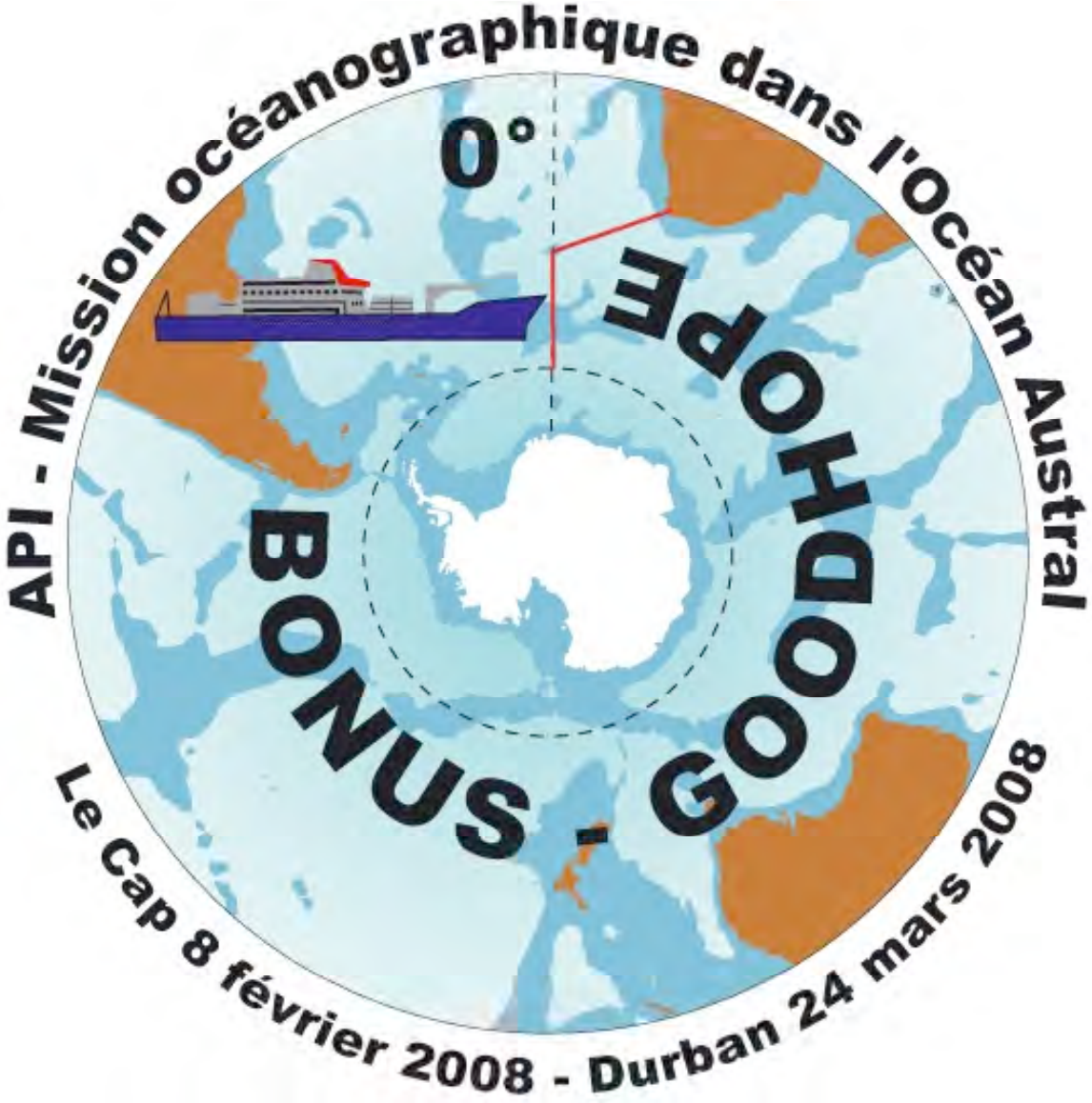
CRUISE REPORT ANNEXES

MD 166 BONUS-GOODHOPE



Cape Town, 7 February
57° 33'S 0°E 17 March
Durban 24 March 2008

CRUISE REPORT
MD 166 BONUS-GOODHOPE

Cape Town, 7 February
57° 33'S 0°E 17 March
Durban 24 March 2008

Annexes

Chief Scientist: *Sabrina Speich*

Co-chief Scientist : *Frank Dehairs*

May 30, 2008

FOREWARD

All the work that has been compiled in these Annexes is very essential to all future cruise analyses. The work to collect all the necessary information and its compilation has been huge in amount and not particularly exciting as are the observations themselves. Therefore, all the BONUS-GOODHOPE scientists are very grateful to all the persons that have invested their time to collect the information and to compile the following Annexes. In particular we should be very grateful to Elodie Kestenare, Marie-Paule Torre, Marie Boyé, Frank Dehairs, Anne-Julie Cavagna, the people on the CTD rosette shifts and all the scientists that took the time to write down all the needed information.

Annexe 0

DICTIONARY

Made by :

Marie BOYE
Franck DEHAIRS
Elodie KESTENARE
MPaule TORRE

Niskin-frame sampling

Rosette Cast	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2	outcome 3	outcome 4	outcome 5	outcome 6
Hydro	Sal	Sabrina.Speich	analysed salinity					
	O2	Sabrina.Speich	analysed dissolved oxygen					
	O2/Ar	Michael Bender , Nicolas Cassar	18O/16O; 17O/16O ratio; argon concentration	O2/Ar ratio	net community production			
	CFC	Rana Fine	chlorofluorocarbons	CFC				
	DIC Licor	Bruno Delille	dissolved inorganic carbon measured using the AIR-DIC	DIC	PCO2			
	Alk & pH	Melchor Gonzales , Magda.	alkalinity, and pH	PH, Alk				
	DIC colori	Melchor Gonzales , Magda.	dissolved inorganic carbon colorimetrically	DIC	PCO2			
	Pigm	Hervé Claustre	phytoplankton pigments					
	NO3 & Si	M. Boye	nitrate, silicate					
	PO4	M. Boye	phosphate					
	NH4	M. Boye	ammonium					
	Chloro	M. Boye	Chlorophyll-a					
	BSi	R. Corvaisier, P. Pondaven	biogenic silica					
	Taxo	M. Boye	phytoplankton taxonomy					
	Cocco	L. Beaufort	coccolithophorid abundance					
	POC/PIC/PON	M. Boye	particulate organic and inorganic carbon, particulate organic nitrogen					
	Bore	Eric Douville	dissolved bore	Proxy salinity				
	dBa	F. Dehairs	dissolved barium					
	234Th	F. Planchon ; F. Dehairs	total 234thorium activity	234Th export	POC export flux			
	Bacterio	K. Barnes	bacterial abundance	DNA by PCR				
	Octopus	E. Viollier	water for sediment core incubation					
Hydro Large	Sal	Sabrina.Speich	analysed salinity					
	O2	Sabrina.Speich	analysed dissolved oxygen					
	O2/Ar	Michael Bender, Nicolas Cassar	18O/16O; 17O/16O ratio; argon concentration	O2/Ar ratio	net community production	net community		
	CFC	Rana Fine	chlorofluorocarbons	CFC				
	DIC Licor	Bruno Delille	dissolved inorganic carbon measured using the AIR-DIC	DIC	PCO2			
	Alk & pH	Melchor Gonzales , Magda.	alkalinity, and pH	PH, Alk				
	DIC colori	Melchor Gonzales , Magda.	dissolved inorganic carbon colorimetrically	DIC	PCO2			
	NO3 & Si	M. Boye	nitrate, silicate					
	PO4	M. Boye	phosphate					

Rosette Cast	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2	outcome 3	outcome 4	outcome 5	outcome 6
	Bore	Eric Douville (LSCE)	dissolved bore	Proxy salinity				
	dBa	F. Dehairs	dissolved barium					
	d30Si	D. Cardinal, F. Fripiat	d30Si of silicate (deep waters)					
	Bsi	R. Corvaisier, P. Pondaven	biogenic silica					
	Cocco	L. Beaufort	coccolithophorid abundance					
	Taxo	M. Boye	phytoplankton taxonomy					
	234Th	F. Planchon , F. Dehairs	total 234thorium activity	234Th export	POC export flux			
Hydro Super	Sal	Sabrina.Speich	analysed salinity					
	O2	Sabrina.Speich	analysed dissolved oxygen					
	CFC	Rana Fine	chlorofluorocarbons	CFC				
	DIC Licor	Bruno Delille	dissolved inorganic carbon measured using the AIR-DIC					
	Alk & pH	Melchor Gonzales, Magda.	alkalinity, and pH					
	DIC colori	Melchor Gonzales , Magda.	dissolved inorganic carbon colorimetrically					
	14C POC & DOC	Nadine Tisnerat-Laborde	14carbon & 13carbon in particulate & dissolved organic carbon bulks	14C age of organic carbon	water masses ageing			
	14C DIC	Nadine Tisnerat-Laborde	14carbon & 13carbon in dissolved inorganic carbon bulk					
	NO3 & Si	Marie Boye	nitrate, silicate					
	PO4	Marie Boye	phosphate					
	Bore	Eric Douville	dissolved bore					
	dBa	F. Dehairs	dissolved barium					
	d30Si	D. Cardinal , F. Fripiat	d30Si of silicate (deep waters)					
	BSi	R. Corvaisier, P. Pondaven	biogenic silica					
	Octopus	E. Viollier	water for sediment core incubation					
ML Large	O2	Sabrina.Speich	analysed dissolved oxygen					
	O2/Ar	Michael Bender , Nicolas Cassar	18O/16O; 17O/16O ratio; argon concentration	O2/Ar ratio	net community production			
	DOC	Richard Sempéré	dissolved organic carbon					
	Pigm	Hervé Claustre	phytoplankton pigments					
	Chloro	Marie Boye	Chlorophyll-a					
	Inc 15N & 13C	Pedro Monteiro , Howard Waldron	nitrogen & carbon uptakes	nitrate, ammonium & urea uptakes; carbon fixation	primary production			
	NO3 & Si	Marie Boye	nitrate, silicate	silicate				
	PO4	Marie Boye	phosphate					

Rosette Cast	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2	outcome 3	outcome 4	outcome 5	outcome 6
	NH4	Marie Boye	ammonium					
	POC/PIC/PON	Marie Boye	particulate organic and inorganic carbon, particulate organic nitrogen					
	Taxo	Marie Boye	phytoplankton taxonomy					
	Cocco	L. Beaufort	coccolithophorid abundance					
	inc Si	R. Corvaisier, P. Pondaven	silicon uptake	silicon uptake & dissolution rates	silicate	biogenic silica		
	234Th	F. Planchon; F. Dehairs	total 234thorium activity	234Th export	POC export flux			
ML Super	O2	Sabrina.Speich	analysed dissolved oxygen					
	O2/Ar	Michael Bender , Nicolas Cassar	18O/16O; 17O/16O ratio; argon concentration	O2/Ar ratio	net community production			
	DOC	Richard Sempéré	dissolved organic carbon					
	Pigm	Hervé Claustre	phytoplankton pigments					
	Chloro	Marie Boye	Chlorophyll-a					
	Inc 15N & 13C	Pedro Monteiro , Howard Waldron	nitrogen & carbon uptakes	nitrate, ammonium & urea uptakes; carbon fixation	primary production			
	NO3 & Si	Marie Boye	nitrate, silicate	silicate				
	PO4	Marie Boye	phosphate					
	NH4	Marie Boye	ammonium					
	Taxo	Marie Boye	phytoplankton taxonomy					
	Cocco	L. Beaufort	coccolithophorid abundance					
	POC/PIC/PON	Marie Boye	particulate organic and inorganic carbon, particulate organic nitrogen					
	inc Si D+R	R. Corvaisier, P. Pondaven, D. Cardinal ,F. Fripiat	silicon uptake	silicon dissolution rates	silicate	biogenic silica		
	inc Si D	D. Cardinal, F. Fripiat, R. Corvaisier	silicon uptake	silicon dissolution rates	silicate	biogenic silica		
PoTh Large &	Sal	Sabrina.Speich	analysed salinity					
	NO3 & Si	Marie Boye	nitrate, silicate	silicate				
	210Po	P. Masquè	total 210polonium activity, 210polonium/210lead ratio	total 210Pb activity				
	234Th	F. Planchon; F. Dehairs	total 234thorium activity					
	226Ra	C. Hanfland	total 226radium activity, 226Ra/228Ra ratio	total 228Ra activity				
	Ba	F. Dehairs , D. Cardinal	particulate barium	particulate Al	particulate Ca	particulate Sr	barite morphology	mesopelagic POC
	Bacterio	K. Barnes	bacterial abundance	DNA by PCR				

Rosette Cast	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2	outcome 3	outcome 4	outcome 5	outcome 6
BaSi Large &	Sal	Sabrina.Speich	analysed salinity					
	NO3 & Si	M. Boye	nitrate, silicate	silicate				
	O2	Sabrina.Speich	analysed dissolved oxygen					
	dBa	F. Dehairs	dissolved barium					
	Ba	F. Dehairs, D. Cardinal	particulate barium	particulate Al	particulate Ca	particulate Sr	barite morphology	mesopelagic POC
	d30Si	D. Cardinal, F. Fripiat	d30Si of silicate (0-1000m)					
	d30BSi	D. Cardinal , F. Fripiat	d30Si of biogenic silica (surface water)					
	234Th	F. Planchon , F. Dehairs	total 234Th activity	234Th export	POC export flux			
	226Ra	C. Hanfland	total 226radium activity, 226Ra/228Ra					
	Inc 15N & 13C	Pedro Monteiro , Howard Waldron	nitrogen & carbon uptakes	nitrate, ammonium & urea uptakes; carbon fixation	primary production			
REE Super	O2	Sabrina.Speich	analysed dissolved oxygen					
	REE	Catherine Jeandel, M. Roy-Barman	Dissolved Rare Earth Element concentrations					
	Pa	Catherine Jeandel, M. Roy-	Dissolved 231protactinium concentration					
	Nd, 230Th	Catherine Jeandel, François Lacan , M. Roy-Barman	Dissolved neodynium and 230thorium isotopic composition	Dissolved 230Th				
	234Th	F. Planchon ; F. Dehairs	total 234Th activity	234Th export	POC export flux			
GEOTRACES dBa	see special sheet	Frank Dehairs						
GEOTRACES d30Si	see special sheet	Damien Cardinal						
GEOTRACES Nd	see special sheet	Catherine Jeandel, François Lacan						
GEOTRACES 230Th/231Pa	see special sheet	Catherine Jeandel , M. Roy-Barman						
GEOTRACES 230Th/231Pa	see special sheet	Catherine Jeandel , François Lacan						
CO2	see special	Melchor Gonzales, Magda.						
CO2	see special	Bruno Delille						

Continuous Shipboard Sea Water Sampling (UNDERWAY)

Operation	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2
Shipboard continuous water supply	pCO2	Bruno Delille	partial pressure of CO2	
	O2-isot/Ar	Michael Bender, Nicolas Cassar	dO2/Ar ratio	net community production
	thermosalinometer	IPEV	sea surface T and S	

Discrete Shipboard Sea Water Sampling (ship INTAKE

Operation	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2
Shipboard water supply	Ac-227	W. Geibert	Total 227 radium concentration	deep-sea tracer
	Ra-226	C. Hanfland	Total 226Ra and 228Ra activities	tracer of water masses circulation
	POC	??	O2 consumption rate	POC remineralization
	Alkenones	MA Sicre	Alkenones concentrations	biomarker of MLD-temperature
	O2-isot/Ar	Michael Bender , Nicolas Cassar	dO2/Ar ratio	net community production
	Bacterio	K. Barnes	bacterial abundance	DNA by PCR

Large volume In Situ Pumps

Filter type	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2	outcome 3
Petex screen (>50µm)	234Th	F. Planchon; F. Dehairs	234Th activity in >50µm size fraction	POC content in >50µm size fraction	
	210Po	P. Masquè	Particulate 210polonium activity, 210polonium/210lead ratio	Particulate 210Pb activity	
	14C POC	Nadine Tisnerat-Laborde	14carbon & 13carbon in particulate organic carbon bulks	14C age of organic carbon	water masses ageing
	Biomarkers	A.-J. Cavagna ; F. Dehairs	Phospholipids contents in 1< <50µm size fraction	d13C of phospholipids in 1< <50µm size fraction	
Quartz filter QMA	234Th	F. Planchon ; F. Dehairs	234Th activity in 1< < 50µm size fraction	POC content in 1< <50µm size fraction	
	210Po	P. Masquè	Particulate 210polonium and 210lead activities		
	14C POC	Nadine Tisnerat-Laborde	14carbon & 13carbon in particulate organic carbon bulks	14C age of organic carbon	water masses ageing
	Biomarkers	A.-J. Cavagna ; F. Dehairs	Phospholipids contents in 1< <50µm size fraction	d13C of phospholipids in 1< <50µm size fraction	
	Alkenones	MA Sicre	Alkenone contents in 1< <50µm size fraction		
Supor filter (0.4 µm)	Nd, Pa, Th, REE	Catherine Jeandel , François Lacan, M. Roy-Barman	Particulate neodynium, Pa, 230thorium isotopic composition, particulate Rare Earth Element concentrations		
	d30BSi	D. Cardinal , F. Fripiat	Particulate delta-silicon composition	d30Si of biogenic Si	
Cartridges	227Ac	W. Geibert	Particulate 227 radium concentration	deep-sea tracer	
	Ra	C. Hanfland	Particulate 226Ra and 228Ra activities		

GoFLO bottle sampling via Kevlar cable

GoFlo Cast	Parameter sampled	Scientific responsible(s) &	outcome 1	outcome 2
LARGE (0-2000 m)	DMe	Marie Boye	dissolved trace metals	
	TMe	Marie Boye	total trace metals	
	DCo,DZn, DCd	Marie Boye	dissolved cobalt, zinc, cadmium	
	DFe	Géraldine Sarthou, Eva Bucciarelli	dissolved iron	
	TDFe	Géraldine Sarthou, Eva Bucciarelli	total iron	
	Orga-Co,Orga-Zn, Orga-Cd	Marie Boye	organic speciation of dissolved cobalt, zinc, cadmium	concentration of TM's organic ligands, conditional stability constant of TM-ligand complexes, concentration
	Orga-Fe	Stan van den Berg	organic speciation of dissolved iron	
	Orga-Mn/Cu	Marie Boye	organic speciation of dissolved manganese and	
	DMn, DCu	Marie Boye	dissolved manganese and copper	
	Sol-Fe	Géraldine Sarthou, Eva Bucciarelli	soluble iron	
	TFe(II)	Géraldine Sarthou	total iron+II	
	TH2O2	Eva Bucciarelli	total hydrogen peroxyde	
	DH2O2	Eva Bucciarelli	dissolved hydrogen peroxyde	
	NO3	Marie Boye	nitrate	
	S	Pierre Brannelec	analysed salinity	
	Microcat	Michel Arhan	pressure	
SUPER-TM's surface (0-1000 m) and	DMe	Marie Boye	dissolved trace metals	
TM's deep (1000-4000 m)	TMe	Marie Boye	total trace metals	
	DCo,DZn, DCd	Marie Boye	dissolved cobalt, zinc, cadmium	
	DFe	Géraldine Sarthou, Eva Bucciarelli	dissolved iron	
	TDFe	Géraldine Sarthou, Eva Bucciarelli	total iron	
	Orga-Co,Orga-Zn, Orga-Cd	Marie Boye	organic speciation of dissolved cobalt, zinc,	
	Orga-Fe	Stan van den Berg	organic speciation of dissolved iron	
	Orga-Mn/Cu	Marie Boye	organic speciation of dissolved manganese and copper	
	DMn, DCu	Marie Boye	dissolved manganese and copper	
	Sol-Fe	Géraldine Sarthou, Eva Bucciarelli	soluble iron	
	TFe(II)	Géraldine Sarthou	total iron+II	
	TH2O2	Eva Bucciarelli	total hydrogen peroxyde	
	DH2O2	Eva Bucciarelli	dissolved hydrogen peroxyde	
	DFe isotopes	François Lacan	Dissolved Fe isotopic composition in deep waters	

GoFlo Cast	Parameter sampled	Scientific responsible(s) &	outcome 1	outcome 2
	PFe isotopes	François Lacan	Particulate Fe isotopic composition in deep	
	DAl	M. Boye & Peter Croot	dissolved aluminium	
	TAl	M. Boye & Peter Croot	total aluminium	
	DCd isotopes	Gideon Henderson	dissolved cadmium isotopic composition in deep	
	NO3	Marie Boye	nitrate	
	S	Pierre Brannelec	analysed salinity	
	Microcat (surface casts)	Michel Arhan	pressure	
	Pinger (deep casts)	IPEV	bathymetry	
SUPER- Cd + incub. Bron	DCd isotopes	Gideon Henderson	dissolved cadmium isotopic composition in	
	incub. Bron	Marie Boye	filtered clean seawater amples at the fluo. max. for trace metals incubations of Bron	Fe/Zn/Co/Cd co-limitations
	incub. Pedro	Pedro Monteiro	filtered clean seawater amples at the fluo. max. for trace metals incubations of Pedro/Sandy	Fe limitation
	NO3	Marie Boye	nitrate	
	S	Pierre Brannelec	analysed salinity	
	Microcat	Michel Arhan	pressure	
SUPER-Fe isotopes	DFe isotopes	François Lacan	Dissolved Fe isotopic composition in 0-1000 m	
	PFe isotopes	François Lacan	Particulate Fe isotopic composition in 0-1000 m	
	NO3	Marie Boye	nitrate	
	S	Pierre Brannelec	analysed salinity	
	Microcat	Michel Arhan	pressure	
SUPER-incub. Bron	incub. Bron	Marie Boye	filtered clean seawater amples at the fluo. max. for trace metals incubations of Bron	Fe/Zn/Co/Cd co-limitations
	Microcat	Michel Arhan	pressure	
SUPER-incub. Gérald.	incub. Géraldine/Eva	Géraldine Sarthou, Eva Bucciarelli	filtered clean seawater amples at the fluo. max. for trace metals incubations of Géraldine/Eva	Fe/Cu and nutrients co-limitations
	Microcat	Michel Arhan	pressure	
GEOTRACES TM's intercalibration	see special sheet	Marie Boye		

Oktopus sediment core sampling

Core profiles	Parameter	Scientific responsible(s) & Email(s)	Outcome
	O2	E.Viollier viollier	oxygen microprofile
	pH	E.Viollier viollier	pH microprofile
	TCO2	E.Viollier viollier	pore water TCO2
	NO2- + NO3-	E.Viollier viollier	pore water nitrite + nitrate
	H4SiO4	E.Viollier viollier	pore water silicic acid
	NH4+	E.Viollier viollier	pore water ammonium
	TPO4	E.Viollier viollier	pore water phosphates
	SO42-	E.Viollier viollier	pore water sulfate
	Fe	E.Viollier viollier	pore water iron
	Mn	E.Viollier viollier	pore water manganese
	DOC	E.Viollier viollier	pore water dissolved organic carbon
	Ba, U, Mo	E.Viollier viollier	pore water + solids
	TTM	Marie Boye	transition trace metals benthic fluxes
	δSi	D. Cardinal , F. Fripiat	pore water + solids silicon isotopic composition
	δFe	F.Lacan	solids iron isotopic composition
	δCd	M. Boye, G. Henderson	solids cadmium isotopic composition
	bulk porosity	E.Viollier	physical property
	%detrital	A. Roychoudhury	mineralogy
	%CaCO3	A. Roychoudhury	mineralogy
	%BSi	A. Roychoudhury	mineralogy
	TTM	A. Roychoudhury	Solids transition trace metals
	granulometry	E.Viollier	physical property
	210Pb	P. Masquè	lead 210
	210Po	P. Masquè	polonium 210
	230 Th	F.Lacan	Thorium 230
	δ13C	N. Laborde	organic carbon stable isotopes
	δ15N	P. Monteiro	organic nitrogen stable isotopes
	14C	N. Laborde	radiocarbon
	234Th	F.Planchon	thorium 234
	Alkenones	M.A Sicre	alkenones in solids
	TAA	A.Grémare	total amino acids
	Pigments	A.Grémare	surface sediment pigments
	Meïofauna	A.Grémare	counting and family identification
	Corg	A.Grémare	organic carbon
	AVS	A. Roychoudhury	acid volatile sulfide
	CRS	A. Roychoudhury	chromium reducible sulfide
	S(0)	A. Roychoudhury	elemental sulfur (possibly)

Core profiles	Parameter	Scientific responsible(s) & Email(s)	Outcome
	SRR	A. Roychoudhury	sulfate reaction rates
	NC	K. Barnes	bacteria counting
	MB	K. Barnes	molecular biology and gene probes
Whole core incubations			
	FO2	E.Viollier	oxygen benthic flux
	FNO3	E.Viollier	nitrite + nitrate benthic flux
	FNH4+	E.Viollier	ammonium benthic flux
	FH4SiO4	E.Viollier	silicic acid flux
	FPO4	E.Viollier	phosphates benthic flux
	FBa, FMo, FU	E.Viollier	barium, uranium, molybdenum benthic fluxes
	FTTM	Marie Boye	transition trace metals benthic fluxes
	FDOC	E.Viollier	dissolved organic carbon benthic flux

CTD sensors

Rosette Cast	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1
	Temperature1	Sabrina.Speich	Temperature1-sensor
	Temperature2	Sabrina.Speich	Temperature2-sensor
	Conductivity1	Sabrina.Speich	Salinity1-sensor
	Conductivity2	Sabrina.Speich	Salinity2-sensor
	O2	Sabrina.Speich	Oxygen sensor
	LADCP (up and down; 300 kHz each)	Sabrina.Speich	Currents
	Fluo	Herve.Claustre	Fluorescence sensor
	Transmissiometer		Particules abundance
	PAR		Light attenuation (calibrated vs SPAR on deck)
	Pinger		Distance from the bottom (bathymetry)

Atmospheric sensors

Operation	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2

To be completed by E. Key (Erica.Key@cetp.ipsl.fr, ericalkey@gmail.com)
and C. Messager (Christophe.Messager@ifremer.fr)
See chapter in report cruise "Atmosphere.."

Aerosols/dust and rain

Operation	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2
aerosols collector	dust	Alexander Baker	trace metals and nutrients in dust	dry atm. Fluxes to surface seawater
rain collector	rain	Alexander Baker	trace metals and nutrients in rain	wet atm. Fluxes to surface seawater

Physics captors deployements

Operation	Parameter sampled	Scientific responsible(s) & Email(s)	Analyses responsible(s) & Email(s)	outcome 1
XBTs	Temperature, Depth		Sebastian Swaart	
PROVOR	Temperature, Salinity, Depth		Sabrina Speich	SO dynamics
CPIES	Current Speed, Acoustical Time, Bottom Pressure		Sabrina Speich	SAMOC monitoring
SADCP	Current Speed in the upper layers along the cruise track		Sabrina Speich	SO Dynamics

Ship captors and data

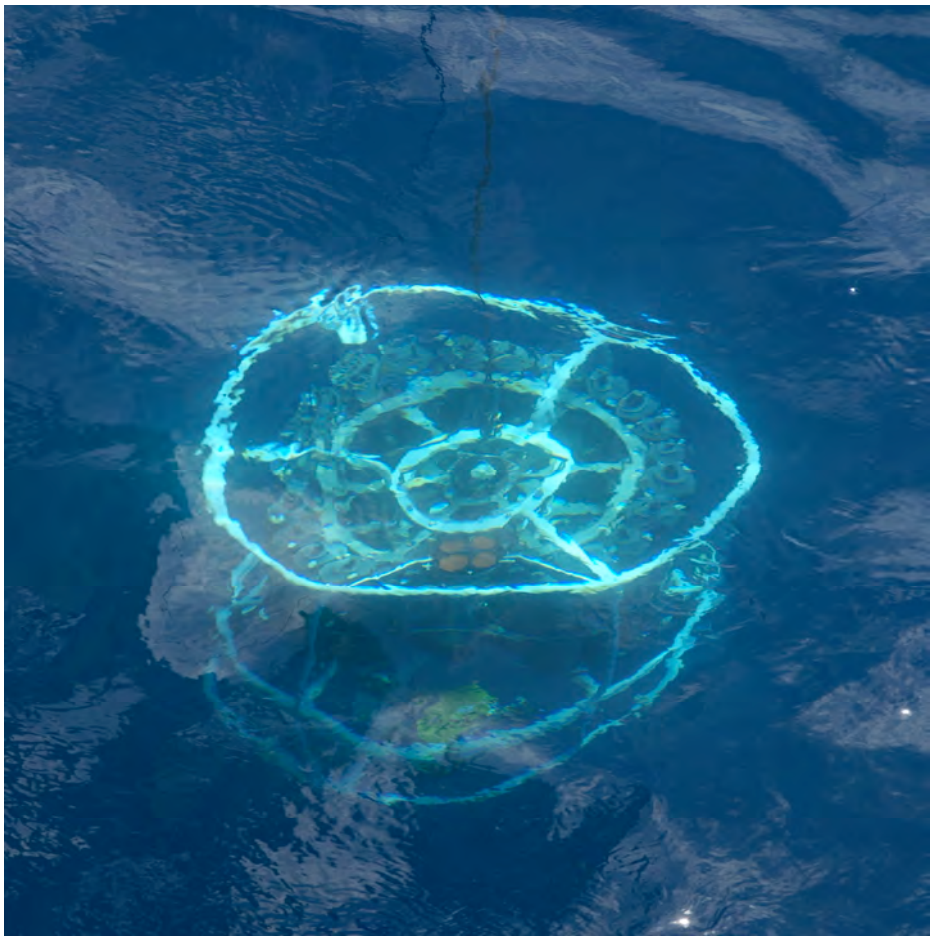
Operation	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1
SADCP (150 kHz)		Sabrina.Speich@univ-brest.fr	
SADCP (75 kHz)			
Thermosalinometer		Sabrina.Speich@univ-brest.fr	
Navigation		Sabrina.Speich@univ-brest.fr	
Meteo		Christophe.Messager@ifremer.fr	

Satellite data (remote sensing)

Data ressource	Parameter sampled	Scientific responsible(s) & Email(s)	outcome 1	outcome 2
ODYSSEA	SST (sea surface temp.)	Sabrina Speich	Sea surf. T	Fronts/Jets/Eddies positions
MODIS	SST (sea surf. Temp.)	Sabrina.Speich	Sea surf. T	Fronts/Jets/Eddies positions
AVISO	Altimetry	Sabrina Speich	Sea surf. Topography	Fronts/Jets/Eddies positions
SeaWIFs	Ocean data color	Bertrand Saulqui, bsaulqui@ifremer.fr	chl-a	
SeaWIFs	"white signals"	Marie Boye	coccolithophorids	
NAUSICAA	wind direction & speed	Christophe Messager	air mass trajectories	
NAUSICAA	atm. particulate density	Christophe Messager	dust	
NAUSICAA	irradiance	Christophe Messager		

Annexe 1

CTD CASTS



CTD Casts
– Sampling –

Made by :

Elodie KESTENARE
MPaule TORRE

GEOGRAPHICAL STATION #0

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	0	1	X	X																
CTD	0	2	X	X																
CTD	0	3	X	X																
CTD	0	4	X	X																
CTD	0	5	X	X																
CTD	0	6	X	X																
CTD	0	7	X	X																
CTD	0	8	X	X																
CTD	0	9	X	X	X															
CTD	0	10	X	X	X	X	X	X												
CTD	0	11	X	X	X	X	X	X												
CTD	0	12	X	X	X	X	X	X												
CTD	0	13	X	X	X	X	X	X												
CTD	0	14	X	X	X	X	X	X												
CTD	0	15	X	X	X	X	X	X												
CTD	0	16	X	X	X	X	X	X												
CTD	0	17	X	X	X	X	X	X												
CTD	0	18	X	X	X	X	X	X												
CTD	0	19	X	X		X	X	X												
CTD	0	20	X	X	X	X	X	X								X	X			
CTD	0	21	X	X		X	X	X												
CTD	0	22																		
CTD	0	23																		
CTD	0	24	X	X	X	X	X	X								X	X			

GEOGRAPHICAL STATION #1

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	1	1	X	X	X															
CTD	1	2				X	X	X												
CTD	1	3	X	X																
CTD	1	4				X	X	X												
CTD	1	5	X	X	X															
CTD	1	6				X	X	X												
CTD	1	7																		
CTD	1	8				X	X	X												
CTD	1	9	X	X	X															
CTD	1	10				X	X	X												
CTD	1	11																		
CTD	1	12				X	X	X												
CTD	1	13	X	X	X															
CTD	1	14				X	X	X												
CTD	1	15																		
CTD	1	16																		
CTD	1	17																		
CTD	1	18																		
CTD	1	19																		
CTD	1	20																		
CTD	1	21																		
CTD	1	22																		
CTD	1	23																		
CTD	1	24																		

GEOGRAPHICAL STATION #2

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	2	1	X	X	X															
CTD	2	2	X	X		X	X	X										X		
CTD	2	3				X	X	X										X		
CTD	2	4	X	X	X	X	X	X										X		
CTD	2	5				X	X	X										X		
CTD	2	6	X	X	X	X	X	X										X		
CTD	2	7	X	X		X	X	X										X		
CTD	2	8	X	X	X	X	X	X										X		
CTD	2	9	X	X		X	X	X												
CTD	2	10																X		
CTD	2	11				X	X	X												
CTD	2	12																X		
CTD	2	13			X													X		
CTD	2	14	X	X		X	X	X												
CTD	2	15																		
CTD	2	16																		
CTD	2	17																		
CTD	2	18																		
CTD	2	19																		
CTD	2	20																		
CTD	2	21																		
CTD	2	22																		
CTD	2	23																		
CTD	2	24																		

GEOGRAPHICAL STATION #3

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	3	1	X	X	X	X	X	X		X	X	X								
CTD	3	2	X	X	X	X	X	X		X	X	X								
CTD	3	3	X	X	X	X	X	X		X	X	X								
CTD	3	4	X	X	X	X	X	X		X	X	X								
CTD	3	5	X	X	X	X	X	X		X	X	X								
CTD	3	6	X	X		X	X	X	X	X	X	X	X			X	X			
CTD	3	7	X	X	X	X	X	X	X	X	X	X	X			X	X			
CTD	3	8	X	X		X	X	X	X	X	X	X	X			X	X			
CTD	3	9	X	X																
CTD	3	10	X	X		X	X	X	X	X	X	X	X			X	X			
CTD	3	11	X	X		X	X	X	X	X	X	X	X			X	X			
CTD	3	12	X	X	X	X	X	X	X	X	X	X	X			X	X			
CTD	3	13		X																
CTD	3	14																		
CTD	3	15																		
CTD	3	16																		
CTD	3	17																		
CTD	3	18																		
CTD	3	19																		
CTD	3	20																		
CTD	3	21																		
CTD	3	22																		
CTD	3	23																		
CTD	3	24																		

GEOGRAPHICAL STATION #4

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	4	1	X	X	X	X	X	X										X		
CTD	4	2	X	X	X	X	X	X										X		
CTD	4	3	X	X	X	X	X	X										X		
CTD	4	4	X	X	X	X	X	X										X		
CTD	4	5	X	X	X	X	X	X										X		
CTD	4	6	X	X	X	X	X	X										X		
CTD	4	7	X	X	X	X	X	X										X		
CTD	4	8	X	X		X	X	X										X		
CTD	4	9	X	X	X	X	X	X										X		
CTD	4	10	X	X		X	X	X										X		
CTD	4	11	X	X										X	X					
CTD	4	12	X	X		X	X	X						X	X			X		
CTD	4	13	X	X		X	X	X						X	X			X		
CTD	4	14	X	X	X	X	X	X										X		
CTD	4	15	X	X																
CTD	4	16																		
CTD	4	17																		
CTD	4	18																		
CTD	4	19																		
CTD	4	20																		
CTD	4	21																		
CTD	4	22																		
CTD	4	23																		
CTD	4	24																		

GEOGRAPHICAL STATION #5

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	5	1	X	X	X	X	X	X										X		
CTD	5	2	X	X	X	X	X	X										X		
CTD	5	3	X	X	X	X	X	X										X		
CTD	5	4	X	X	X	X	X	X										X		
CTD	5	5	X	X	X	X	X	X										X		
CTD	5	6	X	X	X	X	X	X										X		
CTD	5	7	X	X	X	X	X	X										X		
CTD	5	8	X	X	X	X	X	X										X		
CTD	5	9	X	X	X	X	X	X										X		
CTD	5	10	X	X	X	X	X	X										X		
CTD	5	11	X	X	X	X	X	X										X		
CTD	5	12	X	X		X	X	X					X			X	X	X		
CTD	5	13	X	X	X	X	X	X					X			X	X	X		
CTD	5	14	X	X		X	X	X								X	X	X		
CTD	5	15	X	X									X							
CTD	5	16	X	X		X	X	X					X			X	X	X		
CTD	5	17	X	X		X	X	X					X			X	X	X		
CTD	5	18	X	X	X	X	X	X					X			X	X	X		
CTD	5	19																		
CTD	5	20																		
CTD	5	21																		
CTD	5	22																		
CTD	5	23																		
CTD	5	24																		

GEOGRAPHICAL STATION #6

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	6	1	X	X	X	X	X	X										X		
CTD	6	2	X	X		X	X	X										X		
CTD	6	3	X	X	X	X	X	X										X		
CTD	6	4	X	X	X	X	X	X										X		
CTD	6	5	X	X	X	X	X	X										X		
CTD	6	6	X	X	X	X	X											X		
CTD	6	7	X	X	X	X	X											X		
CTD	6	8	X	X	X	X	X											X		
CTD	6	9	X	X	X	X	X	X										X		
CTD	6	10	X	X	X	X	X											X		
CTD	6	11	X	X	X	X	X											X		
CTD	6	12	X	X	X	X	X											X		
CTD	6	13	X	X	X	X	X											X		
CTD	6	14	X	X		X	X											X		
CTD	6	15	X	X	X	X	X	X										X		
CTD	6	16	X	X		X	X								X			X		
CTD	6	17	X	X		X	X								X			X		
CTD	6	18	X	X		X	X								X			X		
CTD	6	19	X	X		X	X											X		
CTD	6	20	X	X	X													X		
CTD	6	21	X	X		X	X	X												
CTD	6	22																		
CTD	6	23																		
CTD	6	24																		

GEOGRAPHICAL STATION #7

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	7	1	X	X	X	X	X	X		X								X		
CTD	7	2	X	X		X	X	X		X								X		
CTD	7	3	X	X	X	X	X	X		X								X		
CTD	7	4	X	X		X	X	X		X								X		
CTD	7	5	X	X	X	X	X	X		X								X		
CTD	7	6	X	X	X	X	X	X		X								X		
CTD	7	7	X	X	X	X	X	X		X								X		
CTD	7	8	X	X	X	X	X	X		X								X		
CTD	7	9	X	X	X	X	X	X		X								X		
CTD	7	10	X	X	X	X	X	X		X								X		
CTD	7	11	X	X	X	X	X	X		X								X		
CTD	7	12	X	X	X	X	X	X		X	X	X						X		
CTD	7	13	X	X	X	X	X	X		X	X	X						X		
CTD	7	14	X	X	X	X	X	X		X	X	X						X		
CTD	7	15	X	X	X	X	X	X	X	X	X	X	X			X	X	X		
CTD	7	16	X	X		X	X	X	X	X	X	X	X			X	X	X		
CTD	7	17	X	X	X	X	X	X	X	X	X	X	X			X	X	X		
CTD	7	18				X	X	X	X	X	X	X	X			X	X	X		
CTD	7	19	X	X		X	X	X	X	X	X	X				X	X	X		
CTD	7	20				X			X	X	X	X	X			X	X	X		
CTD	7	21			X		X	X	X	X	X	X	X			X	X	X		
CTD	7	22																		
CTD	7	23																		
CTD	7	24	X	X		X	X	X		X										

GEOGRAPHICAL STATION #8

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	8	1	X	X	X	X	X	X										X		
CTD	8	2	X	X	X	X	X	X										X		
CTD	8	3	X	X	X	X	X	X										X		
CTD	8	4	X	X		X	X	X										X		
CTD	8	5	X	X	X	X	X	X										X		
CTD	8	6	X	X		X	X	X										X		
CTD	8	7	X	X	X	X	X	X										X		
CTD	8	8	X	X	X	X	X	X										X		
CTD	8	9	X	X	X	X	X	X										X		
CTD	8	10	X	X	X	X	X	X										X		
CTD	8	11	X	X	X	X	X	X										X		
CTD	8	12	X	X	X	X	X	X										X		
CTD	8	13	X	X	X	X	X	X										X		
CTD	8	14	X	X	X	X	X	X										X		
CTD	8	15	X	X	X	X	X	X										X		
CTD	8	16	X	X	X	X	X	X										X		
CTD	8	17	X	X	X	X	X	X										X		
CTD	8	18	X	X		X	X	X										X		
CTD	8	19	X	X	X	X	X	X							X			X		
CTD	8	20	X	X		X	X	X							X			X		
CTD	8	21	X	X		X	X	X							X			X		
CTD	8	22																		
CTD	8	23																		
CTD	8	24	X	X	X	X	X	X										X		

GEOGRAPHICAL STATION #9

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	9	1	X	X	X	X	X	X		X	X							X		
CTD	9	2	X	X	X	X	X	X		X	X							X		
CTD	9	3	X	X	X	X	X	X		X	X							X		
CTD	9	4	X	X	X	X	X	X		X	X							X		
CTD	9	5	X	X		X	X	X		X	X							X		
CTD	9	6	X	X	X	X	X	X		X	X							X		
CTD	9	7	X	X		X	X	X		X	X							X		
CTD	9	8	X	X	X	X	X	X		X	X							X		
CTD	9	9	X	X	X	X	X	X		X	X							X		
CTD	9	10	X	X	X	X	X	X		X	X							X		
CTD	9	11	X	X	X	X	X	X		X	X							X		
CTD	9	12	X	X	X	X	X	X		X	X							X		
CTD	9	13	X	X	X	X	X	X		X	X							X		
CTD	9	14	X	X	X	X	X	X		X	X							X		
CTD	9	15	X	X	X	X	X	X		X	X							X		
CTD	9	16	X	X	X	X	X	X		X	X							X		
CTD	9	17	X	X	X	X	X	X	X	X	X		X			X	X	X		
CTD	9	18	X	X	X	X	X	X	X	X	X		X			X	X	X		
CTD	9	19	X	X		X	X	X	X	X	X		X		X	X	X	X		
CTD	9	20	X	X	X	X	X	X	X	X	X		X		X	X	X	X		
CTD	9	21	X	X		X	X	X	X	X	X		X		X	X	X	X		
CTD	9	22																		
CTD	9	23																		
CTD	9	24	X	X	X	X	X	X	X	X	X		X			X	X	X		

GEOGRAPHICAL STATION #10

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	10	1	X	X	X	X	X	X		X	X							X		
CTD	10	2	X	X	X					X	X							X		
CTD	10	3	X	X	X	X	X	X		X	X							X		
CTD	10	4	X	X	X	X	X	X		X	X							X		
CTD	10	5	X	X		X	X	X		X	X							X		
CTD	10	6	X	X	X	X	X	X		X	X							X		
CTD	10	7	X	X		X	X	X		X	X							X		
CTD	10	8	X	X	X	X	X	X		X	X							X		
CTD	10	9	X	X	X	X	X	X		X	X							X		
CTD	10	10	X	X	X	X	X	X		X	X							X		
CTD	10	11	X	X	X	X	X	X		X	X							X		
CTD	10	12	X	X	X	X	X	X		X	X							X		
CTD	10	13	X	X	X	X	X	X		X	X							X		
CTD	10	14	X	X	X	X	X	X		X	X							X		
CTD	10	15	X	X	X	X	X	X		X	X							X		
CTD	10	16	X	X	X	X	X	X		X	X							X		
CTD	10	17	X	X	X	X	X	X		X	X		X					X		
CTD	10	18	X	X	X	X	X	X		X	X		X					X		
CTD	10	19	X	X		X	X	X		X	X		X					X		
CTD	10	20	X	X	X	X	X	X		X	X		X					X		
CTD	10	21	X	X		X	X	X		X	X		X					X		
CTD	10	22																		
CTD	10	23																		
CTD	10	24	X	X	X	X	X	X		X	X		X					X		

GEOGRAPHICAL STATION #11

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Taxo	Cocco	Commentaires
CTD	11	1	X	X	X	X	X	X	X	X			X		X			
CTD	11	2	X	X	X	X	X	X	X	X			X		X			
CTD	11	3	X	X	X	X	X	X	X	X		X	X					
CTD	11	4	X	X	X	X	X	X	X	X			X					
CTD	11	5	X	X		X	X	X	X	X			X					
CTD	11	6	X	X	X	X	X	X	X	X		X	X					
CTD	11	7	X	X		X	X	X	X	X			X					
CTD	11	8	X	X	X	X	X	X	X	X		X	X					
CTD	11	9	X	X	X	X	X	X	X	X			X					
CTD	11	10	X	X	X	X	X	X	X	X		X	X		X			
CTD	11	11	X	X	X	X	X	X	X	X		X	X		X			
CTD	11	12																Bouteille perdue
CTD	11	13	X	X	X	X	X	X	X	X		X	X		X			
CTD	11	14	X	X	X	X	X	X	X	X		X	X		X			
CTD	11	15	X	X	X	X	X	X	X	X		X	X		X			
CTD	11	16	X	X	X	X	X	X	X	X		X	X		X			
CTD	11	17	X	X	X	X	X	X	X	X		X	X					
CTD	11	18	X	X	X	X	X	X	X	X		X	X					
CTD	11	19	X	X		X	X	X	X	X		X	X			X	X	
CTD	11	20	X	X	X	X	X	X	X	X		X	X		X	X	X	
CTD	11	21	X	X		X	X	X	X	X		X	X			X	X	
CTD		22																
CTD		23																
CTD	11	24	X	X	X	X	X	X	X	X		X	X		X			

GEOGRAPHICAL STATION #11

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC	Cocco	Taxo	Bore	IncSi	Commentaires
CTD	12	1			X	X	X		X	X	X	X	X					
CTD	12	2			X	X	X		X	X	X	X	X					
CTD	12	3			X	X	X		X	X	X	X	X					
CTD	12	4			X	X	X		X	X	X	X	X					
CTD	12	5															X	
CTD	12	6																
CTD	12	7			X	X	X		X	X	X	X	X					
CTD	12	8	X	X				X										
CTD	12	9			X	X	X		X	X	X	X	X					
CTD	12	10			X	X	X		X	X	X	X	X					
CTD	12	11	X	X				X										
CTD	12	12			X	X	X		X	X	X	X	X					
CTD	12	13															X	
CTD	12	14																
CTD	12	15	X	X				X										
CTD	12	16			X	X	X		X	X	X	X	X					
CTD	12	17	X	X				X										
CTD	12	18			X				X	X	X	X	X					
CTD	12	19															X	
CTD	12	20																
CTD	12	21				X	X		X	X	X	X	X					
CTD		22																
CTD		23																
CTD	12	24	X	X				X										

GEOGRAPHICAL STATION #12

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	13	1	X	X	X	X	X	X		X	X							X		
CTD	13	2	X	X	X	X	X	X		X	X							X		
CTD	13	3	X	X	X	X	X	X		X	X							X		
CTD	13	4	X	X	X	X	X	X		X	X							X		
CTD	13	5	X	X		X	X	X		X	X							X		
CTD	13	6	X	X	X	X	X	X		X	X							X		
CTD	13	7	X	X		X	X	X		X	X							X		
CTD	13	8	X	X	X	X	X	X		X	X							X		
CTD	13	9	X	X	X	X	X	X		X	X							X		
CTD	13	10	X	X	X	X	X	X		X	X							X		
CTD	13	11	X	X	X	X	X	X		X	X							X		
CTD	13	12	X	X	X	X	X	X		X	X							X		
CTD	13	13	X	X	X	X	X	X		X	X							X		
CTD	13	14	X	X	X	X	X	X		X	X							X		
CTD	13	15	X	X	X	X	X	X		X	X							X		
CTD	13	16	X	X	X	X	X	X		X	X							X		
CTD	13	17	X	X	X	X	X	X		X	X							X		
CTD	13	18	X	X	X	X	X	X		X	X							X		
CTD	13	19	X	X		X	X	X		X	X				X			X		
CTD	13	20	X	X	X	X	X	X		X	X				X			X		
CTD	13	21	X	X		X	X	X		X	X				X			X		
CTD		22																		
CTD		23																		
CTD	13	24	X	X	X	X	X	X		X	X							X		

GEOGRAPHICAL STATION #13

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	14	1	X	X	X	X	X	X		X	X							X		
CTD	14	2	X	X	X	X	X	X		X	X							X		
CTD	14	3	X	X	X	X	X	X		X	X							X		
CTD	14	4	X	X	X	X	X	X		X	X							X		
CTD	14	5	X	X		X	X	X		X	X							X		
CTD	14	6	X	X	X	X	X	X		X	X							X		
CTD	14	7	X	X		X	X	X		X	X							X		
CTD	14	8	X	X	X	X	X	X		X	X							X		
CTD	14	9	X	X	X	X	X	X		X	X							X		
CTD	14	10	X	X	X	X	X	X		X	X							X		
CTD	14	11	X	X	X	X	X	X		X	X							X		
CTD	14	12	X	X	X	X	X	X		X	X							X		
CTD	14	13	X	X	X	X	X	X		X	X							X		
CTD	14	14	X	X	X	X	X	X		X	X							X		
CTD	14	15	X	X	X	X	X	X		X	X							X		
CTD	14	16	X	X	X	X	X	X		X	X		X					X		
CTD	14	17	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	14	18	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	14	19	X	X		X	X	X		X	X		X			X	X	X		
CTD	14	20	X		X	X	X	X								X	X			FUITE
CTD	14	21	X	X		X	X	X		X	X		X			X	X	X		
CTD		22																		
CTD		23																		
CTD	14	24	X	X	X	X	X	X		X	X		X			X	X	X		

GEOGRAPHICAL STATION #14

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	15	1	X	X	X	X	X	X		X	X									
CTD	15	2	X	X	X	X	X			X	X									
CTD	15	3	X	X	X	X	X	X		X	X									
CTD	15	4	X	X	X	X	X			X	X									
CTD	15	5	X	X		X	X	X		X	X									
CTD	15	6	X	X	X	X	X			X	X									
CTD	15	7	X	X		X	X	X		X	X									
CTD	15	8	X	X	X	X	X			X	X									
CTD	15	9	X	X	X	X	X	X		X	X									
CTD	15	10	X	X	X	X	X			X	X									
CTD	15	11	X	X	X	X	X	X		X	X									
CTD	15	12	X	X	X	X	X			X	X									
CTD	15	13	X	X	X	X	X	X		X	X									
CTD	15	14	X	X	X	X	X			X	X									
CTD	15	15	X	X	X	X	X	X		X	X									
CTD	15	16	X	X	X	X	X			X	X									
CTD	15	17	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	15	18	X	X	X	X	X		X	X	X		X			X	X			
CTD	15	19	X	X		X	X	X	X	X	X		X			X	X			
CTD	15	20	X	X	X	X	X		X	X	X		X	?		X	X			Taxo: 200ml
CTD	15	21	X	X		X	X		X	X	X		X	?		X	X			Au lieu de 1L
CTD		22																		
CTD		23																		
CTD	15	24	X	X	X	X	X	X	X	X	X		X	X		X	X			

GEOGRAPHICAL STATION #15

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	16	1	X	X	X	X	X	X		X	X							X		
CTD	16	2	X	X	X	X	X			X	X							X		
CTD	16	3	X	X	X	X	X	X		X	X							X		
CTD	16	4	X	X	X	X	X			X	X							X		
CTD	16	5	X	X		X	X			X	X							X		
CTD	16	6	X	X	X	X	X	X		X	X							X		
CTD	16	7	X	X		X	X			X	X							X		
CTD	16	8	X	X	X	X	X	X		X	X							X		
CTD	16	9	X	X	X	X	X			X	X							X		
CTD	16	10	X	X	X	X	X	X		X	X							X		
CTD	16	11	X	X	X	X	X			X	X							X		
CTD	16	12	X	X	X	X	X	X		X	X							X		
CTD	16	13	X	X	X	X	X			X	X							X		
CTD	16	14	X	X	X	X	X	X		X	X							X		
CTD	16	15	X	X	X	X	X			X	X							X		
CTD	16	16	X	X	X	X	X	X		X	X							X		
CTD	16	17	X	X	X	X	X			X	X		X			X	X	X		
CTD	16	18	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	16	19	X	X		X	X			X	X		X			X	X	X		
CTD	16	20	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	16	21	X	X		X	X			X	X		X			X	X	X		
CTD		22																		
CTD		23																		
CTD	16	24																		Bouteille non fermée

GEOGRAPHICAL STATION #16

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	17	1	X	X	X	X	X	X		X	X							X		
CTD	17	2	X	X	X	X	X	X		X	X							X		
CTD	17	3	X	X	X	X	X	X		X	X							X		
CTD	17	4	X	X	X	X	X	X		X	X							X		
CTD	17	5	X	X		X	X	X		X	X							X		
CTD	17	6	X	X	X	X	X	X		X	X							X		
CTD	17	7	X	X		X	X	X		X	X							X		
CTD	17	8	X	X	X	X	X	X		X	X							X		
CTD	17	9	X	X	X	X	X	X		X	X							X		
CTD	17	10	X	X	X	X	X	X		X	X							X		
CTD	17	11	X	X	X	X	X	X		X	X							X		
CTD	17	12	X	X	X	X	X	X		X	X							X		
CTD	17	13	X	X	X	X	X	X		X	X							X		
CTD	17	14	X	X	X	X	X	X		X	X							X		
CTD	17	15	X	X	X	X	X	X		X	X							X		
CTD	17	16	X	X	X	X	X	X		X	X							X		
CTD	17	17	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	17	18	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	17	19	X	X		X	X	X		X	X		X	X	X	X	X	X		
CTD	17	20	X	X	X	X	X	X		X	X		X	X	X	X	X	X		
CTD	17	21	X	X		X	X	X		X	X		X	X	X	X	X	X		
CTD		22																		
CTD		23																		
CTD	17	24	X	X	X	X	X	X		X	X		X			X	X	X		

GEOGRAPHICAL STATION #17

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	18	1	X	X	X	X	X	X		X	X							X		
CTD	18	2	X	X	X	X	X	X		X	X							X		
CTD	18	3	X	X	X	X	X	X		X	X							X		
CTD	18	4	X	X	X	X	X	X		X	X							X		
CTD	18	5	X	X		X	X	X		X	X							X		
CTD	18	6	X	X	X	X	X	X		X	X							X		
CTD	18	7	X	X		X	X	X		X	X							X		
CTD	18	8	X	X	X	X	X	X		X	X							X		
CTD	18	9	X	X	X	X	X	X		X	X							X		Prise air non fermée
CTD	18	10	X	X	X	X	X	X		X	X							X		
CTD	18	11	X	X	X	X	X	X		X	X							X		
CTD	18	12	X	X	X	X	X	X		X	X							X		
CTD	18	13	X	X	X	X	X	X		X	X							X		
CTD	18	14	X	X	X	X	X	X		X	X							X		
CTD	18	15	X	X	X	X	X	X		X	X							X		
CTD	18	16	X	X	X	X	X	X		X	X							X		
CTD	18	17	X	X	X	X	X	X	X	X	X		X			X	X	X		
CTD	18	18	X	X	X	X	X	X	X	X	X		X			X	X	X		
CTD	18	19	X	X		X	X	X	X	X	X		X		X	X	X	X		
CTD	18	20	X	X	X	X	X	X	X	X	X		X		X	X	X	X		
CTD	18	21	X	X		X	X	X	X	X	X		X		X	X	X	X		
CTD		22																		
CTD		23																		
CTD	18	24	X	X	X	X	X	X	X	X	X		X			X	X	X		

GEOGRAPHICAL STATION #18

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	14C & POC	DOC	14C DIC	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Taxo	Cocco	Octopus	Comments
CTD	19	1	X	X	X	X	X	X			X	X	X			X	X	X			X	
CTD	19	2	X	X	X	X	X	X			X	X	X			X	X	X				
CTD	19	3	X	X	X	X	X	X	X	X	X	X	X		X	X	X					
CTD	19	4	X	X	X	X	X	X			X	X	X			X						
CTD	19	5	X	X		X	X	X				X	X			X	X					
CTD	19	6	X	X	X	X	X	X	X	X	X	X	X		X	X						
CTD	19	7	X	X		X	X	X			X	X	X			X	X					
CTD	19	8	X	X	X	X	X	X	X	X	X	X	X		X	X	X					
CTD	19	9	X	X	X	X	X	X			X	X	X			X		X				
CTD	19	10	X	X	X	X	X	X	X	X	X	X	X		X	X	X					
CTD	19	11	X	X	X	X	X	X			X	X	X			X		X				
CTD	19	12	X	X	X	X	X	X			X	X	X		X	X	X					
CTD	19	13	X	X	X	X	X	X	X	X	X	X	X		X	X		X				
CTD	19	14	X	X	X	X	X	X			X	X	X			X		X				Ressort cassé en réarmant
CTD	19	15	X	X	X	X	X	X	X	X	X	X	X		X	X		X				
CTD	19	16	X	X	X	X	X	X			X	X	X		X	X		X				
CTD	19	17	X	X	X	X	X	X	X	X	X	X	X		X	X						
CTD	19	18	X	X	X	X	X	X			X	X	X		X	X						
CTD	19	19	X	X		X	X	X	X	X	X	X	X		X	X				X		
CTD	19	20	X	X	X	X	X	X				X	X		X	X		X	X	X		
CTD	19	21	X	X		X	X	X	X	X	X	X	X		X	X				X		
CTD		22																				
CTD		23																				
CTD	19	24	X	X	X	X	X	X	X	X	X	X	X		X	X		X				

GEOGRAPHICAL STATION #18

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC	PIC	Cocco	Taxo	IncSi (D+R)	IncSi (D)	IncTh (F+F)	Comments
CTD	20	1			X	X	X		X	X	X	X	X	X						
CTD	20	2			X	X	X		X	X	X	X	X	X						
CTD	20	3			X	X	X		X	X	X	X	X	X						
CTD	20	4			X	X	X		X	X	X	X	X	X						
CTD	20	5			X	X	X		X	X	X	X	X	X						
CTD	20	6																		
CTD	20	7															X			
CTD	20	8																		
CTD	20	9	X	X				X											X	
CTD	20	10	X		X			X												
CTD	20	11				X	X		X	X	X	X	X	X						
CTD	20	12																X		
CTD	20	13																		
CTD	20	14	X	X	X			X											X	
CTD	20	15				X	X		X	X	X	X	X	X						
CTD	20	16	X		X			X												
CTD	20	17				X	X		X	X	X	X	X	X						
CTD	20	18			X	X	X		X	X	X	X	X	X						
CTD	20	19																		
CTD	20	20															X			
CTD	20	21																	X	
CTD		22																		
CTD		23																		
CTD	20	24	X	X				X												

GEOGRAPHICAL STATION #18						
Code instr.	Cast n°	Bottle n°	O2	REE, Nd,Pa,230Th	234Th	Comments
CTD	21	1	X			
CTD	21	2		X	X	
CTD	21	3	X			
CTD	21	4		X		
CTD	21	5	X			
CTD	21	6		X		
CTD	21	7	X			
CTD	21	8		X		
CTD	21	9	X			
CTD	21	10		X		
CTD	21	11	X			
CTD	21	12		X		
CTD	21	13	X			
CTD	21	14		X		
CTD	21	15	X			
CTD	21	16		X		
CTD	21	17	X			
CTD	21	18		X		
CTD	21	19	X			
CTD	21	20		X		
CTD	21	21	X	X		REE, Nd,Pa,Th prélevés sur Btl21&24
CTD		22				
CTD		23				
CTD	21	24		X		Btl21et 24: meme échantillon

GEOGRAPHICAL STATION #18

Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	210Po	234Th	Ra	Comments
CTD	22	1	X	X	X	X		
CTD	22	2			X	X		
CTD	22	3	X	X	X	X		
CTD	22	4			X	X		
CTD	22	5	X	X	X	X		
CTD	22	6					X	
CTD	22	7						
CTD	22	8			X	X		
CTD	22	9	X	X	X	X		
CTD	22	10			X	X		
CTD	22	11	X	X	X	X		
CTD	22	12			X	X		
CTD	22	13	X	X	X	X		
CTD	22	14			X	X		
CTD	22	15			X	X		
CTD	22	16			X	X		
CTD	22	17	X	X	X	X		
CTD	22	18			X	X		
CTD	22	19			X	X		
CTD	22	20			X	X		
CTD	22	21			X	X		
CTD		22						
CTD		23						
CTD	22	24	X	X	X	X		

GEOGRAPHICAL STATION #18

Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	Ba dissous	Ba particulaire	30Si dissous	30BSi dissous	Ra	Comments
CTD	23	1	X	X	X	X	X			
CTD	23	2							X	
CTD	23	3								
CTD	23	4			X	X				
CTD	23	5	X	X	X	X	X			
CTD	23	6			X	X				
CTD	23	7			X	X				
CTD	23	8	X	X	X	X	X			
CTD	23	9	X		X	X				
CTD	23	10		X	X	X	X			
CTD	23	11			X	X				
CTD	23	12			X	X				
CTD	23	13	X		X	X	X			
CTD	23	14			X	X				
CTD	23	15	X	X	X	X	X			
CTD	23	16			X	X				
CTD	23	17			X	X	X			
CTD	23	18		X	X	X	X			
CTD	23	19			X	X				
CTD	23	20			X	X	X	X		
CTD	23	21			X	X	X	X		
CTD		22								
CTD		23								
CTD	23	24	X	X	X	X	X	X		

GEOGRAPHICAL STATION #19

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	24	1	X	X	X	X	X	X		X	X									
CTD	24	2	X	X	X	X	X	X		X	X									
CTD	24	3	X	X	X	X	X	X		X	X									
CTD	24	4	X	X	X	X	X	X		X	X									
CTD	24	5	X	X		X	X	X		X	X									
CTD	24	6	X	X	X	X	X	X		X	X									
CTD	24	7	X	X		X	X	X		X	X									
CTD	24	8	X	X	X	X	X	X		X	X									
CTD	24	9	X	X	X	X	X	X		X	X									
CTD	24	10	X	X	X	X	X	X		X	X									
CTD	24	11	X	X	X	X	X	X		X	X									
CTD	24	12	X	X	X	X	X	X		X	X									
CTD	24	13	X	X	X	X	X	X		X	X									
CTD	24	14	X	X	X	X	X	X		X	X									
CTD	24	15	X	X	X	X	X	X		X	X									
CTD	24	16	X	X	X	X	X	X		X	X									
CTD	24	17	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	24	18	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	24	19	X	X		X	X	X	X	X	X		X			X	X			
CTD	24	20	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	24	21	X	X		X	X	X	X	X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	24	24	X	X	X	X	X	X	X	X	X		X			X	X			

GEOGRAPHICAL STATION #20

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	25	1	X	X	X	X	X	X		X	X							X		
CTD	25	2	X	X	X	X	X	X		X	X							X		
CTD	25	3	X	X	X	X	X	X		X	X							X		
CTD	25	4	X	X	X	X	X	X		X	X							X		
CTD	25	5	X	X		X	X	X		X	X							X		
CTD	25	6	X	X	X	X	X	X		X	X							X		
CTD	25	7	X	X		X	X	X		X	X							X		
CTD	25	8	X	X	X	X	X	X		X	X							X		
CTD	25	9	X	X	X	X	X	X		X	X							X		
CTD	25	10	X	X	X	X	X	X		X	X							X		
CTD	25	11	X	X	X	X	X	X		X	X							X		
CTD	25	12	X	X	X	X	X	X		X	X							X		
CTD	25	13	X	X	X	X	X	X		X	X							X		
CTD	25	14	X	X	X	X	X	X		X	X							X		
CTD	25	15	X	X	X	X	X	X		X	X							X		
CTD	25	16	X	X	X	X	X	X		X	X							X		
CTD	25	17	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	25	18	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	25	19	X	X		X	X	X		X	X		X		X	X	X	X		
CTD	25	20	X	X	X	X	X	X		X	X		X	X	X	X	X	X		
CTD	25	21	X	X		X	X	X		X	X		X		X	X	X	X		
CTD		22																		
CTD		23																		
CTD	25	24	X	X	X	X	X	X		X	X		X			X	X	X		

GEOGRAPHICAL STATION #21

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	26	1	X	X	X	X	X	X		X	X									
CTD	26	2	X	X	X	X	X	X		X	X									
CTD	26	3	X	X	X	X	X	X		X	X									
CTD	26	4	X	X	X	X	X	X		X	X									
CTD	26	5	X	X		X	X	X		X	X									
CTD	26	6	X	X	X	X	X	X		X	X									
CTD	26	7	X	X		X	X	X		X	X									
CTD	26	8	X	X	X	X	X	X		X	X									
CTD	26	9	X	X	X	X	X	X		X	X									
CTD	26	10	X	X	X	X	X	X		X	X									
CTD	26	11	X	X	X	X	X	X		X	X									
CTD	26	12	X	X	X	X	X	X		X	X									
CTD	26	13	X	X	X	X	X	X		X	X									
CTD	26	14	X	X	X	X	X	X		X	X									
CTD	26	15	X	X		X	X	X		X	X									
CTD	26	16	X	X	X	X	X	X		X	X									
CTD	26	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	26	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	26	19	X	X	X	X	X	X		X	X		X			X	X			
CTD	26	20	X	X	X	X	X	X		X	X		X			X	X			
CTD	26	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	26	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #22

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	27	1	X	X	X	X	X	X		X	X									
CTD	27	2	X	X	X	X	X	X		X	X									
CTD	27	3	X	X	X	X	X	X		X	X									
CTD	27	4	X	X	X	X	X	X		X	X									
CTD	27	5	X	X		X	X	X		X	X									
CTD	27	6	X	X	X	X	X	X		X	X									
CTD	27	7	X	X		X	X	X		X	X									
CTD	27	8	X	X	X	X	X	X		X	X									
CTD	27	9	X	X	X	X	X	X		X	X									
CTD	27	10	X	X	X	X	X	X		X	X									
CTD	27	11	X	X	X	X	X	X		X	X									
CTD	27	12	X	X	X	X	X	X		X	X									
CTD	27	13	X	X	X	X	X	X		X	X									
CTD	27	14	X	X	X	X	X	X		X	X									
CTD	27	15	X	X	X	X	X	X		X	X									
CTD	27	16	X	X	X	X	X	X		X	X									
CTD	27	17	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	27	18	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	27	19	X	X		X	X	X	X	X	X		X		X	X	X			
CTD	27	20	X	X	X	X	X	X	X	X	X		X	X	X	X	X			
CTD	27	21	X	X		X	X	X	X	X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	27	24	X	X	X	X	X	X	X	X	X		X			X	X			

GEOGRAPHICAL STATION #23

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	28	1	X	X	X	X	X	X		X	X									
CTD	28	2	X	X	X	X	X	X		X	X									
CTD	28	3	X	X	X	X	X	X		X	X									
CTD	28	4	X	X	X	X	X	X		X	X									
CTD	28	5	X	X		X	X	X		X	X									
CTD	28	6	X	X	X	X	X	X		X	X									
CTD	28	7	X	X		X	X	X		X	X									
CTD	28	8	X	X	X	X	X	X		X	X									
CTD	28	9	X	X	X	X	X	X		X	X									
CTD	28	10	X	X	X	X	X	X		X	X									
CTD	28	11	X	X	X	X	X	X		X	X									
CTD	28	12	X	X	X	X	X	X		X	X									
CTD	28	13	X	X	X	X	X	X		X	X									
CTD	28	14	X	X	X	X	X	X		X	X									
CTD	28	15	X	X	X	X	X	X		X	X									
CTD	28	16	X	X	X	X	X	X		X	X		X			X	X			
CTD	28	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	28	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	28	19	X	X		X	X	X		X	X		X		X	X	X			
CTD	28	20	X	X	X	X	X	X		X	X		X	X	X	X	X			
CTD	28	21	X	X		X	X	X		X	X				X					
CTD		22																		
CTD		23																		
CTD	28	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #24

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	29	1	X	X	X	X	X	X		X	X									
CTD	29	2	X	X	X	X	X	X		X	X									
CTD	29	3	X	X	X	X	X	X		X	X									
CTD	29	4	X	X	X	X	X	X		X	X									
CTD	29	5	X	X		X	X	X		X	X									
CTD	29	6	X	X	X	X	X	X		X	X									
CTD	29	7	X	X		X	X	X		X	X									
CTD	29	8	X	X	X	X	X	X		X	X									
CTD	29	9	X	X	X	X	X	X		X	X									
CTD	29	10	X	X	X	X	X	X		X	X									
CTD	29	11	X	X	X	X	X	X		X	X									
CTD	29	12	X	X	X	X	X	X		X	X									
CTD	29	13	X	X	X	X	X	X		X	X									
CTD	29	14	X	X	X	X	X	X		X	X									
CTD	29	15	X	X	X	X	X	X		X	X									
CTD	29	16	X	X	X	X	X	X		X	X									
CTD	29	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	29	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	29	19	X	X		X	X	X		X	X		X			X	X			
CTD	29	20				X							X							Fuite, mal fermée
CTD	29	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	29	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #25

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	30	1	X	X	X	X	X	X		X	X							X		
CTD	30	2	X	X	X	X	X	X		X	X							X		
CTD	30	3	X	X	X	X	X	X		X	X							X		
CTD	30	4	X	X	X	X	X	X		X	X							X		
CTD	30	5	X	X		X	X	X		X	X							X		
CTD	30	6	X	X	X	X	X	X		X	X							X		
CTD	30	7	X	X		X	X	X		X	X							X		
CTD	30	8	X	X	X	X	X	X		X	X							X		
CTD	30	9	X	X	X	X	X	X		X	X							X		
CTD	30	10	X	X	X	X	X	X		X	X							X		
CTD	30	11	X	X	X	X	X	X		X	X							X		
CTD	30	12	X	X	X	X	X	X		X	X							X		
CTD	30	13	X	X	X	X	X	X		X	X							X		
CTD	30	14	X	X	X	X	X	X		X	X							X		
CTD	30	15	X	X	X	X	X	X		X	X							X		
CTD	30	16	X	X	X	X	X	X		X	X							X		
CTD	30	17	X	X	X	X	X	X	X	X	X		X			X	X	X		
CTD	30	18	X	X	X	X	X	X	X				X			X	X	X		
CTD	30	19	X	X		X	X	X	X				X	X	X	X	X	X		
CTD	30	20	X	X	X	X	X	X	X				X	X	X	X	X	X		
CTD	30	21	X	X		X	X	X	X				X			X	X	X		
CTD		22																		
CTD		23																		
CTD	30	24	X	X	X	X	X	X	X				X	X	X	X	X	X		

GEOGRAPHICAL STATION #26

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	234Th	Comments
CTD	31	1	X	X	X	X	X	X		X	X									X	
CTD	31	2	X	X	X	X	X			X	X									X	
CTD	31	3	X	X	X	X	X	X		X	X										
CTD	31	4	X	X	X	X	X			X	X										
CTD	31	5	X	X		X	X	X		X	X										
CTD	31	6	X	X	X	X	X			X	X										
CTD	31	7	X	X		X	X	X		X	X										
CTD	31	8	X	X	X	X	X			X	X									X	
CTD	31	9	X	X	X	X	X	X		X	X										
CTD	31	10	X	X	X	X	X			X	X										
CTD	31	11	X	X	X	X	X	X		X	X										
CTD	31	12	X	X	X	X	X			X	X										
CTD	31	13	X	X	X	X	X	X		X	X										
CTD	31	14	X	X	X	X	X			X	X										
CTD	31	15	X	X	X	X	X	X		X	X										
CTD	31	16	X	X	X	X	X			X	X										
CTD	31	17	X	X	X	X	X	X		X	X		X			X	X				
CTD	31	18	X	X	X	X	X			X	X		X			X	X				
CTD	31	19	X	X		X	X	X		X	X		X			X	X				
CTD	31	20	X	X	X	X	X			X	X		X			X	X				
CTD	31	21	X	X		X	X	X		X	X		X			X	X				
CTD		22																			
CTD		23																			
CTD	31	24	X	X	X	X	X			X	X		X			X	X				

GEOGRAPHICAL STATION #27

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	32	1	X	X	X	X	X	X		X	X									
CTD	32	2	X	X	X	X	X	X		X	X									
CTD	32	3	X	X	X	X	X	X		X	X									
CTD	32	4	X	X	X	X	X			X	X									
CTD	32	5	X	X		X	X	X		X	X									
CTD	32	6	X	X	X	X	X	X		X	X									
CTD	32	7	X	X		X	X			X	X									
CTD	32	8	X	X	X	X	X	X		X	X									
CTD	32	9	X	X	X	X	X			X	X									
CTD	32	10	X	X	X	X	X	X		X	X									
CTD	32	11	X	X	X	X	X			X	X									
CTD	32	12	X	X	X	X	X	X		X	X									
CTD	32	13	X	X	X	X	X			X	X									
CTD	32	14	X	X	X	X	X	X		X	X									
CTD	32	15	X	X	X	X	X	X		X	X									
CTD	32	16	X	X	X	X	X	X		X	X									
CTD	32	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	32	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	32	19	X	X		X	X	X		X	X		X			X	X			
CTD	32	20	X	X	X	X	X	X		X	X		X		X	X	X			
CTD	32	21	X	X		X	X	X		X	X		X	X	X	X	X			
CTD		22																		
CTD		23																		
CTD	32	24	X	X	X	X	X	X		X	X		X		X	X	X			

GEOGRAPHICAL STATION #28

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	33	1	X	X	X	X	X	X		X	X									
CTD	33	2	X	X	X	X	X	X		X	X									
CTD	33	3	X	X	X	X	X	X		X	X									
CTD	33	4	X	X	X	X	X	X		X	X									
CTD	33	5	X	X		X	X	X		X	X									
CTD	33	6	X	X	X	X	X	X		X	X									
CTD	33	7	X	X		X	X	X		X	X									
CTD	33	8	X	X	X	X	X	X		X	X									
CTD	33	9	X	X	X	X	X	X		X	X									
CTD	33	10	X	X	X	X	X	X		X	X									
CTD	33	11	X	X	X	X	X	X		X	X									
CTD	33	12	X	X	X	X	X	X		X	X									
CTD	33	13	X	X	X	X	X	X		X	X									
CTD	33	14	X	X	X	X	X	X		X	X									
CTD	33	15	X	X	X	X	X	X		X	X									
CTD	33	16	X	X	X	X	X	X		X	X									
CTD	33	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	33	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	33	19	X	X		X	X	X		X	X		X			X	X			
CTD	33	20	X	X	X	X	X	X		X	X		X			X	X			
CTD	33	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	33	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #29

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	O2/Ar	
CTD	34	1	X	X	X	X	X	X		X	X							X			
CTD	34	2	X	X	X	X	X	X		X	X							X			
CTD	34	3	X	X	X	X	X	X		X	X							X			
CTD	34	4	X	X	X	X	X	X		X	X							X			
CTD	34	5	X	X		X	X	X		X	X							X			
CTD	34	6	X	X	X	X	X	X		X	X							X			
CTD	34	7	X	X		X	X	X		X	X							X			
CTD	34	8	X	X	X	X	X	X		X	X							X			
CTD	34	9	X	X	X	X	X	X		X	X							X			
CTD	34	10	X	X	X	X	X	X		X	X							X			
CTD	34	11	X	X	X	X	X	X		X	X							X			
CTD	34	12	X	X	X	X	X	X		X	X							X			
CTD	34	13	X	X	X	X	X	X		X	X							X			
CTD	34	14	X	X	X	X	X	X		X	X							X			
CTD	34	15	X	X	X	X	X	X		X	X							X			
CTD	34	16	X	X	X	X	X	X		X	X							X			
CTD	34	17	X	X	X	X	X	X	X	X	X		X			X	X	X			
CTD	34	18	X	X	X	X	X	X	X	X	X		X			X	X	X			
CTD	34	19	X	X		X	X	X	X	X	X		X			X	X	X			
CTD	34	20	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X			
CTD	34	21	X	X		X	X	X	X	X	X		X	X	X	X	X	X			
CTD		22																			
CTD		23																			
CTD	34	24	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	

GEOGRAPHICAL STATION #30

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	35	1	X	X	X	X	X	X		X	X									
CTD	35	2	X	X	X	X	X	X		X	X									
CTD	35	3	X	X	X	X	X	X		X	X									
CTD	35	4	X	X	X	X	X	X		X	X									
CTD	35	5	X	X		X	X	X		X	X									
CTD	35	6	X	X	X	X	X	X		X	X									
CTD	35	7	X	X		X	X	X		X	X									
CTD	35	8	X	X	X	X	X	X		X	X									
CTD	35	9	X	X	X	X	X	X		X	X									
CTD	35	10	X	X	X	X	X	X		X	X									
CTD	35	11	X	X	X	X	X	X		X	X									
CTD	35	12																		Bouteille non fermée
CTD	35	13	X	X	X	X	X	X		X	X									
CTD	35	14	X	X	X	X	X	X		X	X									
CTD	35	15	X	X	X	X	X	X		X	X									
CTD	35	16	X	X	X	X	X	X		X	X									
CTD	35	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	35	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	35	19	X	X		X	X	X		X	X		X			X	X			
CTD	35	20	X	X	X	X	X	X		X	X		X			X	X			
CTD	35	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	35	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #31		
CAST for PAR only, no fired bottle ==> no sampling		
Code instr.	Cast n°	Bottle n°
CTD	36	1
CTD	36	2
CTD	36	3
CTD	36	4
CTD	36	5
CTD	36	6
CTD	36	7
CTD	36	8
CTD	36	9
CTD	36	10
CTD	36	11
CTD	36	12
CTD	36	13
CTD	36	14
CTD	36	15
CTD	36	16
CTD	36	17
CTD	36	18
CTD	36	19
CTD	36	20
CTD	36	21
CTD		22
CTD		23
CTD	36	24

GEOGRAPHICAL STATION #31

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Cocco	Taxo	O2/Ar	Comments
CTD	37	1	X	X	X	X	X	X	X	X				X	X				
CTD	37	2	X	X	X	X	X	X	X	X					X				
CTD	37	3	X	X	X	X	X	X	X	X				X					
CTD	37	4	X	X	X	X	X	X	X	X									
CTD	37	5	X	X		X	X	X	X	X				X					
CTD	37	6	X	X	X	X	X	X	X	X									
CTD	37	7	X	X		X	X	X	X	X				X					
CTD	37	8	X	X	X	X	X	X	X	X				X					
CTD	37	9	X	X	X	X	X	X	X	X									
CTD	37	10	X	X	X	X	X	X	X	X				X	X				
CTD	37	11	X	X	X	X	X	X	X	X					X				
CTD	37	12	X	X	X	X	X	X	X	X				X	X				
CTD	37	13	X	X	X	X	X	X	X	X					X				
CTD	37	14	X	X	X	X	X	X	X	X				X	X				
CTD	37	15	X	X	X	X	X	X	X	X				X					
CTD	37	16	X	X	X	X	X	X	X	X				X	X				
CTD	37	17	X	X	X	X	X	X	X	X				X					
CTD	37	18	X	X	X	X	X	X	X	X				X					
CTD	37	19	X	X		X	X	X	X	X				X					
CTD	37	20	X	X	X	X	X	X	X	X						X			
CTD	37	21	X	X		X	X	X	X	X					X	X	X		30Si dissous: prelevement commun sur les btl 20,21 et 24
CTD		22												X					
CTD		23																	
CTD	37	24	X	X	X	X	X	X	X	X					X	X		X	

GEOGRAPHICAL STATION #31

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC/PIC	Cocco	Taxo	Bore	IncSi	Comments
CTD	38	1			X	X	X		X	X	X	X	X					
CTD	38	2			X	X	X		X	X	X	X	X					
CTD	38	3			X	X	X		X	X	X	X	X					
CTD	38	4			X	X	X		X	X	X	X	X					
CTD	38	5			X	X	X		X	X	X	X	X					
CTD	38	6			X	X	X		X	X	X	X	X					
CTD	38	7															X	
CTD	38	8																
CTD	38	9			X	X	X		X	X	X	X	X					
CTD	38	10	X	X				X										
CTD	38	11			X	X	X		X	X	X	X	X					
CTD	38	12			X	X	X		X	X	X	X	X					
CTD	38	13	X					X										
CTD	38	14			X	X	X		X	X	X	X	X					
CTD	38	15															X	
CTD	38	16																
CTD	38	17	X	X				X										
CTD	38	18			X	X	X		X	X	X	X	X					
CTD	38	19															X	
CTD	38	20																
CTD	38	21						X										
CTD		22																
CTD		23																
CTD	38	24	X	X				X										

GEOGRAPHICAL STATION #32

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	39	1	X	X	X	X	X	X		X	X									
CTD	39	2	X	X	X	X	X	X		X	X									
CTD	39	3	X	X	X	X	X	X		X	X									
CTD	39	4	X	X	X	X	X	X		X	X									
CTD	39	5	X	X		X	X	X		X	X									
CTD	39	6	X	X	X	X	X	X		X	X									
CTD	39	7	X	X		X	X	X		X	X									
CTD	39	8	X	X	X	X	X	X		X	X									
CTD	39	9	X	X	X	X	X	X		X	X									
CTD	39	10	X	X	X	X	X	X		X	X									
CTD	39	11	X	X	X	X	X	X		X	X									
CTD	39	12	X	X	X	X	X	X		X	X									
CTD	39	13	X	X	X	X	X	X		X	X									
CTD	39	14	X	X	X	X	X	X		X	X									
CTD	39	15	X	X	X	X	X	X		X	X									
CTD	39	16	X	X	X	X	X	X		X	X									
CTD	39	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	39	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	39	19	X	X		X	X	X		X	X		X		X	X	X			
CTD	39	20	X	X	X	X	X	X		X	X		X		X	X	X			
CTD	39	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	39	24	X	X	X	X	X	X		X	X		X		X	X	X			

GEOGRAPHICAL STATION #33

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	40	1	X	X	X	X	X	X		X	X									
CTD	40	2	X	X	X	X	X	X		X	X									
CTD	40	3	X	X	X	X	X	X		X	X									
CTD	40	4	X	X	X	X	X	X		X	X									
CTD	40	5	X	X		X	X	X		X	X									
CTD	40	6	X	X	X	X	X	X		X	X									
CTD	40	7	X	X		X	X	X		X	X									
CTD	40	8	X	X	X	X	X	X		X	X									
CTD	40	9	X	X	X	X	X	X		X	X									
CTD	40	10	X	X	X	X	X	X		X	X									
CTD	40	11	X	X	X	X	X	X		X	X									
CTD	40	12	X	X	X	X	X	X		X	X									
CTD	40	13	X	X	X	X	X	X		X	X									
CTD	40	14	X	X	X	X	X	X		X	X									
CTD	40	15	X	X	X	X	X	X		X	X									
CTD	40	16	X	X	X	X	X	X		X	X									
CTD	40	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	40	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	40	19	X	X		X	X	X		X	X		X			X	X			
CTD	40	20	X	X	X	X	X	X		X	X		X			X	X			
CTD	40	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	40	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #34

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	14C POC & DOC	14C DIC	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Taxo	Cocco	Octopus	Comments
CTD	41	1	X	X	X	X	X	X		X	X	X			X	X	X				
CTD	41	2	X	X	X	X	X	X	X	X	X	X		X	X		X				
CTD	41	3	X	X	X	X	X	X		X	X	X			X	X					
CTD	41	4	X	X	X	X	X	X			X	X			X	X					
CTD	41	5	X	X		X	X	X	X	X	X	X		X	X						
CTD	41	6	X	X	X	X	X	X		X	X	X			X	X					
CTD	41	7	X	X		X	X	X	X	X	X	X		X	X	X					
CTD	41	8	X	X	X	X	X	X		X	X	X			X	X					
CTD	41	9	X	X	X	X	X	X	X	X	X	X		X	X						
CTD	41	10	X	X	X	X	X	X			X	X			X	X	X				
CTD	41	11	X	X	X	X	X	X		X	X	X		X	X		X				
CTD	41	12	X	X	X	X	X	X	X	X	X	X		X	X	X					
CTD	41	13	X	X	X	X	X	X		X	X	X		X	X		X				
CTD	41	14	X	X	X	X	X	X		X	X	X			X		X				
CTD	41	15	X	X	X	X	X	X	X	X	X	X		X	X		X				
CTD	41	16	X	X	X	X	X	X	X	X	X	X		X	X		X				
CTD	41	17	X	X	X	X	X	X		X	X	X		X	X						
CTD	41	18	X	X	X	X	X	X	X	X	X	X			X						
CTD	41	19	X	X		X	X	X		X	X	X		X	X				X		
CTD	41	20	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X		
CTD	41	21	X	X		X	X	X		X	X	X		X	X				X		
CTD		22																			
CTD		23																			
CTD	41	24	X	X	X	X	X	X	X	X	X	X		X	X		X				

GEOGRAPHICAL STATION #34					
Code instr.	Cast n°	Bottle n°	O2	REE, Nd,Pa,230Th	Comments
CTD	42	1	X		
CTD	42	2		X	
CTD	42	3	X		
CTD	42	4		X	
CTD	42	5	X		
CTD	42	6		X	
CTD	42	7	X		
CTD	42	8		X	
CTD	42	9	X		
CTD	42	10		X	
CTD	42	11	X		
CTD	42	12		X	
CTD	42	13			
CTD	42	14	X	X	
CTD	42	15	X		
CTD	42	16		X	
CTD	42	17			
CTD	42	18	X	X	
CTD	42	19	X		
CTD	42	20		X	
CTD	42	21	X	X	REE, Nd,Pa,Th prélevés sur Btl21&24
CTD		22			
CTD		23			
CTD	42	24		X	Btl21et 24: meme échantillon

GEOGRAPHICAL STATION #34

Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	210Po	234Th	Ra	O2/Ar	Comments
CTD	43	1	X	X	X	X			
CTD	43	2			X	X			
CTD	43	3	X	X	X	X			
CTD	43	4			X	X			
CTD	43	5					X		
CTD	43	6							
CTD	43	7	X	X	X	X			
CTD	43	8			X	X			
CTD	43	9	X	X	X	X			
CTD	43	10			X	X			
CTD	43	11			X	X			
CTD	43	12	X	X	X	X			
CTD	43	13			X	X			
CTD	43	14			X	X			
CTD	43	15			X	X			
CTD	43	16	X	X	X	X			
CTD	43	17			X	X			
CTD	43	18			X	X			
CTD	43	19	X	X	X	X			
CTD	43	20			X	X			
CTD	43	21			X	X			
CTD		22							
CTD		23							
CTD	43	24	X	X	X	X		X	

GEOGRAPHICAL STATION #34											
Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	Ba dissous	Ba particulaire	30Si dissous	30BSi dissous	Ra	234Th	Comments
CTD	44	1							X	XX	234Th: 2 échantillons
CTD	44	2	X	X							
CTD	44	3	X	X	X	X	X				
CTD	44	4			X	X					
CTD	44	5	X	X	X	X	X				
CTD	44	6			X	X					
CTD	44	7	X	X	X	X	X				
CTD	44	8			X	X					
CTD	44	9			X	X					
CTD	44	10			X	X					
CTD	44	11	X	X	X	X	X				
CTD	44	12			X	X					
CTD	44	13			X	X	X				
CTD	44	14			X	X					
CTD	44	15	X	X	X	X	X				
CTD	44	16			X	X					
CTD	44	17	X	X	X	X	X				
CTD	44	18			X	X					
CTD	44	19	X	X	X	X	X				
CTD	44	20			X	X	X	X			
CTD	44	21			X	X	X	X			
CTD		22									
CTD		23									
CTD	44	24	X	X	X	X	X	X			

GEOGRAPHICAL STATION #34

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC	PIC	Cocco	Taxo	IncSi (D+R)	IncSi (D)	Comments
CTD	45	1			X	X	X		X	X	X	X	X	X					
CTD	45	2			X	X	X		X	X	X	X	X	X					
CTD	45	3			X	X	X		X	X	X	X	X	X					
CTD	45	4			X	X	X		X	X	X	X	X	X	X				
CTD	45	5																	
CTD	45	6															X		
CTD	45	7																	
CTD	45	8	X	X				X											
CTD	45	9			X	X	X		X	X	X	X	X	X	X	X			
CTD	45	10	X					X											
CTD	45	11			X	X	X		X	X	X	X	X	X	X				
CTD	45	12																X	
CTD	45	13																	
CTD	45	14	X	X				X											
CTD	45	15			X	X	X		X	X	X	X	X	X					
CTD	45	16	X					X											
CTD	45	17			X	X	X		X	X	X	X	X	X					
CTD	45	18			X	X	X		X	X	X	X	X	X					
CTD	45	19																	
CTD	45	20															X		
CTD	45	21																	
CTD		22																	
CTD		23																	
CTD	45	24	X	X				X											

GEOGRAPHICAL STATION #35

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	
CTD	46	1	X	X	X	X	X	X		X	X								
CTD	46	2	X	X	X	X	X	X		X	X								
CTD	46	3	X	X	X	X	X	X		X	X								
CTD	46	4	X	X	X	X	X	X		X	X								
CTD	46	5	X	X		X	X	X		X	X								
CTD	46	6	X	X	X	X	X	X		X	X								
CTD	46	7	X	X		X	X	X		X	X								
CTD	46	8	X	X	X	X	X	X		X	X								
CTD	46	9	X	X	X	X	X	X		X	X								
CTD	46	10	X	X	X	X	X	X		X	X								
CTD	46	11	X	X	X	X	X	X		X	X								
CTD	46	12	X	X	X	X	X	X		X	X								
CTD	46	13	X	X	X	X	X	X		X	X								
CTD	46	14	X	X	X	X	X	X		X	X								
CTD	46	15	X	X	X	X	X	X		X	X								
CTD	46	16	X	X	X	X	X	X		X	X								
CTD	46	17	X	X	X	X	X	X		X	X		X			X	X		
CTD	46	18	X	X	X	X	X	X		X	X		X			X	X		
CTD	46	19	X	X		X	X	X		X	X		X			X	X		
CTD	46	20	X	X	X	X	X	X		X	X		X			X	X		
CTD	46	21	X	X		X	X	X		X	X		X			X	X		
CTD		22																	
CTD		23																	
CTD	46	24	X	X	X	X	X	X		X	X		X			X	X		

GEOGRAPHICAL STATION #36

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	
CTD	47	1	X	X	X	X	X	X		X	X							X		
CTD	47	2	X	X		X	X	X		X	X							X		
CTD	47	3	X	X	X	X	X	X		X	X							X		
CTD	47	4	X	X	X	X	X	X		X	X							X		
CTD	47	5	X	X	X	X	X	X		X	X							X		
CTD	47	6	X	X	X	X	X	X		X	X							X		
CTD	47	7	X	X	X	X	X	X		X	X							X		
CTD	47	8	X	X	X	X	X	X		X	X							X		
CTD	47	9	X	X	X	X	X	X		X	X							X		
CTD	47	10	X	X	X	X	X	X		X	X							X		
CTD	47	11	X	X	X	X	X	X		X	X							X		
CTD	47	12	X	X	X	X	X	X		X	X							X		
CTD	47	13	X	X		X	X	X		X	X							X		
CTD	47	14	X	X	X	X	X	X		X	X							X		
CTD	47	15	X	X		X	X	X		X	X							X		
CTD	47	16	X	X		X	X	X		X	X							X		
CTD	47	17	X	X		X	X	X		X	X		X			X	X	X		
CTD	47	18	X	X		X	X	X		X	X		X			X	X	X		
CTD	47	19	X	X	X	X	X	X		X	X		X		X	X	X	X		
CTD	47	20	X	X		X	X	X		X	X		X		X	X	X	X		
CTD	47	21	X	X		X	X	X		X	X		X		X	X	X	X		
CTD		22																		
CTD		23																		
CTD	47	24	X	X	X	X	X	X		X	X		X			X	X	X		

GEOGRAPHICAL STATION #37

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	48	1	X	X	X					X	X									
CTD	48	2	X	X	X					X	X									Fermeture très douteuse
CTD	48	3	X	X	X					X	X									
CTD	48	4	X	X	X					X	X									
CTD	48	5	X	X						X	X									
CTD	48	6	X	X	X					X	X									
CTD	48	7	X	X						X	X									
CTD	48	8	X	X	X					X	X									
CTD	48	9	X	X	X					X	X									
CTD	48	10	X	X	X					X	X									
CTD	48	11	X	X	X					X	X									
CTD	48	12	X	X	X					X	X									
CTD	48	13	X	X	X					X	X									
CTD	48	14	X	X	X					X	X									
CTD	48	15	X	X	X					X	X									
CTD	48	16	X	X	X					X	X									
CTD	48	17	X	X	X					X	X									
CTD	48	18	X	X	X					X	X									
CTD	48	19	X	X						X	X									
CTD	48	20	X	X	X					X	X									
CTD	48	21	X	X						X	X									
CTD		22																		
CTD		23																		
CTD	48	24	X	X	X					X	X									

GEOGRAPHICAL STATION #38

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK &pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	O2/Ar	
CTD	49	1	X	X	X	X	X	X		X	X	X									
CTD	49	2	X	X	X	X	X	X		X	X	X									
CTD	49	3	X	X	X	X	X	X		X	X	X									
CTD	49	4	X	X	X	X	X	X		X	X	X									
CTD	49	5	X	X		X	X	X		X	X	X									
CTD	49	6	X	X	X	X	X	X		X	X	X									
CTD	49	7	X	X		X	X	X		X	X	X									
CTD	49	8	X	X	X	X	X	X		X	X	X									
CTD	49	9	X	X	X	X	X	X		X	X	X									
CTD	49	10	X	X	X	X	X	X		X	X	X									
CTD	49	11	X	X	X	X	X	X		X	X	X									
CTD	49	12	X	X	X	X	X	X		X	X	X									
CTD	49	13	X	X	X	X	X	X		X	X	X									
CTD	49	14	X	X	X	X	X	X		X	X	X									
CTD	49	15	X	X	X	X	X	X		X	X	X									
CTD	49	16	X	X	X	X	X	X		X	X	X									
CTD	49	17	X	X	X	X	X	X	X	X	X	X	X			X	X				
CTD	49	18	X	X	X	X	X	X	X	X	X	X	X			X	X				
CTD	49	19	X	X		X	X	X	X	X	X	X	X		X	X	X				
CTD	49	20	X	X	X	X	X	X	X	X	X	X	X		X	X	X				
CTD	49	21	X	X		X	X	X	X	X	X	X	X		X	X	X				
CTD		22																			
CTD		23																			
CTD	49	24	X	X	X	X	X	X	X	X	X	X	X			X	X			X	

GEOGRAPHICAL STATION #39

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	B Si	O2/Ar	
CTD	50	1	X	X	X	X	X	X		X	X									X		
CTD	50	2	X	X		X	X	X		X	X									X		
CTD	50	3	X	X	X	X	X	X		X	X											
CTD	50	4	X	X		X	X	X		X	X											
CTD	50	5	X	X	X	X	X	X		X	X											
CTD	50	6	X	X	X	X	X	X		X	X											
CTD	50	7	X	X	X	X	X	X		X	X											
CTD	50	8	X	X	X	X	X	X		X	X											
CTD	50	9	X	X	X	X	X	X		X	X									X		
CTD	50	10	X	X	X	X	X	X		X	X									X		
CTD	50	11	X	X	X	X	X	X		X	X											
CTD	50	12	X	X	X	X	X	X		X	X									X		
CTD	50	13	X	X	X	X	X	X		X	X									X		
CTD	50	14	X	X	X	X	X	X		X	X									X		
CTD	50	15	X	X	X	X	X	X		X	X											
CTD	50	16	X	X		X	X	X		X	X									X		
CTD	50	17	X	X	X	X	X	X		X	X											
CTD	50	18	X	X		X	X	X		X	X											
CTD	50	19	X	X		X	X	X		X	X											
CTD	50	20	X	X	X	X	X	X		X	X				X							
CTD	50	21	X	X		X	X	X		X	X				X					X		
CTD		22																				
CTD		23																				
CTD	50	24	X	X	X	X	X	X		X	X				X					X	X	

GEOGRAPHICAL STATION #40

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	B Si	Comments
CTD	51	1	X	X	X	X	X	X		X	X										
CTD	51	2	X	X	X	X	X	X		X	X										
CTD	51	3	X	X	X	X	X	X		X	X										
CTD	51	4	X	X	X	X	X	X		X	X										
CTD	51	5																			Bouteille vide
CTD	51	6	X	X	X	X	X	X		X	X										
CTD	51	7	X	X		X	X	X		X	X										
CTD	51	8	X	X	X	X	X	X		X	X										
CTD	51	9	X	X	X	X	X	X		X	X										
CTD	51	10	X	X	X	X	X	X		X	X										
CTD	51	11																			Btl décrochée, robinet changé
CTD	51	12	X	X	X	X	X	X		X	X										
CTD	51	13	X	X	X	X	X	X		X	X										
CTD	51	14	X	X	X	X	X	X		X	X										
CTD	51	15	X	X	X	X	X	X		X	X										
CTD	51	16	X	X	X	X	X	X		X	X										
CTD	51	17	X	X	X	X	X	X		X	X										
CTD	51	18	X	X	X	X	X	X		X	X										
CTD	51	19	X	X		X	X	X		X	X										
CTD	51	20	X	X	X	X	X	X		X	X										
CTD	51	21	X	X		X	X	X		X	X										
CTD		22																			
CTD		23																			
CTD	51	24	X	X	X	X	X	X		X	X										

GEOGRAPHICAL STATION #41

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC/PIC	Cocco	Taxo	Bore	IncSi	Comments
CTD	52	1			X	X	X		X	X	X	X	X					
CTD	52	2			X	X	X		X	X	X	X	X					
CTD	52	3			X	X	X		X	X	X	X	X					
CTD	52	4			X	X	X		X	X	X	X	X					
CTD	52	5			X	X	X		X	X	X	X	X					
CTD	52	6			X	X	X		X	X	X	X	X	X				
CTD	52	7	X	X				X										
CTD	52	8													X			
CTD	52	9															X	
CTD	52	10																
CTD	52	11			X	X	X		X	X	X	X	X	X				
CTD	52	12	X	X				X										
CTD	52	13			X	X	X		X	X	X	X	X					
CTD	52	14																
CTD	52	15																
CTD	52	16															X	
CTD	52	17																
CTD	52	18															X	
CTD	52	19																
CTD	52	20						X										
CTD	52	21						X										
CTD		22																
CTD		23																
CTD	52	24	X	X				X										

GEOGRAPHICAL STATION #41

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	234Th	Comments
CTD	53	1	X	X	X	X	X	X	X	X			X	X	X		
CTD	53	2	X	X	X	X	X	X	X	X			X	X	X	X	
CTD	53	3	X	X	X	X	X	X	X	X			X				
CTD	53	4	X	X	X	X	X	X	X	X			X	X			
CTD	53	5	X	X		X	X	X	X	X			X				
CTD	53	6	X	X	X	X	X	X	X	X			X	X		X	
CTD	53	7	X	X		X	X	X	X	X			X				
CTD	53	8	X	X	X	X	X	X	X	X			X	X			
CTD	53	9	X	X	X	X	X	X	X	X			X				
CTD	53	10	X	X	X	X	X	X	X	X			X	X	X	X	
CTD	53	11	X	X	X	X	X	X	X	X			X		X		
CTD	53	12	X	X	X	X	X	X	X	X			X	X			
CTD	53	13	X	X	X	X	X	X	X	X			X	X	X		
CTD	53	14	X	X	X	X	X	X	X	X			X		X	X	
CTD	53	15	X	X	X	X	X	X	X	X			X		X		
CTD	53	16	X	X	X	X	X	X	X	X			X		X	X	
CTD	53	17	X	X	X	X	X	X	X	X			X			X	
CTD	53	18	X	X	X	X	X	X	X	X			X			X	
CTD	53	19	X	X		X	X	X	X	X			X			X	
CTD	53	20	X	X	X	X	X	X	X	X			X			X	
CTD	53	21	X	X		X	X	X	X	X			X		X	X	
CTD		22															
CTD		23															
CTD	53	24	X	X	X	X	X	X	X	X			X		X	X	

GEOGRAPHICAL STATION #41

Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	210Po	Ba	30Si dissous	Ra	Comments
CTD	54	1		X	X	X			
CTD	54	2			X	X			
CTD	54	3		X	X	X			
CTD	54	4			X	X			
CTD	54	5		X	X	X			
CTD	54	6						X	
CTD	54	7							
CTD	54	8			X	X			
CTD	54	9			X	X			
CTD	54	10			X	X			
CTD	54	11		X	X	X	X		
CTD	54	12			X	X			
CTD	54	13			X	X	X		
CTD	54	14			X	X			
CTD	54	15		X	X	X	X		
CTD	54	16			X	X			
CTD	54	17			X	X	X		
CTD	54	18			X	X			
CTD	54	19		X	X	X	X		
CTD	54	20			X	X	X		
CTD	54	21			X	X	X		
CTD		22							
CTD		23							
CTD	54	24		X	X	X	X		

GEOGRAPHICAL STATION #42

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	55	1	X	X	X	X	X	X		X	X	X								
CTD	55	2	X	X	X	X	X	X		X	X	X								
CTD	55	3	X	X	X	X	X	X		X	X	X								
CTD	55	4	X	X	X	X	X	X		X	X	X								
CTD	55	5	X	X		X	X	X		X	X	X								
CTD	55	6	X	X	X	X	X	X		X	X	X								
CTD	55	7	X	X		X	X	X		X	X	X								
CTD	55	8	X	X	X	X	X	X		X	X	X								
CTD	55	9	X	X	X	X	X	X		X	X	X								
CTD	55	10	X	X	X	X	X	X		X	X	X								
CTD	55	11	X	X	X	X	X	X		X	X	X								Bouteille décrochée
CTD	55	12	X	X	X	X	X	X		X	X	X								
CTD	55	13	X	X		X	X	X		X	X	X								
CTD	55	14	X	X	X	X	X	X		X	X	X								
CTD	55	15	X	X	X	X	X	X		X	X	X								
CTD	55	16	X	X	X	X	X	X		X	X	X								
CTD	55	17	X	X	X	X	X	X		X	X	X	X			X	X			
CTD	55	18	X	X	X	X	X	X		X	X	X	X			X	X			
CTD	55	19	X	X		X	X	X		X	X	X	X		X	X	X			
CTD	55	20	X	X	X	X	X	X		X	X	X	X		X	X	X			
CTD	55	21	X	X		X	X	X		X	X	X	X		X	X	X			
CTD		22																		
CTD		23																		
CTD	55	24	X	X	X	X	X	X		X	X	X	X			X	X			

GEOGRAPHICAL STATION #43

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	56	1	X	X	X	X	X	X		X	X									
CTD	56	2	X	X	X	X	X	X		X	X									
CTD	56	3	X	X	X	X	X	X		X	X									
CTD	56	4	X	X	X	X	X	X		X	X									
CTD	56	5	X	X		X	X	X		X	X									
CTD	56	6	X	X	X	X	X	X		X	X									
CTD	56	7	X	X		X	X	X		X	X									
CTD	56	8	X	X	X	X	X	X		X	X									
CTD	56	9	X	X	X	X	X	X		X	X									
CTD	56	10	X	X	X	X	X	X		X	X									
CTD	56	11	X	X	X	X	X	X		X	X									
CTD	56	12	X	X	X	X	X	X		X	X									
CTD	56	13	X	X	X	X	X	X		X	X									
CTD	56	14	X	X	X	X	X	X		X	X									
CTD	56	15	X	X	X	X	X	X		X	X									
CTD	56	16	X	X	X	X	X	X		X	X									
CTD	56	17	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	56	18	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	56	19	X	X		X	X	X	X	X	X		X		X	X	X			
CTD	56	20	X	X	X	X	X	X	X	X	X		X	X	X	X	X			
CTD	56	21	X	X		X	X	X	X	X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	56	24	X	X	X	X	X	X	X	X	X		X			X	X			

