

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1609
CALIBRATION DATE: 24-Aug-10

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.86632484e-003
h = 6.80390146e-004
i = 2.63998035e-005
j = 2.05068003e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121068e-003
b = 6.03725507e-004
c = 1.50075681e-005
d = 2.05212699e-006
f0 = 6399.624

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6399.624	-1.4999	0.00012
1.0000	6766.119	0.9999	-0.00010
4.5000	7304.260	4.4999	-0.00014
8.0001	7872.334	8.0000	-0.00006
11.5001	8471.083	11.5002	0.00013
15.0001	9101.277	15.0005	0.00042
18.5001	9763.432	18.4998	-0.00028
22.0001	10458.585	21.9999	-0.00017
25.5001	11187.278	25.5001	0.00001
29.0001	11950.114	29.0002	0.00007
32.5001	12747.705	32.5001	0.00001

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

