

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1609
CALIBRATION DATE: 19-Feb-10

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.86639641e-003
h = 6.80487398e-004
i = 2.64476244e-005
j = 2.05859135e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121062e-003
b = 6.03726741e-004
c = 1.50112787e-005
d = 2.06003875e-006
f0 = 6399.680

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6399.680	-1.4999	0.00012
1.0000	6766.178	0.9999	-0.00010
4.5000	7304.319	4.4998	-0.00016
8.0000	7872.374	7.9999	-0.00012
11.4999	8471.137	11.5001	0.00024
15.0000	9101.329	15.0004	0.00040
18.5000	9763.478	18.4997	-0.00034
22.0000	10458.650	21.9999	-0.00014
25.5000	11187.340	25.5000	0.00003
29.0000	11950.162	29.0000	0.00004
32.5000	12747.759	32.5000	0.00002

Temperature ITS-90 = $1/\{g + h[\ln(f_0/f)] + i[\ln^2(f_0/f)] + j[\ln^3(f_0/f)]\} - 273.15$ (°C)

Temperature IPTS-68 = $1/\{a + b[\ln(f_0/f)] + c[\ln^2(f_0/f)] + d[\ln^3(f_0/f)]\} - 273.15$ (°C)

Following the recommendation of JPOTS: T_{68} is assumed to be $1.00024 * T_{90}$ (-2 to 35 °C)

Residual = instrument temperature - bath temperature