GEOGRAPHICAL STATION #44

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Comments
CTD	57	1	X	X	X	X	X	X	X	X			X	X	X	
CTD	57	2	X	X	X	X	X	X	X	X		X	X		X	
CTD	57	3	X	X	X	X	X	X	X	X			X	X		
CTD	57	4	X	X	X	X	X	X	X	X		X	X			
CTD	57	5	X	X		X	X	X	X	X			X	X		
CTD	57	6	X	X	X	X	X	X	X	X		X	X			
CTD	57	7	X	X		X	X	X	X	X			X	X		
CTD	57	8	X	X	X	X	X	X	X	X			X			
CTD	57	9	X	X	X	X	X	X	X	X		X	X	X	X	
CTD	57	10	X	X	X	X	X	X	X	X			X		X	
CTD	57	11	X	X	X	X	X	X	X	X			X	X		
CTD	57	12	X	X	X	X	X	X	X	X		X	X		X	
CTD	57	13	X	X	X	X	X	X	X	X		X	X			
CTD	57	14	X	X	X	X	X	X	X	X		X	X	X	X	
CTD	57	15	X	X	X	X	X	X	X	X		X	X	X	X	
CTD	57	16	X	X	X	X	X	X	X	X		X	X	X	X	
CTD	57	17	X	X	X	X	X	X	X	X		X	X	X		
CTD	57	18	X	X	X	X	X	X	X	X		X	X	X		
CTD	57	19	X	X		X	X	X	X	X		X	X	X		
CTD	57	20	X	X	X	X	X	X	X	X		X	X	X		
CTD	57	21	X	X		X	X	X	X	X			X	X	X	
CTD		22														
CTD		23														
CTD	57	24	X	X	X	X	X	X	X	X		X	X	X	X	

GEOGRAPHICAL STATION #44

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC/PIC	Cocco	Taxo	Bore	IncSi	234Th	Comments
CTD	58	1			X	X	X		X	X	X	X	X					X	
CTD	58	2			X	X	X		X	X	X	X	X					X	
CTD	58	3			X	X	X		X	X	X	X	X					X	
CTD	58	4			X	X	X		X	X	X	X	X					X	
CTD	58	5			X	X	X		X	X	X	X	X	X				X	
CTD	58	6			X	X	X		X	X	X	X	X					X	
CTD	58	7															X		
CTD	58	8																	
CTD	58	9			X	X	X		X	X	X	X	X	X	X			X	
CTD	58	10	X	X				X											
CTD	58	11															X		
CTD	58	12																	
CTD	58	13	X	X				X										X	
CTD	58	14						X											
CTD	58	15			X	X	X		X	X	X	X	X						
CTD	58	16												X					
CTD	58	17															X		
CTD	58	18																	
CTD	58	19	X	X				X										X	
CTD	58	20						X											
CTD	58	21																	
CTD		22																	
CTD		23																	
CTD	58	24			X	X	X		X	X	X	X	X						

GEOGRAPHICAL STATION #45

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	59	1	X	X	X	X	X	X		X	X									
CTD	59	2	X	X	X	X	X	X		X	X									
CTD	59	3	X	X	X	X	X	X		X	X									
CTD	59	4	X	X	X	X	X	X		X	X									
CTD	59	5	X	X		X	X	X		X	X									
CTD	59	6	X	X	X	X	X	X		X	X									
CTD	59	7	X	X		X	X	X		X	X									
CTD	59	8	X	X	X	X	X	X		X	X									
CTD	59	9	X	X	X	X	X	X		X	X									
CTD	59	10	X	X	X	X	X	X		X	X									
CTD	59	11	X	X	X	X	X	X		X	X									
CTD	59	12	X	X	X	X	X	X		X	X									
CTD	59	13	X	X	X	X	X	X		X	X									
CTD	59	14	X	X	X	X	X	X		X	X									
CTD	59	15	X	X	X	X	X	X		X	X									
CTD	59	16	X	X	X	X	X	X		X	X									
CTD	59	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	59	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	59	19	X	X		X	X	X		X	X		X		X	X	X			
CTD	59	20	X	X	X	X	X	X		X	X		X		X	X	X			
CTD	59	21	X	X		X	X	X		X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	59	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #46

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	60	1	X	X	X	X	X	X		X	X									
CTD	60	2	X	X	X	X	X	X		X	X									
CTD	60	3	X	X	X	X	X	X		X	X									
CTD	60	4	X	X	X	X	X	X		X	X									
CTD	60	5	X	X		X	X	X		X	X									
CTD	60	6	X	X	X	X	X	X		X	X									
CTD	60	7	X	X		X	X	X		X	X									
CTD	60	8	X	X	X	X	X	X		X	X									
CTD	60	9	X	X	X	X	X	X		X	X									
CTD	60	10	X	X	X	X	X	X		X	X									
CTD	60	11	X	X	X	X	X	X		X	X									
CTD	60	12	X	X	X	X	X	X		X	X									
CTD	60	13	X	X	X	X	X	X		X	X									
CTD	60	14	X	X	X	X	X	X		X	X									
CTD	60	15	X	X	X	X	X	X		X	X									
CTD	60	16	X	X	X	X	X	X		X	X									
CTD	60	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	60	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	60	19	X	X		X	X	X		X	X		X			X	X			
CTD	60	20	X	X	X	X	X	X		X	X		X			X	X			
CTD	60	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	60	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #47

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	61	1	X	X	X	X	X	X		X	X									
CTD	61	2	X	X	X	X	X	X		X	X									
CTD	61	3	X	X	X	X	X	X		X	X									
CTD	61	4	X	X	X	X	X	X		X	X									
CTD	61	5	X	X		X	X	X		X	X									
CTD	61	6	X	X	X	X	X	X		X	X									
CTD	61	7	X	X		X	X	X		X	X									
CTD	61	8	X	X	X	X	X	X		X	X									
CTD	61	9	X	X	X	X	X	X		X	X									
CTD	61	10	X	X	X	X	X	X		X	X									
CTD	61	11	X	X	X	X	X	X		X	X									
CTD	61	12	X	X	X	X	X	X		X	X									
CTD	61	13	X	X	X	X	X	X		X	X									
CTD	61	14	X	X	X	X	X	X		X	X									
CTD	61	15	X	X	X	X	X	X		X	X									
CTD	61	16	X	X	X	X	X	X		X	X									
CTD	61	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	61	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	61	19	X	X		X	X	X		X	X		X			X	X			
CTD	61	20	X	X	X	X	X	X		X	X		X			X	X			
CTD	61	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	61	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #48

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC	PIC	Cocco	Taxo	IncSi (D+R)	IncSi (D)	Th	Comments
CTD	62	1			X	X	X		X	X	X	X	X	X						
CTD	62	2			X	X	X		X	X	X	X	X	X						
CTD	62	3			X	X	X		X	X	X	X	X	X	X					
CTD	62	4			X	X	X		X	X	X	X	X	X						
CTD	62	5			X	X	X		X	X	X	X	X	X	X	X				
CTD	62	6			X	X	X		X	X	X	X	X	X	X					
CTD	62	7																		
CTD	62	8															X			
CTD	62	9																		
CTD	62	10	X	X				X												
CTD	62	11	X					X												
CTD	62	12			X	X	X		X	X	X	X	X	X						
CTD	62	13																X		
CTD	62	14																		
CTD	62	15	X	X				X												
CTD	62	16			X	X	X		X	X	X	X	X	X						
CTD	62	17																		
CTD	62	18															X			
CTD	62	19																		
CTD	62	20						X												
CTD	62	21		X				X												
CTD		22																		
CTD		23																		
CTD	62	24			X	X	X		X	X	X	X	X	X						

GEOGRAPHICAL STATION #48

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	14C POC & DOC	14C DIC	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Octopus	Comments
CTD	63	1	X	X	X	X	X	X		X	X	X			X	X	X		
CTD	63	2	X	X	X	X	X	X			X	X			X	X	X		
CTD	63	3	X	X	X	X	X	X	X	X	X	X		X	X	X			
CTD	63	4	X	X	X	X	X	X			X	X			X				
CTD	63	5	X	X		X	X	X		X	X	X			X	X			
CTD	63	6	X	X	X	X	X	X	X	X	X	X		X	X				
CTD	63	7	X	X		X	X	X		X	X	X			X	X			
CTD	63	8	X	X	X	X	X	X		X	X	X			X				
CTD	63	9	X	X	X	X	X	X		X	X	X			X	X	X		
CTD	63	10	X	X	X	X	X	X	X	X	X	X		X	X	X			
CTD	63	11	X	X	X	X	X	X		X	X	X			X		X		
CTD	63	12	X	X	X	X	X	X	X	X	X	X		X	X	X			
CTD	63	13	X	X	X	X	X	X	X	X	X	X		X	X		X		
CTD	63	14	X	X	X	X	X	X		X	X	X		X	X		X		
CTD	63	15	X	X	X	X	X	X	X	X	X	X		X	X		X		
CTD	63	16	X	X	X	X	X	X	X	X	X	X		X	X		X		
CTD	63	17	X	X	X	X	X	X		X	X	X		X	X				
CTD	63	18	X	X	X	X	X	X	X	X	X	X		X	X				
CTD	63	19	X	X		X	X	X		X	X	X		X	X				
CTD	63	20	X	X	X	X	X	X	X	X	X	X		X	X				
CTD	63	21	X	X		X	X	X		X	X	X		X	X		X		
CTD		22																	
CTD		23																	
CTD	63	24	X	X	X	X	X	X	X	X	X	X		X	X		X		

GEOGRAPHICAL STATION #48					
Code instr.	Cast n°	Bottle n°	O2	REE, Nd,Pa,230Th	Comments
CTD	64	1	X	X	
CTD	64	2			
CTD	64	3	X	X	
CTD	64	4			
CTD	64	5	X	X	
CTD	64	6			
CTD	64	7		X	
CTD	64	8			
CTD	64	9	X	X	
CTD	64	10			
CTD	64	11	X	X	
CTD	64	12			
CTD	64	13	X	X	
CTD	64	14			
CTD	64	15	X	X	
CTD	64	16			
CTD	64	17	X	X	
CTD	64	18			
CTD	64	19	X	X	
CTD	64	20			
CTD	64	21	X	X	REE, Nd,Pa,Th prélevés sur Btl21&24
CTD		22			
CTD		23			
CTD	64	24		X	Btl21et 24: meme échantillon

GEOGRAPHICAL STATION #48

Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	210Po	234Th	Ra	Comments
CTD	65	1	X	X	X	X		
CTD	65	2			X	X		
CTD	65	3	X	X	X	X		
CTD	65	4	X	X	X	X		
CTD	65	5			X	X		
CTD	65	6			X	X		
CTD	65	7			X	X		
CTD	65	8	X	X	X	X		
CTD	65	9					X	
CTD	65	10						
CTD	65	11			X	X		
CTD	65	12			X	X		
CTD	65	13			X	X		
CTD	65	14			X	X		
CTD	65	15	X	X	X	X		
CTD	65	16			X	X		
CTD	65	17			X	X		
CTD	65	18	X	X	X	X		
CTD	65	19			X	X		
CTD	65	20			X	X		
CTD	65	21			X	X		
CTD		22						
CTD		23						
CTD	65	24	X	X	X	X		

GEOGRAPHICAL STATION #48

Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	Ba dissous	Ba particulaire	30Si dissous	30BSi dissous	O2 (test Kirsten)	Inc 15N	Ra	Comments
CTD	66	1	X		X	X	X					
CTD	66	2			X	X	X					
CTD	66	3	X		X	X						
CTD	66	4			X	X	X					
CTD	66	5			X	X	X					
CTD	66	6									X	
CTD	66	7										
CTD	66	8	X		X	X						
CTD	66	9			X	X						
CTD	66	10			X	X	X					
CTD	66	11			X	X						
CTD	66	12	X		X	X	X					
CTD	66	13			X	X						
CTD	66	14			X	X	X					
CTD	66	15	X		X	X						
CTD	66	16			X	X						
CTD	66	17			X	X	X					
CTD	66	18			X	X						
CTD	66	19	X		X	X	X					
CTD	66	20			X	X	X	X	X	X		
CTD	66	21			X	X	X	X	X	X		
CTD		22										
CTD		23										
CTD	66	24			X	X	X	X	X	X		

GEOGRAPHICAL STATION #49

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Sediment Core Incub	Comments
CTD	67	1	X	X	X	X	X	X		X	X									X	
CTD	67	2	X	X	X	X	X	X		X	X										
CTD	67	3	X	X	X	X	X	X		X	X										
CTD	67	4	X	X	X	X	X	X		X	X										
CTD	67	5	X	X		X	X	X		X	X										
CTD	67	6	X	X	X	X	X	X		X	X										
CTD	67	7	X	X		X	X	X		X	X										
CTD	67	8	X	X	X	X	X	X		X	X										
CTD	67	9	X	X	X	X	X	X		X	X										
CTD	67	10	X	X	X	X	X	X		X	X										
CTD	67	11	X	X	X	X	X	X		X	X										
CTD	67	12	X	X	X	X	X	X		X	X										
CTD	67	13	X	X	X	X	X	X		X	X										
CTD	67	14	X	X	X	X	X	X		X	X										
CTD	67	15	X	X	X	X	X	X		X	X										
CTD	67	16	X	X	X	X	X	X		X	X										
CTD	67	17	X	X	X	X	X	X	X	X	X		X			X	X				
CTD	67	18	X	X	X	X	X	X	X	X	X		X			X	X				
CTD	67	19	X	X		X	X	X	X	X	X		X			X	X				
CTD	67	20	X	X	X	X	X	X	X	X	X		X			X	X				
CTD	67	21	X	X		X	X	X	X	X	X		X			X	X				
CTD		22																			
CTD		23																			
CTD	67	24	X	X	X	X	X	X	X	X	X		X			X	X				

GEOGRAPHICAL STATION #50

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	68	1	X	X	X	X	X	X		X	X									
CTD	68	2	X	X	X	X	X	X		X	X									
CTD	68	3	X	X	X	X	X	X		X	X									
CTD	68	4	X	X	X	X	X	X		X	X									
CTD	68	5	X	X		X	X	X		X	X									
CTD	68	6	X	X	X	X	X	X		X	X									
CTD	68	7	X	X		X	X	X		X	X									
CTD	68	8	X	X	X	X	X	X		X	X									
CTD	68	9	X	X	X	X	X	X		X	X									
CTD	68	10	X	X	X	X	X	X		X	X									
CTD	68	11	X	X	X	X	X	X		X	X									
CTD	68	12	X	X	X	X	X	X		X	X									
CTD	68	13	X	X	X	X	X	X		X	X									
CTD	68	14	X	X	X	X	X	X		X	X									
CTD	68	15	X	X	X	X	X	X		X	X									
CTD	68	16	X	X	X	X	X	X		X	X									
CTD	68	17	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	68	18	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	68	19	X	X		X	X	X	X	X	X		X		X	X	X			
CTD	68	20	X	X	X	X	X	X	X	X	X		X	X	X	X	X			
CTD	68	21	X	X		X	X	X	X	X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	68	24	X	X	X	X	X	X	X	X	X		X			X	X			

GEOGRAPHICAL STATION #51

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	69	1	X	X	X	X	X	X		X	X							X		
CTD	69	2	X	X	X	X	X	X		X	X							X		
CTD	69	3	X	X	X	X	X	X		X	X							X		
CTD	69	4	X	X	X	X	X	X		X	X							X		
CTD	69	5	X	X		X	X	X		X	X							X		
CTD	69	6	X	X	X	X	X	X		X	X							X		
CTD	69	7	X	X		X	X	X		X	X							X		
CTD	69	8	X	X	X	X	X	X		X	X							X		
CTD	69	9	X	X	X	X	X	X		X	X							X		
CTD	69	10	X	X	X	X	X	X		X	X							X		
CTD	69	11	X	X	X	X	X	X		X	X							X		
CTD	69	12	X	X	X	X	X	X		X	X							X		
CTD	69	13	X	X	X	X	X	X		X	X							X		
CTD	69	14	X	X	X	X	X	X		X	X							X		
CTD	69	15	X	X	X	X	X	X		X	X							X		
CTD	69	16	X	X	X	X	X	X		X	X							X		
CTD	69	17	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	69	18	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	69	19	X	X		X	X	X		X	X		X			X	X	X		
CTD	69	20	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	69	21	X	X		X	X	X		X	X		X			X	X	X		
CTD		22																		
CTD		23																		
CTD	69	24	X	X	X	X	X	X		X	X		X			X	X	X		

GEOGRAPHICAL STATION #52

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Taxo	Cocco	234Th	Comments
CTD	70	1	X	X	X	X	X	X	X	X		X	X	X	X				
CTD	70	2	X	X	X	X	X	X	X	X			X		X				
CTD	70	3	X	X	X	X	X	X	X	X			X						
CTD	70	4	X	X	X	X	X	X	X	X		X	X	X					
CTD	70	5	X	X		X	X	X	X	X			X						
CTD	70	6	X	X	X	X	X	X	X	X		X	X	X					
CTD	70	7	X	X		X	X	X	X	X			X						
CTD	70	8	X	X	X	X	X	X	X	X		X	X	X					
CTD	70	9	X	X	X	X	X	X	X	X			X						
CTD	70	10	X	X	X	X	X	X	X	X		X	X	X	X				
CTD	70	11	X	X	X	X	X	X	X	X			X		X				
CTD	70	12	X	X	X	X	X	X	X	X		X	X	X	X				
CTD	70	13	X	X	X	X	X	X	X	X			X		X				
CTD	70	14	X	X	X	X	X	X	X	X		X	X		X			X	
CTD	70	15	X	X	X	X	X	X	X	X		X	X		X			X	
CTD	70	16	X	X	X	X	X	X	X	X		X	X		X			X	
CTD	70	17	X	X	X	X	X	X	X	X		X	X					X	
CTD	70	18	X	X	X	X	X	X	X	X		X	X					X	
CTD	70	19	X	X		X	X	X	X	X		X	X				X	X	
CTD	70	20	X	X	X	X	X	X	X	X		X	X			X	X	X	
CTD	70	21	X	X		X	X	X	X	X		X	X		X		X	X	
CTD		22																	
CTD		23																	
CTD	70	24	X	X	X	X	X	X	X	X		X	X		X			X	

GEOGRAPHICAL STATION #52

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC & PIC	Cocco	Taxo	Bore	IncSi	234Th	Comments
CTD	71	1			X	X	X		X	X	X	X	X						
CTD	71	2			X	X	X		X	X	X	X	X						
CTD	71	3			X	X	X		X	X	X	X	X					X	
CTD	71	4			X	X	X		X	X	X	X	X						
CTD	71	5			X	X	X		X	X	X	X	X					X	
CTD	71	6			X	X	X		X	X	X	X	X					X	
CTD	71	7			X	X	X		X	X	X	X	X					X	
CTD	71	8	X	X				X											
CTD	71	9															X		
CTD	71	10																	
CTD	71	11			X	X	X		X	X	X	X	X					X	
CTD	71	12	X					X											
CTD	71	13			X	X	X		X	X	X	X	X						
CTD	71	14			X	X	X		X	X	X	X	X					X	
CTD	71	15	X	X				X											
CTD	71	16															X		
CTD	71	17																	
CTD	71	18						X											
CTD	71	19															X		
CTD	71	20																	
CTD	71	21			X	X	X		X	X	X	X	X					X	234Th sur btl21 et 24:
CTD		22																	
CTD		23																	
CTD	71	24	X	X				X										X	Meme prélèvement

GEOGRAPHICAL STATION #52

Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	Ba dissous	Ba particulaire	30Si dissous	30BSi dissous	210Po/210Pb	Ra	Comments
CTD	72	1	X	X		X	X		X		
CTD	72	2				X			X		
CTD	72	3	X	X		X	X		X		
CTD	72	4				X			X		
CTD	72	5	X	X		X	X		X		
CTD	72	6							X		
CTD	72	7							X		
CTD	72	8				X			X		
CTD	72	9				X			X		
CTD	72	10				X			X		
CTD	72	11	X	X		X	X		X		
CTD	72	12				X			X		
CTD	72	13				X	X		X		
CTD	72	14				X			X		
CTD	72	15	X	X		X	X		X		
CTD	72	16				X			X		
CTD	72	17				X	X		X		
CTD	72	18				X			X		
CTD	72	19	X	X		X	X		X		
CTD	72	20				X	X	X	X		
CTD	72	21				X	X	X	X		
CTD		22									
CTD		23									
CTD	72	24	X	X		X	X	X	X		

GEOGRAPHICAL STATION #53

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bore	Comments
CTD	73	1	X	X	X	X	X	X		X	X									
CTD	73	2	X	X	X	X	X	X		X	X									
CTD	73	3	X	X	X	X	X	X		X	X									
CTD	73	4	X	X	X	X	X	X		X	X									
CTD	73	5	X	X		X	X	X		X	X									
CTD	73	6	X	X	X	X	X	X		X	X									
CTD	73	7	X	X		X	X	X		X	X									
CTD	73	8	X	X	X	X	X	X		X	X									
CTD	73	9	X	X	X	X	X	X		X	X									
CTD	73	10	X	X	X	X	X	X		X	X									
CTD	73	11	X	X	X	X	X	X		X	X									
CTD	73	12	X	X	X	X	X	X		X	X									
CTD	73	13	X	X	X	X	X	X		X	X									
CTD	73	14	X	X	X	X	X	X		X	X									
CTD	73	15	X	X	X	X	X	X		X	X									
CTD	73	16	X	X	X	X	X	X		X	X									
CTD	73	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	73	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	73	19	X	X		X	X	X		X	X		X			X	X			
CTD	73	20	X	X	X	X	X	X		X	X		X			X	X			
CTD	73	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	73	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #54

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	O2/Ar	Comments
CTD	74	1	X	X	X	X	X	X		X	X									
CTD	74	2	X	X	X	X	X	X		X	X									
CTD	74	3	X	X	X	X	X	X		X	X									
CTD	74	4	X	X	X	X	X	X		X	X									
CTD	74	5	X	X		X	X	X		X	X									
CTD	74	6	X	X	X	X	X	X		X	X									
CTD	74	7	X	X		X	X	X		X	X									
CTD	74	8	X	X	X	X	X	X		X	X									
CTD	74	9																		Vide
CTD	74	10	X	X	X	X	X	X		X	X									
CTD	74	11	X	X	X	X	X	X		X	X									
CTD	74	12	X	X	X	X	X	X		X	X									
CTD	74	13	X	X	X	X	X	X		X	X									
CTD	74	14																		Bouteille mal armée
CTD	74	15	X	X	X	X	X	X		X	X									
CTD	74	16	X	X	X	X	X	X		X	X									
CTD	74	17	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	74	18	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	74	19	X	X		X	X	X	X	X	X		X		X	X	X			
CTD	74	20	X	X	X	X	X	X	X	X	X		X	X	X	X	X			
CTD	74	21	X	X		X	X	X	X	X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	74	24	X	X	X	X	X	X	X	X	X		X			X	X		X	

GEOGRAPHICAL STATION #55

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	O2/Ar	Comments
CTD	75	1	X	X	X	X	X	X		X	X									
CTD	75	2	X	X		X	X	X		X	X									
CTD	75	3	X	X	X	X	X	X		X	X									
CTD	75	4	X	X		X	X	X		X	X									
CTD	75	5	X	X	X	X	X	X		X	X									
CTD	75	6	X	X		X	X	X		X	X									
CTD	75	7	X	X	X	X	X	X		X	X									
CTD	75	8	X	X	X	X	X	X		X	X									
CTD	75	9	X	X	X	X	X	X		X	X									
CTD	75	10	X	X	X	X	X	X		X	X									
CTD	75	11	X	X		X	X	X		X	X									
CTD	75	12	X	X	X	X	X	X		X	X									
CTD	75	13	X	X	X	X	X	X		X	X									
CTD	75	14	X	X	X	X	X	X		X	X									
CTD	75	15	X	X	X	X	X	X		X	X									
CTD	75	16	X	X	X	X	X	X		X	X									
CTD	75	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	75	18	X	X	X	X	X	X		X	X		X		X	X	X			
CTD	75	19	X	X		X	X	X		X	X		X			X	X			
CTD	75	20	X	X		X	X	X		X	X		X		X	X	X			
CTD	75	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	75	24	X	X	X	X	X	X		X	X		X			X	X		X	

GEOGRAPHICAL STATION #56

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	O2/Ar	Comments
CTD	76	1	X	X	X	X	X	X		X	X									
CTD	76	2	X	X		X	X	X		X	X									
CTD	76	3	X	X	X	X	X	X		X	X									
CTD	76	4	X	X						X	X									
CTD	76	5	X	X	X	X	X	X		X	X									
CTD	76	6	X	X	X	X	X	X		X	X									
CTD	76	7	X	X	X	X	X	X		X	X									
CTD	76	8	X	X	X	X	X	X		X	X									
CTD	76	9	X	X	X	X	X	X		X	X									
CTD	76	10	X	X	X	X	X	X		X	X									
CTD	76	11	X	X	X	X	X	X		X	X									
CTD	76	12	X	X	X	X	X	X		X	X									
CTD	76	13	X	X	X	X	X	X		X	X									
CTD	76	14	X	X	X	X	X	X		X	X									
CTD	76	15	X	X	X	X	X	X		X	X									
CTD	76	16	X	X	X	X	X	X		X	X									
CTD	76	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	76	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	76	19	X	X		X	X	X		X	X		X		X	X	X			
CTD	76	20	X	X		X	X	X		X	X		X		X	X	X			
CTD	76	21	X	X		X	X	X		X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	76	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #57

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Taxo	Cocco	Comments
CTD	77	1	X	X	X	X	X	X	X	X			X	X	X			
CTD	77	2	X	X					X	X			X					
CTD	77	3	X	X	X	X	X	X	X	X			X	X	X			
CTD	77	4	X	X		X	X	X	X	X			X					
CTD	77	5	X	X	X	X	X	X	X	X			X	X				
CTD	77	6	X	X		X	X	X	X	X			X					
CTD	77	7	X	X	X	X	X	X	X	X			X	X				
CTD	77	8	X	X	X	X	X	X	X	X			X					
CTD	77	9	X	X	X	X	X	X	X	X			X	X	X			
CTD	77	10	X	X	X	X	X	X	X	X			X		X			
CTD	77	11	X	X	X	X	X	X	X	X			X	X	X			
CTD	77	12	X	X	X	X	X	X	X	X			X		X			
CTD	77	13	X	X	X	X	X	X	X	X			X	X	X			
CTD	77	14	X	X	X	X	X	X	X	X			X	X	X			
CTD	77	15	X	X	X	X	X	X	X	X			X	X	X			
CTD	77	16	X	X	X	X	X	X	X	X			X	X				
CTD	77	17	X	X		X	X	X	X	X			X	X				
CTD	77	18	X	X	X	X	X	X	X	X			X	X				
CTD	77	19	X	X		X	X	X	X	X			X	X			X	
CTD	77	20	X	X	X	X	X	X	X	X			X	X		X	X	
CTD	77	21	X	X		X	X	X	X	X			X	X	X		X	
CTD		22																
CTD		23																
CTD	77	24	X	X	X	X	X	X	X	X			X	X	X			

GEOGRAPHICAL STATION #57

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC & PIC	Cocco	Taxo	Bore	IncSi	234Th	Comments
CTD	78	1			X	X	X		X	X	X	X	X					X	
CTD	78	2			X	X	X		X	X	X	X	X					X	
CTD	78	3			X	X	X		X	X	X	X	X					X	
CTD	78	4			X	X	X		X	X	X	X	X					X	
CTD	78	5			X	X	X		X	X	X	X	X	X					
CTD	78	6			X	X	X		X	X	X	X	X		X			X	
CTD	78	7	X	X				X						X					
CTD	78	8															X		
CTD	78	9																	
CTD	78	10			X	X	X		X	X	X	X	X					X	
CTD	78	11			X	X	X		X	X	X	X	X					X	
CTD	78	12	X					X											
CTD	78	13			X	X	X		X	X	X	X	X						
CTD	78	14			X	X	X		X	X	X	X	X					X	
CTD	78	15	X	X				X											
CTD	78	16															X		
CTD	78	17																	
CTD	78	18						X											
CTD	78	19															X		
CTD	78	20																	Fuite bouteille
CTD	78	21			X	X	X		X	X	X	X	X						
CTD		22																	
CTD		23																	
CTD	78	24	X	X				X										X	

GEOGRAPHICAL STATION #58

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	O2/Ar	Comments
CTD	79	1	X	X	X	X	X	X		X	X									
CTD	79	2	X	X		X	X	X		X	X									
CTD	79	3	X	X		X	X	X		X	X									
CTD	79	4	X	X	X	X	X	X		X	X									
CTD	79	5	X	X		X	X	X		X	X									
CTD	79	6	X	X		X	X	X		X	X									
CTD	79	7	X	X	X	X	X	X		X	X									
CTD	79	8	X	X	X	X	X	X		X	X									
CTD	79	9	X	X	X	X	X	X		X	X									
CTD	79	10	X	X	X	X	X	X		X	X									
CTD	79	11	X	X	X	X	X	X		X	X									
CTD	79	12	X	X	X	X	X	X		X	X									
CTD	79	13	X	X	X	X	X	X		X	X									
CTD	79	14	X	X	X	X	X	X		X	X									
CTD	79	15	X	X	X	X	X	X		X	X									
CTD	79	16	X	X	X	X	X	X		X	X									
CTD	79	17	X	X		X	X	X		X	X		X			X	X			
CTD	79	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	79	19	X	X		X	X	X		X	X		X			X	X			
CTD	79	20	X	X	X	X	X	X		X	X		X			X	X			
CTD	79	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	79	24	X	X	X	X	X	X		X	X									

GEOGRAPHICAL STATION #59

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Bacteria (Kirsten)	Comments
CTD	80	1	X	X	X	X	X	X		X	X								X	
CTD	80	2	X	X	X	X	X	X		X	X								X	
CTD	80	3	X	X		X	X	X		X	X									
CTD	80	4	X	X	X	X	X	X		X	X								X	
CTD	80	5	X	X						X	X									
CTD	80	6	X	X	X	X	X	X		X	X									
CTD	80	7	X	X						X	X								X	
CTD	80	8	X	X	X	X	X	X		X	X								X	
CTD	80	9	X	X	X					X	X									
CTD	80	10	X	X	X	X	X	X		X	X									Bouteille détachée en haut
CTD	80	11	X	X	X	X	X	X		X	X								X	
CTD	80	12	X	X	X	X	X	X		X	X									
CTD	80	13	X	X	X	X	X	X		X	X									
CTD	80	14	X	X		X	X	X		X	X								X	
CTD	80	15	X	X	X	X	X	X		X	X									
CTD	80	16	X	X		X	X	X		X	X									
CTD	80	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	80	18	X	X		X	X	X		X	X		X		X	X	X		X	
CTD	80	19	X	X	X	X	X	X		X	X		X			X	X			
CTD	80	20	X	X		X	X	X		X	X		X	X	X	X	X		X	
CTD	80	21	X	X		X	X	X		X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	80	24	X	X	X	X	X	X		X	X		X			X	X		X	

GEOGRAPHICAL STATION #60

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Comments
CTD	81	1	X	X	X	X	X	X		X	X								
CTD	81	2	X	X		X	X	X		X	X								
CTD	81	3	X	X	X	X	X	X		X	X								
CTD	81	4	X	X	X	X	X	X		X	X								
CTD	81	5	X	X	X	X	X	X		X	X								
CTD	81	6	X	X	X	X	X	X		X	X								
CTD	81	7	X	X	X	X	X	X		X	X								
CTD	81	8	X	X	X	X	X	X		X	X								
CTD	81	9	X	X						X	X								
CTD	81	10	X	X	X	X	X	X		X	X								
CTD	81	11	X	X						X	X								
CTD	81	12	X	X	X	X	X	X		X	X								
CTD	81	13	X	X		X	X	X		X	X								
CTD	81	14	X	X	X	X	X	X		X	X								
CTD	81	15	X	X		X	X	X		X	X								
CTD	81	16	X	X	X	X	X	X		X	X		X			X	X		
CTD	81	17	X	X		X	X	X		X	X		X			X	X		
CTD	81	18	X	X	X	X	X	X		X	X		X			X	X		
CTD	81	19	X	X		X	X	X		X	X		X			X	X		
CTD	81	20	X	X		X	X	X		X	X		X			X	X		
CTD	81	21	X	X		X	X	X		X	X		X			X	X		
CTD		22																	
CTD		23																	
CTD	81	24	X	X	X	X	X	X		X	X		X			X	X		

GEOGRAPHICAL STATION #61

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 30Si	Comments
CTD	82	1	X	X	X	X	X	X		X	X									
CTD	82	2	X	X	X	X	X	X		X	X									
CTD	82	3	X	X	X	X	X	X		X	X									
CTD	82	4	X	X	X	X	X	X		X	X									
CTD	82	5	X	X	X	X	X	X		X	X									
CTD	82	6	X	X		X	X	X		X	X									
CTD	82	7	X	X	X	X	X	X		X	X									
CTD	82	8	X	X	X	X	X	X		X	X									
CTD	82	9	X	X	X	X	X	X		X	X									
CTD	82	10	X	X	X	X	X	X		X	X									
CTD	82	11	X	X						X	X								X	
CTD	82	12	X	X						X	X									
CTD	82	13	X	X	X	X	X	X		X	X									
CTD	82	14	X	X	X	X	X	X		X	X									
CTD	82	15	X	X	X	X	X	X		X	X									
CTD	82	16	X	X		X	X	X		X	X		X			X	X			
CTD	82	17	X	X		X	X	X		X	X		X			X	X			
CTD	82	18	X	X		X	X	X		X	X		X			X	X			
CTD	82	19	X	X	X	X	X	X		X	X		X			X	X			
CTD	82	20	X	X		X	X	X		X	X		X			X	X			
CTD	82	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	82	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #62

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC	PIC	Cocco	Taxo	IncSi (D+R)	IncSi (D)	Th	Comments
CTD	83	1			X	X	X		X	X	X	X	X	X						
CTD	83	2			X	X	X		X	X	X	X	X	X						
CTD	83	3			X	X	X		X	X	X	X	X	X						
CTD	83	4			X	X	X		X	X	X	X	X	X	X					
CTD	83	5													X	X				
CTD	83	6																		
CTD	83	7															X			
CTD	83	8	X	X				X												
CTD	83	9			X	X	X		X	X	X	X	X	X						
CTD	83	10			X	X	X		X	X	X	X	X	X	X					
CTD	83	11	X					X												
CTD	83	12			X	X	X		X	X	X	X	X	X						
CTD	83	13																X		
CTD	83	14																		
CTD	83	15			X	X	X		X	X	X	X	X	X						
CTD	83	16	X					X												
CTD	83	17						X												
CTD	83	18			X	X	X		X	X	X	X	X	X						
CTD	83	19																		
CTD	83	20															X			
CTD	83	21																		
CTD		22																		
CTD		23																		
CTD	83	24	X	X				X												

GEOGRAPHICAL STATION #62

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	14C POC & DOC	14C DIC	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Octopus	Comments
CTD	84	1	X	X	X	X	X	X	X	X	X	X		X	X	X	X		14C POC only, no DOC
CTD	84	2	X	X	X	X	X	X	X	X	X	X		X			X		DOC only, no 14C POC
CTD	84	3	X	X		X	X	X							X				
CTD	84	4	X	X	X	X	X	X		X	X	X				X			
CTD	84	5	X	X		X	X	X							X				
CTD	84	6	X	X		X	X	X		X	X	X							
CTD	84	7	X	X		X	X	X							X				
CTD	84	8	X	X	X	X	X	X		X	X	X			X	X	X		
CTD	84	9	X	X	X	X	X	X	X	X	X	X		X	X		X		
CTD	84	10	X	X	X	X	X	X		X	X	X			X	X	X		
CTD	84	11	X	X		X	X	X		X	X	X			X		X		
CTD	84	12	X	X		X	X	X	X	X	X	X		X	X	X	X		
CTD	84	13	X	X	X	X	X	X		X	X	X		X	X		X		
CTD	84	14	X	X		X	X	X	X	X	X	X		X	X		X		
CTD	84	15	X	X	X	X	X	X		X	X	X		X	X		X		
CTD	84	16	X	X	X	X	X	X	X	X	X	X		X	X				
CTD	84	17	X	X		X	X	X		X	X	X		X	X				
CTD	84	18	X	X	X	X	X	X	X	X	X	X		X	X				
CTD	84	19	X	X		X	X	X	X	X	X	X		X	X				
CTD	84	20	X	X	X	X	X	X	X	X	X	X		X	X				
CTD	84	21	X	X		X	X	X	X	X	X	X		X	X		X		
CTD		22																	
CTD		23																	
CTD	84	24	X	X	X	X	X	X	X	X	X	X		X	X		X		

GEOGRAPHICAL STATION #62

Code instr.	Cast n°	Bottle n°	O2	REE, Nd,Pa,230Th	Comments
CTD	85	1	X	X	
CTD	85	2			
CTD	85	3	X	X	
CTD	85	4			
CTD	85	5	X	X	
CTD	85	6			
CTD	85	7	X	X	
CTD	85	8			
CTD	85	9	X	X	
CTD	85	10			
CTD	85	11	X	X	
CTD	85	12			
CTD	85	13		X	
CTD	85	14			
CTD	85	15	X	X	
CTD	85	16			
CTD	85	17	X	X	
CTD	85	18			
CTD	85	19	X	X	
CTD	85	20			
CTD	85	21	X	X	REE, Nd,Pa,Th prélevés sur Btl21&24
CTD		22			
CTD		23			
CTD	85	24		X	Btl21et 24: meme échantillon

GEOGRAPHICAL STATION #62									
Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	210Po	234Th	O2 (Eric Viollier)	Bacterio	Comments
CTD	86	1	X	X	X	X			
CTD	86	2			X	X			
CTD	86	3	X	X	X	X			
CTD	86	4	X	X	X	X			
CTD	86	5			X	X			
CTD	86	6			X	X			
CTD	86	7			X	X			
CTD	86	8	X	X	X	X			
CTD	86	9			X	X			
CTD	86	10			X	X			
CTD	86	11			X	X			
CTD	86	12	X	X	X	X	XX	X	O2: 2 prélèvements par bouteille
CTD	86	13			X	X			
CTD	86	14			X	X			
CTD	86	15			X	X			
CTD	86	16			X	X			
CTD	86	17			X	X	XX	X	O2: 2 prélèvements par bouteille
CTD	86	18	X	X	X	X			
CTD	86	19			X	X			
CTD	86	20			X	X			
CTD	86	21			X	X			
CTD		22							
CTD		23							
CTD	86	24				X			

GEOGRAPHICAL STATION #62										
Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	Ba dissous	Ba particulaire	30Si dissous	30BSi dissous	Bacteria	Comments
CTD	87	1	X	X	X	X	X		X	
CTD	87	2			X	X				
CTD	87	3			X	X	X			
CTD	87	4	X	X	X	X			X	
CTD	87	5			X	X	X			
CTD	87	6			X	X				
CTD	87	7			X	X				
CTD	87	8	X	X	X	X	X		X	
CTD	87	9			X	X			X	
CTD	87	10			X	X	X		X	
CTD	87	11			X	X				
CTD	87	12			X	X			X	
CTD	87	13	X	X	X	X	X		X	
CTD	87	14			X	X				
CTD	87	15			X	X	X		X	
CTD	87	16			X	X				
CTD	87	17								
CTD	87	18	X	X	X	X	X		X	
CTD	87	19			X	X	X	X		
CTD	87	20			X	X	X	X		
CTD	87	21							X	
CTD		22								
CTD		23								
CTD	87	24	X	X	X	X	X	X	X	

GEOGRAPHICAL STATION #63

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 30Si	Comments
CTD	88	1	X	X	X	X	X	X		X	X									
CTD	88	2	X	X	X	X	X	X		X	X									
CTD	88	3	X	X	X	X	X	X		X	X									
CTD	88	4	X	X		X	X	X		X	X									
CTD	88	5	X	X	X	X	X	X		X	X									
CTD	88	6	X	X	X	X	X	X		X	X									
CTD	88	7	X	X						X	X									
CTD	88	8	X	X		X	X	X		X	X									
CTD	88	9	X	X						X	X									
CTD	88	10	X	X	X	X	X	X		X	X									
CTD	88	11	X	X						X	X									
CTD	88	12	X	X	X	X	X	X		X	X									
CTD	88	13	X	X	X	X	X	X		X	X									
CTD	88	14	X	X	X	X	X	X		X	X									
CTD	88	15	X	X	X	X	X	X		X	X									
CTD	88	16	X	X	X	X	X	X		X	X									
CTD	88	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	88	18	X	X		X	X	X		X	X		X		X	X	X			
CTD	88	19	X	X		X	X	X		X	X		X			X	X			
CTD	88	20	X	X	X	X	X	X		X	X		X	X	X	X	X			
CTD	88	21	X	X		X	X	X		X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	88	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #64

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 30Si	Comments
CTD	89	1	X	X	X	X	X	X		X	X							X		
CTD	89	2	X	X	X	X	X	X		X	X							X		
CTD	89	3	X	X			X	X		X	X							X		
CTD	89	4	X	X		X	X	X		X	X							X		
CTD	89	5	X	X	X	X	X	X		X	X							X		
CTD	89	6	X	X	X	X	X	X		X	X							X		
CTD	89	7	X	X	X	X	X	X		X	X							X		
CTD	89	8	X	X	X	X	X	X		X	X							X		
CTD	89	9	X	X	X	X	X	X		X	X							X		
CTD	89	10	X	X	X	X	X	X		X	X							X		
CTD	89	11	X	X	X	X	X	X		X	X							X		
CTD	89	12	X	X		X	X	X		X	X							X		
CTD	89	13	X	X	X	X	X	X		X	X							X		
CTD	89	14	X	X		X	X	X		X	X							X		
CTD	89	15	X	X		X	X	X		X	X							X		
CTD	89	16	X	X		X	X	X		X	X							X		
CTD	89	17	X	X	X	X	X	X	X	X	X		X			X	X	X		
CTD	89	18	X	X		X	X	X	X	X	X		X			X	X	X		
CTD	89	19	X	X		X	X	X	X	X	X		X			X	X	X		
CTD	89	20	X	X	X	X	X	X	X	X	X		X			X	X	X		
CTD	89	21	X	X		X	X	X	X	X	X		X			X	X	X		
CTD		22																		
CTD		23																		
CTD	89	24	X	X	X	X	X	X	X	X	X		X			X	X	X		

GEOGRAPHICAL STATION #65

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 15N	O2/Ar	Comments
CTD	90	1	X	X	X	X	X	X		X	X							X			
CTD	90	2	X	X	X	X	X	X		X	X							X			
CTD	90	3	X	X	X	X	X	X		X	X							X			
CTD	90	4	X	X		X	X	X		X	X							X			
CTD	90	5	X	X	X	X	X	X		X	X							X			
CTD	90	6	X	X	X	X	X	X		X	X							X			
CTD	90	7	X	X	X	X	X	X		X	X							X			
CTD	90	8	X	X		X	X	X		X	X							X			
CTD	90	9																			Bouteille ouverte
CTD	90	10	X	X	X	X	X	X		X	X							X			
CTD	90	11	X	X	X	X	X	X		X	X							X			
CTD	90	12	X	X		X	X	X		X	X							X			
CTD	90	13	X	X	X	X	X	X		X	X							X			
CTD	90	14	X	X		X	X	X		X	X							X			
CTD	90	15	X	X	X	X	X	X		X	X							X			
CTD	90	16	X	X		X	X	X		X	X		X			X	X	X			
CTD	90	17	X	X	X	X	X	X		X	X		X			X	X	X			
CTD	90	18	X	X		X	X	X		X	X		X		X	X	X	X			
CTD	90	19	X	X	X	X	X	X		X	X		X			X	X	X			
CTD	90	20	X	X		X	X	X		X	X		X	X	X	X	X	X	X		
CTD	90	21	X	X		X	X	X		X	X		X		X	X	X	X	X		
CTD		22																			
CTD		23																			
CTD	90	24	X	X	X	X	X	X		X	X		X			X	X	X	X	X	

GEOGRAPHICAL STATION #65				INTERCALIBRATION		
Code instr.	Cast n°	Bottle n°	O2	REE, Nd,Pa,230Th	Ac	Comments
CTD	91	1		X		
CTD	91	2	X			
CTD	91	3				
CTD	91	4				
CTD	91	5	X		X	
CTD	91	6				
CTD	91	7		X		
CTD	91	8	X			
CTD	91	9				
CTD	91	10				
CTD	91	11		X		
CTD	91	12	X			
CTD	91	13				
CTD	91	14				
CTD	91	15	X	X	X	
CTD	91	16				
CTD	91	17	X	X	X	
CTD	91	18				
CTD	91	19	X	X	X	
CTD	91	20				
CTD	91	21	X	X	X	REE, Nd,Pa,Th, Ac prélevés sur Btl21&24
CTD		22				
CTD		23				
CTD	91	24		X	X	Btl21et 24: meme échantillon

GEOGRAPHICAL STATION #66

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 15N	Comments
CTD	92	1	X	X	X	X	X	X		X	X									
CTD	92	2	X	X		X	X	X		X	X									
CTD	92	3	X	X						X	X									
CTD	92	4	X	X	X	X	X	X		X	X									
CTD	92	5	X	X	X	X	X	X		X	X									
CTD	92	6	X	X	X	X	X	X		X	X									
CTD	92	7	X	X						X	X									
CTD	92	8	X	X	X	X	X	X		X	X									
CTD	92	9	X	X		X	X	X		X	X									
CTD	92	10	X	X	X	X	X	X		X	X									
CTD	92	11	X	X		X	X	X		X	X									
CTD	92	12	X	X	X	X	X	X		X	X									
CTD	92	13	X	X		X	X	X		X	X									
CTD	92	14	X	X	X	X	X	X		X	X									
CTD	92	15	X	X		X	X	X		X	X									
CTD	92	16	X	X	X	X	X	X		X	X									
CTD	92	17	X	X		X	X	X		X	X		X			X	X			
CTD	92	18	X	X	X	X	X	X		X	X		X			X	X			
CTD	92	19	X	X		X	X	X		X	X		X		X	X	X			
CTD	92	20	X	X	X	X	X	X		X	X		X	X	X	X	X			
CTD	92	21	X	X		X	X	X		X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	92	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #67

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 15N	Comments
CTD	93	1	X	X	X	X	X	X		X	X									
CTD	93	2	X	X		X	X	X		X	X									
CTD	93	3	X	X	X	X	X	X		X	X									
CTD	93	4	X	X		X	X	X		X	X									
CTD	93	5	X	X	X	X	X	X		X	X									
CTD	93	6	X	X	X	X	X	X		X	X									
CTD	93	7	X	X	X	X	X	X		X	X									
CTD	93	8	X	X	X	X	X	X		X	X									
CTD	93	9	X	X		X	X	X		X	X									
CTD	93	10	X	X	X	X	X	X		X	X									
CTD	93	11	X	X	X	X	X	X		X	X									
CTD	93	12	X	X		X	X	X		X	X									
CTD	93	13	X	X	X	X	X	X		X	X									
CTD	93	14	X	X		X	X	X		X	X									
CTD	93	15	X	X	X	X	X	X		X	X									
CTD	93	16	X	X		X	X	X		X	X		X			X	X			
CTD	93	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	93	18	X	X		X	X	X		X	X		X			X	X			
CTD	93	19	X	X	X	X	X	X		X	X		X			X	X			
CTD	93	20	X	X		X	X	X		X	X		X			X	X			
CTD	93	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	93	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #68

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 15N	Commentaires
CTD	94	1	X	X	X	X	X	X		X	X							X		
CTD	94	2	X	X		X	X	X		X	X							X		
CTD	94	3	X	X		X	X	X		X	X							X		
CTD	94	4	X	X	X	X	X	X		X	X							X		
CTD	94	5	X	X	X	X	X	X		X	X							X		
CTD	94	6	X	X	X	X	X	X		X	X							X		
CTD	94	7	X	X	X	X	X	X		X	X							X		
CTD	94	8	X	X	X	X	X	X		X	X							X		
CTD	94	9	X	X		X	X	X		X	X							X		
CTD	94	10	X	X	X	X	X	X		X	X							X		
CTD	94	11	X	X		X	X	X		X	X							X		
CTD	94	12	X	X	X	X	X	X		X	X							X		
CTD	94	13	X	X		X	X	X		X	X							X		
CTD	94	14	X	X	X	X	X	X		X	X							X		
CTD	94	15	X	X	X	X	X	X		X	X							X		
CTD	94	16	X	X		X	X	X		X	X		X			X	X	X		
CTD	94	17	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	94	18	X	X		X	X	X		X	X		X			X	X	X		
CTD	94	19	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	94	20	X	X		X	X	X		X	X		X			X	X	X		
CTD	94	21	X	X		X	X	X		X	X		X			X	X	X		
CTD		22																		
CTD		23																		
CTD	94	24	X	X	X	X	X	X		X	X		X			X	X	X		

GEOGRAPHICAL STATION #69

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 15N	Comments
CTD	95	1	X	X	X	X	X	X		X	X									
CTD	95	2	X	X	X	X	X			X	X									
CTD	95	3	X	X	X	X	X	X		X	X									
CTD	95	4	X	X	X	X	X			X	X									
CTD	95	5	X	X		X	X	X		X	X									
CTD	95	6	X	X	X	X	X			X	X									
CTD	95	7	X	X	X	X	X	X		X	X									
CTD	95	8	X	X	X	X	X			X	X									
CTD	95	9	X	X	X	X	X	X		X	X									
CTD	95	10	X	X	X	X	X			X	X									
CTD	95	11	X	X	X	X	X	X		X	X									
CTD	95	12	X	X		X	X			X	X									
CTD	95	13	X	X	X	X	X	X		X	X									
CTD	95	14	X	X		X	X			X	X									
CTD	95	15	X	X	X	X	X	X		X	X									
CTD	95	16	X	X		X	X		X	X	X		X							
CTD	95	17	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	95	18	X	X		X	X		X	X	X		X		X	X	X			
CTD	95	19	X	X		X	X	X	X	X	X		X	X	X	X	X			
CTD	95	20	X	X	X	X	X		X	X	X		X		X	X	X			
CTD	95	21	X	X		X	X	X	X	X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	95	24	X	X	X	X	X	X	X	X	X		X			X	X			

GEOGRAPHICAL STATION #70

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 15N	O2/Ar	Comments
CTD	96	1	X	X	X	X	X	X		X	X							X			
CTD	96	2	X	X						X	X							X			
CTD	96	3	X	X		X				X	X							X			
CTD	96	4	X	X						X	X							X			
CTD	96	5	X	X	X	X	X	X		X	X							X			
CTD	96	6	X	X		X				X	X							X			
CTD	96	7	X	X	X	X	X	X		X	X							X			
CTD	96	8	X	X		X				X	X							X			
CTD	96	9	X	X	X	X	X	X		X	X							X			
CTD	96	10	X	X		X				X	X							X			
CTD	96	11	X	X	X	X	X	X		X	X							X			
CTD	96	12	X	X		X				X	X							X			
CTD	96	13	X	X		X				X	X		X			X	X	X			
CTD	96	14	X	X	X	X	X	X		X	X		X			X	X	X			
CTD	96	15	X	X		X				X	X		X		X	X	X	X			
CTD	96	16				X				X	X		X	X	X	X	X	X			
CTD	96	17			X	X	X	X		X	X		X		X	X	X	X			
CTD	96	18	X	X		X				X	X		X			X	X	X			
CTD	96	19	X	X	X	X	X	X		X	X		X			X	X	X		X	
CTD	96	20																			
CTD	96	21																			
CTD		22																			
CTD		23																			
CTD	96	24																			

GEOGRAPHICAL STATION #71

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 15N	Bacteria	Comments
CTD	97	1	X	X	X	X	X	X		X	X									X	
CTD	97	2	X	X	X	X	X	X		X	X									X	
CTD	97	3	X	X		X	X	X		X	X										
CTD	97	4	X	X	X	X	X	X		X	X										
CTD	97	5	X	X						X	X									X	
CTD	97	6	X	X		X	X	X		X	X										
CTD	97	7	X	X	X	X	X	X		X	X										
CTD	97	8	X	X		X	X	X		X	X									X	
CTD	97	9	X	X	X	X	X	X		X	X										
CTD	97	10	X	X		X	X	X		X	X									X	
CTD	97	11	X	X	X	X	X	X		X	X										
CTD	97	12	X	X		X	X	X		X	X										
CTD	97	13	X	X		X	X	X		X	X		X			X	X			X	
CTD	97	14	X	X	X	X	X	X		X	X		X			X	X				
CTD	97	15	X	X		X	X	X		X	X		X			X	X			X	
CTD	97	16	X	X		X	X	X		X	X		X			X	X			X	
CTD	97	17	X	X	X	X	X	X		X	X		X			X	X				
CTD	97	18	X	X		X	X	X		X	X		X			X	X				
CTD	97	19	X	X	X	X	X	X		X	X		X			X	X				
CTD	97	20																			
CTD	97	21																			
CTD		22																			
CTD		23																			
CTD	97	24																			

GEOGRAPHICAL STATION #72

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Chloro	PIC/POC	14C DIC	O2/Ar	Comments
CTD	98	1	X	X	X	X	X	X	X	X		X	X	X	X			X		
CTD	98	2	X	X									X							
CTD	98	3	X	X	X	X	X	X	X	X			X		X			X		
CTD	98	4	X	X									X							
CTD	98	5	X	X	X	X	X	X	X	X			X	X				X		
CTD	98	6	X	X	X	X	X	X	X	X		X	X					X		
CTD	98	7	X	X	X	X	X	X	X	X		X	X	X				X		
CTD	98	8	X	X		X	X	X	X	X			X		X			X		
CTD	98	9	X	X	X	X	X	X	X	X		X	X		X			X		
CTD	98	10	X	X	X	X	X	X	X	X			X	X	X			X		
CTD	98	11	X	X	X	X	X	X	X	X		X	X		X			X		
CTD	98	12	X	X	X	X	X	X	X	X		X	X		X			X		
CTD	98	13	X	X	X	X	X	X	X	X		X	X		X			X		
CTD	98	14	X	X	X	X	X	X	X	X			X		X			X		
CTD	98	15	X	X		X	X	X	X	X		X	X		X			X		
CTD	98	16	X	X		X	X	X	X	X		X	X			X	X	X		
CTD	98	17	X	X		X	X	X	X	X		X	X			X	X	X		
CTD	98	18	X	X	X	X	X	X	X	X		X	X			X	X	X		
CTD	98	19	X	X		X	X	X	X	X		X	X			X	X	X		
CTD	98	20	X	X	X	X	X	X	X	X		X	X			X	X	X		
CTD	98	21	X	X		X	X	X	X	X		X	X		X	X	X	X		
CTD		22																		
CTD		23																		
CTD	98	24	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	

GEOGRAPHICAL STATION #72

Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	Ba dissous	Ba particulaire	30Si dissous	30BSi dissous	210Po/210Pb	Ra	Comments
CTD	99	1		X	X	X	X		X		
CTD	99	2			X	X			X		
CTD	99	3		X	X	X	X		X		
CTD	99	4			X	X			X		
CTD	99	5		X	X	X	X		X		
CTD	99	6			X	X			X		
CTD	99	7			X	X			X		
CTD	99	8			X	X			X		
CTD	99	9		X	X	X	X		X		
CTD	99	10			X	X			X		
CTD	99	11			X	X	X		X		
CTD	99	12			X	X			X		
CTD	99	13		X	X	X	X		X		
CTD	99	14			X	X			X		
CTD	99	15			X	X	X		X		
CTD	99	16			X	X			X		
CTD	99	17		X	X	X	X		X		
CTD	99	18		X	X	X	X	X	X		
CTD	99	19		X					X		
CTD	99	20		X	X	X	X	X	X		
CTD	99	21							X		
CTD		22									
CTD		23									
CTD	99	24		X	X	X	X	X	X		

GEOGRAPHICAL STATION #73						For “technical” reason, the CTD100 “Large Mixed Layer” had to be done during the geographical station 73, instead of the geographical station 72													
Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC & PIC	Cocco	Taxo	Bore	IncSi	234Th	Comments
CTD	100	1			X	X	X		X	X	X	X	X					X	
CTD	100	2			X	X	X		X	X	X	X	X					X	
CTD	100	3			X	X	X		X	X	X	X	X					X	
CTD	100	4			X	X	X		X	X	X	X	X	X					
CTD	100	5			X	X	X		X	X	X	X	X					X	
CTD	100	6	X	X				X										X	
CTD	100	7			X	X	X		X	X	X	X	X						
CTD	100	8															X		
CTD	100	9																	
CTD	100	10			X	X	X		X	X	X	X	X					X	
CTD	100	11			X	X	X		X	X	X	X	X	X	X			X	
CTD	100	12	X					X											
CTD	100	13			X	X	X		X	X	X	X	X	X					
CTD	100	14															X		
CTD	100	15																	
CTD	100	16			X	X	X		X	X	X	X	X					X	
CTD	100	17	X	X				X											
CTD	100	18															X		
CTD	100	19																	
CTD	100	20						X											
CTD	100	21	X	X				X											
CTD		22																	
CTD		23																	
CTD	100	24			X	X	X		X	X	X	X	X						

GEOGRAPHICAL STATION #73

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	Inc 15N	234Th	Comments
CTD	101	1	X	X	X	X	X	X		X	X										
CTD	101	2	X	X																	
CTD	101	3	X	X	X	X	X	X		X	X										
CTD	101	4	X	X																	
CTD	101	5	X	X		X	X	X		X	X										
CTD	101	6	X	X	X	X	X	X		X	X										
CTD	101	7	X	X	X	X	X	X		X	X										
CTD	101	8	X	X	X	X	X	X		X	X										
CTD	101	9	X	X	X	X	X	X		X	X										
CTD	101	10	X	X	X	X	X	X		X	X										
CTD	101	11	X	X	X	X	X	X		X	X										
CTD	101	12	X	X	X	X	X	X		X	X										
CTD	101	13	X	X	X	X	X	X		X	X										
CTD	101	14	X	X	X	X	X	X		X	X									X	
CTD	101	15	X	X	X	X	X	X		X	X									X	
CTD	101	16	X	X	X	X	X	X		X	X									X	
CTD	101	17	X	X	X	X	X	X		X	X									X	
CTD	101	18	X	X	X	X	X	X		X	X									X	
CTD	101	19	X	X		X	X	X		X	X									X	
CTD	101	20	X	X	X	X	X	X		X	X									X	
CTD	101	21	X	X		X	X	X		X	X									X	
CTD		22																			
CTD		23																			
CTD	101	24	X	X	X	X	X	X		X	X									X	

GEOGRAPHICAL STATION #74

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	O2/Ar	Comments
CTD	102	1	X	X	X	X	X	X		X	X							X		
CTD	102	2	X	X	X	X	X	X		X	X							X		
CTD	102	3	X	X						X	X							X		
CTD	102	4	X	X		X	X	X		X	X							X		
CTD	102	5	X	X	X	X	X	X		X	X							X		
CTD	102	6	X	X		X	X	X		X	X							X		
CTD	102	7	X	X	X	X	X	X		X	X							X		
CTD	102	8	X	X	X	X	X	X		X	X							X		
CTD	102	9	X	X	X	X	X	X		X	X							X		
CTD	102	10	X	X	X	X	X	X		X	X							X		
CTD	102	11	X	X	X	X	X	X		X	X							X		
CTD	102	12	X	X	X	X	X	X		X	X							X		
CTD	102	13	X	X	X	X	X	X		X	X							X		
CTD	102	14	X	X	X	X	X	X		X	X							X		
CTD	102	15	X	X	X	X	X	X		X	X							X		
CTD	102	16	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	102	17	X	X	X	X	X	X		X	X		X			X	X	X		
CTD	102	18	X	X		X	X	X		X	X		X			X	X	X		
CTD	102	19	X	X	X	X	X	X		X	X		X		X	X	X	X		
CTD	102	20	X	X	X	X	X	X		X	X		X		X	X	X	X		
CTD	102	21	X	X		X	X	X		X	X		X		X	X	X	X		
CTD		22																		
CTD		23																		
CTD	102	24	X	X	X	X	X	X		X	X		X			X	X	X	X	

GEOGRAPHICAL STATION #75

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	O2/Ar	Comments
CTD	103	1	X	X	X	X	X	X		X	X									
CTD	103	2	X	X						X	X									
CTD	103	3	X	X		X	X	X		X	X									
CTD	103	4	X	X	X	X	X	X		X	X									
CTD	103	5	X	X	X	X	X	X		X	X									
CTD	103	6	X	X		X	X	X		X	X									
CTD	103	7	X	X	X	X	X	X		X	X									
CTD	103	8	X	X	X	X	X	X		X	X									
CTD	103	9	X	X	X	X	X	X		X	X									
CTD	103	10	X	X	X	X	X	X		X	X									
CTD	103	11	X	X	X	X	X	X		X	X									
CTD	103	12	X	X	X	X	X	X		X	X									
CTD	103	13	X	X	X	X	X	X		X	X									
CTD	103	14	X	X	X	X	X	X		X	X									
CTD	103	15	X	X	X	X	X	X		X	X									
CTD	103	16	X	X	X	X	X	X		X	X									
CTD	103	17	X	X	X					X	X		X							
CTD	103	18	X	X		X	X	X		X	X		X			X	X			
CTD	103	19	X	X	X	X	X	X		X	X		X			X	X			
CTD	103	20	X	X		X	X	X		X	X		X			X	X			
CTD	103	21	X	X		X	X	X		X	X		X			X	X			
CTD		22																		
CTD		23																		
CTD	103	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #76

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	O2/Ar	Comments
CTD	104	1	X	X	X	X	X	X		X	X									
CTD	104	2	X	X	X	X	X	X		X	X									
CTD	104	3	X	X	X	X	X	X		X	X									
CTD	104	4	X	X	X	X	X	X		X	X									
CTD	104	5	X	X		X	X	X		X	X									
CTD	104	6	X	X	X	X	X	X		X	X									
CTD	104	7	X	X		X	X	X		X	X									
CTD	104	8	X	X	X	X	X	X		X	X									
CTD	104	9	X	X	X	X	X	X		X	X									
CTD	104	10	X	X	X	X	X	X		X	X									
CTD	104	11	X	X	X	X	X	X		X	X									
CTD	104	12	X	X	X	X	X	X		X	X									Fuite bouteille?
CTD	104	13	X	X	X	X	X	X		X	X									
CTD	104	14	X	X	X	X	X	X		X	X									
CTD	104	15	X	X	X	X	X	X		X	X									
CTD	104	16	X	X	X	X	X	X		X	X									
CTD	104	17	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	104	18	X	X	X	X	X	X	X	X	X		X			X	X			
CTD	104	19	X	X		X	X	X	X	X	X		X		X	X	X			
CTD	104	20				X	X	X	X				X							Fuite bouteille
CTD	104	21	X	X		X	X	X	X	X	X		X	X	X	X	X			
CTD		22																		
CTD		23																		
CTD	104	24	X	X	X	X	X	X	X	X	X		X		X	X	X		X	

GEOGRAPHICAL STATION #77

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	Pigments	NO3 & Si	PO4	NH4	Chloro	Taxo	Cocco	PIC	POC	Ba dissous	O2/Ar	Comments
CTD	105	1	X	X	X	X	X	X		X	X									
CTD	105	2	X	X	X	X	X	X		X	X									
CTD	105	3	X	X	X	X	X	X		X	X									
CTD	105	4	X	X	X	X	X	X		X	X									
CTD	105	5	X	X		X	X	X		X	X									
CTD	105	6	X	X	X	X	X	X		X	X									
CTD	105	7	X	X	X	X	X	X		X	X									
CTD	105	8	X	X	X	X	X	X		X	X									
CTD	105	9	X	X	X	X	X	X		X	X									Fuite bouteille?
CTD	105	10	X	X	X	X	X	X		X	X									
CTD	105	11	X	X	X	X	X	X		X	X									
CTD	105	12	X	X	X	X	X	X		X	X									
CTD	105	13	X	X	X	X	X	X		X	X									
CTD	105	14	X	X	X	X	X	X		X	X									
CTD	105	15	X	X	X	X	X	X		X	X									
CTD	105	16	X	X	X	X	X	X		X	X									
CTD	105	17	X	X	X	X	X	X		X	X		X			X	X			
CTD	105	18	X	X		X	X	X		X	X		X			X	X			
CTD	105	19	X	X	X	X	X	X		X	X		X		X	X	X			
CTD	105	20	X	X		X	X	X		X	X		X		X	X	X			
CTD	105	21	X	X		X	X	X		X	X		X		X	X	X			
CTD		22																		
CTD		23																		
CTD	105	24	X	X	X	X	X	X		X	X		X			X	X			

GEOGRAPHICAL STATION #78

Code instr.	Cast n°	Bottle n°	O2	Sal	CFC	DIC licor	ALK & pH	DIC colori	14C POC & DOC	14C DIC	NO3 & Si	PO4	NH4	Bore	Ba dissous	30Si dissous	B Si	Bacteria	Comments
CTD	106	1	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	
CTD	106	2	X	X		X	X	X			X	X			X	X	X		
CTD	106	3	X	X	X	X	X	X		X	X	X		X	X				
CTD	106	4	X	X		X	X	X			X	X			X	X			
CTD	106	5	X	X	X	X	X	X	X	X	X	X		X	X	X		X	
CTD	106	6	X	X	X	X	X	X		X	X	X		X	X				
CTD	106	7	X	X	X	X	X	X		X	X	X		X	X	X		X	
CTD	106	8	X	X	X	X	X	X		X	X	X		X	X			X	
CTD	106	9	X	X	X	X	X	X	X	X	X	X		X	X	X	X		
CTD	106	10	X	X	X	X	X	X		X	X	X		X	X		X	X	
CTD	106	11	X	X	X	X	X	X	X	X	X	X		X	X	X	X		
CTD	106	12	X	X	X	X	X	X		X	X	X		X	X	X	X		
CTD	106	13	X	X	X	X	X	X		X	X	X		X	X		X	X	
CTD	106	14	X	X	X	X	X	X	X	X	X	X		X	X		X		
CTD	106	15	X	X	X	X	X	X	X	X	X	X		X	X		X	X	
CTD	106	16	X	X	X	X	X	X		X	X	X		X	X				
CTD	106	17	X	X		X	X	X	X	X	X	X		X	X				
CTD	106	18	X	X	X	X	X	X		X	X	X		X	X			X	
CTD	106	19	X	X		X	X	X	X	X	X	X		X	X				
CTD	106	20	X	X	X	X	X	X		X	X	X		X	X			X	
CTD	106	21	X	X		X	X	X	X	X	X	X		X	X		X		
CTD		22																	
CTD		23																	
CTD	106	24	X	X	X	X	X	X	X	X	X	X		X	X		X	X	

GEOGRAPHICAL STATION #78						
Code instr.	Cast n°	Bottle n°	O2	REE, Nd,Pa,230Th	Bacteria	Comments
CTD	107	1	X	X		
CTD	107	2			X	
CTD	107	3		X		
CTD	107	4				
CTD	107	5	X	X		
CTD	107	6				
CTD	107	7	X	X		
CTD	107	8				
CTD	107	9	X	X		
CTD	107	10				
CTD	107	11	X	X		
CTD	107	12				
CTD	107	13	X	X		
CTD	107	14				
CTD	107	15	X	X		
CTD	107	16				
CTD	107	17	X	X		
CTD	107	18				
CTD	107	19	X	X		
CTD	107	20				
CTD	107	21	X	X		REE, Nd,Pa,Th prélevés sur Btl21&24
CTD		22				
CTD		23				
CTD	107	24		X		Btl21et 24: meme échantillon

GEOGRAPHICAL STATION #78

Code instr.	Cast n°	Bottle n°	O2	O2/Ar	DOC	Pigments	Chloro	Inc 15N	B Si	NO3 & Si	PO4	NH4	POC	PIC	Cocco	Taxo	IncSi (D+R)	IncSi (D)	Th	Comments
CTD	108	1			X	X	X		X	X	X	X	X	X						
CTD	108	2																		Bouteille vide
CTD	108	3			X	X	X		X	X	X	X	X	X	X					
CTD	108	4			X	X	X		X	X	X	X	X	X						
CTD	108	5																		
CTD	108	6															X			
CTD	108	7																		
CTD	108	8			X	X	X		X	X	X	X	X	X						
CTD	108	9	X	X				X							X	X				
CTD	108	10			X	X	X		X	X	X	X	X	X	X					
CTD	108	11	X					X												
CTD	108	12			X	X	X		X	X	X	X	X	X						
CTD	108	13																X		
CTD	108	14																		
CTD	108	15			X	X	X		X	X	X	X	X	X						
CTD	108	16	X					X												
CTD	108	17																		
CTD	108	18															X			
CTD	108	19																		
CTD	108	20						X												
CTD	108	21	X	X				X												
CTD		22																		
CTD		23																		
CTD	108	24		X	X	X	X		X	X	X	X	X	X						

GEOGRAPHICAL STATION #78								
Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	210Po	234Th	Ra	Comments
CTD	109	1		X	X	X		
CTD	109	2						Bouteille non déclenchée
CTD	109	3					X	
CTD	109	4						
CTD	109	5		X	X	X		
CTD	109	6		X	X	X		
CTD	109	7			X	X		
CTD	109	8			X	X		
CTD	109	9			X	X		
CTD	109	10		X	X	X		
CTD	109	11			X	X		
CTD	109	12			X	X		
CTD	109	13			X	X		
CTD	109	14			X	X		
CTD	109	15		X	X	X		
CTD	109	16		X	X	X		
CTD	109	17			X	X		
CTD	109	18			X	X		
CTD	109	19			X	X		
CTD	109	20			X	X		
CTD	109	21			X	X		
CTD		22						
CTD		23						
CTD	109	24		X	X	X		

GEOGRAPHICAL STATION #78												
Code instr.	Cast n°	Bottle n°	Sal	NO3 & Si	Ba dissous	Ba particulaire	30Si dissous	30BSi dissous	Bacteria	REE, Nd,PA,Th	Inc O2	Comments
CTD	110	1		X	X	X	X					
CTD	110	2			X	X						
CTD	110	3		X	X	X						
CTD	110	4			X	X	X					
CTD	110	5		X	X	X						
CTD	110	6			X	X						
CTD	110	7			X	X	X					
CTD	110	8			X	X			X			
CTD	110	9		X	X	X	X		X			
CTD	110	10			X	X			X			
CTD	110	11			X	X	X		X			
CTD	110	12			X	X			X			
CTD	110	13			X	X	X		X			
CTD	110	14		X	X	X	X		X			
CTD	110	15			X	X			X			
CTD	110	16			X	X	X		X			
CTD	110	17		X	X	X					X	
CTD	110	18			X	X	X	X	X			
CTD	110	19		X	X	X	X	X			X	
CTD	110	20								X		
CTD	110	21		X	X	X	X	X				
CTD		22										
CTD		23										
CTD	110	24										Bouteille vide

CTD Casts

– CTD Bottles Values –

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	0	17,226	-33,978	1840	1	1857,9	2,953	34,813	1036,27	2,952	34,817	1036,28	6,13	0,0067			5,9963	88,643	44,79
Hydro	0	17,226	-33,978	1840	2	1857,9	2,953	34,813	1036,27	2,952	34,817	1036,27	6,13	0,0067			5,9963	88,604	44,79
Hydro	0	17,226	-33,978	1840	3	1858,1	2,953	34,813	1036,27	2,952	34,817	1036,28	6,13	0,007			5,9963	88,64	44,791
Hydro	0	17,226	-33,978	1840	4	1857,5	2,953	34,813	1036,27	2,952	34,817	1036,27	6,14	0,0056			5,9963	88,624	44,791
Hydro	0	17,226	-33,978	1840	5	1858,1	2,953	34,813	1036,27	2,952	34,817	1036,28	6,14	0,0096			5,9963	88,635	44,791
Hydro	0	17,226	-33,978	1840	6	1857,8	2,953	34,813	1036,27	2,952	34,817	1036,27	6,14	0,0084			5,9963	88,622	44,791
Hydro	0	17,226	-33,978	1840	7	1856,9	2,952	34,814	1036,27	2,952	34,817	1036,27	6,14	0,0065			5,9963	88,62	44,791
Hydro	0	17,226	-33,978	1840	8	1858,1	2,953	34,813	1036,27	2,952	34,817	1036,28	6,14	0,0073			5,9963	88,638	44,791
Hydro	0	17,226	-33,978	1840	9	1858,5	2,952	34,813	1036,28	2,951	34,817	1036,28	6,14	0,0073			5,9963	88,646	44,791
Hydro	0	17,226	-33,978	1840	10	1858	2,953	34,813	1036,27	2,952	34,817	1036,28	6,14	0,0073			5,9963	88,594	44,791
Hydro	0	17,226	-33,979	1840	11	1742,4	2,973	34,788	1035,73	2,973	34,792	1035,73	5,95	0,0043			5,9963	88,617	44,795
Hydro	0	17,226	-33,979	1840	12	1498,9	2,89	34,724	1034,59	2,889	34,728	1034,59	5,6	0,007			5,9963	88,679	44,8
Hydro	0	17,226	-33,977	1840	13	1252,1	2,914	34,611	1033,37	2,913	34,615	1033,38	5,18	0,0072			5,9963	88,699	44,804
Hydro	0	17,225	-33,975	1840	14	1002,4	3,265	34,495	1032,1	3,261	34,499	1032,1	5,11	0,0059			5,9963	88,679	44,81
Hydro	0	17,228	-33,972	1840	15	802,7	3,921	34,415	1031,04	3,92	34,418	1031,04	5,4	0,0074			5,9963	88,641	44,823
Hydro	0	17,229	-33,973	1840	16	598,7	5,071	34,383	1029,94	5,07	34,386	1029,94	5,82	0,0084			5,9963	88,526	44,827
Hydro	0	17,229	-33,973	1840	17	400	7,701	34,558	1028,79	7,704	34,561	1028,8	5,16	0,0356			5,9963	87,852	44,831
Hydro	0	17,231	-33,973	1840	18	199	10,702	34,883	1027,63	10,7	34,887	1027,64	5,78	0,0169			5,9963	88,237	44,835
Hydro	0	17,231	-33,973	1840	19	148,8	11,452	34,922	1027,3	11,445	34,925	1027,3	6,35	0,0223			5,9963	88,255	44,838
Hydro	0	17,231	-33,973	1840	20	99,4	12,415	34,972	1026,93	12,416	34,976	1026,94	6,55	0,0386			5,9963	88,056	44,84
Hydro	0	17,231	-33,974	1840	21	50,4	14,862	35,269	1026,43	14,858	35,271	1026,44	5,96	0,2636			5,9963	86,468	44,842
Hydro	0	17,231	-33,973	1840	24	2,5	19,955	35,308	1025,02	19,948	35,312	1025,02	6,59	0,393			5,9963	84,058	44,844
Hydro	1	17,956	-33,939	185	1	175,7	9,173	34,708	1027,66	9,173	34,711	1027,66	2,92	0,0444			5,9963	83,661	44,998
Hydro	1	17,956	-33,939	185	2	175,1	9,173	34,708	1027,66	9,172	34,711	1027,66	2,92	0,0437			5,9963	83,703	44,999
Hydro	1	17,956	-33,939	185	3	149,9	9,181	34,709	1027,54	9,181	34,712	1027,54	3	0,044			5,9963	84,201	45,001
Hydro	1	17,956	-33,939	185	4	150,4	9,182	34,709	1027,54	9,182	34,712	1027,55	2,98	0,0469			5,9963	84,145	45,001
Hydro	1	17,956	-33,939	185	5	100,6	9,906	34,779	1027,25	9,904	34,783	1027,25	5,31	0,0347			5,9963	87,695	45,004
Hydro	1	17,956	-33,939	185	6	100,1	9,901	34,779	1027,25	9,898	34,782	1027,25	5,37	0,0292			5,9963	87,72	45,004
Hydro	1	17,956	-33,939	185	7	75,8	10,769	34,898	1027,08	10,768	34,901	1027,08	5,75	0,0524			5,9963	87,728	45,006
Hydro	1	17,956	-33,939	185	8	76	10,724	34,893	1027,08	10,717	34,895	1027,09	5,74	0,0411			5,9963	87,731	45,006
Hydro	1	17,955	-33,94	185	9	50,8	11,181	34,892	1026,89	11,326	34,903	1026,87	5,94	0,1216			5,9963	87,155	45,008
Hydro	1	17,956	-33,94	185	10	50	11,585	34,949	1026,85	11,588	34,953	1026,85	6,07	0,1448			5,9963	87,146	45,008
Hydro	1	17,956	-33,939	185	11	24,6	12,476	35,026	1026,63	12,47	35,029	1026,63	6,5	0,338			5,9963	85,232	45,01
Hydro	1	17,956	-33,94	185	12	24,6	12,47	35,026	1026,63	12,466	35,029	1026,63	6,5	0,3443			5,9963	85,172	45,01
Hydro	1	17,956	-33,94	185	13	2,2	14,4	34,888	1026,03	14,386	34,893	1026,03	7,48	0,388			5,9963	83,153	45,012
Hydro	1	17,956	-33,94	185	14	2,7	14,406	34,887	1026,03	14,4	34,892	1026,03	7,48	0,383			5,9963	83,16	45,012
Hydro	2	17,521	-33,96	371	1	364,4	7,605	34,552	1028,64	7,604	34,554	1028,64	5,15	0,0242			5,9963	87,362	45,13
Hydro	2	17,521	-33,96	371	2	365,1	7,606	34,552	1028,64	7,606	34,554	1028,65	5,14	0,0245			5,9963	87,363	45,13
Hydro	2	17,521	-33,96	371	3	352,4	7,62	34,553	1028,59	7,618	34,556	1028,59	5,13	0,0266			5,9963	87,382	45,133
Hydro	2	17,521	-33,96	371	4	303,4	8,262	34,616	1028,31	8,261	34,619	1028,32	5,01	0,0222			5,9963	87,941	45,136
Hydro	2	17,522	-33,961	371	5	249,3	8,893	34,664	1028	8,895	34,666	1028	5,73	0,0182			5,9963	88,435	45,138
Hydro	2	17,522	-33,962	371	6	201,2	9,95	34,788	1027,7	9,952	34,791	1027,71	5,96	0,0124			5,9963	88,41	45,141
Hydro	2	17,522	-33,962	371	7	150,6	11,273	34,961	1027,37	11,277	34,964	1027,37	5,99	0,0174			5,9963	88,355	45,143
Hydro	2	17,522	-33,962	371	8	98,9	11,753	34,959	1027,05	11,776	34,964	1027,05	6,46	0,0247			5,9963	88,309	45,145
Hydro	2	17,522	-33,962	371	9	49,1	12,211	34,917	1026,7	12,214	34,918	1026,7	6,79	0,0494			5,9963	88,079	45,148
Hydro	2	17,522	-33,962	371	10	49	12,25	34,917	1026,7	12,258	34,921	1026,7	6,81	0,051			5,9963	88,077	45,148

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	2	17,522	-33,962	371	11	25,1	13,33	35,08	1026,5	13,326	35,082	1026,5	6,47	0,1133			5,9963	87,439	45,15
Hydro	2	17,522	-33,962	371	12	25,2	13,489	35,104	1026,49	13,476	35,104	1026,49	6,38	0,1252			5,9963	87,457	45,15
Hydro	2	17,521	-33,962	371	13	2,7	16,381	35,126	1025,77	16,379	35,129	1025,77	6,8	0,5055			5,9963	81,366	45,152
Hydro	2	17,521	-33,962	371	14	3,1	16,367	35,126	1025,77	16,363	35,128	1025,78	6,77	0,5046			5,9963	81,366	45,152
Hydro	3	17,411	-33,969	1072	1	979,9	3,398	34,477	1031,96	3,397	34,48	1031,97	5,17	0,0105			609,63	88,549	45,261
Hydro	3	17,41	-33,969	1072	2	799,4	3,644	34,431	1031,07	3,644	34,434	1031,07	5,31	0,0082			717,6	88,618	45,265
Hydro	3	17,405	-33,967	1072	3	597,7	4,883	34,388	1029,96	4,885	34,392	1029,96	5,74	0,0069			871,59	88,71	45,27
Hydro	3	17,409	-33,967	1072	4	403,3	6,786	34,491	1028,89	6,789	34,494	1028,89	5,66	0,0081			1770,6	88,567	45,275
Hydro	3	17,409	-33,966	1072	5	201,4	9,658	34,764	1027,74	9,661	34,767	1027,74	5,36	0,0173			574,02	88,074	45,28
Hydro	3	17,409	-33,966	1072	6	151,1	10,993	34,917	1027,39	10,996	34,922	1027,4	6,03	0,0138			534,41	88,34	45,283
Hydro	3	17,404	-33,967	1072	7	100,4	11,781	34,985	1027,07	11,783	34,987	1027,07	6,03	0,0341			563,66	88,194	45,285
Hydro	3	17,408	-33,968	1072	8	50,7	12,596	35,022	1026,72	12,592	35,024	1026,72	6,02	0,0723			599,63	87,591	45,287
Hydro	3	17,405	-33,967	1072	9	50,6	12,587	35,021	1026,72	12,585	35,024	1026,72	6,02	0,0723			603,63	87,57	45,288
Hydro	3	17,406	-33,968	1072	10	30,3	13,318	35,069	1026,52	13,339	35,071	1026,51	6,14	0,206			641,61	86,475	45,29
Hydro	3	17,404	-33,968	1072	11	20	14,624	35,061	1026,19	14,609	35,065	1026,2	6,79	0,7408			668,41	81,153	45,291
Hydro	3	17,402	-33,967	1072	12	2,2	15,284	35,05	1025,96	15,288	35,053	1025,96	7,14	1,1097			713,56	66,219	45,293
Hydro	3	17,406	-33,969	1072	13	2,3	15,279	35,05	1025,96	15,245	35,055	1025,97	7,14	1,1092			723,27	64,364	45,293
Hydro	4	17,305	-33,976	1380	1	1361,8	2,927	34,65	1033,9	2,926	34,653	1033,9	5,27	0,0075			2485,6	88,608	45,437
Hydro	4	17,305	-33,974	1380	2	1248,2	2,938	34,617	1033,36	2,937	34,619	1033,36	5,17	0,0074			2230,1	88,694	45,44
Hydro	4	17,304	-33,975	1380	3	1001,6	3,256	34,489	1032,09	3,255	34,492	1032,09	5,13	0,0068			2392,4	88,776	45,446
Hydro	4	17,305	-33,975	1380	4	800,5	3,811	34,419	1031,05	3,809	34,423	1031,05	5,36	0,0066			2292,8	88,745	45,451
Hydro	4	17,305	-33,975	1380	5	599,5	4,778	34,34	1029,94	4,78	34,342	1029,94	6,04	0,0048			2302,4	88,678	45,457
Hydro	4	17,305	-33,976	1380	6	399,4	7,698	34,559	1028,79	7,697	34,562	1028,79	5,1	0,0298			2199,5	87,846	45,463
Hydro	4	17,303	-33,976	1380	7	197,7	10,369	34,847	1027,66	10,367	34,849	1027,66	5,53	0,0186			2578,4	87,817	45,469
Hydro	4	17,305	-33,977	1380	8	149,8	11,659	35,001	1027,33	11,659	35,003	1027,33	5,77	0,0255			2376,3	87,862	45,473
Hydro	4	17,305	-33,977	1380	9	99,2	12,65	35,1	1026,98	12,649	35,102	1026,99	5,86	0,0406			2284,8	87,738	45,476
Hydro	4	17,304	-33,976	1380	10	49,3	14,034	35,117	1026,49	14,033	35,119	1026,49	6,24	0,1637			2065,1	86,295	45,479
Hydro	4	17,304	-33,976	1380	11	49,6	14,051	35,117	1026,49	14,05	35,12	1026,49	6,24	0,1629			2303	86,32	45,479
Hydro	4	17,303	-33,976	1380	12	20,3	15,334	35,099	1026,06	15,33	35,102	1026,07	6,26	0,3572			2274,5	83,961	45,482
Hydro	4	17,303	-33,976	1380	13	10,1	17,284	35,151	1025,61	17,283	35,155	1025,61	6,7	0,1844			2276,6	81,643	45,484
Hydro	4	17,303	-33,976	1380	14	3,2	17,877	35,148	1025,43	17,842	35,154	1025,44	6,75	0,1239			2275,1	82,717	45,485
Hydro	4	17,303	-33,976	1380	15	2,9	17,924	35,146	1025,42	17,899	35,149	1025,42	6,74	0,122			2275,3	82,619	45,486
Hydro	5	16,953	-33,995	2526	1	2541,2	2,504	34,853	1039,42	2,503	34,855	1039,43	6,54	0,0041			2149,1	88,678	45,614
Hydro	5	16,952	-33,995	2526	2	2248,5	2,588	34,837	1038,09	2,588	34,84	1038,1	6,41	0,0035			2091,2	88,849	45,627
Hydro	5	16,952	-33,994	2526	3	2001,6	2,662	34,824	1036,97	2,661	34,827	1036,97	6,25	0,0036			2065,8	88,846	45,633
Hydro	5	16,951	-33,994	2526	4	1747,6	2,788	34,785	1035,78	2,788	34,788	1035,78	5,9	0,0038			2046,4	88,828	45,637
Hydro	5	16,951	-33,994	2526	5	1500,8	2,825	34,714	1034,6	2,824	34,717	1034,6	5,48	0,0034			2007,4	88,825	45,642
Hydro	5	16,952	-33,993	2526	6	1250,4	2,973	34,6	1033,35	2,973	34,602	1033,35	5,05	0,0036			1924,9	88,797	45,646
Hydro	5	16,95	-33,993	2526	7	997,5	3,505	34,476	1032,03	3,505	34,479	1032,03	5,06	0,0035			1959,6	88,761	45,65
Hydro	5	16,95	-33,992	2526	8	798,1	4,364	34,416	1030,96	4,364	34,418	1030,97	5,38	0,0054			1963,5	88,756	45,654
Hydro	5	16,951	-33,992	2526	9	599,3	5,542	34,37	1029,87	5,535	34,371	1029,87	5,99	0,002			1907,1	88,709	45,657
Hydro	5	16,951	-33,991	2526	10	400,6	8,978	34,68	1028,69	8,976	34,682	1028,69	5,67	0,0077			1848,2	88,56	45,66
Hydro	5	16,95	-33,991	2526	11	200,1	11,898	34,976	1027,49	11,895	34,978	1027,49	6,36	0,0104			1611,7	88,462	45,664
Hydro	5	16,951	-33,991	2526	12	148,7	12,646	35,07	1027,18	12,646	35,072	1027,18	6,29	0,0129			1830,6	88,396	45,666
Hydro	5	16,951	-33,991	2526	13	99	13,599	35,145	1026,82	13,594	35,147	1026,83	6,48	0,0345			1808,9	88,052	45,667
Hydro	5	16,952	-33,991	2526	14	48,3	17,023	35,248	1025,91	17,016	35,249	1025,91	6,41	0,4667			1790,3	84,54	45,669

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	5	16,952	-33,991	2526	15	48	16,997	35,222	1025,9	16,989	35,223	1025,9	6,43	0,4895			1793,4	84,387	45,67
Hydro	5	16,953	-33,991	2526	16	28,5	18,512	35,26	1025,47	18,514	35,263	1025,47	6,59	0,412			1772,4	83,287	45,671
Hydro	5	16,953	-33,991	2526	17	19,2	19,788	35,319	1025,15	19,785	35,322	1025,15	6,5	0,3217			1773,4	84,197	45,672
Hydro	5	16,953	-33,992	2526	18	3	20,539	35,349	1024,9	20,534	35,354	1024,9	6,4	0,1378			1742,9	81,567	45,673
Hydro	5	16,953	-33,992	3026	19	3,3	20,562	35,351	1024,89	20,564	35,355	1024,9	6,39	0,1114			1745,7	83,031	45,674
Hydro	6	16,588	-34,013	3026	1	3060,5	2,307	34,846	1041,75	2,306	34,849	1041,75	6,63	0,0034			5,9963	88,566	45,799
Hydro	6	16,588	-34,013	3026	2	2751,2	2,376	34,843	1040,37	2,375	34,846	1040,37	6,6	0,0008			5,9963	88,842	45,808
Hydro	6	16,588	-34,013	3026	3	2500,6	2,481	34,84	1039,24	2,481	34,843	1039,24	6,53	0,0019			5,9963	88,84	45,814
Hydro	6	16,587	-34,013	3026	4	2249	2,574	34,829	1038,09	2,573	34,832	1038,1	6,36	0,0026			5,9963	88,829	45,821
Hydro	6	16,588	-34,013	3026	5	2001,3	2,687	34,815	1036,96	2,686	34,818	1036,96	6,19	0,0045			5,9963	88,827	45,827
Hydro	6	16,588	-34,013	3026	6	1748,4	2,93	34,796	1035,77	2,929	34,799	1035,77	5,98	0,0035			5,9963	88,815	45,832
Hydro	6	16,588	-34,013	3026	7	1501,2	2,855	34,697	1034,58	2,854	34,7	1034,58	5,42	0,0022			5,9963	88,787	45,837
Hydro	6	16,588	-34,013	3026	8	1249,6	2,985	34,566	1033,32	2,984	34,569	1033,32	5,12	0,0043			5,9963	88,795	45,842
Hydro	6	16,588	-34,013	3026	9	1001,3	3,487	34,437	1032,02	3,491	34,44	1032,02	5,26	0,0035			5,9963	88,764	45,847
Hydro	6	16,588	-34,013	3026	10	800	4,11	34,314	1030,92	4,117	34,317	1030,93	6,07	0,0023			5,9963	88,753	45,851
Hydro	6	16,588	-34,013	3026	11	599,5	5,395	34,3	1029,83	5,395	34,302	1029,83	6,44	0,0023			5,9963	88,712	45,856
Hydro	6	16,588	-34,013	3026	12	398,4	8,817	34,613	1028,65	8,814	34,615	1028,65	6,06	0,0067			5,9963	88,567	45,861
Hydro	6	16,588	-34,013	3026	13	200,1	11,799	34,983	1027,51	11,799	34,987	1027,51	6,19	0,0088			5,9963	88,472	45,866
Hydro	6	16,588	-34,013	3026	14	150,6	12,028	34,936	1027,21	12,027	34,938	1027,21	6,58	0,0088			5,9963	88,441	45,868
Hydro	6	16,588	-34,013	3026	15	101,1	12,733	34,978	1026,88	12,735	34,982	1026,88	6,8	0,0337			5,9963	88,088	45,87
Hydro	6	16,588	-34,013	3026	16	58,5	15,1	35,156	1026,33	15,086	35,158	1026,33	6,82	0,3698			5,9963	85,682	45,871
Hydro	6	16,588	-34,013	3026	17	50,4	15,682	35,215	1026,21	15,681	35,216	1026,21	6,92	0,5455			5,9963	84,19	45,873
Hydro	6	16,588	-34,013	3026	18	39,5	18,599	35,36	1025,57	18,601	35,365	1025,57	6,63	0,5217			5,9963	83,493	45,875
Hydro	6	16,588	-34,013	3026	19	24,6	19,913	35,349	1025,16	19,916	35,351	1025,16	6,57	0,241			5,9963	84,532	45,876
Hydro	6	16,588	-34,013	3026	20	1,8	20,162	35,362	1025	20,161	35,365	1025,01	6,49	0,1864			5,9963	84,809	45,878
Hydro	6	16,588	-34,013	3026	21	1,9	20,167	35,362	1025	20,167	35,364	1025	6,5	0,1905			5,9963	84,973	45,878
Hydro	7	16,183	-34,033	3593	1	3630	2,112	34,826	1044,26	2,112	34,83	1044,26	6,78	0,0026			5,9963	88,627	46,013
Hydro	7	16,2	-34,033	3593	2	3251,1	2,266	34,838	1042,59	2,265	34,842	1042,59	6,78	0,0023			5,9963	88,846	46,027
Hydro	7	16,2	-34,033	3593	3	2998,5	2,332	34,84	1041,47	2,331	34,843	1041,47	6,72	0,003			5,9963	88,845	46,033
Hydro	7	16,2	-34,033	3593	4	2750,7	2,387	34,835	1040,36	2,386	34,838	1040,36	6,59	0,0023			5,9963	88,832	46,038
Hydro	7	16,2	-34,033	3593	5	2500,4	2,515	34,839	1039,23	2,514	34,842	1039,23	6,55	0,0024			5,9963	88,841	46,044
Hydro	7	16,2	-34,033	3593	6	2249,8	2,579	34,821	1038,09	2,578	34,824	1038,09	6,32	0,003			5,9963	88,818	46,05
Hydro	7	16,2	-34,033	3593	7	1999,4	2,712	34,802	1036,93	2,711	34,805	1036,94	6,1	0,0018			5,9963	88,81	46,056
Hydro	7	16,2	-34,033	3593	8	1752,7	2,809	34,759	1035,77	2,808	34,762	1035,78	5,77	0,0045			5,9963	88,804	46,062
Hydro	7	16,2	-34,033	3593	9	1498,6	2,86	34,673	1034,55	2,859	34,676	1034,55	5,33	0,0044			5,9963	88,786	46,068
Hydro	7	16,2	-34,033	3593	10	1249,2	3,029	34,544	1033,29	3,027	34,547	1033,29	5,14	0,0065			5,9963	88,794	46,073
Hydro	7	16,2	-34,033	3593	11	1000,6	3,825	34,423	1031,96	3,825	34,426	1031,97	5,34	0,0029			5,9963	88,744	46,079
Hydro	7	16,2	-34,033	3593	12	800,5	4,58	34,346	1030,89	4,58	34,349	1030,89	5,91	0,0052			5,9963	88,708	46,083
Hydro	7	16,183	-34,033	3593	13	601,6	7,035	34,492	1029,76	7,035	34,494	1029,76	5,7	0,0054			5,9963	88,636	46,087
Hydro	7	16,2	-34,033	3593	14	398,9	10,164	34,789	1028,56	10,163	34,792	1028,56	6,2	0,0045			5,9963	88,566	46,092
Hydro	7	16,183	-34,033	3593	15	199,1	12,806	35,044	1027,35	12,805	35,046	1027,36	6,53	0,0083			5,9963	88,367	46,096
Hydro	7	16,183	-34,033	3593	16	150,6	13,801	35,187	1027,04	13,796	35,189	1027,05	6,44	0,0109			5,9963	88,217	46,098
Hydro	7	16,183	-34,033	3593	17	97,9	15,408	35,373	1026,6	15,401	35,375	1026,61	6,34	0,0636			5,9963	87,83	46,099
Hydro	7	16,2	-34,033	3593	18	61,2	17,726	35,476	1025,97	17,722	35,479	1025,98	6,56	0,2207			5,9963	85,882	46,101
Hydro	7	16,2	-34,033	3593	19	49,9	20,044	35,547	1025,39	20,034	35,55	1025,39	6,39	0,0918			5,9963	86,428	46,103
Hydro	7	16,2	-34,033	3593	20	25,2	20,592	35,542	1025,13	20,584	35,545	1025,13	6,29	0,0604			5,9963	86,288	46,105

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	7	16,2	-34,033	3593	21	4,2	20,624	35,545	1025,03	20,623	35,548	1025,03	6,27	0,0457			5,9963	88,365	46,106
Hydro	7	16,2	-34,033	3593	24	4	20,62	35,545	1025,03	20,619	35,548	1025,03	6,28	0,0497			5,9963	88,618	46,107
Hydro	8	15,691	-34,06	4039	1	4100,7	1,082	34,726	1046,4	1,081	34,729	1046,4	6,86	0,0023			711,81	88,119	46,264
Hydro	8	15,691	-34,06	4039	2	3750,3	1,692	34,784	1044,82	1,692	34,786	1044,82	5,78	-0,0001			708,47	88,827	46,281
Hydro	8	15,691	-34,06	4039	3	3499,9	2,034	34,817	1043,7	2,033	34,819	1043,7	5,01	0,0014			809,67	88,822	46,29
Hydro	8	15,692	-34,059	4039	4	3248,4	2,215	34,834	1042,58	2,214	34,836	1042,58	4,65	0,0001			834,27	88,828	46,296
Hydro	8	15,693	-34,06	4039	5	2999	2,312	34,838	1041,47	2,311	34,841	1041,47	4,63	0,0011			1401,6	88,825	46,303
Hydro	8	15,692	-34,061	4039	6	2749,5	2,397	34,837	1040,35	2,396	34,84	1040,36	5,13	0,0023			1486	88,822	46,311
Hydro	8	15,693	-34,061	4039	7	2499,7	2,526	34,839	1039,23	2,526	34,842	1039,23	5,53	0,0001			1894,4	88,832	46,316
Hydro	8	15,694	-34,061	4039	8	2249,1	2,637	34,831	1038,09	2,634	34,834	1038,09	5,79	0,0014			1600,7	88,833	46,321
Hydro	8	15,695	-34,063	4039	9	2000,7	2,725	34,806	1036,94	2,724	34,809	1036,94	5,74	0,0038			1619,9	88,825	46,326
Hydro	8	15,693	-34,063	4039	10	1749,5	2,802	34,747	1035,75	2,801	34,75	1035,75	5,42	0,0031			1728,4	88,782	46,333
Hydro	8	15,693	-34,063	4039	11	1503,4	2,898	34,656	1034,55	2,897	34,659	1034,56	5,05	0,0032			1935	88,756	46,339
Hydro	8	15,694	-34,063	4039	12	1241	3,115	34,517	1033,22	3,115	34,519	1033,22	4,95	0,0034			1703	88,778	46,344
Hydro	8	15,694	-34,063	4039	13	999,5	3,825	34,417	1031,95	3,829	34,419	1031,95	4,98	0,0065			2188,5	88,663	46,35
Hydro	8	15,695	-34,062	4039	14	799,6	4,601	34,353	1030,89	4,601	34,356	1030,89	5,6	0,0047			2184,7	88,683	46,355
Hydro	8	15,695	-34,062	4039	15	600,1	6,915	34,474	1029,75	6,916	34,477	1029,76	5,6	0,0044			2180,3	88,628	46,36
Hydro	8	15,696	-34,062	4039	16	400,7	10,113	34,761	1028,55	10,123	34,765	1028,55	6,29	0,0034			2184	88,534	46,365
Hydro	8	15,697	-34,062	4039	17	201	13,22	35,136	1027,35	13,219	35,138	1027,35	6,19	0,0092			2474,1	88,343	46,369
Hydro	8	15,698	-34,062	4039	18	150,2	14,17	35,234	1027	14,154	35,233	1027	6,18	0,0119			2004,6	88,175	46,372
Hydro	8	15,699	-34,062	4039	19	101,1	15,263	35,351	1026,63	15,264	35,351	1026,63	5,91	0,0305			2162,2	87,908	46,374
Hydro	8	15,698	-34,062	4039	20	70,3	18,163	35,458	1025,89	18,136	35,465	1025,9	6,21	0,3545			2603,6	85,742	46,376
Hydro	8	15,698	-34,062	4039	21	49,4	20,668	35,592	1025,25	20,668	35,594	1025,25	6,14	0,094			2382,6	86,593	46,378
Hydro	8	15,696	-34,061	4039	24	3,1	20,868	35,599	1025	20,868	35,601	1025	6,11	0,0194			2147,6	86,843	46,38
Hydro	9	15,164	-34,092	4296	1	4318,5	1,07	34,724	1047,34	1,069	34,726	1047,35	6,1	0,002			2282,6	88,126	47,394
Hydro	9	15,165	-34,092	4296	2	4001,4	1,2	34,737	1045,96	1,201	34,74	1045,96	5,91	0,0001			2294,6	88,743	47,403
Hydro	9	15,164	-34,092	4296	3	3751,2	1,515	34,768	1044,84	1,515	34,77	1044,84	5,81	0,0002			2335,7	88,801	47,409
Hydro	9	15,164	-34,093	4296	4	3501,6	1,929	34,81	1043,72	1,929	34,812	1043,72	5,78	0,0027			1317,6	88,814	47,416
Hydro	9	15,163	-34,093	4296	5	3246,4	2,18	34,836	1042,58	2,18	34,839	1042,58	5,76	0,0018			2261,7	88,818	47,423
Hydro	9	15,162	-34,093	4296	6	3001,7	2,262	34,838	1041,49	2,263	34,841	1041,49	5,77	0,0031			2272,9	88,814	47,427
Hydro	9	15,163	-34,092	4296	7	2750,1	2,356	34,84	1040,36	2,355	34,843	1040,37	5,81	0,0003			2274,7	88,814	47,432
Hydro	9	15,162	-34,093	4296	8	2499,8	2,464	34,838	1039,23	2,464	34,84	1039,24	5,83	0,0032			2270,6	88,807	47,439
Hydro	9	15,163	-34,092	4296	9	2249,5	2,56	34,827	1038,1	2,56	34,83	1038,1	5,77	0,0026			2276,6	88,802	47,445
Hydro	9	15,162	-34,093	4296	10	1998,9	2,704	34,814	1036,94	2,703	34,817	1036,94	5,66	0,0019			2300,6	88,796	47,45
Hydro	9	15,163	-34,093	4296	11	1751,2	2,885	34,791	1035,78	2,884	34,793	1035,78	5,51	0,0021			2292,6	88,779	47,455
Hydro	9	15,162	-34,093	4296	12	1508,5	3,061	34,741	1034,62	3,06	34,743	1034,62	5,23	0,0023			2296,8	88,734	47,46
Hydro	9	15,163	-34,093	4296	13	1200,4	3,087	34,555	1033,07	3,087	34,557	1033,07	4,76	0,0031			2454,5	88,723	47,466
Hydro	9	15,164	-34,093	4296	14	998,8	3,457	34,434	1032,01	3,458	34,435	1032,01	4,96	0,0027			2860,6	88,713	47,47
Hydro	9	15,163	-34,093	4296	15	699,9	4,999	34,357	1030,39	5,002	34,358	1030,39	5,63	0,001			1793,4	88,678	47,476
Hydro	9	15,162	-34,093	4296	16	500	7,382	34,498	1029,25	7,377	34,498	1029,25	5,55	0,0054			1637,2	88,599	47,48
Hydro	9	15,162	-34,094	4296	17	249	10,794	34,828	1027,8	10,822	34,834	1027,8	6,09	0,0027			1693	88,453	47,485
Hydro	9	15,162	-34,093	4296	18	151	12,829	35,121	1027,2	12,821	35,122	1027,2	5,73	0,0059			1445,6	88,377	47,488
Hydro	9	15,162	-34,094	4296	19	89,4	15,08	35,255	1026,55	15,083	35,257	1026,55	5,91	0,0531			1261,2	87,883	47,491
Hydro	9	15,162	-34,094	4296	20	59,3	16,228	35,214	1026,12	16,216	35,214	1026,12	6,37	0,4158			1577,2	85,607	47,493
Hydro	9	15,163	-34,093	4296	21	29,7	20,68	35,484	1025,08	20,682	35,486	1025,08	6,08	0,0772			2523,6	85,685	47,494
Hydro	9	15,162	-34,093	4296	24	2	21,086	35,517	1024,87	21,092	35,519	1024,87	5,98	0,0197			2574,4	85,499	47,498

