E.2 Lead Project Scientist

E.2.1 Preflight

___ 1. Participate in general mission briefing.

___ 2. Determine specific mission and flight requirements for assigned aircraft.

___ 3. Determine from field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist unless briefed otherwise by field program director.

___ 4. Contact HRD members of crew to:
   a. Assure availability for mission.
   b. Review filed program safety checklist
   c. Arrange ground transportation schedule when deployed.
   d. Determine equipment status.

___ 5. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.

___ 5. Meet with AOC flight crew at least 2 hours before take-off for crew briefing. Provide copies of flight requirements and provide a formal briefing for the flight director, navigator, and pilots.

___ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center (MGOC in Miami).

___ 7. *Before take-off,* brief the on-board GPS dropsonde operator on times and positions of drop times.

___ 8. Perform a radio check with headsets. Make sure everyone's headsets is work properly.

___ 9. Collect "mess" fee ($2.00) from all on-board HRD flight crew members

E.2.2 In-Flight

___ 1. Confirm from AOC flight director that satellite data link is operative (information).

___ 2. Confirm camera mode of operation.

___ 3. Confirm data recording rate.

___ 4. Complete Form E-2.

___ 5. Check in with the flight director to make sure the mission is going as planned (i.e. turns are made when they are supposed to be made).

E.2.3 Post flight

___ 1. Debrief scientific crew.

___ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, *etc.*) remaining aboard the aircraft to MGOC.

___ 3. Gather completed forms for mission and turn in at the appropriate operations center. [**Note**: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]

___ 4. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.

___ 5. Determine next mission status, if any, and brief crews as necessary.

___ 6. Notify MGOC as to where you can be contacted and arrange for any further coordination required.

___ 7. Prepare written mission summary using form E-2 p.3 (due to Field Program Director1 week after the flight).

Lead Project Scientist Check List

Date 21/08/03 **Aircraft** N42RF **Flight ID** 030821H

A. —Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	Chang / Gamache / Aberson	Flight Director	Shepherd / Flaherty
Cloud Physics	Bob Black	Pilots	Tennesen / DeBeest
Radar	Gamache	Navigator	Adler / Newman
Workstation	Aberson / Gamache	Systems Engineer	Wade
Photographer/Observer		Data Technician	McMillan
Dropwindsonde	Aberson / Gamache	Electronics Technician	Halverson / Peck
AXBT/AXCP/Guest	Esteban / Kerr	Other	

Take-Off: 170522 Location: MacDill Landing: ~212000 Location: MacDill

Number of Eye Penetrations: 0

B. —Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

C. —Mission Briefing:

D. —Equipment Status (Up ↑, Down ↓, Not Available —, Not Used **O**)

Equipment	Pre-Flight	In-Flight	Post-Flight	# of DATs or Expendables
Aircraft	↑	↑		
Radar/LF	↑	↑		
Radar/TA (Doppler)	↑	↑		
Cloud Physics	↑	↑		
Data System	↑	↑		
GPS sondes	↑			2
AXBT/AXCP	↑			4
Workstation	?	↓		1
Videography	↑			1