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	10	14,583	-34,124	4407	1	4481	1,05	34,72	1048,05	1,049	34,722	1048,05	6,22	-0,0004			5,9963	87,53	47,865
Hydro	10	14,583	-34,124	4407	2	4482	1,05	34,72	1048,05	1,05	34,722	1048,05	6,2	0			5,9963	87,53	47,866
Hydro	10	14,584	-34,124	4407	3	4100,7	1,119	34,731	1046,4	1,118	34,733	1046,4	6,02	0,002			5,9963	88,731	47,876
Hydro	10	14,584	-34,124	4407	4	3799,7	1,338	34,752	1045,07	1,337	34,755	1045,07	5,96	-0,0008			5,9963	88,821	47,884
Hydro	10	14,583	-34,124	4407	5	3500	1,716	34,79	1043,73	1,716	34,792	1043,73	5,97	-0,0008			5,9963	88,827	47,89
Hydro	10	14,583	-34,124	4407	6	3200,7	2,103	34,832	1042,39	2,102	34,834	1042,39	6,09	0,0009			5,9963	88,837	47,895
Hydro	10	14,583	-34,124	4407	7	2902,4	2,266	34,844	1041,05	2,266	34,846	1041,06	6,11	0,0014			5,9963	88,832	47,903
Hydro	10	14,583	-34,124	4407	8	2599,8	2,345	34,837	1039,7	2,345	34,84	1039,7	6,03	0,0008			5,9963	88,826	47,91
Hydro	10	14,585	-34,124	4407	9	2299,8	2,481	34,833	1038,34	2,48	34,835	1038,34	5,93	0,0016			5,9963	88,825	47,916
Hydro	10	14,586	-34,124	4407	10	1999,7	2,628	34,818	1036,96	2,627	34,821	1036,96	5,74	0,0021			5,9963	88,796	47,927
Hydro	10	14,586	-34,123	4407	11	1750,6	2,735	34,787	1035,8	2,734	34,79	1035,8	5,48	0,002			5,9963	88,777	47,933
Hydro	10	14,587	-34,123	4407	12	1501	2,802	34,718	1034,6	2,801	34,72	1034,61	5,07	0,0024			5,9963	88,755	47,937
Hydro	10	14,586	-34,123	4407	13	1187,2	3,037	34,571	1033,03	3,036	34,573	1033,03	4,64	0,0014			5,9963	88,733	47,943
Hydro	10	14,586	-34,123	4407	14	999,7	3,557	34,472	1032,03	3,558	34,475	1032,03	4,7	0,0024			5,9963	88,713	47,948
Hydro	10	14,587	-34,123	4407	15	750,4	4,684	34,374	1030,67	4,681	34,376	1030,67	5,31	0,0024			5,9963	88,683	47,953
Hydro	10	14,588	-34,124	4407	16	499,5	8,533	34,645	1029,18	8,53	34,647	1029,18	5,17	0,0047			5,9963	88,497	47,958
Hydro	10	14,588	-34,123	4407	17	251,2	12,203	35,044	1027,71	12,202	35,045	1027,71	5,68	0,004			5,9963	88,287	47,963
Hydro	10	14,588	-34,123	4407	18	150,6	14,646	35,311	1026,96	14,667	35,316	1026,96	5,58	0,0133			5,9963	88,049	47,967
Hydro	10	14,588	-34,123	4407	19	89,6	16,889	35,494	1026,31	16,884	35,496	1026,32	5,31	0,1306			5,9963	87,043	47,969
Hydro	10	14,588	-34,123	4407	20	59,6	18,877	35,532	1025,72	18,87	35,532	1025,72	6,01	0,2678			5,9963	85,207	47,971
Hydro	10	14,588	-34,123	4407	21	29,7	20,978	35,611	1025,09	20,978	35,612	1025,1	5,84	0,0357			5,9963	86,299	47,973
Hydro	10	14,588	-34,122	4407	24	3,9	20,984	35,613	1024,98	20,983	35,614	1024,98	5,85	0,0316			5,9963	86,466	47,975
Large_Hydro	11	14,405	-34,427	4506	1	4584,3	1,036	34,718	1048,49	1,035	34,72	1048,49	6,44	0,001			1932,7	87,841	48,259
Large_Hydro	11	14,405	-34,427	4506	2	4399,4	1,074	34,723	1047,69	1,073	34,726	1047,69	6,27	0,0026			484,72	88,515	48,265
Large_Hydro	11	14,405	-34,427	4506	3	4100,3	1,1	34,729	1046,4	1,1	34,731	1046,4	6,01	-0,0023			2045,7	88,74	48,276
Large_Hydro	11	14,405	-34,427	4506	4	3799,6	1,261	34,745	1045,08	1,26	34,747	1045,08	5,82	-0,0013			2103,4	88,753	48,285
Large_Hydro	11	14,405	-34,427	4506	5	3501,5	1,64	34,779	1043,74	1,639	34,782	1043,74	5,69	0,0022			2160	88,79	48,295
Large_Hydro	11	14,406	-34,427	4506	6	3198,7	2,022	34,821	1042,38	2,019	34,823	1042,38	5,78	-0,0015			2268,7	88,825	48,304
Large_Hydro	11	14,406	-34,426	4506	7	2900,3	2,213	34,832	1041,04	2,212	34,834	1041,05	5,78	0,0025			1802,3	88,804	48,31
Large_Hydro	11	14,406	-34,426	4506	8	2599,2	2,339	34,833	1039,69	2,338	34,836	1039,69	5,75	0,0025			2167,1	88,803	48,318
Large_Hydro	11	14,406	-34,426	4506	9	2298,7	2,461	34,829	1038,33	2,46	34,831	1038,33	5,65	0,0009			2156,6	88,796	48,325
Large_Hydro	11	14,406	-34,426	4506	10	1999,5	2,605	34,817	1036,96	2,604	34,819	1036,96	5,5	0,001			2182,2	88,782	48,331
Large_Hydro	11	14,406	-34,426	4506	11	1749,6	2,74	34,788	1035,79	2,74	34,791	1035,8	5,26	0,0028			2213,9	88,77	48,338
Large_Hydro	11	14,406	-34,426	4506	12	1499,9	2,795	34,72	1034,6	2,794	34,722	1034,6	4,84	0,0017			2207,4	88,734	48,345
Large_Hydro	11	14,406	-34,426	4506	13	1198,9	3,099	34,564	1033,07	3,099	34,566	1033,07	4,42	0,0018			2238,1	88,733	48,351
Large_Hydro	11	14,406	-34,427	4506	14	997,9	3,77	34,488	1032,01	3,768	34,491	1032,01	4,42	0,0039			2321,2	88,705	48,355
Large_Hydro	11	14,406	-34,427	4506	15	751,3	4,85	34,39	1030,67	4,849	34,392	1030,67	5,05	0,0017			2385,3	88,654	48,36
Large_Hydro	11	14,406	-34,427	4506	16	500,6	7,91	34,535	1029,2	7,926	34,537	1029,2	5,28	0,0025			2330,4	88,584	48,364
Large_Hydro	11	14,406	-34,427	4506	17	250	12,178	35,01	1027,68	12,18	35,012	1027,68	5,56	0,0052			2339,3	88,309	48,369
Large_Hydro	11	14,406	-34,426	4506	18	143,6	14,885	35,331	1026,89	14,884	35,332	1026,89	5,4	0,0142			2348,9	88,048	48,371
Large_Hydro	11	14,406	-34,426	4506	19	80,8	17,157	35,445	1026,17	17,15	35,446	1026,18	5,52	0,2077			2420,5	86,449	48,373
Large_Hydro	11	14,406	-34,426	4506	20	60,2	18,987	35,525	1025,69	19,036	35,528	1025,68	5,73	0,1844			2481,6	85,646	48,375
Large_Hydro	11	14,406	-34,427	4506	21	51,3	20,641	35,601	1025,27	20,637	35,604	1025,28	5,65	0,0793			2210,1	86,44	48,376
Large_Hydro	11	14,406	-34,427	4506	24	1,8	20,911	35,613	1024,99	20,911	35,614	1024,99	5,64	0,0251			2439	86,894	48,378
Large_ML	12	14,409	-34,427	4510	1	251,7	12,347	35,063	1027,7	12,335	35,063	1027,7	5,31	0,0113	0,0348	0,8768	2521,5	88,239	48,576
Large_ML	12	14,409	-34,427	4510	2	201,6	13,525	35,15	1027,3	13,525	35,15	1027,3	5,63	0,0119	0,0394	0,9418	2392,2	88,253	48,581

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Large_ML	12	14,409	-34,427	4510	3	150	15,062	35,363	1026,9	15,069	35,365	1026,9	5,33	0,0128	0,0548	1,289	2350,2	87,993	48,584
Large_ML	12	14,409	-34,427	4510	4	100,9	16,496	35,459	1026,43	16,498	35,459	1026,43	5,34	0,1013	0,162	3,7799	2333,1	87,353	48,586
Large_ML	12	14,409	-34,427	4510	5	81	17,416	35,501	1026,15	17,419	35,502	1026,15	5,55	0,2739	0,465	11,053	2377,1	86,038	48,589
Large_ML	12	14,409	-34,427	4510	6	80,5	17,434	35,501	1026,15	17,438	35,502	1026,15	5,54	0,2826	0,4859	11,569	2380,7	85,977	48,589
Large_ML	12	14,409	-34,427	4510	7	80,7	17,435	35,501	1026,15	17,436	35,502	1026,15	5,55	0,2777	0,4916	11,694	2378,6	85,934	48,589
Large_ML	12	14,409	-34,427	4510	8	80,9	17,427	35,501	1026,15	17,428	35,502	1026,15	5,55	0,2772	0,4884	11,641	2383,5	85,951	48,589
Large_ML	12	14,409	-34,427	4510	9	70,6	18,572	35,493	1025,82	18,558	35,487	1025,81	5,87	0,2585	1,2379	31,387	2535,5	86,01	48,591
Large_ML	12	14,409	-34,427	4510	10	49,7	20,91	35,621	1025,21	20,916	35,622	1025,21	5,73	0,0477	4,091	109,64	2680,9	86,977	48,593
Large_ML	12	14,409	-34,427	4510	11	35	20,97	35,612	1025,12	20,971	35,627	1025,13	5,74	0,0309	7,4221	112,24	1512,3	86,093	48,594
Large_ML	12	14,409	-34,427	4510	12	35,2	20,971	35,626	1025,13	20,972	35,627	1025,13	5,72	0,0346	7,4678	111,21	1489,2	85,791	48,594
Large_ML	12	14,409	-34,427	4510	13	9	21,032	35,627	1025	21,034	35,628	1025	5,71	0,0141	36,006	641,64	1781,9	86,168	48,596
Large_ML	12	14,409	-34,427	4510	14	8,7	21,032	35,627	1025	21,034	35,628	1025	5,7	0,0143	34,575	617,68	1787,8	86,212	48,596
Large_ML	12	14,409	-34,427	4510	15	9,1	21,033	35,627	1025	21,035	35,628	1025	5,71	0,0155	29,35	548,5	1868,7	86,179	48,596
Large_ML	12	14,409	-34,427	4510	16	8,6	21,034	35,627	1025	21,035	35,628	1025	5,71	0,0177	30,153	508,37	1689,5	86,175	48,596
Large_ML	12	14,409	-34,427	4510	17	5	21,065	35,625	1024,97	21,055	35,607	1024,96	5,72	0,0177	44,319	1015,8	2294,3	87,197	48,598
Large_ML	12	14,409	-34,427	4510	18	5,8	21,082	35,625	1024,97	21,083	35,626	1024,97	5,72	0,0147	44,415	780,38	1757,6	86,753	48,598
Large_ML	12	14,409	-34,427	4510	19	3,9	21,043	35,608	1024,96	21,046	35,623	1024,97	5,73	0,0145	59,161	1034,9	1750,5	87,23	48,599
Large_ML	12	14,409	-34,427	4510	20	3,1	21,045	35,626	1024,97	21,045	35,627	1024,97	5,72	0,0163	61,019	1125,7	1842,8	87,278	48,6
Large_ML	12	14,409	-34,427	4510	21	4,3	21,044	35,627	1024,98	21,044	35,628	1024,98	5,72	0,015	45,537	985,28	2165,7	87,097	48,6
Large_ML	12	14,409	-34,427	4510	24	3,7	21,04	35,627	1024,98	21,04	35,628	1024,98	5,72	0,0105	56,395	1264,6	2241,9	86,176	48,6
Hydro	13	14,224	-34,724	4598	1	4635,1	1,067	34,72	1048,7	1,067	34,722	1048,71	6,01	-0,0011			11,952	88,136	48,754
Hydro	13	14,224	-34,724	4598	2	4399	1,093	34,725	1047,69	1,092	34,727	1047,69	5,81	-0,001			5,9963	88,608	48,767
Hydro	13	14,224	-34,724	4598	3	4098,7	1,161	34,733	1046,39	1,161	34,736	1046,39	5,66	-0,0014			5,9963	88,704	48,773
Hydro	13	14,225	-34,723	4598	4	3800,5	1,397	34,756	1045,07	1,396	34,758	1045,07	5,51	0,0007			5,9963	88,754	48,78
Hydro	13	14,225	-34,723	4598	5	3499,2	1,783	34,79	1043,71	1,782	34,793	1043,72	5,52	0,0004			5,9963	88,763	48,787
Hydro	13	14,225	-34,722	4598	6	3198,9	2,129	34,826	1042,37	2,128	34,828	1042,37	5,62	0,0023			5,9963	88,786	48,793
Hydro	13	14,225	-34,722	4598	7	2899,1	2,249	34,827	1041,03	2,249	34,83	1041,03	5,58	0			5,9963	88,768	48,799
Hydro	13	14,225	-34,723	4598	8	2600,1	2,405	34,835	1039,69	2,404	34,838	1039,69	5,59	-0,0003			5,9963	88,779	48,805
Hydro	13	14,224	-34,723	4598	9	2300,2	2,545	34,83	1038,33	2,544	34,833	1038,33	5,5	0,0012			5,9963	88,775	48,811
Hydro	13	14,224	-34,723	4598	10	2000,3	2,705	34,818	1036,95	2,704	34,82	1036,95	5,35	0,0042			5,9963	88,76	48,818
Hydro	13	14,224	-34,723	4598	11	1750,1	2,799	34,78	1035,78	2,798	34,783	1035,78	5,07	0,0027			5,9963	88,752	48,823
Hydro	13	14,224	-34,723	4598	12	1500,6	2,843	34,702	1034,58	2,842	34,704	1034,59	4,69	0,0018			5,9963	88,726	48,828
Hydro	13	14,224	-34,723	4598	13	1200,3	3,279	34,564	1033,05	3,279	34,566	1033,06	4,21	0,0043			5,9963	88,684	48,834
Hydro	13	14,224	-34,723	4598	14	998,8	3,772	34,459	1031,99	3,775	34,461	1031,99	4,43	0,0065			5,9963	88,68	48,838
Hydro	13	14,224	-34,723	4598	15	798,1	4,49	34,366	1030,91	4,49	34,368	1030,91	4,99	0,0023			5,9963	88,639	48,842
Hydro	13	14,223	-34,723	4598	16	499,8	8,461	34,633	1029,18	8,471	34,634	1029,18	4,86	0,0033			5,9963	88,403	48,848
Hydro	13	14,223	-34,723	4598	17	250,7	12,434	35,051	1027,66	12,438	35,053	1027,67	5,41	0,0061			5,9963	88,203	48,853
Hydro	13	14,223	-34,723	4598	18	150,6	14,493	35,267	1026,96	14,483	35,267	1026,96	5,29	0,019			5,9963	87,959	48,855
Hydro	13	14,223	-34,723	4598	19	99,9	16,886	35,446	1026,32	16,942	35,444	1026,31	5,3	0,1061			5,9963	87,198	48,857
Hydro	13	14,223	-34,723	4598	20	75,5	19,215	35,533	1025,7	19,211	35,535	1025,71	5,49	0,3339			5,9963	85,485	48,859
Hydro	13	14,223	-34,723	4598	21	38,7	20,732	35,623	1025,21	20,715	35,623	1025,21	5,5	0,0692			5,9963	86,204	48,861
Hydro	13	14,223	-34,723	4598	24	3,4	21,009	35,625	1024,98	21,009	35,627	1024,98	5,48	0,0294			5,9963	86,635	48,862
Hydro	14	14,05	-35,027	4691	1	4761,9	1,011	34,714	1049,25	1,01	34,716	1049,25	5,5	0,0014			5,9963	87,767	49,077
Hydro	14	14,05	-35,027	4691	2	4398,8	1,111	34,726	1047,69	1,111	34,729	1047,69	5,12	-0,002			5,9963	88,592	49,105
Hydro	14	14,05	-35,027	4691	3	4097,4	1,194	34,736	1046,38	1,194	34,738	1046,38	5,11	0,0002			5,9963	88,665	49,113
Hydro	14	14,05	-35,027	4691	4	3798,8	1,508	34,765	1045,05	1,508	34,767	1045,05	5,14	-0,0013			5,9963	88,757	49,119

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	14	14,05	-35,027	4691	5	3499,9	1,838	34,794	1043,71	1,838	34,796	1043,71	5,17	-0,0012			5,9963	88,748	49,125
Hydro	14	14,05	-35,027	4691	6	3201	2,039	34,815	1042,38	2,039	34,817	1042,39	5,21	0,0006			5,9963	88,759	49,13
Hydro	14	14,05	-35,027	4691	7	2898,7	2,221	34,828	1041,03	2,221	34,83	1041,04	5,22	0,0009			5,9963	88,78	49,136
Hydro	14	14,05	-35,027	4691	8	2598,8	2,371	34,83	1039,68	2,37	34,832	1039,68	5,18	-0,0006			5,9963	88,78	49,141
Hydro	14	14,05	-35,027	4691	9	2299,5	2,51	34,823	1038,32	2,509	34,825	1038,32	5,07	0,0019			5,9963	88,769	49,146
Hydro	14	14,05	-35,027	4691	10	1999,4	2,672	34,798	1036,93	2,671	34,8	1036,94	4,85	0,0014			5,9963	88,756	49,151
Hydro	14	14,05	-35,027	4691	11	1700,3	2,79	34,732	1035,52	2,789	34,735	1035,52	4,47	0,0024			5,9963	88,729	49,156
Hydro	14	14,05	-35,027	4691	12	1396,6	2,778	34,591	1034,03	2,778	34,593	1034,03	4,16	0,0041			5,9963	88,748	49,161
Hydro	14	14,05	-35,027	4691	13	1198,3	2,936	34,465	1033,01	2,935	34,467	1033,01	4,26	0,0011			5,9963	88,744	49,165
Hydro	14	14,05	-35,027	4691	14	997,8	3,396	34,344	1031,94	3,396	34,346	1031,94	4,64	0,0022			5,9963	88,703	49,169
Hydro	14	14,05	-35,027	4691	15	749,2	5,108	34,366	1030,6	5,113	34,368	1030,61	4,78	0,0034			5,9963	88,663	49,173
Hydro	14	14,05	-35,027	4691	16	498,5	8,805	34,639	1029,12	8,804	34,641	1029,12	4,94	0,0001			5,9963	88,559	49,177
Hydro	14	14,05	-35,027	4691	17	199,7	13,254	35,157	1027,35	13,296	35,168	1027,35	5,03	0,0057			7,9951	88,219	49,182
Hydro	14	14,05	-35,027	4691	18	97,3	14,962	35,291	1026,64	14,958	35,29	1026,64	5,14	0,0336			9,9939	87,66	49,184
Hydro	14	14,05	-35,027	4691	19	68,4	16,285	35,397	1026,29	16,29	35,396	1026,29	5,45	0,1928			11,993	86,666	49,186
Hydro	14	14,05	-35,027	4691	20	49,7	16,521	35,142	1025,96	16,513	35,145	1025,96	5,75	0,3641			13,991	84,951	49,187
Hydro	14	14,05	-35,027	4691	21	40,8	18,438	35,575	1025,78	18,436	35,577	1025,78	5,55	0,1523			17,989	85,3	49,189
Hydro	14	14,05	-35,027	4691	24	3,9	20,145	35,475	1025,1	20,146	35,476	1025,1	5,27	0,0707			23,985	85,545	49,191
Hydro	15	13,866	-35,327	4710	1	4779,1	1,096	34,721	1049,32	1,095	34,723	1049,32	5,56	-0,0017			2270,8	87,468	49,329
Hydro	15	13,866	-35,327	4710	2	4399,3	1,128	34,728	1047,69	1,128	34,73	1047,69	5,54	0,0008			2479,4	88,491	49,341
Hydro	15	13,866	-35,327	4710	3	4098,3	1,261	34,742	1046,37	1,261	34,744	1046,37	5,49	-0,0023			661,07	88,677	49,347
Hydro	15	13,866	-35,327	4710	4	3799,2	1,585	34,772	1045,04	1,585	34,774	1045,04	5,49	-0,0005			1015,9	88,756	49,353
Hydro	15	13,866	-35,327	4710	5	3501,2	1,959	34,807	1043,71	1,959	34,809	1043,71	5,53	-0,0029			2587,3	88,778	49,359
Hydro	15	13,866	-35,327	4710	6	3201,5	2,17	34,826	1042,37	2,169	34,829	1042,38	5,55	0,0001			2331,9	88,775	49,364
Hydro	15	13,866	-35,327	4710	7	2900,1	2,28	34,831	1041,03	2,279	34,833	1041,03	5,51	0,0024			2298,9	88,774	49,369
Hydro	15	13,866	-35,327	4710	8	2601,2	2,396	34,831	1039,69	2,396	34,833	1039,69	5,45	-0,0016			2283,1	88,77	49,374
Hydro	15	13,866	-35,327	4710	9	2301,3	2,56	34,821	1038,32	2,56	34,823	1038,32	5,29	0,0009			2282,7	88,76	49,379
Hydro	15	13,866	-35,327	4710	10	2000,6	2,702	34,795	1036,93	2,701	34,797	1036,94	5,05	0,0014			2276,6	88,741	49,385
Hydro	15	13,866	-35,327	4710	11	1749,5	2,779	34,732	1035,74	2,778	34,735	1035,75	4,69	0,001			2277,4	88,73	49,39
Hydro	15	13,866	-35,327	4710	12	1499	2,859	34,638	1034,52	2,859	34,641	1034,53	4,36	0,0034			2272,2	88,71	49,394
Hydro	15	13,866	-35,327	4710	13	1298,9	2,995	34,529	1033,51	2,994	34,531	1033,51	4,28	0,0015			2274,8	88,73	49,398
Hydro	15	13,866	-35,327	4710	14	1000,1	4,034	34,424	1031,94	4,026	34,426	1031,94	4,46	-0,0006			2274,6	88,667	49,403
Hydro	15	13,866	-35,327	4710	15	749,7	5,171	34,34	1030,58	5,171	34,342	1030,58	5,13	0,0012			2274,4	88,641	49,407
Hydro	15	13,866	-35,327	4710	16	499,5	8,991	34,665	1029,12	8,995	34,667	1029,12	4,94	0,0021			2278,6	88,531	49,412
Hydro	15	13,866	-35,327	4710	17	248,5	11,705	34,904	1027,68	11,703	34,905	1027,69	5,61	0,0022			2312,5	88,477	49,416
Hydro	15	13,866	-35,327	4710	18	119	14,428	35,266	1026,83	14,439	35,268	1026,83	5,26	0,0117			2582,9	88,22	49,42
Hydro	15	13,866	-35,327	4710	19	58,1	16,983	35,403	1026,08	16,993	35,406	1026,08	5,27	0,1159			2783,7	87,016	49,422
Hydro	15	13,866	-35,327	4710	20	39,9	18,533	35,497	1025,69	18,526	35,498	1025,7	5,28	0,4948			2938	83,751	49,424
Hydro	15	13,866	-35,327	4710	21	29,6	18,998	35,506	1025,54	18,995	35,509	1025,54	5,38	0,5023			1532,9	82,193	49,425
Hydro	15	13,866	-35,327	4710	24	4,4	20,098	35,413	1025,07	20,094	35,416	1025,07	5,41	0,0341			2824,8	84,085	49,427
Hydro	16	13,683	-35,626	4496	1	4544,2	1,021	34,716	1048,32	1,021	34,719	1048,32	5,64	-0,0019			2195,6	86,845	49,585
Hydro	16	13,683	-35,626	4496	2	4397,7	1,022	34,718	1047,69	1,022	34,721	1047,69	5,61	-0,0002			2171,6	87,455	49,589
Hydro	16	13,683	-35,626	4496	3	4098,4	1,12	34,729	1046,39	1,119	34,732	1046,39	5,55	-0,0005			2178,6	88,589	49,594
Hydro	16	13,683	-35,626	4496	4	3800,2	1,297	34,746	1045,08	1,296	34,749	1045,08	5,52	-0,0017			2176	88,684	49,599
Hydro	16	13,683	-35,626	4496	5	3499,8	1,703	34,784	1043,73	1,702	34,786	1043,73	5,55	0,0013			2152,8	88,757	49,605
Hydro	16	13,683	-35,626	4496	6	3199,5	2,033	34,815	1042,38	2,032	34,818	1042,38	5,59	-0,0008			2153,4	88,764	49,61

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	16	13,683	-35,626	4496	7	2899	2,244	34,828	1041,03	2,244	34,831	1041,03	5,58	-0,0005			2138,9	88,757	49,615
Hydro	16	13,683	-35,626	4496	8	2601,3	2,377	34,828	1039,69	2,377	34,831	1039,69	5,51	-0,0009			2122,8	88,754	49,619
Hydro	16	13,683	-35,626	4496	9	2297,8	2,549	34,825	1038,31	2,548	34,828	1038,31	5,41	-0,0003			2102	88,767	49,624
Hydro	16	13,683	-35,626	4496	10	1998	2,724	34,797	1036,92	2,723	34,801	1036,92	5,15	0,0009			2094,5	88,752	49,629
Hydro	16	13,683	-35,626	4496	11	1749,8	2,806	34,741	1035,75	2,805	34,744	1035,75	4,8	0,0017			2075,1	88,715	49,634
Hydro	16	13,683	-35,626	4496	12	1499,3	2,821	34,631	1034,52	2,82	34,634	1034,53	4,47	0,002			2025,3	88,727	49,638
Hydro	16	13,683	-35,626	4496	13	1349,5	3,03	34,558	1033,76	3,029	34,561	1033,76	4,3	0,0003			2038,4	88,709	49,641
Hydro	16	13,683	-35,626	4496	14	1000,7	4,251	34,436	1031,92	4,25	34,439	1031,92	4,47	0,0035			1999,1	88,664	49,646
Hydro	16	13,683	-35,626	4496	15	800,1	5,019	34,364	1030,85	5,019	34,366	1030,85	5,03	0,0022			2005,3	88,642	49,65
Hydro	16	13,683	-35,626	4496	16	499	9,317	34,684	1029,07	9,317	34,686	1029,07	5,19	-0,0002			1957,5	88,526	49,654
Hydro	16	13,683	-35,626	4496	17	248,7	12,212	34,95	1027,62	12,206	34,95	1027,62	5,66	0,0041			1929,7	88,395	49,659
Hydro	16	13,683	-35,626	4496	18	149,2	14,592	35,319	1026,97	14,593	35,321	1026,97	5,24	0,0065			1920,2	88,29	49,661
Hydro	16	13,683	-35,626	4496	19	49	17,573	35,447	1025,93	17,576	35,45	1025,94	4,85	0,05			1898,6	87,437	49,663
Hydro	16	13,683	-35,626	4496	20	32	18,593	35,293	1025,49	18,575	35,295	1025,49	5,29	0,199			1901,7	85,836	49,665
Hydro	16	13,683	-35,626	4496	21	14,7	21,147	35,507	1024,9	21,148	35,509	1024,91	5,46	0,2098			1882,8	82,086	49,666
Hydro	17	13,502	-35,923	4842	1	4921,1	0,962	34,707	1049,94	0,961	34,71	1049,94	5,78	0,0001			5,9963	85,76	49,814
Hydro	17	13,504	-35,922	4842	2	4400,5	1,052	34,72	1047,7	1,052	34,723	1047,7	5,45	-0,0014			5,9963	88,457	49,824
Hydro	17	13,504	-35,922	4842	3	4098,7	1,17	34,732	1046,38	1,17	34,735	1046,39	5,28	0,0002			5,9963	88,592	49,83
Hydro	17	13,505	-35,922	4842	4	3800	1,346	34,748	1045,07	1,346	34,751	1045,07	5,16	-0,0013			5,9963	88,692	49,836
Hydro	17	13,505	-35,922	4842	5	3501,1	1,615	34,771	1043,73	1,615	34,773	1043,74	5,07	-0,0007			5,9963	88,731	49,842
Hydro	17	13,505	-35,922	4842	6	3200,6	1,982	34,807	1042,39	1,981	34,81	1042,39	5,09	-0,0011			5,9963	88,747	49,85
Hydro	17	13,506	-35,922	4842	7	2900,4	2,205	34,821	1041,04	2,204	34,825	1041,04	5,08	0,001			5,9963	88,733	49,858
Hydro	17	13,508	-35,922	4842	8	2599,2	2,358	34,824	1039,68	2,357	34,827	1039,68	5,04	0,0016			5,9963	88,731	49,864
Hydro	17	13,509	-35,922	4842	9	2298,6	2,514	34,819	1038,32	2,514	34,822	1038,32	4,94	-0,0003			5,9963	88,728	49,87
Hydro	17	13,51	-35,922	4842	10	1998,8	2,687	34,797	1036,93	2,687	34,8	1036,93	4,74	0,0006			5,9963	88,706	49,876
Hydro	17	13,51	-35,923	4842	11	1749,3	2,78	34,74	1035,75	2,78	34,743	1035,75	4,42	0,0022			5,9963	88,701	49,881
Hydro	17	13,512	-35,922	4842	12	1500,3	2,907	34,65	1034,53	2,906	34,653	1034,54	4,07	0,0009			5,9963	88,685	49,886
Hydro	17	13,513	-35,922	4842	13	1196,4	3,178	34,495	1032,99	3,177	34,498	1033	4,03	0,0033			5,9963	88,7	49,892
Hydro	17	13,513	-35,923	4842	14	1000,6	3,864	34,409	1031,95	3,857	34,413	1031,95	4,24	0,0017			5,9963	88,663	49,896
Hydro	17	13,515	-35,922	4842	15	750,2	4,805	34,318	1030,61	4,805	34,321	1030,61	4,86	-0,0002			5,9963	88,635	49,901
Hydro	17	13,515	-35,923	4842	16	500,8	7,824	34,506	1029,19	7,824	34,508	1029,19	4,82	0,0014			5,9963	88,539	49,906
Hydro	17	13,516	-35,923	4842	17	299,5	10,697	34,767	1028	10,699	34,769	1028	5,31	0,0005			5,9963	88,493	49,91
Hydro	17	13,517	-35,922	4842	18	149,8	12,175	34,893	1027,14	12,178	34,895	1027,14	5,39	0,0102			5,9963	88,332	49,913
Hydro	17	13,518	-35,922	4842	19	99,3	12,93	34,981	1026,84	12,986	34,981	1026,82	5,42	0,0402			5,9963	87,981	49,914
Hydro	17	13,519	-35,922	4842	20	59,5	14,298	35,013	1026,4	14,3	35,014	1026,4	5,63	0,1583			5,9963	87,014	49,916
Hydro	17	13,519	-35,922	4842	21	18,8	17,803	34,915	1025,34	17,816	34,918	1025,34	5,51	0,6168			5,9963	82,024	49,919
Hydro	17	13,52	-35,923	4842	24	3,2	18,631	34,915	1025,06	18,655	34,917	1025,06	5,49	0,4384			5,9963	81,582	49,92
Hydro	18	13,313	-36,218	4842	1	4897,4	1,109	34,72	1049,82	1,109	34,724	1049,82	4,88	-0,0033			885,46	88,216	50,307
Hydro	18	13,313	-36,218	4842	2	4398,9	1,112	34,726	1047,69	1,111	34,729	1047,69	4,48	-0,0014			1089,3	88,614	50,318
Hydro	18	13,313	-36,217	4842	3	4099,3	1,182	34,734	1046,39	1,181	34,737	1046,39	4,3	-0,0012			1398,9	88,687	50,325
Hydro	18	13,313	-36,217	4842	4	3798,8	1,348	34,751	1045,06	1,348	34,754	1045,07	4,15	-0,0009			1757,3	88,745	50,33
Hydro	18	13,313	-36,217	4842	5	3499,7	1,736	34,79	1043,72	1,735	34,793	1043,73	4,06	-0,0044			1608,9	88,772	50,336
Hydro	18	13,314	-36,217	4842	6	3199,1	2,078	34,819	1042,37	2,078	34,822	1042,38	3,98	-0,0024			1606,3	88,775	50,342
Hydro	18	13,316	-36,216	4842	7	2899,9	2,258	34,832	1041,04	2,257	34,835	1041,04	3,9	0,0004			3017,7	88,752	50,348
Hydro	18	13,317	-36,215	4842	8	2600,4	2,372	34,831	1039,69	2,371	34,834	1039,69	3,78	0,0007			2065,2	88,746	50,354
Hydro	18	13,317	-36,215	4842	9	2298,2	2,511	34,822	1038,32	2,51	34,825	1038,32	3,63	0			1883,9	88,75	50,359

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	18	13,318	-36,215	4842	10	1999,8	2,646	34,795	1036,94	2,645	34,798	1036,94	3,46	0,0002			2294,5	88,751	50,364
Hydro	18	13,318	-36,215	4842	11	1750,1	2,773	34,755	1035,76	2,772	34,758	1035,77	3,25	0,0008			1907,3	88,704	50,369
Hydro	18	13,318	-36,215	4842	12	1499,3	2,882	34,657	1034,54	2,881	34,66	1034,54	2,98	0,0005			1523,7	88,681	50,38
Hydro	18	13,318	-36,215	4842	13	1350,8	2,994	34,586	1033,79	2,994	34,589	1033,8	2,87	0,0035			1459,6	88,68	50,383
Hydro	18	13,318	-36,215	4842	14	997,9	3,591	34,383	1031,95	3,59	34,386	1031,95	3,17	0,0012			1552,5	88,672	50,389
Hydro	18	13,318	-36,215	4842	15	798,8	4,527	34,34	1030,89	4,527	34,343	1030,89	3,41	0,0014			1704,8	88,643	50,393
Hydro	18	13,318	-36,215	4842	16	499,3	8,353	34,604	1029,18	8,353	34,607	1029,18	3,31	0,0019			1765,8	88,529	50,399
Hydro	18	13,318	-36,215	4842	17	249,5	11,107	34,796	1027,72	11,114	34,799	1027,72	3,97	0,0009			1979,6	88,33	50,406
Hydro	18	13,318	-36,215	4842	18	149,7	12,732	34,969	1027,09	12,734	34,971	1027,09	3,99	0,0121			1720,3	88,114	50,411
Hydro	18	13,318	-36,215	4842	19	80,3	15,531	35,316	1026,45	15,525	35,316	1026,45	4,02	0,1085			1554,9	87,252	50,413
Hydro	18	13,319	-36,214	4842	20	58,8	16,156	35,398	1026,28	16,161	35,401	1026,28	3,66	0,1105			1862,4	87,06	50,414
Hydro	18	13,32	-36,214	4842	21	23,9	20,199	35,625	1025,29	20,24	35,631	1025,28	3,77	0,0511			2187,4	85,734	50,417
Hydro	18	13,323	-36,21	4842	24	5,1	20,866	35,616	1025,02	20,865	35,618	1025,02	3,8	0,0263			2584,9	85,861	50,428
Super_Hydro	19	13,12	-36,521	4912	1	5000,2	1,126	34,721	1050,25	1,125	34,724	1050,25	4,45	-0,003			5,9963	88,391	50,811
Super_Hydro	19	13,119	-36,52	4912	2	4599,5	1,099	34,723	1048,55	1,099	34,726	1048,55	4,34	-0,0055			5,9963	88,495	50,82
Super_Hydro	19	13,118	-36,52	4912	3	4199,1	1,146	34,731	1046,82	1,146	34,733	1046,82	4,13	-0,0044			5,9963	88,636	50,827
Super_Hydro	19	13,117	-36,519	4912	4	3799	1,398	34,755	1045,06	1,396	34,758	1045,06	4,01	-0,0036			5,9963	88,738	50,833
Super_Hydro	19	13,117	-36,519	4912	5	3499,4	1,729	34,785	1043,72	1,728	34,788	1043,72	3,93	-0,0015			5,9963	88,721	50,838
Super_Hydro	19	13,117	-36,519	4912	6	3200	2,078	34,82	1042,38	2,077	34,823	1042,38	3,87	-0,0009			5,9963	88,755	50,843
Super_Hydro	19	13,117	-36,519	4912	7	2900	2,233	34,829	1041,04	2,232	34,832	1041,04	3,82	-0,0022			5,9963	88,734	50,848
Super_Hydro	19	13,117	-36,519	4912	8	2599	2,365	34,828	1039,68	2,365	34,831	1039,69	3,78	-0,0016			5,9963	88,722	50,853
Super_Hydro	19	13,117	-36,518	4912	9	2298,2	2,516	34,821	1038,31	2,515	34,824	1038,32	3,71	-0,0022			5,9963	88,706	50,859
Super_Hydro	19	13,117	-36,518	4912	10	2001,1	2,67	34,8	1036,94	2,669	34,803	1036,95	3,58	-0,0002			5,9963	88,702	50,866
Super_Hydro	19	13,117	-36,518	4912	11	1751,2	2,791	34,734	1035,75	2,79	34,737	1035,75	3,31	0			5,9963	88,679	50,871
Super_Hydro	19	13,116	-36,518	4912	12	1498,8	2,914	34,633	1034,51	2,909	34,636	1034,52	3,04	0,0008			5,9963	88,663	50,876
Super_Hydro	19	13,115	-36,517	4912	13	1199,4	3,423	34,535	1033,01	3,424	34,537	1033,01	2,9	0,0039			5,9963	88,629	50,884
Super_Hydro	19	13,115	-36,517	4912	14	999,8	4,187	34,486	1031,96	4,191	34,489	1031,96	2,93	0,0004			5,9963	88,615	50,889
Super_Hydro	19	13,115	-36,516	4912	15	796,8	5,228	34,425	1030,85	5,23	34,428	1030,85	3,29	-0,0011			5,9963	88,588	50,893
Super_Hydro	19	13,114	-36,516	4912	16	499,8	8,415	34,6	1029,16	8,422	34,604	1029,17	3,51	-0,0002			5,9963	88,448	50,901
Super_Hydro	19	13,114	-36,515	4912	17	249,8	11,81	34,994	1027,74	11,851	35,006	1027,74	3,71	0,0033			5,9963	88,28	50,908
Super_Hydro	19	13,114	-36,515	4912	18	151,2	12,779	35,035	1027,14	12,798	35,04	1027,14	3,83	0,0063			5,9963	88,183	50,911
Super_Hydro	19	13,114	-36,514	4912	19	70,4	16,02	35,313	1026,3	16,016	35,325	1026,31	3,6	0,1472			5,9963	86,792	50,914
Super_Hydro	19	13,113	-36,514	4912	20	39,7	19,365	35,488	1025,47	19,366	35,489	1025,47	3,92	0,4989			5,9963	83,189	50,919
Super_Hydro	19	13,113	-36,514	4912	21	19,8	20,478	35,569	1025,15	20,48	35,571	1025,16	3,8	0,0831			5,9963	85,228	50,921
Super_Hydro	19	13,113	-36,514	4912	24	3,4	20,727	35,561	1025,01	20,725	35,563	1025,01	3,79	0,0691			5,9963	85,054	50,923
Super_ML	20	13,12	-36,525	4915	1	248,5	11,731	34,981	1027,74	11,73	34,983	1027,74	3,63	0,0014	6,2279	0,598	9,6676	88,322	51,189
Super_ML	20	13,12	-36,525	4915	2	174,4	12,641	35,025	1027,26	12,64	35,028	1027,27	3,75	0,0037	3,7228	0,598	16,072	88,232	51,195
Super_ML	20	13,12	-36,525	4915	3	99,2	14,697	35,25	1026,67	14,692	35,252	1026,67	3,32	0,03	1,9946	0,598	29,982	87,694	51,199
Super_ML	20	13,12	-36,525	4915	4	76,2	15,954	35,302	1026,33	15,97	35,312	1026,33	3,16	0,118	1,4247	0,598	41,974	87,114	51,201
Super_ML	20	13,119	-36,525	4915	5	53,8	18,262	35,429	1025,77	18,278	35,431	1025,77	3,93	0,2138	0,5694	0,598	105,04	84,753	51,204
Super_ML	20	13,119	-36,525	4915	6	53,5	18,268	35,428	1025,77	18,277	35,43	1025,77	3,93	0,2154	0,7113	0,598	86,519	84,543	51,204
Super_ML	20	13,119	-36,525	4915	7	53,6	18,262	35,428	1025,77	18,269	35,43	1025,77	3,93	0,2139	0,7371	0,598	83,418	84,781	51,204
Super_ML	20	13,118	-36,525	4915	8	53,7	18,262	35,429	1025,77	18,257	35,43	1025,77	3,93	0,2142	0,554	0,598	107,93	84,784	51,204
Super_ML	20	13,118	-36,525	4915	9	53,6	18,27	35,428	1025,77	18,256	35,43	1025,77	3,93	0,2134	0,8534	0,598	70,079	84,801	51,205
Super_ML	20	13,118	-36,526	4915	10	40,2	20,547	35,557	1025,22	20,537	35,558	1025,22	3,72	0,086	0,3779	0,598	158,27	85,717	51,206
Super_ML	20	13,118	-36,526	4915	11	39,8	20,562	35,557	1025,21	20,564	35,559	1025,21	3,72	0,0856	0,389	0,598	153,75	85,702	51,206

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_ML	20	13,117	-36,526	4915	12	14,5	20,854	35,59	1025,05	20,858	35,591	1025,05	3,67	0,0479	0,5806	0,598	103	85,428	51,208
Super_ML	20	13,117	-36,526	4915	13	14,1	20,864	35,589	1025,04	20,86	35,592	1025,04	3,67	0,0443	0,5626	0,598	106,31	85,393	51,208
Super_ML	20	13,117	-36,526	4915	14	14	20,861	35,589	1025,04	20,859	35,591	1025,04	3,67	0,0468	0,5536	0,598	108,01	85,386	51,208
Super_ML	20	13,117	-36,526	4915	15	14	20,855	35,588	1025,04	20,852	35,591	1025,05	3,67	0,0491	0,5386	0,598	111,03	85,346	51,209
Super_ML	20	13,117	-36,526	4915	16	7,3	20,904	35,583	1025	20,905	35,585	1025	3,67	0,0506	0,4986	0,598	119,93	85,61	51,21
Super_ML	20	13,117	-36,526	4915	17	7,2	20,903	35,583	1025	20,904	35,585	1025	3,67	0,0482	0,4825	0,598	123,92	85,609	51,21
Super_ML	20	13,116	-36,526	4915	18	3,8	20,906	35,583	1024,98	20,907	35,585	1024,98	3,66	0,0508	0,3342	0,598	185,31	85,762	51,211
Super_ML	20	13,116	-36,526	4915	19	3,5	20,906	35,583	1024,98	20,907	35,585	1024,98	3,67	0,0487	0,2507	0,598	238,59	85,757	51,211
Super_ML	20	13,116	-36,526	4915	20	3,5	20,899	35,584	1024,98	20,9	35,586	1024,98	3,67	0,0505	0,2761	0,598	216,65	85,755	51,212
Super_ML	20	13,116	-36,526	4915	21	3,3	20,899	35,584	1024,98	20,899	35,586	1024,98	3,67	0,0493	0,2018	0,598	296,47	85,746	51,212
Super_ML	20	13,116	-36,526	4915	24	3,6	20,904	35,583	1024,98	20,905	35,585	1024,98	3,67	0,05	0,1495	0,598	399,96	85,736	51,212
Super_REE	21	13,118	-36,521	4923	1	5001,5	0,986	34,709	1050,28	0,986	34,711	1050,28	3,8	-0,0033			2317,7	86,318	51,564
Super_REE	21	13,118	-36,521	4923	2	5000,2	0,986	34,709	1050,27	0,986	34,712	1050,27	3,8	-0,0033			2320,6	86,319	51,564
Super_REE	21	13,118	-36,521	4923	3	4648,4	1,097	34,722	1048,76	1,097	34,725	1048,76	3,73	-0,0028			2405,7	88,322	51,576
Super_REE	21	13,118	-36,521	4923	4	4649	1,097	34,722	1048,76	1,097	34,725	1048,76	3,73	-0,0031			2414,2	88,329	51,576
Super_REE	21	13,118	-36,521	4923	5	4049,1	1,208	34,738	1046,17	1,208	34,741	1046,17	3,69	-0,0029			2464,4	88,698	51,588
Super_REE	21	13,118	-36,521	4923	6	4049,8	1,208	34,738	1046,17	1,208	34,741	1046,17	3,69	-0,0019			2460,1	88,69	51,588
Super_REE	21	13,118	-36,521	4923	7	3048,5	2,125	34,818	1041,7	2,125	34,82	1041,7	3,7	-0,0022			2391,6	88,694	51,606
Super_REE	21	13,118	-36,521	4923	8	3049,4	2,124	34,817	1041,71	2,124	34,82	1041,71	3,7	-0,0029			2384,1	88,694	51,606
Super_REE	21	13,118	-36,521	4923	9	2700,3	2,317	34,826	1040,14	2,317	34,829	1040,14	3,67	-0,0013			2245,9	88,683	51,613
Super_REE	21	13,118	-36,521	4923	10	2701,1	2,317	34,826	1040,14	2,316	34,829	1040,14	3,67	-0,005			2286,8	88,682	51,613
Super_REE	21	13,118	-36,521	4923	11	1999,4	2,671	34,794	1036,93	2,67	34,797	1036,93	3,38	-0,003			2181,5	88,591	51,624
Super_REE	21	13,118	-36,521	4923	12	1999,6	2,671	34,794	1036,93	2,67	34,797	1036,94	3,38	-0,0033			2455,3	88,661	51,624
Super_REE	21	13,118	-36,521	4923	13	1200,3	3,44	34,535	1033,01	3,439	34,538	1033,01	2,69	-0,001			2351,7	88,601	51,636
Super_REE	21	13,118	-36,521	4923	14	1200,2	3,44	34,535	1033,01	3,439	34,538	1033,01	2,69	-0,0007			2284	88,602	51,637
Super_REE	21	13,118	-36,521	4923	15	759,2	5,661	34,417	1030,61	5,663	34,42	1030,62	3,16	0,0004			959,66	88,558	51,644
Super_REE	21	13,118	-36,521	4923	16	759,3	5,656	34,416	1030,61	5,654	34,419	1030,62	3,16	-0,0008			964,43	88,55	51,644
Super_REE	21	13,118	-36,521	4923	17	400,3	10,041	34,767	1028,57	10,043	34,769	1028,57	3,42	0			2358,5	88,403	51,651
Super_REE	21	13,118	-36,521	4923	18	400,3	10,047	34,768	1028,57	10,045	34,77	1028,57	3,41	-0,0006			2343,2	88,39	51,651
Super_REE	21	13,118	-36,521	4923	19	200,6	12,612	35,043	1027,4	12,615	35,045	1027,4	3,54	0,006			497,78	88,194	51,655
Super_REE	21	13,118	-36,521	4923	20	200,8	12,622	35,046	1027,4	12,623	35,048	1027,4	3,54	0,0044			517,68	88,186	51,655
Super_REE	21	13,118	-36,521	4923	21	29,7	19,579	35,435	1025,33	19,56	35,435	1025,34	3,72	0,7989			1238,1	81,719	51,659
Super_REE	21	13,118	-36,521	4923	24	29,6	19,568	35,435	1025,34	19,56	35,436	1025,34	3,72	0,8251			1271	81,536	51,659
Super_PoTh	22	13,118	-36,504	4937	1	1000,1	3,925	34,422	1031,95	3,925	34,424	1031,95	2,97	0,0007			2580,9	88,567	52,334
Super_PoTh	22	13,118	-36,504	4937	2	850,2	5,004	34,403	1031,11	5,004	34,406	1031,11	3,13	0,0017			2011,1	88,547	52,338
Super_PoTh	22	13,117	-36,503	4937	3	699,4	5,883	34,365	1030,27	5,883	34,368	1030,27	3,42	0,0004			1340,4	88,527	52,342
Super_PoTh	22	13,117	-36,503	4937	4	599,9	7,654	34,547	1029,7	7,653	34,55	1029,7	3,13	0,0002			1219,8	88,49	52,345
Super_PoTh	22	13,117	-36,502	4937	5	500,2	9,1	34,688	1029,12	9,112	34,692	1029,12	3,16	0,0012			1208,5	88,395	52,347
Super_PoTh	22	13,117	-36,502	4937	6	500,1	9,111	34,689	1029,12	9,116	34,692	1029,12	3,16	0,0005			1202,7	88,38	52,347
Super_PoTh	22	13,117	-36,502	4937	7	500,2	9,114	34,69	1029,12	9,114	34,692	1029,12	3,16	0,0013			1198,8	88,387	52,347
Super_PoTh	22	13,117	-36,502	4937	8	450,2	9,974	34,798	1028,83	9,974	34,801	1028,83	3,29	0,0011			856,17	88,373	52,35
Super_PoTh	22	13,118	-36,501	4937	9	400,2	10,598	34,854	1028,53	10,598	34,857	1028,53	3,4	0,0013			718,05	88,298	52,352
Super_PoTh	22	13,117	-36,5	4937	10	348,9	11,36	34,942	1028,23	11,361	34,944	1028,23	3,4	0,0025			1093,7	88,3	52,354
Super_PoTh	22	13,117	-36,5	4937	11	299,7	11,883	35,006	1027,96	11,89	35,009	1027,96	3,4	0,0059			1504,1	88,203	52,356
Super_PoTh	22	13,117	-36,499	4937	12	248,8	12,61	35,088	1027,65	12,611	35,091	1027,65	3,38	0,0037			1720,4	88,23	52,359
Super_PoTh	22	13,117	-36,499	4937	13	199,6	13,245	35,118	1027,32	13,251	35,121	1027,33	3,55	0,0066			1328,7	88,205	52,361

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_PoTh	22	13,117	-36,498	4937	14	174,5	13,86	35,216	1027,16	13,861	35,219	1027,16	3,43	0,0063			1156,2	88,146	52,362
Super_PoTh	22	13,117	-36,498	4937	15	150,1	14,691	35,344	1026,97	14,692	35,346	1026,97	3,29	0,0074			1104,6	88,189	52,364
Super_PoTh	22	13,117	-36,497	4937	16	124,1	15,249	35,331	1026,72	15,251	35,334	1026,72	3,36	0,0152			1203,3	87,973	52,366
Super_PoTh	22	13,117	-36,497	4937	17	99,6	14,241	34,883	1026,49	14,247	34,886	1026,49	3,84	0,0806			1291,2	87,144	52,367
Super_PoTh	22	13,117	-36,497	4937	18	79,4	15,629	34,948	1026,14	15,621	34,948	1026,14	3,86	0,1675			1355,8	86,133	52,369
Super_PoTh	22	13,117	-36,496	4937	19	59,5	18,645	35,505	1025,76	18,646	35,507	1025,76	3,13	0,1835			1494,4	86,666	52,37
Super_PoTh	22	13,117	-36,496	4937	20	29,3	20,32	35,566	1025,24	20,323	35,568	1025,24	3,6	0,2767			1548	83,181	52,372
Super_PoTh	22	13,117	-36,496	4937	21	19,6	20,753	35,543	1025,06	20,752	35,545	1025,06	3,55	0,2081			1468,2	83,18	52,373
Super_PoTh	22	13,117	-36,496	4937	24	3	21,165	35,548	1024,88	21,167	35,55	1024,88	3,52	0,0978			1307,4	84,346	52,375
Super_BaSi	23	13,1	-36,45	4941	1	1001,5	3,981	34,424	1031,95	3,982	34,427	1031,95	2,95	0,0034			2279	88,526	52,481
Super_BaSi	23	13,1	-36,45	4941	2	1002,2	3,981	34,424	1031,95	3,981	34,427	1031,95	2,95	0,0041			2266,6	88,536	52,481
Super_BaSi	23	13,1	-36,45	4941	3	1001,9	3,981	34,424	1031,95	3,982	34,427	1031,95	2,95	0,0024			2266,6	88,531	52,481
Super_BaSi	23	13,1	-36,45	4941	4	849,3	4,98	34,404	1031,11	4,976	34,408	1031,11	3,1	0,0002			2286,6	88,549	52,485
Super_BaSi	23	13,1	-36,45	4941	5	701,1	6,064	34,392	1030,27	6,063	34,395	1030,28	3,34	0,0007			2345,8	88,517	52,49
Super_BaSi	23	13,1	-36,45	4941	6	599,8	7,567	34,536	1029,7	7,566	34,538	1029,7	3,15	-0,0014			2266,6	88,478	52,493
Super_BaSi	23	13,1	-36,45	4941	7	550,2	8,421	34,608	1029,4	8,424	34,612	1029,4	3,17	0,0023			2259,9	88,373	52,496
Super_BaSi	23	13,1	-36,45	4941	8	500,7	9,216	34,707	1029,12	9,217	34,71	1029,12	3,15	0,0024			2227,7	88,337	52,499
Super_BaSi	23	13,1	-36,45	4941	9	459,8	9,874	34,789	1028,88	9,867	34,79	1028,88	3,27	0,0016			2253,8	88,345	52,501
Super_BaSi	23	13,1	-36,45	4941	10	420,3	10,369	34,834	1028,65	10,358	34,834	1028,65	3,41	-0,0016			2219,2	88,338	52,504
Super_BaSi	23	13,1	-36,45	4941	11	379,7	10,819	34,886	1028,43	10,824	34,887	1028,42	3,4	0,0012			2226,2	88,269	52,506
Super_BaSi	23	13,1	-36,45	4941	12	340,3	11,254	34,927	1028,2	11,262	34,929	1028,2	3,37	0,0013			2227,5	88,263	52,509
Super_BaSi	23	13,1	-36,45	4941	13	299,9	11,875	35,006	1027,96	11,898	35,008	1027,96	3,4	0,0019			2230,4	88,191	52,511
Super_BaSi	23	13,1	-36,45	4941	14	260,1	12,47	35,067	1027,71	12,483	35,069	1027,71	3,41	0,0042			2254,2	88,15	52,513
Super_BaSi	23	13,1	-36,433	4941	15	220,4	12,832	35,058	1027,45	12,835	35,061	1027,46	3,54	0,0045			2255,6	88,151	52,515
Super_BaSi	23	13,1	-36,433	4941	16	180,1	13,701	35,188	1027,2	13,702	35,19	1027,2	3,51	0,0069			2256,5	88,14	52,517
Super_BaSi	23	13,1	-36,433	4941	17	149,5	14,406	35,281	1026,98	14,406	35,283	1026,98	3,45	0,0091			2255,6	88,096	52,521
Super_BaSi	23	13,1	-36,433	4941	18	100,5	14,121	34,873	1026,51	14,116	34,872	1026,51	3,87	0,0746			2222,1	87,098	52,524
Super_BaSi	23	13,1	-36,433	4941	19	75	18,365	35,494	1025,89	18,364	35,497	1025,89	3,05	0,1221			2269,8	87,173	52,526
Super_BaSi	23	13,1	-36,433	4941	20	50,2	19,654	35,578	1025,51	19,653	35,58	1025,52	3,56	0,3079			2257,5	85,102	52,529
Super_BaSi	23	13,1	-36,433	4941	21	25	20,067	35,548	1025,27	20,07	35,551	1025,27	3,55	0,5782			2310,4	81,983	52,531
Super_BaSi	23	13,1	-36,433	4941	24	4,4	21,177	35,558	1024,89	21,182	35,56	1024,89	3,54	0,0559			2254,9	83,895	52,533
Hydro	24	12,933	-36,817	4980	1	5062,9	1,123	34,719	1050,52	1,123	34,722	1050,52	3,63	-0,004			1134,4	87,918	53,42
Hydro	24	12,933	-36,8	4980	2	4593,2	1,121	34,724	1048,52	1,121	34,727	1048,52	3,56	-0,0016			1611,9	88,35	53,468
Hydro	24	12,933	-36,8	4980	3	4201	1,211	34,736	1046,82	1,21	34,739	1046,82	3,54	-0,0028			1738	88,573	53,48
Hydro	24	12,933	-36,8	4980	4	3772,2	1,695	34,783	1044,91	1,695	34,786	1044,92	3,58	-0,0034			1487,1	88,638	53,488
Hydro	24	12,933	-36,8	4980	5	3201,7	2,244	34,836	1042,37	2,243	34,84	1042,37	3,67	-0,0016			1457,1	88,64	53,498
Hydro	24	12,933	-36,8	4980	6	2899,7	2,341	34,839	1041,03	2,339	34,842	1041,03	3,66	-0,0047			1587,9	88,637	53,504
Hydro	24	12,933	-36,8	4980	7	2750,7	2,387	34,837	1040,36	2,386	34,84	1040,36	3,63	-0,0051			1571	88,631	53,508
Hydro	24	12,933	-36,8	4980	8	2600,3	2,415	34,826	1039,68	2,414	34,83	1039,68	3,57	-0,005			1552,3	88,627	53,512
Hydro	24	12,933	-36,8	4980	9	2301,2	2,542	34,814	1038,32	2,542	34,818	1038,32	3,46	-0,0017			1572,1	88,618	53,517
Hydro	24	12,933	-36,8	4980	10	2000,6	2,693	34,791	1036,93	2,692	34,795	1036,94	3,31	-0,0039			1599,1	88,581	53,523
Hydro	24	12,933	-36,8	4980	11	1750,1	2,776	34,741	1035,75	2,775	34,745	1035,76	3,1	-0,0013			1499,1	88,557	53,528
Hydro	24	12,933	-36,8	4980	12	1500,8	2,9	34,647	1034,53	2,899	34,651	1034,54	2,81	-0,0008			1483,1	88,543	53,533
Hydro	24	12,933	-36,783	4980	13	1150	3,826	34,512	1032,71	3,826	34,516	1032,72	2,66	0,0002			1333,3	88,481	53,54
Hydro	24	12,933	-36,783	4980	14	900,3	4,455	34,334	1031,36	4,455	34,337	1031,36	3,29	-0,0023			1486,4	88,49	53,545
Hydro	24	12,933	-36,783	4980	15	749,4	5,975	34,375	1030,49	5,974	34,378	1030,49	3,37	-0,0025			1616,7	88,435	53,548

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	24	12,933	-36,783	4980	16	500,1	9,976	34,766	1029,03	9,975	34,769	1029,03	3,31	-0,0026			1340,1	88,368	53,553
Hydro	24	12,933	-36,783	4980	17	300,4	13,238	35,25	1027,88	13,229	35,252	1027,88	3,26	-0,0015			1233,2	88,288	53,557
Hydro	24	12,933	-36,783	4980	18	175	15,525	35,394	1026,93	15,525	35,397	1026,93	3,23	0,0072			1165,3	88,003	53,56
Hydro	24	12,933	-36,783	4980	19	80	18,579	35,446	1025,82	18,584	35,448	1025,82	3,23	0,0512			1153,3	87,2	53,563
Hydro	24	12,933	-36,783	4980	20	49,5	20,801	35,54	1025,17	20,8	35,543	1025,18	3,45	0,2605			1197,3	84,634	53,565
Hydro	24	12,933	-36,783	4980	21	25,3	21,206	35,54	1024,96	21,205	35,543	1024,96	3,5	0,1002			1269	84,374	53,567
Hydro	24	12,933	-36,783	4980	24	2,9	21,455	35,551	1024,8	21,456	35,554	1024,8	3,49	0,0567			1207,7	84,949	53,568
Hydro	25	12,739	-37,118	5068	1	5154,5	1,148	34,72	1050,9	1,148	34,724	1050,91	3,56	-0,0038			19,988	88,358	53,732
Hydro	25	12,739	-37,118	5068	2	4599,8	1,12	34,724	1048,55	1,12	34,727	1048,55	3,5	-0,0025			13,991	88,435	53,747
Hydro	25	12,739	-37,118	5068	3	4201,9	1,244	34,738	1046,82	1,245	34,742	1046,82	3,48	-0,004			5,9963	88,591	53,757
Hydro	25	12,739	-37,115	5068	4	3799,3	1,753	34,784	1045,02	1,752	34,788	1045,03	3,51	-0,0039			5,9963	88,642	53,767
Hydro	25	12,74	-37,114	5068	5	3500,4	2,081	34,819	1043,69	2,078	34,822	1043,7	3,57	-0,0044			5,9963	88,632	53,774
Hydro	25	12,741	-37,112	5068	6	3200,6	2,279	34,836	1042,36	2,278	34,839	1042,36	3,6	-0,0039			5,9963	88,639	53,782
Hydro	25	12,741	-37,11	5068	7	2900,6	2,385	34,833	1041,02	2,385	34,837	1041,02	3,55	-0,0032			5,9963	88,633	53,79
Hydro	25	12,741	-37,108	5068	8	2599,2	2,482	34,828	1039,67	2,481	34,831	1039,67	3,49	-0,0028			5,9963	88,635	53,798
Hydro	25	12,741	-37,108	5068	9	2292,3	2,644	34,814	1038,26	2,643	34,818	1038,27	3,37	-0,0031			5,9963	88,612	53,807
Hydro	25	12,741	-37,108	5068	10	1999,8	2,725	34,772	1036,91	2,724	34,776	1036,91	3,19	-0,0009			5,9963	88,614	53,814
Hydro	25	12,74	-37,106	5068	11	1748,1	2,799	34,714	1035,72	2,798	34,717	1035,72	2,99	-0,0038			5,9963	88,586	53,825
Hydro	25	12,74	-37,105	5068	12	1499,2	3,022	34,619	1034,49	3,021	34,622	1034,49	2,69	-0,0021			5,9963	88,538	53,831
Hydro	25	12,739	-37,105	5068	13	1298,9	3,413	34,528	1033,46	3,412	34,531	1033,46	2,64	-0,0023			5,9963	88,527	53,836
Hydro	25	12,739	-37,104	5068	14	999,9	4,58	34,439	1031,87	4,577	34,443	1031,88	2,83	-0,0005			5,9963	88,481	53,842
Hydro	25	12,739	-37,104	5068	15	850,6	5,253	34,355	1031,04	5,255	34,359	1031,04	3,27	-0,0011			5,9963	88,465	53,845
Hydro	25	12,739	-37,104	5068	16	501,4	9,657	34,706	1029,04	9,66	34,71	1029,04	3,44	-0,0015			5,9963	88,345	53,852
Hydro	25	12,739	-37,104	5068	17	329,9	12,764	35,187	1028,06	12,763	35,19	1028,06	3,25	-0,0002			5,9963	88,269	53,856
Hydro	25	12,739	-37,104	5068	18	199,1	13,646	35,179	1027,29	13,652	35,182	1027,29	3,34	0,0056			5,9963	88,019	53,859
Hydro	25	12,739	-37,104	5068	19	100,1	16,078	35,355	1026,44	16,077	35,357	1026,45	3,26	0,0182			5,9963	87,502	53,863
Hydro	25	12,739	-37,104	5068	20	40,2	20,428	35,553	1025,24	20,431	35,557	1025,25	3,47	0,2225			5,9963	85,57	53,865
Hydro	25	12,739	-37,104	5068	21	20,8	20,896	35,557	1025,04	20,896	35,557	1025,04	3,52	0,2396			5,9963	84,066	53,867
Hydro	25	12,739	-37,104	5068	24	3,5	21,077	35,536	1024,9	21,076	35,539	1024,9	3,53	0,1668			5,9963	83,8	53,868
Hydro	26	12,546	-37,417	5071	1	5122,3	1,152	34,721	1050,77	1,151	34,724	1050,77	3,5	-0,0032			5,9963	88,243	54,022
Hydro	26	12,546	-37,417	5071	2	4600,4	1,15	34,727	1048,55	1,149	34,73	1048,55	3,45	-0,0012			5,9963	88,553	54,037
Hydro	26	12,546	-37,417	5071	3	4200,7	1,353	34,748	1046,81	1,353	34,752	1046,81	3,45	-0,0044			5,9963	88,636	54,047
Hydro	26	12,546	-37,417	5071	4	3800,9	1,813	34,791	1045,03	1,813	34,794	1045,03	3,48	-0,0028			5,9963	88,645	54,054
Hydro	26	12,546	-37,416	5071	5	3500,8	2,152	34,831	1043,69	2,152	34,834	1043,69	3,55	-0,0039			5,9963	88,66	54,059
Hydro	26	12,546	-37,416	5071	6	3201,1	2,28	34,837	1042,36	2,28	34,84	1042,37	3,55	-0,0039			5,9963	88,657	54,065
Hydro	26	12,546	-37,416	5071	7	2899,8	2,397	34,841	1041,02	2,397	34,844	1041,02	3,54	-0,0031			5,9963	88,652	54,071
Hydro	26	12,546	-37,416	5071	8	2600	2,572	34,838	1039,66	2,571	34,842	1039,67	3,48	-0,0032			5,9963	88,641	54,077
Hydro	26	12,546	-37,416	5071	9	2300,8	2,674	34,825	1038,31	2,673	34,828	1038,31	3,38	-0,0032			5,9963	88,636	54,083
Hydro	26	12,546	-37,416	5071	10	1999,4	2,841	34,797	1036,91	2,841	34,8	1036,91	3,22	-0,0023			5,9963	88,612	54,088
Hydro	26	12,546	-37,416	5071	11	1749,7	2,837	34,721	1035,73	2,836	34,725	1035,73	2,96	-0,0035			5,9963	88,606	54,093
Hydro	26	12,546	-37,416	5071	12	1449,4	3,019	34,578	1034,23	3,019	34,582	1034,23	2,66	-0,0022			5,9963	88,564	54,099
Hydro	26	12,546	-37,416	5071	13	1293,5	3,112	34,485	1033,44	3,114	34,489	1033,44	2,73	0,0001			5,9963	88,566	54,102
Hydro	26	12,546	-37,416	5071	14	998,9	4,222	34,356	1031,85	4,22	34,359	1031,85	3,07	-0,0015			5,9963	88,54	54,108
Hydro	26	12,546	-37,416	5071	15	849	5,093	34,357	1031,05	5,092	34,36	1031,06	3,19	-0,0016			5,9963	88,513	54,111
Hydro	26	12,546	-37,416	5071	16	649,6	6,544	34,379	1029,96	6,544	34,382	1029,96	3,34	-0,0026			5,9963	88,452	54,116
Hydro	26	12,546	-37,416	5071	17	348,9	10,548	34,729	1028,22	10,545	34,731	1028,22	3,68	-0,0017			5,9963	88,33	54,121

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	26	12,546	-37,416	5071	18	198,6	12,242	34,911	1027,36	12,228	34,91	1027,36	3,69	0,0052			5,9963	88,101	54,124
Hydro	26	12,546	-37,416	5071	19	100	15,803	35,346	1026,5	15,82	35,351	1026,5	3,26	0,0349			5,9963	87,53	54,127
Hydro	26	12,546	-37,416	5071	20	38,8	19,653	35,485	1025,39	19,651	35,487	1025,39	3,46	0,3739			5,9963	84,39	54,129
Hydro	26	12,546	-37,416	5071	21	19,5	20,951	35,532	1025	20,944	35,535	1025	3,51	0,1449			5,9963	84,142	54,13
Hydro	26	12,546	-37,416	5071	24	4,2	21,041	35,536	1024,91	21,043	35,539	1024,91	3,48	0,1288			5,9963	84,34	54,132
Hydro	27	12,35	-37,7	5046	1	5091,7	1,119	34,716	1050,64	1,119	34,722	1050,64	3,47	-0,0044			1904,9	88,206	54,287
Hydro	27	12,35	-37,7	5046	2	4598,8	1,141	34,724	1048,54	1,141	34,729	1048,54	3,42	-0,0058			1950,1	88,395	54,295
Hydro	27	12,35	-37,7	5046	3	4199,8	1,301	34,741	1046,8	1,3	34,746	1046,81	3,41	-0,003			1953,5	88,577	54,309
Hydro	27	12,35	-37,7	5046	4	3799,9	1,844	34,791	1045,02	1,844	34,796	1045,02	3,45	-0,0046			2089,5	88,635	54,316
Hydro	27	12,35	-37,7	5046	5	3497,7	2,141	34,819	1043,67	2,14	34,825	1043,67	3,49	-0,002			2095,8	88,622	54,321
Hydro	27	12,35	-37,7	5046	6	3199	2,269	34,826	1042,35	2,268	34,832	1042,35	3,48	-0,0032			2127,8	88,631	54,327
Hydro	27	12,35	-37,7	5046	7	2898,4	2,35	34,826	1041,01	2,35	34,831	1041,01	3,44	-0,002			2161,1	88,602	54,336
Hydro	27	12,35	-37,7	5046	8	2600	2,488	34,822	1039,66	2,487	34,828	1039,67	3,39	-0,0024			2178,3	88,614	54,343
Hydro	27	12,35	-37,7	5046	9	2299,9	2,64	34,813	1038,3	2,639	34,819	1038,3	3,3	-0,0031			2189	88,614	54,349
Hydro	27	12,35	-37,7	5046	10	2000,1	2,784	34,778	1036,91	2,783	34,784	1036,91	3,13	-0,0026			2196,2	88,6	54,355
Hydro	27	12,35	-37,7	5046	11	1749,8	2,837	34,707	1035,72	2,836	34,713	1035,72	2,89	-0,0006			2204,4	88,569	54,36
Hydro	27	12,35	-37,7	5046	12	1499,6	2,949	34,587	1034,48	2,948	34,593	1034,48	2,67	-0,0011			2208,3	88,563	54,365
Hydro	27	12,35	-37,7	5046	13	1299,5	3,26	34,495	1033,45	3,262	34,501	1033,46	2,66	-0,001			2215	88,562	54,37
Hydro	27	12,35	-37,7	5046	14	999,2	3,544	34,252	1031,86	3,545	34,257	1031,86	3,39	-0,0047			2223,9	88,539	54,375
Hydro	27	12,35	-37,7	5046	15	799,3	4,614	34,229	1030,79	4,613	34,234	1030,79	3,59	-0,0021			2226,6	88,513	54,379
Hydro	27	12,35	-37,7	5046	16	600,1	6,902	34,408	1029,71	6,897	34,413	1029,71	3,28	-0,0024			2232,9	88,444	54,382
Hydro	27	12,35	-37,7	5046	17	399,9	9,885	34,68	1028,53	9,885	34,684	1028,53	3,56	-0,001			2238,6	88,342	54,386
Hydro	27	12,35	-37,7	5046	18	179,8	12,18	34,909	1027,29	12,167	34,913	1027,29	3,67	0,0048			2244,6	88,087	54,39
Hydro	27	12,35	-37,7	5046	19	97,5	14,658	35,125	1026,58	14,657	35,129	1026,58	3,82	0,1371			2244,9	86,954	54,392
Hydro	27	12,35	-37,7	5046	20	59,5	16,515	35,11	1025,98	16,512	35,115	1025,98	3,84	0,147			2244,4	87,052	54,393
Hydro	27	12,35	-37,7	5046	21	39,7	17,97	35,074	1025,51	17,972	35,077	1025,51	3,76	0,2633			2249,1	83,837	54,395
Hydro	27	12,35	-37,7	5046	24	3,1	20,953	35,518	1024,91	20,953	35,523	1024,92	3,51	0,036			2246,5	84,93	54,397
Hydro	28	12,083	-38,083	5178	1	5221,4	1,161	34,721	1051,18	1,161	34,724	1051,19	3,46	-0,0032			514,5	88,186	54,572
Hydro	28	12,083	-38,083	5178	2	4600	1,159	34,727	1048,54	1,159	34,731	1048,54	3,4	-0,003			584,99	88,52	54,589
Hydro	28	12,083	-38,083	5178	3	4199,8	1,324	34,745	1046,8	1,323	34,748	1046,81	3,39	-0,0025			527,84	88,587	54,598
Hydro	28	12,083	-38,083	5178	4	3789	1,861	34,799	1044,97	1,859	34,802	1044,97	3,45	-0,0029			858,25	88,635	54,606
Hydro	28	12,083	-38,083	5178	5	3501,1	2,176	34,831	1043,69	2,174	34,835	1043,69	3,51	-0,0038			699,57	88,635	54,614
Hydro	28	12,083	-38,083	5178	6	3198,7	2,31	34,837	1042,35	2,309	34,84	1042,35	3,5	-0,0032			743,71	88,63	54,619
Hydro	28	12,083	-38,083	5178	7	2899,3	2,407	34,835	1041,01	2,405	34,838	1041,02	3,45	-0,0033			618,07	88,615	54,625
Hydro	28	12,083	-38,083	5178	8	2600	2,507	34,828	1039,67	2,507	34,832	1039,67	3,38	-0,0011			553,66	88,6	54,63
Hydro	28	12,083	-38,083	5178	9	2299,4	2,671	34,813	1038,29	2,671	34,817	1038,29	3,26	-0,0014			477,71	88,587	54,635
Hydro	28	12,083	-38,083	5178	10	1999,8	2,885	34,789	1036,9	2,882	34,793	1036,9	3,13	-0,0016			399,76	88,59	54,64
Hydro	28	12,083	-38,083	5178	11	1749	2,844	34,706	1035,71	2,844	34,71	1035,71	2,86	-0,0018			423,74	88,559	54,644
Hydro	28	12,083	-38,083	5178	12	1499,8	2,825	34,589	1034,49	2,825	34,593	1034,5	2,73	0,0008			331,76	88,587	54,648
Hydro	28	12,083	-38,083	5178	13	1401,2	2,881	34,545	1034	2,88	34,548	1034,01	2,68	-0,0016			288,31	88,562	54,65
Hydro	28	12,083	-38,083	5178	14	1099,6	3,454	34,377	1032,43	3,457	34,381	1032,43	2,92	-0,0007			287,82	88,519	54,655
Hydro	28	12,083	-38,083	5178	15	800,1	4,515	34,268	1030,84	4,514	34,271	1030,84	3,42	-0,0034			311,81	88,489	54,66
Hydro	28	12,083	-38,083	5178	16	399,9	8,849	34,572	1028,62	8,835	34,575	1028,62	3,45	-0,0002			251,85	88,277	54,676
Hydro	28	12,083	-38,083	5178	17	169,8	11,814	34,901	1027,31	11,815	34,905	1027,31	3,68	0,0011			257,84	88,057	54,683
Hydro	28	12,083	-38,083	5178	18	99,6	12,598	34,947	1026,88	12,654	34,954	1026,87	3,76	0,0368			223,7	87,621	54,685
Hydro	28	12,083	-38,083	5178	19	69,3	13,169	34,919	1026,61	13,167	34,921	1026,61	3,88	0,1376			221,86	86,917	54,687

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	28	12,083	-38,083	5178	20	33,6	15,556	34,745	1025,8	15,577	34,765	1025,81	3,99	0,4421			217,79	83,006	54,688
Hydro	28	12,083	-38,083	5178	21	13,7	18,473	35,096	1025,29	18,486	35,102	1025,29	3,73	0,1782			223,86	83,596	54,69
Hydro	28	12,083	-38,083	5178	24	4,1	18,528	35,108	1025,24	18,541	35,113	1025,24	3,72	0,1678			279,42	81,955	54,691
Hydro	29	11,83	-38,459	5044	1	5095,8	1,157	34,722	1050,65	1,156	34,725	1050,66	3,44	-0,0032			5,9963	88,269	54,866
Hydro	29	11,83	-38,459	5044	2	4600,7	1,158	34,727	1048,55	1,157	34,731	1048,55	3,4	-0,0037			5,9963	88,498	54,879
Hydro	29	11,83	-38,459	5044	3	4200,4	1,35	34,748	1046,8	1,349	34,751	1046,81	3,39	-0,0034			5,9963	88,611	54,893
Hydro	29	11,83	-38,459	5044	4	3799,3	1,847	34,797	1045,02	1,846	34,8	1045,02	3,44	-0,003			5,9963	88,625	54,901
Hydro	29	11,83	-38,459	5044	5	3499,1	2,162	34,828	1043,68	2,161	34,831	1043,68	3,49	-0,0039			5,9963	88,619	54,909
Hydro	29	11,83	-38,459	5044	6	3199	2,288	34,831	1042,35	2,287	34,834	1042,35	3,46	-0,0019			5,9963	88,605	54,916
Hydro	29	11,83	-38,459	5044	7	2900,3	2,389	34,831	1041,02	2,388	34,835	1041,02	3,43	-0,0019			5,9963	88,606	54,922
Hydro	29	11,83	-38,459	5044	8	2600,5	2,514	34,828	1039,67	2,513	34,831	1039,67	3,37	-0,0029			5,9963	88,608	54,928
Hydro	29	11,83	-38,459	5044	9	2301,2	2,659	34,82	1038,31	2,658	34,824	1038,31	3,29	-0,0019			5,9963	88,603	54,933
Hydro	29	11,83	-38,459	5044	10	2001,6	2,729	34,771	1036,92	2,728	34,776	1036,92	3,07	0,0001			5,9963	88,589	54,938
Hydro	29	11,83	-38,459	5044	11	1750,5	2,762	34,698	1035,72	2,761	34,702	1035,73	2,84	-0,0006			5,9963	88,574	54,943
Hydro	29	11,83	-38,459	5044	12	1499,9	2,936	34,61	1034,5	2,933	34,615	1034,5	2,66	-0,0009			5,9963	88,538	54,948
Hydro	29	11,83	-38,459	5044	13	1400,4	3,054	34,573	1034	3,053	34,577	1034	2,6	0,0001			5,9963	88,534	54,952
Hydro	29	11,83	-38,459	5044	14	999,8	3,372	34,295	1031,91	3,37	34,299	1031,92	3,18	-0,0023			5,9963	88,531	54,959
Hydro	29	11,83	-38,459	5044	15	750,5	4,271	34,219	1030,6	4,271	34,222	1030,61	3,57	-0,0018			5,9963	88,519	54,964
Hydro	29	11,83	-38,459	5044	16	600	5,122	34,239	1029,82	5,12	34,242	1029,82	3,55	-0,006			5,9963	88,461	54,968
Hydro	29	11,83	-38,459	5044	17	300,9	8,284	34,437	1028,16	8,286	34,44	1028,16	3,8	0,0009			5,9963	88,254	54,973
Hydro	29	11,83	-38,459	5044	18	199,9	8,97	34,419	1027,58	8,969	34,422	1027,58	3,99	0,0217			5,9963	87,948	54,976
Hydro	29	11,83	-38,459	5044	19	120	11,316	34,774	1027,08	11,332	34,778	1027,08	3,74	0,0201			5,9963	87,845	54,98
Hydro	29	11,83	-38,459	5044	20	69,9	12,814	34,773	1026,57	12,814	34,774	1026,57	3,88	0,1618			5,9963	86,597	54,982
Hydro	29	11,83	-38,459	5044	21	25,6	15,489	34,713	1025,76	15,562	34,733	1025,75	3,97	0,5656			5,9963	82,034	54,984
Hydro	29	11,83	-38,459	5044	24	4,3	16,463	34,757	1025,47	16,464	34,759	1025,47	3,91	0,5263			5,9963	81,287	54,987
Hydro	30	11,575	-38,827	5175	1	5220,6	1,156	34,72	1051,18	1,155	34,724	1051,18	3,45	-0,0023			5,9963	87,964	55,171
Hydro	30	11,575	-38,827	5175	2	4599,9	1,167	34,728	1048,54	1,167	34,732	1048,54	3,39	-0,003			5,9963	88,544	55,185
Hydro	30	11,575	-38,827	5175	3	4199,3	1,337	34,746	1046,8	1,336	34,75	1046,8	3,38	-0,0051			9,9939	88,602	55,193
Hydro	30	11,575	-38,827	5175	4	3799,8	1,788	34,789	1045,02	1,789	34,792	1045,03	3,41	-0,0043			19,988	88,617	55,2
Hydro	30	11,575	-38,827	5175	5	3490	2,151	34,828	1043,64	2,15	34,832	1043,65	3,48	-0,0027			32,021	88,642	55,205
Hydro	30	11,575	-38,827	5175	6	3199,7	2,295	34,838	1042,36	2,295	34,842	1042,36	3,49	-0,0042			57,965	88,635	55,21
Hydro	30	11,575	-38,827	5175	7	2899,6	2,379	34,834	1041,02	2,378	34,837	1041,02	3,44	-0,0006			168,47	88,617	55,215
Hydro	30	11,575	-38,827	5175	8	2599,3	2,474	34,822	1039,66	2,473	34,826	1039,67	3,35	-0,0037			234,72	88,628	55,219
Hydro	30	11,575	-38,827	5175	9	2299,8	2,593	34,808	1038,3	2,593	34,812	1038,3	3,25	-0,0023			440,18	88,613	55,224
Hydro	30	11,575	-38,827	5175	10	1999,4	2,69	34,767	1036,91	2,689	34,77	1036,91	3,07	-0,0021			798,65	88,613	55,228
Hydro	30	11,575	-38,827	5175	11	1750,1	2,74	34,708	1035,73	2,739	34,712	1035,74	2,88	-0,0008			569,98	88,601	55,232
Hydro	30	11,575	-38,827	5175	12	1500,1	2,803	34,606	1034,51	2,802	34,61	1034,51	2,68	-0,001			988,7	88,564	55,236
Hydro	30	11,575	-38,827	5175	13	1300,8	2,997	34,513	1033,51	2,996	34,516	1033,51	2,65	0,0007			819,46	88,541	55,239
Hydro	30	11,575	-38,827	5175	14	1000	3,477	34,333	1031,93	3,477	34,337	1031,94	3,05	0,0006			1304,1	88,522	55,244
Hydro	30	11,575	-38,827	5175	15	749,4	4,323	34,261	1030,62	4,332	34,266	1030,63	3,42	-0,0041			1443,7	88,497	55,248
Hydro	30	11,575	-38,827	5175	16	498,8	5,88	34,304	1029,31	5,879	34,307	1029,31	3,41	-0,0001			1496,7	88,419	55,252
Hydro	30	11,575	-38,827	5175	17	350,5	8,48	34,571	1028,46	8,482	34,575	1028,46	3,23	-0,002			1490	88,236	55,255
Hydro	30	11,575	-38,827	5175	18	200,2	10,201	34,69	1027,58	10,2	34,693	1027,58	3,58	0,0025			1596,1	88,135	55,258
Hydro	30	11,575	-38,827	5175	19	99,8	11,705	34,798	1026,94	11,715	34,801	1026,94	3,73	0,0534			815,99	87,575	55,262
Hydro	30	11,575	-38,827	5175	20	49,8	14,554	35,004	1026,29	14,552	35,007	1026,3	3,75	0,3441			1529,7	85,493	55,264
Hydro	30	11,575	-38,827	5175	21	30,6	14,259	34,52	1025,9	14,258	34,523	1025,9	4,13	0,649			1744,1	81,165	55,266

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	30	11,575	-38,827	5175	24	4,4	15,316	34,599	1025,61	15,319	34,601	1025,61	3,97	0,3892			1839,2	81,772	55,267
Hydro	31	11,319	-39,192	5160	1	5172	1,139	34,719	1050,98	1,139	34,722	1050,98	3,44	-0,0044			2538,7	88,285	55,441
Hydro	31	11,319	-39,191	5160	2	4599,7	1,149	34,727	1048,54	1,148	34,73	1048,55	3,38	-0,0034			2197,7	88,525	55,458
Hydro	31	11,319	-39,192	5160	3	4200,3	1,272	34,74	1046,81	1,271	34,743	1046,81	3,36	-0,003			2267,3	88,581	55,468
Hydro	31	11,319	-39,192	5160	4	3798,3	1,679	34,778	1045,03	1,677	34,781	1045,03	3,39	-0,0048			2042,8	88,612	55,476
Hydro	31	11,319	-39,191	5160	5	3500,6	2,021	34,81	1043,7	2,02	34,813	1043,7	3,42	-0,004			1870,9	88,615	55,482
Hydro	31	11,319	-39,192	5160	6	3201,2	2,23	34,824	1042,36	2,229	34,828	1042,36	3,43	-0,0048			2088,9	88,613	55,487
Hydro	31	11,319	-39,191	5160	7	2900,8	2,347	34,828	1041,02	2,346	34,832	1041,03	3,41	-0,001			1867,5	88,611	55,493
Hydro	31	11,319	-39,191	5160	8	2599,5	2,454	34,823	1039,67	2,453	34,827	1039,67	3,35	-0,0015			1877,8	88,625	55,499
Hydro	31	11,319	-39,192	5160	9	2301,5	2,59	34,814	1038,31	2,589	34,818	1038,32	3,27	-0,0019			2561,7	88,606	55,505
Hydro	31	11,319	-39,192	5160	10	2001	2,725	34,788	1036,93	2,725	34,792	1036,93	3,12	-0,0026			2070,3	88,582	55,512
Hydro	31	11,319	-39,191	5160	11	1736,7	2,745	34,722	1035,68	2,744	34,726	1035,68	2,88	-0,0015			1932,6	88,587	55,517
Hydro	31	11,319	-39,192	5160	12	1499,6	2,808	34,635	1034,53	2,809	34,639	1034,53	2,69	-0,001			1971,3	88,559	55,522
Hydro	31	11,319	-39,192	5160	13	1300,8	3,007	34,556	1033,54	3,007	34,56	1033,54	2,62	-0,0014			1900,8	88,542	55,527
Hydro	31	11,319	-39,191	5160	14	1000,3	3,384	34,389	1031,99	3,385	34,394	1031,99	2,87	-0,0031			2029,7	88,54	55,533
Hydro	31	11,319	-39,192	5160	15	699,7	4,591	34,306	1030,4	4,608	34,314	1030,4	3,25	-0,0005			1999,2	88,495	55,538
Hydro	31	11,319	-39,191	5160	16	499,9	5,958	34,335	1029,33	5,961	34,338	1029,33	3,32	-0,0005			1910,8	88,425	55,543
Hydro	31	11,319	-39,192	5160	17	301,3	8,576	34,524	1028,18	8,578	34,527	1028,18	3,54	-0,0021			1839,7	88,234	55,548
Hydro	31	11,319	-39,192	5160	18	150,5	10,453	34,684	1027,31	10,46	34,686	1027,31	3,68	0,003			1296,5	88,05	55,552
Hydro	31	11,319	-39,192	5160	19	89,5	11,666	34,809	1026,91	11,658	34,807	1026,91	3,71	0,0458			1408,7	87,642	55,555
Hydro	31	11,319	-39,192	5160	20	60,6	12,922	34,94	1026,63	12,909	34,941	1026,64	3,73	0,1647			1670	86,592	55,557
Hydro	31	11,319	-39,191	5160	21	19,4	16,746	34,995	1025,66	16,756	34,998	1025,66	3,83	0,4605			1644,6	81,017	55,56
Hydro	31	11,319	-39,192	5160	24	5,3	16,759	34,997	1025,59	16,76	34,999	1025,59	3,83	0,3424			1555,2	81,224	55,561
Hydro	32	11,05	-39,55	4990	1	5038,3	1,045	34,712	1050,42	1,044	34,715	1050,43	3,43	-0,0017			513,52	87,902	55,725
Hydro	32	11,05	-39,55	4990	2	4598,8	1,123	34,723	1048,54	1,123	34,726	1048,54	3,38	-0,0017			191,88	88,379	55,736
Hydro	32	11,05	-39,55	4990	3	4198,5	1,263	34,739	1046,8	1,262	34,742	1046,81	3,36	-0,0029			77,177	88,568	55,744
Hydro	32	11,05	-39,55	4990	4	3794	1,665	34,778	1045,01	1,665	34,781	1045,01	3,38	-0,0021			43,973	88,627	55,75
Hydro	32	11,05	-39,55	4990	5	3501,2	2,021	34,813	1043,7	2,02	34,816	1043,7	3,43	-0,0017			15,99	88,634	55,759
Hydro	32	11,05	-39,55	4990	6	3200	2,215	34,828	1042,36	2,214	34,831	1042,36	3,44	-0,0029			6,445	88,631	55,769
Hydro	32	11,05	-39,55	4990	7	2899,3	2,318	34,83	1041,02	2,318	34,833	1041,02	3,42	-0,0035			5,9963	88,636	55,774
Hydro	32	11,05	-39,55	4990	8	2600,2	2,432	34,826	1039,68	2,431	34,829	1039,68	3,36	-0,0024			5,9963	88,612	55,78
Hydro	32	11,05	-39,55	4990	9	2299,4	2,555	34,819	1038,31	2,553	34,823	1038,32	3,28	-0,0042			5,9963	88,607	55,786
Hydro	32	11,05	-39,55	4990	10	1999,5	2,701	34,793	1036,93	2,7	34,796	1036,93	3,13	-0,003			5,9963	88,589	55,791
Hydro	32	11,05	-39,55	4990	11	1750,1	2,771	34,747	1035,76	2,77	34,75	1035,76	2,95	-0,0016			5,9963	88,584	55,796
Hydro	32	11,05	-39,55	4990	12	1498,8	2,746	34,654	1034,55	2,744	34,656	1034,55	2,73	-0,0031			5,9963	88,58	55,802
Hydro	32	11,05	-39,55	4990	13	1198	3,154	34,533	1033,03	3,153	34,536	1033,04	2,58	-0,0003			5,9963	88,541	55,809
Hydro	32	11,05	-39,55	4990	14	1000,3	3,548	34,426	1032	3,545	34,429	1032	2,74	-0,0019			5,9963	88,519	55,814
Hydro	32	11,05	-39,55	4990	15	649,6	4,678	34,291	1030,15	4,676	34,293	1030,15	3,33	-0,0021			5,9963	88,464	55,822
Hydro	32	11,05	-39,55	4990	16	500	5,798	34,323	1029,34	5,798	34,326	1029,34	3,33	0,001			5,9963	88,415	55,826
Hydro	32	11,05	-39,55	4990	17	280,4	8,96	34,576	1028,06	8,961	34,578	1028,07	3,47	-0,0008			5,9963	88,196	55,831
Hydro	32	11,05	-39,55	4990	18	180,2	9,848	34,619	1027,49	9,847	34,621	1027,5	3,67	0,0027			5,9963	88,121	55,833
Hydro	32	11,05	-39,55	4990	19	100,9	11,17	34,739	1027	11,166	34,74	1027	3,72	0,0184			5,9963	87,787	55,836
Hydro	32	11,05	-39,55	4990	20	51	16,326	35,067	1025,95	16,319	35,069	1025,95	3,68	0,2823			5,9963	85,472	55,838
Hydro	32	11,05	-39,55	4990	21	20,1	17,096	35,079	1025,64	17,098	35,081	1025,64	3,76	0,5236			5,9963	81,513	55,839
Hydro	32	11,05	-39,55	4990	24	3,4	17,095	35,08	1025,57	17,095	35,082	1025,57	3,77	0,5021			5,9963	81,404	55,841
Hydro	33	10,806	-39,926	4780	1	4825	1,012	34,712	1049,52	1,011	34,714	1049,52	3,41	-0,0019			5,9963	88,076	56,001

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	33	10,806	-39,926	4780	2	4599,5	1,045	34,717	1048,55	1,045	34,719	1048,56	3,38	-0,006			5,9963	88,213	56,009
Hydro	33	10,806	-39,926	4780	3	4201	1,109	34,726	1046,83	1,109	34,728	1046,83	3,35	-0,0059			5,9963	88,404	56,019
Hydro	33	10,806	-39,926	4780	4	3800	1,36	34,749	1045,07	1,36	34,752	1045,07	3,34	-0,0044			5,9963	88,547	56,027
Hydro	33	10,806	-39,926	4780	5	3500,1	1,753	34,784	1043,72	1,752	34,787	1043,72	3,36	-0,0023			5,9963	88,605	56,032
Hydro	33	10,806	-39,926	4780	6	3200,1	2,127	34,817	1042,37	2,126	34,82	1042,37	3,41	-0,0051			5,9963	88,601	56,038
Hydro	33	10,806	-39,926	4780	7	2899,6	2,283	34,825	1041,03	2,282	34,828	1041,03	3,39	-0,0051			5,9963	88,594	56,044
Hydro	33	10,806	-39,926	4780	8	2600,7	2,394	34,822	1039,68	2,393	34,826	1039,68	3,34	-0,0034			5,9963	88,591	56,049
Hydro	33	10,806	-39,926	4780	9	2300,2	2,534	34,815	1038,32	2,534	34,818	1038,32	3,27	-0,0046			5,9963	88,591	56,056
Hydro	33	10,806	-39,926	4780	10	1999,7	2,693	34,797	1036,93	2,692	34,801	1036,94	3,15	-0,0013			5,9963	88,58	56,062
Hydro	33	10,806	-39,926	4780	11	1748,6	2,778	34,74	1035,75	2,777	34,743	1035,75	2,93	0,0004			5,9963	88,562	56,067
Hydro	33	10,806	-39,926	4780	12	1501,4	2,814	34,631	1034,54	2,813	34,634	1034,54	2,68	-0,0011			5,9963	88,542	56,072
Hydro	33	10,806	-39,926	4780	13	1200,4	2,978	34,476	1033,02	2,977	34,478	1033,02	2,68	-0,0027			5,9963	88,533	56,077
Hydro	33	10,806	-39,926	4780	14	999,8	3,494	34,394	1031,98	3,493	34,396	1031,98	2,84	0,0007			5,9963	88,513	56,081
Hydro	33	10,806	-39,926	4780	15	700,2	4,295	34,249	1030,39	4,293	34,252	1030,4	3,44	-0,0017			5,9963	88,478	56,087
Hydro	33	10,806	-39,926	4780	16	499,2	6,368	34,379	1029,3	6,364	34,381	1029,3	3,22	-0,0007			5,9963	88,395	56,091
Hydro	33	10,806	-39,926	4780	17	299,5	8,67	34,527	1028,16	8,668	34,529	1028,16	3,6	-0,0002			5,9963	88,237	56,095
Hydro	33	10,806	-39,926	4780	18	170,1	10,598	34,714	1027,39	10,594	34,716	1027,39	3,7	0,0012			5,9963	88,13	56,098
Hydro	33	10,806	-39,926	4780	19	99,9	10,828	34,634	1026,97	10,828	34,636	1026,97	3,84	0,0354			5,9963	87,752	56,1
Hydro	33	10,806	-39,926	4780	20	59,9	11,517	34,538	1026,59	11,501	34,54	1026,6	3,98	0,306			5,9963	85,956	56,102
Hydro	33	10,806	-39,926	4780	21	29,7	16,157	34,68	1025,6	16,142	34,684	1025,6	3,86	0,4169			5,9963	82,371	56,104
Hydro	33	10,806	-39,926	4780	24	4,2	16,139	34,675	1025,48	16,139	34,676	1025,49	3,85	0,4028			5,9963	82,49	56,105
Hydro	34	10,551	-40,291	4729	1	4776,9	1,022	34,713	1049,31	1,021	34,716	1049,32	3,41	-0,0022			841,36	88,085	56,269
Hydro	34	10,551	-40,291	4729	2	4599,1	1,055	34,718	1048,55	1,055	34,721	1048,55	3,38	-0,0023			643,81	88,207	56,274
Hydro	34	10,551	-40,291	4729	3	4201,1	1,123	34,727	1046,83	1,122	34,73	1046,83	3,35	-0,0025			2214,1	88,4	56,282
Hydro	34	10,551	-40,291	4729	4	3800,3	1,379	34,752	1045,07	1,379	34,755	1045,07	3,35	-0,0046			1163,6	88,554	56,29
Hydro	34	10,551	-40,291	4729	5	3500,5	1,752	34,785	1043,72	1,752	34,789	1043,72	3,37	-0,002			2130,6	88,585	56,296
Hydro	34	10,551	-40,291	4729	6	3201	2,092	34,818	1042,38	2,091	34,821	1042,38	3,42	-0,0017			1226,8	88,595	56,302
Hydro	34	10,551	-40,291	4729	7	2899,5	2,268	34,826	1041,03	2,267	34,83	1041,03	3,4	-0,0034			1626,5	88,59	56,308
Hydro	34	10,551	-40,291	4729	8	2602,5	2,348	34,814	1039,69	2,347	34,817	1039,69	3,3	-0,0024			2317	88,581	56,314
Hydro	34	10,551	-40,291	4729	9	2299,6	2,455	34,795	1038,31	2,454	34,798	1038,31	3,17	-0,0053			2226,2	88,586	56,32
Hydro	34	10,551	-40,291	4729	10	2000,3	2,607	34,759	1036,92	2,606	34,763	1036,92	2,99	-0,0015			2225,9	88,578	56,326
Hydro	34	10,551	-40,291	4729	11	1750,7	2,684	34,702	1035,74	2,683	34,705	1035,74	2,82	-0,0022			905,25	88,556	56,331
Hydro	34	10,551	-40,291	4729	12	1500,6	2,748	34,607	1034,52	2,747	34,61	1034,52	2,66	-0,0002			951,95	88,536	56,337
Hydro	34	10,551	-40,291	4729	13	1398,8	2,8	34,562	1034,02	2,799	34,565	1034,02	2,63	-0,0035			959,57	88,531	56,339
Hydro	34	10,551	-40,291	4729	14	999,1	3,196	34,337	1031,97	3,196	34,34	1031,97	3,01	-0,0005			1187,3	88,482	56,346
Hydro	34	10,551	-40,291	4729	15	800,3	4,055	34,3	1030,92	4,053	34,303	1030,92	3,2	-0,0006			1394,9	88,482	56,35
Hydro	34	10,551	-40,291	4729	16	499,7	6,498	34,389	1029,29	6,501	34,391	1029,29	3,23	-0,0007			1446,9	88,382	56,355
Hydro	34	10,551	-40,291	4729	17	297,4	8,816	34,549	1028,14	8,859	34,558	1028,14	3,5	-0,0008			2690,8	88,205	56,359
Hydro	34	10,551	-40,291	4729	18	150,3	10,505	34,66	1027,28	10,507	34,662	1027,28	3,71	0,0052			2747,5	88,015	56,361
Hydro	34	10,551	-40,291	4729	19	100,4	11,452	34,749	1026,95	11,454	34,751	1026,95	3,76	0,0385			1174	87,566	56,364
Hydro	34	10,551	-40,291	4729	20	59,9	13,305	34,901	1026,52	13,313	34,904	1026,52	3,8	0,1251			1115,9	86,764	56,366
Hydro	34	10,551	-40,291	4729	21	30,5	16,936	35,097	1025,74	16,941	35,1	1025,74	3,7	0,4711			1399,1	82,337	56,367
Hydro	34	10,551	-40,291	4729	24	3,3	16,958	35,1	1025,62	16,958	35,102	1025,62	3,7	0,3651			1361,2	82,312	56,368
Hydro	35	10,206	-40,719	4510	1	4567,5	0,991	34,712	1048,42	0,99	34,715	1048,42	3,39	-0,006			2185,6	87,743	56,539
Hydro	35	10,207	-40,72	4510	2	4299	1,063	34,721	1047,26	1,062	34,724	1047,26	3,36	-0,0045			2177,4	88,215	56,548
Hydro	35	10,2	-40,717	4510	3	4099,6	1,095	34,726	1046,4	1,094	34,729	1046,4	3,34	-0,0052			2175,1	88,366	56,554

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	35	10,2	-40,717	4510	4	3799,1	1,199	34,737	1045,08	1,198	34,74	1045,08	3,33	-0,0039			2170,7	88,48	56,56
Hydro	35	10,207	-40,72	4510	5	3498,8	1,532	34,767	1043,74	1,532	34,77	1043,74	3,34	-0,0021			2164,7	88,544	56,566
Hydro	35	10,2	-40,717	4510	6	3198,9	1,95	34,805	1042,38	1,949	34,808	1042,38	3,38	-0,0026			2158,7	88,567	56,571
Hydro	35	10,203	-40,718	4510	7	2900,4	2,189	34,82	1041,04	2,189	34,823	1041,04	3,38	-0,0021			2152,6	88,565	56,577
Hydro	35	10,208	-40,72	4510	8	2599	2,327	34,814	1039,68	2,326	34,817	1039,68	3,3	-0,0036			2150,6	88,56	56,583
Hydro	35	10,205	-40,719	4510	9	2300,4	2,462	34,792	1038,31	2,462	34,795	1038,31	3,16	-0,0026			2143,9	88,564	56,588
Hydro	35	10,202	-40,718	4510	10	1999,3	2,628	34,754	1036,91	2,627	34,758	1036,91	2,97	-0,0031			2137,2	88,544	56,592
Hydro	35	10,202	-40,718	4510	11	1751,8	2,711	34,696	1035,73	2,71	34,7	1035,74	2,8	-0,0022			2129,4	88,532	56,596
Hydro	35	10,208	-40,72	4510	12	1399,7	2,874	34,54	1033,99	2,873	34,543	1034	2,63	-0,0015			2123,7	88,501	56,602
Hydro	35	10,202	-40,718	4510	13	1199,4	3,135	34,435	1032,97	3,134	34,439	1032,97	2,74	0,0002			2118,9	88,485	56,605
Hydro	35	10,2	-40,717	4510	14	900	3,396	34,233	1031,41	3,398	34,236	1031,41	3,39	-0,0006			2104,9	88,473	56,61
Hydro	35	10,207	-40,72	4510	15	699,9	4,59	34,247	1030,35	4,591	34,249	1030,35	3,47	-0,0057			2100,1	88,437	56,613
Hydro	35	10,2	-40,717	4510	16	499,1	6,533	34,347	1029,25	6,544	34,35	1029,25	3,45	-0,0007			2090,4	88,345	56,617
Hydro	35	10,207	-40,72	4510	17	348,4	8,851	34,563	1028,38	8,841	34,565	1028,38	3,62	-0,0006			2084,1	88,283	56,62
Hydro	35	10,207	-40,72	4510	18	199,7	10,71	34,794	1027,57	10,706	34,797	1027,57	3,65	0,0009			2069	88,138	56,622
Hydro	35	10,2	-40,717	4510	19	99,9	12,124	34,914	1026,95	12,118	34,916	1026,95	3,59	0,0257			2067,6	87,66	56,625
Hydro	35	10,207	-40,72	4510	20	59,2	14,008	35,031	1026,47	13,977	35,035	1026,48	3,68	0,166			2059	86,232	56,626
Hydro	35	10,204	-40,718	4510	21	25,1	14,999	34,826	1025,95	14,993	34,82	1025,95	3,91	0,5513			2055,4	81,548	56,627
Hydro	35	10,2	-40,717	4510	24	4,2	14,959	34,731	1025,79	14,963	34,733	1025,79	3,94	0,2433			1996,3	80,659	56,629
Large_Hydro	37	9,917	-41,177	4525	1	4570,2	1,084	34,72	1048,42	1,083	34,72	1048,42	3,4	-0,004			5,9963	88,022	56,809
Large_Hydro	37	9,917	-41,177	4525	2	4400,7	1,089	34,722	1047,69	1,088	34,723	1047,7	3,37	-0,0039			5,9963	88,166	56,815
Large_Hydro	37	9,917	-41,177	4525	3	4200,1	1,078	34,724	1046,83	1,078	34,724	1046,83	3,36	-0,0059			5,9963	88,241	56,819
Large_Hydro	37	9,917	-41,177	4525	4	3799,6	1,265	34,742	1045,08	1,264	34,743	1045,08	3,34	-0,0035			5,9963	88,51	56,827
Large_Hydro	37	9,917	-41,177	4525	5	3498,4	1,659	34,777	1043,72	1,658	34,777	1043,72	3,36	-0,0009			5,9963	88,561	56,833
Large_Hydro	37	9,917	-41,177	4525	6	3200,1	1,99	34,808	1042,38	1,989	34,808	1042,38	3,39	-0,0015			5,9963	88,567	56,839
Large_Hydro	37	9,917	-41,177	4525	7	2899,6	2,193	34,819	1041,03	2,193	34,82	1041,04	3,38	-0,0007			5,9963	88,566	56,845
Large_Hydro	37	9,917	-41,177	4525	8	2598,7	2,359	34,818	1039,67	2,358	34,819	1039,68	3,33	-0,003			5,9963	88,563	56,851
Large_Hydro	37	9,917	-41,177	4525	9	2298,2	2,462	34,794	1038,3	2,461	34,795	1038,3	3,17	-0,0039			5,9963	88,561	56,857
Large_Hydro	37	9,917	-41,177	4525	10	2001,1	2,629	34,774	1036,93	2,628	34,775	1036,93	3,05	-0,0028			5,9963	88,548	56,862
Large_Hydro	37	9,917	-41,177	4525	11	1748,8	2,673	34,709	1035,74	2,672	34,71	1035,74	2,84	-0,0029			5,9963	88,526	56,867
Large_Hydro	37	9,917	-41,177	4525	12	1400,7	2,738	34,566	1034,04	2,737	34,567	1034,04	2,66	-0,0039			5,9963	88,501	56,873
Large_Hydro	37	9,917	-41,177	4525	13	1200,6	2,944	34,472	1033,02	2,942	34,473	1033,03	2,69	-0,0024			5,9963	88,487	56,877
Large_Hydro	37	9,917	-41,177	4525	14	1000	3,196	34,344	1031,98	3,193	34,345	1031,98	2,98	-0,0004			5,9963	88,199	56,881
Large_Hydro	37	9,917	-41,177	4525	15	599,7	4,72	34,24	1029,87	4,715	34,24	1029,87	3,51	-0,0074			5,9963	88,427	56,887
Large_Hydro	37	9,918	-41,178	4525	16	504,1	5,49	34,279	1029,37	5,49	34,279	1029,37	3,45	-0,0036			5,9963	88,385	56,89
Large_Hydro	37	9,918	-41,178	4525	17	300,5	7,847	34,421	1028,21	7,847	34,42	1028,21	3,62	-0,0008			5,9963	88,198	56,894
Large_Hydro	37	9,918	-41,178	4525	18	200,1	9,41	34,598	1027,64	9,382	34,593	1027,64	3,64	0,0001			5,9963	88,085	56,896
Large_Hydro	37	9,918	-41,178	4525	19	100,5	11,056	34,722	1027	11,064	34,722	1027	3,71	0,0206			5,9963	87,563	56,899
Large_Hydro	37	9,918	-41,178	4525	20	49,4	12,788	34,656	1026,39	12,797	34,657	1026,39	3,93	0,3157			5,9963	85,677	56,9
Large_Hydro	37	9,918	-41,178	4525	21	20,6	14,546	34,637	1025,88	14,545	34,637	1025,88	3,99	0,6659			5,9963	81,153	56,901
Large_Hydro	37	9,918	-41,178	4525	24	4,3	15,639	34,751	1025,66	15,64	34,75	1025,66	3,88	0,4573			5,9963	82,309	56,902
Large_ML	38	9,922	-41,19	4500	1	303,3	7,723	34,423	1028,24	7,723	34,424	1028,25	3,61	0,0057			5,9963	88,213	57,046
Large_ML	38	9,922	-41,19	4500	2	151	9,981	34,639	1027,36	9,982	34,64	1027,36	3,69	0,0017			5,9963	88,064	57,051
Large_ML	38	9,922	-41,19	4500	3	100,9	10,684	34,673	1027,03	10,682	34,674	1027,03	3,76	0,015			5,9963	87,919	57,054
Large_ML	38	9,922	-41,19	4500	4	80,5	11,217	34,727	1026,89	11,22	34,73	1026,89	3,71	0,037			5,9963	87,689	57,056
Large_ML	38	9,922	-41,19	4500	5	60,7	11,894	34,717	1026,66	11,894	34,718	1026,66	3,84	0,1324			5,9963	87,052	57,057

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Large_ML	38	9,922	-41,19	4500	6	50,9	12,873	34,89	1026,56	12,796	34,88	1026,57	3,76	0,1553			5,9963	86,835	57,058
Large_ML	38	9,922	-41,19	4500	7	35,6	13,819	34,682	1026,14	13,75	34,677	1026,15	3,91	0,4054			5,9963	84,891	57,06
Large_ML	38	9,922	-41,19	4500	8	35,3	13,848	34,677	1026,13	13,793	34,678	1026,14	3,92	0,4129			5,9963	84,834	57,06
Large_ML	38	9,922	-41,19	4500	9	35,1	13,849	34,685	1026,13	13,814	34,684	1026,14	3,92	0,4258			5,9963	84,803	57,06
Large_ML	38	9,922	-41,19	4500	10	35,4	13,784	34,689	1026,15	13,803	34,69	1026,15	3,92	0,4129			5,9963	84,929	57,06
Large_ML	38	9,922	-41,19	4500	11	25,3	14,504	34,643	1025,92	14,523	34,645	1025,91	3,94	0,6244			5,9963	82,449	57,062
Large_ML	38	9,922	-41,19	4500	12	14,8	15,204	34,716	1025,77	15,224	34,721	1025,77	3,92	0,5638			5,9963	81,63	57,064
Large_ML	38	9,922	-41,19	4500	13	15,3	15,223	34,721	1025,78	15,223	34,723	1025,78	3,91	0,575			5,9963	81,516	57,064
Large_ML	38	9,922	-41,19	4500	14	7,8	15,266	34,729	1025,74	15,264	34,729	1025,74	3,9	0,5688			5,9963	81,284	57,066
Large_ML	38	9,922	-41,19	4500	15	7,1	15,278	34,73	1025,73	15,278	34,731	1025,73	3,91	0,5589			5,9963	81,281	57,066
Large_ML	38	9,922	-41,19	4500	16	7,6	15,277	34,729	1025,74	15,274	34,729	1025,74	3,91	0,5659			5,9963	81,215	57,066
Large_ML	38	9,922	-41,19	4500	17	7,8	15,283	34,731	1025,74	15,283	34,732	1025,74	3,91	0,5615			5,9963	81,23	57,066
Large_ML	38	9,922	-41,19	4500	18	3,8	15,301	34,735	1025,72	15,305	34,737	1025,72	3,9	0,5431			5,9963	81,559	57,067
Large_ML	38	9,922	-41,19	4500	19	3,8	15,303	34,736	1025,72	15,304	34,737	1025,72	3,9	0,5484			5,9963	81,545	57,067
Large_ML	38	9,922	-41,19	4500	20	3,6	15,314	34,738	1025,72	15,313	34,739	1025,72	3,9	0,5324			5,9963	81,551	57,067
Large_ML	38	9,922	-41,19	4500	21	3,3	15,306	34,736	1025,72	15,309	34,738	1025,72	3,9	0,5352			5,9963	81,557	57,067
Large_ML	38	9,922	-41,19	4500	24	3,8	15,308	34,736	1025,72	15,308	34,737	1025,72	3,9	0,5482			5,9963	81,52	57,068
Hydro	39	9,583	-41,609	4643	1	4692,6	1,102	34,72	1048,94	1,101	34,723	1048,95	3,4	-0,0015			1014	88,042	57,236
Hydro	39	9,583	-41,609	4643	2	4399,4	1,095	34,723	1047,69	1,094	34,725	1047,69	3,37	-0,003			1171,8	88,234	57,243
Hydro	39	9,583	-41,609	4643	3	4100,4	1,121	34,728	1046,4	1,12	34,73	1046,4	3,34	-0,0032			1304,6	88,401	57,249
Hydro	39	9,583	-41,609	4643	4	3798,9	1,331	34,747	1045,06	1,33	34,75	1045,07	3,34	-0,0057			1397,5	88,551	57,254
Hydro	39	9,583	-41,609	4643	5	3499,9	1,653	34,776	1043,73	1,653	34,779	1043,73	3,35	-0,0014			1506,8	88,59	57,26
Hydro	39	9,583	-41,609	4643	6	3199,9	1,975	34,804	1042,38	1,974	34,807	1042,38	3,37	-0,0018			1595,8	88,588	57,265
Hydro	39	9,583	-41,609	4643	7	2901,7	2,195	34,817	1041,04	2,194	34,82	1041,04	3,37	-0,0034			397,68	88,589	57,27
Hydro	39	9,583	-41,609	4643	8	2599	2,321	34,813	1039,68	2,32	34,816	1039,68	3,3	-0,0024			918,22	88,579	57,276
Hydro	39	9,583	-41,609	4643	9	2298,9	2,485	34,806	1038,31	2,485	34,809	1038,31	3,23	-0,0023			1726,8	88,568	57,281
Hydro	39	9,583	-41,609	4643	10	2001,8	2,672	34,797	1036,95	2,671	34,8	1036,95	3,15	-0,0021			1755,8	88,549	57,287
Hydro	39	9,583	-41,609	4643	11	1748,8	2,7	34,744	1035,76	2,7	34,747	1035,76	2,93	-0,0014			1783,9	88,539	57,291
Hydro	39	9,583	-41,609	4643	12	1499	2,739	34,659	1034,56	2,738	34,662	1034,56	2,72	-0,0024			1837,3	88,523	57,295
Hydro	39	9,583	-41,609	4643	13	1243,7	2,804	34,549	1033,3	2,802	34,551	1033,3	2,64	-0,0012			1874,5	88,515	57,3
Hydro	39	9,583	-41,609	4643	14	998	3,05	34,447	1032,06	3,049	34,449	1032,07	2,73	-0,0014			1836,5	88,493	57,304
Hydro	39	9,583	-41,609	4643	15	751,7	3,704	34,375	1030,8	3,703	34,377	1030,8	2,89	0,0017			1982,6	88,468	57,31
Hydro	39	9,583	-41,609	4643	16	499,9	5,273	34,432	1029,5	5,277	34,435	1029,5	2,81	0,0002			1899,5	88,366	57,314
Hydro	39	9,583	-41,609	4643	17	349,1	8,413	34,698	1028,56	8,419	34,7	1028,56	2,47	0,0004			1969,5	88,114	57,317
Hydro	39	9,583	-41,609	4643	18	200,3	9,786	34,602	1027,58	9,781	34,6	1027,58	3,63	0,0046			1203,6	88,042	57,321
Hydro	39	9,583	-41,609	4643	19	99,7	10,844	34,589	1026,93	10,846	34,59	1026,93	3,93	0,0633			2007,9	87,365	57,323
Hydro	39	9,583	-41,609	4643	20	49,8	13,244	34,506	1026,18	13,237	34,507	1026,19	3,95	0,3966			2046,9	84,537	57,325
Hydro	39	9,583	-41,609	4643	21	20,6	13,732	34,522	1025,97	13,732	34,523	1025,97	4	0,447			2096,5	81,702	57,327
Hydro	39	9,583	-41,609	4643	24	3,5	13,759	34,523	1025,88	13,76	34,525	1025,89	4,01	0,1891			2140	81,584	57,327
Hydro	40	9,267	-42,033	4628	1	4666,5	1,103	34,721	1048,83	1,102	34,723	1048,83	3,4	-0,0035			2371,9	87,7	57,498
Hydro	40	9,267	-42,033	4628	2	4101,9	1,151	34,73	1046,4	1,15	34,733	1046,4	3,34	-0,0043			1918,5	88,555	57,516
Hydro	40	9,267	-42,033	4628	3	3800	1,337	34,748	1045,07	1,336	34,751	1045,07	3,34	-0,0023			1703,4	88,665	57,521
Hydro	40	9,267	-42,033	4628	4	3502,3	1,673	34,777	1043,74	1,673	34,78	1043,74	3,35	-0,0038			2151,4	88,707	57,527
Hydro	40	9,267	-42,033	4628	5	3200,1	1,969	34,803	1042,38	1,968	34,806	1042,38	3,37	-0,0049			1950,1	88,722	57,533
Hydro	40	9,267	-42,033	4628	6	2898,8	2,216	34,823	1041,03	2,215	34,826	1041,03	3,39	-0,0025			2179	88,711	57,538
Hydro	40	9,267	-42,033	4628	7	2600,4	2,265	34,806	1039,69	2,264	34,808	1039,69	3,27	-0,0024			2369,8	88,708	57,544

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	40	9,267	-42,033	4628	8	2300,3	2,395	34,795	1038,32	2,394	34,797	1038,32	3,18	-0,0016			1594,8	88,708	57,549
Hydro	40	9,267	-42,033	4628	9	1999,1	2,529	34,762	1036,93	2,527	34,765	1036,93	3	-0,0012			1316,8	88,697	57,554
Hydro	40	9,267	-42,033	4628	10	1749,7	2,664	34,714	1035,75	2,663	34,717	1035,75	2,84	-0,0031			1297,2	88,682	57,559
Hydro	40	9,267	-42,033	4628	11	1501,3	2,724	34,622	1034,54	2,723	34,625	1034,54	2,67	-0,0029			1415,3	88,655	57,564
Hydro	40	9,267	-42,033	4628	12	1249,9	2,881	34,517	1033,29	2,88	34,519	1033,29	2,64	-0,0007			1428,8	88,638	57,569
Hydro	40	9,267	-42,033	4628	13	996,3	3,676	34,448	1031,98	3,67	34,453	1031,99	2,66	0,0002			2167,4	88,61	57,573
Hydro	40	9,267	-42,033	4628	14	745,2	3,446	34,211	1030,67	3,45	34,213	1030,67	3,49	-0,0025			1685,2	88,6	57,577
Hydro	40	9,267	-42,033	4628	15	600,7	4,143	34,194	1029,91	4,143	34,196	1029,91	3,63	-0,0012			2424,6	88,575	57,581
Hydro	40	9,267	-42,033	4628	16	499,7	4,801	34,225	1029,39	4,801	34,226	1029,39	3,56	-0,0012			2232,8	88,56	57,584
Hydro	40	9,267	-42,033	4628	17	291,4	6,875	34,312	1028,23	6,882	34,313	1028,23	3,83	0,0025			2312,3	88,359	57,588
Hydro	40	9,267	-42,033	4628	18	128,9	8,147	34,304	1027,29	8,159	34,306	1027,29	4,07	0,0548			2371,7	87,873	57,591
Hydro	40	9,267	-42,033	4628	19	91,6	8,824	34,298	1027,01	8,802	34,303	1027,02	4,17	0,2289			2322,7	86,757	57,592
Hydro	40	9,267	-42,033	4628	20	47,9	11,446	34,208	1026,29	11,447	34,209	1026,29	4,14	0,395			2161,8	84,158	57,593
Hydro	40	9,267	-42,033	4628	21	26	11,595	34,209	1026,17	11,597	34,211	1026,17	4,17	0,3006			2168,5	83,388	57,594
Hydro	40	9,267	-42,033	4628	24	0,9	12,061	34,223	1025,98	12,062	34,22	1025,98	4,12	0,1517			2208,3	82,046	57,596
Super_Hydro	41	8,928	-42,469	4070	1	4057	1,089	34,725	1046,21	1,088	34,728	1046,21	3,37	-0,0023			5,9963	88,97	57,904
Super_Hydro	41	8,928	-42,469	4070	2	3900,9	1,225	34,737	1045,52	1,224	34,74	1045,52	3,36	-0,0028			5,9963	89,124	57,909
Super_Hydro	41	8,928	-42,469	4070	3	3750	1,386	34,752	1044,85	1,385	34,754	1044,85	3,36	-0,0029			5,9963	89,176	57,913
Super_Hydro	41	8,928	-42,469	4070	4	3500	1,661	34,776	1043,73	1,661	34,779	1043,73	3,37	-0,0021			5,9963	89,191	57,919
Super_Hydro	41	8,928	-42,469	4070	5	3247,9	1,967	34,804	1042,59	1,967	34,807	1042,6	3,39	-0,0042			5,9963	89,2	57,924
Super_Hydro	41	8,928	-42,469	4070	6	2999,7	2,13	34,816	1041,48	2,13	34,819	1041,49	3,39	-0,0045			5,9963	89,203	57,929
Super_Hydro	41	8,928	-42,469	4070	7	2750,1	2,255	34,815	1040,36	2,255	34,818	1040,36	3,34	-0,003			5,9963	89,192	57,934
Super_Hydro	41	8,928	-42,469	4070	8	2500,7	2,365	34,807	1039,23	2,364	34,81	1039,23	3,27	-0,0044			5,9963	89,186	57,938
Super_Hydro	41	8,928	-42,469	4070	9	2249,1	2,471	34,783	1038,07	2,47	34,786	1038,07	3,12	-0,0019			5,9963	89,181	57,943
Super_Hydro	41	8,928	-42,469	4070	10	1998,8	2,589	34,743	1036,9	2,588	34,746	1036,9	2,94	-0,0017			5,9963	89,167	57,948
Super_Hydro	41	8,928	-42,469	4070	11	1751	2,672	34,68	1035,72	2,671	34,683	1035,73	2,77	-0,0017			5,9963	89,147	57,952
Super_Hydro	41	8,928	-42,469	4070	12	1399,6	2,75	34,545	1034,01	2,751	34,547	1034,01	2,66	-0,0009			5,9963	89,119	57,958
Super_Hydro	41	8,928	-42,469	4070	13	1248,9	2,792	34,466	1033,26	2,792	34,468	1033,26	2,73	-0,0016			5,9963	89,097	57,962
Super_Hydro	41	8,928	-42,469	4070	14	998,5	2,987	34,324	1031,98	2,987	34,327	1031,98	3,03	-0,0007			5,9963	89,092	57,966
Super_Hydro	41	8,928	-42,469	4070	15	752	3,945	34,254	1030,68	3,939	34,256	1030,68	3,38	-0,0051			5,9963	89,1	57,971
Super_Hydro	41	8,928	-42,469	4070	16	601,3	4,189	34,172	1029,89	4,187	34,174	1029,89	3,72	-0,0025			5,9963	89,08	57,974
Super_Hydro	41	8,928	-42,469	4070	17	349,5	6,285	34,284	1028,55	6,284	34,286	1028,56	3,7	-0,0022			5,9963	89,022	57,979
Super_Hydro	41	8,928	-42,469	4070	18	200,2	7,812	34,334	1027,69	7,826	34,337	1027,69	4	0,0058			5,9963	88,836	57,983
Super_Hydro	41	8,928	-42,469	4070	19	79,8	10,26	34,566	1026,93	10,26	34,567	1026,93	3,89	0,0645			5,9963	88,237	57,986
Super_Hydro	41	8,928	-42,469	4070	20	48,5	12,796	34,69	1026,41	12,81	34,694	1026,41	3,91	0,3434			5,9963	86,514	57,988
Super_Hydro	41	8,928	-42,469	4070	21	20,9	13,373	34,622	1026,12	13,37	34,623	1026,12	4	0,5392			5,9963	83,337	57,989
Super_Hydro	41	8,928	-42,469	4070	24	3,8	13,377	34,622	1026,04	13,378	34,623	1026,04	4,01	0,5298			5,9963	82,106	57,991
Super_REE	42	8,917	-42,467	4070	1	4092,8	1,127	34,728	1046,36	1,127	34,731	1046,36	3,37	-0,003			337,79	88,895	58,676
Super_REE	42	8,917	-42,467	4070	2	4094,2	1,127	34,728	1046,37	1,127	34,731	1046,37	3,37	-0,0056			344,61	88,897	58,676
Super_REE	42	8,917	-42,467	4070	3	3499,9	1,689	34,778	1043,72	1,688	34,781	1043,73	3,36	-0,005			194,57	89,043	58,687
Super_REE	42	8,917	-42,467	4070	4	3501,6	1,688	34,778	1043,73	1,688	34,781	1043,73	3,36	-0,0033			191,19	89,047	58,687
Super_REE	42	8,917	-42,467	4070	5	2949,5	2,188	34,812	1041,25	2,187	34,815	1041,25	3,36	-0,0035			213,87	89,046	58,696
Super_REE	42	8,917	-42,467	4070	6	2947,8	2,188	34,812	1041,24	2,188	34,815	1041,25	3,35	-0,0037			213,87	89,042	58,696
Super_REE	42	8,917	-42,467	4070	7	2200,6	2,504	34,779	1037,85	2,503	34,782	1037,85	3,09	-0,0028			252,17	89,016	58,706
Super_REE	42	8,917	-42,467	4070	8	2200	2,504	34,779	1037,84	2,503	34,782	1037,85	3,09	-0,0046			250,05	89,015	58,706
Super_REE	42	8,917	-42,467	4070	9	1470,4	2,731	34,566	1034,35	2,731	34,569	1034,36	2,66	-0,0011			161,9	88,947	58,717

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_REE	42	8,917	-42,467	4070	10	1470,6	2,731	34,566	1034,36	2,731	34,569	1034,36	2,66	-0,0014			161,9	88,942	58,717
Super_REE	42	8,917	-42,467	4070	11	949,6	3,096	34,298	1031,72	3,096	34,301	1031,72	3,12	-0,0003			149,91	88,914	58,724
Super_REE	42	8,917	-42,467	4070	12	948,6	3,096	34,296	1031,71	3,095	34,299	1031,72	3,13	-0,0026			149,91	88,906	58,724
Super_REE	42	8,917	-42,467	4070	13	600,2	4,206	34,17	1029,88	4,206	34,172	1029,88	3,72	-0,0017			154,07	88,886	58,729
Super_REE	42	8,917	-42,467	4070	14	600,1	4,205	34,17	1029,88	4,205	34,172	1029,88	3,72	-0,0039			151,91	88,896	58,73
Super_REE	42	8,917	-42,467	4070	15	400,2	5,94	34,272	1028,82	5,929	34,273	1028,83	3,61	-0,001			65,96	88,819	58,733
Super_REE	42	8,917	-42,467	4070	16	400,5	5,944	34,273	1028,83	5,943	34,274	1028,83	3,61	-0,0017			65,96	88,82	58,733
Super_REE	42	8,917	-42,467	4070	17	294,8	6,893	34,293	1028,23	6,918	34,297	1028,23	3,92	0,0012			69,957	88,708	58,735
Super_REE	42	8,917	-42,467	4070	18	294,8	6,927	34,298	1028,23	6,935	34,3	1028,23	3,91	-0,0001			69,957	88,704	58,736
Super_REE	42	8,917	-42,467	4070	19	124,9	9,364	34,501	1027,23	9,364	34,503	1027,24	3,86	0,011			61,962	88,536	58,739
Super_REE	42	8,917	-42,467	4070	20	124,8	9,363	34,501	1027,23	9,363	34,503	1027,24	3,85	0,01			61,962	88,527	58,739
Super_REE	42	8,917	-42,467	4070	21	20,1	12,422	34,335	1026,08	12,408	34,333	1026,08	4,08	0,3479			61,962	83,775	58,741
Super_REE	42	8,917	-42,467	4070	24	20,7	12,401	34,324	1026,08	12,385	34,321	1026,08	4,08	0,3394			61,962	83,935	58,741
Super_PoTh	43	8,933	-42,472	4070	1	998,7	3,119	34,328	1031,97	3,119	34,33	1031,97	3,07	-0,0024			5,9963	89,209	58,822
Super_PoTh	43	8,933	-42,472	4070	2	850,4	3,26	34,243	1031,2	3,26	34,245	1031,2	3,37	0,0005			5,9963	89,168	58,825
Super_PoTh	43	8,933	-42,472	4070	3	699,4	3,84	34,18	1030,39	3,841	34,182	1030,39	3,68	-0,0021			5,9963	89,101	58,828
Super_PoTh	43	8,933	-42,472	4070	4	600,4	4,295	34,167	1029,87	4,296	34,169	1029,87	3,77	-0,0007			5,9963	89,112	58,831
Super_PoTh	43	8,933	-42,472	4070	5	601	4,306	34,167	1029,87	4,305	34,169	1029,87	3,77	-0,0039			5,9963	89,107	58,831
Super_PoTh	43	8,933	-42,472	4070	6	600,4	4,307	34,167	1029,87	4,302	34,17	1029,87	3,77	-0,0019			5,9963	89,102	58,831
Super_PoTh	43	8,925	-42,469	4070	7	500,4	4,9	34,195	1029,36	4,893	34,198	1029,36	3,72	-0,0011			5,9963	89,062	58,833
Super_PoTh	43	8,933	-42,472	4070	8	450,6	5,39	34,23	1029,09	5,396	34,232	1029,1	3,66	-0,0023			5,9963	89,026	58,835
Super_PoTh	43	8,933	-42,472	4070	9	400,1	5,995	34,276	1028,82	5,989	34,278	1028,82	3,63	0,0021			5,9963	88,982	58,837
Super_PoTh	43	8,933	-42,472	4070	10	360,8	6,358	34,286	1028,6	6,365	34,287	1028,6	3,72	-0,0014			5,9963	88,984	58,838
Super_PoTh	43	8,933	-42,472	4070	11	330,2	6,558	34,272	1028,42	6,553	34,276	1028,42	3,87	-0,0029			5,9963	88,961	58,84
Super_PoTh	43	8,933	-42,472	4070	12	300,6	6,672	34,259	1028,26	6,681	34,259	1028,26	4	-0,0014			5,9963	88,925	58,841
Super_PoTh	43	8,933	-42,472	4070	13	274,4	6,962	34,283	1028,12	6,965	34,286	1028,12	4,01	0,001			5,9963	88,826	58,843
Super_PoTh	43	8,933	-42,472	4070	14	250,2	7,594	34,377	1027,99	7,571	34,373	1027,99	3,82	0,0016			5,9963	88,819	58,844
Super_PoTh	43	8,931	-42,471	4070	15	224,8	8,181	34,442	1027,83	8,101	34,436	1027,84	3,76	0,0032			5,9963	88,825	58,845
Super_PoTh	43	8,933	-42,472	4070	16	200	8,585	34,476	1027,68	8,578	34,476	1027,68	3,8	0,0035			5,9963	88,802	58,846
Super_PoTh	43	8,933	-42,472	4070	17	175,1	9,303	34,555	1027,51	9,296	34,554	1027,52	3,73	0,0047			5,9963	88,759	58,847
Super_PoTh	43	8,933	-42,472	4070	18	125,6	9,989	34,594	1027,21	10,061	34,605	1027,2	3,79	0,013			5,9963	88,541	58,849
Super_PoTh	43	8,933	-42,472	4070	19	100,3	10,614	34,684	1027,05	10,618	34,686	1027,05	3,74	0,0216			5,9963	88,36	58,85
Super_PoTh	43	8,933	-42,472	4070	20	75,2	12,326	34,862	1026,76	12,317	34,863	1026,76	3,75	0,1659			5,9963	87,246	58,851
Super_PoTh	43	8,933	-42,472	4070	21	39,1	13,271	34,653	1026,24	13,272	34,65	1026,24	3,98	0,5022			5,9963	84,312	58,852
Super_PoTh	43	8,933	-42,471	4070	24	9,3	11,954	34,211	1026,03	11,955	34,213	1026,03	4,12	0,3851			5,9963	83,837	58,854
Super_BaSi	44	8,932	-42,469	3846	1	1503,2	2,708	34,599	1034,53	2,708	34,6	1034,53	2,67	-0,0042			5,9963	89,058	58,956
Super_BaSi	44	8,932	-42,469	3846	2	1501,8	2,707	34,599	1034,53	2,708	34,6	1034,53	2,67	-0,001			5,9963	89,058	58,956
Super_BaSi	44	8,932	-42,469	3846	3	1000,9	3,061	34,315	1031,97	3,062	34,316	1031,97	3,06	-0,0013			5,9963	88,986	58,965
Super_BaSi	44	8,932	-42,469	3846	4	899,2	3,328	34,28	1031,45	3,326	34,283	1031,45	3,21	-0,0041			5,9963	88,963	58,968
Super_BaSi	44	8,932	-42,469	3846	5	794,6	3,464	34,208	1030,89	3,464	34,21	1030,9	3,49	-0,0029			5,9963	88,941	58,972
Super_BaSi	44	8,932	-42,469	3846	6	698,6	3,815	34,182	1030,39	3,815	34,184	1030,39	3,64	-0,0023			5,9963	88,92	58,975
Super_BaSi	44	8,932	-42,469	3846	7	600,6	4,158	34,173	1029,89	4,159	34,175	1029,89	3,71	-0,0022			5,9963	88,905	58,978
Super_BaSi	44	8,932	-42,469	3846	8	550	4,313	34,167	1029,64	4,314	34,169	1029,64	3,75	0,0005			5,9963	88,891	58,98
Super_BaSi	44	8,932	-42,469	3846	9	500,2	4,679	34,177	1029,37	4,685	34,18	1029,37	3,74	-0,0015			5,9963	88,861	58,982
Super_BaSi	44	8,932	-42,469	3846	10	450,4	5,232	34,218	1029,11	5,233	34,22	1029,11	3,66	-0,002			5,9963	88,831	58,984
Super_BaSi	44	8,932	-42,469	3846	11	399,9	5,928	34,265	1028,82	5,945	34,272	1028,82	3,62	0,0004			5,9963	88,806	58,986

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_BaSi	44	8,932	-42,469	3846	12	350,3	6,328	34,284	1028,55	6,326	34,285	1028,55	3,71	-0,001			5,9963	88,784	58,988
Super_BaSi	44	8,932	-42,469	3846	13	300	6,638	34,276	1028,27	6,666	34,281	1028,27	3,88	0,0003			5,9963	88,721	58,991
Super_BaSi	44	8,932	-42,469	3846	14	249,4	8,099	34,453	1027,96	8,083	34,453	1027,97	3,67	-0,002			5,9963	88,702	58,993
Super_BaSi	44	8,932	-42,469	3846	15	200	8,867	34,524	1027,67	8,87	34,525	1027,68	3,71	0,001			5,9963	88,652	58,995
Super_BaSi	44	8,932	-42,469	3846	16	175,2	9,492	34,61	1027,53	9,5	34,611	1027,53	3,62	0,0027			5,9963	88,574	58,997
Super_BaSi	44	8,932	-42,469	3846	17	149,8	9,191	34,482	1027,36	9,192	34,482	1027,36	3,84	0,0091			5,9963	88,455	58,998
Super_BaSi	44	8,932	-42,469	3846	18	125,1	10,025	34,607	1027,21	10,024	34,609	1027,21	3,74	0,0138			5,9963	88,287	59
Super_BaSi	44	8,932	-42,469	3846	19	100,1	10,948	34,732	1027,03	10,958	34,735	1027,03	3,71	0,0342			5,9963	88,087	59,002
Super_BaSi	44	8,932	-42,469	3846	20	80,2	11,786	34,824	1026,85	11,779	34,826	1026,86	3,71	0,1048			5,9963	87,558	59,003
Super_BaSi	44	8,932	-42,469	3846	21	39,7	13,155	34,669	1026,28	13,154	34,672	1026,29	3,91	0,4272			5,9963	85,081	59,006
Super_BaSi	44	8,932	-42,469	3846	24	9,6	12,004	34,232	1026,03	12,006	34,233	1026,04	4,09	0,3755			5,9963	84,174	59,008
Super_ML	45	8,934	-42,469	4070	1	350,2	6,498	34,284	1028,53	6,499	34,285	1028,53	3,83	0,0007	0,0406	0,857	2110,6	89,841	59,365
Super_ML	45	8,934	-42,469	4070	2	200,5	8,906	34,522	1027,67	8,912	34,524	1027,67	3,74	0,0029	0,0429	0,9117	2125,2	89,631	59,369
Super_ML	45	8,934	-42,469	4070	3	150,6	9,268	34,497	1027,36	9,269	34,498	1027,37	3,85	0,0093	0,0521	1,1134	2136,2	89,462	59,37
Super_ML	45	8,934	-42,469	4070	4	80,6	12,024	34,843	1026,82	12,056	34,846	1026,82	3,74	0,1251	0,2324	4,3104	1855,2	88,381	59,373
Super_ML	45	8,934	-42,469	4070	5	50,6	13,201	34,662	1026,32	13,204	34,661	1026,32	3,95	0,3836	1,5158	34,389	2268,6	86,256	59,374
Super_ML	45	8,934	-42,469	4070	6	50,4	13,206	34,657	1026,31	13,206	34,658	1026,31	3,95	0,3792	1,556	35,502	2281,5	86,304	59,375
Super_ML	45	8,934	-42,469	4070	7	50,3	13,208	34,655	1026,31	13,209	34,656	1026,31	3,95	0,3903	1,5717	36,305	2309,8	86,327	59,375
Super_ML	45	8,934	-42,469	4070	8	50,6	13,202	34,656	1026,31	13,205	34,657	1026,31	3,95	0,3694	1,6487	34,096	2071,1	86,353	59,375
Super_ML	45	8,934	-42,469	4070	9	50,4	13,203	34,654	1026,31	13,201	34,655	1026,31	3,96	0,3793	1,7545	31,049	1779,5	86,365	59,375
Super_ML	45	8,934	-42,469	4070	10	21,9	12,009	34,237	1026,09	12,01	34,238	1026,09	4,09	0,2161	12,227	266,95	2183,3	85,418	59,376
Super_ML	45	8,934	-42,469	4070	11	21,9	12,003	34,237	1026,09	12,004	34,238	1026,09	4,1	0,2218	11,809	257,54	2180,9	85,403	59,376
Super_ML	45	8,934	-42,469	4070	12	9,8	12,009	34,236	1026,04	12,009	34,237	1026,04	4,09	0,1043	30,152	673,25	2232,7	85,259	59,377
Super_ML	45	8,934	-42,469	4070	13	9,7	12,013	34,236	1026,04	12,013	34,237	1026,04	4,09	0,1047	32,229	726	2252,5	85,202	59,377
Super_ML	45	8,934	-42,469	4070	14	9,6	12,009	34,236	1026,04	12,009	34,237	1026,04	4,09	0,1147	31,545	721,21	2286,2	85,219	59,377
Super_ML	45	8,934	-42,469	4070	15	9,6	12,008	34,236	1026,04	12,008	34,236	1026,04	4,09	0,1045	30,541	715,58	2343,2	85,208	59,378
Super_ML	45	8,934	-42,469	4070	16	5	12,014	34,235	1026,01	12,016	34,236	1026,01	4,09	0,0898	52,46	1130,2	2154,7	84,951	59,379
Super_ML	45	8,934	-42,469	4070	17	4,8	12,019	34,235	1026,01	12,02	34,236	1026,01	4,09	0,0944	50,373	1166,3	2315,1	84,864	59,379
Super_ML	45	8,934	-42,469	4070	18	3,3	12,013	34,235	1026,01	12,014	34,236	1026,01	4,09	0,0865	63,186	1391,9	2202,9	84,745	59,38
Super_ML	45	8,934	-42,469	4070	19	3,3	12,014	34,235	1026,01	12,015	34,236	1026,01	4,09	0,0803	63,643	1397,9	2196,5	84,99	59,38
Super_ML	45	8,934	-42,469	4070	20	3,2	12,014	34,235	1026,01	12,015	34,236	1026,01	4,09	0,0833	66,925	1469,4	2195,8	85,085	59,38
Super_ML	45	8,934	-42,469	4070	21	2,8	12,016	34,235	1026	12,016	34,236	1026,01	4,09	0,0873	72,498	1587,9	2190,2	85,142	59,38
Super_ML	45	8,934	-42,469	4070	24	3	12,016	34,234	1026	12,017	34,236	1026,01	4,1	0,0925	73,346	1601,7	2183,8	85,073	59,38
Hydro	46	8,565	-42,894	3261	1	3226,1	2,066	34,804	1042,48	2,065	34,807	1042,48	3,39	-0,0024			2074,2	88,995	59,59
Hydro	46	8,565	-42,894	3261	2	3225,2	2,066	34,804	1042,48	2,065	34,807	1042,48	3,39	-0,0032			2061,6	88,993	59,59
Hydro	46	8,564	-42,893	3261	3	3001,1	2,132	34,807	1041,48	2,132	34,81	1041,48	3,36	-0,0035			2056,2	88,984	59,596
Hydro	46	8,564	-42,893	3261	4	3001,9	2,133	34,807	1041,49	2,132	34,81	1041,49	3,36	-0,0015			2046,2	88,982	59,596
Hydro	46	8,563	-42,893	3261	5	2750,3	2,312	34,814	1040,35	2,31	34,816	1040,35	3,34	-0,0044			2142,9	88,968	59,6
Hydro	46	8,562	-42,892	3261	6	2500,8	2,395	34,791	1039,21	2,394	34,793	1039,21	3,19	-0,0039			2147,5	88,953	59,604
Hydro	46	8,56	-42,892	3261	7	2251,7	2,512	34,77	1038,07	2,511	34,773	1038,07	3,06	-0,0037			1837,1	88,937	59,608
Hydro	46	8,56	-42,892	3261	8	2002,3	2,623	34,733	1036,9	2,622	34,736	1036,91	2,91	-0,0033			2009,8	88,923	59,613
Hydro	46	8,558	-42,892	3261	9	1750,2	2,635	34,657	1035,71	2,634	34,66	1035,71	2,71	-0,0032			1973,7	88,896	59,617
Hydro	46	8,557	-42,892	3261	10	1600,1	2,62	34,598	1034,98	2,619	34,601	1034,98	2,64	-0,0014			1781,6	88,874	59,62
Hydro	46	8,554	-42,891	3261	11	1251,2	2,832	34,394	1033,21	2,831	34,397	1033,21	2,84	-0,002			1890	88,859	59,626
Hydro	46	8,552	-42,891	3261	12	998,4	3,147	34,26	1031,91	3,147	34,262	1031,91	3,27	-0,0028			2080,1	88,846	59,63
Hydro	46	8,55	-42,891	3261	13	699,8	3,983	34,161	1030,36	3,983	34,164	1030,36	3,72	-0,0037			1931	88,8	59,635

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	46	8,549	-42,891	3261	14	600,6	4,435	34,156	1029,85	4,438	34,16	1029,85	3,79	-0,0027			1909,2	88,776	59,637
Hydro	46	8,548	-42,891	3261	15	499,8	5,299	34,205	1029,31	5,305	34,208	1029,31	3,74	-0,0001			1896	88,662	59,64
Hydro	46	8,547	-42,891	3261	16	398,4	6,688	34,319	1028,75	6,699	34,321	1028,75	3,7	-0,0007			1900,1	88,646	59,642
Hydro	46	8,545	-42,891	3261	17	300	7,927	34,419	1028,19	7,929	34,42	1028,2	3,7	-0,0011			1913,6	88,696	59,644
Hydro	46	8,543	-42,891	3261	18	148,4	8,244	34,264	1027,34	8,248	34,265	1027,34	4,1	0,0932			1933	87,659	59,647
Hydro	46	8,543	-42,891	3261	19	91,2	8,961	34,147	1026,87	8,893	34,132	1026,87	4,17	0,1505			1885,6	87,168	59,648
Hydro	46	8,542	-42,891	3261	20	50,5	13,167	34,665	1026,33	13,127	34,661	1026,33	3,96	0,5165			1881,1	82,922	59,65
Hydro	46	8,54	-42,891	3261	21	20,3	13,399	34,722	1026,19	13,399	34,723	1026,19	3,95	0,5415			1861,8	82,838	59,652
Hydro	46	8,539	-42,892	3261	24	3,2	13,391	34,72	1026,11	13,392	34,721	1026,11	3,95	0,2716			1870,7	83,1	59,653
Hydro	47	8,236	-43,325	2700	1	2712,5	2,252	34,789	1040,17	2,251	34,792	1040,18	3,23	-0,0039			5,9963	89,042	59,816
Hydro	47	8,236	-43,325	2700	2	2501	2,36	34,788	1039,22	2,358	34,791	1039,22	3,19	-0,0012			5,9963	89,012	59,82
Hydro	47	8,236	-43,325	2700	3	2298,2	2,534	34,766	1038,27	2,534	34,769	1038,27	3,06	-0,0045			5,9963	88,975	59,825
Hydro	47	8,236	-43,325	2700	4	2099	2,63	34,735	1037,34	2,629	34,737	1037,34	2,93	-0,0029			5,9963	88,947	59,829
Hydro	47	8,236	-43,325	2700	5	1899,6	2,697	34,679	1036,39	2,696	34,682	1036,39	2,78	-0,0027			5,9963	88,925	59,833
Hydro	47	8,236	-43,325	2700	6	1751,2	2,712	34,633	1035,68	2,711	34,636	1035,68	2,71	-0,0007			5,9963	88,896	59,836
Hydro	47	8,236	-43,325	2700	7	1501,2	2,938	34,516	1034,43	2,938	34,519	1034,43	2,65	-0,0007			5,9963	88,877	59,841
Hydro	47	8,236	-43,325	2700	8	1299,6	3,434	34,414	1033,37	3,433	34,417	1033,37	2,78	-0,0028			5,9963	88,858	59,845
Hydro	47	8,236	-43,325	2700	9	1099,9	3,606	34,268	1032,32	3,609	34,27	1032,32	3,28	-0,0039			5,9963	88,851	59,848
Hydro	47	8,236	-43,325	2700	10	898,8	4,661	34,255	1031,26	4,664	34,258	1031,26	3,45	-0,0016			5,9963	88,849	59,852
Hydro	47	8,236	-43,325	2700	11	799,4	6,111	34,365	1030,69	6,111	34,368	1030,69	3,26	-0,0012			5,9963	88,85	59,855
Hydro	47	8,236	-43,325	2700	12	698	8,261	34,589	1030,07	8,262	34,592	1030,08	3,11	-0,0014			5,9963	88,912	59,857
Hydro	47	8,236	-43,325	2700	13	600,5	10,837	34,929	1029,44	10,838	34,932	1029,44	3,66	-0,0005			5,9963	89,03	59,859
Hydro	47	8,236	-43,325	2700	14	499,9	11,797	35,122	1028,96	11,797	35,124	1028,96	3,81	-0,0019			5,9963	89,06	59,862
Hydro	47	8,236	-43,325	2700	15	400	11,832	35,134	1028,51	11,832	35,136	1028,52	3,82	-0,0004			5,9963	89,011	59,864
Hydro	47	8,236	-43,325	2700	16	250	11,835	35,14	1027,85	11,836	35,142	1027,85	3,83	0,0022			5,9963	88,86	59,867
Hydro	47	8,236	-43,325	2700	17	119	11,829	35,142	1027,27	11,83	35,144	1027,27	3,82	-0,0002			5,9963	88,591	59,87
Hydro	47	8,236	-43,325	2700	18	79,9	11,855	35,142	1027,09	11,859	35,143	1027,09	3,82	0,0125			5,9963	88,156	59,871
Hydro	47	8,236	-43,324	2700	19	59,7	11,991	35,139	1026,97	11,994	35,14	1026,97	3,81	0,0344			5,9963	87,92	59,872
Hydro	47	8,236	-43,325	2700	20	29,4	13,485	35,058	1026,47	13,47	35,062	1026,48	3,84	0,4327			5,9963	84,503	59,873
Hydro	47	8,236	-43,325	2700	21	14,3	13,611	35,035	1026,36	13,606	35,038	1026,36	3,86	0,5171			5,9963	83,959	59,874
Hydro	47	8,236	-43,325	2700	24	4,2	13,607	35,037	1026,32	13,608	35,038	1026,32	3,86	0,5058			5,9963	84,003	59,875
Hydro	48	7,965	-43,684	4657	1	4697,6	0,872	34,693	1048,99	0,871	34,696	1048,99	3,32	-0,004			5,9963	88,661	60,06
Hydro	48	7,967	-43,685	4657	2	4293,9	1,017	34,707	1047,23	1,016	34,709	1047,24	3,27	-0,0036			5,9963	88,821	60,073
Hydro	48	7,971	-43,686	4657	3	3998,6	1,211	34,722	1045,93	1,211	34,725	1045,94	3,24	-0,007			5,9963	88,847	60,081
Hydro	48	7,973	-43,687	4657	4	3751,2	1,362	34,74	1044,85	1,361	34,742	1044,85	3,26	-0,0068			5,9963	88,831	60,086
Hydro	48	7,974	-43,688	4657	5	3493,9	1,484	34,747	1043,71	1,484	34,75	1043,71	3,23	-0,002			5,9963	88,865	60,091
Hydro	48	7,976	-43,689	4657	6	3254,5	1,663	34,763	1042,64	1,663	34,766	1042,64	3,24	-0,0036			5,9963	88,874	60,096
Hydro	48	7,978	-43,69	4657	7	2997,1	1,973	34,787	1041,47	1,972	34,789	1041,48	3,25	-0,0026			5,9963	88,885	60,1
Hydro	48	7,98	-43,691	4657	8	2697,6	2,208	34,793	1040,12	2,208	34,796	1040,12	3,22	-0,003			5,9963	88,878	60,105
Hydro	48	7,982	-43,691	4657	9	2401,1	2,384	34,785	1038,76	2,383	34,788	1038,77	3,12	-0,0028			5,9963	88,871	60,111
Hydro	48	7,984	-43,692	4657	10	2103,4	2,533	34,75	1037,38	2,532	34,753	1037,39	2,93	-0,0019			5,9963	88,84	60,117
Hydro	48	7,985	-43,692	4657	11	1799,9	2,672	34,677	1035,94	2,671	34,68	1035,94	2,75	-0,0004			5,9963	88,817	60,122
Hydro	48	7,987	-43,693	4657	12	1502,4	2,728	34,556	1034,49	2,728	34,559	1034,49	2,65	-0,0022			5,9963	88,804	60,128
Hydro	48	7,99	-43,694	4657	13	1201,8	2,898	34,377	1032,96	2,895	34,38	1032,96	2,89	-0,002			5,9963	88,789	60,133
Hydro	48	7,991	-43,694	4657	14	999,6	3,111	34,27	1031,93	3,11	34,273	1031,93	3,21	-0,0017			5,9963	88,782	60,137
Hydro	48	7,995	-43,696	4657	15	745,9	4,077	34,189	1030,58	4,079	34,191	1030,58	3,62	-0,0049			5,9963	88,769	60,141

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	48	7,998	-43,696	4657	16	550	5,715	34,277	1029,54	5,714	34,279	1029,54	3,48	-0,0036			5,9963	88,743	60,145
Hydro	48	8,001	-43,697	4657	17	300,3	9,105	34,572	1028,13	9,108	34,574	1028,13	3,61	-0,0019			5,9963	88,638	60,149
Hydro	48	8,005	-43,698	4657	18	131,8	10,944	34,797	1027,22	10,948	34,8	1027,22	3,73	0,007			5,9963	88,278	60,153
Hydro	48	8,007	-43,698	4657	19	80,5	12,785	34,962	1026,77	12,766	34,962	1026,77	3,72	0,1062			5,9963	87,145	60,155
Hydro	48	8,008	-43,698	4657	20	49,9	13,839	35,004	1026,45	13,84	35,006	1026,45	3,83	0,4729			5,9963	84,123	60,156
Hydro	48	8,01	-43,699	4657	21	25	13,755	34,82	1026,21	13,756	34,821	1026,21	3,86	0,552			5,9963	83,149	60,158
Hydro	48	8,011	-43,699	4657	24	2,7	13,738	34,814	1026,11	13,738	34,813	1026,11	3,86	0,5183			5,9963	82,91	60,159
Hydro	49	7,631	-44,041	4432	1	4475,6	0,878	34,695	1048,03	0,877	34,698	1048,04	3,3	-0,0023			966,55	88,621	60,346
Hydro	49	7,631	-44,041	4432	2	4303	0,912	34,699	1047,29	0,912	34,702	1047,29	3,28	-0,0028			1486,3	88,733	60,35
Hydro	49	7,631	-44,041	4432	3	3997,7	1,021	34,709	1045,95	1,02	34,712	1045,95	3,26	-0,0062			1352,3	88,799	60,356
Hydro	49	7,631	-44,041	4432	4	3750,8	1,176	34,724	1044,86	1,175	34,726	1044,86	3,25	-0,004			1148,4	88,802	60,362
Hydro	49	7,631	-44,041	4432	5	3500,9	1,373	34,741	1043,75	1,373	34,744	1043,75	3,25	-0,0046			1300,5	88,826	60,366
Hydro	49	7,631	-44,041	4432	6	3250,5	1,584	34,753	1042,63	1,584	34,755	1042,63	3,21	-0,0028			729,71	88,835	60,371
Hydro	49	7,631	-44,041	4432	7	3000	1,736	34,755	1041,5	1,735	34,758	1041,5	3,15	-0,0031			881,42	88,829	60,376
Hydro	49	7,631	-44,041	4432	8	2698,7	2,023	34,769	1040,13	2,022	34,772	1040,13	3,12	-0,0014			463,72	88,831	60,382
Hydro	49	7,631	-44,041	4432	9	2398,3	2,267	34,772	1038,76	2,266	34,775	1038,76	3,07	-0,0031			898,8	88,822	60,387
Hydro	49	7,631	-44,041	4432	10	2099,1	2,503	34,756	1037,37	2,502	34,759	1037,38	2,96	-0,0017			788,29	88,801	60,392
Hydro	49	7,631	-44,041	4432	11	1799	2,644	34,701	1035,96	2,644	34,704	1035,96	2,79	-0,0016			1818	88,781	60,398
Hydro	49	7,631	-44,041	4432	12	1399,1	2,721	34,552	1034,02	2,72	34,555	1034,02	2,65	-0,0015			1330,7	88,753	60,404
Hydro	49	7,631	-44,041	4432	13	1199,4	2,822	34,438	1033,01	2,822	34,44	1033,01	2,77	-0,0027			1079,9	88,736	60,408
Hydro	49	7,631	-44,041	4432	14	996,3	3,005	34,328	1031,97	3,004	34,331	1031,97	3,03	-0,0022			541,67	88,729	60,412
Hydro	49	7,631	-44,041	4432	15	748,5	3,43	34,207	1030,68	3,43	34,21	1030,69	3,49	-0,0027			1152,2	88,713	60,417
Hydro	49	7,631	-44,041	4432	16	500,4	4,353	34,157	1029,4	4,353	34,159	1029,4	3,77	-0,0003			1902	88,644	60,422
Hydro	49	7,631	-44,041	4432	17	249,7	6,627	34,315	1028,08	6,632	34,317	1028,08	3,74	0,0016			1897,2	88,472	60,427
Hydro	49	7,631	-44,041	4432	18	150,9	7,484	34,331	1027,51	7,481	34,332	1027,52	4	0,0126			2083,1	96,294	60,43
Hydro	49	7,631	-44,041	4432	19	100,2	7,76	34,24	1027,17	7,758	34,241	1027,17	4,09	0,0936			1756,3	96,294	60,433
Hydro	49	7,631	-44,041	4432	20	59,8	9,176	34,011	1026,59	9,177	34,012	1026,59	4,2	0,3072			1646,8	96,294	60,435
Hydro	49	7,631	-44,041	4432	21	31,2	9,698	33,931	1026,31	9,698	33,932	1026,31	4,22	0,2062			1800,3	96,294	60,437
Hydro	49	7,631	-44,041	4432	24	6,3	9,745	33,933	1026,19	9,745	33,934	1026,19	4,22	0,0453			2487,4	96,294	60,439
Hydro	50	7,384	-44,33	3625	1	3604	1,245	34,727	1044,21	1,244	34,73	1044,21	3,26	-0,0036			467,63	88,985	60,736
Hydro	50	7,383	-44,33	3625	2	3399,6	1,337	34,733	1043,31	1,337	34,736	1043,31	3,23	-0,0059			215,67	88,977	60,742
Hydro	50	7,383	-44,33	3625	3	3401,6	1,338	34,733	1043,31	1,337	34,736	1043,32	3,23	-0,0037			219,83	88,971	60,742
Hydro	50	7,383	-44,33	3625	4	3202,5	1,504	34,743	1042,42	1,503	34,746	1042,42	3,2	-0,0029			92,066	88,947	60,747
Hydro	50	7,384	-44,33	3625	5	3001,2	1,659	34,752	1041,51	1,658	34,755	1041,52	3,18	-0,0044			53,967	88,947	60,751
Hydro	50	7,383	-44,33	3625	6	2749,5	1,926	34,768	1040,37	1,924	34,771	1040,37	3,16	-0,0039			39,976	88,941	60,756
Hydro	50	7,382	-44,332	3625	7	2495,9	2,145	34,773	1039,21	2,144	34,776	1039,22	3,11	-0,0006			23,985	88,927	60,761
Hydro	50	7,379	-44,334	3625	8	2251,4	2,359	34,767	1038,09	2,358	34,77	1038,09	3,03	-0,0018			7,9951	88,893	60,772
Hydro	50	7,379	-44,335	3625	9	2002,9	2,532	34,747	1036,93	2,531	34,751	1036,93	2,93	-0,0008			5,9963	88,874	60,777
Hydro	50	7,379	-44,335	3625	10	1749,4	2,636	34,702	1035,74	2,635	34,705	1035,74	2,8	0			5,9963	88,848	60,782
Hydro	50	7,378	-44,336	3625	11	1398,3	2,703	34,572	1034,03	2,703	34,575	1034,04	2,65	-0,0009			5,9963	88,826	60,788
Hydro	50	7,378	-44,336	3625	12	1248,8	2,77	34,492	1033,28	2,769	34,495	1033,28	2,7	-0,0005			5,9963	88,812	60,791
Hydro	50	7,379	-44,338	3625	13	999,8	2,888	34,351	1032,02	2,887	34,354	1032,02	2,94	-0,0024			5,9963	88,778	60,795
Hydro	50	7,38	-44,338	3625	14	797,6	3,228	34,24	1030,96	3,227	34,243	1030,96	3,33	-0,0036			5,9963	88,781	60,799
Hydro	50	7,379	-44,338	3625	15	598,9	3,864	34,178	1029,92	3,864	34,18	1029,92	3,65	-0,0018			5,9963	88,776	60,803
Hydro	50	7,38	-44,338	3625	16	502,2	4,217	34,17	1029,43	4,216	34,172	1029,43	3,73	-0,0026			5,9963	88,747	60,805
Hydro	50	7,38	-44,338	3625	17	397,8	4,697	34,178	1028,9	4,699	34,18	1028,9	3,74	-0,0004			5,9963	88,689	60,808

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	50	7,38	-44,338	3625	18	398,1	4,708	34,178	1028,9	4,708	34,18	1028,9	3,74	-0,0046			5,9963	88,682	60,808
Hydro	50	7,38	-44,338	3625	19	200,2	6,799	34,313	1027,82	6,8	34,315	1027,82	3,85	0,0024			5,9963	88,548	60,812
Hydro	50	7,38	-44,338	3625	20	100,1	7,731	34,307	1027,23	7,734	34,308	1027,23	4,02	0,0842			5,9963	88,043	60,814
Hydro	50	7,38	-44,338	3625	21	51,5	9,06	34,058	1026,61	9,049	34,067	1026,61	4,21	0,3625			5,9963	85,63	60,815
Hydro	50	7,38	-44,338	3625	24	4,6	9,601	33,877	1026,16	9,602	33,879	1026,16	4,24	0,3358			5,9963	83,947	60,817
Hydro	51	7,138	-44,611	4649	1	4687,6	0,868	34,692	1048,94	0,868	34,694	1048,95	3,3	-0,0032			5,9963	87,879	61,045
Hydro	51	7,141	-44,613	4649	2	4301,9	0,924	34,7	1047,28	0,923	34,702	1047,28	3,27	-0,0057			5,9963	88,575	61,057
Hydro	51	7,14	-44,613	4649	3	4000,4	0,988	34,707	1045,97	0,988	34,71	1045,97	3,25	-0,0033			5,9963	88,683	61,066
Hydro	51	7,14	-44,612	4649	4	3746,7	1,125	34,718	1044,85	1,124	34,721	1044,85	3,23	-0,0031			5,9963	88,729	61,073
Hydro	51	7,141	-44,612	4649	5	3502,7	1,285	34,729	1043,76	1,284	34,731	1043,77	3,2	-0,0065			5,9963	88,75	61,078
Hydro	51	7,142	-44,613	4649	6	3252,3	1,434	34,734	1042,64	1,434	34,737	1042,65	3,15	-0,0053			5,9963	88,758	61,084
Hydro	51	7,143	-44,614	4649	7	3006	1,677	34,753	1041,53	1,676	34,756	1041,54	3,15	-0,0058			5,9963	88,75	61,089
Hydro	51	7,143	-44,614	4649	8	2701,6	1,934	34,763	1040,15	1,934	34,766	1040,15	3,1	-0,002			5,9963	88,755	61,095
Hydro	51	7,145	-44,615	4649	9	2401,5	2,195	34,769	1038,78	2,194	34,772	1038,78	3,05	-0,0016			5,9963	88,739	61,101
Hydro	51	7,145	-44,614	4649	10	2096	2,434	34,762	1037,37	2,434	34,765	1037,38	2,98	-0,0014			5,9963	88,737	61,107
Hydro	51	7,147	-44,614	4649	11	1801,4	2,563	34,71	1035,99	2,562	34,714	1035,99	2,78	-0,0015			5,9963	88,695	61,113
Hydro	51	7,147	-44,614	4649	12	1552,5	2,682	34,646	1034,8	2,681	34,649	1034,8	2,7	-0,0016			5,9963	88,698	61,118
Hydro	51	7,147	-44,613	4649	13	1302,9	2,635	34,54	1033,58	2,635	34,543	1033,58	2,61	-0,0024			5,9963	88,668	61,123
Hydro	51	7,149	-44,614	4649	14	1000,7	2,853	34,389	1032,05	2,853	34,391	1032,06	2,85	-0,0018			5,9963	88,661	61,128
Hydro	51	7,149	-44,615	4649	15	802,7	3,078	34,276	1031,03	3,078	34,279	1031,03	3,18	-0,0026			5,9963	88,666	61,132
Hydro	51	7,15	-44,614	4649	16	552,1	3,691	34,16	1029,71	3,688	34,162	1029,71	3,67	-0,0017			5,9963	88,635	61,136
Hydro	51	7,15	-44,614	4649	17	550,4	3,696	34,161	1029,7	3,693	34,163	1029,71	3,68	-0,0036			5,9963	88,631	61,137
Hydro	51	7,15	-44,613	4649	18	142	6,955	34,273	1027,5	6,954	34,275	1027,51	4,02	0,0245			5,9963	88,353	61,145
Hydro	51	7,152	-44,613	4649	19	98,3	7,629	34,292	1027,22	7,627	34,293	1027,22	4,06	0,191			5,9963	87,232	61,147
Hydro	51	7,153	-44,614	4649	20	59,2	9,371	33,907	1026,47	9,372	33,909	1026,47	4,21	0,2965			5,9963	85,394	61,148
Hydro	51	7,154	-44,614	4649	21	28,8	9,587	33,902	1026,29	9,586	33,903	1026,3	4,2	0,2836			5,9963	85,449	61,15
Hydro	51	7,155	-44,614	4649	24	20,7	9,591	33,901	1026,26	9,592	33,902	1026,26	4,2	0,2808			5,9963	84,848	61,152
Large_ML	52	6,886	-44,899	4315	1	302,9	4,918	34,168	1028,43	4,92	34,17	1028,43	3,86	0,0029	0,0502	0,8621	1716,4	96,294	61,637
Large_ML	52	6,888	-44,898	4315	2	179,7	6,092	34,21	1027,74	6,092	34,211	1027,74	4,11	0,0053	0,0688	0,9381	1364,7	96,294	61,641
Large_ML	52	6,889	-44,897	4315	3	140,2	6,932	34,287	1027,51	6,935	34,289	1027,51	4,04	0,0173	0,0635	1,2831	2021	96,294	61,643
Large_ML	52	6,889	-44,897	4315	4	99,7	7,323	34,278	1027,26	7,325	34,28	1027,26	4,06	0,071	0,2263	1,4942	660,42	96,294	61,645
Large_ML	52	6,89	-44,897	4315	5	80,4	7,848	34,296	1027,11	7,849	34,298	1027,11	4,13	0,2818	0,3526	4,9628	1427,4	96,294	61,646
Large_ML	52	6,89	-44,897	4315	6	59,8	9,372	33,908	1026,48	9,373	33,91	1026,48	4,21	0,2437	0,7524	10,716	1433,6	96,294	61,647
Large_ML	52	6,89	-44,897	4315	7	58,8	9,372	33,909	1026,47	9,373	33,91	1026,47	4,21	0,2501	0,7741	9,0864	1173,7	96,294	61,647
Large_ML	52	6,89	-44,897	4315	8	62	9,374	33,908	1026,48	9,376	33,909	1026,49	4,21	0,2429	0,9751	7,419	760,68	96,294	61,648
Large_ML	52	6,89	-44,897	4315	9	58,2	9,374	33,908	1026,47	9,375	33,909	1026,47	4,22	0,251	1,1087	8,159	735,84	96,294	61,648
Large_ML	52	6,89	-44,897	4315	10	60,9	9,375	33,907	1026,48	9,376	33,909	1026,48	4,21	0,2468	1,0593	7,9507	750,52	96,294	61,648
Large_ML	52	6,89	-44,897	4315	11	37,1	9,376	33,906	1026,37	9,377	33,907	1026,37	4,22	0,2321	3,1506	30,903	982,14	96,294	61,649
Large_ML	52	6,89	-44,897	4315	12	36,9	9,376	33,906	1026,37	9,377	33,907	1026,37	4,22	0,2361	3,4886	34,686	994,59	96,294	61,649
Large_ML	52	6,89	-44,897	4315	13	19,6	9,374	33,906	1026,29	9,375	33,907	1026,29	4,22	0,1957	10,643	217,97	2048,1	96,294	61,651
Large_ML	52	6,89	-44,897	4315	14	20,2	9,374	33,906	1026,29	9,375	33,907	1026,29	4,22	0,2038	9,4249	189,54	2011	96,294	61,651
Large_ML	52	6,89	-44,897	4315	15	20,2	9,373	33,906	1026,29	9,373	33,907	1026,29	4,22	0,1883	11,157	225,82	2024,1	96,294	61,651
Large_ML	52	6,89	-44,897	4315	16	20	9,373	33,906	1026,29	9,374	33,907	1026,29	4,22	0,1701	10,661	214,4	2011,1	96,294	61,651
Large_ML	52	6,89	-44,897	4315	17	21	9,373	33,906	1026,3	9,373	33,907	1026,3	4,22	0,1748	9,1232	185,05	2028,5	96,294	61,651
Large_ML	52	6,89	-44,897	4315	18	21,3	9,373	33,906	1026,3	9,374	33,907	1026,3	4,22	0,1803	8,9111	179,8	2017,8	96,294	61,651
Large_ML	52	6,89	-44,897	4315	19	19,3	9,373	33,906	1026,29	9,374	33,907	1026,29	4,22	0,1838	10,597	209,18	1973,9	96,294	61,651

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Large_ML	52	6,89	-44,897	4315	20	21,5	9,373	33,906	1026,3	9,374	33,907	1026,3	4,22	0,1974	8,7388	174,2	1993,5	96,294	61,651
Large_ML	52	6,89	-44,897	4315	21	19,7	9,373	33,906	1026,29	9,373	33,907	1026,29	4,22	0,1969	9,8007	192,58	1965	96,294	61,651
Large_ML	52	6,89	-44,897	4315	24	21	9,373	33,906	1026,3	9,374	33,907	1026,3	4,22	0,199	8,9753	176,05	1961,6	96,294	61,652
Large_Hydro	53	6,883	-44,883	4328	1	4370,9	0,886	34,695	1047,58	0,885	34,698	1047,58	3,29	-0,0041			5,9963	88,18	61,89
Large_Hydro	53	6,883	-44,883	4328	2	4100,9	0,933	34,702	1046,41	0,932	34,704	1046,41	3,27	-0,0059			5,9963	88,501	61,897
Large_Hydro	53	6,883	-44,883	4328	3	3899,4	1	34,708	1045,53	0,999	34,711	1045,53	3,26	-0,0046			5,9963	88,522	61,901
Large_Hydro	53	6,883	-44,883	4328	4	3601,1	1,135	34,718	1044,21	1,134	34,721	1044,21	3,22	-0,0046			5,9963	88,54	61,907
Large_Hydro	53	6,883	-44,883	4328	5	3301,2	1,314	34,73	1042,87	1,313	34,733	1042,88	3,19	-0,0039			5,9963	88,547	61,914
Large_Hydro	53	6,883	-44,883	4328	6	3001,4	1,597	34,752	1041,52	1,596	34,755	1041,53	3,18	-0,004			5,9963	88,548	61,921
Large_Hydro	53	6,883	-44,883	4328	7	2751,7	1,806	34,759	1040,39	1,806	34,762	1040,39	3,13	-0,0039			5,9963	88,536	61,926
Large_Hydro	53	6,883	-44,883	4328	8	2501,5	2,068	34,769	1039,25	2,068	34,772	1039,25	3,1	-0,002			5,9963	88,527	61,93
Large_Hydro	53	6,883	-44,883	4328	9	2249,5	2,31	34,766	1038,08	2,309	34,769	1038,09	3,02	-0,0018			5,9963	88,514	61,935
Large_Hydro	53	6,883	-44,883	4328	10	1996,8	2,506	34,757	1036,91	2,505	34,76	1036,92	2,96	-0,0037			5,9963	88,489	61,94
Large_Hydro	53	6,883	-44,883	4328	11	1748,7	2,62	34,716	1035,75	2,619	34,719	1035,75	2,83	-0,0023			5,9963	88,48	61,945
Large_Hydro	53	6,883	-44,883	4328	12	1399,7	2,729	34,604	1034,06	2,728	34,607	1034,06	2,66	-0,0019			5,9963	88,434	61,951
Large_Hydro	53	6,9	-44,883	4328	13	1251,2	2,735	34,538	1033,33	2,734	34,541	1033,34	2,65	-0,0022			5,9963	88,431	61,955
Large_Hydro	53	6,9	-44,883	4328	14	1002,9	2,819	34,411	1032,09	2,818	34,414	1032,09	2,8	-0,0039			5,9963	88,422	61,96
Large_Hydro	53	6,9	-44,883	4328	15	750,6	3,083	34,26	1030,78	3,083	34,263	1030,78	3,24	-0,0013			5,9963	88,399	61,965
Large_Hydro	53	6,9	-44,883	4328	16	495,7	3,821	34,166	1029,44	3,82	34,167	1029,44	3,67	-0,0028			5,9963	88,373	61,969
Large_Hydro	53	6,9	-44,883	4328	17	398,5	4,161	34,138	1028,93	4,16	34,14	1028,93	3,81	0			5,9963	88,31	61,972
Large_Hydro	53	6,9	-44,883	4328	18	198,1	5,801	34,227	1027,88	5,802	34,229	1027,88	3,93	0,002			5,9963	88,259	61,975
Large_Hydro	53	6,9	-44,883	4328	19	147,1	6,882	34,318	1027,57	6,879	34,318	1027,57	3,92	0,0117			5,9963	88,207	61,978
Large_Hydro	53	6,9	-44,883	4328	20	98,8	7,327	34,274	1027,25	7,328	34,276	1027,25	4,05	0,0972			5,9963	87,554	61,98
Large_Hydro	53	6,9	-44,883	4328	21	48,4	9,193	33,9	1026,45	9,199	33,899	1026,44	4,21	0,3238			5,9963	84,959	61,981
Large_Hydro	53	6,9	-44,883	4328	24	5,5	9,208	33,893	1026,24	9,209	33,895	1026,24	4,22	0,3045			5,9963	84,467	61,983
Large_PoTh	54	6,883	-44,883	4328	1	1002	2,818	34,412	1032,08	2,818	34,415	1032,08	2,84	-0,002			5,9963	88,576	62,064
Large_PoTh	54	6,883	-44,883	4328	2	901,2	2,914	34,353	1031,56	2,914	34,355	1031,56	2,97	-0,0004			5,9963	88,563	62,068
Large_PoTh	54	6,883	-44,883	4328	3	799,6	3,029	34,298	1031,04	3,029	34,3	1031,04	3,14	-0,0013			5,9963	88,534	62,071
Large_PoTh	54	6,883	-44,883	4328	4	697,8	3,154	34,217	1030,49	3,154	34,219	1030,49	3,42	-0,0017			5,9963	88,506	62,075
Large_PoTh	54	6,883	-44,883	4328	5	600,3	3,391	34,169	1029,98	3,39	34,171	1029,98	3,63	-0,0033			5,9963	88,472	62,078
Large_PoTh	54	6,883	-44,883	4328	6	599	3,396	34,169	1029,97	3,396	34,17	1029,97	3,63	-0,0018			5,9963	88,476	62,078
Large_PoTh	54	6,883	-44,883	4328	7	599	3,394	34,169	1029,97	3,394	34,17	1029,97	3,63	-0,0029			5,9963	88,464	62,078
Large_PoTh	54	6,883	-44,883	4328	8	549,5	3,752	34,173	1029,7	3,752	34,176	1029,71	3,66	-0,0049			5,9963	88,476	62,081
Large_PoTh	54	6,883	-44,883	4328	9	501,8	3,842	34,15	1029,46	3,841	34,152	1029,46	3,75	-0,0012			5,9963	88,431	62,083
Large_PoTh	54	6,883	-44,883	4328	10	449,7	4,097	34,15	1029,19	4,097	34,152	1029,19	3,78	-0,002			5,9963	88,416	62,085
Large_PoTh	54	6,883	-44,883	4328	11	399,5	4,446	34,157	1028,92	4,447	34,159	1028,92	3,79	-0,0002			5,9963	88,377	62,087
Large_PoTh	54	6,883	-44,883	4328	12	352,2	4,61	34,151	1028,68	4,611	34,153	1028,68	3,84	-0,0009			5,9963	88,36	62,089
Large_PoTh	54	6,883	-44,883	4328	13	298,4	4,982	34,17	1028,4	4,982	34,172	1028,4	3,85	0,001			5,9963	88,31	62,091
Large_PoTh	54	6,883	-44,883	4328	14	249,5	5,424	34,198	1028,14	5,425	34,199	1028,14	3,94	0,002			5,9963	88,328	62,094
Large_PoTh	54	6,883	-44,883	4328	15	200,2	6,11	34,261	1027,88	6,136	34,265	1027,88	3,88	0,0019			5,9963	88,289	62,096
Large_PoTh	54	6,883	-44,883	4328	16	172,5	6,628	34,307	1027,72	6,63	34,309	1027,72	3,85	0,0047			5,9963	88,272	62,097
Large_PoTh	54	6,883	-44,883	4328	17	149,3	6,978	34,329	1027,58	6,981	34,33	1027,58	3,92	0,0115			5,9963	88,234	62,099
Large_PoTh	54	6,883	-44,883	4328	18	123,7	7,317	34,338	1027,42	7,32	34,34	1027,42	3,97	0,0274			5,9963	88,106	62,1
Large_PoTh	54	6,883	-44,883	4328	19	100,9	7,426	34,289	1027,26	7,425	34,291	1027,26	4,05	0,1			5,9963	87,608	62,101
Large_PoTh	54	6,883	-44,883	4328	20	60,5	9,135	33,893	1026,51	9,139	33,894	1026,5	4,22	0,3221			5,9963	84,937	62,103
Large_PoTh	54	6,883	-44,883	4328	21	27,6	9,123	33,888	1026,35	9,124	33,889	1026,35	4,23	0,3373			5,9963	84,98	62,104

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Large_PoTh	54	6,883	-44,883	4328	24	11	9,118	33,887	1026,28	9,119	33,888	1026,28	4,23	0,3292			5,9963	84,843	62,106
Hydro	55	6,5	-45,317	4380	1	4435,8	0,862	34,691	1047,86	0,861	34,694	1047,86	3,29	-0,0031			175,89	88,118	62,292
Hydro	55	6,5	-45,317	4380	2	4003	0,961	34,702	1045,98	0,96	34,705	1045,98	3,23	-0,006			281,83	88,376	62,338
Hydro	55	6,5	-45,317	4380	3	3753,3	1,145	34,715	1044,87	1,145	34,718	1044,87	3,2	-0,004			397,76	88,409	62,344
Hydro	55	6,5	-45,317	4380	4	3499,8	1,313	34,725	1043,74	1,312	34,728	1043,75	3,16	-0,0041			289,25	96,294	62,351
Hydro	55	6,5	-45,317	4380	5	3246,6	1,469	34,734	1042,61	1,469	34,737	1042,61	3,13	-0,0031			486,56	88,408	62,357
Hydro	55	6,5	-45,317	4380	6	2990,7	1,645	34,746	1041,46	1,644	34,749	1041,47	3,11	-0,0044			432,43	88,425	62,362
Hydro	55	6,5	-45,317	4380	7	2752,7	1,869	34,759	1040,39	1,868	34,762	1040,39	3,1	-0,004			301,66	88,422	62,368
Hydro	55	6,517	-45,317	4380	8	2499,5	2,091	34,767	1039,23	2,09	34,771	1039,24	3,07	-0,0018			490,48	88,422	62,373
Hydro	55	6,517	-45,317	4380	9	2251,8	2,367	34,781	1038,1	2,366	34,785	1038,1	3,1	-0,0033			517,68	88,424	62,377
Hydro	55	6,517	-45,317	4380	10	2001,4	2,486	34,76	1036,94	2,484	34,763	1036,94	2,97	-0,0018			284,56	88,423	62,382
Hydro	55	6,517	-45,317	4380	11	1749,6	2,615	34,72	1035,76	2,614	34,723	1035,76	2,82	-0,0024			775,9	88,394	62,387
Hydro	55	6,517	-45,317	4380	12	1497,7	2,691	34,657	1034,55	2,69	34,66	1034,56	2,71	0			924,29	88,375	62,392
Hydro	55	6,517	-45,317	4380	13	1298,2	2,628	34,565	1033,58	2,628	34,568	1033,58	2,61	-0,0012			887,46	88,35	62,395
Hydro	55	6,517	-45,317	4380	14	995,6	2,79	34,428	1032,07	2,79	34,431	1032,07	2,77	-0,0011			842,38	88,371	62,401
Hydro	55	6,517	-45,3	4380	15	751,5	2,975	34,27	1030,8	2,974	34,273	1030,8	3,18	-0,0018			1419,3	96,294	62,406
Hydro	55	6,517	-45,3	4380	16	400,9	4,018	34,137	1028,96	4,018	34,139	1028,96	3,8	-0,0038			956,28	88,255	62,413
Hydro	55	6,517	-45,3	4380	17	299,4	4,521	34,14	1028,43	4,521	34,142	1028,44	3,85	0,001			1345	88,166	62,417
Hydro	55	6,517	-45,3	4380	18	129,3	6,05	34,124	1027,45	6,062	34,127	1027,45	4,22	0,0314			1048,9	95,822	62,422
Hydro	55	6,517	-45,3	4380	19	88,5	7,418	34,057	1027,02	7,417	34,059	1027,03	4,27	0,2094			1363,7	96,294	62,424
Hydro	55	6,517	-45,3	4380	20	47,9	8,642	33,821	1026,47	8,642	33,822	1026,47	4,26	0,2974			1102,8	84,975	62,426
Hydro	55	6,517	-45,3	4380	21	25,5	8,651	33,819	1026,36	8,651	33,82	1026,37	4,26	0,2833			1017,9	84,773	62,427
Hydro	55	6,517	-45,3	4380	24	8,6	8,657	33,818	1026,29	8,657	33,819	1026,29	4,26	0,252			851,15	84,618	62,429
Hydro	56	6,23	-45,614	4280	1	4332,4	0,904	34,697	1047,41	0,904	34,699	1047,41	3,29	-0,0026			237,85	88,183	62,702
Hydro	56	6,23	-45,614	4280	2	4003,3	0,9	34,699	1045,99	0,899	34,702	1045,99	3,26	-0,004			1296	88,277	62,711
Hydro	56	6,23	-45,614	4280	3	3753,5	0,937	34,704	1044,9	0,936	34,707	1044,9	3,24	-0,0041			401,39	88,328	62,716
Hydro	56	6,229	-45,615	4280	4	3497,7	1,097	34,72	1043,76	1,096	34,723	1043,77	3,24	-0,002			169,57	88,374	62,721
Hydro	56	6,228	-45,616	4280	5	3254,6	1,325	34,728	1042,67	1,323	34,731	1042,67	3,17	-0,0034			1011,9	88,418	62,725
Hydro	56	6,23	-45,617	4280	6	3003,4	1,53	34,738	1041,53	1,529	34,741	1041,53	3,12	-0,0045			151,62	88,42	62,729
Hydro	56	6,232	-45,618	4280	7	2749,6	1,763	34,754	1040,38	1,762	34,757	1040,39	3,11	-0,0029			147,42	88,421	62,734
Hydro	56	6,232	-45,619	4280	8	2497,5	1,989	34,766	1039,24	1,989	34,769	1039,24	3,1	-0,0026			215,01	88,412	62,738
Hydro	56	6,232	-45,62	4280	9	2248,3	2,184	34,766	1038,1	2,183	34,769	1038,1	3,03	-0,0022			95,941	95,659	62,742
Hydro	56	6,235	-45,62	4280	10	1999,7	2,351	34,754	1036,95	2,35	34,757	1036,95	2,94	-0,0006			59,963	88,385	62,747
Hydro	56	6,236	-45,621	4280	11	1758,3	2,517	34,727	1035,81	2,517	34,73	1035,82	2,83	-0,0001			39,976	88,359	62,751
Hydro	56	6,235	-45,622	4280	12	1494,7	2,63	34,661	1034,55	2,629	34,664	1034,55	2,69	-0,0015			35,978	88,336	62,756
Hydro	56	6,237	-45,621	4280	13	1204,8	2,595	34,529	1033,13	2,594	34,532	1033,13	2,6	0,0008			23,944	88,288	62,762
Hydro	56	6,239	-45,622	4280	14	1000,6	2,689	34,433	1032,11	2,688	34,437	1032,11	2,71	-0,0012			16,602	88,261	62,766
Hydro	56	6,24	-45,621	4280	15	753	2,849	34,288	1030,83	2,848	34,291	1030,84	3,1	-0,0002			9,9939	88,26	62,771
Hydro	56	6,241	-45,621	4280	16	497,6	3,263	34,147	1029,5	3,263	34,15	1029,5	3,67	0			7,9951	88,226	62,775
Hydro	56	6,241	-45,622	4280	17	246,7	4,425	34,085	1028,16	4,424	34,087	1028,16	4,12	0,0001			5,9963	88,121	62,779
Hydro	56	6,242	-45,621	4280	18	151,5	5,709	34,114	1027,59	5,705	34,115	1027,59	4,26	0,0106			5,9963	88,011	62,781
Hydro	56	6,243	-45,622	4280	19	104,5	5,727	34,018	1027,29	5,727	34,02	1027,29	4,33	0,0515			5,9963	87,561	62,783
Hydro	56	6,244	-45,622	4280	20	66,2	8,041	33,769	1026,6	8,048	33,77	1026,6	4,3	0,3562			5,9963	84,588	62,785
Hydro	56	6,245	-45,622	4280	21	34,9	8,053	33,768	1026,46	8,054	33,77	1026,46	4,31	0,3492			5,9963	84,51	62,786
Hydro	56	6,245	-45,622	4280	24	5,7	8,051	33,767	1026,32	8,051	33,769	1026,33	4,31	0,3343			5,9963	84,32	62,788
Large_Hydro	57	5,864	-46,025	4147	1	4147,9	0,817	34,69	1046,62	0,817	34,693	1046,63	3,27	-0,0064			5,9963	88,363	63,05

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Large_Hydro	57	5,864	-46,025	4147	2	3802,4	0,954	34,703	1045,11	0,954	34,706	1045,11	3,24	-0,0027			5,9963	88,393	63,057
Large_Hydro	57	5,864	-46,024	4147	3	3501,9	1,155	34,716	1043,77	1,154	34,719	1043,77	3,2	-0,003			5,9963	88,443	63,063
Large_Hydro	57	5,864	-46,024	4147	4	3252,4	1,298	34,725	1042,66	1,297	34,728	1042,66	3,16	-0,0036			5,9963	88,45	63,067
Large_Hydro	57	5,864	-46,025	4147	5	3000,9	1,468	34,737	1041,53	1,468	34,74	1041,53	3,14	-0,0036			5,9963	88,446	63,072
Large_Hydro	57	5,864	-46,024	4147	6	2749,8	1,662	34,748	1040,39	1,661	34,751	1040,4	3,12	-0,003			5,9963	88,447	63,077
Large_Hydro	57	5,864	-46,024	4147	7	2497,4	1,902	34,763	1039,25	1,903	34,767	1039,25	3,11	-0,0023			5,9963	88,44	63,082
Large_Hydro	57	5,864	-46,024	4147	8	2248,8	2,116	34,766	1038,11	2,116	34,769	1038,11	3,05	-0,0028			5,9963	88,438	63,086
Large_Hydro	57	5,865	-46,025	4147	9	1999,4	2,374	34,771	1036,95	2,372	34,774	1036,96	3,03	-0,0023			5,9963	88,425	63,091
Large_Hydro	57	5,866	-46,026	4147	10	1749,4	2,548	34,743	1035,78	2,547	34,746	1035,78	2,9	-0,0021			5,9963	88,396	63,095
Large_Hydro	57	5,866	-46,026	4147	11	1501,9	2,571	34,685	1034,61	2,57	34,688	1034,61	2,73	-0,0022			5,9963	88,374	63,099
Large_Hydro	57	5,866	-46,026	4147	12	1298,8	2,588	34,623	1033,63	2,587	34,626	1033,64	2,63	-0,0013			5,9963	88,332	63,103
Large_Hydro	57	5,866	-46,026	4147	13	1200,3	2,592	34,58	1033,15	2,591	34,583	1033,15	2,6	-0,0006			5,9963	88,327	63,105
Large_Hydro	57	5,866	-46,026	4147	14	1001,2	2,618	34,479	1032,15	2,618	34,482	1032,16	2,64	-0,0004			5,9963	88,31	63,109
Large_Hydro	57	5,866	-46,026	4147	15	749,3	2,781	34,325	1030,85	2,781	34,328	1030,86	2,97	-0,0006			5,9963	88,28	63,113
Large_Hydro	57	5,866	-46,026	4147	16	500,7	3,136	34,173	1029,55	3,136	34,176	1029,55	3,55	-0,0025			5,9963	88,244	63,118
Large_Hydro	57	5,866	-46,026	4147	17	299,6	3,986	34,123	1028,48	3,988	34,125	1028,48	3,87	0,0012			5,9963	88,183	63,121
Large_Hydro	57	5,866	-46,026	4147	18	151,1	4,987	34,055	1027,63	4,988	34,056	1027,63	4,34	0,0033			5,9963	88,091	63,124
Large_Hydro	57	5,867	-46,026	4147	19	90,4	5,811	33,949	1027,16	5,81	33,951	1027,16	4,34	0,057			5,9963	87,495	63,126
Large_Hydro	57	5,867	-46,026	4147	20	61	7,864	33,734	1026,58	7,865	33,736	1026,58	4,31	0,3866			5,9963	84,215	63,127
Large_Hydro	57	5,868	-46,026	4147	21	32,2	7,863	33,735	1026,45	7,864	33,736	1026,45	4,31	0,3819			5,9963	84,051	63,129
Large_Hydro	57	5,869	-46,026	4147	24	4,7	7,861	33,734	1026,32	7,862	33,736	1026,32	4,33	0,3569			5,9963	83,314	63,13
Large_ML	58	5,867	-46,017	4100	1	200	4,508	34,061	1027,91	4,508	34,063	1027,91	4,29	0,0023	0,0438	0,8905	2033,7		63,332
Large_ML	58	5,867	-46,017	4100	2	161,7	5,03	34,056	1027,67	5,027	34,058	1027,67	4,35	0,005	0,0462	0,9548	2066,2		63,334
Large_ML	58	5,867	-46,017	4100	3	130,6	5,154	34,012	1027,48	5,155	34,013	1027,48	4,36	0,0088	0,0566	1,0854	1920,6		63,335
Large_ML	58	5,867	-46,017	4100	4	99,5	5,536	33,965	1027,25	5,537	33,966	1027,25	4,37	0,0392	0,0749	1,5616	2085,5		63,336
Large_ML	58	5,867	-46,017	4100	5	77,6	6,884	33,847	1026,88	6,863	33,851	1026,89	4,33	0,1502	0,1433	3,1504	2198,2		63,338
Large_ML	58	5,867	-46,017	4100	6	69,6	7,706	33,747	1026,65	7,698	33,75	1026,65	4,31	0,2969	0,2201	5,0365	2288		63,338
Large_ML	58	5,867	-46,017	4100	7	49,5	7,787	33,736	1026,54	7,787	33,738	1026,54	4,32	0,3403	0,6424	14,812	2305,6		63,339
Large_ML	58	5,867	-46,017	4100	8	47,4	7,788	33,736	1026,53	7,788	33,738	1026,53	4,32	0,3436	0,7232	16,757	2317		63,339
Large_ML	58	5,867	-46,017	4100	9	48,7	7,785	33,737	1026,54	7,786	33,738	1026,54	4,32	0,3401	0,695	16,117	2318,9		63,34
Large_ML	58	5,867	-46,017	4100	10	48,5	7,785	33,737	1026,54	7,786	33,738	1026,54	4,32	0,3443	0,6897	16,042	2326,1		63,34
Large_ML	58	5,867	-46,017	4100	11	19,8	7,792	33,736	1026,4	7,793	33,738	1026,4	4,33	0,1891	4,5461	40,863	898,55		63,341
Large_ML	58	5,867	-46,017	4100	12	19	7,791	33,736	1026,4	7,792	33,738	1026,4	4,33	0,1862	3,6104	46,748	1295,1		63,341
Large_ML	58	5,867	-46,017	4100	13	20,3	7,792	33,736	1026,4	7,792	33,738	1026,41	4,32	0,226	2,6628	43,117	1623,7		63,341
Large_ML	58	5,867	-46,017	4100	14	18,9	7,79	33,736	1026,4	7,791	33,737	1026,4	4,33	0,2217	2,2909	48,432	2115		63,341
Large_ML	58	5,867	-46,017	4100	15	18,2	7,79	33,736	1026,4	7,791	33,737	1026,4	4,32	0,2431	2,6147	55,611	2127		63,341
Large_ML	58	5,867	-46,017	4100	16	19,6	7,79	33,737	1026,4	7,791	33,738	1026,4	4,33	0,2259	2,473	51,691	2089,5		63,341
Large_ML	58	5,867	-46,017	4100	17	10,7	7,789	33,736	1026,36	7,789	33,737	1026,36	4,33	0,259	3,8403	79,54	2071		63,343
Large_ML	58	5,867	-46,017	4100	18	12,5	7,788	33,736	1026,37	7,789	33,737	1026,37	4,33	0,227	3,4361	70,268	2045		63,343
Large_ML	58	5,867	-46,017	4100	19	10,6	7,788	33,736	1026,36	7,789	33,737	1026,36	4,33	0,2378	3,7909	77,304	2039,2		63,343
Large_ML	58	5,867	-46,017	4100	20	13,4	7,786	33,736	1026,37	7,786	33,738	1026,38	4,32	0,3016	2,9551	59,919	2027,7		63,343
Large_ML	58	5,867	-46,017	4100	21	10,7	7,785	33,736	1026,36	7,786	33,737	1026,36	4,33	0,2903	3,89	79,197	2035,9		63,343
Large_ML	58	5,867	-46,017	4100	24	11,6	7,785	33,736	1026,37	7,785	33,737	1026,37	4,33	0,2781	3,4933	70,358	2014,2		63,343
Hydro	59	5,533	-46,35	4282	1	4317,9	0,907	34,697	1047,35	0,906	34,7	1047,35	3,3	-0,0026			1589		63,544
Hydro	59	5,533	-46,35	4282	2	3998,9	0,978	34,709	1045,96	0,978	34,712	1045,97	3,29	-0,0023			1200,8		63,553
Hydro	59	5,533	-46,35	4282	3	3742,4	1,033	34,714	1044,84	1,033	34,717	1044,84	3,26	-0,0023			1092,5		63,559

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	59	5,533	-46,35	4282	4	3501	1,155	34,725	1043,77	1,155	34,728	1043,78	3,25	-0,0029			2504,4		63,564
Hydro	59	5,533	-46,35	4282	5	3250,4	1,309	34,734	1042,65	1,308	34,737	1042,66	3,21	-0,0022			2210,1		63,572
Hydro	59	5,533	-46,35	4282	6	2998,7	1,46	34,744	1041,53	1,46	34,747	1041,53	3,19	-0,0037			2126,5		63,577
Hydro	59	5,533	-46,35	4282	7	2745,1	1,695	34,759	1040,38	1,696	34,762	1040,38	3,18	-0,0009			2139		63,582
Hydro	59	5,533	-46,35	4282	8	2500,3	1,924	34,773	1039,26	1,923	34,776	1039,27	3,17	-0,0013			2408,1		63,586
Hydro	59	5,533	-46,35	4282	9	2250,9	2,123	34,78	1038,13	2,123	34,783	1038,13	3,14	-0,0022			1366,9		63,59
Hydro	59	5,533	-46,35	4282	10	2000,9	2,264	34,773	1036,98	2,263	34,777	1036,98	3,06	-0,001			1358,5		63,595
Hydro	59	5,533	-46,35	4282	11	1752,3	2,456	34,758	1035,82	2,455	34,761	1035,82	2,95	-0,0011			1625,8		63,599
Hydro	59	5,533	-46,35	4282	12	1499,9	2,518	34,705	1034,62	2,517	34,708	1034,63	2,76	-0,0001			2237,5		63,603
Hydro	59	5,533	-46,35	4282	13	1249,7	2,62	34,621	1033,4	2,619	34,624	1033,41	2,64	0,0039			2048,8		63,608
Hydro	59	5,533	-46,35	4282	14	1099,3	2,58	34,552	1032,67	2,579	34,555	1032,67	2,59	0,0016			2054,7		63,611
Hydro	59	5,533	-46,35	4282	15	798,7	2,751	34,385	1031,13	2,751	34,387	1031,13	2,82	0,0008			2140,1		63,616
Hydro	59	5,533	-46,35	4282	16	499,7	2,993	34,195	1029,57	2,992	34,197	1029,58	3,45	0			1704,9		63,62
Hydro	59	5,533	-46,35	4282	17	250,4	3,921	34,09	1028,23	3,921	34,092	1028,24	3,98	0,0018			2000,1		63,624
Hydro	59	5,533	-46,35	4282	18	109,1	4,612	33,879	1027,34	4,613	33,88	1027,34	4,44	0,0211			1969,5		63,627
Hydro	59	5,533	-46,35	4282	19	70,1	6,955	33,729	1026,75	6,958	33,731	1026,75	4,38	0,2826			1994,9		63,628
Hydro	59	5,533	-46,35	4282	20	50,9	7,184	33,708	1026,61	7,187	33,709	1026,61	4,37	0,3186			2021,2		63,63
Hydro	59	5,533	-46,35	4282	21	28,9	7,219	33,711	1026,51	7,219	33,713	1026,51	4,38	0,2788			2115,4		63,631
Hydro	59	5,533	-46,35	4282	24	6,3	7,224	33,712	1026,4	7,225	33,713	1026,4	4,39	0,1017			885,79		63,633
Hydro	60	5,196	-46,722	4278	1	4313,4	0,783	34,685	1047,34	0,782	34,688	1047,35	3,28	-0,0014			5,9963		63,83
Hydro	60	5,196	-46,722	4278	2	4000,6	0,838	34,693	1045,98	0,838	34,696	1045,99	3,26	-0,0017			5,9963		63,837
Hydro	60	5,196	-46,722	4278	3	3747,7	0,92	34,702	1044,87	0,919	34,705	1044,88	3,24	-0,0025			5,9963		63,842
Hydro	60	5,196	-46,722	4278	4	3501,9	1,046	34,711	1043,78	1,045	34,714	1043,79	3,21	-0,0037			5,9963		63,847
Hydro	60	5,196	-46,722	4278	5	3250	1,196	34,72	1042,66	1,196	34,723	1042,66	3,17	-0,0001			5,9963		63,851
Hydro	60	5,196	-46,722	4278	6	2999,1	1,363	34,73	1041,53	1,362	34,733	1041,53	3,14	-0,0024			5,9963		63,855
Hydro	60	5,196	-46,722	4278	7	2748,2	1,507	34,738	1040,4	1,506	34,741	1040,4	3,11	-0,002			5,9963		63,859
Hydro	60	5,196	-46,722	4278	8	2500,1	1,738	34,753	1039,27	1,737	34,756	1039,28	3,1	-0,0016			5,9963		63,863
Hydro	60	5,196	-46,722	4278	9	2242,9	2,066	34,768	1038,09	2,067	34,772	1038,09	3,08	0,0013			5,9963		63,867
Hydro	60	5,196	-46,722	4278	10	2000,7	2,273	34,77	1036,97	2,272	34,773	1036,98	3,03	-0,0009			5,9963		63,871
Hydro	60	5,196	-46,722	4278	11	1748,4	2,44	34,749	1035,8	2,438	34,753	1035,8	2,91	0,0011			5,9963		63,875
Hydro	60	5,197	-46,722	4278	12	1500,1	2,515	34,701	1034,62	2,515	34,705	1034,63	2,76	-0,0001			5,9963		63,882
Hydro	60	5,196	-46,722	4278	13	1249,8	2,564	34,642	1033,43	2,564	34,645	1033,43	2,65	0,0026			5,9963		63,889
Hydro	60	5,196	-46,723	4278	14	999,5	2,57	34,517	1032,18	2,569	34,52	1032,18	2,6	0,0031			5,9963		63,895
Hydro	60	5,197	-46,722	4278	15	798,8	2,684	34,408	1031,16	2,684	34,411	1031,16	2,76	0,0016			5,9963		63,901
Hydro	60	5,197	-46,723	4278	16	501,5	2,884	34,205	1029,6	2,884	34,208	1029,6	3,4	0,0013			5,9963		63,907
Hydro	60	5,196	-46,723	4278	17	248,4	3,865	34,093	1028,23	3,865	34,095	1028,24	3,97	0,0007			5,9963		63,913
Hydro	60	5,197	-46,723	4278	18	141,7	4,359	33,972	1027,59	4,36	33,974	1027,59	4,42	0,0055			5,9963		63,916
Hydro	60	5,197	-46,723	4278	19	101,3	4,527	33,946	1027,36	4,527	33,948	1027,36	4,39	0,0373			5,9963		63,918
Hydro	60	5,197	-46,722	4278	20	72	6,446	33,735	1026,83	6,436	33,74	1026,83	4,37	0,2633			5,9963		63,92
Hydro	60	5,197	-46,723	4278	21	35,1	6,816	33,681	1026,57	6,817	33,683	1026,57	4,41	0,3107			5,9963		63,922
Hydro	60	5,197	-46,723	4278	24	6,7	6,812	33,681	1026,44	6,813	33,683	1026,44	4,42	0,2864			5,9963		63,924
Hydro	61	4,791	-47,139	4684	1	4711,5	0,779	34,681	1049,05	0,779	34,684	1049,06	3,28	-0,0024			5,9963		64,127
Hydro	61	4,791	-47,139	4684	2	4401,8	0,769	34,684	1047,73	0,768	34,687	1047,73	3,26	-0,0014			5,9963		64,138
Hydro	61	4,791	-47,139	4684	3	4100,9	0,789	34,688	1046,42	0,788	34,691	1046,43	3,24	-0,0035			5,9963		64,146
Hydro	61	4,791	-47,139	4684	4	3799,7	0,871	34,696	1045,1	0,869	34,699	1045,11	3,22	-0,0009			5,9963		64,152
Hydro	61	4,791	-47,139	4684	5	3498,8	1,017	34,706	1043,77	1,017	34,71	1043,77	3,18	-0,003			5,9963		64,157

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	61	4,791	-47,139	4684	6	3200,7	1,199	34,716	1042,44	1,199	34,719	1042,44	3,13	-0,0018			5,9963		64,162
Hydro	61	4,791	-47,139	4684	7	2901,1	1,431	34,735	1041,09	1,431	34,738	1041,09	3,13	-0,0021			5,9963		64,166
Hydro	61	4,791	-47,139	4684	8	2599,6	1,701	34,753	1039,72	1,701	34,757	1039,73	3,11	-0,0016			5,9963		64,171
Hydro	61	4,791	-47,139	4684	9	2299,8	1,959	34,763	1038,36	1,959	34,767	1038,36	3,08	0,0009			5,9963		64,176
Hydro	61	4,791	-47,139	4684	10	1999,4	2,215	34,766	1036,97	2,214	34,77	1036,98	3,01	-0,0012			5,9963		64,18
Hydro	61	4,791	-47,139	4684	11	1750,2	2,42	34,751	1035,81	2,42	34,754	1035,81	2,91	-0,0008			5,9963		64,184
Hydro	61	4,791	-47,139	4684	12	1399	2,545	34,682	1034,14	2,544	34,685	1034,15	2,71	0,0011			5,9963		64,19
Hydro	61	4,791	-47,139	4684	13	1099,7	2,58	34,579	1032,69	2,58	34,581	1032,69	2,6	0,0015			5,9963		64,194
Hydro	61	4,791	-47,139	4684	14	901	2,586	34,482	1031,7	2,585	34,485	1031,7	2,63	-0,0007			5,9963		64,197
Hydro	61	4,791	-47,139	4684	15	650,9	2,78	34,323	1030,4	2,78	34,325	1030,4	2,97	-0,0002			5,9963		64,202
Hydro	61	4,791	-47,139	4684	16	400,5	3,05	34,15	1029,07	3,051	34,152	1029,07	3,63	-0,0004			5,9963		64,207
Hydro	61	4,791	-47,139	4684	17	200,3	3,432	33,944	1027,94	3,433	33,949	1027,94	4,39	0,0032			7,9951		64,21
Hydro	61	4,791	-47,139	4684	18	120	4,232	33,844	1027,4	4,231	33,846	1027,4	4,47	0,0096			7,9951		64,212
Hydro	61	4,791	-47,139	4684	19	100,6	4,783	33,817	1027,23	4,778	33,819	1027,23	4,48	0,0409			7,9951		64,213
Hydro	61	4,791	-47,139	4684	20	79,9	6,253	33,718	1026,88	6,255	33,72	1026,88	4,45	0,2485			7,9951		64,214
Hydro	61	4,791	-47,139	4684	21	38,6	6,394	33,715	1026,66	6,395	33,716	1026,67	4,44	0,2356			9,9939		64,216
Hydro	61	4,791	-47,139	4684	24	3,8	6,388	33,715	1026,51	6,388	33,716	1026,51	4,45	0,2463			11,993		64,217
Super_ML	62	4,376	-47,554	4489	1	221,7	3,6	34,027	1028,09	3,6	34,028	1028,09	4,2	0,0034	0,1155	0,8734	756,27		64,54
Super_ML	62	4,376	-47,554	4489	2	151,2	3,722	33,891	1027,64	3,724	33,893	1027,64	4,47	0,0071	0,1269	0,9766	769,57		64,543
Super_ML	62	4,376	-47,554	4489	3	118,9	4,12	33,864	1027,42	4,108	33,867	1027,43	4,49	0,0108	0,1718	1,126	655,27		64,546
Super_ML	62	4,376	-47,554	4489	4	101,3	4,503	33,808	1027,26	4,528	33,81	1027,26	4,5	0,0437	0,2338	1,2636	540,49		64,548
Super_ML	62	4,376	-47,554	4489	5	79,9	6,386	33,709	1026,85	6,397	33,711	1026,85	4,44	0,2599	0,4025	2,1148	525,48		64,549
Super_ML	62	4,376	-47,554	4489	6	58,3	6,542	33,707	1026,73	6,543	33,708	1026,73	4,45	0,651	1,0408	5,4503	523,68		64,551
Super_ML	62	4,376	-47,554	4489	7	59,9	6,543	33,707	1026,74	6,543	33,708	1026,74	4,45	0,2752	0,9696	5,0252	518,29		64,551
Super_ML	62	4,376	-47,554	4489	8	59,5	6,543	33,707	1026,74	6,543	33,708	1026,74	4,45	0,2989	1,0043	5,2275	520,5		64,552
Super_ML	62	4,376	-47,554	4489	9	60,2	6,546	33,707	1026,74	6,546	33,708	1026,74	4,45	0,272	0,9735	5,0591	519,68		64,552
Super_ML	62	4,376	-47,554	4489	10	60,1	6,546	33,707	1026,74	6,547	33,708	1026,74	4,45	0,3635	0,9523	4,9871	523,68		64,552
Super_ML	62	4,376	-47,554	4489	11	19,7	6,564	33,706	1026,55	6,565	33,708	1026,55	4,46	0,2483	9,7079	56,302	579,97		64,554
Super_ML	62	4,376	-47,554	4489	12	20,7	6,568	33,706	1026,55	6,569	33,707	1026,55	4,46	0,2615	8,8482	51,465	581,64		64,554
Super_ML	62	4,376	-47,554	4489	13	8,8	6,562	33,707	1026,5	6,562	33,708	1026,5	4,46	0,2036	20,802	112,59	541,22		64,555
Super_ML	62	4,376	-47,554	4489	14	10	6,561	33,707	1026,5	6,562	33,708	1026,51	4,45	0,2445	18,969	101,45	534,81		64,555
Super_ML	62	4,376	-47,554	4489	15	9,5	6,561	33,707	1026,5	6,562	33,708	1026,5	4,46	0,2798	21,127	112,75	533,67		64,556
Super_ML	62	4,376	-47,554	4489	16	9,6	6,563	33,706	1026,5	6,564	33,708	1026,5	4,46	0,5025	19,088	101,49	531,68		64,556
Super_ML	62	4,376	-47,554	4489	17	4,7	6,572	33,706	1026,48	6,573	33,707	1026,48	4,46	0,2611	33,011	155,72	471,71		64,557
Super_ML	62	4,376	-47,554	4489	18	4,4	6,571	33,706	1026,48	6,572	33,707	1026,48	4,45	0,2932	33,585	158,42	471,71		64,557
Super_ML	62	4,376	-47,554	4489	19	4,2	6,57	33,706	1026,48	6,571	33,707	1026,48	4,46	0,2016	32,846	154,88	471,51		64,557
Super_ML	62	4,376	-47,554	4489	20	5	6,564	33,707	1026,48	6,565	33,708	1026,48	4,46	0,2954	31,65	148,61	469,55		64,557
Super_ML	62	4,376	-47,554	4489	21	4,2	6,565	33,706	1026,48	6,566	33,708	1026,48	4,46	0,1994	37,702	176,32	467,67		64,557
Super_ML	62	4,376	-47,554	4489	24	4,2	6,561	33,707	1026,48	6,561	33,708	1026,48	4,46	0,2413	39,607	184,66	466,25		64,558
Super_Hydro	63	4,376	-47,554	4480	1	4532,2	0,758	34,682	1048,29	0,757	34,684	1048,29	3,28	-0,001			211,09		64,689
Super_Hydro	63	4,376	-47,554	4480	2	4301,2	0,753	34,683	1047,29	0,752	34,686	1047,3	3,26	-0,0013			269,84		64,698
Super_Hydro	63	4,372	-47,552	4480	3	4100,5	0,755	34,685	1046,43	0,754	34,688	1046,43	3,25	-0,0016			296,76		64,704
Super_Hydro	63	4,376	-47,554	4480	4	3798,8	0,801	34,691	1045,11	0,8	34,694	1045,11	3,22	-0,0035			305,81		64,709
Super_Hydro	63	4,375	-47,554	4480	5	3499,5	0,924	34,702	1043,79	0,924	34,705	1043,79	3,2	-0,0026			193,64		64,715
Super_Hydro	63	4,375	-47,554	4480	6	3200,2	1,091	34,712	1042,45	1,091	34,715	1042,45	3,16	-0,0026			141,91		64,72
Super_Hydro	63	4,371	-47,552	4480	7	2900,3	1,313	34,725	1041,1	1,312	34,728	1041,1	3,12	-0,0013			131,92		64,725

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_Hydro	63	4,374	-47,554	4480	8	2599,6	1,514	34,731	1039,73	1,513	34,735	1039,74	3,05	-0,0006			139,1		64,73
Super_Hydro	63	4,374	-47,554	4480	9	2301,3	1,866	34,752	1038,37	1,865	34,755	1038,37	3,04	-0,0002			197,1		64,735
Super_Hydro	63	4,374	-47,554	4480	10	2000,4	2,151	34,758	1036,98	2,15	34,762	1036,98	2,98	-0,0027			239,85		64,739
Super_Hydro	63	4,374	-47,554	4480	11	1751	2,337	34,745	1035,82	2,334	34,748	1035,82	2,89	0,0001			257,84		64,743
Super_Hydro	63	4,374	-47,554	4480	12	1402,9	2,466	34,683	1034,17	2,465	34,686	1034,17	2,7	0,0009			129,92		64,748
Super_Hydro	63	4,374	-47,554	4480	13	1098,7	2,523	34,56	1032,68	2,522	34,563	1032,68	2,58	-0,0016			59,963		64,754
Super_Hydro	63	4,374	-47,554	4480	14	898,8	2,598	34,451	1031,66	2,598	34,453	1031,66	2,66	0,0009			39,976		64,758
Super_Hydro	63	4,374	-47,554	4480	15	648,1	2,741	34,282	1030,36	2,741	34,284	1030,36	3,09	0,0021			27,983		64,762
Super_Hydro	63	4,374	-47,554	4480	16	400,8	3,057	34,133	1029,06	3,06	34,136	1029,06	3,71	0,0007			21,987		64,766
Super_Hydro	63	4,374	-47,554	4480	17	198,6	3,698	33,977	1027,93	3,698	33,979	1027,93	4,3	0,0018			17,989		64,769
Super_Hydro	63	4,374	-47,554	4480	18	149,4	4,114	33,892	1027,59	4,114	33,891	1027,59	4,46	0,0082			15,99		64,77
Super_Hydro	63	4,374	-47,554	4480	19	101,8	6,284	33,718	1026,97	6,281	33,721	1026,97	4,43	0,2135			13,991		64,772
Super_Hydro	63	4,374	-47,554	4480	20	59,4	6,438	33,714	1026,75	6,436	33,716	1026,76	4,44	0,2604			11,993		64,773
Super_Hydro	63	4,372	-47,552	4480	21	28,7	6,454	33,714	1026,61	6,454	33,716	1026,61	4,45	0,2695			9,9939		64,775
Super_Hydro	63	4,374	-47,554	4480	24	5	6,452	33,714	1026,5	6,452	33,716	1026,5	4,46	0,3039			9,9939		64,776
Super_REE	64	4,367	-47,533	4479	1	4380,5	0,754	34,683	1047,64	0,754	34,686	1047,64	3,27	0,007			572,79		65,528
Super_REE	64	4,367	-47,533	4479	2	4380,5	0,754	34,683	1047,64	0,754	34,685	1047,64	3,27	0,006			555,25		65,528
Super_REE	64	4,367	-47,533	4479	3	3097,5	1,164	34,718	1041,99	1,163	34,72	1041,99	3,15	0,0094			541,67		65,549
Super_REE	64	4,367	-47,533	4479	4	3099,7	1,169	34,718	1042	1,168	34,721	1042	3,16	0,0073			548,77		65,549
Super_REE	64	4,367	-47,533	4479	5	2030,2	2,115	34,758	1037,12	2,113	34,761	1037,12	2,99	0,0119			662,66		65,565
Super_REE	64	4,367	-47,533	4479	6	2031	2,115	34,758	1037,12	2,114	34,761	1037,12	2,99	0,0097			679,42		65,566
Super_REE	64	4,367	-47,533	4479	7	2030,9	2,116	34,757	1037,12	2,115	34,761	1037,12	2,99	0,0091			723,97		65,566
Super_REE	64	4,367	-47,533	4479	8	2030,4	2,116	34,758	1037,12	2,115	34,761	1037,12	2,99	0,0129			731,47		65,566
Super_REE	64	4,367	-47,533	4479	9	1500,9	2,441	34,702	1034,64	2,44	34,705	1034,64	2,75	0,0117			872,25		65,574
Super_REE	64	4,367	-47,533	4479	10	1500,7	2,441	34,702	1034,63	2,44	34,705	1034,64	2,75	0,0158			861,18		65,574
Super_REE	64	4,367	-47,533	4479	11	1079,1	2,518	34,561	1032,59	2,517	34,565	1032,59	2,58	0,0127			874,73		65,581
Super_REE	64	4,367	-47,533	4479	12	1079,5	2,518	34,561	1032,59	2,517	34,564	1032,59	2,58	0,0133			887,91		65,581
Super_REE	64	4,367	-47,533	4479	13	743,8	2,699	34,364	1030,87	2,699	34,367	1030,87	2,85	0,0155			747,42		65,586
Super_REE	64	4,367	-47,533	4479	14	744,1	2,702	34,363	1030,87	2,702	34,366	1030,87	2,85	0,0134			742,82		65,586
Super_REE	64	4,367	-47,533	4479	15	500,6	2,839	34,188	1029,59	2,84	34,19	1029,59	3,47	0,0172			620,15		65,59
Super_REE	64	4,367	-47,533	4479	16	500,8	2,84	34,188	1029,59	2,84	34,19	1029,59	3,47	0,0133			609,92		65,591
Super_REE	64	4,367	-47,533	4479	17	249,5	3,681	34,06	1028,23	3,683	34,061	1028,23	4,06	0,0153			598		65,595
Super_REE	64	4,367	-47,533	4479	18	249,1	3,684	34,058	1028,23	3,685	34,06	1028,23	4,06	0,0115			606,69		65,595
Super_REE	64	4,367	-47,533	4479	19	125	4,074	33,851	1027,45	4,078	33,852	1027,45	4,48	0,0372			655,6		65,597
Super_REE	64	4,367	-47,533	4479	20	125,6	4,096	33,847	1027,44	4,087	33,851	1027,45	4,49	0,1816			657,76		65,598
Super_REE	64	4,367	-47,533	4479	21	39	6,48	33,711	1026,65	6,481	33,712	1026,65	4,45	0,8972			774,02		65,6
Super_REE	64	4,367	-47,533	4479	24	40,8	6,479	33,711	1026,66	6,48	33,712	1026,66	4,46	0,3932			757,54		65,6
Super_PoTh	65	4,367	-47,55	4500	1	1000,2	2,554	34,522	1032,19	2,553	34,525	1032,19	2,62	0,015			311,32		65,716
Super_PoTh	65	4,367	-47,55	4500	2	799,7	2,66	34,391	1031,15	2,661	34,393	1031,15	2,8	0,0165			203,88		65,721
Super_PoTh	65	4,367	-47,55	4500	3	601,3	2,759	34,262	1030,12	2,759	34,264	1030,12	3,18	0,0153			220,11		65,725
Super_PoTh	65	4,367	-47,55	4500	4	399,9	3,047	34,138	1029,06	3,049	34,14	1029,06	3,72	0,0143			183,03		65,729
Super_PoTh	65	4,367	-47,55	4500	5	319,9	3,371	34,117	1028,64	3,373	34,119	1028,64	3,83	0,0128			159,9		65,732
Super_PoTh	65	4,367	-47,55	4500	6	281	3,589	34,099	1028,42	3,59	34,101	1028,42	3,91	0,0172			138,04		65,733
Super_PoTh	65	4,367	-47,55	4500	7	240,8	3,692	34,059	1028,19	3,692	34,061	1028,19	4,08	0,0127			100,02		65,734
Super_PoTh	65	4,367	-47,55	4500	8	198,8	3,689	33,982	1027,93	3,689	33,984	1027,94	4,36	0,0172			81,909		65,736
Super_PoTh	65	4,367	-47,55	4500	9	200,1	3,689	33,981	1027,94	3,689	33,983	1027,94	4,37	0,0176			79,951		65,736