REMARKS: workstation on, unknown status before in-flight ~~tst~~

Lead Project Scientist Event Log

Date 21/08/08 **Flight** 030821H **LPS** Chang/Gamache/Aberson

Time	Event	Position	Comments
~1709	Right turn		Over Sunshine Skyway
171207	Left turn	27° 40' 82° 49'	Toward CIEAR, then IP
~1720 - 1725	Deviation in track		Around line of convection
172645	Descent to 5000'	27° 44' 83° 55'	
174713 - 174730	10° wingwags 5 cycles	26° 52' 84° 58'	
174841	Track 220°, climb to 8000'	26° 49' 85° 5'	IP
175123	Turn to avoid convection	26° 43' 85° 10'	Circle for 43-rendezvous
175443	Radar stopped updating	26° 43' 85° 6'	Reset
175717	Track 228°	26° 40' 85° 12'	Then turn to avoid convection
180400	Track 110° → 140°	26° 38' 85° 27'	26° 31' 85° 23' new IP due to convection
180645	Convection	26° 36' 85° 25'	
180715	Turn to 160°	26° 33' 85° 24'	Get ready for coördination
181001	Turn ~~left~~ right to 270°	26° 26' 85° 18'	Change due to convection
181115	Turn right & left	26° 26' 85° 23'	Coordination
181439	Turn to 225°	26° 23' 85° 30'	To begin leg
181545	Convection	26° 20' 85° 34'	
181715	Drop / BT	26° 16' 85° 38'	~~Reset~~
181743	Drop	26° 15' 85° 39'	
181815	Drop	26° 14' 85° 40'	
181845	Drop	26° 13' 85° 42'	
181915	Drop	26° 11' 85° 43'	
181930	Drop	26° 10' 85° 44'	
181945	Drop	26° 10' 85° 45'	
182000	BT / Sonobuoy drop	26° 9' 85° 46'	Channel 16 ~~[illegible]~~ ~29.5° C
182447	Right to ~~[illegible]~~ 270°	25° 56' 85° 59'	Eye orbit
182547	Right to 360°	25° 57' 86° 5'	
182801	Right to 045°	26° 3' 86° 5'	

27° 20'
085° 22' } IP
for step from 42

Lead Project Scientist Event Log

Date 21/08/03 **Flight** 030821H **LPS** Chang/Gamache/Aberson

Time	Event	Position	Comments
182935	Turn to 90°	26° 8′ 86° 1′	1833 projected start of outbound leg
183115	Turn to 175°→225°	26° 8′ 85° 53′	
183245	Turn to 180°	26° 3′ 85° 53′	
183315	Turn to 225°→224°	26° 1′ 85° 53′	To begin leg
183550	BT only	25° 54′ 86° 0′	BT Channel 12 ~29.5°C
183605	Drop	25° 53′ 86° 1′	
183620	Drop	25° 53′ 86° 2′	
183635	Drop	25° 52′ 86° 2′	
183705	Drop	25° 51′ 86° 4′	
183735	Drop	25° 50′ 86° 5′	
183805	Drop	25° 49′ 86° 6′	
183835	Drop	25° 47′ 86° 8′	End of sequence
184122	Convection	25° 40′ 86° 16′	Bumpy
184600	Turn to 030°	25° 27′ 86° 30′	Toward IP
191225	Convection	27° 00′ 85° 34′	
191600	Turn to 325°		For new IP due to convection
192054	Start circling	27° 21′ 85° 48′	For coördination
192210	Right turn to start	27° 19′ 85° 52′	Outbound track 120° 27° 15′ 85° 37′ new IP
192545	Left turn to start	27° 17′ 85° 51′	For coördination
192647	Right turn	27° 18′ 85° 47′	To start
192910	43-start leg	27° 15′ 85° 36′	
192950	Sonobuoy	27° 15′ 85° 35′	
193423	Convection	27° 6′ 85° 17′	
193519	Sonobuoy	27° 4′ 85° 14′	Failed, may not have gone out
193537	Convection	27° 3′ 85° 12′	
193857	Right turn	26° 57′ 85° 0′	300° out bound track
194405	43-start leg	27° 2′ 85° 16′	

Lead Project Scientist Event Log

Date _____ **Flight** _____ **LPS** _____

Time	Event	Position	Comments
194950	Left turn to 210°	27° 13' 85° 37'	Out bound leg
195032	43 - start leg	27° 10' 85° 43'	
195530	Turn to 030° (left)	26° 55' 85° 51'	Sonobuoy Channel 12
195800	Sonobuoy	26° 58' 85° 44'	Did not go out
200130	Turn left	27° 12' 85° 36'	
200115	43 - end leg	27° 13' 85° 37'	Descend to 3000 ft for field min test
200730	Turn right to 190°	27° 34' 85° 34'	
201417	Climb to 13000'	27° 13' 85° 42'	
202200	Turn right 70°	27° 4' 86° 0'	13000 ft for field melt test
202909	Descend to 11 500 ft	27° 13' 85° 29'	
205900			Lots of sodBe in line of thunderstorms off coast
210205	Convection	27° 26' 82° 50'	Just off Anna Maria Island
210349	Turn left to McDill	27° 28' 82° 42'	Part convection
211023	Radar recording off	27° 45' 82° 24'	