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_PoTh	65	4,367	-47,55	4500	10	200,5	3,689	33,979	1027,94	3,69	33,981	1027,94	4,38	0,0153			77,952		65,736
Super_PoTh	65	4,367	-47,55	4500	11	178,6	3,793	33,941	1027,8	3,791	33,944	1027,8	4,47	0,0126			77,952		65,737
Super_PoTh	65	4,367	-47,55	4500	12	158,9	3,953	33,93	1027,68	3,958	33,931	1027,68	4,48	0,0175			71,956		65,738
Super_PoTh	65	4,367	-47,55	4500	13	137,4	3,987	33,874	1027,53	3,998	33,873	1027,53	4,49	0,0255			83,949		65,739
Super_PoTh	65	4,367	-47,55	4500	14	118,5	4,212	33,828	1027,38	4,216	33,83	1027,38	4,51	0,0486			97,94		65,74
Super_PoTh	65	4,367	-47,55	4500	15	99,5	6,157	33,726	1026,98	6,163	33,727	1026,99	4,44	0,2487			83,908		65,741
Super_PoTh	65	4,367	-47,55	4500	16	79,2	6,45	33,714	1026,84	6,45	33,716	1026,85	4,45	0,4347			91,944		65,742
Super_PoTh	65	4,367	-47,55	4500	17	58,3	6,545	33,708	1026,73	6,545	33,71	1026,73	4,46	0,4243			71,956		65,743
Super_PoTh	65	4,367	-47,55	4500	18	39,7	6,577	33,705	1026,64	6,577	33,706	1026,64	4,46	0,4944			67,958		65,744
Super_PoTh	65	4,367	-47,55	4500	19	29,7	6,579	33,705	1026,59	6,579	33,706	1026,59	4,47	0,4844			62,248		65,745
Super_PoTh	65	4,367	-47,55	4500	20	19,2	6,588	33,704	1026,54	6,588	33,706	1026,54	4,47	0,4344			59,963		65,746
Super_PoTh	65	4,367	-47,55	4500	21	9,4	6,595	33,704	1026,5	6,596	33,705	1026,5	4,47	0,4991			55,966		65,747
Super_PoTh	65	4,367	-47,55	4500	24	3,7	6,598	33,704	1026,47	6,598	33,705	1026,47	4,47	0,4518			55,272		65,748
Super_BaSi	66	4,379	-47,553	4490	1	1002,4	2,558	34,514	1032,19	2,558	34,516	1032,2	2,63	0,0132			5,9963		66,205
Super_BaSi	66	4,379	-47,553	4490	2	850,2	2,628	34,417	1031,41	2,627	34,419	1031,41	2,75	0,0164			5,9963		66,209
Super_BaSi	66	4,38	-47,553	4490	3	700,1	2,729	34,322	1030,63	2,728	34,323	1030,63	2,99	0,0147			6,2411		66,212
Super_BaSi	66	4,38	-47,553	4490	4	600,1	2,767	34,266	1030,12	2,767	34,268	1030,12	3,18	0,0182			7,9543		66,214
Super_BaSi	66	4,38	-47,553	4490	5	549,9	2,779	34,232	1029,86	2,779	34,234	1029,86	3,31	0,0157			7,9951		66,215
Super_BaSi	66	4,38	-47,553	4490	6	550,4	2,779	34,232	1029,86	2,779	34,234	1029,86	3,31	0,0157			7,9951		66,215
Super_BaSi	66	4,38	-47,553	4490	7	550,3	2,779	34,232	1029,86	2,779	34,234	1029,86	3,32	0,015			7,9951		66,215
Super_BaSi	66	4,38	-47,554	4490	8	499,9	2,831	34,194	1029,59	2,83	34,196	1029,59	3,46	0,0122			7,9951		66,217
Super_BaSi	66	4,38	-47,554	4490	9	449,5	2,9	34,148	1029,31	2,898	34,15	1029,31	3,66	0,0135			7,9951		66,219
Super_BaSi	66	4,38	-47,554	4490	10	400,8	3,086	34,132	1029,05	3,087	34,134	1029,06	3,75	0,0096			7,9951		66,22
Super_BaSi	66	4,38	-47,555	4490	11	349,8	3,304	34,12	1028,79	3,304	34,122	1028,79	3,82	0,0126			7,9951		66,223
Super_BaSi	66	4,381	-47,555	4490	12	300	3,496	34,105	1028,52	3,496	34,107	1028,52	3,89	0,0128			9,9939		66,224
Super_BaSi	66	4,38	-47,555	4490	13	274,7	3,587	34,093	1028,39	3,587	34,095	1028,39	3,94	0,0142			9,9939		66,225
Super_BaSi	66	4,38	-47,555	4490	14	250,8	3,694	34,072	1028,25	3,693	34,074	1028,25	4,03	0,015			10,157		66,227
Super_BaSi	66	4,381	-47,555	4490	15	200,4	3,674	33,975	1027,94	3,674	33,977	1027,94	4,37	0,0148			11,993		66,229
Super_BaSi	66	4,38	-47,555	4490	16	173,5	3,741	33,945	1027,78	3,741	33,946	1027,78	4,46	0,0164			12,075		66,23
Super_BaSi	66	4,38	-47,554	4490	17	149,4	4,047	33,919	1027,62	4,048	33,92	1027,62	4,48	0,0199			13,991		66,231
Super_BaSi	66	4,38	-47,554	4490	18	124,1	4,207	33,851	1027,43	4,208	33,853	1027,43	4,49	0,037			15,704		66,232
Super_BaSi	66	4,38	-47,554	4490	19	100,1	5,56	33,758	1027,09	5,551	33,761	1027,09	4,47	0,1757			17,989		66,233
Super_BaSi	66	4,38	-47,555	4490	20	78,5	6,317	33,717	1026,86	6,317	33,719	1026,86	4,47	0,3719			17,989		66,234
Super_BaSi	66	4,382	-47,556	4490	21	40,9	6,342	33,715	1026,68	6,343	33,717	1026,68	4,47	0,4005			17,989		66,236
Super_BaSi	66	4,384	-47,557	4490	24	4,8	6,352	33,715	1026,52	6,353	33,717	1026,52	4,47	0,3765			23,985		66,24
Hydro	67	3,957	-47,971	4391	1	4430	0,75	34,682	1047,85	0,749	34,685	1047,85	3,28	0,0106			945,42	91,587	66,506
Hydro	67	3,957	-47,971	4391	2	4200,1	0,752	34,684	1046,86	0,752	34,687	1046,86	3,26	0,0133			2220,5	91,695	66,514
Hydro	67	3,957	-47,971	4391	3	4000,3	0,779	34,688	1045,99	0,778	34,691	1045,99	3,25	0,01			2153,6	91,766	66,518
Hydro	67	3,957	-47,971	4391	4	3750,2	0,852	34,695	1044,89	0,851	34,698	1044,89	3,23	0,0094			2908	91,779	66,523
Hydro	67	3,957	-47,971	4391	5	3500,1	0,953	34,702	1043,78	0,951	34,705	1043,79	3,2	0,0108			2536,2	91,811	66,528
Hydro	67	3,957	-47,971	4391	6	3200	1,139	34,712	1042,44	1,139	34,715	1042,44	3,15	0,0127			2506,7	91,818	66,534
Hydro	67	3,957	-47,971	4391	7	2899,7	1,348	34,727	1041,09	1,347	34,73	1041,09	3,12	0,0116			914,3	91,815	66,539
Hydro	67	3,957	-47,971	4391	8	2599,8	1,578	34,74	1039,73	1,576	34,743	1039,73	3,09	0,012			1511,2	91,834	66,545
Hydro	67	3,957	-47,971	4391	9	2302,4	1,902	34,76	1038,37	1,902	34,763	1038,37	3,08	0,0102			798,45	91,835	66,55
Hydro	67	3,957	-47,971	4391	10	2001	2,183	34,766	1036,98	2,183	34,769	1036,99	3,02	0,0108			2496,1	91,817	66,556
Hydro	67	3,957	-47,971	4391	11	1751,8	2,404	34,757	1035,82	2,404	34,76	1035,82	2,94	0,0125			1165,2	91,814	66,561

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	67	3,957	-47,971	4391	12	1501,2	2,533	34,718	1034,64	2,532	34,721	1034,64	2,8	0,0126			1306,7	91,804	66,566
Hydro	67	3,957	-47,971	4391	13	1248,5	2,559	34,653	1033,43	2,558	34,656	1033,43	2,67	0,0124			2200,7	91,784	66,571
Hydro	67	3,957	-47,971	4391	14	996,7	2,611	34,538	1032,18	2,609	34,541	1032,18	2,61	0,0134			2500,1	91,752	66,576
Hydro	67	3,957	-47,971	4391	15	749,6	2,663	34,397	1030,92	2,662	34,399	1030,93	2,77	0,0145			2502,7	91,752	66,581
Hydro	67	3,957	-47,971	4391	16	500,7	2,767	34,221	1029,62	2,766	34,223	1029,62	3,33	0,0117			1658,9	91,715	66,586
Hydro	67	3,957	-47,971	4391	17	250,3	3,43	34,09	1028,29	3,431	34,092	1028,29	3,91	0,0143			2078	91,609	66,59
Hydro	67	3,957	-47,971	4391	18	149,3	4,506	34,031	1027,66	4,506	34,033	1027,66	4,36	0,019			1348,1	91,612	66,592
Hydro	67	3,957	-47,971	4391	19	101,1	4,576	33,939	1027,35	4,604	33,947	1027,35	4,41	0,0628			1205,6	91,313	66,593
Hydro	67	3,957	-47,971	4391	20	80,2	5,161	33,787	1027,07	5,165	33,786	1027,07	4,47	0,1134			1083,1	90,721	66,594
Hydro	67	3,957	-47,971	4391	21	30	6,429	33,697	1026,61	6,431	33,698	1026,61	4,47	0,3805			1166,1	88,239	66,596
Hydro	67	3,957	-47,971	4391	24	4	6,45	33,697	1026,48	6,452	33,699	1026,49	4,47	0,1375			932,9	88,215	66,598
Hydro	68	3,524	-48,379	4056	1	4087	0,626	34,676	1046,38	0,626	34,679	1046,38	3,29	0,0129			5,9963	90,442	66,915
Hydro	68	3,524	-48,379	4056	2	4000	0,626	34,676	1046	0,625	34,679	1046,01	3,27	0,0121			5,9963	91,059	66,917
Hydro	68	3,524	-48,379	4056	3	3750,3	0,685	34,681	1044,91	0,684	34,684	1044,91	3,24	0,0114			5,9963	91,688	66,923
Hydro	68	3,524	-48,379	4056	4	3500,1	0,808	34,688	1043,79	0,807	34,691	1043,8	3,2	0,011			5,9963	91,788	66,927
Hydro	68	3,524	-48,379	4056	5	3250,5	1,035	34,701	1042,67	1,034	34,704	1042,67	3,14	0,0105			5,9963	91,8	66,933
Hydro	68	3,524	-48,379	4056	6	3001,2	1,28	34,721	1041,55	1,279	34,724	1041,55	3,13	0,0119			5,9963	91,817	66,937
Hydro	68	3,524	-48,379	4056	7	2751,4	1,432	34,728	1040,42	1,431	34,731	1040,42	3,09	0,0073			5,9963	91,823	66,942
Hydro	68	3,524	-48,379	4056	8	2501,9	1,607	34,738	1039,29	1,606	34,741	1039,29	3,06	0,0123			5,9963	91,83	66,947
Hydro	68	3,524	-48,379	4056	9	2249,9	1,713	34,745	1038,15	1,712	34,748	1038,15	3,05	0,0136			5,9963	91,842	66,952
Hydro	68	3,524	-48,379	4056	10	1997,9	2,006	34,759	1036,99	2,005	34,762	1036,99	3,03	0,0128			5,9963	91,834	66,957
Hydro	68	3,524	-48,379	4056	11	1749,5	2,301	34,762	1035,83	2,301	34,765	1035,83	2,98	0,0139			5,9963	91,82	66,961
Hydro	68	3,524	-48,379	4056	12	1497,7	2,484	34,736	1034,64	2,483	34,739	1034,65	2,86	0,0148			5,9963	91,809	66,966
Hydro	68	3,524	-48,379	4056	13	1248,8	2,535	34,673	1033,45	2,535	34,676	1033,45	2,69	0,0141			5,9963	91,799	66,971
Hydro	68	3,524	-48,379	4056	14	999,1	2,568	34,589	1032,24	2,567	34,592	1032,24	2,6	0,0172			5,9963	91,764	66,975
Hydro	68	3,524	-48,379	4056	15	797,9	2,622	34,481	1031,22	2,622	34,484	1031,22	2,64	0,0133			5,9963	91,766	66,979
Hydro	68	3,524	-48,379	4056	16	499,8	2,659	34,253	1029,65	2,659	34,255	1029,66	3,2	0,016			5,9963	91,751	66,984
Hydro	68	3,524	-48,379	4056	17	249,3	3,297	34,071	1028,28	3,304	34,073	1028,28	3,95	0,0137			5,9963	91,606	66,989
Hydro	68	3,524	-48,379	4056	18	130,9	3,952	33,839	1027,48	3,934	33,846	1027,49	4,48	0,0637			5,9963	91,293	66,992
Hydro	68	3,524	-48,379	4056	19	90,4	5,448	33,721	1027,03	5,449	33,723	1027,03	4,53	0,2823			5,9963	89,707	66,994
Hydro	68	3,524	-48,379	4056	20	59,8	5,494	33,72	1026,88	5,495	33,722	1026,88	4,54	0,3353			5,9963	89,341	66,996
Hydro	68	3,524	-48,379	4056	21	29,4	5,706	33,717	1026,71	5,708	33,718	1026,71	4,53	0,3609			5,9963	85,704	66,997
Hydro	68	3,524	-48,379	4056	24	3,2	5,721	33,718	1026,59	5,722	33,719	1026,59	4,53	0,3267			5,9963	78,463	66,999
Hydro	69	3,178	-48,701	3900	1	3940,6	0,629	34,677	1045,74	0,629	34,68	1045,75	3,27	0,0112			5,9963	91,43	67,176
Hydro	69	3,178	-48,701	3900	2	3753,2	0,698	34,683	1044,92	0,697	34,686	1044,92	3,24	0,0124			5,9963	91,716	67,183
Hydro	69	3,178	-48,701	3900	3	3501,5	0,763	34,688	1043,81	0,762	34,691	1043,81	3,22	0,0103			5,9963	91,791	67,188
Hydro	69	3,178	-48,702	3900	4	3245,1	0,914	34,698	1042,66	0,913	34,701	1042,67	3,18	0,0119			6,0371	91,816	67,193
Hydro	69	3,178	-48,703	3900	5	2999,8	1,131	34,713	1041,56	1,131	34,716	1041,56	3,14	0,0121			6,0371	91,814	67,198
Hydro	69	3,18	-48,704	3900	6	2748,7	1,319	34,726	1040,42	1,318	34,729	1040,42	3,12	0,0106			5,9963	91,818	67,202
Hydro	69	3,181	-48,703	3900	7	2501,5	1,514	34,735	1039,3	1,513	34,738	1039,3	3,08	0,0132			6,0371	91,841	67,206
Hydro	69	3,181	-48,703	3900	8	2251	1,775	34,751	1038,15	1,774	34,754	1038,15	3,06	0,0094			7,5464	91,837	67,211
Hydro	69	3,181	-48,703	3900	9	2000,5	2,014	34,762	1037	2,016	34,765	1037	3,04	0,0097			7,9951	91,841	67,215
Hydro	69	3,181	-48,703	3900	10	1749,1	2,235	34,759	1035,83	2,234	34,763	1035,84	2,97	0,0112			7,9951	91,829	67,219
Hydro	69	3,181	-48,703	3900	11	1499,8	2,358	34,731	1034,66	2,357	34,735	1034,67	2,84	0,011			10,157	91,817	67,223
Hydro	69	3,181	-48,703	3900	12	1248,8	2,421	34,671	1033,46	2,42	34,675	1033,47	2,67	0,013			11,993	91,791	67,227
Hydro	69	3,181	-48,703	3900	13	999,8	2,471	34,591	1032,25	2,47	34,594	1032,25	2,58	0,0124			19,988	91,782	67,231

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	69	3,181	-48,703	3900	14	899,3	2,442	34,534	1031,75	2,441	34,538	1031,75	2,56	0,0182			23,985	91,741	67,233
Hydro	69	3,181	-48,703	3900	15	600,9	2,701	34,377	1030,22	2,702	34,379	1030,22	2,82	0,0149			15,99	91,734	67,238
Hydro	69	3,181	-48,703	3900	16	401	2,542	34,181	1029,15	2,542	34,184	1029,15	3,48	0,0146			39,731	91,648	67,241
Hydro	69	3,181	-48,703	3900	17	249,4	3,126	34,086	1028,31	3,119	34,089	1028,31	3,88	0,0115			61,636	91,603	67,244
Hydro	69	3,181	-48,703	3900	18	179,2	3,175	33,972	1027,89	3,157	33,967	1027,88	4,27	0,0162			75,954	91,538	67,246
Hydro	69	3,181	-48,703	3900	19	130	3,979	33,888	1027,51	4,003	33,887	1027,51	4,47	0,0395			81,95	91,428	67,248
Hydro	69	3,181	-48,703	3900	20	79,6	5,599	33,768	1027	5,619	33,768	1026,99	4,46	0,2449			89,945	90,031	67,249
Hydro	69	3,181	-48,703	3900	21	29,9	5,94	33,75	1026,71	5,941	33,752	1026,71	4,49	0,4484			101,94	88,612	67,25
Hydro	69	3,181	-48,703	3900	24	4,6	5,941	33,75	1026,59	5,942	33,752	1026,59	4,5	0,4278			110,83	88,042	67,252
Large_Hydro	70	2,831	-49,028	4025	1	4080,2	0,626	34,676	1046,35	0,625	34,679	1046,35	3,29	0,0093			598,57	91,412	67,427
Large_Hydro	70	2,831	-49,028	4025	2	4079,9	0,627	34,676	1046,35	0,626	34,679	1046,35	3,29	0,0118			599,63	91,406	67,427
Large_Hydro	70	2,831	-49,028	4025	3	3800,7	0,653	34,679	1045,13	0,653	34,682	1045,13	3,25	0,0085			1456,6	91,631	67,433
Large_Hydro	70	2,831	-49,028	4025	4	3501	0,732	34,684	1043,81	0,731	34,688	1043,81	3,21	0,0113			1804,4	91,765	67,44
Large_Hydro	70	2,831	-49,028	4025	5	3250,5	0,852	34,691	1042,69	0,851	34,694	1042,69	3,17	0,0105			1535,8	91,8	67,445
Large_Hydro	70	2,831	-49,028	4025	6	3001,3	1,082	34,705	1041,56	1,081	34,708	1041,57	3,12	0,011			1140,8	91,817	67,451
Large_Hydro	70	2,831	-49,028	4025	7	2750,6	1,278	34,72	1040,43	1,277	34,723	1040,43	3,1	0,0115			1386,8	91,816	67,456
Large_Hydro	70	2,831	-49,028	4025	8	2500	1,509	34,732	1039,29	1,51	34,735	1039,29	3,07	0,0118			1243,2	91,82	67,461
Large_Hydro	70	2,831	-49,028	4025	9	2250,9	1,826	34,756	1038,15	1,825	34,759	1038,15	3,08	0,0117			1091,7	91,816	67,466
Large_Hydro	70	2,831	-49,028	4025	10	2001	2,081	34,765	1037	2,081	34,769	1037	3,05	0,0117			1206,3	91,805	67,471
Large_Hydro	70	2,831	-49,028	4025	11	1749,9	2,272	34,754	1035,83	2,271	34,758	1035,83	2,95	0,0148			2335	91,797	67,476
Large_Hydro	70	2,831	-49,028	4025	12	1500,7	2,402	34,718	1034,65	2,402	34,721	1034,65	2,79	0,0118			1210,1	91,791	67,482
Large_Hydro	70	2,831	-49,028	4025	13	1250,1	2,44	34,653	1033,45	2,439	34,656	1033,46	2,64	0,0125			844,75	91,803	67,487
Large_Hydro	70	2,831	-49,028	4025	14	999,2	2,494	34,557	1032,22	2,493	34,56	1032,22	2,58	0,013			2437,7	91,78	67,492
Large_Hydro	70	2,831	-49,028	4025	15	801,1	2,581	34,46	1031,22	2,581	34,462	1031,22	2,65	0,0106			1793,8	91,754	67,496
Large_Hydro	70	2,831	-49,028	4025	16	599,9	2,669	34,336	1030,18	2,669	34,338	1030,18	2,92	0,0151			2258,7	91,703	67,501
Large_Hydro	70	2,831	-49,028	4025	17	399,3	2,788	34,176	1029,11	2,788	34,178	1029,11	3,52	0,0154			1330,5	91,69	67,505
Large_Hydro	70	2,831	-49,028	4025	18	250	3,322	34,068	1028,28	3,322	34,07	1028,28	3,97	0,0161			1388,4	91,582	67,509
Large_Hydro	70	2,831	-49,028	4025	19	118,3	3,935	33,798	1027,39	3,94	33,799	1027,39	4,58	0,053			1662,7	91,296	67,513
Large_Hydro	70	2,831	-49,028	4025	20	90,5	5,819	33,738	1027	5,819	33,739	1027	4,49	0,2431			1778,9	89,699	67,515
Large_Hydro	70	2,831	-49,028	4025	21	51,8	5,91	33,733	1026,8	5,91	33,734	1026,8	4,49	0,3107			1792	89,209	67,516
Large_Hydro	70	2,831	-49,028	4025	24	6,1	5,951	33,732	1026,58	5,952	33,733	1026,59	4,5	0,1469			1383,4	88,998	67,519
Large_ML	71	2,817	-49,017	4025	1	249,9	3,328	34,064	1028,27	3,328	34,065	1028,27	4,01	0,0135	0,123	0,8684	706,18	91,595	67,595
Large_ML	71	2,817	-49,017	4025	2	200	3,255	33,931	1027,94	3,256	33,933	1027,94	4,36	0,0153	0,1166	0,902	773,82	91,563	67,598
Large_ML	71	2,817	-49,017	4025	3	150,1	3,685	33,824	1027,58	3,691	33,825	1027,58	4,61	0,0349	0,1232	1,0695	868,16	91,451	67,6
Large_ML	71	2,817	-49,017	4025	4	118,6	4,732	33,784	1027,29	4,756	33,786	1027,29	4,55	0,076	0,1622	1,7114	1055,4	90,993	67,601
Large_ML	71	2,817	-49,017	4025	5	100	5,788	33,739	1027,04	5,788	33,74	1027,05	4,49	0,2308	0,2636	2,6967	1023	89,742	67,602
Large_ML	71	2,817	-49,017	4025	6	80,7	5,889	33,734	1026,94	5,89	33,736	1026,94	4,5	0,2922	0,5553	5,2646	948,07	89,391	67,603
Large_ML	71	2,817	-49,017	4025	7	59,9	5,904	33,733	1026,84	5,903	33,735	1026,84	4,5	0,3081	1,2878	11,351	881,46	88,93	67,604
Large_ML	71	2,817	-49,017	4025	8	60,4	5,909	33,733	1026,84	5,91	33,735	1026,84	4,5	0,3184	1,226	10,786	879,75	89,137	67,604
Large_ML	71	2,817	-49,017	4025	9	60	5,909	33,733	1026,84	5,91	33,734	1026,84	4,5	0,3168	1,2458	10,981	881,46	89,097	67,605
Large_ML	71	2,817	-49,017	4025	10	60,8	5,91	33,733	1026,84	5,91	33,734	1026,84	4,5	0,3215	1,2073	10,663	883,22	89,168	67,605
Large_ML	71	2,817	-49,017	4025	11	34	5,943	33,732	1026,72	5,943	33,734	1026,72	4,5	0,3365	4,7885	41,41	864,78	69,608	67,606
Large_ML	71	2,817	-49,017	4025	12	13,9	5,954	33,732	1026,62	5,955	33,734	1026,62	4,5	0,2935	14,904	123,56	829,08	89,041	67,607
Large_ML	71	2,817	-49,017	4025	13	13,9	5,954	33,732	1026,62	5,954	33,734	1026,62	4,5	0,2825	15,513	127,73	823,38	89,028	67,607
Large_ML	71	2,817	-49,017	4025	14	9,2	5,961	33,732	1026,6	5,961	33,734	1026,6	4,5	0,2162	21,547	181,46	842,18	89,036	67,608
Large_ML	71	2,817	-49,017	4025	15	10,1	5,957	33,733	1026,6	5,957	33,734	1026,6	4,5	0,2685	19,119	161,65	845,48	89,025	67,608

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Large_ML	71	2,817	-49,017	4025	16	9,4	5,96	33,733	1026,6	5,96	33,734	1026,6	4,5	0,2696	21,931	184,58	841,65	89,031	67,608
Large_ML	71	2,817	-49,017	4025	17	9	5,959	33,732	1026,6	5,959	33,734	1026,6	4,5	0,2628	22,084	185,97	842,14	89,018	67,608
Large_ML	71	2,817	-49,017	4025	18	3,9	5,95	33,733	1026,58	5,949	33,734	1026,58	4,5	0,2203	35,514	303,81	855,52	89,04	67,61
Large_ML	71	2,817	-49,017	4025	19	4	5,949	33,733	1026,58	5,952	33,734	1026,58	4,51	0,198	34,986	298,74	853,93	89,032	67,61
Large_ML	71	2,817	-49,017	4025	20	3,7	5,952	33,732	1026,57	5,954	33,734	1026,58	4,5	0,2112	37,278	318,16	853,48	89,039	67,61
Large_ML	71	2,817	-49,017	4025	21	3,8	5,954	33,733	1026,57	5,954	33,733	1026,58	4,5	0,2115	38,274	327,43	855,48	89,039	67,61
Large_ML	71	2,817	-49,017	4025	24	4,3	5,957	33,732	1026,58	5,958	33,734	1026,58	4,5	0,2286	34,821	295,99	850,01	89,018	67,61
Large_PoBaSi	72	2,831	-49,028	4025	1	1000,8	2,503	34,561	1032,23	2,503	34,563	1032,23	2,6	0,0159			5,9963	91,762	67,789
Large_PoBaSi	72	2,831	-49,028	4025	2	899,9	2,538	34,511	1031,72	2,537	34,514	1031,72	2,62	0,0121			5,9963	91,751	67,791
Large_PoBaSi	72	2,831	-49,028	4025	3	799,4	2,579	34,462	1031,21	2,578	34,465	1031,22	2,67	0,0137			5,9963	91,742	67,794
Large_PoBaSi	72	2,831	-49,028	4025	4	702,9	2,633	34,398	1030,71	2,633	34,4	1030,71	2,78	0,0131			5,9963	91,697	67,796
Large_PoBaSi	72	2,831	-49,028	4025	5	600,8	2,694	34,294	1030,15	2,694	34,296	1030,15	3,07	0,0135			5,9963	91,701	67,798
Large_PoBaSi	72	2,831	-49,028	4025	6	600,3	2,694	34,293	1030,15	2,694	34,295	1030,15	3,08	0,014			5,9963	91,699	67,799
Large_PoBaSi	72	2,831	-49,028	4025	7	599,7	2,695	34,292	1030,14	2,695	34,295	1030,15	3,08	0,0126			5,9963	91,701	67,799
Large_PoBaSi	72	2,831	-49,028	4025	8	551,2	2,716	34,253	1029,89	2,716	34,256	1029,89	3,22	0,0127			5,9963	91,712	67,801
Large_PoBaSi	72	2,831	-49,028	4025	9	499,7	2,739	34,221	1029,62	2,74	34,223	1029,62	3,35	0,0124			5,9963	91,716	67,802
Large_PoBaSi	72	2,831	-49,028	4025	10	449,3	2,772	34,184	1029,35	2,772	34,186	1029,35	3,5	0,0142			5,9963	91,69	67,804
Large_PoBaSi	72	2,831	-49,028	4025	11	401,5	2,837	34,157	1029,1	2,837	34,159	1029,1	3,61	0,0126			5,9963	91,631	67,806
Large_PoBaSi	72	2,831	-49,028	4025	12	348,6	2,932	34,135	1028,83	2,931	34,137	1028,83	3,71	0,0135			5,9963	91,636	67,808
Large_PoBaSi	72	2,831	-49,028	4025	13	300,4	3,103	34,107	1028,57	3,103	34,109	1028,57	3,84	0,0121			5,9963	91,632	67,809
Large_PoBaSi	72	2,831	-49,028	4025	14	248,5	3,301	34,077	1028,28	3,304	34,077	1028,28	3,95	0,013			5,9963	91,578	67,811
Large_PoBaSi	72	2,831	-49,028	4025	15	200,2	3,259	33,954	1027,96	3,259	33,955	1027,96	4,29	0,0133			5,9963	91,556	67,813
Large_PoBaSi	72	2,831	-49,028	4025	16	176,5	3,363	33,858	1027,76	3,365	33,859	1027,77	4,52	0,0211			5,9963	91,493	67,814
Large_PoBaSi	72	2,831	-49,028	4025	17	151,9	3,667	33,821	1027,59	3,665	33,824	1027,59	4,58	0,0392			5,9963	91,374	67,816
Large_PoBaSi	72	2,831	-49,028	4025	18	125,6	4,372	33,797	1027,37	4,372	33,798	1027,38	4,57	0,0732			5,9963	91,125	67,817
Large_PoBaSi	72	2,831	-49,028	4025	19	99,9	5,864	33,743	1027,04	5,864	33,745	1027,04	4,48	0,2593			5,9963	89,927	67,818
Large_PoBaSi	72	2,831	-49,028	4025	20	70,2	5,919	33,738	1026,89	5,918	33,739	1026,89	4,49	0,3309			5,9963	88,352	67,819
Large_PoBaSi	72	2,831	-49,028	4025	21	40,3	5,955	33,734	1026,74	5,956	33,735	1026,74	4,5	0,3882			5,9963	87,732	67,821
Large_PoBaSi	72	2,831	-49,028	4025	24	9,3	5,954	33,734	1026,6	5,955	33,735	1026,6	4,51	0,3822			5,9963	88,424	67,822
Hydro	73	2,537	-49,301	4025	1	4054,5	0,606	34,675	1046,24	0,606	34,678	1046,24	3,29	0,0133			5,9963	90,487	67,981
Hydro	73	2,537	-49,301	4025	2	4053,9	0,606	34,675	1046,24	0,606	34,678	1046,24	3,29	0,0128			5,9963	90,513	67,981
Hydro	73	2,536	-49,301	4025	3	3799,8	0,648	34,678	1045,13	0,647	34,681	1045,13	3,25	0,0096			5,9963	91,611	67,988
Hydro	73	2,536	-49,302	4025	4	3498,9	0,7	34,682	1043,8	0,699	34,685	1043,8	3,21	0,0068			5,9963	91,738	67,994
Hydro	73	2,536	-49,302	4025	5	3250,6	0,869	34,692	1042,69	0,868	34,695	1042,69	3,17	0,0099			5,9963	91,791	67,999
Hydro	73	2,535	-49,302	4025	6	2998,5	1,057	34,704	1041,55	1,056	34,707	1041,56	3,13	0,0103			5,9963	91,791	68,004
Hydro	73	2,535	-49,302	4025	7	2751,3	1,249	34,718	1040,44	1,249	34,72	1040,44	3,1	0,0106			5,9963	91,795	68,009
Hydro	73	2,535	-49,302	4025	8	2497,5	1,408	34,725	1039,29	1,408	34,728	1039,29	3,06	0,01			5,9963	91,804	68,014
Hydro	73	2,535	-49,301	4025	9	2250	1,65	34,74	1038,15	1,65	34,743	1038,16	3,04	0,0079			5,9963	91,817	68,019
Hydro	73	2,534	-49,301	4025	10	2001,6	1,971	34,756	1037,01	1,971	34,76	1037,01	3,02	0,0106			5,9963	91,793	68,023
Hydro	73	2,534	-49,301	4025	11	1750,5	2,191	34,755	1035,84	2,19	34,758	1035,84	2,96	0,0107			5,9963	91,791	68,028
Hydro	73	2,533	-49,301	4025	12	1499,5	2,384	34,734	1034,66	2,383	34,737	1034,66	2,85	0,0126			5,9963	91,786	68,033
Hydro	73	2,534	-49,301	4025	13	1250,8	2,454	34,68	1033,48	2,454	34,683	1033,48	2,7	0,0145			5,9963	91,773	68,038
Hydro	73	2,534	-49,301	4025	14	999,8	2,508	34,586	1032,24	2,507	34,589	1032,25	2,58	0,0148			5,9963	91,741	68,043
Hydro	73	2,533	-49,301	4025	15	748,9	2,586	34,455	1030,98	2,585	34,458	1030,98	2,66	0,0138			5,9963	91,722	68,047
Hydro	73	2,534	-49,301	4025	16	499,8	2,703	34,252	1029,65	2,703	34,254	1029,65	3,2	0,0143			5,9963	91,702	68,052
Hydro	73	2,534	-49,301	4025	17	249,4	3,188	34,077	1028,3	3,188	34,078	1028,3	3,93	0,0104			5,9963	91,587	68,057

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	73	2,533	-49,301	4025	18	139	3,461	33,815	1027,55	3,467	33,815	1027,55	4,54	0,0272			5,9963	91,355	68,061
Hydro	73	2,534	-49,301	4025	19	99,8	5,611	33,73	1027,06	5,614	33,731	1027,06	4,5	0,316			5,9963	89,704	68,063
Hydro	73	2,534	-49,301	4025	20	69,5	5,66	33,73	1026,91	5,661	33,731	1026,91	4,51	0,2639			5,9963	89,719	68,065
Hydro	73	2,534	-49,301	4025	21	29,5	5,668	33,73	1026,73	5,668	33,731	1026,73	4,52	0,2683			5,9963	89,638	68,066
Hydro	73	2,534	-49,301	4025	24	9,5	5,669	33,729	1026,63	5,67	33,731	1026,63	4,52	0,2606			5,9963	89,477	68,068
Hydro	74	2,236	-49,568	3794	1	3810,6	0,581	34,675	1045,18	0,58	34,678	1045,19	3,28	0,0108			9,9939	91,427	68,228
Hydro	74	2,236	-49,568	3794	2	3498,7	0,619	34,679	1043,81	0,618	34,681	1043,81	3,24	0,0091			13,991	91,585	68,234
Hydro	74	2,236	-49,568	3794	3	3500,1	0,619	34,679	1043,82	0,618	34,682	1043,82	3,24	0,0087			13,991	91,585	68,235
Hydro	74	2,237	-49,568	3794	4	3252,2	0,72	34,684	1042,71	0,719	34,687	1042,71	3,19	0,012			17,989	91,72	68,239
Hydro	74	2,236	-49,568	3794	5	3000	0,893	34,693	1041,58	0,892	34,696	1041,58	3,15	0,0116			21,987	91,766	68,243
Hydro	74	2,236	-49,568	3794	6	2747,8	1,097	34,704	1040,43	1,095	34,707	1040,44	3,09	0,0097			33,979	91,757	68,247
Hydro	74	2,236	-49,568	3794	7	2500,4	1,37	34,728	1039,31	1,369	34,731	1039,31	3,09	0,0109			43,973	91,764	68,252
Hydro	74	2,236	-49,568	3794	8	2247,6	1,59	34,739	1038,15	1,59	34,742	1038,15	3,06	0,0109			79,951	91,784	68,256
Hydro	74	2,237	-49,569	3794	9	1997,3	1,83	34,752	1037	1,829	34,755	1037	3,04	0,0106			113,93	91,791	68,26
Hydro	74	2,237	-49,568	3794	10	1750,2	2,104	34,758	1035,85	2,103	34,762	1035,86	2,99	0,0098			127,92	91,786	68,264
Hydro	74	2,236	-49,568	3794	11	1497,4	2,318	34,742	1034,67	2,317	34,745	1034,67	2,87	0,0102			141,91	91,766	68,268
Hydro	74	2,237	-49,568	3794	12	1248,6	2,435	34,699	1033,48	2,434	34,702	1033,49	2,74	0,0128			133,92	91,737	68,272
Hydro	74	2,236	-49,568	3794	13	1000,9	2,416	34,62	1032,29	2,415	34,623	1032,29	2,6	0,0167			129,35	91,694	68,276
Hydro	74	2,236	-49,568	3794	14	898,9	2,394	34,564	1031,78	2,393	34,568	1031,78	2,56	0,0162			131,92	91,683	68,278
Hydro	74	2,236	-49,568	3794	15	598,1	2,637	34,38	1030,21	2,636	34,383	1030,22	2,8	0,0132			205,87	91,688	68,283
Hydro	74	2,236	-49,568	3794	16	400,6	2,637	34,206	1029,16	2,637	34,209	1029,16	3,38	0,0153			173,24	91,656	68,286
Hydro	74	2,236	-49,568	3794	17	249,8	3,142	34,103	1028,32	3,143	34,105	1028,33	3,84	0,0151			197,92	91,569	68,289
Hydro	74	2,236	-49,568	3794	18	179,4	3,354	33,981	1027,88	3,355	33,982	1027,88	4,32	0,019			204,16	91,501	68,291
Hydro	74	2,236	-49,568	3794	19	120,2	4,777	33,758	1027,27	4,777	33,76	1027,27	4,58	0,3681			205,87	88,859	68,292
Hydro	74	2,236	-49,568	3794	20	69,2	5,516	33,743	1026,94	5,517	33,745	1026,94	4,53	0,4243			229,86	87,735	68,294
Hydro	74	2,236	-49,568	3794	21	29	5,521	33,743	1026,75	5,521	33,745	1026,75	4,53	0,4278			223,7	85,668	68,295
Hydro	74	2,236	-49,568	3794	24	2,9	5,514	33,743	1026,63	5,514	33,745	1026,63	4,54	0,3998			218,56	88,368	68,296
Hydro	75	1,936	-49,827	3719	1	3740,8	0,568	34,674	1044,88	0,567	34,678	1044,88	3,27	0,009			501,12	91,276	68,46
Hydro	75	1,936	-49,826	3719	2	3738,1	0,568	34,674	1044,87	0,567	34,678	1044,87	3,27	0,0104			515,52	91,271	68,461
Hydro	75	1,937	-49,824	3719	3	3500,6	0,587	34,676	1043,82	0,586	34,679	1043,82	3,24	0,0105			490,6	91,662	68,466
Hydro	75	1,938	-49,822	3719	4	3249,6	0,688	34,682	1042,7	0,687	34,685	1042,71	3,2	0,0108			463,43	91,739	68,471
Hydro	75	1,94	-49,821	3719	5	3001	0,849	34,693	1041,59	0,848	34,696	1041,59	3,16	0,0114			279,83	91,767	68,476
Hydro	75	1,942	-49,82	3719	6	2749,8	1,064	34,708	1040,45	1,063	34,711	1040,45	3,13	0,0067			296,84	91,774	68,481
Hydro	75	1,943	-49,821	3719	7	2497,6	1,255	34,72	1039,3	1,254	34,724	1039,31	3,1	0,01			467,88	91,79	68,486
Hydro	75	1,944	-49,819	3719	8	2250,9	1,498	34,734	1038,17	1,497	34,737	1038,18	3,06	0,0106			503,45	91,778	68,491
Hydro	75	1,945	-49,818	3719	9	2002,3	1,781	34,753	1037,03	1,78	34,756	1037,03	3,06	0,0137			371,77	91,789	68,496
Hydro	75	1,946	-49,817	3719	10	1751,2	2,081	34,764	1035,87	2,08	34,767	1035,87	3,03	0,0127			410,81	91,766	68,501
Hydro	75	1,948	-49,815	3719	11	1504,8	2,219	34,752	1034,72	2,218	34,755	1034,72	2,93	0,0134			536,98	91,748	68,506
Hydro	75	1,95	-49,815	3719	12	1300,5	2,186	34,705	1033,75	2,186	34,708	1033,76	2,75	0,0147			565,16	91,746	68,51
Hydro	75	1,95	-49,813	3719	13	1097,4	2,411	34,676	1032,78	2,41	34,679	1032,78	2,68	0,0143			668,24	91,744	68,514
Hydro	75	1,952	-49,811	3719	14	901,4	2,519	34,615	1031,81	2,519	34,618	1031,82	2,61	0,0166			511,69	91,724	68,519
Hydro	75	1,953	-49,81	3719	15	702,1	2,502	34,514	1030,81	2,501	34,517	1030,82	2,59	0,0156			581,68	91,714	68,523
Hydro	75	1,956	-49,81	3719	16	498,8	2,63	34,377	1029,75	2,63	34,38	1029,75	2,8	0,0141			450,34	91,713	68,527
Hydro	75	1,957	-49,808	3719	17	199,6	3,03	34,085	1028,09	3,027	34,087	1028,09	3,89	0,0158			549,78	91,564	68,533
Hydro	75	1,958	-49,807	3719	18	110,8	3,346	33,944	1027,53	3,343	33,946	1027,53	4,39	0,0177			618,8	91,506	68,536
Hydro	75	1,96	-49,807	3719	19	77,4	4,59	33,764	1027,1	4,59	33,766	1027,1	4,6	0,3079			549,58	89,172	68,538

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	75	1,961	-49,807	3719	20	44,9	4,951	33,752	1026,9	4,952	33,754	1026,9	4,58	0,416			427,98	87,575	68,539
Hydro	75	1,962	-49,807	3719	21	24,7	4,963	33,752	1026,8	4,963	33,753	1026,81	4,58	0,3975			485,7	88,571	68,541
Hydro	75	1,963	-49,806	3719	24	4,5	4,965	33,751	1026,71	4,965	33,753	1026,71	4,59	0,2512			631,24	88,577	68,543
Hydro	76	1,616	-50,107	3622	1	3645,5	0,573	34,675	1044,46	0,572	34,678	1044,46	3,27	0,0132			7,9951	91,499	68,782
Hydro	76	1,616	-50,107	3622	2	3500	0,582	34,677	1043,82	0,581	34,679	1043,82	3,25	0,0104			7,9951	91,599	68,786
Hydro	76	1,617	-50,107	3622	3	3248,7	0,7	34,684	1042,7	0,699	34,687	1042,7	3,21	0,0104			6,2003	91,74	68,79
Hydro	76	1,617	-50,107	3622	4	3248,6	0,7	34,684	1042,7	0,699	34,687	1042,7	3,21	0,0097			6,2411	91,741	68,79
Hydro	76	1,617	-50,107	3622	5	3000,6	0,79	34,689	1041,59	0,789	34,692	1041,59	3,17	0,0101			5,9963	91,773	68,795
Hydro	76	1,618	-50,107	3622	6	2751	1,01	34,704	1040,46	1,009	34,707	1040,46	3,13	0,0105			5,9963	91,793	68,798
Hydro	76	1,618	-50,107	3622	7	2500	1,218	34,718	1039,32	1,217	34,721	1039,32	3,1	0,0095			5,9963	91,808	68,802
Hydro	76	1,619	-50,108	3622	8	2250,2	1,368	34,725	1038,18	1,367	34,728	1038,18	3,06	0,0084			5,9963	91,817	68,807
Hydro	76	1,62	-50,107	3622	9	2001	1,64	34,744	1037,04	1,639	34,747	1037,04	3,05	0,0086			5,9963	91,815	68,811
Hydro	76	1,621	-50,107	3622	10	1750,5	1,888	34,761	1035,88	1,887	34,764	1035,89	3,07	0,0114			5,9963	91,814	68,815
Hydro	76	1,621	-50,108	3622	11	1497,8	2,108	34,764	1034,71	2,107	34,767	1034,71	3,01	0,0139			5,9963	91,79	68,818
Hydro	76	1,622	-50,108	3622	12	1248,8	2,295	34,74	1033,53	2,294	34,743	1033,54	2,87	0,0135			5,9963	91,775	68,823
Hydro	76	1,623	-50,108	3622	13	999,9	2,462	34,686	1032,33	2,459	34,689	1032,33	2,71	0,0135			5,9963	91,766	68,827
Hydro	76	1,623	-50,107	3622	14	696,8	2,48	34,548	1030,82	2,479	34,551	1030,82	2,57	0,0149			5,9963	91,74	68,831
Hydro	76	1,624	-50,108	3622	15	600,2	2,35	34,474	1030,33	2,349	34,477	1030,33	2,61	0,0152			5,9963	91,632	68,833
Hydro	76	1,627	-50,108	3622	16	398,2	2,615	34,336	1029,25	2,615	34,338	1029,25	2,93	0,0124			5,9963	91,722	68,837
Hydro	76	1,629	-50,107	3622	17	161,4	2,646	34,084	1027,94	2,646	34,086	1027,94	3,85	0,0122			5,9963	91,556	68,84
Hydro	76	1,63	-50,107	3622	18	97,8	2,65	33,888	1027,49	2,65	33,889	1027,49	4,44	0,0198			5,9963	91,406	68,842
Hydro	76	1,63	-50,107	3622	19	85,7	2,697	33,84	1027,39	2,698	33,842	1027,39	4,53	0,033			5,9963	91,354	68,843
Hydro	76	1,631	-50,107	3622	20	68,7	3,571	33,777	1027,18	3,554	33,781	1027,18	4,55	0,1453			5,9963	90,218	68,844
Hydro	76	1,631	-50,107	3622	21	39,4	4,581	33,76	1026,92	4,582	33,762	1026,92	4,62	0,3699			5,9963	88,89	68,845
Hydro	76	1,633	-50,107	3622	24	2,7	4,582	33,76	1026,75	4,583	33,761	1026,75	4,63	0,3393			5,9963	88,846	68,847
Large_Hydro	77	1,301	-50,373	3576	1	3596,3	0,565	34,675	1044,25	0,564	34,678	1044,25	3,26	0,0087			7,0977	91,439	69,019
Large_Hydro	77	1,301	-50,373	3576	2	3595	0,565	34,675	1044,24	0,564	34,678	1044,24	3,26	0,0094			7,0569	91,45	69,019
Large_Hydro	77	1,301	-50,373	3576	3	3402,4	0,561	34,676	1043,39	0,56	34,679	1043,4	3,24	0,0092			6,9345	91,551	69,024
Large_Hydro	77	1,301	-50,373	3576	4	3249,6	0,571	34,677	1042,72	0,57	34,68	1042,72	3,23	0,008			6,6898	91,637	69,028
Large_Hydro	77	1,301	-50,373	3576	5	2997,6	0,646	34,681	1041,59	0,645	34,684	1041,59	3,19	0,0147			6,4858	91,74	69,033
Large_Hydro	77	1,301	-50,373	3576	6	2749,3	0,786	34,688	1040,47	0,785	34,691	1040,47	3,14	0,0087			6,445	91,787	69,038
Large_Hydro	77	1,301	-50,373	3576	7	2499,7	0,929	34,693	1039,34	0,928	34,697	1039,34	3,09	0,0104			6,6082	91,808	69,043
Large_Hydro	77	1,301	-50,373	3576	8	2250,5	1,275	34,721	1038,19	1,274	34,724	1038,19	3,08	0,0138			6,4042	91,795	69,048
Large_Hydro	77	1,301	-50,373	3576	9	2001,8	1,476	34,734	1037,05	1,475	34,737	1037,06	3,05	0,013			6,6082	91,804	69,053
Large_Hydro	77	1,301	-50,373	3576	10	1748,9	1,74	34,745	1035,88	1,74	34,748	1035,89	3,01	0,0079			6,649	91,789	69,058
Large_Hydro	77	1,301	-50,373	3576	11	1501,1	2,004	34,748	1034,73	2,003	34,752	1034,73	2,95	0,0117			7,0569	91,79	69,063
Large_Hydro	77	1,301	-50,373	3576	12	1252,1	2,199	34,742	1033,56	2,198	34,745	1033,56	2,88	0,012			6,7713	91,784	69,068
Large_Hydro	77	1,301	-50,373	3576	13	999,1	2,284	34,711	1032,37	2,283	34,715	1032,37	2,76	0,0126			6,7713	91,742	69,073
Large_Hydro	77	1,301	-50,373	3576	14	800,8	2,268	34,646	1031,4	2,267	34,649	1031,4	2,61	0,0169			6,649	91,692	69,078
Large_Hydro	77	1,301	-50,373	3576	15	602	2,325	34,56	1030,41	2,324	34,563	1030,41	2,54	0,0151			6,4042	91,678	69,081
Large_Hydro	77	1,301	-50,373	3576	16	400,7	2,35	34,422	1029,36	2,354	34,426	1029,36	2,68	0,0144			6,445	91,606	69,085
Large_Hydro	77	1,301	-50,373	3576	17	250,8	2,191	34,253	1028,54	2,19	34,256	1028,54	3,19	0,0165			6,5674	91,436	69,088
Large_Hydro	77	1,301	-50,373	3576	18	200,2	2,093	34,181	1028,25	2,094	34,184	1028,25	3,45	0,0185			6,6898	91,388	69,089
Large_Hydro	77	1,301	-50,373	3576	19	129	1,796	33,913	1027,72	1,799	33,915	1027,73	4,41	0,0399			6,7306	91,105	69,091
Large_Hydro	77	1,301	-50,373	3576	20	97,5	4,129	33,772	1027,25	4,113	33,775	1027,25	4,62	0,283			6,445	89,167	69,093
Large_Hydro	77	1,301	-50,373	3576	21	48	4,416	33,767	1026,99	4,415	33,77	1026,99	4,63	0,3761			6,3634	88,632	69,095

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Large_Hydro	77	1,301	-50,373	3576	24	3,4	4,406	33,767	1026,78	4,405	33,77	1026,78	4,64	0,3382			6,6082	88,534	69,097
Large_ML	78	1,319	-50,377	3506	1	252,3	2,174	34,218	1028,52	2,175	34,219	1028,52	3,35	0,0171	1,1951	0,8599	71,956	91,386	69,248
Large_ML	78	1,32	-50,377	3506	2	160,3	1,799	34,037	1027,97	1,801	34,04	1027,97	4,02	0,0178	1,038	0,8714	83,949	91,287	69,25
Large_ML	78	1,321	-50,377	3506	3	119,9	1,756	33,911	1027,68	1,756	33,913	1027,68	4,46	0,026	0,9515	0,9129	95,941	91,187	69,252
Large_ML	78	1,321	-50,377	3506	4	103	2,2	33,849	1027,52	2,199	33,851	1027,52	4,62	0,0494	0,9039	0,9576	105,94	91,06	69,253
Large_ML	78	1,322	-50,378	3506	5	90,2	2,519	33,828	1027,41	2,516	33,83	1027,42	4,65	0,0781	0,892	1,0341	115,93	90,933	69,254
Large_ML	78	1,322	-50,378	3506	6	78,4	3,192	33,804	1027,28	3,251	33,799	1027,27	4,65	0,1543	0,9288	1,1696	125,92	90,309	69,255
Large_ML	78	1,322	-50,378	3506	7	78,5	3,476	33,794	1027,25	3,475	33,796	1027,25	4,64	0,1583	0,9325	1,1742	125,92	90,227	69,255
Large_ML	78	1,322	-50,378	3506	8	78,3	3,565	33,791	1027,23	3,554	33,793	1027,24	4,63	0,1655	0,9227	1,1803	127,92	90,119	69,255
Large_ML	78	1,322	-50,378	3506	9	78,4	3,544	33,792	1027,24	3,545	33,795	1027,24	4,64	0,1757	0,9224	1,1799	127,92	90,078	69,255
Large_ML	78	1,322	-50,378	3506	10	60,4	4,491	33,765	1027,03	4,492	33,767	1027,03	4,63	0,36	1,163	1,7763	152,73	88,675	69,256
Large_ML	78	1,322	-50,378	3506	11	29,4	4,492	33,766	1026,89	4,493	33,767	1026,89	4,63	0,357	3,5052	5,9893	170,88	88,678	69,258
Large_ML	78	1,323	-50,378	3506	12	15,2	4,488	33,766	1026,82	4,49	33,767	1026,83	4,63	0,3596	6,4197	11,944	186,05	88,669	69,259
Large_ML	78	1,323	-50,378	3506	13	14,7	4,49	33,766	1026,82	4,491	33,767	1026,82	4,63	0,3555	6,8548	13,249	193,27	88,643	69,259
Large_ML	78	1,323	-50,378	3506	14	9,6	4,485	33,766	1026,8	4,485	33,767	1026,8	4,63	0,359	9,4817	19,448	205,14	88,669	69,259
Large_ML	78	1,323	-50,378	3506	15	9,4	4,485	33,766	1026,8	4,486	33,767	1026,8	4,63	0,3555	9,3441	19,681	210,85	88,669	69,26
Large_ML	78	1,323	-50,378	3506	16	10,3	4,488	33,766	1026,8	4,489	33,767	1026,8	4,63	0,3521	9,4104	19,404	206,16	88,657	69,26
Large_ML	78	1,323	-50,378	3506	17	10,4	4,489	33,766	1026,8	4,49	33,767	1026,8	4,63	0,3647	8,6267	18,355	212,77	88,656	69,26
Large_ML	78	1,324	-50,378	3506	18	5,7	4,491	33,766	1026,78	4,492	33,767	1026,78	4,63	0,3594	13,886	33,277	239,48	88,653	69,261
Large_ML	78	1,324	-50,378	3506	19	4,7	4,49	33,766	1026,77	4,491	33,767	1026,78	4,63	0,3731	14,83	38,452	259,31	88,647	69,261
Large_ML	78	1,324	-50,378	3506	20	6,6	4,49	33,766	1026,78	4,49	33,767	1026,78	4,63	0,3582	11,274	28,207	250,22	88,656	69,261
Large_ML	78	1,324	-50,378	3506	21	5,8	4,49	33,766	1026,78	4,49	33,767	1026,78	4,63	0,3582	12,089	31,645	261,8	88,673	69,261
Large_ML	78	1,324	-50,378	3506	24	6,6	4,49	33,766	1026,78	4,49	33,767	1026,78	4,63	0,3581	11,496	29,307	254,94	88,61	69,261
Hydro	79	0,976	-50,64	3504	1	3506,6	0,51	34,673	1043,86	0,51	34,676	1043,86	3,28	0,0096			631,61	91,078	69,399
Hydro	79	0,976	-50,64	3504	2	3399,4	0,508	34,673	1043,39	0,507	34,676	1043,39	3,26	0,0092			521,44	91,353	69,402
Hydro	79	0,976	-50,641	3504	3	3246,4	0,527	34,675	1042,71	0,526	34,678	1042,71	3,24	0,0095			1218,6	91,532	69,404
Hydro	79	0,976	-50,641	3504	4	3000,7	0,558	34,677	1041,61	0,557	34,681	1041,62	3,21	0,01			2052,6	91,662	69,408
Hydro	79	0,976	-50,641	3504	5	2751	0,634	34,681	1040,49	0,633	34,685	1040,5	3,18	0,0114			831,49	91,759	69,412
Hydro	79	0,976	-50,641	3504	6	2748	0,635	34,681	1040,48	0,634	34,685	1040,48	3,18	0,0091			815,99	91,741	69,412
Hydro	79	0,977	-50,641	3504	7	2500,2	0,771	34,688	1039,35	0,769	34,691	1039,36	3,13	0,0101			337,79	91,773	69,418
Hydro	79	0,977	-50,642	3504	8	2248,1	0,904	34,693	1038,21	0,903	34,697	1038,21	3,08	0,0098			1041	91,795	69,423
Hydro	79	0,977	-50,641	3504	9	1999,1	1,106	34,705	1037,06	1,103	34,708	1037,07	3,04	0,0105			933,43	91,791	69,427
Hydro	79	0,977	-50,641	3504	10	1750,2	1,333	34,714	1035,91	1,332	34,718	1035,92	2,99	0,0094			530,41	91,787	69,432
Hydro	79	0,977	-50,641	3504	11	1499,5	1,622	34,729	1034,75	1,621	34,733	1034,75	2,96	0,0085			2108,5	91,766	69,436
Hydro	79	0,977	-50,641	3504	12	1248,6	1,805	34,726	1033,58	1,804	34,73	1033,58	2,89	0,0146			2054,4	91,734	69,441
Hydro	79	0,977	-50,641	3504	13	999,8	1,947	34,703	1032,4	1,946	34,706	1032,4	2,76	0,0105			2219,9	91,694	69,446
Hydro	79	0,977	-50,641	3504	14	799,4	2,075	34,666	1031,43	2,072	34,669	1031,43	2,65	0,0139			750,89	91,648	69,45
Hydro	79	0,977	-50,641	3504	15	499	2,133	34,527	1029,92	2,133	34,529	1029,92	2,56	0,0146			823,25	91,439	69,455
Hydro	79	0,977	-50,641	3504	16	399,6	2,147	34,461	1029,4	2,147	34,464	1029,4	2,63	0,0164			1935,7	91,377	69,458
Hydro	79	0,977	-50,641	3504	17	298,9	1,961	34,379	1028,88	1,962	34,381	1028,88	2,83	0,0195			761,25	91,283	69,46
Hydro	79	0,977	-50,641	3504	18	249,1	1,823	34,291	1028,59	1,819	34,291	1028,59	3,09	0,019			707,49	91,263	69,463
Hydro	79	0,977	-50,641	3504	19	80,1	3,291	33,743	1027,23	3,307	33,743	1027,23	4,72	0,1583			2270	90,144	69,467
Hydro	79	0,977	-50,641	3504	20	50,3	3,335	33,741	1027,08	3,336	33,743	1027,09	4,75	0,099			2492,4	90,21	69,469
Hydro	79	0,977	-50,642	3504	21	19,7	3,33	33,741	1026,94	3,33	33,743	1026,94	4,75	0,0507			1321,4	90,105	69,471
Hydro	79	0,977	-50,642	3504	24	19,4	3,329	33,741	1026,94	3,33	33,743	1026,94	4,75	0,0509			682,11	90,224	69,471
Hydro	80	0,656	-50,904	2290	1	2384,6	0,734	34,687	1038,84	0,733	34,69	1038,84	3,15	0,0128			2186,4	91,694	69,636

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	80	0,656	-50,904	2290	2	2100,1	0,972	34,698	1037,53	0,972	34,702	1037,54	3,08	0,013			1999,1	91,772	69,642
Hydro	80	0,656	-50,904	2290	3	1998,3	1,076	34,703	1037,06	1,076	34,706	1037,06	3,05	0,0096			1843,3	91,8	69,644
Hydro	80	0,656	-50,904	2290	4	1799,3	1,244	34,71	1036,14	1,244	34,714	1036,15	3,01	0,0103			1833,1	91,804	69,647
Hydro	80	0,656	-50,904	2290	5	1797,1	1,246	34,711	1036,13	1,245	34,714	1036,14	3,01	0,0091			1826,5	91,793	69,648
Hydro	80	0,656	-50,904	2290	6	1600,6	1,425	34,719	1035,22	1,424	34,722	1035,23	2,98	0,0106			1827,4	91,797	69,651
Hydro	80	0,656	-50,904	2290	7	1600	1,424	34,719	1035,22	1,423	34,722	1035,22	2,98	0,0086			1835,6	91,793	69,651
Hydro	80	0,656	-50,904	2290	8	1398,4	1,655	34,727	1034,28	1,656	34,73	1034,28	2,94	0,0096			1798	91,791	69,654
Hydro	80	0,656	-50,904	2290	9	1400,7	1,662	34,727	1034,29	1,658	34,73	1034,29	2,94	0,0125			1817,6	91,791	69,654
Hydro	80	0,656	-50,904	2290	10	1199	1,865	34,723	1033,34	1,865	34,727	1033,34	2,86	0,012			1376,9	91,764	69,657
Hydro	80	0,656	-50,904	2290	11	1000,7	1,999	34,71	1032,4	1,998	34,713	1032,4	2,78	0,016			375,77	91,738	69,661
Hydro	80	0,656	-50,904	2290	12	799,5	2,1	34,671	1031,43	2,099	34,674	1031,43	2,65	0,0138			553,09	91,66	69,664
Hydro	80	0,656	-50,904	2290	13	600,2	2,122	34,616	1030,46	2,122	34,618	1030,46	2,57	0,0176			1839,4	91,585	69,667
Hydro	80	0,656	-50,904	2290	14	498,6	2,133	34,566	1029,95	2,133	34,569	1029,95	2,55	0,0179			1984,3	91,532	69,669
Hydro	80	0,656	-50,904	2290	15	350,7	2,163	34,482	1029,19	2,163	34,485	1029,19	2,6	0,0166			1396,5	91,44	69,671
Hydro	80	0,656	-50,904	2290	16	200,7	1,523	34,127	1028,25	1,524	34,129	1028,26	3,66	0,025			1781,3	91,231	69,674
Hydro	80	0,656	-50,904	2290	17	149,5	1,266	33,94	1027,88	1,266	33,942	1027,88	4,4	0,0416			1777,6	91,109	69,675
Hydro	80	0,656	-50,904	2290	18	108,6	2,539	33,803	1027,48	2,558	33,804	1027,48	4,7	0,11			1748,5	90,523	69,677
Hydro	80	0,656	-50,904	2290	19	68,9	3,371	33,755	1027,18	3,372	33,757	1027,18	4,73	0,1912			1634	89,648	69,678
Hydro	80	0,656	-50,904	2290	20	49,4	3,378	33,754	1027,09	3,378	33,756	1027,09	4,74	0,1912			1453,1	89,636	69,679
Hydro	80	0,656	-50,904	2290	21	13,3	3,375	33,754	1026,92	3,375	33,755	1026,92	4,74	0,1322			1728,3	89,623	69,681
Hydro	80	0,656	-50,904	2290	24	4,4	3,376	33,753	1026,88	3,376	33,755	1026,88	4,74	0,0728			1669,4	89,592	69,682
Hydro	81	0,332	-51,169	2396	1	2385,4	0,69	34,684	1038,85	0,689	34,688	1038,85	3,13	0,0132			6,2003	91,367	69,818
Hydro	81	0,332	-51,169	2396	2	2198,5	0,951	34,698	1037,98	0,95	34,701	1037,98	3,09	0,0121			6,2003	91,662	69,821
Hydro	81	0,332	-51,169	2396	3	1999	1,096	34,706	1037,07	1,095	34,709	1037,07	3,05	0,0099			6,1187	91,732	69,825
Hydro	81	0,332	-51,169	2396	4	1798,3	1,253	34,714	1036,14	1,252	34,717	1036,14	3,02	0,0108			6,0779	91,763	69,828
Hydro	81	0,332	-51,17	2396	5	1602,5	1,437	34,724	1035,24	1,436	34,727	1035,24	2,99	0,0133			5,9963	91,763	69,832
Hydro	81	0,332	-51,17	2396	6	1397,7	1,641	34,734	1034,28	1,641	34,737	1034,29	2,97	0,0106			6,0779	91,742	69,835
Hydro	81	0,332	-51,17	2396	7	1199	1,851	34,732	1033,35	1,85	34,735	1033,35	2,9	0,0113			5,9963	91,74	69,838
Hydro	81	0,332	-51,17	2396	8	1001,6	1,949	34,717	1032,42	1,948	34,72	1032,42	2,81	0,0104			5,9963	91,72	69,842
Hydro	81	0,332	-51,17	2396	9	1001,2	1,949	34,717	1032,42	1,948	34,72	1032,42	2,81	0,012			6,0371	91,72	69,842
Hydro	81	0,332	-51,17	2396	10	799,3	2,08	34,675	1031,44	2,08	34,678	1031,44	2,66	0,0155			6,0371	91,641	69,845
Hydro	81	0,332	-51,17	2396	11	800,8	2,081	34,674	1031,44	2,08	34,677	1031,44	2,66	0,0157			6,0371	91,655	69,845
Hydro	81	0,333	-51,171	2396	12	596,8	2,139	34,604	1030,43	2,138	34,606	1030,44	2,55	0,0167			6,0371	91,608	69,849
Hydro	81	0,333	-51,171	2396	13	499,3	2,195	34,569	1029,95	2,194	34,572	1029,95	2,53	0,0144			6,0371	91,556	69,851
Hydro	81	0,333	-51,171	2396	14	398,2	2,179	34,508	1029,43	2,179	34,511	1029,43	2,56	0,0161			5,9963	91,484	69,853
Hydro	81	0,333	-51,171	2396	15	297,4	2,045	34,407	1028,89	2,045	34,409	1028,89	2,74	0,0201			5,9963	91,357	69,855
Hydro	81	0,333	-51,171	2396	16	248,3	1,829	34,284	1028,58	1,83	34,287	1028,58	3,1	0,0205			6,0371	91,326	69,856
Hydro	81	0,333	-51,171	2396	17	140	1,549	33,903	1027,79	1,566	33,901	1027,78	4,48	0,0633			5,9963	91,074	69,858
Hydro	81	0,333	-51,171	2396	18	97,9	2,907	33,761	1027,36	2,988	33,757	1027,35	4,72	0,148			5,9963	90,554	69,86
Hydro	81	0,333	-51,171	2396	19	88,9	3,309	33,74	1027,27	3,312	33,741	1027,27	4,73	0,1634			5,9963	90,296	69,86
Hydro	81	0,333	-51,171	2396	20	78,1	3,353	33,738	1027,21	3,355	33,74	1027,21	4,74	0,1629			5,9963	90,238	69,861
Hydro	81	0,333	-51,171	2396	21	39,4	3,354	33,738	1027,03	3,355	33,74	1027,03	4,74	0,1671			5,9963	90,203	69,862
Hydro	81	0,332	-51,171	2396	24	4,1	3,348	33,738	1026,87	3,349	33,74	1026,87	4,74	0,1678			5,9963	90,013	69,864
Hydro	82	0,009	-51,431	2674	1	2666,5	0,487	34,673	1040,13	0,486	34,677	1040,13	3,17	0,01			6,0371	91,635	70,037
Hydro	82	0,009	-51,431	2674	2	2499,9	0,543	34,676	1039,37	0,542	34,68	1039,38	3,16	0,011			5,9963	91,732	70,042
Hydro	82	0,009	-51,431	2674	3	2250,4	0,672	34,683	1038,24	0,671	34,686	1038,24	3,12	0,0107			5,9963	91,741	70,047

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	82	0,009	-51,431	2674	4	1999,9	0,853	34,693	1037,09	0,852	34,696	1037,09	3,08	0,0091			6,0371	91,759	70,052
Hydro	82	0,008	-51,43	2674	5	1798,4	1,028	34,703	1036,16	1,028	34,706	1036,16	3,04	0,0117			6,0779	91,714	70,056
Hydro	82	0,008	-51,43	2674	6	1597	1,177	34,703	1035,22	1,176	34,706	1035,23	2,97	0,0098			5,9963	91,766	70,06
Hydro	82	0,008	-51,43	2674	7	1399	1,39	34,711	1034,3	1,389	34,715	1034,3	2,93	0,0129			5,9963	91,77	70,065
Hydro	82	0,008	-51,43	2674	8	1200	1,645	34,725	1033,37	1,644	34,728	1033,37	2,91	0,012			6,0371	91,757	70,069
Hydro	82	0,008	-51,43	2674	9	1000,2	1,818	34,719	1032,43	1,818	34,723	1032,43	2,84	0,0127			5,9963	91,74	70,073
Hydro	82	0,008	-51,43	2674	10	796,5	1,985	34,697	1031,45	1,984	34,7	1031,45	2,73	0,0122			5,9963	91,683	70,077
Hydro	82	0,008	-51,43	2674	11	795,4	1,982	34,696	1031,44	1,982	34,699	1031,45	2,72	0,0147			5,9963	91,67	70,077
Hydro	82	0,008	-51,43	2674	12	794,5	1,982	34,696	1031,44	1,982	34,699	1031,44	2,72	0,0146			5,9963	91,651	70,077
Hydro	82	0,008	-51,43	2674	13	597,3	2,023	34,641	1030,48	2,023	34,643	1030,48	2,58	0,0134			6,0371	91,61	70,081
Hydro	82	0,008	-51,43	2674	14	499,5	2,043	34,59	1029,98	2,043	34,592	1029,98	2,55	0,02			5,9963	91,609	70,084
Hydro	82	0,008	-51,43	2674	15	399	2,039	34,534	1029,47	2,04	34,536	1029,47	2,56	0,0186			5,9963	91,513	70,087
Hydro	82	0,008	-51,43	2674	16	247,8	1,742	34,354	1028,64	1,738	34,355	1028,64	2,91	0,0206			5,9963	91,234	70,091
Hydro	82	0,008	-51,43	2674	17	139,9	1,257	33,852	1027,77	1,251	33,855	1027,77	4,61	0,0839			5,9963	90,779	70,094
Hydro	82	0,008	-51,43	2674	18	121,2	1,851	33,773	1027,57	1,852	33,775	1027,57	4,75	0,122			5,9963	90,555	70,095
Hydro	82	0,008	-51,43	2674	19	100,3	2,408	33,716	1027,38	2,427	33,718	1027,38	4,82	0,1975			5,9963	89,909	70,096
Hydro	82	0,008	-51,43	2674	20	69,3	2,744	33,713	1027,21	2,746	33,715	1027,21	4,8	0,2118			5,9963	89,921	70,098
Hydro	82	0,008	-51,43	2674	21	27,9	2,776	33,713	1027,01	2,777	33,715	1027,01	4,81	0,2117			5,9963	89,85	70,099
Hydro	82	0,008	-51,43	2674	24	4,6	2,78	33,713	1026,9	2,78	33,715	1026,9	4,81	0,2023			5,9963	89,867	70,101
Super_ML	83	0	-51,853	2640	1	250	1,591	34,432	1028,73	1,591	34,434	1028,73	2,82	0,0121	1,5401	0,8619	55,966	91,343	70,257
Super_ML	83	0	-51,852	2640	2	180,8	0,915	34,099	1028,18	0,919	34,103	1028,19	3,83	0,0244	1,5818	0,876	55,395	91,215	70,259
Super_ML	83	0	-51,853	2640	3	147	1,152	33,851	1027,81	1,15	33,854	1027,81	4,55	0,0758	1,8048	0,9047	50,132	90,8	70,261
Super_ML	83	0	-51,853	2640	4	123,4	2,427	33,704	1027,48	2,424	33,707	1027,48	4,82	0,1532	1,8004	0,9919	55,109	90,065	70,262
Super_ML	83	0	-51,853	2640	5	123,2	2,431	33,704	1027,48	2,431	33,706	1027,48	4,82	0,1899	1,7803	0,9963	55,966	90,094	70,262
Super_ML	83	0	-51,853	2640	6	124,9	2,384	33,709	1027,49	2,374	33,712	1027,5	4,82	0,1849	1,7723	0,9919	55,966	90,088	70,262
Super_ML	83	0	-51,853	2640	7	123,9	2,401	33,707	1027,49	2,402	33,709	1027,49	4,82	0,171	1,7522	0,9939	56,741	90,092	70,262
Super_ML	83	0	-51,853	2640	8	124,8	2,35	33,712	1027,5	2,335	33,715	1027,5	4,83	0,1676	1,7038	0,9876	57,965	90,112	70,262
Super_ML	83	0	-51,854	2640	9	88,3	2,546	33,698	1027,3	2,546	33,7	1027,3	4,83	0,1668	2,2908	1,4653	63,961	89,954	70,264
Super_ML	83	0	-51,854	2640	10	59,7	2,547	33,697	1027,17	2,548	33,699	1027,17	4,82	0,1735	3,9047	2,8097	71,956	89,944	70,265
Super_ML	83	0	-51,854	2640	11	23,6	2,546	33,698	1027	2,546	33,699	1027	4,83	0,1762	12,506	9,2487	73,955	89,951	70,266
Super_ML	83	0	-51,854	2640	12	23,4	2,546	33,698	1026,99	2,546	33,699	1027	4,83	0,1806	12,553	9,2834	73,955	89,924	70,266
Super_ML	83	0,001	-51,855	2640	13	10,6	2,542	33,698	1026,93	2,543	33,699	1026,94	4,83	0,1754	22,085	16,333	73,955	89,904	70,267
Super_ML	83	0,001	-51,855	2640	14	10,9	2,542	33,698	1026,94	2,543	33,699	1026,94	4,83	0,1692	21,906	16,2	73,955	89,914	70,267
Super_ML	83	0,001	-51,855	2640	15	9,7	2,545	33,698	1026,93	2,545	33,699	1026,93	4,83	0,1681	24,486	18,108	73,955	89,857	70,267
Super_ML	83	0,001	-51,855	2640	16	9,3	2,544	33,698	1026,93	2,545	33,699	1026,93	4,83	0,1843	25,186	18,626	73,955	89,893	70,267
Super_ML	83	0,001	-51,855	2640	17	1,9	2,545	33,698	1026,89	2,545	33,699	1026,89	4,83	0,1725	83,72	61,915	73,955	89,818	70,268
Super_ML	83	0,001	-51,855	2640	18	3,8	2,542	33,698	1026,9	2,542	33,699	1026,9	4,83	0,1654	40,229	29,751	73,955	89,823	70,268
Super_ML	83	0,001	-51,855	2640	19	2,6	2,541	33,698	1026,9	2,541	33,699	1026,9	4,83	0,1731	47,543	35,16	73,955	89,523	70,269
Super_ML	83	0,001	-51,855	2640	20	1,9	2,541	33,698	1026,89	2,542	33,699	1026,9	4,83	0,1759	63,006	46,596	73,955	89,587	70,269
Super_ML	83	0,001	-51,855	2640	21	3,3	2,54	33,697	1026,9	2,541	33,699	1026,9	4,83	0,1773	39,063	29,188	74,73	88,679	70,269
Super_ML	83	0,001	-51,855	2640	24	4	2,542	33,697	1026,9	2,542	33,699	1026,91	4,83	0,1736	35,22	26,751	75,954	89,259	70,269
Super_Hydro	84	0,006	-51,867	2632	1	2551	0,465	34,673	1039,61	0,464	34,676	1039,61	3,17	0,0086			207,83	91,602	70,391
Super_Hydro	84	0,012	-51,868	2632	2	2503	0,471	34,673	1039,39	0,469	34,677	1039,4	3,16	0,0134			197,88	91,629	70,393
Super_Hydro	84	0,012	-51,868	2632	3	2500,2	0,47	34,673	1039,38	0,469	34,677	1039,38	3,17	0,0121			197,88	91,631	70,393
Super_Hydro	84	0,006	-51,867	2632	4	2300,8	0,538	34,677	1038,48	0,536	34,681	1038,48	3,14	0,0094			205,87	91,686	70,397
Super_Hydro	84	0,012	-51,868	2632	5	2300,5	0,538	34,677	1038,48	0,537	34,681	1038,48	3,14	0,0117			207,83	91,707	70,397

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_Hydro	84	0,011	-51,868	2632	6	2101,2	0,657	34,682	1037,56	0,656	34,686	1037,57	3,11	0,0097			193,88	91,734	70,401
Super_Hydro	84	0,011	-51,868	2632	7	2102	0,657	34,682	1037,57	0,656	34,686	1037,57	3,11	0,0092			191,88	91,74	70,401
Super_Hydro	84	0	-51,867	2632	8	2000,5	0,693	34,684	1037,1	0,692	34,688	1037,11	3,1	0,0119			167,9	91,738	70,404
Super_Hydro	84	0,011	-51,867	2632	9	1800,8	0,804	34,688	1036,18	0,803	34,692	1036,19	3,06	0,0116			311,81	91,745	70,408
Super_Hydro	84	0,011	-51,868	2632	10	1601,1	0,983	34,697	1035,26	0,981	34,7	1035,26	3,02	0,0088			396,9	91,755	70,411
Super_Hydro	84	0,014	-51,867	2632	11	1395,6	1,161	34,704	1034,3	1,159	34,708	1034,31	2,97	0,0096			426,07	91,753	70,415
Super_Hydro	84	0,015	-51,869	2632	12	1201,3	1,37	34,711	1033,39	1,369	34,715	1033,4	2,92	0,0082			276,03	91,744	70,418
Super_Hydro	84	0,004	-51,867	2632	13	1001,1	1,559	34,712	1032,45	1,558	34,716	1032,45	2,87	0,0136			353,78	91,74	70,423
Super_Hydro	84	0,012	-51,869	2632	14	798,1	1,734	34,699	1031,48	1,733	34,702	1031,49	2,76	0,014			535,55	91,703	70,426
Super_Hydro	84	0,007	-51,868	2632	15	597,7	1,85	34,659	1030,51	1,849	34,662	1030,51	2,62	0,0127			589,68	91,641	70,43
Super_Hydro	84	0,005	-51,868	2632	16	401,1	1,87	34,558	1029,51	1,87	34,562	1029,51	2,57	0,0162			611,63	91,498	70,434
Super_Hydro	84	0,007	-51,869	2632	17	299,7	1,746	34,489	1028,99	1,745	34,492	1028,99	2,66	0,0138			518,58	91,451	70,436
Super_Hydro	84	0,002	-51,867	2632	18	200,4	1,188	34,26	1028,39	1,188	34,263	1028,39	3,25	0,0178			415,34	91,377	70,439
Super_Hydro	84	0	-51,867	2632	19	150,9	0,805	34,005	1027,97	0,805	34,011	1027,98	4,09	0,0389			351,71	91,207	70,441
Super_Hydro	84	0,007	-51,869	2632	20	99,6	2,043	33,739	1027,43	2,03	33,743	1027,43	4,77	0,1425			287,82	90,389	70,443
Super_Hydro	84	0	-51,867	2632	21	49	2,533	33,698	1027,12	2,533	33,701	1027,12	4,82	0,1872			257,84	89,99	70,445
Super_Hydro	84	0,002	-51,867	2632	24	4,9	2,528	33,698	1026,91	2,528	33,701	1026,91	4,83	0,1502			273,83	89,959	70,447
Super_REE	85	-0,012	-51,858	2568	1	2537,6	0,473	34,673	1039,55	0,472	34,676	1039,55	3,17	0,0067			6,1187	91,641	70,898
Super_REE	85	-0,012	-51,858	2568	2	2537,5	0,473	34,673	1039,55	0,472	34,676	1039,55	3,17	0,008			6,0371	91,652	70,898
Super_REE	85	-0,012	-51,858	2568	3	2341	0,5	34,675	1038,66	0,499	34,678	1038,66	3,16	0,01			5,9963	91,712	70,902
Super_REE	85	-0,012	-51,858	2568	4	2340,3	0,501	34,675	1038,66	0,5	34,678	1038,66	3,16	0,0087			5,9963	91,705	70,902
Super_REE	85	-0,012	-51,858	2568	5	1698,5	0,866	34,691	1035,71	0,865	34,694	1035,71	3,04	0,0118			6,0371	91,775	70,91
Super_REE	85	-0,012	-51,858	2568	6	1700,1	0,867	34,69	1035,72	0,866	34,694	1035,72	3,04	0,0089			6,0371	91,778	70,91
Super_REE	85	-0,012	-51,858	2568	7	1129,5	1,482	34,713	1033,05	1,481	34,717	1033,06	2,9	0,0125			5,9963	91,762	70,918
Super_REE	85	-0,012	-51,858	2568	8	1129,6	1,482	34,713	1033,05	1,481	34,716	1033,06	2,9	0,012			5,9963	91,775	70,919
Super_REE	85	-0,012	-51,858	2568	9	747,5	1,745	34,69	1031,24	1,745	34,693	1031,24	2,73	0,0134			5,9963	91,708	70,925
Super_REE	85	-0,012	-51,858	2568	10	750,2	1,749	34,689	1031,25	1,748	34,692	1031,25	2,73	0,0138			5,9963	91,711	70,925
Super_REE	85	-0,012	-51,858	2568	11	418,9	1,897	34,614	1029,64	1,898	34,616	1029,64	2,56	0,0145			5,9963	91,638	70,93
Super_REE	85	-0,012	-51,858	2568	12	418,3	1,901	34,605	1029,63	1,901	34,608	1029,63	2,56	0,0143			5,9963	91,625	70,93
Super_REE	85	-0,012	-51,858	2568	13	419,3	1,902	34,604	1029,63	1,901	34,607	1029,63	2,56	0,0148			5,9963	91,624	70,93
Super_REE	85	-0,012	-51,858	2568	14	419,4	1,902	34,604	1029,63	1,902	34,606	1029,63	2,55	0,0153			6,0371	91,612	70,93
Super_REE	85	-0,012	-51,858	2568	15	330,3	1,823	34,525	1029,16	1,822	34,527	1029,16	2,6	0,0148			5,9963	91,502	70,933
Super_REE	85	-0,012	-51,858	2568	16	329,7	1,82	34,523	1029,15	1,821	34,526	1029,16	2,6	0,0135			5,9963	91,488	70,933
Super_REE	85	-0,012	-51,858	2568	17	249,9	1,471	34,383	1028,7	1,472	34,386	1028,7	2,92	0,014			5,9963	91,433	70,935
Super_REE	85	-0,012	-51,858	2568	18	250,2	1,472	34,383	1028,7	1,472	34,386	1028,7	2,93	0,0151			5,9963	91,432	70,935
Super_REE	85	-0,012	-51,858	2568	19	169	0,868	34,073	1028,11	0,868	34,075	1028,11	3,83	0,0309			5,9963	91,3	70,938
Super_REE	85	-0,012	-51,858	2568	20	167,6	0,85	34,057	1028,09	0,851	34,06	1028,09	3,93	0,0323			5,9963	91,28	70,938
Super_REE	85	-0,012	-51,858	2568	21	57,6	2,534	33,698	1027,16	2,534	33,7	1027,16	4,82	0,2134			5,9963	89,976	70,941
Super_REE	85	-0,012	-51,858	2568	24	58,4	2,534	33,698	1027,16	2,535	33,7	1027,16	4,82	0,2007			5,9963	89,97	70,941
Super_PoTh	86	-0,002	-51,865	2568	1	1001,9	1,606	34,716	1032,45	1,605	34,719	1032,46	2,88	0,0126			5,9963	91,738	71,083
Super_PoTh	86	-0,002	-51,865	2568	2	800,4	1,717	34,7	1031,5	1,717	34,703	1031,5	2,78	0,0139			6,0371	91,738	71,088
Super_PoTh	86	-0,002	-51,865	2568	3	601,1	1,825	34,672	1030,54	1,825	34,674	1030,54	2,66	0,0137			5,9963	91,688	71,092
Super_PoTh	86	-0,002	-51,865	2568	4	398,7	1,919	34,591	1029,52	1,919	34,594	1029,52	2,55	0,0151			5,9963	91,589	71,096
Super_PoTh	86	-0,002	-51,865	2568	5	347,6	1,843	34,545	1029,25	1,844	34,547	1029,25	2,59	0,0158			5,9963	91,486	71,098
Super_PoTh	86	-0,002	-51,865	2568	6	297,6	1,776	34,502	1028,99	1,777	34,504	1028,99	2,64	0,0155			5,9963	91,44	71,1
Super_PoTh	86	-0,002	-51,865	2568	7	247,3	1,606	34,437	1028,72	1,606	34,439	1028,72	2,79	0,0176			5,9963	91,451	71,102

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_PoTh	86	-0,001	-51,865	2568	8	199,6	1,213	34,272	1028,39	1,216	34,276	1028,39	3,24	0,0191			5,9963	91,413	71,103
Super_PoTh	86	-0,001	-51,866	2568	9	175,4	0,945	34,14	1028,19	0,946	34,142	1028,19	3,66	0,0251			5,9963	91,356	71,104
Super_PoTh	86	0	-51,866	2568	10	155,1	0,844	34,047	1028,02	0,844	34,048	1028,03	3,96	0,0344			5,9963	91,268	71,105
Super_PoTh	86	0	-51,867	2568	11	145,7	0,91	33,905	1027,86	0,908	33,908	1027,86	4,45	0,0685			5,9963	91,079	71,107
Super_PoTh	86	-0,001	-51,867	2568	12	119,8	1,804	33,76	1027,56	1,817	33,761	1027,56	4,71	0,1169			5,9963	90,511	71,108
Super_PoTh	86	-0,001	-51,867	2568	13	120,3	1,891	33,75	1027,55	1,936	33,747	1027,54	4,71	0,1251			5,9963	90,503	71,108
Super_PoTh	86	0	-51,867	2568	14	99,6	2,515	33,697	1027,35	2,514	33,699	1027,36	4,82	0,1911			5,9963	90,034	71,11
Super_PoTh	86	0	-51,868	2568	15	79,7	2,529	33,694	1027,26	2,529	33,696	1027,26	4,82	0,2051			5,9963	90,036	71,111
Super_PoTh	86	0	-51,868	2568	16	60,2	2,529	33,692	1027,16	2,529	33,694	1027,17	4,82	0,1896			5,9963	89,987	71,112
Super_PoTh	86	0	-51,868	2568	17	40,9	2,527	33,693	1027,07	2,528	33,695	1027,08	4,82	0,2096			5,9963	90,059	71,113
Super_PoTh	86	0	-51,868	2568	18	38,8	2,527	33,693	1027,06	2,527	33,694	1027,07	4,82	0,1905			5,9963	90,042	71,113
Super_PoTh	86	0	-51,869	2568	19	29,1	2,529	33,69	1027,02	2,529	33,692	1027,02	4,83	0,1849			5,9963	90,089	71,114
Super_PoTh	86	0	-51,869	2568	20	20,3	2,526	33,692	1026,98	2,526	33,694	1026,98	4,83	0,1927			5,9963	90,058	71,115
Super_PoTh	86	0	-51,869	2568	21	9,2	2,527	33,691	1026,92	2,527	33,693	1026,93	4,83	0,1776			5,9963	90,018	71,116
Super_PoTh	86	0	-51,869	2568	24	2,6	2,53	33,691	1026,89	2,531	33,691	1026,89	4,83	0,1698			5,9963	89,294	71,117
Super_BaSi	87	0,004	-51,878	2554	1	1003,9	1,554	34,715	1032,47	1,554	34,718	1032,47	2,9	0,01			5,9963	91,772	71,213
Super_BaSi	87	0,004	-51,878	2554	2	848,7	1,684	34,704	1031,73	1,684	34,707	1031,73	2,81	0,012			5,9963	91,748	71,218
Super_BaSi	87	0,004	-51,878	2554	3	703,9	1,823	34,681	1031,02	1,823	34,684	1031,03	2,69	0,0141			5,9963	91,713	71,221
Super_BaSi	87	0,003	-51,879	2554	4	596,2	1,862	34,654	1030,5	1,862	34,657	1030,5	2,62	0,0118			6,2003	91,688	71,224
Super_BaSi	87	0,003	-51,879	2554	5	553,3	1,892	34,641	1030,28	1,892	34,643	1030,29	2,59	0,0122			7,9543	91,688	71,226
Super_BaSi	87	0,004	-51,88	2554	6	494,7	1,92	34,628	1030	1,92	34,63	1030	2,57	0,014			7,9951	91,659	71,228
Super_BaSi	87	0,004	-51,88	2554	7	453,1	1,923	34,615	1029,79	1,923	34,617	1029,8	2,56	0,0119			7,9951	91,648	71,23
Super_BaSi	87	0,003	-51,879	2554	8	397,7	1,898	34,59	1029,52	1,898	34,592	1029,52	2,56	0,0145			7,9951	91,578	71,231
Super_BaSi	87	0,004	-51,879	2554	9	348,7	1,867	34,56	1029,27	1,867	34,562	1029,27	2,57	0,0143			7,9951	91,533	71,233
Super_BaSi	87	0,004	-51,88	2554	10	299,9	1,781	34,51	1029,01	1,781	34,511	1029,01	2,64	0,0161			7,9951	91,5	71,235
Super_BaSi	87	0,004	-51,88	2554	11	274,7	1,735	34,484	1028,87	1,734	34,485	1028,87	2,68	0,0193			9,9939	91,476	71,236
Super_BaSi	87	0,005	-51,88	2554	12	246,3	1,659	34,455	1028,72	1,66	34,457	1028,72	2,74	0,0163			9,9939	91,457	71,238
Super_BaSi	87	0,005	-51,88	2554	13	199	1,175	34,258	1028,38	1,175	34,259	1028,38	3,28	0,0181			11,993	91,411	71,239
Super_BaSi	87	0,006	-51,88	2554	14	177,1	0,895	34,066	1028,14	0,897	34,069	1028,14	3,89	0,0275			11,993	91,306	71,24
Super_BaSi	87	0,006	-51,88	2554	15	148,9	1,256	33,839	1027,8	1,257	33,841	1027,8	4,59	0,0745			13,991	90,867	71,242
Super_BaSi	87	0,006	-51,88	2554	16	121,6	2,45	33,701	1027,47	2,459	33,702	1027,47	4,81	0,1637			15,99	90,11	71,243
Super_BaSi	87	0,005	-51,88	2554	17	120,9	2,463	33,7	1027,46	2,463	33,702	1027,46	4,81	0,1753			15,99	90,114	71,243
Super_BaSi	87	0,005	-51,88	2554	18	99,8	2,52	33,693	1027,35	2,52	33,695	1027,35	4,82	0,1727			19,988	90,112	71,245
Super_BaSi	87	0,006	-51,88	2554	19	78,5	2,517	33,693	1027,25	2,517	33,695	1027,25	4,83	0,1822			19,988	90,104	71,246
Super_BaSi	87	0,006	-51,881	2554	20	41	2,513	33,694	1027,08	2,514	33,695	1027,08	4,83	0,1697			23,985	90,115	71,247
Super_BaSi	87	0,006	-51,881	2554	21	40,5	2,513	33,693	1027,07	2,514	33,695	1027,08	4,83	0,1614			23,985	90,106	71,247
Super_BaSi	87	0,005	-51,881	2554	24	10,7	2,514	33,693	1026,93	2,514	33,695	1026,94	4,83	0,165			25,984	90,113	71,249
Hydro	88	0,002	-52,273	2715	1	2699,4	0,443	34,67	1040,28	0,443	34,673	1040,28	3,2	0,012			5,9963	91,665	71,993
Hydro	88	0,002	-52,273	2715	2	2499,5	0,44	34,671	1039,38	0,439	34,674	1039,38	3,18	0,0094			5,9963	91,699	71,997
Hydro	88	0,002	-52,273	2715	3	2300	0,506	34,675	1038,48	0,505	34,678	1038,48	3,16	0,012			5,9963	91,738	72,001
Hydro	88	0,002	-52,273	2715	4	2099,4	0,576	34,678	1037,56	0,575	34,682	1037,56	3,13	0,0097			5,9963	91,766	72,006
Hydro	88	0,002	-52,273	2715	5	1999,5	0,639	34,681	1037,1	0,638	34,684	1037,11	3,11	0,0071			5,9963	91,769	72,009
Hydro	88	0,002	-52,273	2715	6	1798,4	0,731	34,686	1036,18	0,73	34,689	1036,18	3,08	0,0086			5,9963	91,787	72,013
Hydro	88	0,002	-52,273	2715	7	1798,7	0,731	34,686	1036,18	0,73	34,689	1036,18	3,08	0,0077			5,9963	91,785	72,013
Hydro	88	0,002	-52,273	2715	8	1600,2	0,915	34,694	1035,26	0,914	34,697	1035,26	3,03	0,0127			5,9963	91,793	72,018
Hydro	88	0,002	-52,273	2715	9	1599,7	0,916	34,694	1035,26	0,915	34,697	1035,26	3,03	0,011			5,9963	91,776	72,018

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	88	0,002	-52,273	2715	10	1399,4	1,055	34,7	1034,33	1,053	34,703	1034,33	2,99	0,0098			5,9963	91,791	72,022
Hydro	88	0,002	-52,273	2715	11	1401,5	1,054	34,699	1034,34	1,054	34,703	1034,34	2,99	0,0094			5,9963	91,791	72,022
Hydro	88	0,002	-52,273	2715	12	1201,6	1,223	34,703	1033,4	1,222	34,707	1033,41	2,94	0,0116			5,9963	91,787	72,026
Hydro	88	0,002	-52,273	2715	13	1000	1,471	34,709	1032,45	1,47	34,713	1032,46	2,88	0,012			5,9963	91,763	72,03
Hydro	88	0,002	-52,273	2715	14	799	1,667	34,705	1031,5	1,667	34,708	1031,5	2,8	0,0133			5,9963	91,653	72,035
Hydro	88	0,002	-52,273	2715	15	597,1	1,735	34,665	1030,52	1,735	34,668	1030,53	2,66	0,0123			5,9963	91,685	72,039
Hydro	88	0,002	-52,273	2715	16	447,9	1,721	34,605	1029,78	1,72	34,608	1029,78	2,6	0,0122			5,9963	91,604	72,042
Hydro	88	0,002	-52,273	2715	17	249,9	1,41	34,37	1028,69	1,411	34,373	1028,69	2,97	0,0172			5,9963	91,385	72,047
Hydro	88	0,002	-52,273	2715	18	160,8	0,886	34,069	1028,07	0,885	34,07	1028,07	3,86	0,0274			5,9963	91,337	72,049
Hydro	88	0,002	-52,273	2715	19	139,8	0,811	33,963	1027,89	0,811	33,964	1027,89	4,22	0,0598			5,9963	91,229	72,051
Hydro	88	0,002	-52,273	2715	20	110,5	1,447	33,787	1027,56	1,478	33,786	1027,56	4,65	0,0953			5,9963	90,935	72,052
Hydro	88	0,002	-52,273	2715	21	48,7	2,372	33,697	1027,13	2,372	33,699	1027,13	4,84	0,1796			5,9963	90,223	72,054
Hydro	88	0,002	-52,273	2715	24	8,1	2,378	33,697	1026,94	2,378	33,699	1026,94	4,84	0,1736			5,9963	90,196	72,057
Hydro	89	0	-52,602	2701	1	2690,4	0,428	34,669	1040,24	0,427	34,673	1040,24	3,2	0,0123			5,9963	91,688	72,208
Hydro	89	0	-52,602	2701	2	2498,9	0,448	34,671	1039,38	0,447	34,674	1039,38	3,18	0,0112			5,9963	91,716	72,213
Hydro	89	0	-52,602	2701	3	2500,2	0,448	34,671	1039,38	0,447	34,674	1039,39	3,18	0,0121			5,9963	91,718	72,213
Hydro	89	0	-52,602	2701	4	2299,7	0,497	34,673	1038,47	0,496	34,677	1038,48	3,15	0,0091			5,9963	91,762	72,217
Hydro	89	0	-52,602	2701	5	2099	0,572	34,678	1037,56	0,571	34,681	1037,56	3,13	0,0091			5,9963	91,766	72,22
Hydro	89	0	-52,602	2701	6	1898,4	0,692	34,684	1036,64	0,692	34,688	1036,64	3,1	0,0088			5,9963	91,774	72,224
Hydro	89	0	-52,602	2701	7	1697,3	0,843	34,691	1035,71	0,842	34,694	1035,71	3,05	0,0119			7,7096	91,791	72,227
Hydro	89	0	-52,602	2701	8	1500	1,019	34,698	1034,79	1,018	34,702	1034,8	3,01	0,0101			7,9951	91,785	72,231
Hydro	89	0	-52,602	2701	9	1299,4	1,174	34,7	1033,86	1,171	34,703	1033,86	2,95	0,0121			7,9951	91,774	72,235
Hydro	89	0	-52,602	2701	10	1099	1,412	34,708	1032,91	1,413	34,711	1032,92	2,9	0,0083			9,9939	91,76	72,238
Hydro	89	0	-52,602	2701	11	900,1	1,657	34,71	1031,97	1,657	34,713	1031,98	2,83	0,0121			11,993	91,744	72,242
Hydro	89	0	-52,602	2701	12	798,7	1,738	34,704	1031,49	1,739	34,707	1031,49	2,78	0,0133			11,993	91,718	72,244
Hydro	89	0	-52,602	2701	13	699,7	1,778	34,689	1031,01	1,777	34,692	1031,02	2,72	0,0116			12,115	91,698	72,246
Hydro	89	0	-52,602	2701	14	598,7	1,795	34,67	1030,53	1,795	34,673	1030,53	2,66	0,0122			13,991	91,68	72,247
Hydro	89	0	-52,602	2701	15	499,8	1,87	34,646	1030,04	1,87	34,648	1030,04	2,6	0,0152			13,991	91,662	72,25
Hydro	89	0	-52,602	2701	16	399,2	1,867	34,595	1029,53	1,867	34,597	1029,53	2,56	0,0153			14,481	91,578	72,252
Hydro	89	0	-52,602	2701	17	250,5	1,852	34,488	1028,75	1,85	34,49	1028,75	2,63	0,0184			15,99	91,481	72,254
Hydro	89	0	-52,602	2701	18	148,2	0,899	33,996	1027,95	0,9	33,997	1027,95	4,16	0,0319			17,989	91,106	72,256
Hydro	89	0	-52,602	2701	19	119,3	1,547	33,814	1027,62	1,557	33,815	1027,62	4,66	0,1097			21,987	90,743	72,258
Hydro	89	0	-52,602	2701	20	99,9	2,4	33,711	1027,38	2,401	33,714	1027,38	4,8	0,1564			21,987	90,352	72,259
Hydro	89	0	-52,602	2701	21	50,2	2,438	33,706	1027,14	2,438	33,708	1027,14	4,82	0,155			23,985	90,322	72,26
Hydro	89	0	-52,603	2701	24	6,1	2,44	33,705	1026,93	2,44	33,707	1026,93	4,83	0,1542			29,982	90,309	72,262
Hydro	90	0	-52,93	2624	1	2612,1	0,415	34,669	1039,89	0,414	34,672	1039,89	3,19	0,0111			897,29	91,665	72,393
Hydro	90	0	-52,93	2624	2	2499,8	0,423	34,67	1039,38	0,422	34,673	1039,39	3,18	0,0101			857,07	91,701	72,395
Hydro	90	0	-52,93	2624	3	2301,4	0,454	34,672	1038,49	0,453	34,675	1038,49	3,16	0,0091			889,99	91,739	72,399
Hydro	90	0	-52,93	2624	4	2098,4	0,482	34,674	1037,56	0,481	34,677	1037,57	3,14	0,0117			900,47	91,745	72,403
Hydro	90	0	-52,931	2624	5	1899,4	0,528	34,675	1036,65	0,527	34,678	1036,66	3,12	0,0103			593,64	91,771	72,406
Hydro	90	-0,001	-52,93	2624	6	1747,4	0,634	34,68	1035,95	0,633	34,684	1035,96	3,09	0,011			529,76	91,792	72,409
Hydro	90	0	-52,93	2624	7	1500,3	0,872	34,694	1034,81	0,871	34,697	1034,81	3,05	0,0084			709,57	91,814	72,413
Hydro	90	0	-52,93	2624	8	1298,7	1,057	34,701	1033,87	1,057	34,704	1033,87	3	0,01			882,6	91,811	72,417
Hydro	90	0	-52,93	2624	9	1099,9	1,236	34,707	1032,94	1,235	34,71	1032,94	2,95	0,0098			1114,5	91,813	72,425
Hydro	90	0	-52,93	2624	10	899,3	1,423	34,705	1031,99	1,422	34,708	1031,99	2,88	0,012			766,35	91,791	72,428
Hydro	90	0	-52,93	2624	11	798,7	1,596	34,709	1031,51	1,596	34,712	1031,51	2,84	0,0095			955,22	91,79	72,431

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	90	0	-52,93	2624	12	699,7	1,714	34,704	1031,03	1,714	34,707	1031,04	2,78	0,0135			1176,9	91,766	72,434
Hydro	90	0	-52,93	2624	13	597,9	1,691	34,683	1030,55	1,691	34,686	1030,55	2,73	0,0131			1340,8	91,767	72,436
Hydro	90	0	-52,93	2624	14	499,5	1,765	34,66	1030,06	1,765	34,663	1030,06	2,66	0,0128			1067,5	91,749	72,439
Hydro	90	0	-52,93	2624	15	398,6	1,824	34,629	1029,56	1,823	34,631	1029,56	2,6	0,0123			1181,4	91,708	72,441
Hydro	90	0	-52,93	2624	16	249,3	1,713	34,52	1028,78	1,713	34,522	1028,78	2,66	0,0121			1099,6	91,602	72,444
Hydro	90	0	-52,93	2624	17	179,2	1,174	34,332	1028,34	1,171	34,333	1028,34	3,14	0,0155			1339	91,523	72,446
Hydro	90	0	-52,93	2624	18	136,9	0,592	33,997	1027,91	0,592	33,999	1027,92	4,17	0,0699			1278,9	91,25	72,448
Hydro	90	0	-52,93	2624	19	108,2	1,249	33,798	1027,57	1,253	33,799	1027,58	4,8	0,1448			1013,4	90,869	72,45
Hydro	90	0	-52,93	2624	20	67,7	1,653	33,749	1027,32	1,653	33,752	1027,32	4,88	0,163			1163,8	90,522	72,451
Hydro	90	0	-52,93	2624	21	30,2	1,73	33,744	1027,13	1,73	33,746	1027,13	4,88	0,1378			1126,1	90,463	72,453
Hydro	90	0	-52,93	2624	24	3,9	1,749	33,742	1027	1,749	33,744	1027	4,88	0,0561			1121,2	90,212	72,455
Intercal_REE	91	0	-52,982	2624	1	1010,8	1,255	34,697	1032,51	1,254	34,7	1032,52	2,93	0,011			1034,5	91,832	72,539
Intercal_REE	91	0	-52,982	2624	2	1011,6	1,259	34,697	1032,52	1,258	34,7	1032,52	2,93	0,0124			1019,4	91,836	72,54
Intercal_REE	91	0	-52,982	2624	3	1012	1,259	34,697	1032,52	1,257	34,7	1032,52	2,93	0,0119			1017,9	91,84	72,54
Intercal_REE	91	0	-52,982	2624	4	1010,6	1,26	34,697	1032,51	1,259	34,7	1032,52	2,93	0,0117			1015,4	91,833	72,54
Intercal_REE	91	0	-52,982	2624	5	949,4	1,33	34,699	1032,22	1,329	34,702	1032,23	2,91	0,0118			1065,3	91,823	72,542
Intercal_REE	91	0	-52,982	2624	6	950,8	1,333	34,699	1032,23	1,333	34,702	1032,23	2,91	0,0105			1107,1	91,829	72,543
Intercal_REE	91	0	-52,982	2624	7	502,5	1,771	34,672	1030,08	1,77	34,674	1030,09	2,69	0,0139			1113,5	91,766	72,549
Intercal_REE	91	0	-52,982	2624	8	504,6	1,773	34,671	1030,09	1,773	34,673	1030,09	2,68	0,0135			1143,3	91,766	72,55
Intercal_REE	91	0	-52,982	2624	9	504,6	1,774	34,671	1030,09	1,773	34,673	1030,09	2,68	0,0157			1159	91,757	72,55
Intercal_REE	91	0	-52,982	2624	10	505,3	1,774	34,671	1030,1	1,774	34,673	1030,1	2,68	0,0126			1197,8	91,766	72,55
Intercal_REE	91	0	-52,982	2624	11	385	1,825	34,623	1029,49	1,825	34,626	1029,49	2,61	0,0132			1204,9	91,688	72,553
Intercal_REE	91	0	-52,982	2624	12	384,3	1,825	34,623	1029,49	1,825	34,626	1029,49	2,61	0,0147			1208,8	91,693	72,553
Intercal_REE	91	0	-52,982	2624	13	383,6	1,825	34,624	1029,49	1,825	34,626	1029,49	2,61	0,0126			1212,6	91,686	72,553
Intercal_REE	91	0	-52,982	2624	14	384,5	1,825	34,623	1029,49	1,825	34,626	1029,49	2,61	0,0171			1221,9	91,686	72,553
Intercal_REE	91	0	-52,982	2624	15	299,5	1,864	34,586	1029,06	1,865	34,588	1029,06	2,58	0,015			1143,5	91,606	72,556
Intercal_REE	91	0	-52,982	2624	16	298,5	1,869	34,584	1029,05	1,869	34,587	1029,05	2,58	0,0133			1270,6	91,594	72,556
Intercal_REE	91	0	-52,982	2624	17	150,7	0,705	34,197	1028,13	0,702	34,197	1028,13	3,6	0,0383			1543,3	91,489	72,559
Intercal_REE	91	0	-52,982	2624	18	147,9	0,675	34,182	1028,11	0,685	34,189	1028,11	3,6	0,0456			1559,9	91,468	72,559
Intercal_REE	91	0	-52,982	2624	19	130	0,615	33,984	1027,87	0,619	33,979	1027,87	4,13	0,0982			1207	91,13	72,56
Intercal_REE	91	0	-52,982	2624	20	129,7	0,604	33,971	1027,86	0,603	33,972	1027,86	4,24	0,0948			1207,9	91,156	72,56
Intercal_REE	91	0	-52,982	2624	21	56	1,52	33,777	1027,29	1,52	33,779	1027,29	4,91	0,1863			1246,4	90,575	72,563
Intercal_REE	91	0	-52,982	2624	24	58,2	1,52	33,777	1027,3	1,52	33,779	1027,3	4,91	0,1654			1509,9	90,571	72,564
Hydro	92	0,001	-53,261	2190	1	2177,1	0,472	34,672	1037,92	0,471	34,676	1037,92	3,16	0,0092			176,46	91,752	72,693
Hydro	92	0,001	-53,261	2190	2	2098,3	0,484	34,673	1037,56	0,483	34,676	1037,57	3,15	0,0097			203,88	91,765	72,695
Hydro	92	0,001	-53,261	2190	3	2100,3	0,484	34,673	1037,57	0,483	34,676	1037,58	3,15	0,011			203,88	91,766	72,695
Hydro	92	0,001	-53,261	2190	4	1898,2	0,521	34,675	1036,65	0,52	34,678	1036,65	3,12	0,0103			145,83	91,769	72,698
Hydro	92	0,001	-53,261	2190	5	1699,9	0,578	34,677	1035,74	0,578	34,681	1035,74	3,1	0,0105			121,93	91,791	72,702
Hydro	92	0,001	-53,261	2190	6	1499,1	0,666	34,681	1034,81	0,666	34,684	1034,81	3,06	0,0104			149,01	91,792	72,705
Hydro	92	0,001	-53,261	2190	7	1500,3	0,667	34,681	1034,82	0,666	34,684	1034,82	3,07	0,0068			147,91	91,796	72,705
Hydro	92	0,001	-53,261	2190	8	1299,2	0,818	34,685	1033,88	0,818	34,688	1033,88	3,02	0,0091			145,91	91,791	72,708
Hydro	92	0,001	-53,261	2190	9	1099,3	1,062	34,692	1032,94	1,061	34,695	1032,94	2,96	0,0133			201,96	91,769	72,711
Hydro	92	0,001	-53,261	2190	10	999,7	1,131	34,694	1032,47	1,13	34,697	1032,47	2,93	0,0111			173,16	91,766	72,713
Hydro	92	0,001	-53,261	2190	11	897,8	1,23	34,696	1031,99	1,227	34,699	1031,99	2,91	0,0095			131,92	91,764	72,715
Hydro	92	0,001	-53,261	2190	12	798,8	1,348	34,696	1031,52	1,347	34,699	1031,52	2,87	0,0104			109,93	91,764	72,717
Hydro	92	0,001	-53,261	2190	13	699,1	1,432	34,694	1031,05	1,432	34,697	1031,05	2,83	0,0126			83,949	91,733	72,719

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	92	0,001	-53,261	2190	14	600	1,535	34,685	1030,57	1,535	34,687	1030,57	2,78	0,012			82,603	91,675	72,721
Hydro	92	0,001	-53,261	2190	15	497	1,611	34,67	1030,07	1,611	34,673	1030,07	2,72	0,0152			96,186	91,686	72,723
Hydro	92	0,001	-53,261	2190	16	400,6	1,658	34,644	1029,6	1,658	34,647	1029,6	2,67	0,0129			69,957	91,666	72,725
Hydro	92	0,001	-53,261	2190	17	299,1	1,599	34,587	1029,08	1,599	34,589	1029,08	2,67	0,014			61,962	91,478	72,727
Hydro	92	0,001	-53,261	2190	18	159,6	0,348	34,068	1028,09	0,347	34,071	1028,1	4,06	0,0496			65,96	91,213	72,73
Hydro	92	0,001	-53,261	2190	19	129	0,935	33,849	1027,74	0,944	33,849	1027,73	4,73	0,1435			100,14	90,601	72,731
Hydro	92	0,001	-53,261	2190	20	101,4	1,368	33,787	1027,53	1,369	33,789	1027,53	4,92	0,3259			87,946	90,202	72,732
Hydro	92	0,001	-53,261	2190	21	50,7	1,388	33,786	1027,28	1,389	33,788	1027,29	4,93	0,2683			67,917	90,138	72,733
Hydro	92	0,001	-53,261	2190	24	4,4	1,385	33,786	1027,06	1,386	33,788	1027,07	4,93	0,2583			53,967	90,031	72,735
Hydro	93	0,001	-53,591	2693	1	2664,9	0,365	34,667	1040,13	0,364	34,67	1040,13	3,2	0,0063			5,9963	91,661	72,861
Hydro	93	0,001	-53,591	2693	2	2500,6	0,372	34,668	1039,39	0,371	34,671	1039,39	3,2	0,0097			5,9963	91,763	72,865
Hydro	93	0,002	-53,591	2693	3	2301,8	0,393	34,669	1038,49	0,392	34,672	1038,5	3,18	0,0078			5,9963	91,773	72,868
Hydro	93	0,002	-53,591	2693	4	2101,5	0,433	34,671	1037,58	0,432	34,674	1037,58	3,15	0,0066			5,9963	91,786	72,872
Hydro	93	0,001	-53,59	2693	5	1899,7	0,482	34,673	1036,66	0,481	34,677	1036,66	3,12	0,0092			5,9963	91,791	72,875
Hydro	93	0,002	-53,591	2693	6	1751,7	0,554	34,676	1035,98	0,552	34,679	1035,98	3,1	0,0094			5,9963	91,791	72,878
Hydro	93	0,002	-53,591	2693	7	1500,3	0,707	34,681	1034,81	0,706	34,685	1034,82	3,05	0,012			5,9963	91,814	72,882
Hydro	93	0,002	-53,591	2693	8	1299,7	0,857	34,687	1033,88	0,856	34,69	1033,88	3,01	0,0072			5,9963	91,815	72,885
Hydro	93	0,001	-53,591	2693	9	1100,9	1,049	34,692	1032,95	1,049	34,696	1032,95	2,95	0,0114			5,9963	91,812	72,888
Hydro	93	0,002	-53,591	2693	10	902,9	1,27	34,697	1032,01	1,268	34,701	1032,02	2,89	0,0116			5,9963	91,779	72,892
Hydro	93	0,002	-53,591	2693	11	800,8	1,349	34,698	1031,53	1,349	34,701	1031,53	2,87	0,0126			5,9963	91,789	72,895
Hydro	93	0,002	-53,59	2693	12	701,5	1,43	34,694	1031,06	1,43	34,697	1031,06	2,83	0,0111			5,9963	91,759	72,901
Hydro	93	0,002	-53,591	2693	13	601,3	1,522	34,687	1030,58	1,521	34,69	1030,58	2,78	0,014			5,9963	91,713	72,905
Hydro	93	0,001	-53,591	2693	14	499,1	1,601	34,672	1030,08	1,601	34,674	1030,08	2,72	0,0148			5,9963	91,702	72,908
Hydro	93	0,001	-53,591	2693	15	400,6	1,651	34,645	1029,6	1,651	34,648	1029,6	2,67	0,0137			5,9963	91,665	72,911
Hydro	93	0,001	-53,591	2693	16	251,6	1,508	34,549	1028,83	1,508	34,551	1028,83	2,71	0,0189			5,9963	91,504	72,915
Hydro	93	0,001	-53,591	2693	17	169,3	0,934	34,361	1028,34	0,933	34,363	1028,34	3,16	0,0216			5,9963	91,585	72,917
Hydro	93	0,001	-53,592	2693	18	141,7	0,405	34,157	1028,08	0,406	34,159	1028,08	3,78	0,0552			5,9963	91,369	72,919
Hydro	93	0,001	-53,592	2693	19	121,6	0,517	33,945	1027,8	0,516	33,948	1027,81	4,46	0,139			5,9963	91,01	72,921
Hydro	93	0,001	-53,592	2693	20	79,6	1,395	33,797	1027,43	1,395	33,799	1027,43	4,92	0,2218			5,9963	90,546	72,922
Hydro	93	0	-53,592	2693	21	39,4	1,393	33,798	1027,24	1,393	33,8	1027,24	4,92	0,2067			5,9963	90,577	72,924
Hydro	93	-0,001	-53,592	2693	24	4,3	1,39	33,798	1027,07	1,391	33,799	1027,07	4,92	0,205			5,9963	90,245	72,926
Hydro	94	0,001	-53,919	2460	1	2443,6	0,38	34,668	1039,13	0,38	34,671	1039,14	3,2	0,0098			5,9963	91,673	73,07
Hydro	94	0,001	-53,919	2460	2	2447,1	0,381	34,668	1039,15	0,38	34,671	1039,15	3,2	0,0084			5,9963	91,675	73,07
Hydro	94	0,001	-53,919	2460	3	2299,2	0,38	34,668	1038,48	0,379	34,672	1038,49	3,18	0,012			5,9963	91,683	73,074
Hydro	94	0,001	-53,919	2460	4	2100,6	0,411	34,67	1037,58	0,41	34,673	1037,58	3,16	0,0079			5,9963	91,74	73,077
Hydro	94	0,001	-53,919	2460	5	1899,1	0,475	34,672	1036,66	0,474	34,675	1036,66	3,13	0,0108			5,9963	91,762	73,081
Hydro	94	0,001	-53,919	2460	6	1750,1	0,516	34,673	1035,97	0,514	34,677	1035,98	3,11	0,0115			5,9963	91,765	73,084
Hydro	94	0,001	-53,919	2460	7	1499,1	0,675	34,678	1034,81	0,674	34,682	1034,81	3,06	0,0117			5,9963	91,791	73,088
Hydro	94	0,001	-53,919	2460	8	1298,4	0,833	34,683	1033,87	0,831	34,686	1033,88	3,02	0,011			5,9963	91,793	73,092
Hydro	94	0,001	-53,919	2460	9	1098,6	1,009	34,69	1032,94	1,008	34,693	1032,94	2,98	0,0113			5,9963	91,792	73,095
Hydro	94	0,001	-53,919	2460	10	900,5	1,253	34,696	1032	1,253	34,7	1032,01	2,93	0,0118			5,9963	91,765	73,098
Hydro	94	0,001	-53,919	2460	11	799,7	1,367	34,697	1031,53	1,367	34,7	1031,53	2,9	0,0113			5,9963	91,741	73,1
Hydro	94	0,001	-53,919	2460	12	699,6	1,489	34,693	1031,04	1,489	34,696	1031,05	2,84	0,0124			5,9963	91,714	73,102
Hydro	94	0,001	-53,919	2460	13	599,9	1,563	34,685	1030,57	1,563	34,687	1030,57	2,77	0,0128			5,9963	91,699	73,104
Hydro	94	0,001	-53,919	2460	14	500,3	1,636	34,67	1030,08	1,636	34,673	1030,09	2,74	0,0131			5,9963	91,71	73,106
Hydro	94	0,001	-53,919	2460	15	350	1,671	34,614	1029,33	1,671	34,617	1029,34	2,67	0,0188			5,9963	91,582	73,109

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	94	0,001	-53,919	2460	16	251,8	1,622	34,561	1028,83	1,621	34,559	1028,83	2,3	0,0171			5,9963	91,492	73,111
Hydro	94	0,001	-53,919	2460	17	167,3	0,728	34,843	1028,73	0,705	34,273	1028,27	1,96	0,0381			5,9963	91,54	73,113
Hydro	94	0,001	-53,919	2460	18	149,9	0,535	34,233	1028,17	0,527	34,193	1028,14	2,89	0,0663			5,9963	91,459	73,114
Hydro	94	0,001	-53,919	2460	19	125,5	0,426	34,109	1027,96	0,427	34,041	1027,91	3,02	0,1179			5,9963	91,259	73,115
Hydro	94	0,001	-53,919	2460	20	88,7	1,194	33,821	1027,5	1,195	33,831	1027,51	4,37	0,1005			5,9963	91,17	73,117
Hydro	94	0,001	-53,919	2460	21	49,4	1,198	33,828	1027,32	1,199	33,831	1027,33	3,96	0,1048			5,9963	91,153	73,119
Hydro	94	0,001	-53,919	2460	24	3,2	1,198	33,83	1027,11	1,199	33,828	1027,1	4,31	0,0888			5,9963	90,375	73,12
Hydro	95	-0,001	-54,251	2640	1	2620,8	0,372	34,666	1039,93	0,371	34,671	1039,94	3,22	0,013			29,982	91,67	73,265
Hydro	95	-0,001	-54,251	2640	2	2500,4	0,375	34,667	1039,39	0,374	34,671	1039,39	3,21	0,009			31,939	91,724	73,268
Hydro	95	-0,001	-54,251	2640	3	2294,9	0,389	34,668	1038,46	0,388	34,672	1038,46	3,18	0,0088			37,977	91,74	73,271
Hydro	95	-0,001	-54,251	2640	4	2099,7	0,441	34,67	1037,57	0,44	34,674	1037,58	3,16	0,0087			39,976	91,764	73,275
Hydro	95	-0,001	-54,251	2640	5	1898,6	0,507	34,672	1036,65	0,507	34,676	1036,65	3,12	0,0101			47,971	91,778	73,278
Hydro	95	-0,001	-54,251	2640	6	1748	0,573	34,675	1035,96	0,571	34,678	1035,96	3,1	0,0106			51,968	91,784	73,28
Hydro	95	-0,001	-54,251	2640	7	1497,2	0,805	34,683	1034,79	0,804	34,687	1034,79	3,03	0,0108			65,96	91,801	73,284
Hydro	95	-0,001	-54,251	2640	8	1299,4	0,972	34,688	1033,87	0,972	34,693	1033,87	2,99	0,0113			79,951	91,81	73,288
Hydro	95	-0,001	-54,251	2640	9	1099,5	1,166	34,694	1032,93	1,165	34,699	1032,93	2,95	0,0111			87,008	91,804	73,291
Hydro	95	-0,001	-54,251	2640	10	899,4	1,452	34,701	1031,98	1,452	34,705	1031,99	2,88	0,0107			92,107	91,791	73,294
Hydro	95	-0,001	-54,251	2640	11	799,5	1,544	34,697	1031,51	1,543	34,7	1031,51	2,84	0,0099			95,941	91,764	73,296
Hydro	95	-0,001	-54,251	2640	12	699,3	1,627	34,69	1031,03	1,627	34,694	1031,03	2,79	0,0123			101,94	91,763	73,299
Hydro	95	-0,001	-54,251	2640	13	596,3	1,716	34,675	1030,53	1,715	34,679	1030,53	2,72	0,0116			107,93	91,752	73,301
Hydro	95	-0,001	-54,251	2640	14	496,4	1,762	34,653	1030,04	1,762	34,657	1030,04	2,68	0,0118			111,93	91,735	73,303
Hydro	95	-0,001	-54,251	2640	15	397,8	1,772	34,622	1029,55	1,772	34,624	1029,56	2,64	0,0135			119,93	91,688	73,305
Hydro	95	-0,001	-54,251	2640	16	248,2	1,727	34,536	1028,79	1,726	34,538	1028,79	2,67	0,018			129,92	91,585	73,307
Hydro	95	-0,001	-54,251	2640	17	167,7	0,904	34,312	1028,29	0,909	34,315	1028,29	3,29	0,0344			127,92	91,572	73,309
Hydro	95	-0,001	-54,251	2640	18	149	0,521	34,187	1028,13	0,52	34,189	1028,13	3,76	0,0747			127,92	91,429	73,31
Hydro	95	-0,001	-54,251	2640	19	119,8	0,658	33,933	1027,78	0,649	33,94	1027,78	4,5	0,084			129,92	91,354	73,311
Hydro	95	-0,001	-54,251	2640	20	78,1	1,117	33,821	1027,46	1,117	33,823	1027,46	4,91	0,0706			125,92	91,319	73,313
Hydro	95	-0,001	-54,251	2640	21	26,4	1,114	33,821	1027,22	1,115	33,823	1027,22	4,91	0,0692			119,93	91,327	73,314
Hydro	95	-0,001	-54,251	2640	24	10	1,113	33,821	1027,14	1,114	33,823	1027,14	4,92	0,0737			113,93	91,335	73,315
Hydro	96	-0,001	-54,58	1234	1	1227,9	1,124	34,69	1033,52	1,123	34,694	1033,53	2,97	0,0107			351,79	91,638	73,417
Hydro	96	-0,001	-54,58	1234	2	1230,7	1,122	34,69	1033,54	1,121	34,694	1033,54	2,97	0,0113			353,78	91,636	73,417
Hydro	96	0	-54,58	1234	3	1100,9	1,216	34,693	1032,93	1,216	34,696	1032,93	2,94	0,0138			514,06	91,698	73,421
Hydro	96	0	-54,58	1234	4	1102	1,216	34,693	1032,94	1,216	34,696	1032,94	2,94	0,0145			521,68	91,695	73,421
Hydro	96	-0,001	-54,58	1234	5	998,9	1,298	34,693	1032,45	1,298	34,697	1032,45	2,92	0,0129			523,88	91,748	73,424
Hydro	96	-0,001	-54,581	1234	6	901,1	1,387	34,693	1031,99	1,386	34,697	1031,99	2,89	0,0119			505,69	91,758	73,427
Hydro	96	-0,001	-54,58	1234	7	800,4	1,497	34,691	1031,51	1,496	34,695	1031,51	2,85	0,0092			481,59	91,765	73,429
Hydro	96	-0,001	-54,58	1234	8	699,2	1,567	34,689	1031,03	1,567	34,693	1031,04	2,82	0,0156			433,62	91,77	73,431
Hydro	96	-0,001	-54,581	1234	9	599,2	1,655	34,678	1030,55	1,655	34,682	1030,55	2,76	0,0137			393,76	91,76	73,434
Hydro	96	-0,001	-54,581	1234	10	500,5	1,733	34,657	1030,07	1,732	34,66	1030,07	2,7	0,0111			335,79	91,743	73,436
Hydro	96	-0,001	-54,581	1234	11	397,1	1,665	34,603	1029,55	1,665	34,606	1029,55	2,73	0,0147			442,87	91,64	73,438
Hydro	96	-0,001	-54,581	1234	12	298,6	1,65	34,545	1029,04	1,651	34,548	1029,04	2,73	0,0154			429,74	91,603	73,441
Hydro	96	-0,001	-54,58	1234	13	250,4	1,576	34,489	1028,77	1,575	34,492	1028,78	2,78	0,0167			345,79	91,583	73,443
Hydro	96	-0,001	-54,581	1234	14	179,8	0,777	34,273	1028,33	0,782	34,277	1028,33	3,45	0,0456			334,49	91,521	73,445
Hydro	96	-0,001	-54,581	1234	15	139,2	0,421	34,11	1028,03	0,411	34,106	1028,02	3,91	0,0857			393,76	91,395	73,447
Hydro	96	-0,001	-54,58	1234	16	110	0,999	33,799	1027,6	1,002	33,8	1027,6	4,91	0,081			384,99	91,234	73,449
Hydro	96	0	-54,58	1234	17	80,5	1,018	33,791	1027,45	1,019	33,794	1027,46	4,94	0,0809			363,9	91,202	73,451

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	96	-0,001	-54,58	1234	18	41	1,017	33,791	1027,27	1,017	33,793	1027,27	4,95	0,0742			339,79	91,178	73,452
Hydro	96	-0,001	-54,581	1234	19	5,3	1,016	33,791	1027,1	1,017	33,793	1027,1	4,95	0,0634			319,8	91,172	73,454
Hydro	97	0,004	-54,913	1433	1	1408,9	0,844	34,683	1034,38	0,845	34,687	1034,38	3,04	0,0111			864,98	91,765	73,564
Hydro	97	0,004	-54,913	1433	2	1299,1	0,924	34,686	1033,87	0,923	34,69	1033,87	3,01	0,0129			767,53	91,789	73,567
Hydro	97	0,004	-54,913	1433	3	1090,5	1,109	34,692	1032,89	1,108	34,696	1032,9	2,97	0,0125			687,54	91,817	73,571
Hydro	97	0,004	-54,913	1433	4	999,4	1,216	34,695	1032,46	1,216	34,699	1032,47	2,94	0,0112			641,73	91,817	73,573
Hydro	97	0,004	-54,913	1433	5	1000	1,219	34,695	1032,47	1,218	34,699	1032,47	2,94	0,0121			637,77	91,817	73,573
Hydro	97	0,004	-54,913	1433	6	898,8	1,334	34,698	1031,99	1,333	34,701	1031,99	2,91	0,0111			607,63	91,807	73,576
Hydro	97	0,004	-54,913	1433	7	799,5	1,417	34,698	1031,52	1,417	34,702	1031,52	2,89	0,012			553,66	91,808	73,578
Hydro	97	0,004	-54,913	1433	8	697,3	1,501	34,693	1031,03	1,501	34,696	1031,04	2,85	0,0118			530,21	91,782	73,58
Hydro	97	0,004	-54,913	1433	9	600,1	1,584	34,684	1030,57	1,584	34,688	1030,57	2,8	0,011			529,68	91,775	73,584
Hydro	97	0,004	-54,913	1433	10	500	1,675	34,67	1030,08	1,675	34,673	1030,08	2,74	0,0133			511,53	91,791	73,586
Hydro	97	0,004	-54,913	1433	11	399,6	1,724	34,641	1029,58	1,724	34,644	1029,59	2,69	0,0136			479,71	91,76	73,588
Hydro	97	0,004	-54,913	1433	12	330,1	1,72	34,612	1029,23	1,72	34,615	1029,24	2,69	0,0174			461,72	91,714	73,591
Hydro	97	0,004	-54,913	1433	13	248	1,656	34,548	1028,8	1,654	34,549	1028,8	2,72	0,0154			459,72	91,633	73,593
Hydro	97	0,004	-54,913	1433	14	179,5	1,244	34,416	1028,41	1,245	34,419	1028,41	3,02	0,0239			439,73	91,545	73,594
Hydro	97	0,004	-54,913	1433	15	151	0,642	34,225	1028,16	0,644	34,227	1028,16	3,56	0,0642			443,73	91,491	73,595
Hydro	97	0,004	-54,913	1433	16	110,3	0,842	33,769	1027,59	0,848	33,77	1027,59	4,86	0,0945			461,84	90,95	73,597
Hydro	97	0,004	-54,913	1433	17	78,6	0,869	33,761	1027,43	0,869	33,763	1027,43	4,93	0,1102			471,71	90,929	73,598
Hydro	97	0,004	-54,913	1433	18	50	0,871	33,76	1027,29	0,872	33,762	1027,3	4,94	0,1272			475,71	90,882	73,599
Hydro	97	0,004	-54,913	1433	19	5,8	0,875	33,76	1027,08	0,875	33,762	1027,09	4,94	0,0755			481,02	90,913	73,601
Large_Hydro	98	0,025	-55,23	2770	1	2768,3	0,135	34,658	1040,62	0,134	34,662	1040,62	3,34	0,0096			6,0779	91,74	73,812
Large_Hydro	98	0,025	-55,23	2770	2	2768	0,135	34,658	1040,62	0,134	34,662	1040,62	3,34	0,0099			6,0371	91,739	73,812
Large_Hydro	98	0,025	-55,23	2770	3	2597,3	0,164	34,66	1039,85	0,163	34,664	1039,85	3,31	0,0067			5,9963	91,775	73,815
Large_Hydro	98	0,025	-55,23	2770	4	2597	0,163	34,66	1039,85	0,162	34,664	1039,85	3,31	0,009			6,0779	91,769	73,815
Large_Hydro	98	0,025	-55,23	2770	5	2498	0,162	34,66	1039,4	0,161	34,664	1039,4	3,3	0,0078			5,9963	91,766	73,817
Large_Hydro	98	0,025	-55,23	2770	6	2298,9	0,191	34,661	1038,5	0,19	34,665	1038,5	3,27	0,0088			5,9963	91,791	73,82
Large_Hydro	98	0,025	-55,23	2770	7	2095,7	0,308	34,665	1037,57	0,307	34,669	1037,57	3,21	0,0099			6,0371	91,794	73,824
Large_Hydro	98	0,026	-55,229	2770	8	1899,1	0,392	34,668	1036,66	0,391	34,672	1036,67	3,1	0,0118			5,9963	91,773	73,827
Large_Hydro	98	0,026	-55,229	2770	9	1699	0,498	34,672	1035,74	0,497	34,676	1035,74	3,09	0,0103			5,9963	91,788	73,83
Large_Hydro	98	0,026	-55,229	2770	10	1497,2	0,6	34,675	1034,81	0,599	34,678	1034,81	3,08	0,0109			5,9963	91,791	73,833
Large_Hydro	98	0,026	-55,229	2770	11	1247,9	0,799	34,68	1033,64	0,799	34,684	1033,64	3,04	0,0105			5,9963	91,789	73,837
Large_Hydro	98	0,026	-55,229	2770	12	998,4	1,07	34,688	1032,47	1,069	34,692	1032,47	2,98	0,0121			5,9963	91,766	73,841
Large_Hydro	98	0,027	-55,229	2770	13	798,8	1,273	34,691	1031,52	1,272	34,695	1031,53	2,94	0,0107			5,9963	91,746	73,844
Large_Hydro	98	0,027	-55,229	2770	14	597,9	1,48	34,679	1030,56	1,479	34,683	1030,56	2,85	0,0135			5,9963	91,719	73,847
Large_Hydro	98	0,027	-55,229	2770	15	497,9	1,564	34,665	1030,07	1,563	34,668	1030,08	2,79	0,0163			5,9963	91,695	73,849
Large_Hydro	98	0,027	-55,229	2770	16	298,2	1,634	34,593	1029,08	1,634	34,597	1029,08	2,74	0,0141			6,0371	91,627	73,852
Large_Hydro	98	0,027	-55,229	2770	17	169,5	1,091	34,385	1028,35	1,077	34,385	1028,35	3,14	0,0315			5,9963	91,587	73,854
Large_Hydro	98	0,027	-55,229	2770	18	129,9	0,456	34,202	1028,05	0,47	34,211	1028,06	3,65	0,0963			5,9963	91,318	73,855
Large_Hydro	98	0,027	-55,229	2770	19	99,7	0,598	33,848	1027,62	0,593	33,855	1027,62	4,73	0,2059			5,9963	90,482	73,856
Large_Hydro	98	0,027	-55,229	2770	20	79,6	0,752	33,786	1027,46	0,751	33,789	1027,47	4,92	0,2111			5,9963	90,33	73,857
Large_Hydro	98	0,027	-55,228	2770	21	38	0,751	33,786	1027,27	0,751	33,789	1027,27	4,93	0,1918			5,9963	90,309	73,859
Large_Hydro	98	0,028	-55,228	2770	24	6,2	0,754	33,785	1027,11	0,754	33,789	1027,12	4,94	0,1542			5,9963	90,338	73,861
Large_PoBaSi	99	0,043	-55,233	2770	1	1001,8	1,106	34,69	1032,48	1,104	34,693	1032,48	2,99	0,012			6,0779	91,764	74,024
Large_PoBaSi	99	0,044	-55,233	2770	2	898,4	1,207	34,692	1031,99	1,205	34,696	1032	2,97	0,0127			6,0371	91,758	74,028
Large_PoBaSi	99	0,043	-55,233	2770	3	801,2	1,313	34,69	1031,53	1,312	34,693	1031,53	2,94	0,0128			6,0371	91,741	74,031

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Large_PoBaSi	99	0,043	-55,233	2770	4	699,4	1,397	34,687	1031,05	1,397	34,69	1031,05	2,9	0,014			5,9963	91,738	74,033
Large_PoBaSi	99	0,043	-55,233	2770	5	599,5	1,482	34,672	1030,56	1,482	34,675	1030,56	2,85	0,0135			5,9963	91,71	74,036
Large_PoBaSi	99	0,043	-55,233	2770	6	550,5	1,542	34,669	1030,33	1,542	34,672	1030,33	2,82	0,0137			5,9963	91,714	74,039
Large_PoBaSi	99	0,044	-55,233	2770	7	501,6	1,577	34,66	1030,09	1,577	34,663	1030,09	2,79	0,0149			5,9963	91,701	74,041
Large_PoBaSi	99	0,043	-55,233	2770	8	450,6	1,6	34,651	1029,84	1,601	34,654	1029,84	2,78	0,0153			5,9963	91,673	74,043
Large_PoBaSi	99	0,043	-55,233	2770	9	399,4	1,619	34,645	1029,59	1,619	34,648	1029,6	2,76	0,0125			5,9963	91,681	74,046
Large_PoBaSi	99	0,043	-55,233	2770	10	348,8	1,647	34,63	1029,34	1,648	34,633	1029,34	2,74	0,0133			5,9963	91,647	74,048
Large_PoBaSi	99	0,043	-55,233	2770	11	300	1,68	34,609	1029,09	1,681	34,611	1029,1	2,72	0,015			5,9963	91,633	74,05
Large_PoBaSi	99	0,043	-55,232	2770	12	249,1	1,663	34,579	1028,83	1,66	34,581	1028,84	2,73	0,0158			5,9963	91,626	74,053
Large_PoBaSi	99	0,043	-55,233	2770	13	199	1,485	34,499	1028,55	1,485	34,502	1028,55	2,85	0,0162			5,9963	91,613	74,055
Large_PoBaSi	99	0,043	-55,233	2770	14	174,9	1,354	34,452	1028,41	1,351	34,454	1028,41	2,93	0,0202			5,9963	91,615	74,057
Large_PoBaSi	99	0,044	-55,233	2770	15	149,2	1,145	34,402	1028,26	1,142	34,404	1028,26	3,09	0,0303			5,9963	91,6	74,059
Large_PoBaSi	99	0,044	-55,233	2770	16	125,3	0,867	34,322	1028,1	0,873	34,325	1028,11	3,33	0,0482			5,9963	91,507	74,06
Large_PoBaSi	99	0,044	-55,233	2770	17	100,3	0,289	34,116	1027,85	0,29	34,12	1027,86	3,99	0,132			5,9963	91,134	74,062
Large_PoBaSi	99	0,043	-55,232	2770	18	79,8	0,75	33,785	1027,46	0,754	33,786	1027,46	4,84	0,1909			5,9963	90,434	74,063
Large_PoBaSi	99	0,043	-55,232	2770	19	59,2	0,756	33,784	1027,36	0,756	33,786	1027,37	4,93	0,1912			5,9963	90,405	74,064
Large_PoBaSi	99	0,043	-55,233	2770	20	39,1	0,755	33,784	1027,27	0,755	33,786	1027,27	4,94	0,1988			5,9963	90,395	74,067
Large_PoBaSi	99	0,043	-55,233	2770	21	19,1	0,754	33,784	1027,17	0,754	33,787	1027,18	4,94	0,1496			5,9963	90,364	74,069
Large_PoBaSi	99	0,044	-55,232	2770	24	4,1	0,75	33,784	1027,1	0,75	33,787	1027,11	4,94	0,1712			5,9963	90,417	74,071
Large_ML	100	0	-55,567	3600	1	248,3	1,631	34,569	1028,82	1,631	34,572	1028,83	2,76	0,014	1,5403	0,862	55,966	91,584	74,27
Large_ML	100	0	-55,567	3600	2	168,8	1,215	34,415	1028,36	1,216	34,417	1028,36	3,06	0,0223	1,4536	0,8717	59,963	91,576	74,272
Large_ML	100	0	-55,567	3600	3	149,4	0,892	34,332	1028,22	0,885	34,335	1028,23	3,34	0,049	1,3424	0,8855	65,96	91,488	74,273
Large_ML	100	0	-55,567	3600	4	129,3	0,237	34,06	1027,95	0,237	34,062	1027,95	4,22	0,1943	1,2844	0,922	71,793	90,541	74,274
Large_ML	100	0	-55,567	3600	5	119,3	0,236	33,999	1027,85	0,236	34,001	1027,85	4,58	0,2383	1,2439	0,9697	77,952	89,955	74,275
Large_ML	100	0	-55,567	3600	6	109,9	0,25	33,987	1027,8	0,251	33,988	1027,8	4,62	0,2485	1,2893	1,0309	79,951	89,993	74,276
Large_ML	100	0	-55,567	3600	7	109,5	0,248	33,988	1027,8	0,249	33,99	1027,8	4,63	0,2343	1,2927	1,0336	79,951	90,045	74,276
Large_ML	100	0	-55,567	3600	8	109,5	0,249	33,987	1027,8	0,249	33,989	1027,8	4,63	0,243	1,2959	1,0334	79,747	89,993	74,276
Large_ML	100	0	-55,567	3600	9	109,7	0,249	33,986	1027,8	0,249	33,989	1027,8	4,63	0,2623	1,2917	1,0327	79,951	90,087	74,276
Large_ML	100	0	-55,567	3600	10	79,5	0,429	33,877	1027,55	0,43	33,879	1027,56	4,92	0,2917	1,8947	1,5528	81,95	89,698	74,277
Large_ML	100	0	-55,567	3600	11	48,9	0,459	33,864	1027,4	0,46	33,866	1027,4	4,92	0,2728	4,2082	3,7009	87,946	89,807	74,279
Large_ML	100	0	-55,567	3600	12	25,1	0,466	33,857	1027,28	0,467	33,859	1027,28	4,93	0,2862	9,5153	8,7487	91,944	89,821	74,28
Large_ML	100	0	-55,567	3600	13	25,3	0,466	33,857	1027,28	0,466	33,859	1027,28	4,93	0,245	9,5653	8,8101	92,107	89,787	74,28
Large_ML	100	0	-55,567	3600	14	13,2	0,468	33,856	1027,22	0,469	33,858	1027,22	4,93	0,2426	17,157	16,16	94,188	89,873	74,281
Large_ML	100	0	-55,567	3600	15	13,6	0,467	33,856	1027,22	0,467	33,858	1027,22	4,94	0,2854	16,619	15,842	95,329	89,87	74,281
Large_ML	100	0	-55,567	3600	16	13,4	0,467	33,856	1027,22	0,467	33,858	1027,22	4,93	0,2366	17,049	16,287	95,533	89,867	74,281
Large_ML	100	0	-55,567	3600	17	13,5	0,467	33,856	1027,22	0,467	33,858	1027,22	4,93	0,3221	16,711	16,033	95,941	89,876	74,281
Large_ML	100	0	-55,567	3600	18	5	0,47	33,855	1027,18	0,47	33,857	1027,18	4,94	0,2394	31,647	30,363	95,941	89,848	74,282
Large_ML	100	0	-55,567	3600	19	5,3	0,47	33,855	1027,18	0,47	33,858	1027,18	4,94	0,2322	30,093	28,872	95,941	89,787	74,282
Large_ML	100	0	-55,567	3600	20	5,3	0,47	33,855	1027,18	0,47	33,857	1027,18	4,94	0,3048	29,006	27,828	95,941	89,868	74,282
Large_ML	100	0	-55,567	3600	21	5	0,47	33,855	1027,18	0,47	33,857	1027,18	4,94	0,2544	31,072	29,811	95,941	89,851	74,282
Large_ML	100	0	-55,567	3600	24	5	0,469	33,855	1027,18	0,47	33,858	1027,18	4,94	0,286	30,838	29,587	95,941	89,821	74,283
Hydro	101	0,005	-55,57	3584	1	3511,1	-0,157	34,646	1043,96	-0,158	34,65	1043,96	3,58	0,0075			936,9	91,662	74,387
Hydro	101	0,005	-55,57	3584	2	3511,9	-0,157	34,646	1043,96	-0,158	34,65	1043,96	3,58	0,0078			1004,7	91,661	74,387
Hydro	101	0,005	-55,57	3584	3	3399	-0,128	34,647	1043,46	-0,13	34,651	1043,46	3,55	0,0133			1076,6	91,688	74,39
Hydro	101	0,005	-55,57	3584	4	3399,2	-0,128	34,647	1043,46	-0,129	34,651	1043,46	3,55	0,0081			1109,5	91,688	74,39
Hydro	101	0,005	-55,57	3584	5	3196	-0,09	34,649	1042,55	-0,091	34,653	1042,55	3,49	0,0083			1477,3	91,675	74,393

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	101	0,005	-55,57	3584	6	2999,9	-0,065	34,65	1041,67	-0,067	34,654	1041,68	3,45	0,0092			1866,3	91,714	74,397
Hydro	101	0,005	-55,57	3584	7	2748,5	0,039	34,654	1040,54	0,038	34,658	1040,54	3,36	0,0091			1695,6	91,716	74,401
Hydro	101	0,005	-55,57	3584	8	2499,3	0,112	34,657	1039,41	0,11	34,661	1039,41	3,3	0,0085			1263,5	91,73	74,405
Hydro	101	0,005	-55,57	3584	9	2248,5	0,213	34,661	1038,27	0,212	34,665	1038,27	3,21	0,011			1894,9	91,716	74,409
Hydro	101	0,004	-55,57	3584	10	1998,8	0,315	34,665	1037,12	0,314	34,669	1037,13	3,16	0,0113			1237,5	91,725	74,413
Hydro	101	0,005	-55,57	3584	11	1748,6	0,433	34,669	1035,97	0,432	34,674	1035,98	3,13	0,0093			1835,9	91,721	74,418
Hydro	101	0,005	-55,57	3584	12	1499,6	0,564	34,672	1034,82	0,562	34,677	1034,82	3,07	0,0055			1580,1	91,723	74,422
Hydro	101	0,005	-55,57	3584	13	1249,5	0,733	34,678	1033,65	0,732	34,682	1033,66	3,05	0,0094			1791,1	91,729	74,426
Hydro	101	0,005	-55,57	3584	14	999,5	0,994	34,689	1032,48	0,993	34,693	1032,48	2,99	0,0098			1702,2	91,739	74,431
Hydro	101	0,005	-55,57	3584	15	796,4	1,194	34,687	1031,52	1,193	34,691	1031,52	2,95	0,0105			1505,7	91,664	74,434
Hydro	101	0,005	-55,57	3584	16	599,5	1,464	34,683	1030,57	1,464	34,686	1030,58	2,86	0,0115			1764,8	91,664	74,438
Hydro	101	0,005	-55,57	3584	17	399	1,592	34,64	1029,59	1,591	34,643	1029,59	2,76	0,0139			1933	91,62	74,442
Hydro	101	0,005	-55,57	3584	18	198,7	1,586	34,534	1028,57	1,587	34,537	1028,57	2,78	0,0176			1911,6	91,556	74,446
Hydro	101	0,005	-55,57	3584	19	149,6	1,192	34,405	1028,26	1,193	34,408	1028,26	3,08	0,0257			1936,4	91,521	74,449
Hydro	101	0,005	-55,57	3584	20	98,6	0,269	34,098	1027,83	0,27	34,1	1027,83	4,1	0,1541			1992,2	90,685	74,451
Hydro	101	0,005	-55,57	3584	21	49,6	0,467	33,854	1027,39	0,467	33,857	1027,39	4,9	0,228			1973,9	89,813	74,454
Hydro	101	0,005	-55,57	3584	24	5,2	0,529	33,836	1027,16	0,528	33,839	1027,16	4,93	0,063			1700,9	89,881	74,456
Hydro	102	-0,114	-55,904	3695	1	3651,2	-0,172	34,645	1044,58	-0,173	34,649	1044,58	3,61	0,0099			463,72	91,662	74,624
Hydro	102	-0,114	-55,904	3695	2	3498,7	-0,151	34,646	1043,9	-0,153	34,65	1043,9	3,57	0,0064			427,5	91,664	74,628
Hydro	102	-0,114	-55,904	3695	3	3498,9	-0,151	34,646	1043,9	-0,152	34,65	1043,9	3,57	0,0092			421,74	91,666	74,628
Hydro	102	-0,114	-55,904	3695	4	3248,3	-0,152	34,647	1042,79	-0,154	34,651	1042,79	3,54	0,0102			449,4	91,664	74,632
Hydro	102	-0,114	-55,904	3695	5	3000,3	-0,107	34,648	1041,68	-0,108	34,653	1041,68	3,48	0,0113			510,83	91,713	74,636
Hydro	102	-0,114	-55,904	3695	6	2749,8	-0,07	34,65	1040,56	-0,072	34,654	1040,56	3,43	0,0079			433,54	91,713	74,64
Hydro	102	-0,114	-55,904	3695	7	2498,6	-0,022	34,652	1039,42	-0,022	34,656	1039,42	3,37	0,0076			402,32	91,722	74,643
Hydro	102	-0,114	-55,904	3695	8	2248,6	0,115	34,657	1038,28	0,113	34,662	1038,28	3,27	0,0078			413,75	91,729	74,647
Hydro	102	-0,114	-55,904	3695	9	1999	0,164	34,66	1037,14	0,164	34,664	1037,14	3,23	0,0048			389,76	91,721	74,651
Hydro	102	-0,114	-55,904	3695	10	1749,8	0,285	34,664	1035,99	0,284	34,669	1035,99	3,17	0,0087			351,79	91,736	74,655
Hydro	102	-0,114	-55,904	3695	11	1499,3	0,412	34,669	1034,83	0,412	34,673	1034,83	3,1	0,0075			303,77	91,73	74,659
Hydro	102	-0,114	-55,904	3695	12	1250,3	0,526	34,673	1033,67	0,524	34,677	1033,68	3,08	0,0089			281,83	91,739	74,663
Hydro	102	-0,114	-55,904	3695	13	1000,1	0,722	34,677	1032,5	0,721	34,682	1032,5	3,04	0,0086			317,77	91,736	74,667
Hydro	102	-0,114	-55,905	3695	14	749,6	1,053	34,687	1031,31	1,053	34,691	1031,32	2,97	0,0066			277,83	91,709	74,671
Hydro	102	-0,115	-55,905	3695	15	501,4	1,462	34,685	1030,12	1,462	34,688	1030,12	2,86	0,0122			261,84	91,66	74,675
Hydro	102	-0,115	-55,904	3695	16	299,6	1,503	34,617	1029,11	1,504	34,62	1029,12	2,8	0,0153			198,7	91,577	74,678
Hydro	102	-0,115	-55,904	3695	17	199,3	1,166	34,506	1028,58	1,163	34,508	1028,58	3	0,0157			189,88	91,522	74,68
Hydro	102	-0,115	-55,904	3695	18	150,4	0,742	34,403	1028,29	0,74	34,405	1028,3	3,31	0,0298			224,96	91,453	74,682
Hydro	102	-0,115	-55,904	3695	19	120,4	0,195	34,253	1028,07	0,197	34,258	1028,07	3,84	0,1076			226,1	90,975	74,683
Hydro	102	-0,115	-55,904	3695	20	100,2	-0,038	34,154	1027,9	-0,039	34,156	1027,9	4,25	0,1728			213,87	90,457	74,684
Hydro	102	-0,115	-55,905	3695	21	47,6	0,328	33,983	1027,49	0,329	33,986	1027,5	4,93	0,3109			185,89	89,355	74,686
Hydro	102	-0,115	-55,906	3695	24	3,7	0,326	33,98	1027,28	0,327	33,983	1027,29	4,96	0,2714			169,25	88,38	74,689
Hydro	103	-0,004	-56,232	3700	1	3667,6	-0,267	34,642	1044,66	-0,268	34,646	1044,66	3,67	0,0076			5,9963	91,636	74,877
Hydro	103	-0,004	-56,232	3700	2	3667,3	-0,267	34,642	1044,66	-0,268	34,646	1044,66	3,67	0,0123			5,9963	91,636	74,877
Hydro	103	-0,003	-56,233	3700	3	3596,6	-0,274	34,642	1044,35	-0,275	34,646	1044,35	3,67	0,0071			5,9963	91,642	74,879
Hydro	103	-0,004	-56,233	3700	4	3498,4	-0,271	34,642	1043,91	-0,272	34,646	1043,92	3,65	0,007			5,9963	91,659	74,881
Hydro	103	-0,004	-56,233	3700	5	3248,8	-0,258	34,643	1042,81	-0,259	34,648	1042,81	3,61	0,0085			5,9963	91,672	74,885
Hydro	103	-0,004	-56,233	3700	6	3000,1	-0,237	34,645	1041,69	-0,238	34,649	1041,7	3,56	0,008			5,9963	91,698	74,89
Hydro	103	-0,004	-56,231	3700	7	2748,3	-0,195	34,646	1040,56	-0,196	34,65	1040,56	3,5	0,0066			5,9963	91,714	74,894

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	103	-0,006	-56,232	3700	8	2497,3	-0,127	34,649	1039,42	-0,128	34,653	1039,43	3,43	0,0109			5,9963	91,71	74,898
Hydro	103	-0,006	-56,232	3700	9	2250,6	-0,093	34,651	1038,3	-0,094	34,655	1038,31	3,39	0,0075			5,9963	91,714	74,902
Hydro	103	-0,006	-56,233	3700	10	1996,1	-0,027	34,653	1037,14	-0,028	34,657	1037,14	3,33	0,0139			5,9963	91,74	74,907
Hydro	103	-0,007	-56,233	3700	11	1751,7	0,071	34,657	1036,01	0,07	34,661	1036,02	3,24	0,0099			5,9963	91,748	74,911
Hydro	103	-0,008	-56,233	3700	12	1498,7	0,158	34,66	1034,85	0,157	34,665	1034,85	3,16	0,0077			5,9963	91,705	74,916
Hydro	103	-0,007	-56,233	3700	13	1251,6	0,268	34,665	1033,7	0,267	34,669	1033,7	3,08	0,0093			5,9963	91,744	74,92
Hydro	103	-0,007	-56,233	3700	14	1001,7	0,417	34,67	1032,53	0,416	34,674	1032,53	2,96	0,0094			5,9963	91,713	74,925
Hydro	103	-0,007	-56,232	3700	15	798,6	0,51	34,671	1031,57	0,51	34,675	1031,58	2,99	0,0107			5,9963	91,73	74,929
Hydro	103	-0,007	-56,232	3700	16	600,1	0,571	34,666	1030,64	0,571	34,669	1030,64	2,97	0,0106			5,9963	91,673	74,933
Hydro	103	-0,008	-56,232	3700	17	299,5	0,77	34,642	1029,19	0,77	34,645	1029,19	3,03	0,0125			5,9963	91,559	74,938
Hydro	103	-0,007	-56,232	3700	18	179,7	-0,337	34,409	1028,5	-0,335	34,413	1028,51	3,76	0,0302			5,9963	91,525	74,941
Hydro	103	-0,007	-56,232	3700	19	127,5	-0,617	34,211	1028,11	-0,617	34,214	1028,11	4,4	0,1066			5,9963	91,108	74,943
Hydro	103	-0,007	-56,233	3700	20	78,9	0,358	34,075	1027,72	0,359	34,078	1027,72	4,93	0,3021			5,9963	89,756	74,945
Hydro	103	-0,008	-56,233	3700	21	42	0,432	34,027	1027,5	0,428	34,035	1027,5	4,99	0,331			5,9963	89,569	74,947
Hydro	103	-0,008	-56,232	3700	24	6,2	0,45	34,005	1027,31	0,449	34,008	1027,31	4,99	0,3453			5,9963	89,13	74,95
Hydro	104	-0,014	-56,762	3867	1	3893,9	-0,366	34,638	1045,67	-0,368	34,642	1045,67	3,77	0,0068			177,89	91,627	75,312
Hydro	104	-0,014	-56,762	3867	2	3798,9	-0,348	34,639	1045,25	-0,349	34,644	1045,25	3,74	0,007			177,03	91,634	75,314
Hydro	104	-0,014	-56,762	3867	3	3599,2	-0,325	34,64	1044,37	-0,326	34,645	1044,37	3,69	0,0077			219,87	91,663	75,317
Hydro	104	-0,014	-56,762	3867	4	3399,7	-0,314	34,641	1043,48	-0,315	34,646	1043,49	3,66	0,0081			167,9	91,688	75,321
Hydro	104	-0,014	-56,762	3867	5	3201,4	-0,296	34,642	1042,6	-0,297	34,647	1042,6	3,62	0,0063			145,91	91,71	75,325
Hydro	104	-0,014	-56,762	3867	6	2998,6	-0,273	34,644	1041,69	-0,275	34,648	1041,7	3,58	0,0063			166,68	91,714	75,329
Hydro	104	-0,014	-56,762	3867	7	2748	-0,235	34,645	1040,56	-0,236	34,65	1040,57	3,52	0,0076			119,93	91,714	75,333
Hydro	104	-0,014	-56,762	3867	8	2499,2	-0,197	34,647	1039,44	-0,198	34,651	1039,44	3,47	0,0102			101,94	91,734	75,337
Hydro	104	-0,014	-56,762	3867	9	2247,3	-0,146	34,649	1038,29	-0,147	34,653	1038,3	3,41	0,009			101,94	91,738	75,341
Hydro	104	-0,014	-56,762	3867	10	2000,2	-0,083	34,651	1037,16	-0,085	34,656	1037,17	3,35	0,0098			135,92	91,739	75,345
Hydro	104	-0,014	-56,762	3867	11	1751,1	0,005	34,655	1036,02	0,004	34,659	1036,02	3,27	0,0108			193,88	91,731	75,348
Hydro	104	-0,014	-56,762	3867	12	1500,1	0,096	34,658	1034,86	0,095	34,662	1034,86	3,21	0,0111			171,89	91,739	75,352
Hydro	104	-0,014	-56,762	3867	13	1248,8	0,181	34,662	1033,69	0,18	34,666	1033,69	3,13	0,0095			167,9	91,736	75,356
Hydro	104	-0,014	-56,762	3867	14	998,3	0,316	34,667	1032,52	0,315	34,671	1032,52	3,04	0,0105			159,9	91,719	75,36
Hydro	104	-0,014	-56,762	3867	15	799,4	0,417	34,67	1031,58	0,417	34,674	1031,59	2,98	0,0084			166,92	91,714	75,363
Hydro	104	-0,014	-56,762	3867	16	600,1	0,514	34,671	1030,64	0,514	34,675	1030,65	2,96	0,0094			193,88	91,702	75,366
Hydro	104	-0,014	-56,762	3867	17	399,6	0,542	34,66	1029,69	0,541	34,663	1029,69	2,99	0,0122			175,89	91,611	75,37
Hydro	104	-0,014	-56,762	3867	18	199,9	0,245	34,578	1028,7	0,243	34,581	1028,7	3,25	0,0134			135,92	91,537	75,373
Hydro	104	-0,014	-56,762	3867	19	148,6	-0,769	34,405	1028,37	-0,772	34,408	1028,38	4,01	0,0436			131,92	91,414	75,375
Hydro	104	-0,014	-56,762	3867	20	121	-0,903	34,31	1028,17	-0,903	34,313	1028,17	4,34	0,0871			131,92	91,123	75,376
Hydro	104	-0,014	-56,762	3867	21	49,2	0,482	34,103	1027,59	0,482	34,106	1027,59	4,97	0,3456			123,92	89,724	75,378
Hydro	104	-0,014	-56,762	3867	24	4,5	0,486	34,103	1027,38	0,486	34,105	1027,38	4,98	0,3611			111,89	89,61	75,38
Hydro	105	-0,114	-57,212	4364	1	4400,5	-0,369	34,636	1047,88	-0,371	34,641	1047,88	3,83	0,0057			1463,7	91,637	75,541
Hydro	105	-0,114	-57,212	4364	2	3978,5	-0,389	34,637	1046,04	-0,39	34,642	1046,05	3,77	0,0094			1335	91,668	75,553
Hydro	105	-0,114	-57,211	4364	3	3749,7	-0,387	34,638	1045,04	-0,388	34,643	1045,04	3,74	0,0074			1403,5	91,691	75,558
Hydro	105	-0,114	-57,212	4364	4	3503,3	-0,369	34,639	1043,95	-0,37	34,644	1043,95	3,69	0,0105			1396	91,708	75,563
Hydro	105	-0,114	-57,212	4364	5	3251	-0,336	34,641	1042,82	-0,337	34,646	1042,83	3,64	0,0081			1166,4	91,72	75,568
Hydro	105	-0,114	-57,212	4364	6	2999,9	-0,303	34,642	1041,7	-0,305	34,648	1041,7	3,59	0,0079			1024,2	91,735	75,573
Hydro	105	-0,114	-57,212	4364	7	2749,1	-0,273	34,644	1040,57	-0,275	34,649	1040,58	3,54	0,0092			1083,1	91,738	75,577
Hydro	105	-0,114	-57,212	4364	8	2499,1	-0,258	34,645	1039,44	-0,26	34,65	1039,45	3,5	0,0063			1042,5	91,742	75,582
Hydro	105	-0,114	-57,212	4364	9	2250,9	-0,227	34,646	1038,32	-0,229	34,651	1038,32	3,46	0,0086			990,98	91,759	75,586

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Hydro	105	-0,114	-57,212	4364	10	2002	-0,171	34,648	1037,18	-0,172	34,653	1037,18	3,4	0,0103			796,61	91,765	75,59
Hydro	105	-0,114	-57,212	4364	11	1750,8	-0,11	34,651	1036,02	-0,111	34,656	1036,03	3,34	0,0072			955,01	91,766	75,594
Hydro	105	-0,114	-57,212	4364	12	1499	-0,02	34,654	1034,86	-0,021	34,659	1034,86	3,25	0,0109			757,62	91,766	75,598
Hydro	105	-0,114	-57,212	4364	13	1247,1	0,077	34,658	1033,69	0,076	34,662	1033,69	3,18	0,0108			834,88	91,764	75,602
Hydro	105	-0,114	-57,212	4364	14	1000	0,176	34,662	1032,53	0,176	34,666	1032,54	3,09	0,0111			882,93	91,749	75,606
Hydro	105	-0,114	-57,212	4364	15	750,7	0,305	34,667	1031,36	0,304	34,671	1031,37	2,99	0,0098			867,76	91,743	75,61
Hydro	105	-0,114	-57,212	4364	16	499,2	0,423	34,671	1030,18	0,423	34,675	1030,18	2,87	0,0097			1070,4	91,682	75,614
Hydro	105	-0,114	-57,212	4364	17	298,6	0,467	34,664	1029,22	0,467	34,668	1029,23	2,87	0,0096			750,85	91,572	75,618
Hydro	105	-0,114	-57,212	4364	18	181	-0,354	34,522	1028,6	-0,362	34,523	1028,6	3,52	0,0196			598	91,582	75,62
Hydro	105	-0,114	-57,212	4364	19	140,6	-0,865	34,363	1028,3	-0,865	34,367	1028,31	4,21	0,073			637,73	91,326	75,622
Hydro	105	-0,114	-57,212	4364	20	88,6	0,42	34,14	1027,81	0,412	34,144	1027,81	4,93	0,2989			1030,5	89,828	75,623
Hydro	105	-0,114	-57,212	4364	21	49,2	0,506	34,129	1027,61	0,505	34,132	1027,61	4,98	0,3216			926,41	89,669	75,625
Hydro	105	-0,114	-57,212	4364	24	2,1	0,552	34,127	1027,38	0,55	34,13	1027,38	4,98	0,1468			762,96	89,443	75,627
Super_Hydro	106	-0,038	-57,552	3932	1	3979,1	-0,371	34,637	1046,04	-0,373	34,642	1046,05	3,78	0,0113			25,984	91,688	75,754
Super_Hydro	106	-0,038	-57,552	3932	2	3749,5	-0,38	34,638	1045,04	-0,382	34,643	1045,04	3,75	0,0076			19,988	91,712	75,758
Super_Hydro	106	-0,038	-57,552	3932	3	3498,7	-0,361	34,639	1043,93	-0,363	34,644	1043,93	3,7	0,0066			15,99	91,722	75,762
Super_Hydro	106	-0,038	-57,552	3932	4	3249,3	-0,318	34,642	1042,81	-0,319	34,646	1042,82	3,64	0,0093			15,99	91,74	75,766
Super_Hydro	106	-0,038	-57,552	3932	5	2999,5	-0,283	34,643	1041,7	-0,284	34,648	1041,7	3,58	0,0095			12,034	91,741	75,77
Super_Hydro	106	-0,038	-57,552	3932	6	2751	-0,25	34,645	1040,58	-0,251	34,65	1040,58	3,53	0,0084			9,9939	91,759	75,774
Super_Hydro	106	-0,038	-57,552	3932	7	2500,1	-0,208	34,646	1039,44	-0,209	34,651	1039,45	3,48	0,0086			7,9951	91,766	75,778
Super_Hydro	106	-0,038	-57,552	3932	8	2249,2	-0,15	34,649	1038,3	-0,151	34,653	1038,31	3,41	0,0068			7,3424	91,77	75,782
Super_Hydro	106	-0,038	-57,552	3932	9	1999	-0,078	34,651	1037,16	-0,08	34,656	1037,16	3,34	0,0065			5,9963	91,768	75,787
Super_Hydro	106	-0,038	-57,552	3932	10	1749,1	-0,001	34,654	1036,01	-0,002	34,659	1036,01	3,27	0,0083			5,9963	91,766	75,79
Super_Hydro	106	-0,038	-57,552	3932	11	1499,4	0,083	34,658	1034,85	0,082	34,662	1034,86	3,21	0,0117			5,9963	91,779	75,794
Super_Hydro	106	-0,038	-57,552	3932	12	1248,3	0,195	34,662	1033,69	0,193	34,666	1033,69	3,14	0,0095			5,9963	91,778	75,798
Super_Hydro	106	-0,038	-57,552	3932	13	999,7	0,314	34,666	1032,52	0,314	34,671	1032,53	3,05	0,0081			5,9963	91,761	75,802
Super_Hydro	106	-0,038	-57,552	3932	14	800,9	0,401	34,67	1031,59	0,401	34,674	1031,6	2,95	0,0124			5,9963	91,742	75,805
Super_Hydro	106	-0,038	-57,552	3932	15	597,5	0,494	34,671	1030,63	0,494	34,675	1030,64	2,95	0,0123			5,9963	91,728	75,808
Super_Hydro	106	-0,038	-57,552	3932	16	397,5	0,54	34,661	1029,68	0,54	34,665	1029,69	2,97	0,0122			5,9963	91,624	75,812
Super_Hydro	106	-0,038	-57,552	3932	17	299,4	0,439	34,633	1029,2	0,438	34,636	1029,21	3,07	0,0148			5,9963	91,568	75,813
Super_Hydro	106	-0,038	-57,552	3932	18	198,9	-0,258	34,512	1028,67	-0,263	34,514	1028,68	3,55	0,0238			5,9963	91,582	75,815
Super_Hydro	106	-0,038	-57,552	3932	19	129,1	-0,664	34,304	1028,19	-0,665	34,308	1028,2	4,29	0,1209			5,9963	91,149	75,817
Super_Hydro	106	-0,038	-57,552	3932	20	80,1	0,38	34,133	1027,77	0,388	34,135	1027,77	4,86	0,2923			5,9963	89,998	75,818
Super_Hydro	106	-0,038	-57,552	3932	21	49,5	0,4	34,078	1027,58	0,4	34,081	1027,58	4,97	0,3312			5,9963	89,751	75,819
Super_Hydro	106	-0,038	-57,552	3932	24	4,4	0,402	34,064	1027,35	0,402	34,067	1027,35	4,98	0,3421			6,0779	89,53	75,821
Super_REE	107	-0,035	-57,551	3932	1	3921,8	-0,373	34,638	1045,79	-0,374	34,642	1045,79	3,77	0,0086			6,0779	91,707	76,055
Super_REE	107	-0,034	-57,55	3932	2	3920,3	-0,373	34,638	1045,78	-0,374	34,642	1045,79	3,77	0,009			5,9963	91,701	76,055
Super_REE	107	-0,033	-57,55	3932	3	3919,9	-0,373	34,638	1045,78	-0,374	34,642	1045,79	3,77	0,0074			6,0371	91,705	76,055
Super_REE	107	-0,033	-57,55	3932	4	3919,7	-0,373	34,638	1045,78	-0,374	34,642	1045,79	3,77	0,0101			6,1187	91,702	76,055
Super_REE	107	-0,033	-57,55	3932	5	3199,7	-0,309	34,642	1042,59	-0,31	34,646	1042,6	3,63	0,0071			6,1187	91,753	76,067
Super_REE	107	-0,035	-57,551	3932	6	3199	-0,309	34,642	1042,59	-0,31	34,646	1042,59	3,62	0,0091			6,0779	91,748	76,068
Super_REE	107	-0,035	-57,551	3932	7	2500,8	-0,201	34,647	1039,45	-0,203	34,651	1039,45	3,47	0,0119			6,2818	91,779	76,079
Super_REE	107	-0,033	-57,55	3932	8	2500	-0,201	34,647	1039,44	-0,202	34,651	1039,45	3,47	0,0101			6,2818	91,78	76,079
Super_REE	107	-0,033	-57,55	3932	9	1799,3	-0,011	34,654	1036,24	-0,012	34,658	1036,24	3,28	0,01			6,0779	91,791	76,09
Super_REE	107	-0,033	-57,55	3932	10	1800,3	-0,011	34,654	1036,24	-0,012	34,658	1036,25	3,28	0,01			6,2003	91,791	76,09
Super_REE	107	-0,033	-57,55	3932	11	1199,6	0,195	34,662	1033,46	0,194	34,666	1033,46	3,12	0,0097			5,9963	91,79	76,099

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_REE	107	-0,035	-57,551	3932	12	1201,1	0,195	34,662	1033,47	0,194	34,666	1033,47	3,12	0,0076			6,0779	91,791	76,1
Super_REE	107	-0,033	-57,55	3932	13	699	0,454	34,671	1031,11	0,453	34,675	1031,12	2,95	0,0152			6,0371	91,758	76,107
Super_REE	107	-0,033	-57,55	3932	14	699,8	0,454	34,671	1031,12	0,453	34,675	1031,12	2,95	0,0132			5,9963	91,761	76,107
Super_REE	107	-0,033	-57,55	3932	15	397,9	0,537	34,661	1029,68	0,537	34,664	1029,69	2,97	0,0127			5,9963	91,637	76,112
Super_REE	107	-0,035	-57,551	3932	16	397,5	0,537	34,661	1029,68	0,537	34,664	1029,69	2,97	0,0103			6,0371	91,637	76,112
Super_REE	107	-0,033	-57,55	3932	17	249,6	0,297	34,606	1028,96	0,295	34,609	1028,96	3,16	0,0159			6,0371	91,579	76,115
Super_REE	107	-0,033	-57,55	3932	18	249,6	0,301	34,607	1028,96	0,296	34,609	1028,96	3,16	0,013			6,0779	91,572	76,115
Super_REE	107	-0,033	-57,55	3932	19	134,9	-0,698	34,343	1028,25	-0,701	34,345	1028,26	4,14	0,0972			5,9963	91,341	76,117
Super_REE	107	-0,033	-57,55	3932	20	135	-0,703	34,338	1028,25	-0,701	34,34	1028,25	4,18	0,0837			5,9963	91,336	76,117
Super_REE	107	-0,035	-57,551	3932	21	29,7	0,413	34,068	1027,47	0,413	34,07	1027,47	4,97	0,3436			6,0371	89,646	76,12
Super_REE	107	-0,033	-57,55	3932	24	29,9	0,412	34,067	1027,47	0,412	34,07	1027,48	4,97	0,3415			5,9963	89,651	76,12
Super_ML	108	-0,037	-57,553	3940	1	268,9	0,456	34,628	1029,06	0,456	34,631	1029,06	3,11	0,0144			298,6	91,554	76,321
Super_ML	108	-0,038	-57,553	3940	2	177,6	-0,243	34,489	1028,55	-0,244	34,492	1028,56	3,62	0,0194			342,48	91,558	76,323
Super_ML	108	-0,038	-57,553	3940	3	129,9	-0,695	34,35	1028,24	-0,695	34,352	1028,24	4,17	0,0648			293,82	91,269	76,325
Super_ML	108	-0,038	-57,553	3940	4	110,1	-0,42	34,245	1028,04	-0,424	34,247	1028,05	4,45	0,1414			295,82	90,877	76,326
Super_ML	108	-0,038	-57,553	3940	5	90,1	0,306	34,133	1027,82	0,313	34,135	1027,82	4,86	0,3369			257,84	89,611	76,327
Super_ML	108	-0,038	-57,553	3940	6	90,1	0,342	34,126	1027,81	0,335	34,13	1027,82	4,87	0,2949			257,84	89,722	76,327
Super_ML	108	-0,038	-57,553	3940	7	90	0,351	34,124	1027,81	0,354	34,126	1027,81	4,88	0,4288			255,84	89,686	76,327
Super_ML	108	-0,038	-57,553	3940	8	89,8	0,34	34,129	1027,81	0,354	34,128	1027,81	4,89	0,3235			255,84	89,676	76,327
Super_ML	108	-0,038	-57,553	3940	9	90	0,384	34,12	1027,8	0,39	34,123	1027,81	4,9	0,3271			253,84	89,676	76,327
Super_ML	108	-0,038	-57,553	3940	10	59,3	0,436	34,111	1027,65	0,436	34,114	1027,65	4,96	0,3709			232,39	89,585	76,328
Super_ML	108	-0,038	-57,553	3940	11	28,8	0,426	34,074	1027,47	0,428	34,077	1027,48	4,99	0,3229			230,43	89,645	76,329
Super_ML	108	-0,037	-57,553	3940	12	29,1	0,421	34,072	1027,47	0,422	34,075	1027,47	4,99	0,3384			235,86	89,626	76,329
Super_ML	108	-0,037	-57,553	3940	13	8,7	0,401	34,065	1027,37	0,402	34,068	1027,37	4,99	0,317			255,84	89,561	76,33
Super_ML	108	-0,037	-57,553	3940	14	9,1	0,401	34,065	1027,37	0,402	34,068	1027,38	4,99	0,3114			257,84	89,579	76,33
Super_ML	108	-0,037	-57,553	3940	15	8,6	0,401	34,065	1027,37	0,401	34,068	1027,37	4,99	0,3253			257,84	89,606	76,33
Super_ML	108	-0,037	-57,553	3940	16	8,5	0,402	34,065	1027,37	0,402	34,068	1027,37	4,99	0,3124			259,76	89,599	76,33
Super_ML	108	-0,038	-57,553	3940	17	3,7	0,4	34,065	1027,35	0,401	34,067	1027,35	4,99	0,3096			257,84	89,556	76,331
Super_ML	108	-0,038	-57,553	3940	18	3,4	0,4	34,065	1027,35	0,401	34,067	1027,35	4,99	0,3325			255,84	89,583	76,331
Super_ML	108	-0,038	-57,553	3940	19	3,3	0,4	34,065	1027,35	0,4	34,067	1027,35	4,99	0,323			253,84	89,586	76,331
Super_ML	108	-0,038	-57,553	3940	20	3,2	0,4	34,065	1027,34	0,4	34,067	1027,35	4,99	0,2886			251,85	89,561	76,331
Super_ML	108	-0,038	-57,553	3940	21	4	0,4	34,065	1027,35	0,4	34,067	1027,35	4,99	0,294			247,93	89,566	76,331
Super_ML	108	-0,038	-57,553	3940	24	4	0,4	34,065	1027,35	0,4	34,067	1027,35	4,99	0,2865			238,75	89,568	76,332
Super_PoTh	109	-0,038	-57,553	3940	1	1004	0,308	34,666	1032,54	0,308	34,67	1032,55	3,06	0,0102			23,985	91,771	76,752
Super_PoTh	109	-0,038	-57,553	3940	2	800,9	0,408	34,669	1031,59	0,407	34,673	1031,59	2,97	0,0111			17,948	91,758	76,756
Super_PoTh	109	-0,038	-57,553	3940	3	649,5	0,47	34,671	1030,88	0,47	34,674	1030,88	2,98	0,0097			19,988	91,755	76,758
Super_PoTh	109	-0,038	-57,553	3940	4	650,3	0,471	34,671	1030,88	0,471	34,674	1030,89	2,98	0,0131			19,988	91,764	76,758
Super_PoTh	109	-0,038	-57,553	3940	5	600,6	0,496	34,67	1030,65	0,496	34,674	1030,65	2,91	0,0125			20,07	91,705	76,76
Super_PoTh	109	-0,038	-57,553	3940	6	399	0,56	34,663	1029,69	0,56	34,666	1029,69	2,99	0,0104			15,99	91,653	76,763
Super_PoTh	109	-0,038	-57,553	3940	7	349,2	0,533	34,655	1029,45	0,533	34,658	1029,45	3,01	0,0134			13,991	91,606	76,765
Super_PoTh	109	-0,038	-57,553	3940	8	298,7	0,521	34,648	1029,21	0,521	34,652	1029,21	3,03	0,0148			11,993	91,582	76,766
Super_PoTh	109	-0,038	-57,553	3940	9	250,4	0,441	34,626	1028,97	0,441	34,629	1028,97	3,1	0,0139			9,9939	91,559	76,768
Super_PoTh	109	-0,038	-57,553	3940	10	197,8	0,141	34,569	1028,69	0,147	34,573	1028,69	3,29	0,0178			7,9951	91,584	76,769
Super_PoTh	109	-0,038	-57,553	3940	11	179,6	0,004	34,537	1028,59	0,006	34,541	1028,59	3,42	0,0141			8,0359	91,575	76,77
Super_PoTh	109	-0,038	-57,553	3940	12	159	-0,424	34,462	1028,45	-0,428	34,464	1028,45	3,74	0,0304			9,9123	91,519	76,771
Super_PoTh	109	-0,038	-57,553	3940	13	138,8	-0,621	34,401	1028,32	-0,627	34,402	1028,32	3,97	0,0434			9,9939	91,445	76,772

Type of Station	CTD	Lon	Lat	Bottom (m)	Niskin	Press (dB)	T1	S1	density1	T2	S2	density 2	O2 (ml/l)	Fluo	CPAR	PAR	SPAR	Xmiss %	Julian Day
Super_PoTh	109	-0,038	-57,553	3940	14	118,3	-0,7	34,332	1028,17	-0,7	34,335	1028,17	4,23	0,0786			9,9939	91,299	76,773
Super_PoTh	109	-0,038	-57,553	3940	15	98,6	-0,326	34,226	1027,97	-0,295	34,221	1027,96	4,49	0,1805			9,9939	90,609	76,774
Super_PoTh	109	-0,038	-57,553	3940	16	79,2	0,322	34,13	1027,76	0,315	34,134	1027,77	4,85	0,2871			9,8715	89,828	76,775
Super_PoTh	109	-0,038	-57,553	3940	17	59,8	0,428	34,116	1027,65	0,429	34,119	1027,66	4,94	0,3466			7,9951	89,58	76,776
Super_PoTh	109	-0,038	-57,553	3940	18	39,9	0,427	34,078	1027,53	0,425	34,079	1027,53	4,98	0,3361			7,9951	89,632	76,777
Super_PoTh	109	-0,038	-57,553	3940	19	29,1	0,389	34,057	1027,46	0,39	34,059	1027,46	4,99	0,3483			7,9951	89,472	76,778
Super_PoTh	109	-0,038	-57,553	3940	20	20,3	0,388	34,056	1027,42	0,388	34,059	1027,42	5	0,3037			7,9951	89,478	76,779
Super_PoTh	109	-0,038	-57,553	3940	21	9,2	0,386	34,055	1027,37	0,386	34,058	1027,37	5	0,3373			7,9951	89,491	76,78
Super_PoTh	109	-0,038	-57,553	3940	24	2,2	0,387	34,054	1027,33	0,388	34,057	1027,33	5	0,3259			7,9951	89,415	76,78
Super_BaSi	110	-0,038	-57,553	3950	1	1003,2	0,325	34,666	1032,54	0,324	34,67	1032,54	3,06	0,01			6,1595	91,777	76,93
Super_BaSi	110	-0,038	-57,552	3950	2	901,1	0,372	34,668	1032,06	0,371	34,672	1032,06	3,04	0,0093			6,0371	91,778	76,933
Super_BaSi	110	-0,038	-57,552	3950	3	800,6	0,403	34,669	1031,59	0,403	34,673	1031,59	2,99	0,0088			6,0779	91,761	76,936
Super_BaSi	110	-0,038	-57,552	3950	4	700,3	0,465	34,671	1031,12	0,464	34,674	1031,12	2,94	0,0117			6,2818	91,742	76,939
Super_BaSi	110	-0,038	-57,552	3950	5	600,4	0,506	34,67	1030,65	0,506	34,673	1030,65	2,91	0,0128			6,0371	91,689	76,942
Super_BaSi	110	-0,038	-57,552	3950	6	549,5	0,524	34,668	1030,4	0,523	34,672	1030,41	2,93	0,0099			5,9963	91,683	76,944
Super_BaSi	110	-0,038	-57,552	3950	7	499,1	0,535	34,667	1030,17	0,535	34,671	1030,17	2,95	0,0112			6,0371	91,668	76,946
Super_BaSi	110	-0,038	-57,552	3950	8	449,7	0,545	34,665	1029,93	0,545	34,669	1029,93	2,97	0,012			6,0371	91,675	76,948
Super_BaSi	110	-0,038	-57,552	3950	9	400,2	0,553	34,664	1029,7	0,553	34,667	1029,7	2,98	0,0096			6,1187	91,662	76,95
Super_BaSi	110	-0,038	-57,552	3950	10	348,9	0,544	34,656	1029,45	0,544	34,66	1029,45	3	0,0095			6,0779	91,607	76,953
Super_BaSi	110	-0,038	-57,552	3950	11	298,6	0,504	34,644	1029,2	0,504	34,647	1029,21	3,04	0,0137			6,0779	91,583	76,956
Super_BaSi	110	-0,037	-57,553	3950	12	274,9	0,476	34,635	1029,09	0,476	34,639	1029,09	3,07	0,0141			6,0371	91,581	76,958
Super_BaSi	110	-0,038	-57,552	3950	13	250,9	0,408	34,622	1028,97	0,407	34,625	1028,97	3,11	0,0111			5,9963	91,559	76,959
Super_BaSi	110	-0,038	-57,552	3950	14	198,7	0,03	34,551	1028,69	0,025	34,555	1028,69	3,37	0,0155			5,9963	91,573	76,962
Super_BaSi	110	-0,038	-57,553	3950	15	174,2	-0,07	34,527	1028,56	-0,066	34,53	1028,56	3,48	0,02			5,9963	91,568	76,963
Super_BaSi	110	-0,038	-57,552	3950	16	150,6	-0,44	34,45	1028,4	-0,436	34,45	1028,4	3,78	0,0332			6,0371	91,533	76,965
Super_BaSi	110	-0,038	-57,552	3950	17	123,2	-0,66	34,352	1028,2	-0,658	34,357	1028,21	4,13	0,0774			5,9963	91,341	76,966
Super_BaSi	110	-0,038	-57,552	3950	18	88	0,416	34,116	1027,79	0,417	34,119	1027,79	4,93	0,3591			6,0371	89,694	76,968
Super_BaSi	110	-0,038	-57,552	3950	19	48,2	0,349	34,052	1027,55	0,349	34,055	1027,55	4,99	0,3883			5,9963	89,543	76,97
Super_BaSi	110	-0,038	-57,552	3950	20	29,7	0,344	34,051	1027,46	0,345	34,055	1027,47	4,99	0,355			5,9963	89,536	76,971
Super_BaSi	110	-0,038	-57,552	3950	21	28,8	0,344	34,051	1027,46	0,344	34,054	1027,46	4,99	0,3622			6,0779	89,504	76,971

CTD Casts
– Bottle Depths –

CTD	Niskin 1	Niskin 2	Niskin 3	Niskin 4	Niskin 5	Niskin 6	Niskin 7	Niskin 8	Niskin 9	Niskin 10	Niskin 11	Niskin 12	Niskin 13	Niskin 14	Niskin 15	Niskin 16	Niskin 17	Niskin 18	Niskin 19	Niskin 20	Niskin 21	Niskin 24
0	1858	1858	1858	1857	1858	1858	1857	1858	1859	1858	1742	1499	1252	1002	803	599	400	199	149	99	50	2
1	176	175	150	150	101	100	76	76	51	50	25	25	2	3								
2	364	365	352	303	249	201	151	99	49	49	25	25	3	3								
3	980	799	598	403	201	151	100	51	51	30	20	2	2									
4	1362	1248	1002	800	600	399	198	150	99	49	50	20	10	3	3							
5	2541	2249	2002	1748	1501	1250	997	798	599	401	200	149	99	48	48	28	19	3	3			
6	3060	2751	2501	2249	2001	1748	1501	1250	1001	800	600	398	200	151	101	58	50	39	25	2	2	
7	3630	3251	2999	2751	2500	2250	1999	1753	1499	1249	1001	800	602	399	199	151	98	61	50	25	4	4
8	4101	3750	3500	3248	2999	2750	2500	2249	2001	1750	1503	1241	1000	800	600	401	201	150	101	70	49	3
9	4319	4001	3751	3502	3246	3002	2750	2500	2250	1999	1751	1509	1200	999	700	500	249	151	89	59	30	2
10	4481	4482	4101	3800	3500	3201	2902	2600	2300	2000	1751	1501	1187	1000	750	500	251	151	90	60	30	4
11	4584	4399	4100	3800	3502	3199	2900	2599	2299	1999	1750	1500	1199	998	751	501	250	144	81	60	51	2
12	252	202	150	101	81	80	81	81	71	50	35	35	9	9	9	9	5	6	4	3	4	4
13	4635	4399	4099	3800	3499	3199	2899	2600	2300	2000	1750	1501	1200	999	798	500	251	151	100	75	39	3
14	4762	4399	4097	3799	3500	3201	2899	2599	2299	1999	1700	1397	1198	998	749	498	200	97	68	50	41	4
15	4779	4399	4098	3799	3501	3202	2900	2601	2301	2001	1750	1499	1299	1000	750	499	248	119	58	40	30	4
16	4544	4398	4098	3800	3500	3199	2899	2601	2298	1998	1750	1499	1349	1001	800	499	249	149	49	32	15	
17	4921	4401	4099	3800	3501	3201	2900	2599	2299	1999	1749	1500	1196	1001	750	501	299	150	99	59	19	3
18	4897	4399	4099	3799	3500	3199	2900	2600	2298	2000	1750	1499	1351	998	799	499	250	150	80	59	24	5
19	5000	4599	4199	3799	3499	3200	2900	2599	2298	2001	1751	1499	1199	1000	797	500	250	151	70	40	20	3
20	248	174	99	76	54	53	54	54	54	40	40	14	14	14	14	7	7	4	3	4	3	4
21	5002	5000	4648	4649	4049	4050	3049	3049	2700	2701	1999	2000	1200	1200	759	759	400	400	201	201	30	30
22	1000	850	699	600	500	500	500	450	400	349	300	249	200	174	150	124	100	79	60	29	20	3
23	1002	1002	1002	849	701	600	550	501	460	420	380	340	300	260	220	180	150	101	75	50	25	4
24	5063	4593	4201	3772	3202	2900	2751	2600	2301	2001	1750	1501	1150	900	749	500	300	175	80	49	25	3
25	5155	4600	4202	3799	3500	3201	2901	2599	2292	2000	1748	1499	1299	1000	851	501	330	199	100	40	21	4
26	5122	4600	4201	3801	3501	3201	2900	2600	2301	1999	1750	1449	1293	999	849	650	349	199	100	39	20	4
27	5092	4599	4200	3800	3498	3199	2898	2600	2300	2000	1750	1500	1299	999	799	600	400	180	97	59	40	3
28	5221	4600	4200	3789	3501	3199	2899	2600	2299	2000	1749	1500	1401	1100	800	400	170	100	69	34	14	4
29	5096	4601	4200	3799	3499	3199	2900	2600	2301	2002	1750	1500	1400	1000	750	600	301	200	120	70	26	4
30	5221	4600	4199	3800	3490	3200	2900	2599	2300	1999	1750	1500	1301	1000	749	499	350	200	100	50	31	4
31	5172	4600	4200	3798	3501	3201	2901	2599	2302	2001	1737	1500	1301	1000	700	500	301	151	90	61	19	5
32	5038	4599	4198	3794	3501	3200	2899	2600	2299	2000	1750	1499	1198	1000	650	500	280	180	101	51	20	3
33	4825	4600	4201	3800	3500	3200	2900	2601	2300	2000	1749	1501	1200	1000	700	499	300	170	100	60	30	4
34	4777	4599	4201	3800	3500	3201	2900	2602	2300	2000	1751	1501	1399	999	800	500	297	150	100	60	30	3
35	4568	4299	4100	3799	3499	3199	2900	2599	2300	1999	1752	1400	1199	900	700	499	348	200	100	59	25	4
37	4570	4401	4200	3800	3498	3200	2900	2599	2298	2001	1749	1401	1201	1000	600	504	300	200	101	49	21	4
38	303	151	101	81	61	51	36	35	35	35	25	15	15	8	7	8	8	4	4	4	3	4
39	4693	4399	4100	3799	3500	3200	2902	2599	2299	2002	1749	1499	1244	998	752	500	349	200	100	50	21	3
40	4666	4102	3800	3502	3200	2899	2600	2300	1999	1750	1501	1250	996	745	601	500	291	129	92	48	26	1
41	4057	3901	3750	3500	3248	3000	2750	2501	2249	1999	1751	1400	1249	998	752	601	349	200	80	48	21	4
42	4093	4094	3500	3502	2950	2948	2201	2200	1470	1471	950	949	600	600	400	400	295	295	125	125	20	21
43	999	850	699	600	601	600	500	451	400	361	330	301	274	250	225	200	175	126	100	75	39	9
44	1503	1502	1001	899	795	699	601	550	500	450	400	350	300	249	200	175	150	125	100	80	40	10

CTD	Niskin 1	Niskin 2	Niskin 3	Niskin 4	Niskin 5	Niskin 6	Niskin 7	Niskin 8	Niskin 9	Niskin 10	Niskin 11	Niskin 12	Niskin 13	Niskin 14	Niskin 15	Niskin 16	Niskin 17	Niskin 18	Niskin 19	Niskin 20	Niskin 21	Niskin 24
45	350	200	151	81	51	50	50	51	50	22	22	10	10	10	10	5	5	3	3	3	3	3
46	3226	3225	3001	3002	2750	2501	2252	2002	1750	1600	1251	998	700	601	500	398	300	148	91	51	20	3
47	2713	2501	2298	2099	1900	1751	1501	1300	1100	899	799	698	601	500	400	250	119	80	60	29	14	4
48	4698	4294	3999	3751	3494	3254	2997	2698	2401	2103	1800	1502	1202	1000	746	550	300	132	80	50	25	3
49	4476	4303	3998	3751	3501	3250	3000	2699	2398	2099	1799	1399	1199	996	748	500	250	151	100	60	31	6
50	3604	3400	3402	3202	3001	2750	2496	2251	2003	1749	1398	1249	1000	798	599	502	398	398	200	100	51	5
51	4688	4302	4000	3747	3503	3252	3006	2702	2402	2096	1801	1553	1303	1001	803	552	550	142	98	59	29	21
52	303	180	140	100	80	60	59	62	58	61	37	37	20	20	20	20	21	21	19	21	20	21
53	4371	4101	3899	3601	3301	3001	2752	2501	2250	1997	1749	1400	1251	1003	751	496	399	198	147	99	48	6
54	1002	901	800	698	600	599	599	549	502	450	400	352	298	249	200	173	149	124	101	60	28	11
55	4436	4003	3753	3500	3247	2991	2753	2499	2252	2001	1750	1498	1298	996	751	401	299	129	89	48	26	9
56	4332	4003	3753	3498	3255	3003	2750	2497	2248	2000	1758	1495	1205	1001	753	498	247	151	104	66	35	6
57	4148	3802	3502	3252	3001	2750	2497	2249	1999	1749	1502	1299	1200	1001	749	501	300	151	90	61	32	5
58	200	162	131	99	78	70	50	47	49	48	20	19	20	19	18	20	11	12	11	13	11	12
59	4318	3999	3742	3501	3250	2999	2745	2500	2251	2001	1752	1500	1250	1099	799	500	250	109	70	51	29	6
60	4313	4001	3748	3502	3250	2999	2748	2500	2243	2001	1748	1500	1250	999	799	502	248	142	101	72	35	7
61	4712	4402	4101	3800	3499	3201	2901	2600	2300	1999	1750	1399	1100	901	651	400	200	120	101	80	39	4
62	222	151	119	101	80	58	60	59	60	60	20	21	9	10	10	10	5	4	4	5	4	4
63	4532	4301	4101	3799	3499	3200	2900	2600	2301	2000	1751	1403	1099	899	648	401	199	149	102	59	29	5
64	4380	4380	3097	3100	2030	2031	2031	2030	1501	1501	1079	1080	744	744	501	501	249	249	125	126	39	41
65	1000	800	601	400	320	281	241	199	200	200	179	159	137	119	100	79	58	40	30	19	9	4
66	1002	850	700	600	550	550	550	500	449	401	350	300	275	251	200	173	149	124	100	79	41	5
67	4430	4200	4000	3750	3500	3200	2900	2600	2302	2001	1752	1501	1249	997	750	501	250	149	101	80	30	4
68	4087	4000	3750	3500	3251	3001	2751	2502	2250	1998	1749	1498	1249	999	798	500	249	131	90	60	29	3
69	3941	3753	3501	3245	3000	2749	2501	2251	2000	1749	1500	1249	1000	899	601	401	249	179	130	80	30	5
70	4080	4080	3801	3501	3250	3001	2751	2500	2251	2001	1750	1501	1250	999	801	600	399	250	118	90	52	6
71	250	200	150	119	100	81	60	60	60	61	34	14	14	9	10	9	9	4	4	4	4	4
72	1001	900	799	703	601	600	600	551	500	449	401	349	300	249	200	177	152	126	100	70	40	9
73	4055	4054	3800	3499	3251	2999	2751	2497	2250	2002	1750	1500	1251	1000	749	500	249	139	100	70	30	10
74	3811	3499	3500	3252	3000	2748	2500	2248	1997	1750	1497	1249	1001	899	598	401	250	179	120	69	29	3
75	3741	3738	3501	3250	3001	2750	2498	2251	2002	1751	1505	1300	1097	901	702	499	200	111	77	45	25	5
76	3646	3500	3249	3249	3001	2751	2500	2250	2001	1750	1498	1249	1000	697	600	398	161	98	86	69	39	3
77	3596	3595	3402	3250	2998	2749	2500	2250	2002	1749	1501	1252	999	801	602	401	251	200	129	98	48	3
78	252	160	120	103	90	78	79	78	78	60	29	15	15	10	9	10	10	6	5	7	6	7
79	3507	3399	3246	3001	2751	2748	2500	2248	1999	1750	1499	1249	1000	799	499	400	299	249	80	50	20	19
80	2385	2100	1998	1799	1797	1601	1600	1398	1401	1199	1001	800	600	499	351	201	150	109	69	49	13	4
81	2385	2199	1999	1798	1603	1398	1199	1002	1001	799	801	597	499	398	297	248	140	98	89	78	39	4
82	2667	2500	2250	2000	1798	1597	1399	1200	1000	797	795	794	597	500	399	248	140	121	100	69	28	5
83	250	181	147	123	123	125	124	125	88	60	24	23	11	11	10	9	2	4	3	2	3	4
84	2551	2503	2500	2301	2301	2101	2102	2000	1801	1601	1396	1201	1001	798	598	401	300	200	151	100	49	5
85	2538	2538	2341	2340	1699	1700	1129	1130	748	750	419	418	419	419	330	330	250	250	169	168	58	58
86	1002	800	601	399	348	298	247	200	175	155	146	120	120	100	80	60	41	39	29	20	9	3
87	1004	849	704	596	553	495	453	398	349	300	275	246	199	177	149	122	121	100	79	41	41	11
88	2699	2500	2300	2099	2000	1798	1799	1600	1600	1399	1401	1202	1000	799	597	448	250	161	140	110	49	8

CTD	Niskin 1	Niskin 2	Niskin 3	Niskin 4	Niskin 5	Niskin 6	Niskin 7	Niskin 8	Niskin 9	Niskin 10	Niskin 11	Niskin 12	Niskin 13	Niskin 14	Niskin 15	Niskin 16	Niskin 17	Niskin 18	Niskin 19	Niskin 20	Niskin 21	Niskin 24
89	2690	2499	2500	2300	2099	1898	1697	1500	1299	1099	900	799	700	599	500	399	250	148	119	100	50	6
90	2612	2500	2301	2098	1899	1747	1500	1299	1100	899	799	700	598	500	399	249	179	137	108	68	30	4
91	1011	1012	1012	1011	949	951	503	505	505	505	385	384	384	385	300	299	151	148	130	130	56	58
92	2177	2098	2100	1898	1700	1499	1500	1299	1099	1000	898	799	699	600	497	401	299	160	129	101	51	4
93	2665	2501	2302	2101	1900	1752	1500	1300	1101	903	801	702	601	499	401	252	169	142	122	80	39	4
94	2444	2447	2299	2101	1899	1750	1499	1298	1099	900	800	700	600	500	350	252	167	150	125	89	49	3
95	2621	2500	2295	2100	1899	1748	1497	1299	1100	899	800	699	596	496	398	248	168	149	120	78	26	10
96	1228	1231	1101	1102	999	901	800	699	599	501	397	299	250	180	139	110	80	41	5			
97	1409	1299	1090	999	1000	899	800	697	600	500	400	330	248	180	151	110	79	50	6			
98	2768	2768	2597	2597	2498	2299	2096	1899	1699	1497	1248	998	799	598	498	298	170	130	100	80	38	6
99	1002	898	801	699	600	550	502	451	399	349	300	249	199	175	149	125	100	80	59	39	19	4
100	248	169	149	129	119	110	110	110	110	79	49	25	25	13	14	13	13	5	5	5	5	5
101	3511	3512	3399	3399	3196	3000	2749	2499	2249	1999	1749	1500	1249	999	796	600	399	199	150	99	50	5
102	3651	3499	3499	3248	3000	2750	2499	2249	1999	1750	1499	1250	1000	750	501	300	199	150	120	100	48	4
103	3668	3667	3597	3498	3249	3000	2748	2497	2251	1996	1752	1499	1252	1002	799	600	299	180	128	79	42	6
104	3894	3799	3599	3400	3201	2999	2748	2499	2247	2000	1751	1500	1249	998	799	600	400	200	149	121	49	5
105	4401	3978	3750	3503	3251	3000	2749	2499	2251	2002	1751	1499	1247	1000	751	499	299	181	141	89	49	2
106	3979	3749	3499	3249	3000	2751	2500	2249	1999	1749	1499	1248	1000	801	597	398	299	199	129	80	49	4
107	3922	3920	3920	3920	3200	3199	2501	2500	1799	1800	1200	1201	699	700	398	398	250	250	135	135	30	30
108	269	178	130	110	90	90	90	90	90	59	29	29	9	9	9	8	4	3	3	3	4	4
109	1004	801	650	650	601	399	349	299	250	198	180	159	139	118	99	79	60	40	29	20	9	2
110	1003	901	801	700	600	549	499	450	400	349	299	275	251	199	174	151	123	88	48	30	29	

Annexe 2

In Situ Pumps

In Situ Pumps
– Sampling –

Made by

Anne-Julie CAVAGNA

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 1
N° de palanquée : ISP 1
Operators : Cavagna-Dehairs

Date (UTC) : 20/2/2008
Heure debut (UTC): 07:00 am
Heure fin (UTC): 11:30 am
PUMPING = 01:30

Lattitude (° ') : 36°31.258'
Longitude (° ') : 13°07.139'
Bottom Depth (m) : -

1 punch = diameter of 25.3 mm
Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

Total wire out (m)	750
Wire out, when microcat is attached (740m)	

(≥ total wire out -3300)

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge		Parameters to be measured	persons in charge	prefilter %	filter fraction		Parameters to be measured	persons in charge	prefilter %	filter fraction
1	50	*Challenger 4*	693	petex 53µ	QMA 142mm 1µm	-		Po Pb210	Verdeny	25%	10 punchs		14, 13, 12 C POC	Tisnerat	25%	5 punchs
2	75	*Challenger 3*	668	petex 53µ	QMA 142mm 1µm	-		Po Pb210	Verdeny	25%	10 punchs		14, 13, 12 C POC	Tisnerat	25%	6 punchs
3	125	*Challenger 2*	618	petex 53µ	QMA 142mm 1µm	-		Po Pb210	Verdeny	25%	10 punchs		14, 13, 12 C POC	Tisnerat	25%	6 punchs
4	175	*Challenger 1*	568	petex 53µ	QMA 142mm 1µm	-		Po Pb210	Verdeny	33%	10 punchs		14, 13, 12 C POC	Tisnerat	33%	6 punchs
5	250	*McLane 3*	493	petex 53µ	QMA 142mm 1µm	-		Po Pb210	Verdeny	33%	10 punchs		14, 13, 12 C POC	Tisnerat	33%	6 punchs
6	500	*McLane 2*	243	petex 53µ	QMA 142mm 1µm	-		Po Pb210	Verdeny	33%	10 punchs		14, 13, 12 C POC	Tisnerat	33%	6 punchs
7	750	*McLane 1*	**0**	petex 53µ	QMA 142mm 1µm	-		Po Pb210	Verdeny	33%	10 punchs		14, 13, 12 C POC	Tisnerat	33%	6 punchs

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 1
N° de palanquée : ISP 1
Operators : Cavagna-Dehairs

Date (UTC) : 20/2/2008
Heure debut (UTC): 07:00 am
Heure fin (UTC): 11:30 am

Lattitude (° ') : 36°31.258'
Longitude (° ') : 13°07.139'
Bottom Depth (m) : -

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge		Parameters to be measured	persons in charge	prefilter %	filter fraction		Parameters to be measured	persons in charge	prefilter %	filter fraction
1	50	*Challenger 4*	693	petex 53µ	QMA 142mm 1µm	-		compound specifics 234Th	Cavagna Planchon	50%	all the rest		alkenones	Ezzat	-	1 punch
2	75	*Challenger 3*	668	petex 53µ	QMA 142mm 1µm	-		compound specifics 234Th	Cavagna Planchon	50%	all the rest		-	-	-	-
3	125	*Challenger 2*	618	petex 53µ	QMA 142mm 1µm	-		compound specifics 234Th	Cavagna Planchon	50%	all the rest		-	-	-	-
4	175	*Challenger 1*	568	petex 53µ	QMA 142mm 1µm	-		compound specifics 234Th	Cavagna Planchon	33%	all the rest		-	-	-	-
5	250	*McLane 3*	493	petex 53µ	QMA 142mm 1µm	-		compound specifics 234Th	Cavagna Planchon	33%	all the rest		-	-	-	-
6	500	*McLane 2*	243	petex 53µ	QMA 142mm 1µm	-		compound specifics 234Th	Cavagna Planchon	33%	all the rest		-	-	-	-
7	750	*McLane 1*	**0**	petex 53µ	QMA 142mm 1µm	-		compound specifics 234Th	Cavagna Planchon	33%	all the rest		-	-	-	-

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 1
N° de palanquée : ISP 1
Operators : Cavagna-Dehairs

Date (UTC) : 20/2/2008
Heure debut (UTC): 07:00 am
Heure fin (UTC): 11:30 am

Lattitude (° ') : 36°31.258'
Longitude (° ') : 13°07.139'
Bottom Depth (m) : -

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge		Filtered volume (L) read on the pump	pumping duration (min)	Effective depth (m) calculated from microcat data	comments	
1	50	*Challenger 4*	693	petex 53µ	QMA 142mm 1µm	-		1084	Set to 1h30min	**50**	ok	
2	75	*Challenger 3*	668	petex 53µ	QMA 142mm 1µm	-		693	Set to 1h30min	**76**	ok	
3	125	*Challenger 2*	618	petex 53µ	QMA 142mm 1µm	-		1316	Set to 1h30min	**126**	ok	
4	175	*Challenger 1*	568	petex 53µ	QMA 142mm 1µm	-		1008	Set to 1h30min	**176**	no particulate matter on the filter: no filtration or water mass different at this depth	
5	250	*McLane 3*	493	petex 53µ	QMA 142mm 1µm	-		603	Set to 1h30min	**252**	ok	
6	500	*McLane 2*	243	petex 53µ	QMA 142mm 1µm	-		612	Set to 1h30min	**504**	ok	
7	750	*McLane 1*	**0**	petex 53µ	QMA 142mm 1µm	-		612	Set to 1h30min	**748**	ok	

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **750 m**

profondeur du microcat: 755,55 m

on suppose poulie compteuse a zero quanf microcat at seasurface

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length

alpha= 6,95 °

NAME : **SUPER station 1 / ISP 1**

QMA

date : 20/2/2008 start time (TU): 07:30 am start lat: 36° 31.258' S start lon: 13°07.139' E

site : S1 stop time: 11:30 am

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
Challenger 4	1	50		1084	53	M1	yellow, well charged with presence of zooplankton (pteropods ?)	no
					1	M2	nice coverage, yellow	no
Challenger 3	2	75		693	53	M3	compared with M1, very clear (no more big particles)	no
					1	M4	nice coverage, yellow	no
Challenger 2	3	125		1316	53	M5	ok	no
					1	M6	nice coverage, yellow brown	no
Challenger 1	4	175		1008	53	M7	seems to be a **blank** even if pump functionned	no
					1	M8	seems to be a **blank** even if pump functionned	no
McLane 3	5	250		603	53	M9	ok, very very clear	no
					1	M10	clear color, homogenous	no
McLane 2	6	500		612	53	M11	very clear	no
					1	M12	clear color, (same color than M10)	no
McLane 1	7	750		612	53	M13	again very clear	no
					1	M14	clear color, homogenous (a little more colored than M10 and M12)	no

Prefilter 53µ: pumps 1, 2, 3 = 25% 234Th, CS, 14C, Po each / pumps 4, 5, 6, 7 = 33,3% 234Th, 14C, Po each
filter QMA 1µ: 10 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C (sauf pour le point de max chloro à 50m = 5 pour Nadine + 1 pour Ula), rest for compound specifics

Note: M1 and M3, resuspension and filtration on Ag filter for 234Th-POC are not complet because Ag filters were colmated and Petex not full rinsed (particules collantes..)

GLOBAL NOTE

Filter diameter=142mm **Total area= 158,37 cm2**

Active filtered diameter=136mm **Active area= 145,27 cm2**

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 1
N° de palanquée : ISP 2
Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 21 / 2 / 2008
Heure debut (UTC): 10:25 pm
Heure fin (UTC): 00:30 am

Lattitude (° ') : 36°31.800'
Longitude (° ') : 13°07.330'
Bottom Depth (m) : 4929m

RESET Poulie when line at the sea surface

Total wire out (m)	4807
Wire out, when microcat is attached (m)	-

(≥ total wire out -3300)

microcat depth #VALEUR!

PUMPING = 02:00 **PINGER = 145m**
1 punch = diameter of 25.3 mm
Microcat maximum depth is 3500m. Maximum target depth for mic
pumps are attached 7m above sea surface

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	4700	*McLane 1*	100	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	50%	50%	compound specifics 234Th	Cavagna Planchon	50%	50%
2	4650	Challenger INSU 5	150	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	83%	Bsi, 30Si	Cardinal	-	17%
3	2750	*McLane 2*	2050	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	50%	50%	compound specifics 234Th	Cavagna Planchon	50%	50%
4	2700	Challenger INSU 6	2100	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	50%	Bsi, 30Si	Cardinal	-	50%
5	1250	*McLane 1*	3550	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	50%	50%	compound specifics 234Th	Cavagna Planchon	50%	50%
6	1200	Challenger INSU 7	3600	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	83%	Bsi, 30Si	Cardinal	-	17%
7	760	Challenger ULB 1	4040	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	83%	Bsi, 30Si	Cardinal	-	17%
8	200	Challenger ULB 2	4600	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	83%	Bsi, 30Si	Cardinal	-	17%
9	30	Challenger Elisabet	4770	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 7 / 8	Bsi, 30Si	Cardinal	-	» 1 / 8

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 1
N° de palanquée : ISP 2
Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 21 / 2 / 2008
Heure debut (UTC): 10:25 pm
Heure fin (UTC): 00:30 am

Lattitude (° ') : 36°31.800'
Longitude (° ') : 13°07.330'
Bottom Depth (m) : 4929m

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)	Effective depth (m) calculated from pinger data	Comments
1	4700	*McLane 1*	100	petex 53µ	QMA 142mm 1µm	-	7781	8775	994	Set to 2h	4678	ok
2	4650	Challenger INSU 5	150	-	SUPOR 293mm 0.45µm	-	114842	115585	743	Set to 2h	4628	ok
3	2750	*McLane 2*	2050	petex 53µ	QMA 142mm 1µm	-	6805	7783	978	Set to 2h	2737	ok
4	2700	Challenger INSU 6	2100	-	SUPOR 293mm 0.45µm	-	118435	118711	276	Set to 2h	2687	only 276 L because 2 membranes loaded by mistake
5	1250	*McLane 1*	3550	petex 53µ	QMA 142mm 1µm	-	2400	3427	1027	Set to 2h	1244	ok
6	1200	Challenger INSU 7	3600	-	SUPOR 293mm 0.45µm	-	63509	63510	1	Set to 2h	1194	no pumping BLANK IN SITU
7	760	Challenger ULB 1	4040	-	SUPOR 293mm 0.45µm	-	91052	91050	-2	Set to 2h	756	no pumping BLANK IN SITU
8	200	Challenger ULB 2	4600	-	SUPOR 293mm 0.45µm	-	85362	86319	957	Set to 2h	199	ok
9	30	Challenger Elisabet	4770	-	SUPOR 293mm 0.45µm	-	51140	51541	401	Set to 2h	30	ok

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **4807** m

pumps were set to start at 1h00 UTC.
at 1h00 UTC, the wire out was 4772 instead of 4807
at 1h02 UTC, the last pump was attached
at 1h06 UTC, the wire out was at the right position, 4807.

depth of the bottom of the line
4784 m

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger depth / cable length = 4784/4807
alpha= 5,61 °

NAME : **SUPER station 1 / ISP 2**

QMA

date : 21/2/2008 start time (TU): 10:25 pm start lat: 36° 31.80' S start lon: 13°08' E

site : S1 stop time: 05:25 am

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
McLane	1	1250		1027,5	53	M15	something on it, great !!	no
					1	M16	colored and homogenous	no
McLane	2	2750		978	53	M17	very clear, like M15	no
					1	M18	colored and homogenous	no
McLane	3	4700		994	53	M19	very clear	no
					1	M20	browner than M16 and M18 (nepheloids ?)	no

Prefilter 53µ: 50% = 14C and 234Th each (no compound specifics sampling on this fraction)
filter QMA 1µ: 1 punch for 234Th, 50% for 14C and (50% - 1) punch for CS

Note 1: M1 and M3, resuspension and filtration on Ag filter for 234Th-POC are not complet because Ag filters were colmated and Petex not full rinsed (particules collantes..)

Note 2: no sampling for Elisabet, because didn't discussed about that together, it will be done next super stations.