Mission Summary
Storm name
YYMMDDA# Aircraft 4__RF

Scientific Crew (4 RF)

Lead Project Scientist Chang / Gamache / Aberson
Radar Scientist Gamache
Cloud Physics Scientist RBlack
Dropwindsonde Scientist Aberson / Gamache
Boundary-Layer Scientist —
Workstation Scientist Gamache / Aberson
Observers —

Mission Briefing: (include sketch of proposed flight track or page #)

Mission Synopsis: (include plot of actual flight track)

Evaluation: (did the experiment meet the proposed objectives?)

Problems:(list all problems)

N43RF 10 min delay. Decided to proceed to at least test field mdls for Bob Black.
Initial workstation test failed.

E.2 Lead Project Scientist

E.2.1 Preflight

____ 1. Participate in general mission briefing.

____ 2. Determine specific mission and flight requirements for assigned aircraft.

____ 3. Determine from field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist unless briefed otherwise by field program director.

____ 4. Contact HRD members of crew to:
   a. Assure availability for mission.
   b. Review filed program safety checklist
   c. Arrange ground transportation schedule when deployed.
   d. Determine equipment status.

____ 5. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.

____ 5. Meet with AOC flight crew at least 2 hours before take-off for crew briefing. Provide copies of flight requirements and provide a formal briefing for the flight director, navigator, and pilots.

____ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center (MGOC in Miami).

____ 7. *Before take-off,* brief the on-board GPS dropsonde operator on times and positions of drop times.

____ 8. Perform a radio check with headsets. Make sure everyone's headsets is work properly.

____ 9. Collect "mess" fee ($2.00) from all on-board HRD flight crew members

E.2.2 In-Flight

____ 1. Confirm from AOC flight director that satellite data link is operative (information).

____ 2. Confirm camera mode of operation.

____ 3. Confirm data recording rate.

____ 4. Complete Form E-2.

____ 5. Check in with the flight director to make sure the mission is going as planned (i.e. turns are made when they are supposed to be made).

E.2.3 Post flight

____ 1. Debrief scientific crew.

____ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, *etc.*) remaining aboard the aircraft to MGOC.

____ 3. Gather completed forms for mission and turn in at the appropriate operations center. [**Note**: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]

____ 4. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.

____ 5. Determine next mission status, if any, and brief crews as necessary.

____ 6. Notify MGOC as to where you can be contacted and arrange for any further coordination required.

____ 7. Prepare written mission summary using form E-2 p.3 (due to Field Program Director1 week after the flight).

Form E-2
Page 1 of 5

Lead Project Scientist Check List

Date 21 AUG 2003 **Aircraft** N42RF **Flight ID** 030821H

A. —Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	P.CHANG/ABERSON/GAMACHE	Flight Director	SHEPHERD / FLAHERTY
Cloud Physics	R. BLACK	Pilots	TENNESEN/TEBEEST,
Radar	GAMACHE	Navigator	ADLER / NEWMAN
Workstation		Systems Engineer	McMILLAN.
Photographer/Observer		Data Technician	
Dropwindsonde		Electronics Technician	HAWERSIN ~~PEER~~
AXBT/AXCP/Guest	GAMACHE	Other	S. WADE (FLT ENG) KERR

U MASS (FREEK, ESTEBAN)

Take-Off: 170522 Location: MACDILL Landing: N/20 Location: MACDILL

Number of Eye Penetrations: 0

B. —Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

C. —Mission Briefing:

1) FLY OUT TO BUOY
2) DO 12 SONDE (8 ON 42, 4 ON 43) FROM NE OF BUOY
3) FIND SPOT FOR IP NEAR CONVECTION TO SIMULATE MOAT IN HURRICANE
4) FLY TOP OF 3 LEVEL "L" PATTERN FOR 43 ONLY DO ONE L
5) FIND CLEAR SPOT FOR BOB BLACK FIELD MILL CALIB AT 5, 10, & 15,000 FT
6) RTB