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 1
N° de palanquée : ISP 3
Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 22 / 2 / 2008
Heure debut (UTC): 05:07 pm
Heure fin (UTC): 00:30 am

Lattitude (° ') : 36°29.799'
Longitude (° ') : 13°06.705'
Bottom Depth (m) : 4862m

RESET Poulie when line at the sea surface

Total wire out (m)		2857	
Wire out, when microcat is attached (m)		1	(≥ total wire out -3300)
		microcat depth	2856

PUMPING = 02:00
1 punch = diameter of 25.3 mm
Microcat maximum depth is 3500m. Maximum target depth for microcat is 330

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	2750	Challenger INSU 5	100	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
2	2700	*McLane 3*	150	petex 53µ	QMA 142mm 1µm	Y	Radium	Verdeny	-	-	14, 13, 12 C POC	Tisnerat	50%	50%
3	1250	Challenger INSU 6	1600	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
4	1200	*McLane 1*	1650	petex 53µ	QMA 142mm 1µm	Y	radium	Verdeny	-	-	14, 13, 12 C POC	Tisnerat	50%	50%
5	775	Challenger INSU 2 adapté	2075	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
6	725	*McLane 2*	2125	petex 53µ	QMA 142mm 1µm	Y	radium	Verdeny	-	-	-	-	-	-
7	500	*Challenger INSU 3*	2350	petex 53µ	QMA 142mm 1µm	Y	radium	Verdeny	-	-	14, 13, 12 C POC	Tisnerat	33%	50%
8	250	*Challenger INSU 4*	2600	petex 53µ	QMA 142mm 1µm	Y	radium	Verdeny	-	-	14, 13, 12 C POC	Tisnerat	33%	50%
9	75	*Challenger INSU 1*	2775	petex 53µ	QMA 142mm 1µm	Y	radium	Verdeny	-	-	14, 13, 12 C POC	Tisnerat	33%	50%

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 1
N° de palanquée : ISP 3

Date (UTC) : 22 / 2 / 2008
Heure debut (UTC): 05:07 pm

Lattitude (° ') : 36°29.799'
Longitude (° ') : 13°06.705'

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)
1	2750	Challenger INSU 5	100	-	SUPOR 293mm 0.45µm	-	-	-	-	-	115587	116955	1368	Set to 2h
2	2700	*McLane 3*	150	petex 53µ	QMA 142mm 1µm	Y	compound specifics 234Th	Cavagna	50%	50%	7785	8698	913	Set to 2h
3	1250	Challenger INSU 6	1600	-	SUPOR 293mm 0.45µm	-	-	-	-	-	118711	119868	1157	Set to 2h
4	1200	*McLane 1*	1650	petex 53µ	QMA 142mm 1µm	Y	compound specifics 234Th	Cavagna	50%	50%	3428	4402	974	Set to 2h
5	775	Challenger INSU 2 adapté	2075	-	SUPOR 293mm 0.45µm	-	-	-	-	-	33233	33225	-8	Set to 2h
6	725	*McLane 2*	2125	petex 53µ	QMA 142mm 1µm	Y	-	-	-	-	8776	8776	0	Set to 2h
7	500	*Challenger INSU 3*	2350	petex 53µ	QMA 142mm 1µm	Y	compound specifics 234Th	Cavagna	66%	50%	46325	46363	38	Set to 2h
8	250	*Challenger INSU 4*	2600	petex 53µ	QMA 142mm 1µm	Y	compound specifics 234Th	Cavagna	66%	50%	54631	56326	1695	Set to 2h
9	75	*Challenger INSU 1*	2775	petex 53µ	QMA 142mm 1µm	Y	compound specifics 234Th	Cavagna	66%	50%	81450	82402	952	Set to 2h

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 1
N° de palanquée : ISP 3

Date (UTC) : 22 / 2 / 2008
Heure debut (UTC): 05:07 pm

Lattitude (° ') : 36°29.799'
Longitude (° ') : 13°06.705'

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Effective depth (m) calculated from microcat data	comments
1	2750	Challenger INSU 5	100	-	SUPOR 293mm 0.45µm	-	2734	ok
2	2700	*McLane 3*	150	petex 53µ	QMA 142mm 1µm	Y	2684	ok
3	1250	Challenger INSU 6	1600	-	SUPOR 293mm 0.45µm	-	1243	ok
4	1200	*McLane 1*	1650	petex 53µ	QMA 142mm 1µm	Y	1193	ok
5	775	Challenger INSU 2 adapté	2075	-	SUPOR 293mm 0.45µm	-	770	head filter lost at sea
6	725	*McLane 2*	2125	petex 53µ	QMA 142mm 1µm	Y	721	no pumping **QMA NOT USED AS BLANK**
7	500	*Challenger INSU 3*	2350	petex 53µ	QMA 142mm 1µm	Y	497	no pumping **BLANK IN SITU**
8	250	*Challenger INSU 4*	2600	petex 53µ	QMA 142mm 1µm	Y	249	ok
9	75	*Challenger INSU 1*	2775	petex 53µ	QMA 142mm 1µm	Y	75	ok

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **2857 m**

profondeur du microcat: 2840 m

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length
alpha= 6,25 °

NAME : **SUPER station 1 / ISP 3**

QMA

date : 22/2/2008 start time (TU): 05:07 pm start lat: 36° 30' S start lon: 13°7' E

site : S1 stop time: 00:30 am

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
Challenger 1	1	75		952	53	M21	nice coverage (more charged than M3)	yes
					1	M22	nice coverage but less charged than M4	yes
Challenger 4	2	250		1695	53	M23	nice coverage so, no leak observed	yes
					1	M24	well colored (brown) - large volume filtered	yes
McLane 1	3	725		0	53	-	**Blank** (50% pour anju et 50% pour Nadine)	yes
					1	-	**Blank** (50% pour anju et 50% pour Nadine)	yes
McLane 2	4	1200		974	53	M25	very clear	yes
					1	M26	nice relatively clear coverage	yes
McLane 3	5	2700		913	53	M27	very clear, almost nothing	yes
					1	M28	a litlle bit more clear than M18	yes

Prefilter 53µ: pumps 1, 2 = 33.3% for 234Th, CS and 14C each - pumps 5, 6 =50% for CS and 14C each (no 234Th sampling)
filter QMA 1µ: 50% for 14C and CS each + 1 punch for 234Th sampled on the CS fraction

Note: hey sorry Elisabet.. Don't worry, you wil have samples everywhere next super stations !

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 4
Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 27/02/ 2008
Heure debut (UTC) : 05:00 AM
Heure fin (UTC): 12:04

Lattitude (° ') : 42°28.146'
Longitude (° ') : 08° 55.726 '

RESET Pulley when line at the sea surface

Total wire out (m)		**4027**
Wire out, when microcat is attached (m)		**1000**

(≥ total wire out -3300)

microcat depth **3027**

PUMPING = 02:00

1 punch = diameter of 25.3 mm

Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 4

Date (UTC) : 27/02/ 2008
Heure debut (UTC) : 05:00 AM

Lattitude (° ') : 42°28.146'
Longitude (° ') : 08° 55.726 '

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	75	*Challenger INSU 6*	3945	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	25%	5 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
2	608	*Challenger INSU 4*	3412	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
3	980	ULB 1	3040	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
4	1440	Challenger INSU 5	2580	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
5	1450	*McLane 1*	2570	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
6	1460	*Challenger INSU 1*	2560	petex 53µ	QMA 142mm 1µm	Y	-	-	-	-	-	-	-	-
7	1960	Challenger INSU 7	2060	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
8	2890	Challenger Elisabet	1130	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
9	2900	*McLane 2*	1120	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
10	2910	*Challenger INSU 3*	1110	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
11	3940	*McLane 3*	80	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 4

Date (UTC) : 27/02/ 2008
Heure debut (UTC) : 05:00 AM

Lattitude (° ') : 42°28.146'
Longitude (° ') : 08° 55.726 '

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge		Parameters to be measured	persons in charge	prefilter %	filter %		Parameters to be measured	persons in charge	prefilter %	filter %
12	3950	ULB 2	70	-	SUPOR 293mm 0.45µm	-		Nd, Pa, Th	Lacan	-	» 5 / 6		Bsi, 30Si	Cardinal	-	» 1 / 6
13	3960	Challenger INSU 2	60	-	-	Y		-	-	-	-		-	-	-	-

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 4

Date (UTC) : 27/02/ 2008
Heure debut (UTC) : 05:00 AM

Lattitude (° ') : 42°28.146'
Longitude (° ') : 08° 55.726 '

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	75	*Challenger INSU 6*	3945	petex 53µ	QMA 142mm 1µm	Y	Radium	Verdeny	-	-	alkenones 210Pb / Po	Ezzat Verdeny	no 25%	1 punch 10 punchs
2	608	*Challenger INSU 4*	3412	petex 53µ	QMA 142mm 1µm	Y	Radium	Verdeny	-	-	Po Pb210	Verdeny	25%	10 punchs
3	980	ULB 1	3040	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
4	1440	Challenger INSU 5	2580	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
5	1450	*McLane 1*	2570	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	Po Pb210	Verdeny	33%	10 punchs
6	1460	*Challenger INSU 1*	2560	petex 53µ	QMA 142mm 1µm	Y	Radium	Verdeny	-	-	-	-	-	-
7	1960	Challenger INSU 7	2060	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
8	2890	Challenger Elisabet	1130	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
9	2900	*McLane 2*	1120	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	Po Pb210	Verdeny	33%	10 punchs
10	2910	*Challenger INSU 3*	1110	petex 53µ	QMA 142mm 1µm	Y	Radium	Verdeny	-	-	Po Pb210	Verdeny	33%	10 punchs
11	3940	*McLane 3*	80	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	Po Pb210	Verdeny	33%	10 punchs
12	3950	ULB 2	70	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
13	3960	Challenger INSU 2	60	-	-	Y	Radium	Verdeny	-	-	-	-	-	-

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 4

Date (UTC) : 27/02/ 2008
Heure debut (UTC) : 05:00 AM

Lattitude (° ') : 42°28.146'
Longitude (° ') : 08° 55.726 '

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)	Effective depth (m) calculated from microcat data	Comments
1	75	*Challenger INSU 6*	3945	petex 53µ	QMA 142mm 1µm	Y	119848	120580	732	set 2h	0,0	ok
2	608	*Challenger INSU 4*	3412	petex 53µ	QMA 142mm 1µm	Y	56327	57054	727	set 2h	0,0	ok
3	980	ULB 1	3040	-	SUPOR 293mm 0.45µm	-	91050	91050	0	set 2h	0,0	no pumping **BLANK IN SITU**
4	1440	Challenger INSU 5	2580	-	SUPOR 293mm 0.45µm	-	116955	118255	1300	set 2h	0,0	*don't remember which one but one INSU was*
5	1450	*McLane 1*	2570	petex 53µ	QMA 142mm 1µm	-	4402	5324	922	set 2h	0,0	*disconnected at the recovery…*
6	1460	*Challenger INSU 1*	2560	petex 53µ	QMA 142mm 1µm	Y	82402	82375	-27	set 2h	0,0	inverse pumping **QMA NOT USED AS BLANK**
7	1960	Challenger INSU 7	2060	-	SUPOR 293mm 0.45µm	-	63510	64174	664	set 2h	0,0	ok
8	2890	Challenger Elisabet	1130	-	SUPOR 293mm 0.45µm	-	51541	51554	13	set 2h	0,0	no pumping: check on / off **BLANK IN SITU**
9	2900	*McLane 2*	1120	petex 53µ	QMA 142mm 1µm	-	8778	9789	1011	set 2h	0,0	ok
10	2910	*Challenger INSU 3*	1110	petex 53µ	QMA 142mm 1µm	Y	46364	47805	1441	set 2h	0,0	ok
11	3940	*McLane 3*	80	petex 53µ	QMA 142mm 1µm	-	8698	9638	940	set 2h	0,0	ok
12	3950	ULB 2	70	-	SUPOR 293mm 0.45µm	-	86320	87572	1252	set 2h	0,0	pump and head filter connected after clamping..
13	3960	Challenger INSU 2	60	-	-	Y	33226	35493	2267	set 2h	0,0	ok

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 4

Date (UTC) : 27/02/ 2008
Heure debut (UTC) : 05:00 AM

Lattitude (° ') : 42°28.146'
Longitude (° ') : 08° 55.726 '

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **4027 m**

profondeur du microcat: m

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length
alpha= 90,00 °

1	75	Ra	
2	250	Ra	
3	620	Ra	
4	1400	Nd	293
5	1400	Ra	
6	1400	C14	
7	2700	Nd	293
8	2700	Ra	
9	2700	C14	
10	4000	Nd	293
11	4000	Ra	
12	4000	C14	
13			

1	30	Nd	293
2	30	C14	
3	75	C14	
4	80	Nd	142
5	130	C14	
6	130	Nd	293
7	175	C14	
8	200	Nd	293
9	250	C14	
10	400	Nd	293
11	620	Nd	293
12	620	C14	
13			

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 4

Date (UTC) : 27/02/ 2008
Heure debut (UTC) : 05:00 AM

Lattitude (° ') : 42°28.146'
Longitude (° ') : 08° 55.726 '

	filtre	diametre	pompe	
1	75	QMA-Mn	142	Chal insu6
2	620	SUPOR	293	Chal ULB1
3	620	QMA-Mn	142	Chal insu4
4	1400	SUPOR	293	Chal insu5
5	1400	QMA-Mn	142	Chal insu1
6	1400	QMA	142	McLane
7	2000	SUPOR	293	Chal insu7
8	2700	SUPOR	293	Chal Elisabet
9	2700	QMA-Mn	142	Chal insu3
10	2700	QMA	142	McLane
11	4000	SUPOR	293	Chal ULB2
12	4000	QMA-Mn	142	Chal insu2
13	4000	QMA	142	McLane

insu1	x	142
insu2	x	142
insu3	x	142
insu4	x	142
insu5	x	142-293
insu6	x	142
insu7	x	142-293
ulb1	x	293
ulb2	x	293
Elisabet	x	293

1	30	SUPOR	293	Chal ULB1
2	30	QMA	142	McLane
3	75	QMA	142	McLane
4	80	SUPOR	293	Chal insu5
5	130	QMA	142	McLane
6	130	SUPOR	293	Chal insu6
7	175	QMA	142	Chal insu1
8	200	SUPOR	293	Chal Elisabet
9	250	QMA	142	Chal insu2
#	400	SUPOR	293	Chal ULB2
#	500	QMA	142	Chal insu3
#	620	QMA	142	Chal insu4

NAME : **SUPER station 2 / ISP 4** **QMA**

date : 27/2/2008 start time (TU): 05:00 am start lat: 42° 22.146' S start lon: 08°55.726' E

site : S2 stop time (TU): 12:04 am stop lat: 42° 28.134' S stop lon: 08°55.72''' E

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
INSU 6	1	75		732	53	M29	well charged + 1 krill (problem when refiltration, so not so much matter on Ag filter)	yes
					1	M30	very nice coverage, yellow / green	yes
INSU 4	2	608		727	53	M31	a few specimens of funny zooplankton, very slightly charger	yes
					1	M32	colored: yellow / brown	yes
McLane 1	3	1450		922	53	M33	nothing on it (no visible particules)	no
					1	M34	slightly colored homogenous	no
INSU 1	4	1460		-27	53	-	inverse pumping, dirty so throw it away..	yes
					1	-	inverse pumping, dirty so throw it away..	yes
McLane 2	5	2900		1011	53	M35	clear really.	no
					1	M36	again slighlty colored	no
INSU 3	6	2910		1441	53	M37	clear really.	yes
					1	M38	again a little bit colored	yes
McLane 3	7	3940		940	53	M39	nothing	no
					1	M40	again colored + black rubber particles (from head filter?) like on SAZ-SENSE	no

Prefilter 53µ: pumps 1, 2 = 25% 234Th, CS, 14C, Po each / pumps 3, 5, 6, 7 = 33,3% 234Th, 14C, Po each
filter QMA 1µ: 10 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C (sauf pour le point de max chloro à 75m = 5 pour Nadine + 1 pour Ula), rest for compound specifics

Note: next time i will take inverse pumping to mesure potential pump contamination (just potential because no inverse flux when pumping)

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 5
Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 28 / 02 / 2008
Heure debut (UTC) : 00:38
Heure fin (UTC): 07:30

Lattitude (° ') : 42°28 'S
Longitude (° ') : 08°56'E
Bottom Depth (m) : m

RESET Pulley when line at the sea surface

PUMPING = 02:00

Total wire out (m)	4000
Wire out, when microcat is attached (m)	1000

(≥ total wire out -3300)

microcat depth **3000**

1 punch = diameter of 25.3 mm

Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 5

Date (UTC) : 28 / 02 / 2008
Heure debut (UTC) : 00:38

Lattitude (° ') : 42°28 'S
Longitude (° ') : 08°56'E

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	20	Challenger Elisabet	3973	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
2	30	*McLane 1*	3963	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	5 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
3	75	*Challenger INSU 4*	3918	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	5 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
4	130	*McLane 2*	3863	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
5	175	*Challenger INSU 1*	3818	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	50%	50%	compound specifics 234Th	Cavagna Planchon	66%	50%
6	250	*Challenger INSU 2*	3743	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
7	260	Challenger ULB 2	3733	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
8	590	*McLane 3*	3403	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
9	608	Challenger INSU 3	3385	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
10	1450	*Challenger INSU 7*	2543	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	50%	50%	compound specifics 234Th	Cavagna Planchon	66%	50%
11	2890	Challenger INSU 6	1103	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 5

Date (UTC) : 28 / 02 / 2008
Heure debut (UTC) : 00:38

Lattitude (° ') : 42°28 'S
Longitude (° ') : 08°56'E

12	3900	Challenger INSU 5	93	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)
1	20	Challenger Elisabet	3973	-	SUPOR 293mm 0.45µm	-	-	-	-	-	51554	51937	383	set 2h
2	30	*McLane 1*	3963	petex 53µ	QMA 142mm 1µm	-	alkenones 210Pb / Po	Ezzat Verdeny	no 25%	1 punch 10 punchs	5324	5815	491	set 2h
3	75	*Challenger INSU 4*	3918	petex 53µ	QMA 142mm 1µm	-	alkenones 210Pb / Po	Ezzat Verdeny	no 25%	1 punch 10 punchs	57054	58423	1369	set 2h
4	130	*McLane 2*	3863	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	10 punchs	9789	10830	1041	set 2h
5	175	*Challenger INSU 1*	3818	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	82375	82345	-30	set 2h
6	250	*Challenger INSU 2*	3743	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	10 punchs	35493	37058	1565	set 2h
7	260	Challenger ULB 2	3733	-	SUPOR 293mm 0.45µm	-	-	-	-	-	87571	88586,5	1015,5	set 2h
8	590	*McLane 3*	3403	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	8630	10613	1983	set 2h
9	608	Challenger INSU 3	3385	-	SUPOR 293mm 0.45µm	-	-	-	-	-	47805	48999	1194	set 2h
10	1450	*Challenger INSU 7*	2543	petex 53µ	QMA 142mm 1µm	Y	-	-	-	-	164174	164171,5	-2,5	set 2h
11	2890	Challenger INSU 6	1103	-	SUPOR 293mm 0.45µm	-	-	-	-	-	120589	121174	585	set 2h
12	3900	Challenger INSU 5	93	-	SUPOR 293mm 0.45µm	-	-	-	-	-	118255	118878	623	set 2h

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 5

Date (UTC) : 28 / 02 / 2008
Heure debut (UTC) : 00:38

Lattitude (° ') : 42°28 'S
Longitude (° ') : 08°56'E

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Effective depth (m) calculated from microcat data	Comments
1	20	Challenger Elisabet	3973	-	SUPOR 293mm 0.45µm	-	0	ok
2	30	*McLane 1*	3963	petex 53µ	QMA 142mm 1µm	-	0	ok
3	75	*Challenger INSU 4*	3918	petex 53µ	QMA 142mm 1µm	-	0	ok
4	130	*McLane 2*	3863	petex 53µ	QMA 142mm 1µm	-	0	ok
5	175	*Challenger INSU 1*	3818	petex 53µ	QMA 142mm 1µm	-	0	inverse pumping **BLANK IN SITU**
6	250	*Challenger INSU 2*	3743	petex 53µ	QMA 142mm 1µm	-	0	ok
7	260	Challenger ULB 2	3733	-	SUPOR 293mm 0.45µm	-	0	ok
8	590	*McLane 3*	3403	petex 53µ	QMA 142mm 1µm	-	0	ok
9	608	Challenger INSU 3	3385	-	SUPOR 293mm 0.45µm	-	0	ok
10	1450	*Challenger INSU 7*	2543	petex 53µ	QMA 142mm 1µm	Y	0	no pumping BLANK IN SITU
11	2890	Challenger INSU 6	1103	-	SUPOR 293mm 0.45µm	-	0	ok
12	3900	Challenger INSU 5	93	-	SUPOR 293mm 0.45µm	-	0	no connection betwen head filter and pump at the recovery: not well

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 2
N° de palanquée : ISP 5

Date (UTC) : 28 / 02 / 2008
Heure debut (UTC) : 00:38

Lattitude (° ') : 42°28 'S
Longitude (° ') : 08°56'E

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **4000 m**

profondeur du microcat: m

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length
alpha= 90,00 °

1	75	Ra	
2	250	Ra	
3	620	Ra	
4	1400	Nd	293
5	1400	Ra	
6	1400	C14	
7	2700	Nd	293
8	2700	Ra	
9	2700	C14	
10	4000	Nd	293
11	4000	Ra	
12	4000	C14	
13			

1	30	Nd	293
2	30	C14	
3	75	C14	
4	80	Nd	142
5	130	C14	
6	130	Nd	293
7	175	C14	
8	200	Nd	293
9	250	C14	
10	400	Nd	293
11	620	Nd	293
12	620	C14	
13			

		filtre	diametre	pompe
1	75	QMA-Mn	142	Chal insu6
2	620	SUPOR	293	Chal ULB1
3	620	QMA-Mn	142	Chal insu4
4	1400	SUPOR	293	Chal insu5
5	1400	QMA-Mn	142	Chal insu1
6	1400	QMA	142	McLane
7	2000	SUPOR	293	Chal insu7
8	2700	SUPOR	293	Chal Elisabet
9	2700	QMA-Mn	142	Chal insu3
10	2700	QMA	142	McLane
11	4000	SUPOR	293	Chal ULB2
12	4000	QMA-Mn	142	Chal insu2
13	4000	QMA	142	McLane

1	30	SUPOR	293	Chal ULB1
2	30	QMA	142	McLane
3	75	QMA	142	McLane
4	80	SUPOR	293	Chal insu5
5	130	QMA	142	McLane
6	130	SUPOR	293	Chal insu6
7	175	QMA	142	Chal insu1
8	200	SUPOR	293	Chal Elisabet
9	250	QMA	142	Chal insu2
10	400	SUPOR	293	Chal ULB2
11	500	QMA	142	Chal insu3
12	620	QMA	142	Chal insu4

NAME : **SUPER station 2 / ISP 5** **QMA**

date : 28/2/2008 start time (TU): 00:38 am start lat: 42° 28.' S start lon: 08°56' E

site : S2 stop time: 09:30 am

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
McLane 1	1	30		491	53	M 41	well charged yellow	no
					1	M 42	the same and homogenous	no
INSU 4	2	75		1369	53	M 43	again well charged + 1 krill	no
					1	M 44	yellow brown, well charged	no
McLane 2	3	130		1041	53	M 45	very sligthly charged (but something sure)	no
					1	M 46	again well charged (clear yellow)	no
INSU 1	4	175		-30	53	-	**Blank 1** (50% Nadine et 50% anju CS)	no
					1	-	**Blank 1** (50% Nadine et 50% anju+234Th / POC)	no
INSU 2	5	250		1565	53	M 47	ok colored	no
					1	M 48	yellow too	no
McLane 3	6	590		1983	53	M 49	nothing	no
					1	M 50	again colored yellow clear (**8 punch for Eli**)	no
INSU 7	7	1450		-2,5	53	-	**Blank 2** (50% Nadine et 50% anju CS)	yes
					1	-	**Blank 2** (50% Nadine et 50% anju+234Th / POC)	yes

Prefilter 53µ: pumps 1, 2 = 25% 234Th, CS, 14C, Po each / pumps 3, 5, 6 = 33,3% 234Th, 14C, Po each
filter QMA 1µ: 10 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C (sauf pour les points 30 et 75 m = 5 pour Nadine + 1 pour Ula), rest for compound specifics

Elisabet !! I am improving sampling for you: next super station, Po samples on each filters **and blanks !!**

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 3
N° de palanquée : ISP 6

Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 05 / 03 / 2008
Heure debut (UTC) : 11:30 pm
Heure fin (UTC): 06:50 am

Lattitude (° ') : 47°33.16'
Longitude (° ') : 04°22.34'
Bottom Depth (m) : m

RESET Pulley when line at the sea surface

Total wire out (m)	**4400**
Wire out, when microcat is attached (m)	**1400**

(≥ total wire out -3300)

microcat depth **3000**

PUMPING = 02:00
1 punch = diameter of 25.3 mm

Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	1038	*INSU 7*	3355	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
2	1048	*INSU 1*	3345	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
3	1068	INSU 3	3325	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
4	1088	*INSU 2*	3305	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
5	1482	Elisabet	2911	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
6	2003	INSU 5	2390	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
7	2023	*McLane 3*	2370	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
8	2043	*INSU 6*	2350	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 3
N° de palanquée : ISP 6

Date (UTC) : 05 / 03 / 2008
Heure debut (UTC) : 11:30 pm

Lattitude (° ') : 47°33.16'
Longitude (° ') : 04°22.34'

9	3052	INSU 4	1341	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
10	4300	ULB 2	93	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
11	4320	*McLane 2*	73	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
12	4340	*McLane 1*	53	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	1038	*INSU 7*	3355	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	-	-	-	-
2	1048	*INSU 1*	3345	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	-	-	-	-
3	1068	INSU 3	3325	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
4	1088	*INSU 2*	3305	petex 53µ	QMA 142mm 1µm	Y	Po Pb210	Verdeny	33%	8 punchs	Radium	Verdeny	-	-
5	1482	Elisabet	2911	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
6	2003	INSU 5	2390	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
7	2023	*McLane 3*	2370	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	-	-	-	-
8	2043	*INSU 6*	2350	petex 53µ	QMA 142mm 1µm	Y	Po Pb210	Verdeny	33%	8 punchs	Radium	Verdeny	-	-
9	3052	INSU 4	1341	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
10	4300	ULB 2	93	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
11	4320	*McLane 2*	73	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	-	-	-	-
12	4340	*McLane 1*	53	petex 53µ	QMA 142mm 1µm	Y	Po Pb210	Verdeny	33%	8 punchs	Radium	Verdeny	-	-

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 3
N° de palanquée : ISP 6

Date (UTC) : 05 / 03 / 2008
Heure debut (UTC) : 11:30 pm

Lattitude (° ') : 47°33.16'
Longitude (° ') : 04°22.34'

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)	Effective depth (m) calculated from microcat data	Comments
1	1038	*INSU 7*	3355	petex 53µ	QMA 142mm 1µm	-	164162	164158	-4	set 2h	0,0	no pumping
2	1048	*INSU 1*	3345	petex 53µ	QMA 142mm 1µm	-	82350	83410	1060	set 2h	0,0	ok
3	1068	INSU 3	3325	-	SUPOR 293mm 0.45µm	-	48990	50130	1140	set 2h	0,0	ok
4	1088	*INSU 2*	3305	petex 53µ	QMA 142mm 1µm	Y	37058	37896	838	set 2h	0,0	copper line (from XBT) on the pump: comes from boat ?
5	1482	Elisabet	2911	-	SUPOR 293mm 0.45µm	-	51937	51942	5	set 2h	0,0	no pumping, head filter and pump non connected at recovery (crew attach ok but colson out)
6	2003	INSU 5	2390	-	SUPOR 293mm 0.45µm	-	118878	120342	1464	set 2h	0,0	ok
7	2023	*McLane 3*	2370	petex 53µ	QMA 142mm 1µm	-	10613	11563	950	set 2h	0,0	ok
8	2043	*INSU 6*	2350	petex 53µ	QMA 142mm 1µm	Y	121165	122395	1230	set 2h	0,0	ok
9	3052	INSU 4	1341	-	SUPOR 293mm 0.45µm	-	58424	58686	262	set 2h	0,0	ok, even if it is not a big volume (battery problem? Filter problem ?)
10	4300	ULB 2	93	-	SUPOR 293mm 0.45µm	-	88587	90532	1945	set 2h	0,0	head filter and pump not connected at recovery. Connection disappeared.. Volume counter not well screwed but always here
11	4320	*McLane 2*	73	petex 53µ	QMA 142mm 1µm	-	10831	11816	985	set 2h	0,0	ok
12	4340	*McLane 1*	53	petex 53µ	QMA 142mm 1µm	Y	5815	5824	9	set 2h	0,0	no pumping

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 3
N° de palanquée : ISP 6

Date (UTC) : 05 / 03 / 2008
Heure debut (UTC) : 11:30 pm

Lattitude (° ') : 47°33.16'
Longitude (° ') : 04°22.34'

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **4400 m**

profondeur du microcat: m

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length
alpha= 90,00 °

1	75	Ra	
2	250	Ra	
3	620	Ra	
4	1400	Nd	293
5	1400	Ra	
6	1400	C14	
7	2700	Nd	293
8	2700	Ra	
9	2700	C14	
10	4000	Nd	293
11	4000	Ra	
12	4000	C14	
13			

1	30	Nd	293
2	30	C14	
3	75	C14	
4	80	Nd	142
5	130	C14	
6	130	Nd	293
7	175	C14	
8	200	Nd	293
9	250	C14	
10	400	Nd	293
11	620	Nd	293
12	620	C14	
13			

		filtre	diametre	pompe
1	75	QMA-Mn	142	Chal insu6
2	620	SUPOR	293	Chal ULB1
3	620	QMA-Mn	142	Chal insu4
4	1400	SUPOR	293	Chal insu5
5	1400	QMA-Mn	142	Chal insu1
6	1400	QMA	142	McLane
7	2000	SUPOR	293	Chal insu7
8	2700	SUPOR	293	Chal Elisabet
9	2700	QMA-Mn	142	Chal insu3
10	2700	QMA	142	McLane
11	4000	SUPOR	293	Chal ULB2
12	4000	QMA-Mn	142	Chal insu2
13	4000	QMA	142	McLane

1	30	SUPOR	293	Chal ULB1
2	30	QMA	142	McLane
3	75	QMA	142	McLane
4	80	SUPOR	293	Chal insu5
5	130	QMA	142	McLane
6	130	SUPOR	293	Chal insu6
7	175	QMA	142	Chal insu1
8	200	SUPOR	293	Chal Elisabet
9	250	QMA	142	Chal insu2
10	400	SUPOR	293	Chal ULB2
11	500	QMA	142	Chal insu3
12	620	QMA	142	Chal insu4

NAME : **SUPER station 3 / ISP 6** **QMA**

date : 5/3/2008 start time (TU): 11:30pm lat: 47°33.16' S lon: 04°34' E

site : S3 stop time (TU): 06:50am

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
McLane 2	1	4320		985	53	M 51	clear, almost nothing (two particles of back rubber)	no
					1	M52	colored (clear brown)	no
McLane 3	2	2023		950	53	M 53	clear, nothing (something gelatinous throwed away)	no
					1	M 54	colored (clear green)	no
INSU 6	3	2043		1230	53	M 55	nothing	yes
					1	M 56	yellow-brown again homogenous	yes
INSU 2	4	1088		848	53	M 57	**very dirty and non homogenous (XBT on the pump)**	yes
					1	M 58	**non homogenous, colored + brown dust on it**	yes
INSU 1	5	1048		1060	53	M 59	homogenous, particles (several on the filter)	no
					1	M 60	well charged	no
INSU 7	6	1038		-4	53	M 61	**blank (1/3 each Po, 14C, 234Th)**	no
					1	M 62	**blank (Po, 14C, 234Th and CS)**	no
McLane 1	7	4340		19	53	-	no treatment because of 19 L filtered (not operation blank)	yes
					1	-	no treatment because of 19 L filtered (not operation blank)	yes

Prefilter 53µ: all pumps pumps = 33,3% 234Th, 14C, Po each
filter QMA 1µ: 8 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C, rest for compound specifics

Campagne : BONUS GOODHOPE 2008

Station : **TREUIL**

N° de palanquée : ISP 6

Operators :

RESET Poulie when line at the sea surface

Total wire out (m)			**4400**
Wire out, when microcat is attached (m)			**1400** (≥ total wire out -3300)

microcat depth **3000**

Sample #	Target depth (m)	Pump #	filter holder	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	initial volume	final volume	filtered volume	pump comments	filter comments
1	1038	INSU 7	INSU 142	3355	petex	QMA 142				-	-4	
2	1048	INSU 1	INSU 142	3345	petex	QMA 142				1060		
3	1068	INSU 3	ULB1	3325		SUPOR 293				1130		
4	1088	INSU 2	INSU 142	3305	petex	QMA 142	Y			848		
5	1482	Elisabet	ELI	2911		SUPOR 293				-	5	
6	2003	INSU 5	INSU 293	2390		SUPOR 293				1464		
7	2023	McLane3	Mc Lane	2370	petex	QMA 142				950		
8	2043	INSU 6	INSU 142	2350	petex	QMA 142	Y			1230		
	microcat			1400								
9	3052	INSU 4	INSU 293	1341		SUPOR 293				262		
10	4300	ULB 2	ULB2	93		SUPOR 293				-	2000	
11	4320	McLane2	Mc Lane	73	petex	QMA 142				985		
12	4340	McLane1	Mc Lane	53	petex	QMA 142	Y			-	19	

	Microcat data at the maximum microcat depth	
P (dbar) :	S :	T (° C) :

go down to **4400**

	Eli	F&D	Nadine	AnJu
UCDW	1088	1068	1048	1048
NADW	2043	2003	2023	2023
		3052		
AABW			4320	4320

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 3
N° de palanquée : ISP 7

Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 06 /03/ 2008
Heure debut (UTC) : 07:30 pm
Heure fin (UTC): 03:07 am
Bottom Depth (m) : m

Lattitude (° ') : 47°33' (start: 47°33.047', stop: 47°33.05')
Longitude (° ') : 04 °22 ' (start: 04°22.96', stop: 04°22.84')

RESET Pulley when line at the sea surface

Total wire out (m)	4400
Wire out, when microcat is attached (m)	1593

(≥ total wire out -3300)

microcat depth 2807

PUMPING = 02:00
1 punch = diameter of 25.3 mm
Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	20	*McLane 3*	4373	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	5 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
2	40	ULB 2	4353	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
3	50	*McLane 1*	4343	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	5 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
4	80	*INSU 1*	4313	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
5	150	*INSU 6*	4243	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
6	230	*McLane 2*	4163	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
7	250	INSU 2	4143	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
8	450	*INSU 7*	3943	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 3
N° de palanquée : ISP 7

Date (UTC) : 06 /03/ 2008
Heure debut (UTC) : 07:30 pm

Lattitude (° ') : 47°33' (start: 47°33.047', stop: 47°33.05')
Longitude (° ') : 04 °22 ' (start: 04°22.96', stop: 04°22.84')

9	550	*INSU 3*	3843	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
10	600	INSU 5	3793	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
11	3052	Elisabet	1593	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
12	4300	INSU 4	93	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6

Sample #	**Target depth (m)**	**Pump # (e.g. McLane-1, Challenger-INSU-2)**	**Wire out, when pump attached (m)**	**Prefilter**	**Filter type, size and porisity, or cartridge**	**cartridge**	**Parameters to be measured**	**persons in charge**	**prefilter %**	**filter %**	**Parameters to be measured**	**persons in charge**	**prefilter %**	**filter %**
1	20	*McLane 3*	4373	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	alkenones	Ezzat	-	1 punch
2	40	ULB 2	4353	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
3	50	*McLane 1*	4343	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	alkenones	Ezzat	-	1 punch
4	80	*INSU 1*	4313	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	-	-	-	-
5	150	*INSU 6*	4243	petex 53µ	QMA 142mm 1µm	Y	Po Pb210	Verdeny	33%	8 punchs	Radium	Verdeny	-	-
6	230	*McLane 2*	4163	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	-	-	-	-
7	250	INSU 2	4143	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
8	450	*INSU 7*	3943	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	-	-	-	-
9	550	*INSU 3*	3843	petex 53µ	QMA 142mm 1µm	Y	Po Pb210	Verdeny	33%	8 punchs	Radium	Verdeny	-	-
10	600	INSU 5	3793	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
11	3052	Elisabet	1593	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 3
N° de palanquée : ISP 7

Date (UTC) : 06 /03/ 2008
Heure debut (UTC) : 07:30 pm

Lattitude (° ') : 47°33' (start: 47°33.047', stop: 47°33.05')
Longitude (° ') : 04 °22 ' (start: 04°22.96', stop: 04°22.84')

12	4300	INSU 4	93	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-	-

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)	Effective depth (m) calculated from microcat data	Comments
1	20	*McLane 3*	4373	petex 53µ	QMA 142mm 1µm	-	11563	11715	152	set 2h	0,0	ok
2	40	ULB 2	4353	-	SUPOR 293mm 0.45µm	-	120344	120425	81	set 2h	0,0	ok
3	50	*McLane 1*	4343	petex 53µ	QMA 142mm 1µm	-	5825	6032	207	set 2h	0,0	ok
4	80	*INSU 1*	4313	petex 53µ	QMA 142mm 1µm	-	83417	83362	-55	set 2h	0,0	blank
5	150	*INSU 6*	4243	petex 53µ	QMA 142mm 1µm	Y	37896	39072	1176	set 2h	0,0	ok
6	230	*McLane 2*	4163	petex 53µ	QMA 142mm 1µm	-	11811	12819	1008	set 2h	0,0	ok
7	250	INSU 2	4143	-	SUPOR 293mm 0.45µm	-	122395	122403	8	set 2h	0,0	blank
8	450	*INSU 7*	3943	petex 53µ	QMA 142mm 1µm	-	164150	165734	1584	set 2h	0,0	ok
9	550	*INSU 3*	3843	petex 53µ	QMA 142mm 1µm	Y	50130	51473	1343	set 2h	0,0	ok
10	600	INSU 5	3793	-	SUPOR 293mm 0.45µm	-	90532	91147	615	set 2h	0,0	ok
11	3052	Elisabet	1593	-	SUPOR 293mm 0.45µm	-	51942	52623	681	set 2h	0,0	ok
12	4300	INSU 4	93	-	SUPOR 293mm 0.45µm	-	58686	58940	254	set 2h	0,0	ok

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 3
N° de palanquée : ISP 7

Date (UTC) : 06 /03/ 2008
Heure debut (UTC) : 07:30 pm

Lattitude (° ') : 47°33' (start: 47°33.047', stop: 47°33.05')
Longitude (° ') : 04 °22 ' (start: 04°22.96', stop: 04°22.84')

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **4400 m**

profondeur du microcat: m

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length
alpha= 90,00 °

1	75	Ra	
2	250	Ra	
3	620	Ra	
4	1400	Nd	293
5	1400	Ra	
6	1400	C14	
7	2700	Nd	293
8	2700	Ra	
9	2700	C14	
10	4000	Nd	293
11	4000	Ra	
12	4000	C14	
13			

1	30	Nd	293
2	30	C14	
3	75	C14	
4	80	Nd	142
5	130	C14	
6	130	Nd	293
7	175	C14	
8	200	Nd	293
9	250	C14	
10	400	Nd	293
11	620	Nd	293
12	620	C14	
13			

		filtre	diametre	pompe
1	75	QMA-Mn	142	Chal insu6
2	620	SUPOR	293	Chal ULB1
3	620	QMA-Mn	142	Chal insu4
4	1400	SUPOR	293	Chal insu5
5	1400	QMA-Mn	142	Chal insu1
6	1400	QMA	142	McLane
7	2000	SUPOR	293	Chal insu7
8	2700	SUPOR	293	Chal Elisabet
9	2700	QMA-Mn	142	Chal insu3
10	2700	QMA	142	McLane
11	4000	SUPOR	293	Chal ULB2
12	4000	QMA-Mn	142	Chal insu2
13	4000	QMA	142	McLane

1	30	SUPOR	293	Chal ULB1
2	30	QMA	142	McLane
3	75	QMA	142	McLane
4	80	SUPOR	293	Chal insu5
5	130	QMA	142	McLane
6	130	SUPOR	293	Chal insu6
7	175	QMA	142	Chal insu1
8	200	SUPOR	293	Chal Elisabet
9	250	QMA	142	Chal insu2
10	400	SUPOR	293	Chal ULB2
11	500	QMA	142	Chal insu3
12	620	QMA	142	Chal insu4

NAME : **SUPER station 3 / ISP 7**

QMA

date : 6/3/2008 start time (TU): 19:30 start lat: 47°33' start lon: 04°22'E

site : S3 stop time (TU): 03:07

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
McLane 3	1	20		152	53	M 63	very clear and non homogenous	no
					1	M 64	well yellow, homogenous	no
McLane 1	2	50		207	53	M 65	very clear, with particles all around the filter	no
					1	M 66	well yellow, homogenous	no
McLane 2	3	230		1008	53	M 67	very clear	no
					1	M 68	yellow clear, good !	no
INSU 1	4	80		-55	53	M 69	**operation blank**	no
					1	M 70	**operation blank**	no
INSU 6	5	150		1176	53	M 71	well charged cool !!	yes
					1	M 72	less colored than M 64 and M 66	yes
INSU 7	6	450		1584	53	M 73	particles on it even if it is clear	yes
					1	M 74	again colored	no
INSU 3	7	550		1343	53	M 75	as M 74	yes
					1	M 76	clear colored	yes

Prefilter 53µ: all pumps = 33,3% 234Th, 14C, Po each

filter QMA 1µ: 8 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C (sauf pour les points 20 et 50 m = 5 pour Nadine + 1 pour Ula), rest for compound specifics

Campagne : BONUS GOODHOPE 2008

Station : **TREUIL**

N° de palanquée : ISP 7

Operators :

RESET Poulie when line at the sea surface

Total wire out (m)			**4400**	
Wire out, when microcat is attached (m)			**1593**	(≥ total wire out -3300)
			microcat depth	**2807**

Sample #	Target depth (m)	Pump #	filter holder	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	initial volume	final volume	filtered volume	bag #	pump comments	filter comments
1	20	INSU 2	INSU 142	4373	petex	QMA 142							
2	40	Elisabet	ELI	4353		SUPOR 293							
3	50	McLane1	INSU 142	4343	petex	QMA 142							
4	80	McLane3	Mc Lane	4313	petex	QMA 142							
5	150	INSU 6	INSU 142	4243	petex	QMA 142	Y						
6	230	INSU 1	INSU 142	4163	petex	QMA 142							
7	250	ULB 2	ULB2	4143		SUPOR 293							
8	450	McLane2	Mc Lane	3943	petex	QMA 142							
9	550	INSU 3	INSU 142	3843	petex	QMA 142	Y						
10	600	INSU 5	INSU 293	3793		SUPOR 293							
	2800	microcat		1593									
11	3052	INSU 7	INSU 293	1341		SUPOR 293							
12	4300	INSU 4	INSU 293	93		SUPOR 293							

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **4400**

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 4
N° de palanquée : ISP 8

Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 10/03/ 2008 **Lattitude (° ') :** 51°51'S
Heure debut (UTC) : 13:30 **Longitude (° ') :** 00°00'
Heure fin (UTC): 20:18 **Bottom Depth (m) :** m

RESET Pulley when line at the sea surface

Total wire out (m)	2535
Wire out, when microcat is attached (m)	0

(≥ total wire out -3300)

PUMPING = 02:00

1 punch = diameter of 25.3 mm
Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

pinger is attached to the lest, 0 wire out is done when microcat touch surface (microcat is 2m under the pinger)

microcat depth **2535**

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	40	INSU 1	2488	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	25% (prefilter)	compound specifics 234Th	Cavagna Planchon	50%	50% (prefilter)
2	80	INSU 2	2448	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
3	165	INSU 3	2363	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
4	400	McLane 3	2128	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
5	749	INSU 6	1779	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
6	1108	McLane 2	1420	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	5 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
7	1128	INSU 5	1400	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
8	1685	INSU 7	843	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 4
N° de palanquée : ISP 8

Date (UTC) : 10/03/ 2008 **Lattitude (° ') :** 51°51'S
Heure debut (UTC) : 13:30 **Longitude (° ') :** 00°00'

9	1695	Eli	833	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
10	2290	INSU 4	238	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
11	2468	McLane 1	60	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
12	2488	ULB 2	40	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)
1	40	INSU 1	2488	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	25% (prefilter)	83362	85517	2155	set 2h
2	80	INSU 2	2448	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	8 punchs	39072	39782	710	set 2h
3	165	INSU 3	2363	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	51473	52286	813	set 2h
4	400	McLane 3	2128	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	11715	12671	956	set 2h
5	749	INSU 6	1779	-	SUPOR 293mm 0.45µm	-	-	-	-	-	122413	123574	1161	set 2h
6	1108	McLane 2	1420	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	12819	13836	1017	set 2h
7	1128	INSU 5	1400	-	SUPOR 293mm 0.45µm	-	-	-	-	-	120425	120798	373	set 2h
8	1685	INSU 7	843	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	8 punchs	165735	165672	-63	set 2h
9	1695	Eli	833	-	SUPOR 293mm 0.45µm	-	-	-	-	-	52623	53489	866	set 2h
10	2290	INSU 4	238	-	SUPOR 293mm 0.45µm	-	-	-	-	-	58941	60032	1091	set 2h
11	2468	McLane 1	60	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	8 punchs	6033	6038	5	set 2h

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 4
N° de palanquée : ISP 8

Date (UTC) : 10/03/ 2008 **Lattitude (° ') :** 51°51'S
Heure debut (UTC) : 13:30 **Longitude (° ') :** 00°00'

12	2488	ULB 2	40	-	SUPOR 293mm 0.45µm	-	-	-	-	-	91147	91737	590	set 2h	

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Effective depth (m) calculated from microcat data	Comments
1	40	INSU 1	2488	petex 53µ	QMA 142mm 1µm	-	0,0	well.. Forgot to put the QMA filter, result = to prefilters represent this
2	80	INSU 2	2448	petex 53µ	QMA 142mm 1µm	-	0,0	
3	165	INSU 3	2363	petex 53µ	QMA 142mm 1µm	-	0,0	
4	400	McLane 3	2128	petex 53µ	QMA 142mm 1µm	-	0,0	
5	749	INSU 6	1779	-	SUPOR 293mm 0.45µm	-	0,0	
6	1108	McLane 2	1420	petex 53µ	QMA 142mm 1µm	-	0,0	
7	1128	INSU 5	1400	-	SUPOR 293mm 0.45µm	-	0,0	
8	1685	INSU 7	843	petex 53µ	QMA 142mm 1µm	-	0,0	operation blank
9	1695	Eli	833	-	SUPOR 293mm 0.45µm	-	0,0	
10	2290	INSU 4	238	-	SUPOR 293mm 0.45µm	-	0,0	
11	2468	McLane 1	60	petex 53µ	QMA 142mm 1µm	-	0,0	operation blank
12	2488	ULB 2	40	-	SUPOR 293mm 0.45µm	-	0,0	

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 4
N° de palanquée : ISP 8

Date (UTC) : 10/03/ 2008 **Lattitude (° ') :** 51°51'S
Heure debut (UTC) : 13:30 **Longitude (° ') :** 00°00'

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **2535 m**

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length

profondeur du microcat: m

alpha= 90,00 °

1	75	Ra	
2	250	Ra	
3	620	Ra	
4	1400	Nd	293
5	1400	Ra	
6	1400	C14	
7	2700	Nd	293
8	2700	Ra	
9	2700	C14	
10	4000	Nd	293
11	4000	Ra	
12	4000	C14	
13			

1	30	Nd	293
2	30	C14	
3	75	C14	
4	80	Nd	142
5	130	C14	
6	130	Nd	293
7	175	C14	
8	200	Nd	293
9	250	C14	
10	400	Nd	293
11	620	Nd	293
12	620	C14	
13			

		filtre	diametre	pompe
1	75	QMA-Mn	142	Chal insu6
2	620	SUPOR	293	Chal ULB1
3	620	QMA-Mn	142	Chal insu4
4	1400	SUPOR	293	Chal insu5
5	1400	QMA-Mn	142	Chal insu1
6	1400	QMA	142	McLane
7	2000	SUPOR	293	Chal insu7
8	2700	SUPOR	293	Chal Elisabet
9	2700	QMA-Mn	142	Chal insu3
10	2700	QMA	142	McLane
11	4000	SUPOR	293	Chal ULB2
12	4000	QMA-Mn	142	Chal insu2
13	4000	QMA	142	McLane

1	30	SUPOR	293	Chal ULB1
2	30	QMA	142	McLane
3	75	QMA	142	McLane
4	80	SUPOR	293	Chal insu5
5	130	QMA	142	McLane
6	130	SUPOR	293	Chal insu6
7	175	QMA	142	Chal insu1
8	200	SUPOR	293	Chal Elisabet
9	250	QMA	142	Chal insu2
10	400	SUPOR	293	Chal ULB2
11	500	QMA	142	Chal insu3
12	620	QMA	142	Chal insu4

NAME : SUPER station 4 / ISP 8 **QMA**

date : 10/3/2008 start time (TU): 01:30 pm start lat: 51°51' start lon: 00°00'

site : S4 stop time (TU): 08:18 pm

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
McLane 3	1	400		1156	53	M 77	very clear	no
					1	M 78	clear yellow, homogenous	no
McLane 2	2	1108		1017	53	M 79	very clear too	no
					1	M 80	same than M 78, yellow very clear	no
McLane 1	3	2468		5	53	M 81	**blank**	no
					1	M 82	**blank**	no
INSU 1	4	40		2155	53	M 83	well charged, but just on the perimeter	no
					1	M 84	no QMA, just prefilter.. Well charged too	no
INSU 2	5	80		710	53	M 85	well yellow and charged	no
					1	M 86	well yellow and charged homogenous	no
INSU 3	6	165		1213	53	M 87	very clear with several particles	no
					1	M 88	charged, colored (clearly but colored)	no
INSU 7	7	1685		-60	53	M 89	**blank**	no
					1	M 90	**blank**	no

Prefilter 53µ: pumps 3, 4, 5, 7 = 25% 234Th, CS, 14C, Po each / pumps 1, 2, 6 = 33,3% 234Th, 14C, Po each
filter QMA 1µ: 8 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C, rest for compound specifics

Note: M 84 was not QMA filter because i forgot to put one, but however there was a prefilter (QMA support) part in 1/4 (for Elisabet, Nadine, anju, 234Th)

Campagne : BONUS GOODHOPE 2008

Station : SUPER 4 **SAMPLING**
N° de palanquée : ISP 8
Operators :

RESET Poulie when line at the sea surface

Total wire out (m)			**2535**	
Wire out, when microcat is attached (m)			**0**	(≥ total wire out -3300)

microcat depth **2535**

Sample #	Target depth (m)	Pump #	filter holder	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity,	cartridge	initial volume	final volume	filtered volume	bag #	pump comments	filter comments
1	40	INSU 1		2488	petex	QMA 142							
2	80	INSU 2		2448	petex	QMA 142							
3	165	INSU 3		2363	petex	QMA 142							
4	400	McLane3		2128	petex	QMA 142							
5	749	INSU 6	insu 293	1779		SUPOR 293							
6	1108	McLane2		1420	petex	QMA 142							
7	1128	INSU 5	insu 293	1400		SUPOR 293							
8	1685	INSU 7		843	petex	QMA 142							
9	1695	Eli	Eli	833		SUPOR 293							
10	2290	INSU 4	ulb1	238		SUPOR 293							
11	2468	McLane1		60	petex	QMA 142							
12	2488	ULB 2	ulb2	40		SUPOR 293							
	2528	microcat		0									

	Microcat data at the maximum microcat depth	
P (dbar) :	S :	T (° C) :

go down to **2535**

	Eli		F&D	Nadine		AnJu
UCDW	1088		1068	1048		1048
NADW	2043		2003	2023		2023
			3052			
AABW				4320		4320

Campagne : BONUS GOODHOPE 2008

Station : SUPER 4 TREUIL
N° de palanquée : ISP 8
Operators :

RESET Poulie when line at the sea surface

Total wire out (m)				**2535**	
Wire out, when microcat is attached (m)				**0**	(≥ total wire out -3300)
				microcat depth	**2535**

Sample #	Target depth (m)	Pump #	filter holder	Wire out, when pump attached (m)	Wire out, when pump attached (dBAr)	Prefilter	Filter type, size and porisity, or cartridge	cartridge
1	40	INSU 1		2488		petex	QMA 142	
2	80	INSU 2		2448		petex	QMA 142	
3	165	INSU 3		2363		petex	QMA 142	
4	400	McLane3		2128		petex	QMA 142	
5	749	INSU 6	insu 293	1779			SUPOR 293	
6	1108	McLane2		1420		petex	QMA 142	
7	1128	INSU 5	insu 293	1400			SUPOR 293	
8	1685	INSU 7		843		petex	QMA 142	
9	1695	Eli	Eli	833			SUPOR 293	
10	2290	INSU 4	ulb1	238			SUPOR 293	
11	2468	McLane1		60		petex	QMA 142	
12	2488	ULB 2	ulb2	40			SUPOR 293	
	2528	microcat		0				

		Microcat data at the maximum microcat depth	
	P (dbar) :	S :	T (° C) :
	go down to	**2535**	

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 4
N° de palanquée : ISP 9

Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 11 / 03 / 2008
Heure debut (UTC) : 09:28 am
Heure fin (UTC): 03:49 pm

Lattitude (° ') : 51°53' S
Longitude (° ') :00°00 Greenwich !!!
Bottom Depth (m) : m

RESET Pulley when line at the sea surface

Total wire out (m)	2535
Wire out, when microcat is attached (m)	0 ??

(≥ total wire out -3300)

microcat depth #VALEUR!

PUMPING = 02:00
1 punch = diameter of 25.3 mm
Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	30	INSU 1	2498	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	-	-	-	-
2	60	INSU 6	2468	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
3	100	INSU 7	2428	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
4	125	INSU 2	2403	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
5	170	ULB 2	2358	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
6	240	McLane 1	2288	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	-	-	-	-
7	260	Elisabet	2268	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
8	420	INSU 4	2108	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 4
N° de palanquée : ISP 9

Date (UTC) : 11 / 03 / 2008 **Lattitude (° ') :** 51°53' S
Heure debut (UTC) : 09:28 am **Longitude (° ') :**00°00 Greenwich !!!

9	749	INSU 3	1779	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
10	1128	INSU 5	1400	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
11	1685	McLane 2	843	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
12	2468	McLane 3	60	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)
1	30	INSU 1	2498	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	85517	85497	-20	set 2h
2	60	INSU 6	2468	-	SUPOR 293mm 0.45µm	-	-	-	-	-	123575	124032	457	set 2h
3	100	INSU 7	2428	petex 53µ	QMA 142mm 1µm	-	alkenones 210Pb / Po	Ezzat Verdeny	no 25%	1 punch 8 punchs	165672	166301	629	set 2h
4	125	INSU 2	2403	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	8 punchs	39782	40547	765	set 2h
5	170	ULB 2	2358	-	SUPOR 293mm 0.45µm	-	-	-	-	-	91737	92549	812	set 2h
6	240	McLane 1	2288	petex 53µ	QMA 142mm 1µm	-	-	-	-	-	6038	6039	1	set 2h
7	260	Elisabet	2268	-	SUPOR 293mm 0.45µm	-	-	-	-	-	53489	54528	1039	set 2h
8	420	INSU 4	2108	-	SUPOR 293mm 0.45µm	-	-	-	-	-	60032	60485	453	set 2h
9	749	INSU 3	1779	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	52286	53495	1209	set 2h
10	1128	INSU 5	1400	-	SUPOR 293mm 0.45µm	-	-	-	-	-	120798	122051	1253	set 2h

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 4
N° de palanquée : ISP 9

Date (UTC) : 11 / 03 / 2008 **Lattitude (° ') :** 51°53' S
Heure debut (UTC) : 09:28 am **Longitude (° ') :**00°00 Greenwich !!!

11	1685	McLane 2	843	petex 53µ	QMA 142mm 1µm	-	Po	Pb210	Verdeny	33%	8 punchs	13836	14848	1012	set 2h
12	2468	McLane 3	60	petex 53µ	QMA 142mm 1µm	-	Po	Pb210	Verdeny	33%	8 punchs	12670	13612	942	set 2h

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Effective depth (m) calculated from microcat data	Comments
1	30	INSU 1	2498	petex 53µ	QMA 142mm 1µm	-	0,0	barbapapa no pumping
2	60	INSU 6	2468	-	SUPOR 293mm 0.45µm	-	0,0	
3	100	INSU 7	2428	petex 53µ	QMA 142mm 1µm	-	0,0	
4	125	INSU 2	2403	petex 53µ	QMA 142mm 1µm	-	0,0	
5	170	ULB 2	2358	-	SUPOR 293mm 0.45µm	-	0,0	
6	240	McLane 1	2288	petex 53µ	QMA 142mm 1µm	-	0,0	icecream.. NO PUMPING
7	260	Elisabet	2268	-	SUPOR 293mm 0.45µm	-	0,0	
8	420	INSU 4	2108	-	SUPOR 293mm 0.45µm	-	0,0	
9	749	INSU 3	1779	petex 53µ	QMA 142mm 1µm	-	0,0	
10	1128	INSU 5	1400	-	SUPOR 293mm 0.45µm	-	0,0	
11	1685	McLane 2	843	petex 53µ	QMA 142mm 1µm	-	0,0	
12	2468	McLane 3	60	petex 53µ	QMA 142mm 1µm	-	0,0	

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 4
N° de palanquée : ISP 9

Date (UTC) : 11 / 03 / 2008 **Lattitude (° ') :** 51°53' S
Heure debut (UTC) : 09:28 am **Longitude (° ') :**00°00 Greenwich !!!

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **2535 m**

profondeur du microcat: m

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length
alpha= 90,00 °

1	75	Ra	
2	250	Ra	
3	620	Ra	
4	1400	Nd	293
5	1400	Ra	
6	1400	C14	
7	2700	Nd	293
8	2700	Ra	
9	2700	C14	
10	4000	Nd	293
11	4000	Ra	
12	4000	C14	
13			

1	30	N	293
2	30	C14	
3	75	C14	
4	80	N	142
5	130	C14	
6	130	N	293
7	175	C14	
8	200	N	293
9	250	C14	
10	400	N	293
11	620	N	293
12	620	C14	
13			

		filtre	diametre	pompe
1	75	QMA-Mn	142	Chal insu6
2	620	SUPOR	293	Chal ULB1
3	620	QMA-Mn	142	Chal insu4
4	1400	SUPOR	293	Chal insu5
5	1400	QMA-Mn	142	Chal insu1
6	1400	QMA	142	McLane
7	2000	SUPOR	293	Chal insu7
8	2700	SUPOR	293	Chal Elisabet
9	2700	QMA-Mn	142	Chal insu3
10	2700	QMA	142	McLane
11	4000	SUPOR	293	Chal ULB2
12	4000	QMA-Mn	142	Chal insu2
13	4000	QMA	142	McLane

1	30	SUPOR	293	Chal ULB1
2	30	QMA	142	McLane
3	75	QMA	142	McLane
4	80	SUPOR	293	Chal insu5
5	130	QMA	142	McLane
6	130	SUPOR	293	Chal insu6
7	175	QMA	142	Chal insu1
8	200	SUPOR	293	Chal Elisabet
9	250	QMA	142	Chal insu2
10	400	SUPOR	293	Chal ULB2
11	500	QMA	142	Chal insu3
12	620	QMA	142	Chal insu4

NAME : **SUPER station 4 / ISP 9**

QMA

date : 11/3/2008 start time (TU): 09:28 am start lat: 51°53' start lon: 00°00'

site : S4 stop time (TU): 03:49 pm

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
INSU 1	1	30		-20	53	-	**no sampling**	no
					1	-	**no sampling**	no
INSU 7	2	100		629	53	M 91	well colored, yellow	no
					1	M92	well colored, yellow homogenous	no
INSU 2	3	125		765	53	M 93	well colored, yellow	no
					1	M 94	charged and homogenous again	no
McLane 1	4	240		1	53	-	**no sampling**	no
					1	-	**no sampling**	no
INSU 3	5	749		1209	53	M 95	very clear	no
					1	M 96	clear yellow	no
McLane 2	6	1685		1012	53	M 97	very clear	no
					1	M 98	again colored !!	no
McLane 3	7	2468		942	53	M 99	very clear	no
					1	M 100	again colored !!	no

Prefilter 53µ: pumps 2, 3 = 25% 234Th, CS, 14C, Po each / pumps 5, 6, 7 = 33,3% 234Th, 14C, Po each

filter QMA 1µ: 8 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C (+ punch 1 pour Ula depth 100m), rest for compound specifics

Campagne : BONUS GOODHOPE 2008

Station :
N° de palanquée : ISP 9
Operators :

SAMPLING

RESET Poulie when line at the sea surface

Total wire out (m)			**4400**	
Wire out, when microcat is attached (m)			**1593**	(≥ total wire out -3300)
			microcat depth	**2807**

Sample #	Target depth (m)	Pump #	filter holder	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity,	cartridge	initial volume	final volume	filtered volume	bag #	pump comments	filter comments
1	20	INSU 1		2508	petex	QMA 142							
2	30	INSU 6	insu 293	2498		SUPOR 293							
3	115	INSU 7		2413	petex	QMA 142							
4	140	INSU 2		2388	petex	QMA 142							
5	250	ULB 2	ulb2	2278		SUPOR 293							
6	300	McLane1		2228	petex	QMA 142							
7	400	Eli	Eli	2128		SUPOR 293							
8	500	INSU 4	ulb1	2028		SUPOR 293							
9	700	INSU 3		1828	petex	QMA 142							
10	1500	INSU 5	insu 293	1028		SUPOR 293							
11	2300	McLane2		228	petex	QMA 142							
12	2500	McLane3		28	petex	QMA 142							
	2550	microcat		-22									

	Microcat data at the maximum microcat depth	
P (dbar) :	S :	T (° C) :

go down to **2535**

1128	INSU 5	insu 293	1400		SUPOR 293	
400	McLane3		2128	petex	QMA 142	

Campagne : BONUS GOODHOPE 2008

Station : SUPER 4 **TREUIL**
N° de palanquée : ISP 9
Operators :

RESET Poulie when line at the sea surface

Total wire out (m)				**2535**	
Wire out, when microcat is attached (m)				**0**	(≥ total wire out -3300)
				microcat depth	**2535**

Sample #	Target depth (m)	Pump #	filter holder	Wire out, when pump attached (m)	Wire out, when pump attached (dBAr)	Prefilter	Filter type, size and porisity, or cartridge	cartridge
1	30	INSU 1		2498		petex	QMA 142	
2	60	INSU 6	insu 293	2468			SUPOR 293	
3	100	INSU 7		2428		petex	QMA 142	
4	125	INSU 2		2403		petex	QMA 142	
5	170	ULB2	ulb2	2358			SUPOR 293	
6	250	McLane 1		2278		petex	QMA 142	
7	250	Eli	eli	2278			SUPOR 293	
8	420	INSU 4	ulb1	2108			SUPOR 293	
9	749	INSU 3		1779		petex	QMA 142	
10	1128	INSU 5	insu 293	1400			SUPOR 293	
11	1685	McLane 2		843		petex	QMA 142	
12	2468	McLane 3		60		petex	QMA 142	
	2528	microcat		0				

		Microcat data at the maximum microcat depth	
	P (dbar) :	S :	T (° C) :

go down to **2535**

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 5
N° de palanquée : ISP 10

Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 16 / 03 / 2008
Heure debut (UTC) : 08:05 am
Heure fin (UTC): 03:20 pm

Lattitude (° ') : 57 ° 33.14' S
Longitude (° ') : 00 ° 02.19 ' E
Bottom Depth (m) : 3944 m

RESET Pulley when line at the sea surface

Total wire out (m)	3921
Wire out, when microcat is attached (m)	914

(≥ total wire out -3300)

microcat depth 3007

PUMPING = 02:00

1 punch = diameter of 25.3 mm

Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	50	*McLane 1*	3864	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
2	90	*McLane 2*	3824	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
3	125	*INSU 2*	3789	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
4	650	*INSU 5*	3264	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
5	1200	INSU 7	2714	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
6	1800	INSU 6	2114	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
7	2000	*INSU 1*	1914	petex 53µ	QMA 142mm 1µm	Y	-	-	-	-	-	-	-	-
8	2500	INSU 3	1414	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 5
N° de palanquée : ISP 10

Date (UTC) : 16 / 03 / 2008
Heure debut (UTC) : 08:05 am

Lattitude (° ') : 57 ° 33.14' S
Longitude (° ') : 00 ° 02.19 ' E

9	3200	Eli	714	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
10	3874	ULB 2	40	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
11	3884	*McLane 3*	30	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
12	3894	*INSU 4*	20	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest

Sample #	**Target depth (m)**	**Pump # (e.g. McLane-1, Challenger-INSU-2)**	**Wire out, when pump attached (m)**	**Prefilter**	**Filter type, size and porisity, or cartridge**	**cartridge**	**Parameters to be measured**	**persons in charge**	**prefilter %**	**filter %**	**Parameters to be measured**	**persons in charge**	**prefilter %**	**filter %**
1	50	*McLane 1*	3864	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	8 punchs	alkenones	Ezzat	-	1 punch
2	90	*McLane 2*	3824	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	8 punchs	-	-	-	-
3	125	*INSU 2*	3789	petex 53µ	QMA 142mm 1µm	Y	Po Pb210	Verdeny	33%	8 punchs	Radium	Verdeny	-	-
4	650	*INSU 5*	3264	petex 53µ	QMA 142mm 1µm	Y	Po Pb210	Verdeny	33%	8 punchs	Radium	Verdeny	-	-
5	1200	INSU 7	2714	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
6	1800	INSU 6	2114	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
7	2000	*INSU 1*	1914	petex 53µ	QMA 142mm 1µm	Y	-	-	-	-	Radium	Verdeny	-	-
8	2500	INSU 3	1414	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
9	3200	Eli	714	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
10	3874	ULB 2	40	-	SUPOR 293mm 0.45µm	-	-	-	-	-	-	-	-	-
11	3884	*McLane 3*	30	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	-	-	-	-
12	3894	*INSU 4*	20	petex 53µ	QMA 142mm 1µm	Y	Po Pb210	Verdeny	33%	8 punchs	Radium	Verdeny	-	-

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 5
N° de palanquée : ISP 10

Date (UTC) : 16 / 03 / 2008
Heure debut (UTC) : 08:05 am

Lattitude (° ') : 57 ° 33.14' S
Longitude (° ') : 00 ° 02.19 ' E

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)	Effective depth (m) calculated from microcat data	Comments
1	50	*McLane 1*	3864	petex 53µ	QMA 142mm 1µm	-	6039	6697	658	set to 2h	0,0	
2	90	*McLane 2*	3824	petex 53µ	QMA 142mm 1µm	-	14848	15637	789	set to 2h	0,0	
3	125	*INSU 2*	3789	petex 53µ	QMA 142mm 1µm	Y	40547	41202	655	set to 2h	0,0	
4	650	*INSU 5*	3264	petex 53µ	QMA 142mm 1µm	Y	122051	122677	626	set to 2h	0,0	
5	1200	INSU 7	2714	-	SUPOR 293mm 0.45µm	-	66302	66291	-11	set to 2h	0,0	no puming
6	1800	INSU 6	2114	-	SUPOR 293mm 0.45µm	-	124032	124373	341	set to 2h	0,0	
7	2000	*INSU 1*	1914	petex 53µ	QMA 142mm 1µm	Y	85497	85434	-63	set to 2h	0,0	no puming
8	2500	INSU 3	1414	-	SUPOR 293mm 0.45µm	-	53495	54734	1239	set to 2h	0,0	
9	3200	Eli	714	-	SUPOR 293mm 0.45µm	-	54528	55620	1092	set to 2h	0,0	
10	3874	ULB 2	40	-	SUPOR 293mm 0.45µm	-	92550	93388	838	set to 2h	0,0	
11	3884	*McLane 3*	30	petex 53µ	QMA 142mm 1µm	-	13613	14532	919	set to 2h	0,0	
12	3894	*INSU 4*	20	petex 53µ	QMA 142mm 1µm	Y	60485	61950	1465	set to 2h	0,0	

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 5
N° de palanquée : ISP 10

Date (UTC) : 16 / 03 / 2008
Heure debut (UTC) : 08:05 am

Lattitude (° ') : 57 ° 33.14' S
Longitude (° ') : 00 ° 02.19 ' E

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **3921 m**

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length

profondeur du microcat: m

alpha= 90,00 °

1	75	Ra	
2	250	Ra	
3	620	Ra	
4	1400	Nd	293
5	1400	Ra	
6	1400	C14	
7	2700	Nd	293
8	2700	Ra	
9	2700	C14	
10	4000	Nd	293
11	4000	Ra	
12	4000	C14	
13			

1	30	N	293
2	30	C14	
3	75	C14	
4	80	N	142
5	130	C14	
6	130	N	293
7	175	C14	
8	200	N	293
9	250	C14	
10	400	N	293
11	620	N	293
12	620	C14	
13			

		filtre	diametre	pompe
1	75	QMA-Mn	142	Chal insu6
2	620	SUPOR	293	Chal ULB1
3	620	QMA-Mn	142	Chal insu4
4	1400	SUPOR	293	Chal insu5
5	1400	QMA-Mn	142	Chal insu1
6	1400	QMA	142	McLane
7	2000	SUPOR	293	Chal insu7
8	2700	SUPOR	293	Chal Elisabet
9	2700	QMA-Mn	142	Chal insu3
10	2700	QMA	142	McLane
11	4000	SUPOR	293	Chal ULB2
12	4000	QMA-Mn	142	Chal insu2
13	4000	QMA	142	McLane

1	30	SUPOR	293	Chal ULB1
2	30	QMA	142	McLane
3	75	QMA	142	McLane
4	80	SUPOR	293	Chal insu5
5	130	QMA	142	McLane
6	130	SUPOR	293	Chal insu6
7	175	QMA	142	Chal insu1
8	200	SUPOR	293	Chal Elisabet
9	250	QMA	142	Chal insu2
10	400	SUPOR	293	Chal ULB2
11	500	QMA	142	Chal insu3
12	620	QMA	142	Chal insu4

NAME : SUPER station 5 / ISP 10 **QMA**

date : 10/3/2008 start time (TU): 08:05 am start lat: 57°33.14' start lon: 00°02.19'

site : S5 stop time (TU): 03:20 pm

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
McLane 1	1	50		658	53	M 101	really well charged and yellow	no
					1	M 102	yellow	no
McLane 2	2	90		789	53	M 103	again well charged (but less than M 101)	no
					1	M 104	yellow	no
McLane 3	3	3884		919	53	M 105	very clear, like a blank	no
					1	M 106	yellow very clear	no
INSU 4	4	3894		1465	53	M 107	same than M 105	yes
					1	M 108	same than M 106	yes
INSU 5	5	650		629	53	M 109	very clear several foraminifers	yes
					1	M 110	tellow brown clear	yes
INSU 2	6	125		655	53	M 111	again well charged ! several foraminifers	yes
					1	M 112	yellow	yes
INSU 1	7	1200		-61	53	-	-	no
					1	-	-	no

Prefilter 53µ: pumps 1, 2 = 25% 234Th, CS, 14C, Po each / pumps 3, 5, 6 = 33,3% 234Th, 14C, Po each
filter QMA 1µ: 8 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C (sauf pour les points 30 et 75 m = 6 pour Nadine + 1 pour Ula), rest for compound specifics

Note 1 : M 109 forma' dried for belgian team, M 111 foram' for Nadine (to determine which specie it is)
Note 2: M 106 is less colored than precedent bottom points (nepheloids)

Campagne : BONUS GOODHOPE 2008

Station : SUPER 5
N° de palanquée : ISP 10

SAMPLING

Operators :

RESET Poulie when line at the sea surface

Total wire out (m)			**3921**	
Wire out, when microcat is attached (m)			**914**	(≥ total wire out -3300)

microcat depth **3000**

Sample #	Target depth (m)	Pump #	filter holder	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity,	cartridge	initial volume	final volume	filtered volume	bag #	pump comments	filter comments
1	50	McLane 1		3864	petex	QMA 142							
2	90	McLane 2		3824	petex	QMA 142							
3	125	INSU 2		3789		QMA 142	Y						
4	650	INSU 5		3264	petex	QMA 142	Y						
5	1200	INSU7	insu	2714		SUPOR 293							
6	1800	INSU6	insu	2114		SUPOR 293							
7	2000	INSU 1		1914	petex	QMA 142	Y						
8	2500	INSU3	insu	1414		SUPOR 293							
microcat	3000			914									
9	3200	Eli	Eli	714		SUPOR 293							
10	3874	ULB2	ULB2	40		SUPOR 293							
11	3884	McLane 3		30		QMA 142							
12	3894	INSU 4		20	petex	QMA 142	Y						

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **3921**

FOND: **3944 m**

Campagne : BONUS GOODHOPE 2008

Station : SUPER 5 **TREUIL**
N° de palanquée : ISP 10
Operators :

RESET Poulie when line at the sea surface

Total wire out (m)		**3927**	
Wire out, when microcat is attached (m)		**920**	(≥ total wire out -3300)
	microcat depth		**3000**

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge
1	50	McLane 1	3870	petex	QMA 142	
2	90	McLane 2	3830	petex	QMA 142	
3	125	INSU 2	3795		QMA 142	Y
4	650	INSU 5	3270	petex	QMA 142	Y
5	1200	INSU7	2720		SUPOR 293	
6	1800	INSU6	2120		SUPOR 293	
7	2000	INSU 1	1920	petex	QMA 142	Y
8	2500	INSU3	1420		SUPOR 293	
microcat	3000		920			
9	3200	Eli	720		SUPOR 293	
10	3880	ULB2	40		SUPOR 293	
11	3890	McLane 3	30		QMA 142	
12	3900	INSU 4	20	petex	QMA 142	Y

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **3927**

3930
3940

FOND: **3950 m**

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 5
N° de palanquée : ISP 11

Operators : Tisnerat-Lacan-Cavagna

Date (UTC) : 17 / 03 / 2008
Heure debut (UTC) : 00:15 am
Heure fin (UTC): 07:55 am

Lattitude (° ') : 57 ° 33.08 ' S
Longitude (° ') : 00 ° 03.03 ' E
Bottom Depth (m) : m

RESET Pulley when line at the sea surface

Total wire out (m)	**2607**
Wire out, when microcat is attached (m)	**50**

(≥ total wire out -3300)

microcat depth **2557**

PUMPING = 02:00
1 punch = diameter of 25.3 mm
Microcat maximum depth is 3500m. Maximum target depth for microcat is 3300m.

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	Parameters to be measured	persons in charge	prefilter %	filter %
1	20	*INSU 1*	2580	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
2	30	INSU 4	2570	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
3	115	*McLane 1*	2485	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	25%	6 punchs	compound specifics 234Th	Cavagna Planchon	50%	all the rest
4	140	INSU 6	2460	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
5	250	Eli	2350	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
6	300	*McLane 2*	2300	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
7	400	INSU 3	2200	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
8	500	*INSU 2*	2100	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 5
N° de palanquée : ISP 11

Date (UTC) : 17 / 03 / 2008
Heure debut (UTC) : 00:15 am

Lattitude (° ') : 57 ° 33.08 ' S
Longitude (° ') : 00 ° 03.03 ' E

9	700	ULB 2	1900	-	SUPOR 293mm 0.45µm	-	Nd, Pa, Th	Lacan	-	» 5 / 6	Bsi, 30Si	Cardinal	-	» 1 / 6
10	1500	*McLane 3*	1100	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
11	2300	*INSU 5*	300	petex 53µ	QMA 142mm 1µm	Y	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest
12	2500	*INSU 7*	100	petex 53µ	QMA 142mm 1µm	-	14, 13, 12 C POC	Tisnerat	33%	6 punchs	compound specifics 234Th	Cavagna Planchon	33%	all the rest

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Parameters to be measured	persons in charge	prefilter %	filter %	initial volume	final volume	Filtered volume (L) read on the pump	pumping duration (min)
1	20	*INSU 1*	2580	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	8 punchs	85434	85434	0	set to 2h
2	30	INSU 4	2570	-	SUPOR 293mm 0.45µm	-	-	-	-	-	61950	62364	414	set to 2h
3	115	*McLane 1*	2485	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	25%	8 punchs	6697	6697	0	set to 2h
4	140	INSU 6	2460	-	SUPOR 293mm 0.45µm	-	-	-	-	-	124332	125351	1019	set to 2h
5	250	Eli	2350	-	SUPOR 293mm 0.45µm	-	-	-	-	-	55620	56703	1083	set to 2h
6	300	*McLane 2*	2300	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	15637	16628	991	set to 2h
7	400	INSU 3	2200	-	SUPOR 293mm 0.45µm	-	-	-	-	-	54734	55403	669	set to 2h
8	500	*INSU 2*	2100	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	41202	42724	1522	set to 2h
9	700	ULB 2	1900	-	SUPOR 293mm 0.45µm	-	-	-	-	-	93389	93532	143	set to 2h
10	1500	*McLane 3*	1100	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	14232	15491	1259	set to 2h

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 5
N° de palanquée : ISP 11

Date (UTC) : 17 / 03 / 2008
Heure debut (UTC) : 00:15 am

Lattitude (° ') : 57 ° 33.08 ' S
Longitude (° ') : 00 ° 03.03 ' E

11	2300	*INSU 5*	300	petex 53µ	QMA 142mm 1µm	Y	Po, Pb210, radium (cartirdge)	Verdeny	33%	8 punchs	122677	124414	1737	set to 2h
12	2500	*INSU 7*	100	petex 53µ	QMA 142mm 1µm	-	Po Pb210	Verdeny	33%	8 punchs	166294	166208	-86	set to 2h

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-INSU-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge	Effective depth (m) calculated from microcat data	Comments
1	20	*INSU 1*	2580	petex 53µ	QMA 142mm 1µm	-	0,0	no puming
2	30	INSU 4	2570	-	SUPOR 293mm 0.45µm	-	0,0	
3	115	*McLane 1*	2485	petex 53µ	QMA 142mm 1µm	-	0,0	no puming
4	140	INSU 6	2460	-	SUPOR 293mm 0.45µm	-	0,0	
5	250	Eli	2350	-	SUPOR 293mm 0.45µm	-	0,0	
6	300	*McLane 2*	2300	petex 53µ	QMA 142mm 1µm	-	0,0	
7	400	INSU 3	2200	-	SUPOR 293mm 0.45µm	-	0,0	
8	500	*INSU 2*	2100	petex 53µ	QMA 142mm 1µm	-	0,0	
9	700	ULB 2	1900	-	SUPOR 293mm 0.45µm	-	0,0	
10	1500	*McLane 3*	1100	petex 53µ	QMA 142mm 1µm	-	0,0	
11	2300	*INSU 5*	300	petex 53µ	QMA 142mm 1µm	Y	0,0	
12	2500	*INSU 7*	100	petex 53µ	QMA 142mm 1µm	-	0,0	no puming

Campagne : BONUS GOODHOPE 2008
Navire : R/V Marion Dufresne

FICHE PRELEVEMENT IN SITU PUMPS (ISP)

Station : SUPER 5
N° de palanquée : ISP 11

Date (UTC) : 17 / 03 / 2008
Heure debut (UTC) : 00:15 am

Lattitude (° ') : 57 ° 33.08 ' S
Longitude (° ') : 00 ° 03.03 ' E

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **2607 m**

profondeur du microcat: m

alpha: angle entre verticale et cable (si cable rectiligne)
cos (alpha) = pinger or microcat depth / cable length
alpha= 90,00 °

1	75	Ra	
2	250	Ra	
3	620	Ra	
4	1400	Nd	293
5	1400	Ra	
6	1400	C14	
7	2700	Nd	293
8	2700	Ra	
9	2700	C14	
10	4000	Nd	293
11	4000	Ra	
12	4000	C14	
13			

1	30	Nd	293
2	30	C14	
3	75	C14	
4	80	Nd	142
5	130	C14	
6	130	Nd	293
7	175	C14	
8	200	Nd	293
9	250	C14	
10	400	Nd	293
11	620	Nd	293
12	620	C14	
13			

		filtre	diametre	pompe
1	75	QMA-Mn	142	Chal insu6
2	620	SUPOR	293	Chal ULB1
3	620	QMA-Mn	142	Chal insu4
4	1400	SUPOR	293	Chal insu5
5	1400	QMA-Mn	142	Chal insu1
6	1400	QMA	142	McLane
7	2000	SUPOR	293	Chal insu7
8	2700	SUPOR	293	Chal Elisabet
9	2700	QMA-Mn	142	Chal insu3
10	2700	QMA	142	McLane
11	4000	SUPOR	293	Chal ULB2
12	4000	QMA-Mn	142	Chal insu2
13	4000	QMA	142	McLane

1	30	SUPOR	293	Chal ULB1
2	30	QMA	142	McLane
3	75	QMA	142	McLane
4	80	SUPOR	293	Chal insu5
5	130	QMA	142	McLane
6	130	SUPOR	293	Chal insu6
7	175	QMA	142	Chal insu1
8	200	SUPOR	293	Chal Elisabet
9	250	QMA	142	Chal insu2
10	400	SUPOR	293	Chal ULB2
11	500	QMA	142	Chal insu3
12	620	QMA	142	Chal insu4

NAME : **SUPER station 5 / ISP 11**

QMA

date : 17/3/2008 start time (TU): 00:15 am start lat: 57°33.08' start lon: 00°03.03'

site : S5 stop time (TU): 07:55 am

Pump		depth (m)	P. CorrD	volume (l)	fract (µ)	SSM #	comments	cartridge
INSU 1	1	20		0	53	Blk INSU	blank	yes
					1	Blk INSU	blank	yes
McLane 1	2	115		0	53	Blk McLane	blank	yes
					1	Blk McLane	blank	yes
McLane 2	3	300		991	53	M 113	very clear	yes
					1	M 114	well yellow	yes
INSU 2	4	500		1522	53	M 115	very clear + 2 foraminifers	yes
					1	M 116	again well colored	yes
McLane 3	5	1500		1259	53	M 117	very clear nothing	yes
					1	M 118	clear yellow	yes
INSU 5	6	2300		1737	53	M 119	nothing	no
					1	M 120	very clear yellow	no
INSU 7	7	2500		-14	53	M 121	-	yes
					1	M 122	-	yes

Prefilter 53µ: pumps 1, 2 = 25% 234Th, CS, 14C, Po each / pumps 3, 5, 6 = 33,3% 234Th, 14C, Po each
filter QMA 1µ: 8 punchs for Po-210Pb, 1 punch for 234Th, 6 punchs 14C, rest for compound specifics

Campagne : BONUS GOODHOPE 2008

Station : SUPER 5
N° de palanquée : ISP 11
Operators :

SAMPLING

RESET Poulie when line at the sea surface

Total wire out (m)		**2607**
Wire out, when microcat is attached (m)		**50** (≥ total wire out -3300)
	microcat depth	**2557**

Sample #	Target depth (m)	Pump #	filter holder	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity,	cartridge	initial volume	final volume	filtered volume	bag #	pump comments	filter comments
1	20	INSU 1		2580	petex	QMA 142							
2	30	INSU4		2570		SUPOR 293							
3	115	McLane1		2485	petex	QMA 142							
4	140	INSU6		2460		SUPOR 293							
5	250	Eli	Eli	2350		SUPOR 293							
6	300	McLane2		2300	petex	QMA 142							
7	400	INSU3	Eli	2200		SUPOR 293							
8	500	INSU 2		2100	petex	QMA 142							
9	700	ULB2	ulb2	1900		SUPOR 293							
10	1500	McLane3		1100	petex	QMA 142							
11	2300	INSU5		300	petex	QMA 142	Y						
12	2500	INSU 7		100	petex	QMA 142							
microcat	2550			50									

Microcat data at the maximum microcat depth

P (dbar) :	S :	T (° C) :

1128	INSU 5	insu 293	2786		SUPOR 293	
400	McLane3		3514	petex	QMA 142	

Campagne : BONUS GOODHOPE 2008

Station : SUPER 5 **TREUIL**
N° de palanquée : ISP 11
Operators :

RESET Poulie when line at the sea surface

Total wire out (m)			**2607**	
Wire out, when microcat is attached (m)			**50**	(≥ total wire out -3300)

microcat depth **2550**

Sample #	Target depth (m)	Pump # (e.g. McLane-1, Challenger-2)	Wire out, when pump attached (m)	Prefilter	Filter type, size and porisity, or cartridge	cartridge
1	20	INSU 1	2580	petex	QMA 142	
2	30	INSU4	2570		SUPOR 293	
3	115	McLane1	2485	petex	QMA 142	
4	140	INSU6	2460		SUPOR 293	
5	250	Eli	2350		SUPOR 293	
6	300	McLane2	2300	petex	QMA 142	
7	400	INSU3	2200		SUPOR 293	
8	500	INSU 2	2100	petex	QMA 142	
9	700	ULB2	1900		SUPOR 293	
10	1500	McLane3	1100	petex	QMA 142	
11	2300	INSU5	300	petex	QMA 142	
12	2500	INSU 7	100	petex	QMA 142	
microcat	2550		50			

Microcat data at the maximum microcat depth		
P (dbar) :	S :	T (° C) :

go down to **2607**

Campagne : BONUS GOODHOPE 2008 **PERFORMANCE**

	IPS1	ISP2	ISP3	ISP4	ISP5	ISP6	ISP7	ISP8	ISP9	ISP10	ISP11			
Challenger INSU 1	1		1	0	0	1	0	1	0	0	0	40%		inverse pumping
Challenger INSU 2	1		0	1	1	1	0	1	1	1	1	80%		inverse pumping
Challenger INSU 3	1		0	1	1	1	1	1	1	1	1	90%		
Challenger INSU 4	1		1	1	1	1	1	1	1	1	1	100%	Chal	
Challenger INSU 5		1	1	1	1	1	1	1	1	1	1	100%		
Challenger INSU 6		1	1	1	1	1	1	1	1	1	1	100%		
Challenger INSU 7		0		1	0	0	1	0	1	0	0	33%		no pumping
Challenger ULB 1		0		0								0%		no pumping
Challenger ULB 2		1		1	1	1	1	1	1	1	1	100%		
Challenger Elisabet		1		0	1	0	1	1	1	1	1	78%		pump 13L
McLane INSU 1	1	1	1	1	1	0	1	0	0	1	0	64%	McLane	
McLane INSU 2	1	1	0	1	1	1	1	1	1	1	1	91%		
McLane INSU 3	1	1	1	1	1	1	1	1	1	1	1	100%		

piles	82%	supor	88%	batteries : noir	QMA+cartouche
accu	75%	QMA	93%	piles : bleu	Supor
		QMA+cartouche	77%		QMA

SUPER 1

QMA	QMA+Mn	SUPOR
50		
75		
125	2700	30
175	1200	200
250	250	1250
500	75	2750
750		4650
4700		
2750		
1250		
10	4	5

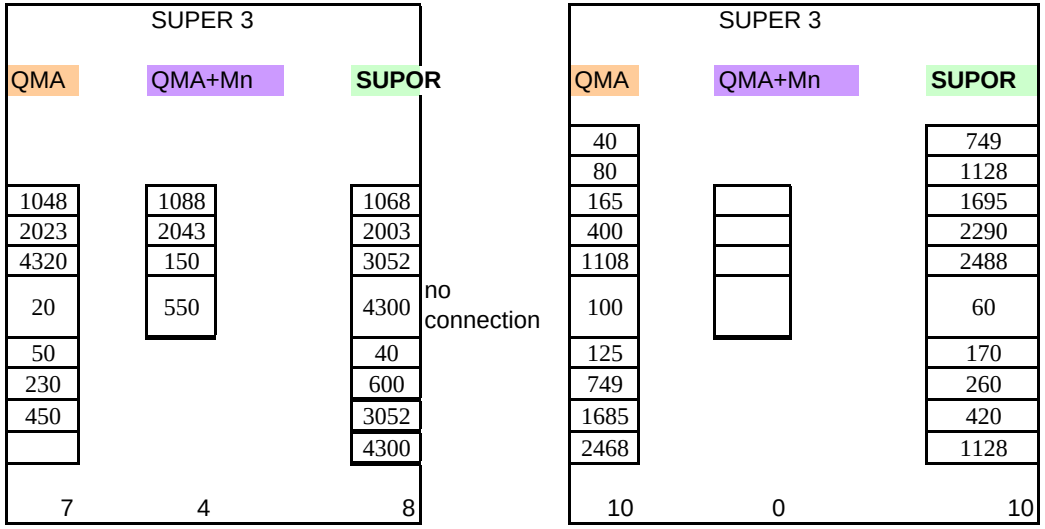
19

SUPER 2

QMA	QMA+Mn	SUPOR
1450	75	20
2900	608	260
3940	2910	608
30	3960	1440
75		1960
130		2890
250		3900
590		
8	4	7

19

Anju	14			12	
Nadine	10	et peut etre	14	8	et peut etre 12
Eli	4			4	
Francois et Damien	5			7	



Anju	11				10
Nadine	7	et peut-etre	11		10
Eli	4				0
Francois et Damien	7				10

Annexe 3

GO-FLOs

LOG-BOOK of the GO-FLO casts (completed by M. Boye).

GF#0 (TEST) 0-1000 m

TEST station	Date (UTC): 08/02/17
GO-FLO N°: GF0	Starting time (UTC): 02H23 — Position start (°'): 34°25.433 S, 14°24.316 E
Closer CTD N°:	Ending time (UTC): 04H13 — Position end (°'): 34°25.704 S, 14°24.222 E
Station N°:	Bottom depth (m):
	Total lenght of cable out (m): 1107 m

GF#1 (L1A, TM's) 0-2100m

Station N°: L1A	Date (UTC): 08/02/17
GO-FLO N°: GF1	Starting time (UTC): 09H36 — Position start (°'): 34°25.553 S, 14°24.358 E
Closer CTD N°: 11	Ending time (UTC): 13H10 — Position end (°'): 34°25.606 S, 14°24.526 E
Station N°: 11	Bottom depth (m):
	Total lenght of cable out (m): 2157 m

GF#2 (S1, TM's & Cd-isot.) 0-850 m

Station N°: S1	Date start (UTC): 08/02/19 — Date end (UTC): 08/02/20
GO-FLO N°: GF2	Starting time (UTC): 22H57 — Position start (°'): 36°31.00 S, 13°07.00 E
Closer CTD N°: 19	Ending time (UTC): 01H20 — Position end (°'): 36°30.00 S, 13°06.00 E
Station N°: 18	Bottom depth (m): 4920
	Total lenght of cable out (m): 957

GF#3 (S1, TM's & Cd-isot.) 1000-4000 m

Station N°: S1	Date start (UTC): 08/02/20 — Date end (UTC): 08/02/20
GO-FLO N°: GF3	Starting time (UTC): 16H37 — Position start (°'): 36°31.35 S, 13°07.18 E
Closer CTD N°: 21	Ending time (UTC): 21H31 — Position end (°'): 36°28.00 S, 13°05.00 E
Station N°: 18	Bottom depth (m): 4920
	Total lenght of cable out (m): 4107 + 50 m

GF#4 (S1, Inc. Géraldine/Eva) 30-50 m

Station N°: S1	Date start (UTC): 08/02/21 — Date end (UTC): 08/02/21
GO-FLO N°: GF4	Starting time (UTC): 06H08 — Position start (°'): 36°31.021 S, 13°07.448 E
Closer CTD N°: 21	Ending time (UTC): 06H53 — Position end (°'): 36°30.403 S, 13°07.133 E
Station N°: 18	Bottom depth (m): 4920
	Total lenght of cable out (m):

GF#5 (S1, Inc. Bron/Marie) 25-45 m

Station N°: S1	Date start (UTC): 08/02/21 — Date end (UTC): 08/02/21
GO-FLO N°: GF5	Starting time (UTC): 09H27 — Position start (°'): 36°29.492 S, 13°06.976 E
Closer CTD N°: 22	Ending time (UTC): 10H39 — Position end (°'): 36°28.437 S, 13°06.422 E
Station N°: 18	Bottom depth (m): 4920
	Total lenght of cable out (m): 265 + 50

GF#6 (S1, Inc. Bron/Marie) 35-50 m

Station N°: S1	Date start (UTC): 08/02/21 — Date end (UTC): 08/02/21
GO-FLO N°: GF6	Starting time (UTC): 13H43 — Position start (°'): 36°27.997 S, 13°06.246 E
Closer CTD N°: 23	Ending time (UTC): 14H26 — Position end (°'): 36°27.497 S, 13°06.048 E
Station N°: 18	Bottom depth (m): 4920
	Total lenght of cable out (m): 50 + 50

GF#7 (S1, Cd-isot.) 30-200 m

Station N°: S1	Date start (UTC): 08/02/21 — Date end (UTC): 08/02/21
GO-FLO N°: GF7	Starting time (UTC): 15H50 — Position start (°'): 36°31.321 S, 13°07.177 E
Closer CTD N°: 23	Ending time (UTC): 16H29 — Position end (°'): 36°31.00 S, 13°06.00 E
Station N°: 18	Bottom depth (m): 4920
	Total lenght of cable out (m): 250 m

GF#8 (S1, Fe-isot.) 0-4000 m

Station N°: S1	Date start (UTC): 08/02/22 — Date end (UTC): 08/02/22
GO-FLO N°: GF8	Starting time (UTC): 01H50 — Position start (°'): 36°30.47 S, 13°07.110 E
Closer CTD N°: 23	Ending time (UTC): 06H01 — Position end (°'): 36°27.800 S, 13°07.337 E
Station N°: 18	Bottom depth (m): 4920
	Total lenght of cable out (m): 4007 + 50

GF#9 (L2B, TM's) 15-2100 m

Station N°: L2B	Date start (UTC): 08/02/25 — Date end (UTC): 08/02/26
GO-FLO N°: GF9	Starting time (UTC): 22H06 — Position start (°'): 41°10.71 S, 09°55.01 E
Closer CTD N°: 37	Ending time (UTC): 00H26 — Position end (°'): 41°11.28 S, 09°55.28 E
Station N°: 31	Bottom depth (m):
	Total lenght of cable out (m): 2107 + 50 m

LOG-BOOK of the GO-FLO casts (completed by M. Boye).

GF#10 (S2, TM's & Cd/Fe-isot.) 1441-3950 m

Station N°: S2	Date start (UTC): 08/02/27	Date end (UTC): 08/02/27
GO-FLO N°: GF10	Starting time (UTC): 00H23	Position start (°'): 42°28.19 S, 08°55.718 E
Closer CTD N°: 41	Ending time (UTC): 04H10	Position end (°'): 42°88.191 S, 08°55.731 E
Station N°: 34	Bottom depth (m): 4060	
	Total lenght of cable out (m): 3957+ 50 m	

GF#11 (S2, TM's & Cd/Fe-isot.) 196-1441 m

Station N°: S2	Date start (UTC): 08/02/27	Date end (UTC): 08/02/27
GO-FLO N°: GF11	Starting time (UTC): 12H34	Position start (°'): 42°28.135 S, 08°55.726 E
Closer CTD N°: 41	Ending time (UTC): 14H20	Position end (°'): 42°88.127 S, 08°55.73 E
Station N°: 34	Bottom depth (m): 4060	
	Total lenght of cable out (m): 1448+ 50 m	

GF#12 (S2, TM's & Cd/Fe-isot.) 15-196 m

Station N°: S2	Date start (UTC): 08/02/27	Date end (UTC): 08/02/27
GO-FLO N°: GF12	Starting time (UTC): 18H07	Position start (°'): 42°28.21 S, 08°55.854 E
Closer CTD N°: 42	Ending time (UTC): 18H50	Position end (°'): 42°28.354 S, 08°56.149 E
Station N°: 34	Bottom depth (m): 4060	
	Total lenght of cable out (m): 207+ 50 m	

GF#13 (S2, Inc. Géraldine/Eva) 30-60 m

Station N°: S2	Date start (UTC): 08/02/27	Date end (UTC): 08/02/27
GO-FLO N°: GF13	Starting time (UTC): 21H12	Position start (°'): 42°28.133 S, 08°55.850 E
Closer CTD N°: 43	Ending time (UTC): 22H11	Position end (°'): 42°28.111 S, 08°55.975 E
Station N°: 34	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#14 (S2, Inc. Bron/Marie) 25-45 m

Station N°: S2	Date start (UTC): 08/02/28	Date end (UTC): 08/02/28
GO-FLO N°: GF14	Starting time (UTC): 07H50	Position start (°'): 42°28.111 S, 08°55.975 E
Closer CTD N°: 44	Ending time (UTC): 08H26	Position end (°'): 42°28.12 S, 08°55.970 E
Station N°: 34	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#15 (S2, Inc. Bron/Marie & Pedro + Cd/Fe-isot.) 25-55 m

Station N°: S2	Date start (UTC): 08/02/28	Date end (UTC): 08/02/28
GO-FLO N°: GF15	Starting time (UTC): 09H30	Position start (°'): 42°28.111 S, 08°56.05 E
Closer CTD N°: 45	Ending time (UTC): 09H50	Position end (°'): 42°28.110 S, 08°56.05 E
Station N°: 34	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#16 (L3B, TM's) 30-2100 m

Station N°: L3B	Date start (UTC): 08/03/01	Date end (UTC): 08/03/01
GO-FLO N°: GF16	Starting time (UTC): 16H22	Position start (°'): 44°53.900 S, 06°53.030 E
Closer CTD N°: 50	Ending time (UTC): 19H17	Position end (°'): 44°53.205 S, 06°54.204 E
Station N°: 41	Bottom depth (m):	
	Total lenght of cable out (m): 2100+ 7 + 100 m	

GF#17 (L4A, TM's) 30-2050 m

Station N°: L4A	Date start (UTC): 08/03/03	Date end (UTC): 08/03/03
GO-FLO N°: GF17	Starting time (UTC): 04H08	Position start (°'): 46°01.378 S, 05°51.639 E
Closer CTD N°: 57	Ending time (UTC): 07H10	Position end (°'): 46°00.850 S, 05°52.650 E
Station N°: 44	Bottom depth (m): 4100	
	Total lenght of cable out (m): 2050+ 7 + 80 m	

GF#18 (S3, Cd-isot.) 20-100 m

Station N°: S3	Date start (UTC): 08/03/04	Date end (UTC): 08/03/04
GO-FLO N°: GF18	Starting time (UTC): 13H59	Position start (°'): 47°33.267 S, 04°22.621 E
Closer CTD N°: 62	Ending time (UTC): 14H44	Position end (°'): 47°33.264 S, 04°22.622 E
Station N°: 48	Bottom depth (m):	
	Total lenght of cable out (m): 90 + 7 + 50 m	

GF#19: TEI's GEOTRACES INTERCALIBRATION (trace metals, GO-FLO cast)

THIRD SUPER STATION		
Station number: GF19		
Cast number: S3-GF19		
Date start (UTC): 04	Time start (UTC): 19H10	Position start (°'): 47°33.1658 S/ 04°22.3625 E
Date end (UTC): 04/	Time end (UTC): 22H50	Position end (°'): 47°33.160 S/ 04°22.3703 E
Closer CTD number: 63		

LOG-BOOK of the GO-FLO casts (completed by M. Boye).

Station N°: 48
with microcat

GF#20 (S3, TM's & Cd/Fe-isot.) 1070-4000 m

Station N°: S3	Date start (UTC): 08/03/05	Date end (UTC): 08/03/05
GO-FLO N°: GF20	Starting time (UTC): 07H07	Position start (°'): 47°33.156 S, 04°22.332 E
Closer CTD N°: 63	Ending time (UTC): 10H50	Position end (°'): 47°33.15 S, 04°22.330 E
Station N°: 48	Bottom depth (m):	
	Total lenght of cable out (m): 4007 + 50 m	

GF#21 (S3, TM's & Cd-isot.) 20-800 m

Station N°: S3	Date start (UTC): 08/03/05	Date end (UTC): 08/03/05
GO-FLO N°: GF21	Starting time (UTC): 14H40	Position start (°'): 47°33.0655 S, 04°22.226 E
Closer CTD N°: 64	Ending time (UTC): 16H01	Position end (°'): 47°33.1809 S, 04°22.388 E
Station N°: 48	Bottom depth (m):	
	Total lenght of cable out (m): 807+ 50 m	

GF#22 (S3, Inc. Géraldine/Eva) 30-60 m

Station N°: S3	Date start (UTC): 08/03/05	Date end (UTC): 08/03/05
GO-FLO N°: GF22	Starting time (UTC): 18H07	Position start (°'): 47°33.293 S, 04°22.543 E
Closer CTD N°: 65	Ending time (UTC): 19H01	Position end (°'): 47°33.261 S, 04°22.141 E
Station N°: 48	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#23 (S3, Inc. Bron/Marie) 40-60 m

Station N°: S3	Date start (UTC): 08/03/06	Date end (UTC): 08/03/06
GO-FLO N°: GF23	Starting time (UTC): 03H45	Position start (°'): 47°33.36 S, 04°22.60 E
Closer CTD N°: 65	Ending time (UTC): 04H15	Position end (°'): 47°33.37 S, 04°22.60 E
Station N°: 48	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#24 (S3, Inc. Bron/Marie + Fe-isot.) 25-1068 m

Station N°: S3	Date start (UTC): 08/03/06	Date end (UTC): 08/03/06
GO-FLO N°: GF24	Starting time (UTC): 06H00	Position start (°'): 47°33.32 S, 04°22.96 E
Closer CTD N°: 66	Ending time (UTC): 07H27	Position end (°'): 47°33.21 S, 04°23.14 E
Station N°: 48	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#25 (L5B, TM's) 40-2200 m

Station N°: L5B	Date start (UTC): 08/03/07	Date end (UTC): 08/03/07
GO-FLO N°: GF25	Starting time (UTC): 14H53	Position start (°'): 49°01.69 S, 02°49.926 E
Closer CTD N°: 70	Ending time (UTC): 17H55	Position end (°'): 49°01.69 S, 02°49.93 E
Station N°: 52	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#26 (L6A, TM's) 30-2100 m

Station N°: L6A	Date start (UTC): 08/03/09	Date end (UTC): 08/03/09
GO-FLO N°: GF26	Starting time (UTC): 02H50	Position start (°'): 50°22.55 S, 01°19.535 E
Closer CTD N°: 77	Ending time (UTC): 05H12	Position end (°'): 50°22.61 S, 01°19.971 E
Station N°: 57	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#27 (S4, Inc. Pedro + Cd-isot.) 10-250 m

Station N°: S4	Date start (UTC): 08/03/10	Date end (UTC): 08/03/10
GO-FLO N°: GF27	Starting time (UTC): 07H03	Position start (°'): 51°51.24 S, 00°00.09 E
Closer CTD N°: 83	Ending time (UTC): 08H10	Position end (°'): 51°51.297 S, 00°00.38 E
Station N°: 62	Bottom depth (m):	
	Total lenght of cable out (m):	

GF#28 (S4, TM's + Cd-isot.) 30-450 m

Station N°: S4	Date start (UTC): 08/03/10	Date end (UTC): 08/03/10
GO-FLO N°: GF28	Starting time (UTC): 11H15	Position start (°'): 51°51.082 S, 00°00.307 E
Closer CTD N°: 84	Ending time (UTC): 13H06	Position end (°'): 51°51.241 S, 00°00.478 E
Station N°: 62	Bottom depth (m): 2400	
	Total lenght of cable out (m):	

GF#29 (S4, Inc. Géraldine/Eva) 30-60 m

Station N°: S4	Date start (UTC): 08/03/11	Date end (UTC): 08/03/11
GO-FLO N°: GF29	Starting time (UTC): 00H05	Position start (°'): 51°51.890 S, 00°00.140 E
Closer CTD N°: 85	Ending time (UTC): 01H15	Position end (°'): 51°51.899 S, 00°00.095 E
Station N°: 62	Bottom depth (m):	

LOG-BOOK of the GO-FLO casts (completed by M. Boye).

Total lenght of cable out (m):

GF#30 (S4, Inc. Bron/Marie) 40-60 m

Station N°: S4	Date start (UTC): 08/03/11	Date end (UTC): 08/03/11
GO-FLO N°: GF30	Starting time (UTC): 03H15	Position start (°'): 51°52.19 S, 00°00.26 E
Closer CTD N°: 86	Ending time (UTC): 04H18	Position end (°'): 51°52.44 S, 00°00.48 E
Station N°: 62	Bottom depth (m):	
	Total lenght of cable out (m): 191 m	

GF#31 (S4, TM's & Cd/Fe-isot.) 500-2500 m

Station N°: S4	Date start (UTC): 08/03/11	Date end (UTC): 08/03/11
GO-FLO N°: GF31	Starting time (UTC): 06H20	Position start (°'): 51°52.70 S, 00°00.32 E
Closer CTD N°: 87	Ending time (UTC): 09H04	Position end (°'): 51°52.91 S, 00°00.23 E
Station N°: 62	Bottom depth (m): 2550 m	
	Total lenght of cable out (m):	

GF#32 (S4, Fe-isot.) 50-1117 m

Station N°: S4	Date start (UTC): 08/03/11	Date end (UTC): 08/03/11
GO-FLO N°: GF32	Starting time (UTC): 16H20	Position start (°'): 51°53.28 S, 00°00.30 E
Closer CTD N°: 87	Ending time (UTC): 18H00	Position end (°'): 51°53.12 S, 00°00.22 E
Station N°: 62	Bottom depth (m): 2550 m	
	Total lenght of cable out (m):	

GF#33 (L7B, TM's) 30-2100 m

Station N°: L7B	Date start (UTC): 08/03/13	Date end (UTC): 08/03/13
GO-FLO N°: GF33	Starting time (UTC): 21H08	Position start (°'): 55°14.070 S, 00°02.2143 E
Closer CTD N°: 98	Ending time (UTC): 23H50	Position end (°'): 55°13.940 S, 00°02.6618 E
Station N°: 72	Bottom depth (m): 2800	
	Total lenght of cable out (m):	

GF#34 (S5, TM's & Cd/Fe-isot.) 800-3850 m

Station N°: S5	Date start (UTC): 08/03/15	Date end (UTC): 08/03/15
GO-FLO N°: GF34	Starting time (UTC): 20H30	Position start (°'): 57°33.15 S, 00°02.19 W
Closer CTD N°: 106	Ending time (UTC): 23H20	Position end (°'): 57°33.15 S, 00°02.19 W
Station N°: 78	Bottom depth (m): 3950	
	Total lenght of cable out (m): 3857 + 50 m	

GF#35 (S5, Inc. Pedro & Cd-isot.) 10-300 m

Station N°: S5	Date start (UTC): 08/03/16	Date end (UTC): 08/03/16
GO-FLO N°: GF35	Starting time (UTC): 03H40	Position start (°'): 57°33.13 S, 00°02.19 W
Closer CTD N°: 107	Ending time (UTC): 04H30	Position end (°'): 57°33.139 S, 00°02.1906 W
Station N°: 78	Bottom depth (m): 3932	
	Total lenght of cable out (m): 307 + 50 m	

GF#36 (S5, TM's & Cd-isot.) 30-750 m

Station N°: S5	Date start (UTC): 08/03/16	Date end (UTC): 08/03/16
GO-FLO N°: GF36	Starting time (UTC): 15H43	Position start (°'): 57°33.1401 S, 00°02.1910 W
Closer CTD N°: 108	Ending time (UTC): 17H20	Position end (°'): 57°33.154 S, 00°02.193 W
Station N°: 78	Bottom depth (m): 3950	
	Total lenght of cable out (m): 757 + 50 m	

GF#37 (S5, Fe-isot.) 25-2100 m

Station N°: S5	Date start (UTC): 08/03/16	Date end (UTC): 08/03/16
GO-FLO N°: GF37	Starting time (UTC): 19H20	Position start (°'): 57°33.143 S, 00°02.193 W
Closer CTD N°: 109	Ending time (UTC): 21H34	Position end (°'): 57°33.140 S, 00°02.190 W
Station N°: 78	Bottom depth (m): 3950	
	Total lenght of cable out (m):	

GF#38 (S5, Large Volumes Sampling) Fluo. Max.

Station N°: S5	Date start (UTC): 08/03/17	Date end (UTC): 08/03/17
GO-FLO N°: GF38	Starting time (UTC): 08H02	Position start (°'): 57°33.040 S, 00°03.048 W
Closer CTD N°: 110	Ending time (UTC): 08H50	Position end (°'): 57°33.040 S, 00°03.049 W
Station N°: 78	Bottom depth (m):	
	Total lenght of cable out (m):	

Go-Flo

– Sampling –

Responsible : *Marie BOYE*
File made by : *Marie BOYE*

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#1 (L1A, TM's) 0-2100m

Station N°: L1A
GO-FLO N°: GF1
Closer CTD N°: 11
Station N°: 11

Date (UTC): 08/02/17
Starting time (UTC): 09H3 Position start (°'): 34°25.553 S, 14°24.358 E
Ending time (UTC): 13H10 Position end (°'): 34°25.606 S, 14°24.526 E
Bottom depth (m):
Total lenght of cable out (m): 2157 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TFe (FIA)		DFeII	DH2O2	DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	Soluble Fe	NO3	S	micro cat	COMMENTS
10	20	X	X	X	X		X	X	X	X	X	X	X	X		N°205	X	
9	40	X	X	X	X		X	X	X	X	X	X	X	X			X	
8	60	X	X	X	X		X	X	X	X	X	X	X	X		N°204	X	max fluo
7	80	X	X	X	X		X	X	X	X	X	X	X	X			X	
6	200	X	X	X	X		X	X	X	X	X	X	X	X	X	N°203	X	Small leakage (before connecting N2)
5	700	X	X	X	X		X	X	X	X	X	X	X	X	X	N°202	X	at 750 m/min S)
4	800	X	X	X	X		X	X	X	X	X	X	X	X			X	AAIW
3	1000	X	X	X	X		X	X	X	X	X	X	X	X			X	UCDW
2	1200	X	X	X	X		X	X	X	X	X	X	X	X	X	N°201	X	at 1100 m/min O2)
1	2100	X	X	X	X		X	X	X	X	X	X	X	X			X	upper of NADW

Messenger sent at 11H12 UTC
Start cast up at 11H29 UTC
First bottle on deck at 11H32
New messenger sent at 11H45
Start 2nd cast up at 12H05
2nd bottle on the deck at 12H12
Last bottle on the deck at 13H10
Note a : glissement du cable lors de la 2eme descente d'environ 10 m.
Note b: microcat attached at 55 m below the deeper bottle

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#2 (S1, TM's & Cd-isot.) 0-850 m

Station N°: S1
GO-FLO N°: GF2
Closer CTD N°: 19
Station N°: 18

Date start (UTC): 08/02/19 **Date end (UTC): 08/02/20**
Starting time (UTC): 22H57 **Position start (°'): 36°31.00 S, 13°07.00 E**
Ending time (UTC): 01H20 **Position end (°'): 36°30.00 S, 13°06.00 E**
Bottom depth (m): 4920
Total lenght of cable out (m): 957

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)		DFeII	DH2O2	DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (700/850m = 1L)	Soluble Fe	NO3	S	microcat	COMMENTS
10	850	X	X	X		X		X	X	X	X	X	X	X		X	X	X	X	X	
9	700	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	center of AAIW (S min/T min/O2max)
8	500	X	X	X		X		X	X	X	X	X	X	X			X	X	X	X	
7	300	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X	X	subtropical waters
6	200	X	X	X		X		X	X	X	X	X	X	X			X	X	X	X	subtropical waters
5	100	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X	X	cup leak + crash cable
4	70	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	maxO2/minT/minS
3	40	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X	X	max chl
2	30	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	subtropical waters
1	20	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X	X	back leakage

Note: microcat attached at 55 m below the deeper bottle

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#3 (S1, TM's & Cd-isot.) 1000-4000 m

Station N°: S1
GO-FLO N°: GF3
Closer CTD N°: 21
Station N°: 18

Date start (UTC): 08/02/20 **Date end (UTC): 08/02/20**
Starting time (UTC): 16H37 **Position start (°'): 36°31.35 S, 13°07.18 E**
Ending time (UTC): 21H31 **Position end (°'): 36°28.00 S, 13°05.00 E**
Bottom depth (m): 4920
Total lenght of cable out (m): 4107 + 50 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)		DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (2800/1300/4000m = 1L)	Soluble Fe	NO3	S	Pinger	COMMENTS
10	1000	X	X	X	X		X	X	X	X	X	X		X	X	X	X	bottom of AAIW (?)
9	1200	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	UCDW (min O2)
8	1400	X	X	X	X		X	X	X	X	X	X		X	X	X	X	
7	1600	X	X		X		X	X	X	X	X			X	X	X	X	
6	2000	X	X	X	X		X	X	X	X	X	X		X	X	X	X	
4	2700	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	NADW (S max)
3	3050	X	X	X	X		X	X	X	X	X	X		X	X	X	X	
2	3500	X	X		X		X	X	X	X	X			X	X	X	X	
5	3800	X	X		X		X	X	X	X	X			X	X	X	X	contamination due to previous cast bottle cable crash (?)
1	4000	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	AABW

WARNING: PINGER (instead of microcat)

messenger sent at 19H30 UTC
change of puleys (troncanage) in wood at 19H29 UTC
start remontée cable at 19H54 UTC

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#4 (S1, Inc. Géraldine/Eva) 30-50 m

Station N°: S1
GO-FLO N°: GF4
Closer CTD N°: 21
Station N°: 18

Date start (UTC): 08/02/21 **Date end (UTC): 08/02/21**
Starting time (UTC): 06H08 **Position start (°'): 36°31.021 S, 13°07.448 E**
Ending time (UTC): 06H53 **Position end (°'): 36°30.403 S, 13°07.133 E**
Bottom depth (m): 4920
Total lenght of cable out (m):

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Go-Flo #	Depth (m)
1	50
2	40
3	30
4	50
6	40
7	30
8	50
9	40
10	30

All Go-Flo bottles were mixed and unfiltered samples were used for incubations

	Person in charge	CTD	Go-Flo	Bottle	depth	%light	Nitrate	Silicate	Phosphate	Chla	POC/ PON	BSi	Cytometry	Taxonomy	TDFe	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org
incub Fe-Cu-pore-waters	Sarthou-Bucciarelli		4	1-10	30-50	50	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

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FICHE PRELEVEMENTS GF#4 (S1, Inc. Géraldine/Eva) 30-50 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S1**
T (°C) =	**22**

Additions in the incubations

	+ Fe	+ Cu	+ NO3-	+ PO4-	+ Si(OH)4+	Pore waters
S1	1 nM	0.5 nM	100 µM	0.6 µM	10 µM	200 µl
S2	1 nM	0.5 nM	32 µM	2 µM	30 µM	-
S3	1 nM	0.5 nM	16 µM	1 µM	20 µM	-
S4	1 nM and 2 nM (2 x Fe)	0.5 nM	-	-	-	-

T0	**21/02/2008**									
Treatment	Time	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	14:30	10 ml	10 ml	125 ml	500 ml	500 ml	500 ml	1 ml	250 ml	60 ml
Control - B	14:30	x	x	x	500 ml	500 ml	500 ml	1 ml	x	60 ml

T0	**21/02/2008**							
Treatment	Time	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	Comments
Control - A	14:30	60 ml	60 ml	60 ml	60 ml	125 ml	x	
Control - B	14:30	60 ml	60 ml	60 ml	60 ml	125 ml	x	

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FICHE PRELEVEMENTS GF#4 (S1, Inc. Géraldine/Eva) 30-50 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S1**
T (°C) =	**22**

T1	**21/02/2008**	**23/02/2008**	2,19									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	10:14	12:45	2,10	10 ml	10 ml	x	500 ml	500 ml	500 ml	1 ml	x	60 ml
Control - B	10:14	12:45	2,10	10 ml	10 ml	x	500 ml	450 ml	300 ml	1 ml	x	60 ml
+ Fe - A	10:24	14:25	2,17	10 ml	10 ml	x	500 ml	500 ml	300 ml	1 ml	x	60 ml
+ Fe - B	10:24	14:25	2,17	10 ml	10 ml	x	500 ml	500 ml	300 ml	1 ml	x	60 ml
+ Fe + SN - A	10:43	15:46	2,21	10 ml	10 ml	x	500 ml	500 ml	300 ml	1 ml	x	60 ml
+ Fe + SN - B	10:43	15:46	2,21	10 ml	10 ml	x	500 ml	500 ml	300 ml	1 ml	x	60 ml
+ Fe + Cu + SN - A	11:26	16:45	2,22	10 ml	10 ml	x	500 ml	500 ml	300 ml	1 ml	x	60 ml
+ Fe + Cu + SN - B	11:26	16:45	2,22	10 ml	10 ml	x	500 ml	500 ml	300 ml	1 ml	x	60 ml
+ Pore waters - A	11:26	17:35	2,26	10 ml	10 ml	x	500 ml	500 ml	300 ml	1 ml	x	60 ml
+ Pore waters - B	11:26	17:35	2,26	10 ml	10 ml	x	500 ml	500 ml	300 ml	1 ml	x	60 ml

T1	**21/02/2008**	**23/02/2008**	2,19							
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	Comments
Control - A	10:14	12:45	2,10	60 ml	60 ml	60 ml	60 ml	125 ml	x	BSi pb de fuite
Control - B	10:14	12:45	2,10	60 ml	60 ml	60 ml	60 ml	125 ml	x	
+ Fe - A	10:24	14:25	2,17	60 ml	60 ml	60 ml	60 ml	125 ml	x	
+ Fe - B	10:24	14:25	2,17	60 ml	60 ml	60 ml	60 ml	125 ml	x	
+ Fe + SN - A	10:43	15:46	2,21	60 ml	60 ml	60 ml	60 ml	125 ml	x	
+ Fe + SN - B	10:43	15:46	2,21	60 ml	60 ml	60 ml	60 ml	125 ml	x	
+ Fe + Cu + SN - A	11:26	16:45	2,22	60 ml	60 ml	60 ml	60 ml	125 ml	x	
+ Fe + Cu + SN - B	11:26	16:45	2,22	60 ml	60 ml	60 ml	60 ml	125 ml	x	
+ Pore waters - A	11:26	17:35	2,26	60 ml	60 ml	60 ml	60 ml	125 ml	x	
+ Pore waters - B	11:26	17:35	2,26	60 ml	60 ml	60 ml	60 ml	125 ml	x	

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FICHE PRELEVEMENTS GF#4 (S1, Inc. Géraldine/Eva) 30-50 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S1**
T (°C) =	**22**

T2	**21/02/2008**	**25/02/2008**	4,16									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	10:14	12:20	4,09	10 ml	10 ml	125 ml	500 ml	300 ml	250 ml	1 ml	250 ml	60 ml
Control - B	10:14	12:20	4,09	10 ml	10 ml	125 ml	500 ml	130 ml	210 ml	1 ml	250 ml	60 ml
+ Fe - A	10:24	13:40	4,14	10 ml	10 ml	125 ml	500 ml	200 ml	235 ml	1 ml	250 ml	60 ml
+ Fe - B	10:24	13:40	4,14	10 ml	10 ml	125 ml	500 ml	300 ml	315 ml	1 ml	250 ml	60 ml
+ Fe + SN - A	10:43	14:50	4,17	10 ml	10 ml	125 ml	500 ml	300 ml	300 ml	1 ml	250 ml	60 ml
+ Fe + SN - B	10:43	14:50	4,17	10 ml	10 ml	125 ml	500 ml	290 ml	300 ml	1 ml	250 ml	60 ml
+ Fe + Cu + SN - A	11:26	15:37	4,17	10 ml	10 ml	125 ml	500 ml	250 ml	250 ml	1 ml	250 ml	60 ml
+ Fe + Cu + SN - B	11:26	15:37	4,17	10 ml	10 ml	125 ml	500 ml	250 ml	200 ml	1 ml	250 ml	60 ml
+ Pore waters - A	11:26	17:00	4,23	10 ml	10 ml	125 ml	500 ml	250 ml	346 ml	1 ml	250 ml	60 ml
+ Pore waters - B	11:26	17:00	4,23	10 ml	10 ml	125 ml	500 ml	250 ml	290 ml	1 ml	250 ml	60 ml

T2	**21/02/2008**	**25/02/2008**	4,16							
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	Comments
Control - A	10:14	12:20	4,09	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
Control - B	10:14	12:20	4,09	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
+ Fe - A	10:24	13:40	4,14	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
+ Fe - B	10:24	13:40	4,14	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
+ Fe + SN - A	10:43	14:50	4,17	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
+ Fe + SN - B	10:43	14:50	4,17	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
+ Fe + Cu + SN - A	11:26	15:37	4,17	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
+ Fe + Cu + SN - B	11:26	15:37	4,17	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
+ Pore waters - A	11:26	17:00	4,23	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	
+ Pore waters - B	11:26	17:00	4,23	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	

BONUS-GOODHOPE
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FICHE PRELEVEMENTS GF#4 (S1, Inc. Géraldine/Eva) 30-50 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S1**
T (°C) =	**22**

T3	**21/02/2008**	**26/02/2008**	5,25									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	10:14	15:15	5,21	10 ml	10 ml	125 ml	400 ml	300 ml	300 ml	1 ml	250 ml	60 ml
Control - B	10:14	15:15	5,21	10 ml	10 ml	125 ml	500 ml	300 ml	300 ml	1 ml	250 ml	60 ml
+ Fe - A	10:24	16:00	5,23	10 ml	10 ml	125 ml	500 ml	220 ml	300 ml	1 ml	250 ml	60 ml
+ Fe - B	10:24	16:00	5,23	10 ml	10 ml	125 ml	500 ml	300 ml	345 ml	1 ml	250 ml	60 ml
+ Pore waters - A	11:26	16:40	5,22	10 ml	10 ml	125 ml	500 ml	280 ml	300 ml	1 ml	250 ml	60 ml
+ Pore waters - B	11:26	16:40	5,22	10 ml	10 ml	125 ml	400 ml	283 ml	300 ml	1 ml	250 ml	60 ml
+ Fe + SN - A	10:43	17:40	5,29	10 ml	10 ml	125 ml	400 ml	300 ml	340 ml	1 ml	250 ml	60 ml
+ Fe + SN - B	10:43	17:40	5,29	10 ml	10 ml	125 ml	300 ml	250 ml	250 ml	1 ml	250 ml	60 ml
+ Fe + Cu + SN - A	11:26	18:50	5,31	10 ml	10 ml	125 ml	500 ml	250 ml	200 ml	1 ml	250 ml	60 ml
+ Fe + Cu + SN - B	11:26	18:50	5,31	10 ml	10 ml	125 ml	500 ml	250 ml	200 ml	1 ml	250 ml	60 ml
+ Cu + SN - A	11:26	22:35	5,46	10 ml	10 ml	125 ml	500 ml	250 ml	200 ml	1 ml	250 ml	60 ml
+ Cu + SN - B	11:26	22:35	5,46	10 ml	10 ml	125 ml	500 ml	250 ml	200 ml	1 ml	250 ml	60 ml

T3	**21/02/2008**	**26/02/2008**	5,25								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	10:14	15:15	5,21	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
Control - B	10:14	15:15	5,21	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe - A	10:24	16:00	5,23	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe - B	10:24	16:00	5,23	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Pore waters - A	11:26	16:40	5,22	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Pore waters - B	11:26	16:40	5,22	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + SN - A	10:43	17:40	5,29	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + SN - B	10:43	17:40	5,29	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	11:26	18:50	5,31	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	11:26	18:50	5,31	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Cu + SN - A	11:26	22:35	5,46	60 ml (x2)	x	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Cu + SN - B	11:26	22:35	5,46	60 ml	x	60 ml	60 ml	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#5 (S1, Inc. Bron/Marie) 25-45 m

Station N°: S1
GO-FLO N°: GF5
Closer CTD N°: 22
Station N°: 18

Date start (UTC): 08/02/21 **Date end (UTC): 08/02/21**
Starting time (UTC): 09H27 **Position start (°'): 36°29.492 S, 13°06.976 E**
Ending time (UTC): 10H39 **Position end (°'): 36°28.437 S, 13°06.422 E**
Bottom depth (m): 4920
Total lenght of cable out (m): 265 + 50

Cast responsible: Marie Boye & Bronwyn Wake

GO-FLO bottle number	Target depth (m)	Water sampling	microcat+pinger	COMMENTS
10	25	x	x	
9	35	x	x	
8	45	x	x	
7	25	x	x	
6	35	x	x	
4	45	X	X	
3	25	X	X	
2	35	X	X	
1	45	X	X	

bottle#5 attached, but just for cleaning
Krill taken on the bottles (stored in liquid-N2)
avec microcat et pinger
WARNING: 9 bottles at the max fluo

Parameters sampled in the trace metals incubations using Go-Flo (GF5 + GF6)

Station	Position	S1
GF5	36°29.492 S	13°06.976 E
GF6	36°27.997 S	13°06.246 E

Added concentrations: 2 nM trace metal, 0.63 microM P, 5 microM N

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#5 (S1, Inc. Bron/Marie) 25-45 m

Parameters sampled in the trace metals incubations using Go-Flo (GF5 + GF6)

Addition time and date: 21/02/08

GoFlo #	Bottle	Treatment	Day sampled	ICPMS	TM int cell or	P	N	Si	POC/PON/PIC	Pig/Chl a	Flow	NH4	Urea
		T0	0	200 ml	yes	100 ml	10 ml	With N					
	1	Control	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	960 ml	1 ml	15 ml	15 ml
	2	Control	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml	15 ml	15 ml
	3	Control	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	1000 ml	1 ml	-	-
	4	Control	8	200 ml	yes	100 ml	10 ml	With N	900 ml	850 ml	1 ml	-	-
	5	+Zn	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml	15 ml	15 ml
	6	+Zn	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml	15 ml	15 ml
	7	+Zn	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	960 ml	1 ml	-	-
	8	+Zn	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	970 ml	1 ml	-	-
	9	+Zn	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml	15 ml	15 ml
	10	+Zn	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml	15 ml	15 ml
	11	+Zn	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	1000 ml	1 ml	-	-
	12	+Zn	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	950 ml	1 ml	-	-
	13	+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml	15 ml	15 ml
	14	+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml	15 ml	15 ml
	15	+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	950 ml	1 ml	-	-
	16	+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml	-	-
	17	+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml	15 ml	15 ml
	18	+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml	15 ml	15 ml
	19	+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	970 ml	1 ml	-	-
	20	+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	820 ml	1 ml	-	-
	21	+Fe Bronwyn Wake comments : 4 of these had insufficient N added	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml	15 ml	15 ml
	22	+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml	15 ml	15 ml
	23	+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml	-	-
	24	+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	980 ml	1 ml	-	-
	25	+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml	15 ml	15 ml
	26	+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml	15 ml	15 ml
	27	+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	990 ml	1 ml	-	-
	28	+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml	-	-
	29	+Zn+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	925 ml	1 ml	15 ml	15 ml
	30	+Zn+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml	15 ml	15 ml

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#5 (S1, Inc. Bron/Marie) 25-45 m

Parameters sampled in the trace metals incubations using Go-Flo (GF5 + GF6)

Addition time and date: 21/02/08

GoFlo #	Bottle	Treatment	Day sampled	ICPMS	TM int cell or	P	N	Si	POC/PON/PIC	Pig/Chl a	Flow	NH4	Urea
	31	+Zn+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml	-	-
	32	+Zn+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	970 ml	1 ml	-	-
	33	+Zn+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml	15 ml	15 ml
	34	+Zn+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	820 ml	1 ml	15 ml	15 ml
	35	+Zn+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml	-	-
	36	+Zn+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml	-	-
	37	+Zn+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml	15 ml	15 ml
	38	+Zn+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml	15 ml	15 ml
	39	+Zn+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	990 ml	1 ml	-	-
	40	+Zn+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml	-	-
	41	+Zn+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml	15 ml	15 ml
	42	+Zn+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	850 ml	1 ml	15 ml	15 ml
	43	+Zn+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	990 ml	1 ml	-	-
	44	+Zn+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	990 ml	1 ml	-	-
	45	Control	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml	15 ml	15 ml
	46	Control	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml	15 ml	15 ml
	47	Control	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml	-	-
	48	Control	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	830 ml	1 ml	-	-

NB: acidified with 305 ul of HNO3 All nutrients analysed onboard

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#6 (S1, Inc. Bron/Marie) 35-50 m

Station N°: S1
GO-FLO N°: GF6
Closer CTD N°: 23
Station N°: 18

Date start (UTC): 08/02/21 **Date end (UTC): 08/02/21**
Starting time (UTC): 13H43 **Position start (°'): 36°27.997 S, 13°06.246 E**
Ending time (UTC): 14H26 **Position end (°'): 36°27.497 S, 13°06.048 E**
Bottom depth (m): 4920
Total lenght of cable out (m): 50 + 50

Cast responsible: Marie Boye & Bronwyn Wake

GO-FLO bottle number	Target depth (m)	Water sampling	microcat (+pinger ?)	COMMENTS
4	35	X	X	
3	40	X	X	
2	45	X	X	
1	50	X	X	

WARNING: 4 bottles at the max fluo

Parameters sampled in the trace metals incubations using Go-Flo (GF5 + GF6)

Station	Position	S1
GF5	36°29.492 S	13°06.976 E
GF6	36°27.997 S	13°06.246 E

Added concentrations: 2 nM trace metal, 0.63 n

see GF#5 for parameters

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#7 (S1, Cd-isot.) 30-200 m

Station N°: S1
GO-FLO N°: GF7
Closer CTD N°: 23
Station N°: 18

Date start (UTC): 08/02/21 **Date end (UTC): 08/02/21**
Starting time (UTC): 15H50 **Position start (°'): 36°31.321 S, 13°07.177 E**
Ending time (UTC): 16H29 **Position end (°'): 36°31.00 S, 13°06.00 E**
Bottom depth (m): 4920
Total lenght of cable out (m): 250 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	Cd-isotopes (10L/depth)	Cd-isotopes (5L)	Cd-isotopes (1L)	Microcat	COMMENTS
7	30	X			X	
6	35	X			X	
4	50	X			X	Fluoro max
3	55	X			X	
2	90		X		X	
1	200			X	X	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#8 (S1, Fe-isot.) 0-4000 m

Station N°: S1
GO-FLO N°: GF8
Closer CTD N°: 23
Station N°: 18

Date start (UTC): 08/02/22 **Date end (UTC): 08/02/22**
Starting time (UTC): 01H50 **Position start (°'): 36°30.47 S, 13°07.110 E**
Ending time (UTC): 06H01 **Position end (°'): 36°27.800 S, 13°07.337 E**
Bottom depth (m): 4920
Total lenght of cable out (m): 4007 + 50

Operators: François / Amandine / Marie

GO-FLO bottle number	Target depth (m)	TFeisotopes	DFeisotopes	NO3	S	pinger	COMMENTS
10	30	X	X			X	
9	broken					X	broken
8	50	X	X			X	Fluoro max
7	100	X	X			X	
6	200	X	X			X	
5	400	X	X			X	lost of messenger above #5
4	750	X	X			X	AAIW
3	1250	X	X			X	UCDW
2	2750	X	X			X	NADW
1	4000	X	X			X	

WARNING: pinger (instead of microcat)

Comments:
Pas de microcat. Derniere CTD: CTD23
Messager lancé a 4h00 UTC. Remontée debutée a 4h30UTC
La bouteille 9 a volé contre le montant du portique, le robinet a cassé,
on l'a retirée de cette palanquée
on n'a pas récupéré le messager au dessus de la bouteille 5.

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#9 (L2B, TM's) 15-2100 m

Station N°: L2B

GO-FLO N°: GF9

Closer CTD N°: 37
Station N°: 31

Date start (UTC): 08/02/25 Date end (UTC): 08/02/26

Starting time (UTC): 22H06 Position start (°'): 41°10.71 S, 09°55.01 E

Ending time (UTC): 00H26 Position end (°'): 41°11.28 S, 09°55.28 E
Bottom depth (m):
Total lenght of cable out (m): 2107 + 50 m

just south of STF

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TFe (FIA)		DFeII	DH2O2	DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	Soluble Fe	NO3	S	micro cat	COMMENTS
10	15	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	remanent thermocline
8	35	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo
9	45	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
7	95	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
6	300	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	#6: air leakage from right side of pressure valve when N2 on.
5	600	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	AAIW (center at 600 m/min S)
4	800	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	AAIW
3	1200	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	LCDW
2	1400	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	LCDW (center at 1400 m/min O2)
1	2100	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	upper of NADW

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#10 (S2, TM's & Cd/Fe-isot.) 1441-3950 m

Station N°: S2
GO-FLO N°: GF10
Closer CTD N°: 41
Station N°: 34

Date start (UTC): 08/02/27 **Date end (UTC): 08/02/27**
Starting time (UTC): 00H23 **Position start (°'): 42°28.19 S, 08°55.718 E**
Ending time (UTC): 04H10 **Position end (°'): 42°88.191 S, 08°55.731 E**
Bottom depth (m): 4060
Total lenght of cable out (m): 3957+ 50 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	expected depth (m)	TFeII	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)	TFe - isot		DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (2700/4000m = 1L)	Soluble Fe	DFe - isot	NO3	S	Pinger	COMMENTS
10	1441	1441	X	X	X	X			X	X	X	X	X	X		X		X	X	X	UCDW
9	1764	1764	X	X		X			X	X	X	X	X			X		X	X	X	
8	2156	2156	X	X		X			X	X	X	X	X			X		X	X	X	
7	2548	2548	X	X		X			X	X	X	X	X		X	X		X	X	X	
6	2881	2881					X										X	X	X	X	NADW
5	2891	2891	X	X	X	X			X	X	X	X	X	X		X		X	X	X	NADW
4	3234	3245	X	X		X			X	X	X	X	X			X		X	X	X	aurait glissée (705 au lieu de 716)
3	3626	3636	X	X		X			X	X	X	X	X			X		X	X	X	
2	3940	3950	X	X	X	X			X	X	X	X	X	X	X	X		X	X	X	ABW
1	3950	3960					X										X	X	X	X	ABW

WARNING: PINGER (instead of microcat)

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#11 (S2, TM's & Cd/Fe-isot.) 196-1441 m

Station N°: S2
GO-FLO N°: GF11
Closer CTD N°: 41
Station N°: 34

Date start (UTC): 08/02/27 **Date end (UTC): 08/02/27**
Starting time (UTC): 12H34 **Position start (°'): 42°28.135 S, 08°55.726 E**
Ending time (UTC): 14H20 **Position end (°'): 42°88.127 S, 08°55.73 E**
Bottom depth (m): 4060
Total lenght of cable out (m): 1448+ 50 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)	TFe-isot		DFeII	DH2O2	DFe	Orga Co (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes 196/598/809/1250m = 1L)	DFe-isot	Soluble Fe	NO3	S	micro cat	COMMENTS
10	196	X	X	X		X				X	X	X	X	X	X		X		X	X	X	X	
9	314	X	X	X	X	X				X	X	X	X	X	X	X			X	X	X	X	
8	392						X											X		X	X	X	
7	461	X	X	X		X				X	X	X	X	X	X					X	X	X	AAIW
6	598	X	X	X	X	X				X	X	X	X	X	X	X	X		X	X	X	X	AAIW
5	608						X											X		X	X	X	AAIW
4	809	X	X	X		X				X	X	X	X	X	X		X		X	X	X	X	
3	1029	X	X	X		X				X	X	X	X	X	X					X	X	X	
2	1250	X	X	X		X				X	X	X	X	X	X		X		X	X	X	X	UCDW
1	1441						X											X		X	X	X	UCDW

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#12 (S2, TM's & Cd/Fe-isot.) 15-196 m

Station N°: S2
GO-FLO N°: GF12
Closer CTD N°: 42
Station N°: 34

Date start (UTC): 08/02/27 Date end (UTC): 08/02/27
Starting time (UTC): 18H07 Position start (°'): 42°28.21 S, 08°55.854 E
Ending time (UTC): 18H50 Position end (°'): 42°28.354 S, 08°56.149 E
Bottom depth (m): 4060
Total lenght of cable out (m): 207+ 50 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles	TFe (FIA)	TFe-isot		DFeII	DH2O2	DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (100m, 5L)	DFe-isot	Soluble Fe	NO3	S	micro cat	COMMENTS
10	15	X	X	X	X	X			X	X	X	X	X	X	X	X			X	X	X	X	remanent thermocline
9	30	X	X	X	X	X			X	X	X	X	X	X	X	X			X	X	X	X	
8	35	X	X	X	X	X			X	X	X	X	X	X	X	X			X	X	X	X	max fluo (37 m)
7	40						X											X		X	X	X	max fluo
6	45						X											X		X	X	X	
5	80	X	X	X	X	X			X	X	X	X	X	X	X	X			X	X	X	X	
4	90						X											X		X	X	X	
3	120	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X	X	base of MLD
2	125						X											X		X	X	X	base of ML (about 110m)
1	196						X											X		X	X	X	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#13 (S2, Inc. Géraldine/Eva) 30-60 m

Station N°: S2
GO-FLO N°: GF13
Closer CTD N°: 43
Station N°: 34

Date start (UTC): 08/02/27 — **Date end (UTC): 08/02/27**
Starting time (UTC): 21H12 — **Position start (°'): 42°28.133 S, 08°55.850 E**
Ending time (UTC): 22H11 — **Position end (°'): 42°28.111 S, 08°55.975 E**
Bottom depth (m):
Total lenght of cable out (m):

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Go-Flo #	Depth (m)
1	60
2	50
3	40
4	30
5	50
6	40
7	30
8	50
9	40
10	30

All Go-Flo bottles were mixed and unfiltered samples were used for incubations

	Person in charge	CTD	Go-Flo	Bottle	depth	%light	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org
incub Fe-Cu	Sarthou-Bucciarelli		13	1-10	30-60	50	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#13 (S2, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S2**
T (°C) =	**12**

Additions in the incubations

	+ Fe	+ Cu	+ NO3-	+ PO4-	+ Si(OH)4+	Pore waters
S1	1 nM	0.5 nM	100 µM	0.6 µM	10 µM	200 µl
S2	1 nM	0.5 nM	32 µM	2 µM	30 µM	-
S3	1 nM	0.5 nM	16 µM	1 µM	20 µM	-
S4	1 nM and 2 nM (2 x Fe)	0.5 nM	-	-	-	-

T0 **28/02/2008**

Treatment	Time	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	02:50	10 ml	10 ml	125 ml	500 ml	400 ml	380 ml	1 ml	250 ml	60 ml
Control - B	02:50	10 ml	10 ml	125 ml	500 ml	300 ml	320 ml	1 ml	250 ml	60 ml

T0 **28/02/2008**

Treatment	Time	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	02:50	x	x	60 ml	x	125 ml	125 ml	60 ml	
Control - B	02:50	x	x	60 ml	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#13 (S2, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S2**
T (°C) =	**12**

T1	**28/02/2008**	**29/02/2008**	1,52									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	01:00	13:45	1,53	10 ml	10 ml	x	700 ml	300 ml	250 ml	1 ml	x	60 ml
Control - B	01:00	13:45	1,53	10 ml	10 ml	x	700 ml	270 ml	250 ml	1 ml	x	60 ml
+ SN - A	02:00	13:55	1,50	10 ml	10 ml	x	700 ml	300 ml	250 ml	1 ml	x	60 ml
+ SN - B	02:00	13:55	1,50	10 ml	10 ml	x	700 ml	300 ml	250 ml	1 ml	x	60 ml
+ Fe + SN - A	02:00	14:15	1,51	10 ml	10 ml	x	700 ml	300 ml	250 ml	1 ml	x	60 ml
+ Fe + SN - B	02:00	14:15	1,51	10 ml	10 ml	x	500 ml	300 ml	250 ml	1 ml	x	60 ml
+ Cu + SN - A	02:00	14:35	1,52	10 ml	10 ml	x	700 ml	250 ml	300 ml	1 ml	x	60 ml
+ Cu + SN - B	02:00	14:35	1,52	10 ml	10 ml	x	750 ml	300 ml	250 ml	1 ml	x	60 ml
+ Fe + Cu + SN - A	02:00	14:55	1,54	10 ml	10 ml	x	700 ml	300 ml	250 ml	1 ml	x	60 ml
+ Fe + Cu + SN - B	02:00	14:55	1,54	10 ml	10 ml	x	900 ml	300 ml	250 ml	1 ml	x	60 ml

T1	**28/02/2008**	**29/02/2008**	1,52								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	01:00	13:45	1,53	x	x	x	x	125 ml	125 ml	60 ml	
Control - B	01:00	13:45	1,53	x	x	x	x	125 ml	125 ml	60 ml	
+ SN - A	02:00	13:55	1,50	x	x	x	x	125 ml	125 ml	60 ml	
+ SN - B	02:00	13:55	1,50	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + SN - A	02:00	14:15	1,51	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + SN - B	02:00	14:15	1,51	x	x	x	x	125 ml	125 ml	60 ml	
+ Cu + SN - A	02:00	14:35	1,52	x	x	x	x	125 ml	125 ml	60 ml	
+ Cu + SN - B	02:00	14:35	1,52	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	02:00	14:55	1,54	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	02:00	14:55	1,54	x	x	x	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#13 (S2, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S2**
T (°C) =	**12**

T2	**28/02/2008**	**02/03/2008**	3,15									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	10:14	12:40	3,10	10 ml	10 ml	125 ml	500 ml	320 ml	250 ml	1 ml	250 ml	60 ml
Control - B	10:14	12:40	3,10	10 ml	10 ml	125 ml	500 ml	400 ml	300 ml	1 ml	250 ml	60 ml
+ SN - A	10:24	14:00	3,15	10 ml	10 ml	125 ml	500 ml	370 ml	300 ml	1 ml	250 ml	60 ml
+ SN - B	10:24	14:00	3,15	10 ml	10 ml	125 ml	500 ml	180 ml	250 ml	1 ml	250 ml	60 ml
+ Fe + SN - A	10:43	14:35	3,16	10 ml	10 ml	125 ml	500 ml	290 ml	300 ml	1 ml	250 ml	60 ml
+ Fe + SN - B	10:43	14:35	3,16	10 ml	10 ml	125 ml	500 ml	172 ml	250 ml	1 ml	250 ml	60 ml
+ Cu + SN - A	11:26	15:21	3,16	10 ml	10 ml	125 ml	500 ml	140 ml	250 ml	1 ml	250 ml	60 ml
+ Cu + SN - B	11:26	15:21	3,16	10 ml	10 ml	125 ml	500 ml	245 ml	250 ml	1 ml	250 ml	60 ml
+ Fe + Cu + SN - A	11:26	16:00	3,19	10 ml	10 ml	125 ml	500 ml	180 ml	250 ml	1 ml	250 ml	60 ml
+ Fe + Cu + SN - B	11:26	16:00	3,19	10 ml	10 ml	125 ml	500 ml	100 ml	250 ml	1 ml	250 ml	60 ml

T2	**28/02/2008**	**02/03/2008**	3,15								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	10:14	12:40	3,10	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
Control - B	10:14	12:40	3,10	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ SN - A	10:24	14:00	3,15	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ SN - B	10:24	14:00	3,15	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + SN - A	10:43	14:35	3,16	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + SN - B	10:43	14:35	3,16	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Cu + SN - A	11:26	15:21	3,16	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Cu + SN - B	11:26	15:21	3,16	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	11:26	16:00	3,19	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	11:26	16:00	3,19	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#13 (S2, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S2**
T (°C) =	**12**

T3	**28/02/2008**	**04/03/2008**	5,16									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	10:14	12:55	5,11	10 ml	10 ml	x	700 ml	320 ml	350 ml	1 ml	x	60 ml
Control - B	10:14	12:55	5,11	10 ml	10 ml	x	500 ml	400 ml	350 ml	1 ml	x	60 ml
+ SN - A	10:24	13:45	5,14	10 ml	10 ml	x	700 ml	370 ml	400 ml	1 ml	x	60 ml
+ SN - B	10:24	13:45	5,14	10 ml	10 ml	x	500 ml	180 ml	450 ml	1 ml	x	60 ml
+ Cu + SN - A	11:26	14:50	5,14	10 ml	10 ml	x	650 ml	140 ml	456 ml	1 ml	x	60 ml
+ Cu + SN - B	11:26	14:50	5,14	10 ml	10 ml	x	700 ml	245 ml	400 ml	1 ml	x	60 ml
+ Fe + SN - A	10:43	15:55	5,22	10 ml	10 ml	x	650 ml	290 ml	378 ml	1 ml	x	60 ml
+ Fe + SN - B	10:43	15:55	5,22	10 ml	10 ml	x	700 ml	172 ml	462 ml	1 ml	x	60 ml
+ Fe + Cu + SN - A	11:26	16:20	5,20	10 ml	10 ml	x	700 ml	180 ml	330 ml	1 ml	x	60 ml
+ Fe + Cu + SN - B	11:26	16:20	5,20	10 ml	10 ml	x	700 ml	100 ml	330 ml	1 ml	x	60 ml

T3	**28/02/2008**	**04/03/2008**	5,16								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	10:14	12:55	5,11	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
Control - B	10:14	12:55	5,11	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ SN - A	10:24	13:45	5,14	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ SN - B	10:24	13:45	5,14	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Cu + SN - A	11:26	14:50	5,14	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Cu + SN - B	11:26	14:50	5,14	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + SN - A	10:43	15:55	5,22	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + SN - B	10:43	15:55	5,22	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	11:26	16:20	5,20	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	11:26	16:20	5,20	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#13 (S2, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S2**
T (°C) =	**12**

T4	**28/02/2008**	**06/03/2008**	7,18									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	10:14	13:30	7,14	10 ml	10 ml	125 ml	500 ml	330 ml	350 ml	1 ml	250 ml	60 ml
Control - B	10:14	13:30	7,14	10 ml	10 ml	125 ml	500 ml	310 ml	300 ml	1 ml	250 ml	60 ml
+ SN - A	10:24	14:20	7,16	10 ml	10 ml	125 ml	500 ml	250 ml	300 ml	1 ml	250 ml	60 ml
+ SN - B	10:24	14:20	7,16	10 ml	10 ml	125 ml	500 ml	300 ml	350 ml	1 ml	250 ml	60 ml
+ Cu + SN - A	11:26	15:15	7,16	10 ml	10 ml	125 ml	500 ml	310 ml	300 ml	1 ml	250 ml	60 ml
+ Cu + SN - B	11:26	15:15	7,16	10 ml	10 ml	125 ml	500 ml	300 ml	310 ml	1 ml	250 ml	60 ml
+ Fe + SN - A	10:43	15:50	7,21	10 ml	10 ml	125 ml	500 ml	305 ml	300 ml	1 ml	250 ml	60 ml
+ Fe + SN - B	10:43	15:50	7,21	10 ml	10 ml	125 ml	500 ml	300 ml	330 ml	1 ml	250 ml	60 ml
+ Fe + Cu + SN - A	11:26	16:30	7,21	10 ml	10 ml	125 ml	500 ml	400 ml	300 ml	1 ml	250 ml	60 ml
+ Fe + Cu + SN - B	11:26	16:30	7,21	10 ml	10 ml	125 ml	500 ml	300 ml	275 ml	1 ml	250 ml	60 ml

T4	**28/02/2008**	**06/03/2008**	7,18								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	10:14	13:30	7,14	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
Control - B	10:14	13:30	7,14	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ SN - A	10:24	14:20	7,16	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ SN - B	10:24	14:20	7,16	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Cu + SN - A	11:26	15:15	7,16	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Cu + SN - B	11:26	15:15	7,16	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + SN - A	10:43	15:50	7,21	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + SN - B	10:43	15:50	7,21	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	11:26	16:30	7,21	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	11:26	16:30	7,21	60 ml	60 ml	60 ml	60 ml	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#14 (S2, Inc. Bron/Marie) 25-45 m

Station N°: S2
GO-FLO N°: GF14
Closer CTD N°: 44
Station N°: 34

Date start (UTC): 08/02/28 **Date end (UTC): 08/02/28**
Starting time (UTC): 07H50 **Position start (°'): 42°28.111 S, 08°55.975 E**
Ending time (UTC): 08H26 **Position end (°'): 42°28.12 S, 08°55.970 E**
Bottom depth (m):
Total lenght of cable out (m):

Cast responsible: Marie Boye & Bronwyn Wake

GO-FLO bottle number	Target depth (m)	Water sampling	microcat	COMMENTS
1	27	x		
2	32	x	x	
3	37	x	x	
4	42	x	x	
5	30	x	x	
6	37	x	x	
7	44	X	X	
8	30	X	X	
9	37	X	X	
10	44	X	X	

Parameters sampled in the trace metals incubations using Go-Flo (GF14 + GF15)

Station	Position
GF14	42°28.111 S 08°55.975 E
GF15	42°28.11 S 08°56.05 E

Added concentrations: 2 nM trace metal, 0.63 micr

Addition time and dat 28/02/08

GoFlo #	Bottle	Treatment	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/PON/PIC	Pig/Chl a	Flow	Comments
		T0	0	200 ml	yes	100 ml	10 ml	With N	1190 ml	1180 ml	1 ml	
	1	Control	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml	
	2	Control	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml	
	3	Control	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml	
	4	Control	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml	
	5	+Zn	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml	
	6	+Zn	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml	
	7	+Zn	6	200 ml	yes	100 ml	10 ml	With N	780 ml	800 ml	1 ml	
	8	+Zn	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml	
	9	+Zn	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml	
	10	+Zn	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml	
	11	+Zn	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	950 ml	1 ml	
	12	+Zn	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml	
	13	+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml	
	14	+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	830 ml	1 ml	
	15	+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml	
	16	+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	770 ml	1 ml	
	17	+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	750 ml	1 ml	
	18	+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml	
	19	+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml	
	20	+Co	8	200 ml	yes	100 ml	10 ml	With N	800 ml	820 ml	1 ml	
	21	+Cd	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml	
	22	+Cd	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml	
	23	+Cd	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml	
	24	+Cd	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml	
	25	+Cd	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	760 ml	1 ml	
	26	+Cd	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	830 ml	1 ml	
	27	+Cd	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml	
	28	+Cd	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	780 ml Bronwyn Wake Comment: maybe 20 ml spilt	1 ml	
	29	+Zn+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	850 ml	1 ml	
	30	+Zn+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml	
	31	+Zn+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml	
	32	+Zn+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml Bronwyn Wake Comment : maybe 40 ml spilt	860 ml	1 ml	
	33	+Zn+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml	

Addition time and dat 28/02/08

GoFlo #	Bottle	Treatment	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/PON/PIC	Pig/Chl a	Flow	Comments
	34	+Zn+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml Bronwyn Wake Comment: guesstimate….	1 ml	
	35	+Zn+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	760 ml	1 ml	
	36	+Zn+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	750 ml	1 ml	
	37	+Co+Cd	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	810 ml	1 ml	
	38	+Co+Cd	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	830 ml	1 ml	
	39	+Co+Cd	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	820 ml	1 ml	
	40	+Co+Cd	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml	
	41	+Co+Cd	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	730 ml	1 ml	
	42	+Co+Cd	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	800 ml	1 ml	
	43	+Co+Cd	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	850 ml	1 ml	
	44	+Co+Cd	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml	
	45	Control	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	830 ml	1 ml	
	46	Control	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	800 ml	1 ml	
	47	Control	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml	
	48	Control	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml	

NB: acidified with 305 ul of HNO3 All nutrients analysed onboard

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#15 (S2, Inc. Bron/Marie & Pedro + Cd/Fe-isot.) 25-55 m

Station N°: S2
GO-FLO N°: GF15
Closer CTD N°: 45
Station N°: 34

Date start (UTC): 08/02/28 **Date end (UTC): 08/02/28**
Starting time (UTC): 09H30 **Position start (°'): 42°28.111 S, 08°56.05 E**
Ending time (UTC): 09H50 **Position end (°'): 42°28.110 S, 08°56.05 E**
Bottom depth (m):
Total lenght of cable out (m):

Cast responsible: Marie Boye, Bronwyn Wake, François Lacan

GO-FLO bottle number	Target depth (m)	Water sampling	DCd-isot (2x10 L/depth)	T&DFe-isotopes	microcat	COMMENTS
10	55		X		X	
9	50		X		X	
8	45		X		X	
7	40		X		X	
6	35			X	X	
5	30			X	X	
4	42	X			X	
3	37	X			X	
2	32	X			X	
1	27	X			X	

WARNING: 4 bottles at the max fluo (50 m)

Parameters sampled in the trace metals incubations Bron/Marie using Go-Flo (GF14 + GF15)

Station Position	S2
GF14	42°28.111 S 08°55.975 E
GF15	42°28.11 S 08°56.05 E

Added concentrations: 2 nM trace metal, 0.63 microM P, 10 microM N

see GF#14 for parameters

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#15 (S2, Inc. Bron/Marie & Pedro + Cd/Fe-isot.) 25-55 m

Parameters sampled in the trace metals & 15N incubations Pedro using Go-Flo (GF15)

Added concentrations: 2 nM Fe, ?? 15N

Treatment	Day sampled	ICPMS	15N	Flow
	0	200 ml		1 ml
	1	200 ml		1 ml
	2	200 ml		1 ml
	3	200 ml		1 ml
	4	200 ml		1 ml
	5	200 ml		1 ml
	6	200 ml		1 ml

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#16 (L3B, TM's) 30-2100 m

Station N°: L3B
GO-FLO N°: GF16
Closer CTD N°: 50
Station N°: 41

Date start (UTC): 08/03/01 **Date end (UTC): 08/03/01**
Starting time (UTC): 16H22 **Position start (°'): 44°53.900 S, 06°53.030 E**
Ending time (UTC): 19H17 **Position end (°'): 44°53.205 S, 06°54.204 E**
Bottom depth (m):
Total lenght of cable out (m): 2100+ 7 + 100 m

at the SAF (northern frontier)

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TFe (FIA)	DFeII	DH2O2	DFe	OrgaCo (250 ml)	DZn /Co/ Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	Soluble Fe	NO3	S	microcat	COMMENTS	COMMENTS
10	30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	max fluo	clamp cassé à la remontée
9	50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	max fluo	robinet arraché à la remontée sur le pont
8	100	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	subantarctic surface waters	
7	150	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	subantarctic surface waters	
6	270	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	min O2	
5	400	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	AAIW (center at 400 m/min S)	
4	600	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	AAIW	
3	1200	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	UCDW	
2	1400	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	UCDW (center at 1400 m/min O2)	
1	2100	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	upper of NADW and LCDW	

new weight (100 kg)

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#17 (L4A, TM's) 30-2050 m

Station N°: L4A
GO-FLO N°: GF17
Closer CTD N°: 57
Station N°: 44

Date start (UTC): 08/03/03 Date end (UTC): 08/03/03
Starting time (UTC): 04I Position start (°'): 46°01.378 S, 05°51.639 E
Ending time (UTC): 07H Position end (°'): 46°00.850 S, 05°52.650 E
Bottom depth (m): 4100
Total lenght of cable out (m): 2050+ 7 + 80 m

at the SAF (southern frontier)

ZONE DE FORMATION DE L'AAIW
(dans les 80/300m de prof)

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TFe (FIA)		DFeII	DH2O2	DFe	Orga Co (250 ml)	DZn/ Co/ Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	Soluble Fe	NO3	S	microcat	COMMENTS	
10	30	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo	
5	60	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo	
8	100	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	AAIW	
7	150	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	AAIW	
6	270	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	AAIW	
9	400	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		new tape
4	800	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		
3	1300	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	UCDW	not closed, so down-cast again and then messenger again
2	1600	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	UCDW (center at 1300 m/min O2)	
1	2050	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	min S	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#18 (S3, Cd-isot.) 20-100 m

Station N°: S3
GO-FLO N°: GF18
Closer CTD N°: 62
Station N°: 48

Date start (UTC): 08/03/04 **Date end (UTC): 08/0**
Starting time (UTC): 13H59 **Position start (°'): 47°33.267 S, 04°**
Ending time (UTC): 14H44 **Position end (°'): 47°33.264 S, 04°2**
Bottom depth (m):
Total lenght of cable out (m): 90 + 7 + 50 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	Cd-isotopes (20L/depth)	Cd-isotopes (5L)	Microcat	COMMENTS
5	20	X		X	max fluo
4	25	X		X	max fluo
3	55	X		X	max fluo
2	60	X		X	max fluo
1	90		X	X	MLD

TEI's GEOTRACES INTERCALIBRATION (trace metals, GO-FLO cast)

BONUS-GOODHOPE (*Marion Dufresne II*)

THIRD SUPER STATION
Station number: GF19
Cast number: S3-GF19
Date start (UTC): Time start (UTC): Position start (°'): 47°33.1658 S/ 04°22.3625 E
Date end (UTC): (Time end (UTC): 2 Position end (°'): 47°33.160 S/ 04°22.3703 E
Closer CTD number: 63
Station N°: 48
with microcat

Cast leader: Marie Boye [marie.boye@univ-brest.fr]
Sampling: Johann Bown [johann.bown@univ-brest.fr] & Marie Boye [marie.boye@univ-brest.fr]

TEI's GEOTRACES INTERCALIBRATION (trace metals, GO-FLO cast)

BONUS-GOODHOPE (*Marion Dufresne II*)

Position start (°'): 47°33.1658 S/ 04°22.3625 E
Position end (°'): 47°33.160 S/ 04°22.3703 E

THIRD SUPER STATION **Cast number: S3-GF19** **Date start (UTC): 04/03/08** **Time start (UTC): 19H10**
Station number: GF19 **Closer CTD number: 63** **Date end (UTC): 04/03/08** **Time end (UTC): 22H50**

		Marie Boye for													
		Patrick Laan	Marie Boye	Johann Bown	Bronwyn Wake	Fanny Chever	For Rémi Losno	For Peter Croot	For Loes Gerringa	Johann Bown	For Loes Gerringa	Annick Masson &	Volfango Ruppolo	IFREMER	
		Intercal.	**Library**	**Zn/Co/ Cd**	**trace metals**	**Fe**	**trace metals**	**Al**	**Zn/Co/ Cd/Fe**	**Zn/Co/ Cd-orga**	**Zn/Co/ Cd/Fe-orga**	Frederic Le Moigne		[Michel Arhan]	
		filtered	filtered	filtered	filtered	filtered	filtered	filtered	filtered	filtered	filtered				
GO-FLO bottle number	**Target depth (m)**	**Intercal. conc.**	**Library LEMAR**	**Zn/Co/Cd (voltam.)**	**Trace metals (ICPMS)**	**Fe (FIA-chem.)**	**Trace metals (ICPAES)**	**Al (FIA-chem)**	**Zn/Co/Cd/ Fe**	**OrgaZn/Co /Cd**	**OrgaZn/Co/Cd**	**NO3/Si**	**S**	**microcat**	**COMMENTS**
10	50	X	X	X	X	X	X	X	X	X	X	X	X	X	
9	200	X	X	X	X	X	X	X	X	X	X	X	X	X	
8	400	X	X	X	X	X	X	X	X			X	X	X	
7	750	X	X	X	X	X	X	X	X			X	X	X	
6	1000	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	1750 (NADW/S min)	X	X	X	X	X		X	X			X	X	X	liniking, prb of cartridge (1 for the 5L, and then new one for the rest used after sampling #1-4)
4	2000	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	2500	X	X	X	X	X	X	X	X			X	X	X	
2	3000	X	X	X	X	X	X	X	X			X	X	X	
1	3500	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Volume per depth (ml)	2500	2500	250	250	60	120	125	250	1000	1000	125	100		**8280**
	Storage	HCl ultra. 30%, pH 1.8	HCl ultra. 30%, pH 1.8	HCl ultra. 30%, pH 1.8	HNO3 ultra.	HCl	HCl (seastar)	HCl ultra. 30%, pH 1.8	HCl ultra. 30%, pH 1.8	frozen	frozen	analysed on board	analysed on board		

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#20 (S3, TM's & Cd/Fe-isot.) 1070-4000 m

Station N°: S3
GO-FLO N°: GF20
Closer CTD N°: 63
Station N°: 48

Date start (UTC): 08/03/05 **Date end (UTC): 08/03/05**
Starting time (UTC): 07H07 **Position start (°'): 47°33.156 S, 04°22.332 E**
Ending time (UTC): 10H50 **Position end (°'): 47°33.15 S, 04°22.330 E**
Bottom depth (m):
Total lenght of cable out (m): 4007 + 50 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)	TFe-isot		DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (1070/2020/3980 = 1L)	Soluble Fe	DFe-isot	NO3	S	COMMENTS
10	1070	X	X	X	X			X	X	X	X	X	X	x	X		X	X	
9	1500	X	X		X			X	X	X	X	X			X		X	X	
8	2000					X										X	x	x	
7	2006					X										X	X	X	
6	2020	X	X	X	X			X	X	X	X	X	X	x	X		X	X	
5	2500	X	X		X			X	X	X	X	X			X		X	X	
4	3000	X	X	X	X			X	X	X	X	X	X		X		X	X	
3	3500	X	X		X			X	X	X	X	X			X		X	X	
2	3980	X	X	X	X			X	X	X	X	X	X	x	X		X	X	
1	4000					X										X	X	X	

without microcat!!!!!

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#21 (S3, TM's & Cd-isot.) 20-800 m

Station N°: S3
GO-FLO N°: GF21
Closer CTD N°: 64
Station N°: 48

Date start (UTC): 08/03/05 Date end (UTC): 08/03/05
Starting time (UTC): 14H4 Position start (°'): 47°33.0655 S, 04°22.226 E
Ending time (UTC): 16H01 Position end (°'): 47°33.1809 S, 04°22.388 E
Bottom depth (m):
Total lenght of cable out (m): 807+ 50 m

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)		DFeII	DH2O2	DFe	Orga Co (250 ml)	DZn/ Co /Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes 4 depths below MLD x 1L)	Soluble Fe	NO3	S	micro cat	COMMENTS
10	20	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	
9	30	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	
8	40	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X	X	
7	70	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X	X	
6	100	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	
5	200	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	
4	300	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
3	450	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	
2	600	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	
1	800	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#22 (S3, Inc. Géraldine/Eva) 30-60 m

Station N°: S3
GO-FLO N°: GF22
Closer CTD N°: 65
Station N°: 48

Date start (UTC): 08/03/0 Date end (UTC): 08/03/05
Starting time (UTC Position start (°'): 47°33.293 S, 04°22.543 E
Ending time (UTC): Position end (°'): 47°33.261 S, 04°22.141 E
Bottom depth (m):
Total lenght of cable out (m):

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Go-Flo #	Depth (m)
9	60
2	50
3	40
4	30
5	50
6	40
7	30
8	50
1	40
10	30

All Go-Flo bottles were mixed and unfiltered samples were used for incubations

	Person in charge	CTD	Go-Flo	Bottle	depth	%light	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org
incub Fe-Cu	Sarthou-Bucciarelli		22	1-10	30-60	50	x	x	x	x	x	x	x	x	x	x	x	x		x	x

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#22 (S3, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S3**
T (°C) =	**8**

Additions in the incubations

	+ Fe	+ Cu	+ NO3-	+ PO4-	+ Si(OH)4+	Pore waters
S1	1 nM	0.5 nM	100 µM	0.6 µM	10 µM	200 µl
S2	1 nM	0.5 nM	32 µM	2 µM	30 µM	-
S3	1 nM	0.5 nM	16 µM	1 µM	20 µM	-
S4	1 nM and 2 nM (2 x Fe)	0.5 nM	-	-	-	-

T0 **06/03/2008**

Treatment	Time	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	01:00	10 ml	10 ml	125 ml	500 ml	400 ml	380 ml	1 ml	250 ml	60 ml
Control - B	01:00	10 ml	10 ml	125 ml	500 ml	300 ml	320 ml	1 ml	250 ml	60 ml

T0 **06/03/2008**

Treatment	Time	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	01:00	x	x	60 ml	x	125 ml	125 ml	60 ml	
Control - B	01:00	x	x	60 ml	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#22 (S3, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S3**
T (°C) =	**8**

T1	**05/03/2008**	**08/03/2008**	2,66									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	22:20	13:40	2,64	10 ml	10 ml	x	800 ml	410 ml	400 ml	1 ml	x	60 ml
Control - B	22:20	13:40	2,64	10 ml	10 ml	x	700 ml	390 ml	400 ml	1 ml	x	60 ml
+ SN - A	23:00	14:00	2,63	10 ml	10 ml	x	800 ml	450 ml	400 ml	1 ml	x	60 ml
+ SN - B	23:00	14:00	2,63	10 ml	10 ml	x	700 ml	470 ml	400 ml	1 ml	x	60 ml
+ Cu + SN - A	23:30	15:05	2,65	10 ml	10 ml	x	700 ml	450 ml	450 ml	1 ml	x	60 ml
+ Cu + SN - B	23:30	15:05	2,65	10 ml	10 ml	x	800 ml	400 ml	410 ml	1 ml	x	60 ml
+ Fe + SN - A	00:00	16:30	2,69	10 ml	10 ml	x	800 ml	450 ml	450 ml	1 ml	x	60 ml
+ Fe + SN - B	00:00	16:30	2,69	10 ml	10 ml	x	700 ml	435 ml	435 ml	1 ml	x	60 ml
+ Fe + Cu + SN - A	00:30	17:10	2,69	10 ml	10 ml	x	800 ml	465 ml	450 ml	1 ml	x	60 ml
+ Fe + Cu + SN - B	00:30	17:10	2,69	10 ml	10 ml	x	700 ml	435 ml	400 ml	1 ml	x	60 ml

T1	**05/03/2008**	**08/03/2008**	2,66								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	22:20	13:40	2,64	x	x	x	x	125 ml	125 ml	60 ml	
Control - B	22:20	13:40	2,64	x	x	x	x	125 ml	125 ml	60 ml	
+ SN - A	23:00	14:00	2,63	x	x	x	x	125 ml	125 ml	60 ml	
+ SN - B	23:00	14:00	2,63	x	x	x	x	125 ml	125 ml	60 ml	
+ Cu + SN - A	23:30	15:05	2,65	x	x	x	x	125 ml	125 ml	60 ml	
+ Cu + SN - B	23:30	15:05	2,65	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + SN - A	00:00	16:30	2,69	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + SN - B	00:00	16:30	2,69	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	00:30	17:10	2,69	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	00:30	17:10	2,69	x	x	x	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#22 (S3, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S3**
T (°C) =	**8**

T2	**05/03/2008**	**12/03/2008**	6,63									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	22:20	12:40	6,60	10 ml	10 ml	100 ml	400	250	289	1 ml	250 ml	60 ml
Control - B	22:20	12:40	6,60	10 ml	10 ml	100 ml	500	290	300	1 ml	250 ml	60 ml
+ SN - A	23:00	14:00	6,63	10 ml	10 ml	100 ml	400	310	310	1 ml	250 ml	60 ml
+ SN - B	23:00	14:00	6,63	10 ml	10 ml	100 ml	400	350	300	1 ml	250 ml	60 ml
+ Cu + SN - A	23:30	14:35	6,63	10 ml	10 ml	100 ml	600	300	300	1 ml	250 ml	60 ml
+ Cu + SN - B	23:30	14:35	6,63	10 ml	10 ml	100 ml	600	300	360	1 ml	250 ml	60 ml
+ Fe + SN - A	00:00	15:21	6,64	10 ml	10 ml	100 ml	600	320	310	1 ml	250 ml	60 ml
+ Fe + SN - B	00:00	15:21	6,64	10 ml	10 ml	100 ml	500	250	284	1 ml	250 ml	60 ml
+ Fe + Cu + SN - A	00:30	16:00	6,65	10 ml	10 ml	100 ml	500	275	300	1 ml	250 ml	60 ml
+ Fe + Cu + SN - B	00:30	16:00	6,65	10 ml	10 ml	100 ml	600	275	300	1 ml	250 ml	60 ml

T2	**05/03/2008**	**12/03/2008**	6,63								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	22:20	12:40	6,60	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
Control - B	22:20	12:40	6,60	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ SN - A	23:00	14:00	6,63	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ SN - B	23:00	14:00	6,63	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu + SN - A	23:30	14:35	6,63	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu + SN - B	23:30	14:35	6,63	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + SN - A	00:00	15:21	6,64	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + SN - B	00:00	15:21	6,64	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	00:30	16:00	6,65	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	00:30	16:00	6,65	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#22 (S3, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S3**
T (°C) =	**8**

T3	**05/03/2008**	**15/03/2008**	9,64									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	22:20	12:55	9,61	10 ml	10 ml	x	400	250	289	1 ml	x	60 ml
Control - B	22:20	12:55	9,61	10 ml	10 ml	x	500	290	300	1 ml	x	60 ml
+ SN - A	23:00	13:45	9,61	10 ml	10 ml	x	400	310	310	1 ml	x	60 ml
+ SN - B	23:00	13:45	9,61	10 ml	10 ml	x	400	350	300	1 ml	x	60 ml
+ Cu + SN - A	23:30	14:50	9,64	10 ml	10 ml	x	600	300	300	1 ml	x	60 ml
+ Cu + SN - B	23:30	14:50	9,64	10 ml	10 ml	x	600	300	360	1 ml	x	60 ml
+ Fe + SN - A	00:00	15:55	9,66	10 ml	10 ml	x	600	320	310	1 ml	x	60 ml
+ Fe + SN - B	00:00	15:55	9,66	10 ml	10 ml	x	500	250	284	1 ml	x	60 ml
+ Fe + Cu + SN - A	00:30	16:20	9,66	10 ml	10 ml	x	500	275	300	1 ml	x	60 ml
+ Fe + Cu + SN - B	00:30	16:20	9,66	10 ml	10 ml	x	600	275	300	1 ml	x	60 ml

T3	**05/03/2008**	**15/03/2008**	9,64								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	22:20	12:55	9,61	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
Control - B	22:20	12:55	9,61	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ SN - A	23:00	13:45	9,61	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ SN - B	23:00	13:45	9,61	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu + SN - A	23:30	14:50	9,64	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu + SN - B	23:30	14:50	9,64	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + SN - A	00:00	15:55	9,66	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + SN - B	00:00	15:55	9,66	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	00:30	16:20	9,66	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	00:30	16:20	9,66	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#22 (S3, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S3**
T (°C) =	**8**

T4	**05/03/2008**	**18/03/2008**	12,72									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	22:20	15:35	12,72	10 ml	10 ml	100 ml	500	250	300	1 ml	250 ml	60 ml
Control - B	22:20	15:35	12,72	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml
+ SN - A	23:00	16:10	12,72	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml
+ SN - B	23:00	16:10	12,72	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml
+ Cu + SN - A	23:30	16:40	12,72	10 ml	10 ml	100 ml	500	350	342	1 ml	250 ml	60 ml
+ Cu + SN - B	23:30	16:40	12,72	10 ml	10 ml	100 ml	500	390	350	1 ml	250 ml	60 ml
+ Fe + SN - A	00:00	17:15	12,72	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml
+ Fe + SN - B	00:00	17:15	12,72	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml
+ Fe + Cu + SN - A	00:30	17:45	12,72	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml
+ Fe + Cu + SN - B	00:30	17:45	12,72	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml

T4	**05/03/2008**	**18/03/2008**	12,72								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	22:20	15:35	12,72	x	x	x	x	125 ml	125 ml	60 ml	
Control - B	22:20	15:35	12,72	x	x	x	x	125 ml	125 ml	60 ml	
+ SN - A	23:00	16:10	12,72	x	x	x	x	125 ml	125 ml	60 ml	
+ SN - B	23:00	16:10	12,72	x	x	x	x	125 ml	125 ml	60 ml	
+ Cu + SN - A	23:30	16:40	12,72	x	x	x	x	125 ml	125 ml	60 ml	
+ Cu + SN - B	23:30	16:40	12,72	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + SN - A	00:00	17:15	12,72	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + SN - B	00:00	17:15	12,72	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - A	00:30	17:45	12,72	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + Cu + SN - B	00:30	17:45	12,72	x	x	x	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#23 (S3, Inc. Bron/Marie) 40-60 m

Station N°: S3
GO-FLO N°: GF23
Closer CTD N°: 65
Station N°: 48

Date start (UTC): 08/03/06 **Date end (UTC): 08/03/06**
Starting time (UTC): 03H45 **Position start (°'): 47°33.36 S, 04°22.60 E**
Ending time (UTC): 04H15 **Position end (°'): 47°33.37 S, 04°22.60 E**
Bottom depth (m):
Total lenght of cable out (m):

Cast responsible: Marie Boye & Bronwyn Wake

GO-FLO bottle number	Target depth (m)	Water sampling	microcat	COMMENTS
1	40	x		
2	45	x		
3	50	x		
4	55	x		
5	40	x		
6	47	x		
7	54	X		
8	40	X		
9	47	X		
10	54	X		

MAX FLUO BETWEEN SURFACE AND ABOUT 80 M

Parameters sampled in the trace metals incubations using Go-Flo (GF23 + GF24)

Station	Position	S3
GF23	**47°33.36 S 04°22.60 E**	
GF24	**47°33.32 S 04°22.96 E**	

Added concentrations: 2 nM trace metal, no nutrients addition

Addition time and date: 06/03/08

FICHE PRELEVEMENTS GF#23 (S3, Inc. Bron/Marie) 40-60 m

Parameters sampled in the trace metals incubations using Go-Flo (GF23 + GF24)

Station	Position	S3
GF23	47°33.36 S	04°22.60 E
GF24	47°33.32 S	04°22.96 E

Added concentrations: 2 nM trace metal, no nutrients addition

Addition time and date: 06/03/08

GoFlo #	Bottle	Treatment Bronwyn Wake comments : No nutrient additions	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/PON/PIC	Pig/Chl a	Flow
		T0	0	200 ml	yes	100 ml	10 ml	With N	1000 ml		1 ml
	1	Control	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml
	2	Control	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml
	3	Control	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml
	4	Control	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml
	5	+Zn	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml
	6	+Zn	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml
	7	+Zn	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml
	8	+Zn	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	960 ml	1 ml
	9	+Zn	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml
	10	+Zn	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml
	11	+Zn	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml
	12	+Zn	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml
	13	+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml
	14	+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml
	15	+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml
	16	+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml
	17	+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml
	18	+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml
	19	+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml
	20	+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml

FICHE PRELEVEMENTS GF#23 (S3, Inc. Bron/Marie) 40-60 m

Parameters sampled in the trace metals incubations using Go-Flo (GF23 + GF24)

Station Position	S3
GF23	47°33.36 S 04°22.60 E
GF24	47°33.32 S 04°22.96 E

Added concentrations: 2 nM trace metal, no nutrients addition

Addition time and date: 06/03/08

GoFlo #	Bottle	Treatment Bronwyn Wake comments : No nutrient additions	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/PON/PIC	Pig/Chl a	Flow
	21	+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	950 ml Bronwyn Wake comment: minus ~40 ml spilt	1 ml
	22	+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml
	23	+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	850 ml	1 ml
	24	+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml
	25	+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml	1 ml
	26	+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	? Bronwyn Wake comment: not recorded, thought to be slightly more than average	1 ml
	27	+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	850 ml	1 ml
	28	+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml
	29	+Zn+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	950 ml	1 ml
	30	+Zn+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml

FICHE PRELEVEMENTS GF#23 (S3, Inc. Bron/Marie) 40-60 m

Parameters sampled in the trace metals incubations using Go-Flo (GF23 + GF24)

Station	Position	S3
GF23	47°33.36 S	04°22.60 E
GF24	47°33.32 S	04°22.96 E

Added concentrations: 2 nM trace metal, no nutrients addition

Addition time and date: 06/03/08

GoFlo #	Bottle	Treatment Bronwyn Wake comments : No nutrient additions	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/PON/PIC	Pig/Chl a	Flow
	31	+Zn+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml
	32	+Zn+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml
	33	+Zn+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml
	34	+Zn+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	830 ml	1 ml
	35	+Zn+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml
	36	+Zn+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml
	37	+Zn+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	930 ml	1 ml
	38	+Zn+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml
	39	+Zn+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml
	40	+Zn+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	950 ml	1 ml
	41	+Zn+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml
	42	+Zn+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml
	43	+Zn+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml
	44	+Zn+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml
	45	Control	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	not recorded	1 ml
	46	Control	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	830 ml	1 ml
	47	Control	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	860 ml	1 ml
	48	Control	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	960 ml	1 ml

NB: acidified with 305 ul of HNO3 Day 2 - Nutrients analysed onboard

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#24 (S3, Inc. Bron/Marie + Fe-isot.) 25-1068 m

Station N°: S3
GO-FLO N°: GF24
Closer CTD N°: 66
Station N°: 48

Date start (UTC): 08/03/06 **Date end (UTC): 08/03/06**
Starting time (UTC): 06H00 **Position start (°'): 47°33.32 S, 04°22.96 E**
Ending time (UTC): 07H27 **Position end (°'): 47°33.21 S, 04°23.14 E**
Bottom depth (m):
Total lenght of cable out (m):

Cast responsible: Marie Boye, Bronwyn Wake, François Lacan

GO-FLO bottle number	Target depth (m)	Water sampling	T&DFe-isotopes	NO3	S	microcat	COMMENTS
10	25		X	X	X	X	
9	30		X	X	X	X	
8	50		X	X	X	X	
7	55		X	X	X	X	
6	60	X				X	
5	99		X	X	X	X	
4	149		X	X	X	X	
3	248		X	X	X	X	
2	495		X	X	X	X	
1	1068		X	X	X	X	

WARNING: 1 bottle at the max fluo

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#25 (L5B, TM's) 40-2200 m

Station N°: L5B
GO-FLO N°: GF25
Closer CTD N°: 70
Station N°: 52

Date start (UTC): 08/03/07 **Date end (UTC): 08/03/07**
Starting time (UTC): 14H53 **Position start (°'): 49°01.69 S, 02°49.926 E**
Ending time (UTC): 17H55 **Position end (°'): 49°01.69 S, 02°49.93 E**
Bottom depth (m):
Total lenght of cable out (m):

north of the PF

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TFe (FIA)		DFeII	DH2O2	DFe	Orga Co (250 ml)	DZn/ Co/ Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	Soluble Fe	NO3	S	microcat	COMMENTS
10	40	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo (deep MLD of 110 m)
8	80	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo
7	150	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	antarctic winter waters
6	170	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	antarctic winter waters
5	250	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
4	350	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
9	700	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	UCDW (center at 1000 m/min O2)
3	1000	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	UCDW
2	1600	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	UCDW (center at 1000 m/min O2)
1	2200	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#26 (L6A, TM's) 30-2100 m

Station N°: L6A
GO-FLO N°: GF26
Closer CTD N°: 77
Station N°: 57

Date start (UTC): 08/03/09 **Date end (UTC): 08/03/09**
Starting time (UTC): 02H50 **Position start (°'): 50°22.55 S, 01°19.535 E**
Ending time (UTC): 05H12 **Position end (°'): 50°22.61 S, 01°19.971 E**
Bottom depth (m):
Total lenght of cable out (m):

in the PF

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TFe (FIA)		DFeII	DH2O2	DFe	OrgaCo (250 ml)	DZn/ Co/ Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	Soluble Fe	NO3	S	microcat	COMMENTS
10	30	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo (deep MLD of 80 m)
8	60	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo
7	100	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	antarctic winter waters
6	135	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	antarctic winter waters
5	180	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	base of the antarctic winter waters
4	300	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
9	600	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	UCDW (center at 600 m/min O2)
3	850	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	UCDW
2	1600	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
1	2100	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#27 (S4, Inc. Pedro + Cd-isot.) 10-250 m

Station N°: S4
GO-FLO N°: GF27
Closer CTD N°: 83
Station N°: 62

Date start (UTC): 08/03/10 **Date end (UTC): 08/03/10**
Starting time (UTC): 07H03 **Position start (°'): 51°51.24 S, 00°00.09 E**
Ending time (UTC): 08H10 **Position end (°'): 51°51.297 S, 00°00.38 E**
Bottom depth (m):
Total lenght of cable out (m):

just a bit south of the PF

Cast responsible: Marie Boye, Bronwyn Wake

GO-FLO bottle number	Target depth (m)	Cd-isotopes (20L/depth)	Cd-isotopes (5L)	Cd-isotopes (1L)	Pedro incub.	salinity	nuts	microcat	COMMENTS	
10	10				X			X	max fluo	bouteille non fermée (redescente à 257 m pour 2eme fermeture)
9	25				X			X	max fluo	
5	30	X						X	max fluo	
8	35	X				X	X	X	max fluo (deep MLD of 125 m)	
7	50	X				X	X	X	max fluo	
6	55	X				X	X	X	max fluo (deep MLD of 125 m)	
4	125				X			X	MLD	
3	140		X			X	X	X	antarctic winter waters	
2	170							X	antarctic winter waters	bouchon cassé sur la coque
1	250			X		X	X	X		bouteille non fermée (redescente à 257 m)

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#27 (S4, Inc. Pedro + Cd-isot.) 10-250 m

Parameters sampled in the trace metals & 15N incubations Pedro using Go-Flo (GF27)

Added concentrations: 2 nM Fe, ?? 15N

Treatment	Day sampled	ICPMS	15N	Flow
	0	200 ml		1 ml
	1	200 ml		1 ml
	2	200 ml		1 ml
	3	200 ml		1 ml
	4	200 ml		1 ml
	5	200 ml		1 ml
	6	200 ml		1 ml

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#28 (S4, TM's + Cd-isot.) 30-450 m

Station N°: S4
GO-FLO N°: GF28
Closer CTD N°: 84
Station N°: 62

Date start (UTC): 08/03/10 **Date end (UTC): 08/03/10**
Starting time (UTC): 11H15 **Position start (°'): 51°51.082 S, 00°00.307 E**
Ending time (UTC): 13H06 **Position end (°'): 51°51.241 S, 00°00.478 E**
Bottom depth (m): 2400
Total lenght of cable out (m):

just a bit south of the PF

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)		DFe	OrgaCo (250 ml)	DZn/ Co/ Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (1L)	Soluble Fe	NO3	S	micro cat	COMMENTS
10	30	X	X	X	X		X	X	X	X	X	X		X	X	X		max fluo
9	60	X	X		X		X	X	X	X	X			X	X	X		max fluo
8	130	X	X	X	X		X	X	X	X	X	X		X	x	x		antarctic winter waters
7	160	X	X	X	X		X	X	X	X	X	X		X	X	X		antarctic winter waters
6	180	X	X	X	X		X	X	X	X	X	X	x	X	X	X		base of the antarctic winter waters
5	250	X	X		X		X	X	X	X	X			X	X	X		
4	300	X	X	X	X		X	X	X	X	X	X		X	X	X		
3	350	X	X		X		X	X	X	X	X			X	X	X		
1	400	X	X	X	X		X	X	X	X	X	X	x	X	X	X		
2	450																	bottle rincing

with microcat!!!!!

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#29 (S4, Inc. Géraldine/Eva) 30-60 m

Station N°: S4
GO-FLO N°: GF29
Closer CTD N°: 85
Station N°: 62

Date start (UTC): 08/03/11 **Date end (UTC): 08/03/11**
Starting time (UTC): 00H05 **Position start (°'): 51°51.890 S, 00°00.140 E**
Ending time (UTC): 01H15 **Position end (°'): 51°51.899 S, 00°00.095 E**
Bottom depth (m):
Total lenght of cable out (m):

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

Go-Flo #	Depth (m)
2	60
1	50
3	40
4	30
5	50
6	40
7	30
8	50
9	40
10	30

All Go-Flo bottles were mixed and unfiltered samples were used for incubations

	Person in charge	CTD	Go-Flo	Bottle	depth	%light	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org
incub Fe-Cu	Sarthou-Bucciarelli		29	1-10	30-60	50	x	x	x	x	x	x	x	x	x	x	x	x		x	x

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#29 (S4, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S4**
T (°C) =	**2**

Additions in the incubations

	+ Fe	+ Cu	+ NO3-	+ PO4-	+ Si(OH)4+	Pore waters
S1	1 nM	0.5 nM	100 µM	0.6 µM	10 µM	200 µl
S2	1 nM	0.5 nM	32 µM	2 µM	30 µM	-
S3	1 nM	0.5 nM	16 µM	1 µM	20 µM	-
S4	1 nM and 2 nM (2 x Fe)	0.5 nM	-	-	-	-

T0 **11/03/2008**

Treatment	Time	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	05:45	10 ml	10 ml	125 ml	700	400	390	1 ml	250 ml	60 ml
Control - B	05:45	10 ml	10 ml	125 ml	700	410	400	1 ml	250 ml	60 ml

T0 **11/03/2008**

Treatment	Time	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	05:45	x	x	60 ml	x	125 ml	125 ml	60 ml	
Control - B	05:45	x	x	60 ml	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#29 (S4, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S4**
T (°C) =	**2**

T1	**11/03/2008**	**13/03/2008**	2,43									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	05:00	13:55	2,37	10 ml	10 ml	x	700	360	350	1 ml	x	60 ml
Control - B	05:00	13:55	2,37	10 ml	10 ml	x	700	400	420	1 ml	x	60 ml
+ Cu - A	05:10	14:50	2,40	10 ml	10 ml	x	700	350	350	1 ml	x	60 ml
+ Cu - B	05:10	14:50	2,40	10 ml	10 ml	x	750	420	400	1 ml	x	60 ml
+ Fe - A	05:20	15:30	2,42	10 ml	10 ml	x	700	430	400	1 ml	x	60 ml
+ Fe - B	05:20	15:30	2,42	10 ml	10 ml	x	700	380	400	1 ml	x	60 ml
+ Fe + Cu - A	05:30	16:30	2,46	10 ml	10 ml	x	700	385	400	1 ml	x	60 ml
+ Fe + Cu - B	05:30	16:30	2,46	10 ml	10 ml	x	700	460	450	1 ml	x	60 ml
+ 2 x Fe - A	05:40	17:05	2,48	10 ml	10 ml	x	700	410	400	1 ml	x	60 ml
+ 2 x Fe - B	05:40	17:05	2,48	10 ml	10 ml	x	700	440	440	1 ml	x	60 ml

T1	**11/03/2008**	**13/03/2008**	2,43								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	05:00	13:55	2,37	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
Control - B	05:00	13:55	2,37	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu - A	05:10	14:50	2,40	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu - B	05:10	14:50	2,40	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe - A	05:20	15:30	2,42	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe - B	05:20	15:30	2,42	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu - A	05:30	16:30	2,46	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu - B	05:30	16:30	2,46	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ 2 x Fe - A	05:40	17:05	2,48	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ 2 x Fe - B	05:40	17:05	2,48	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#29 (S4, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S4**
T (°C) =	**2**

T2	**11/03/2008**	**17/03/2008**	6,39									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	05:00	13:30	6,35	10 ml	10 ml	100 ml	500	310	300	1 ml	250 ml	60 ml
Control - B	05:00	13:30	6,35	10 ml	10 ml	100 ml	600	350	386	1 ml	250 ml	60 ml
+ Cu - A	05:10	14:05	6,37	10 ml	10 ml	100 ml	600	360	350	1 ml	250 ml	60 ml
+ Cu - B	05:10	14:05	6,37	10 ml	10 ml	100 ml	600	395	396	1 ml	250 ml	60 ml
+ Fe - A	05:20	14:45	6,39	10 ml	10 ml	100 ml	600	425	400	1 ml	250 ml	60 ml
+ Fe - B	05:20	14:45	6,39	10 ml	10 ml	100 ml	600	380	405	1 ml	250 ml	60 ml
+ Fe + Cu - A	05:30	15:10	6,40	10 ml	10 ml	100 ml	600	410	400	1 ml	250 ml	60 ml
+ Fe + Cu - B	05:30	15:10	6,40	10 ml	10 ml	100 ml	600	375	400	1 ml	250 ml	60 ml
+ 2 x Fe - A	05:40	15:45	6,42	10 ml	10 ml	100 ml	600	340	400	1 ml	250 ml	60 ml
+ 2 x Fe - B	05:40	15:45	6,42	10 ml	10 ml	100 ml	600	360	350	1 ml	250 ml	60 ml

T2	**11/03/2008**	**17/03/2008**	6,39								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	05:00	13:30	6,35	x	x	x	x	125 ml	125 ml	60 ml	
Control - B	05:00	13:30	6,35	x	x	x	x	125 ml	125 ml	60 ml	
+ Cu - A	05:10	14:05	6,37	x	x	x	x	125 ml	125 ml	60 ml	
+ Cu - B	05:10	14:05	6,37	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe - A	05:20	14:45	6,39	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe - B	05:20	14:45	6,39	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + Cu - A	05:30	15:10	6,40	x	x	x	x	125 ml	125 ml	60 ml	
+ Fe + Cu - B	05:30	15:10	6,40	x	x	x	x	125 ml	125 ml	60 ml	
+ 2 x Fe - A	05:40	15:45	6,42	x	x	x	x	125 ml	125 ml	60 ml	
+ 2 x Fe - B	05:40	15:45	6,42	x	x	x	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#29 (S4, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S4**
T (°C) =	**2**

T3	**11/03/2008**	**19/03/2008**	8,39									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	05:00	12:55	8,33	10 ml	10 ml	x	700	374	400	1 ml	x	60 ml
Control - B	05:00	12:55	8,33	10 ml	10 ml	x	700	340	400	1 ml	x	60 ml
+ Cu - A	05:10	13:45	8,36	10 ml	10 ml	x	600	400	400	1 ml	x	60 ml
+ Cu - B	05:10	13:45	8,36	10 ml	10 ml	x	700	400	410	1 ml	x	60 ml
+ Fe - A	05:20	14:50	8,40	10 ml	10 ml	x	720	260	350	1 ml	x	60 ml
+ Fe - B	05:20	14:50	8,40	10 ml	10 ml	x	708	400	350	1 ml	x	60 ml
+ Fe + Cu - A	05:30	15:55	8,43	10 ml	10 ml	x	700	350	400	1 ml	x	60 ml
+ Fe + Cu - B	05:30	15:55	8,43	10 ml	10 ml	x	700	357	400	1 ml	x	60 ml
+ 2 x Fe - A	05:40	16:20	8,44	10 ml	10 ml	x	600	380	400	1 ml	x	60 ml
+ 2 x Fe - B	05:40	16:20	8,44	10 ml	10 ml	x	600	370	400	1 ml	x	60 ml

T3	**11/03/2008**	**19/03/2008**	8,39								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	05:00	12:55	8,33	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
Control - B	05:00	12:55	8,33	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu - A	05:10	13:45	8,36	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu - B	05:10	13:45	8,36	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe - A	05:20	14:50	8,40	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe - B	05:20	14:50	8,40	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu - A	05:30	15:55	8,43	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu - B	05:30	15:55	8,43	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ 2 x Fe - A	05:40	16:20	8,44	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ 2 x Fe - B	05:40	16:20	8,44	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#29 (S4, Inc. Géraldine/Eva) 30-60 m

Cast responsible: Géraldine Sarthou & Eva Bucciarelli

Sampling and parameter Fe incubations Go-Flo

N° station	**S4**
T (°C) =	**2**

T4	**11/03/2008**	**20/03/2008**	9,40									
Treatment	Time in	Time out	T (d)	Nitrate	Silicate	Phosphate	Chla	POC/PON	BSi	Cytometry	Taxonomy	TDFe
Control - A	05:00	13:30	9,35	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml
Control - B	05:00	13:30	9,35	10 ml	10 ml	100 ml	500	350	350	1 ml	250 ml	60 ml
+ Cu - A	05:10	14:20	9,38	10 ml	10 ml	100 ml	500	350	350	1 ml	250 ml	60 ml
+ Cu - B	05:10	14:20	9,38	10 ml	10 ml	100 ml	500	350	350	1 ml	250 ml	60 ml
+ Fe - A	05:20	15:15	9,41	10 ml	10 ml	100 ml	500	300	300	1 ml	250 ml	60 ml
+ Fe - B	05:20	15:15	9,41	10 ml	10 ml	100 ml	600	300	300	1 ml	250 ml	60 ml
+ Fe + Cu - A	05:30	15:50	9,43	10 ml	10 ml	100 ml	600	265	300	1 ml	250 ml	60 ml
+ Fe + Cu - B	05:30	15:50	9,43	10 ml	10 ml	100 ml	600	300	375	1 ml	250 ml	60 ml
+ 2 x Fe - A	05:40	16:00	9,43	10 ml	10 ml	100 ml	500	250	250	1 ml	250 ml	60 ml
+ 2 x Fe - B	05:40	16:00	9,43	10 ml	10 ml	100 ml	600	285	300	1 ml	250 ml	60 ml

T4	**11/03/2008**	**20/03/2008**	9,40								
Treatment	Time in	Time out	T (d)	DFe	sFe	Fe(II)	H2O2	Fe org	Cu org	TDCu	Comments
Control - A	05:00	13:30	9,35	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
Control - B	05:00	13:30	9,35	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu - A	05:10	14:20	9,38	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Cu - B	05:10	14:20	9,38	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe - A	05:20	15:15	9,41	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe - B	05:20	15:15	9,41	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu - A	05:30	15:50	9,43	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ Fe + Cu - B	05:30	15:50	9,43	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ 2 x Fe - A	05:40	16:00	9,43	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	
+ 2 x Fe - B	05:40	16:00	9,43	60 ml	60 ml	60 ml	x	125 ml	125 ml	60 ml	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#30 (S4, Inc. Bron/Marie) 40-60 m

Station N°: S4
GO-FLO N°: GF30
Closer CTD N°: 86
Station N°: 62

Date start (UTC): 08/03/11 **Date end (UTC): 08/03/11**
Starting time (UTC): 03H15 **Position start (°'): 51°52.19 S, 00°00.26 E**
Ending time (UTC): 04H18 **Position end (°'): 51°52.44 S, 00°00.48 E**
Bottom depth (m):
Total lenght of cable out (m): 191 m

Cast responsible: Marie Boye & Bronwyn Wake

GO-FLO bottle number	Target depth (m)	Water sampling	microcat	COMMENTS
10	35	x		
9	45	x		
8	55	x		
7	35	x		
6	45	x		
5	55	x		
4	30	X		
3	40	X		
2	50	X		
1	60	X		

WARNING: 10 bottles at the max fluo

Parameters sampled in the trace metals incubations using Go-Flo (GF30)

Station Position	S4
GF30	51°52.19 S 0°00.26 E

Added concentrations: 2 nM trace metal, no nutrients addition

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#30 (S4, Inc. Bron/Marie) 40-60 m

Parameters sampled in the trace metals incubations using Go-Flo (GF30)

Station Position	S4
GF30	51°52.19 S 0°00.26 E

Added concentrations: 2 nM trace metal, no nutrients addition

Addition time and date: 11/03/08

GoFlo #	Bottle	Treatment Bronwyn Wake comments: No nutrient additions	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/ PON/ PIC	Pig/ Chl a	Flow
		T0	0	200 ml	yes	100 ml	10 ml	With N	1000 ml	1000 ml	1 ml
	1	Control	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	885 ml	1 ml
	2	Control	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml
	4	Control	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	850 ml	1 ml
	5	+Zn	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	705 ml	1 ml
	6	+Zn	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml
	7	+Zn	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	960 ml	1 ml
	8	+Zn	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	825 ml	1 ml
	9	+Zn	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	895 ml	1 ml
	10	+Zn	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml
	11	+Zn	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml
	12	+Zn	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	905 ml	1 ml
	13	+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	850 ml Bronwyn Wake comment: leaked a bit	1 ml
	14	+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml
	15	+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	1000 ml	1 ml
	16	+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml
	17	+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	920 ml	1 ml
	18	+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml
	20	+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	940 ml	1 ml

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#30 (S4, Inc. Bron/Marie) 40-60 m

Parameters sampled in the trace metals incubations using Go-Flo (GF30)

Station Position	S4
GF30	51°52.19 S 0°00.26 E

Added concentrations: 2 nM trace metal, no nutrients addition

Addition time and date: 11/03/08

GoFlo #	Bottle	Treatment Bronwyn Wake comments: No nutrient additions	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/ PON/ PIC	Pig/ Chl a	Flow
	21	+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	905 ml Bronwyn Wake comment : some lost when straw re-adjusted	1 ml
	22	+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml
	23	+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	950 ml	1 ml
	24	+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	980 ml	1 ml
	25	+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	900 ml Bronwyn Wake comment : guesstimate	1 ml
	26	+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	845 ml	1 ml
	28	+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	880 ml	1 ml
	29	+Zn+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	835 ml	1 ml
	30	+Zn+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml
	31	+Zn+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	950 ml	1 ml
	32	+Zn+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	945 ml	1 ml
	33	+Zn+Co	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#30 (S4, Inc. Bron/Marie) 40-60 m

Parameters sampled in the trace metals incubations using Go-Flo (GF30)

Station Position	S4
GF30	51°52.19 S 0°00.26 E

Added concentrations: 2 nM trace metal, no nutrients addition

Addition time and date: 11/03/08

GoFlo #	Bottle	Treatment Bronwyn Wake comments: No nutrient additions	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/ PON/ PIC	Pig/ Chl a	Flow
	34	+Zn+Co	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml Bronwyn Wake comment : some of 38 filtered (~100 ml) thru here	1 ml
	35	+Zn+Co	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	980 ml	1 ml
	36	+Zn+Co	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	800 ml	1 ml
	37	+Zn+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml
	38	+Zn+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	925 ml Bronwyn Wake: some lost (~100 ml), filtered thru 34	1 ml
	39	+Zn+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	830 ml	1 ml
	40	+Zn+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	885 ml	1 ml
	41	+Zn+Fe	2	200 ml	yes	100 ml	10 ml	With N	1000 ml	905 ml	1 ml
	42	+Zn+Fe	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	910 ml	1 ml
	43	+Zn+Fe	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	960 ml	1 ml
	44	+Zn+Fe	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	820 ml	1 ml
	45	Control	4	200 ml	yes	100 ml	10 ml	With N	1000 ml	840 ml	1 ml
	46	Control	6	200 ml	yes	100 ml	10 ml	With N	1000 ml	890 ml	1 ml

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#30 (S4, Inc. Bron/Marie) 40-60 m

Parameters sampled in the trace metals incubations using Go-Flo (GF30)

Station Position	S4
GF30	51°52.19 S 0°00.26 E

Added concentrations: 2 nM trace metal, no nutrients addition

Addition time and date: 11/03/08

GoFlo #	Bottle	Treatment Bronwyn Wake comments: No nutrient additions	Day sampled	ICPMS	TM int cell or Bsi	P	N	Si	POC/ PON/ PIC	Pig/ Chl a	Flow
	48	Control	8	200 ml	yes	100 ml	10 ml	With N	1000 ml	870 ml	1 ml

NB: acidified with 305 ul of HNO3 All nutrients analysed onboard
T6 & T8 acidified with 380 ul HNO3

T0		0900
T2		2130-2330
	Saturday 15	
T4	**March**	1900-2045
	Tuesday 18	
T6	**March**	2130-2330
	Friday 21	
T8	**March**	1900-2045

4 bottles short at the start of the experiment so minus control (#3&#47), +Co (#19) and +Fe (#27)

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#31 (S4, TM's & Cd/Fe-isot.) 500-2500 m

Station N°: S4
GO-FLO N°: GF31
Closer CTD N°: 87
Station N°: 62

Date start (UTC): 08/03/11 Date end (UTC): 08/03/11
Starting time (UTC): 06H2 Position start (°'): 51°52.70 S, 00°00.32 E
Ending time (UTC): 09H04 Position end (°'): 51°52.91 S, 00°00.23 E
Bottom depth (m): 2550 m
Total lenght of cable out (m):

just a bit south of the PF

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)		DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (1L)	Fe-isotopes	Soluble Fe	NO3	S	micro cat	COMMENTS
10	500	X	X	X	X		X	X	X	X	X	X			X	X	X	X	
9	700	X	X		X		X	X	X	X	X		X		X	X	X	X	
8	900	X	X	X	X		X	X	X	X	X	X			X	x	x	X	
7	1117	X	X		X		X	X	X	X	X				X	X	X	X	
6	1534	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	
5	1679													X	X	X	X	X	
4	1950	X	X	X	X		X	X	X	X	X	X			X	X	X	X	
3	2300	X	X		X		X	X	X	X	X				X	X	X	X	
2	2490	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	
1	2500													X				X	

with microcat and pinger!!!!!

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#32 (S4, Fe-isot.) 50-1117 m

Station N°: S4
GO-FLO N°: GF32
Closer CTD N°: 87
Station N°: 62

Date start (UTC): 08/03/11 **Date end (UTC): 08/03/11**
Starting time (UTC): 16H20 **Position start (°'): 51°53.28 S, 00°00.30 E**
Ending time (UTC): 18H00 **Position end (°'): 51°53.12 S, 00°00.22 E**
Bottom depth (m): 2550 m
Total lenght of cable out (m):

Cast responsible: François Lacan

GO-FLO bottle number	Target depth (m)	T&DFe-isotopes	NO3	S	COMMENTS
10	50	x	x	x	chloro
9	60	x	x	x	chloro
8	121	x	x	x	
7	131	x	x	x	WW
6	168	x	x	x	
5	267	x	x	x	
4	416	x	x	x	
3	421	x	x	x	
2	742	x	x	x	
1	1117	x	x	x	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#33 (L7B, TM's) 30-2100 m

Station N°: L7B
GO-FLO N°: GF33
Closer CTD N°: 98
Station N°: 72

Date start (UTC): 08/03/13 **Date end (UTC): 08/03/13**
Starting time (UTC): 21H08 **Position start (°'): 55°14.070 S, 00°02.2143 E**
Ending time (UTC): 23H50 **Position end (°'): 55°13.940 S, 00°02.6618 E**
Bottom depth (m): 2800
Total lenght of cable out (m):

south of the PF

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TFe (FIA)		DFeII	DH2O2	DFe	Orga Co (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	Soluble Fe	NO3	S	micro cat	COMMENTS
9	30																	max fluo bouchon cassé
8	60	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo
7	100	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	antarctic winter waters
6	120	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	antarctic winter waters
5	200	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
4	300	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
3	650	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
2	1000	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
10	1500	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
1	2100	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#33 (L7B, TM's) 30-2100 m

Station N°: L7B
GO-FLO N°: GF33
Closer CTD N°: 98
Station N°: 72

Date start (UTC): 08/03/13 **Date end (UTC): 08/03/13**
Starting time (UTC): 21H08 **Position start (°'): 55°14.070 S, 00°02.2143 E**
Ending time (UTC): 23H50 **Position end (°'): 55°13.940 S, 00°02.6618 E**
Bottom depth (m): 2800
Total lenght of cable out (m):

south of the PF

Cast responsible: Marie Boye

2eme descente

GO-FLO bottle number	Target depth (m)	TFeII	TH2O2	TM (ICPMS: 250 ml)	TFe (FIA)		DFeII	DH2O2	DFe	Orga Co (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	Soluble Fe	NO3	S	micro cat	COMMENTS
8	30	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	max fluo

BONUS-GOODHOPE

RV Marion-Dufresne

FICHE PRELEVEMENTS GF#34 (S5, TM's & Cd/Fe-isot.) 800-3850 m

Station N°: S5
GO-FLO N°: GF34
Closer CTD N°: 106
Station N°: 78

Date start (UTC): 08/03/15 **Date end (UTC): 08/03/15**
Starting time (UTC): 20H30 **Position start (°'): 57°33.15 S, 00°02.19 W**
Ending time (UTC): 23H20 **Position end (°'): 57°33.15 S, 00°02.19 W**
Bottom depth (m): 3950
Total lenght of cable out (m): 3857 + 50 m

in the weddel gyre

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)	DFe	OrgaCo (250 ml)	DZn/Co/Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (1L)	Fe-isotopes	Soluble Fe	Dmetals (R. Losno)	NO3	S	micro cat	COMMENTS
10	800	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		
2	1250	X	X	X	X	X	X	X	X	X	X			X	X	X	X		
8	1700	X	X	X	X	X	X	X	X	X	X			X	X	x	x		
7	2150	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		
6	2600	X	X		X	X	X	X	X	X				X		X	X		
5	3000												X	X		X	X		
4	3050	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		
3	3500	X	X		X	X	X	X	X	X				X		X	X		
9	3840	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		
1	3850												X						

NO MICROCAT!!!!!

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#35 (S5, Inc. Pedro & Cd-isot.) 10-300 m

Station N°: S5
GO-FLO N°: GF35
Closer CTD N°: 107
Station N°: 78

Date start (UTC): 08/03/16 **Date end (UTC): 08/03/16**
Starting time (UTC): 03H40 **Position start (°'): 57°33.13 S, 00°02.19 W**
Ending time (UTC): 04H30 **Position end (°'): 57°33.139 S, 00°02.1906 W**
Bottom depth (m): 3932
Total lenght of cable out (m): 307 + 50 m

in the weddel gyre

Cast responsible: Marie Boye, Bronwyn Wake

GO-FLO bottle number	Target depth (m)	Cd-isotopes (20L/depth)	Cd-isotopes (5L)	Cd-isotopes (1L)	Pedro incub.	salinity	nuts	microcat	COMMENTS
10	10				X			X	max fluo (deep MLD of 100 m)
5	25				X			X	max fluo
9	30	X				X	X	X	max fluo
8	35	X				X	X	X	max fluo
7	45				X			X	max fluo
6	50	X				X	X	X	max fluo
4	55	X				X	X	X	max fluo (deep MLD of 100 m)
3	120		X			X	X	X	antarctic winter waters
2	140			X		X	X	X	antarctic winter waters
1	300			X		X	X	X	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#35 (S5, Inc. Pedro & Cd-isot.) 10-300 m

Parameters sampled in the trace metals & 15N incubations Pedro using Go-Flo (GF35)

Added concentrations: 2 nM Fe, ?? 15N

Treatment	Day sampled	ICPMS	15N	Flow
	0	200 ml		1 ml
	1	200 ml		1 ml
	2	200 ml		1 ml
	3	200 ml		1 ml
	4	200 ml		1 ml
	5	200 ml		1 ml
	6	200 ml		1 ml

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#36 (S5, TM's & Cd-isot.) 30-750 m

Station N°: S5
GO-FLO N°: GF36
Closer CTD N°: 108
Station N°: 78

Date start (UTC): 08/03/16 **Date end (UTC): 08/03/16**
Starting time (UTC): 15H43 **Position start (°'): 57°33.1401 S, 00°02.1910 W**
Ending time (UTC): 17H20 **Position end (°'): 57°33.154 S, 00°02.193 W**
Bottom depth (m): 3950
Total lenght of cable out (m): 757 + 50 m

in the weddel gyre

Cast responsible: Marie Boye

GO-FLO bottle number	Target depth (m)	TFeII	TM (ICPMS: 250 ml)	TAl (125 ml PMP bottles)	TFe (FIA)		DFe	OrgaCo (250 ml)	DZn/ Co/ Cd (volt: 250 ml)	DM (ICPMS: 250 ml)	OrgaM (2*500 ml)	DAl (125 ml PMP)	Cd-isotopes (1L)	DMetals (R. Losno)	Soluble Fe	NO3	S	micro cat	COMMENTS
10	30	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	max fluo
9	60	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	max fluo
8	120	X	X	X	X		X	X	X	X	X	X			X	x	x	X	antarctic winter waters
7	140	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	antarctic winter waters
6	190	X	X	X	X		X	X	X	X	X	X			X	X	X	X	base of the antarctic winter waters
5	250	X	X		X		X	X	X	X	X				X	X	X	X	
4	350	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	
3	450	X	X		X		X	X	X	X	X				X	X	X	X	
2	550	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	
1	750				X		X	X	X	X	X		X		X	X	X	X	

with microcat!!!!!

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#37 (S5, Fe-isot.) 25-2100 m

Station N°: S5
GO-FLO N°: GF37
Closer CTD N°: 109
Station N°: 78

Date start (UTC): 08/03/16
Starting time (UTC): 19H20
Ending time (UTC): 21H34
Bottom depth (m): 3950
Total lenght of cable out (m):

Date end (UTC): 08/03/16
Position start (°'): 57°33.143 S, 00°02.193 W
Position end (°'): 57°33.140 S, 00°02.190 W

Cast responsible: François Lacan

GO-FLO bottle number	Target depth (m)	T&DFe-isotopes	NO3	S	COMMENTS
10	25	x	x	x	chloro
2	35	x	x	x	chloro
8	75	x	x	x	
7	85	x	x	x	WW
6	140	x	x	x	
5	200	x	x	x	
4	400	x	x	x	
3	700	x	x	x	
9	1200	x	x	x	
1	2100	x	x	x	

BONUS-GOODHOPE
RV Marion-Dufresne

FICHE PRELEVEMENTS GF#38 (S5, Large Volumes Sampling) Fluo. Max.

Station N°: S5
GO-FLO N°: GF38
Closer CTD N°: 110
Station N°: 78

Date start (UTC): 08/03/17 — **Date end (UTC): 08/03/17**
Starting time (UTC): 08H02 — **Position start (°'): 57°33.040 S, 00°03.048 W**
Ending time (UTC): 08H50 — **Position end (°'): 57°33.040 S, 00°03.049 W**
Bottom depth (m):
Total lenght of cable out (m):

Cast responsible: Marie Boye

in the weddel gyre

Large volume sampling in the Chl-a maximum (filtered O.2 microm)
10 GOFLO bottles (5 for Marie, 5 for Géraldine)