D. —Equipment Status (Up ↑, Down ↓, Not Available —, Not Used **O**)

Equipment	Pre-Flight	In-Flight	Post-Flight	# of DATs or Expendables
Aircraft	✓	✓	✓	
Radar/LF	?	✓	✓	
Radar/TA (Doppler)	?	✓	✓	
Cloud Physics	?		✓	
Data System	✓	✓	✓	
GPS sondes	?	✓	✓	
AXBT/AXCP	?	✓	✓	
Workstation	~~NO~~ NO	WORKING	MONITOR	
Videography	✓	✓	✓	

REMARKS:

MOST DIFFICULTY WITH CONV AT ID OF 12 DROP INBOUND.

PILOTS CONCERNED THAT WE MIGHT WANT 42 TO BE A LITTLE FARTHER BEHIND 43.

Lead Project Scientist Event Log

Date 21 AUG 2013 **Flight** 030821 H **LPS** P. CHANG / ANDERSON / GAMACHE

Time	Event	Position	Comments
170522	T/O	MACDILL	
174830		26°50' 85°2'	PAUL CHANG ← POST SPUNDED
			ROLL MANEUVERS
174920	TURN/ASCENT	26°49' 85°5'	TRACK 222 TO 8000 FT
180727		26°33' 85°23'	MANEUVERING FOR IP
			WEATHER ROUGH AT ORIG IP
181457		26°21' 85°32'	IP? OF 12 SONDE PATTERN (INBOUND)
181717		26°16' 85°38'	REAL SONDE
181747		26°15 85°39'	SIM SONDE
181816		26°14' 85°41'	" "
181846		26°13' 85°42'	" "
181916		26°11 85°44	" "
181933		26°10 85°44	" "
181945		26°10 85°45	" "
182000		26°9' 85°46'	AXBT & SIM SONDE
182145		26°4' 85°51'	CIRCLING FOR SIMULATED EYE
183548		25°54' 85°0'	AXBT & SIM SONDE (BEGIN OUTBOUND)
183505		25°54' 86°07'	" "
183616		25°53 86°1	SIM SONDE
183636		25°52' 86°2'	"
183703		25°51' 86°4'	"
183733		25°50' 86°5'	"
183802		25°48 86°6'	"
183836		25°47' 86°8'	REAL SONDE
184720		25°29' 86°32'	END LEG HEADING FOR
			3-LEVEL STAIRSTEP IP

Lead Project Scientist Event Log

Date 21 AUG 2003 **Flight** 030821H **LPS** P. CHANG/ABERSON/GAMACHE

Time	Event	Position	Comments
192948	LAUNCH SONOBUOY	27°15' 85°35'	SONOBUOY OUT TRACK 120°
193520	" "	27° 4' 85°14'	SONOBUOY OUT (MAY NOT HAVE GONE OUT)
193840	TURN	26°57' 85° 0'	TO TRACK 300
194405			START DOWNWIND LEG
194950	TURN	27°13' 85°38'	TURNING 210° - X WIND
			SONOBUOY CHANNEL 12
195800	LAUNCH SONOBUOY	27° 0' 85°43'	THIS ONE IS OUT
200311	DESCENT TO 3000'	27° 18' 85°38'	WILL DO BOB BLACKS FIELD MILL CALIB
200955	FIELD MILL RUN	27°25' 85°36'	TRACK 200° BOB BLACK RUNNING 3000 ft calib
201420	CLIMBING TO 8,000ft	27°11' 85°42'	BOB GOT 3,000ft data
202332	FIELD MILL RUN AT 3,000 ft	27° 7 85°55'	FIELD MILL CALIB TRACK 075°
202920	END RUN	27°14' 85°28'	END RUN RTB