

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0436
CALIBRATION DATE: 01-May-04

SBE19 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.20247104e-003
h = 6.15567824e-004
i = 1.04810441e-005
j = -4.95434793e-007
f0 = 1000.0

ITS-68 COEFFICIENTS

a = 3.64763132e-003
b = 5.95255224e-004
c = 1.18689471e-005
d = -4.94579453e-007
f0 = 2499.909

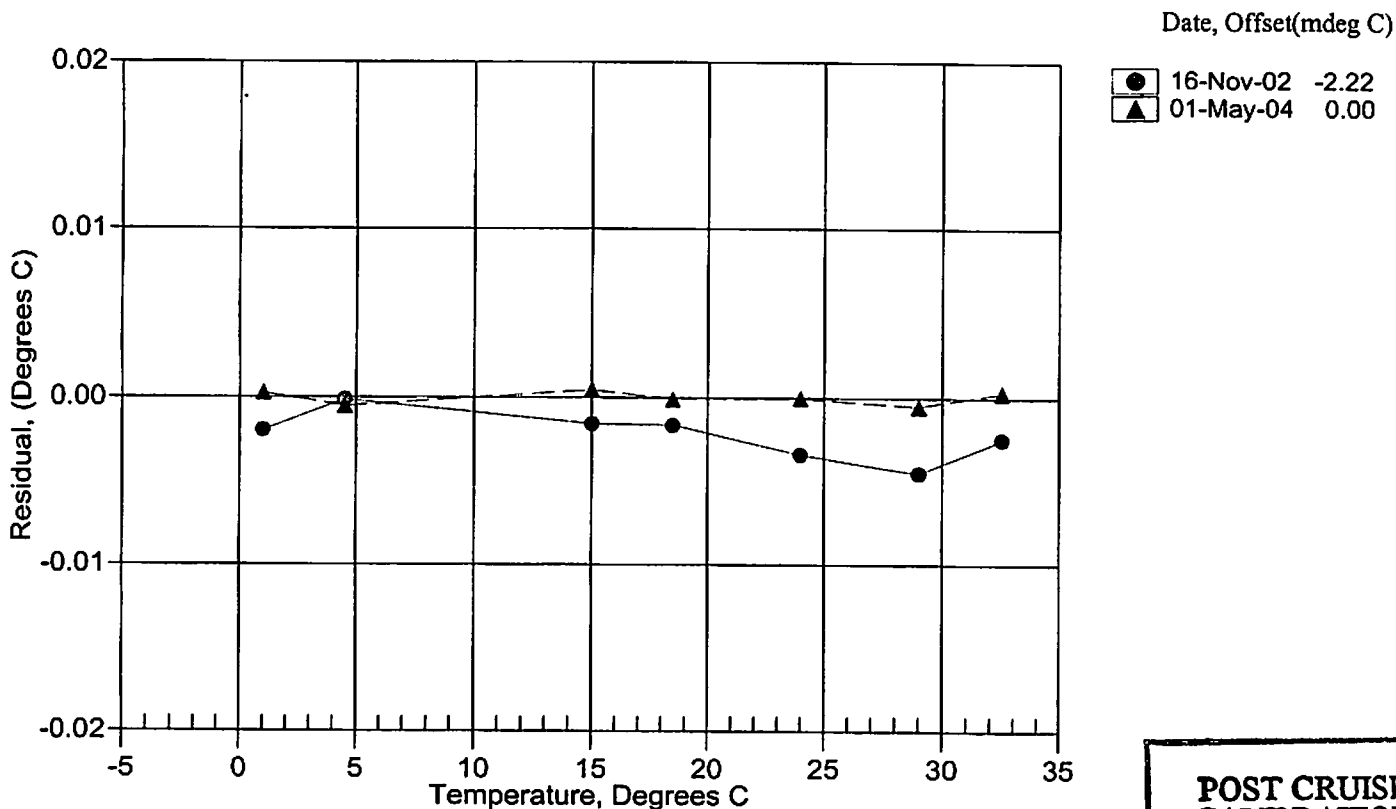
BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	2499.909	1.0003	0.00027
4.5000	2700.999	4.4995	-0.00050
15.0000	3373.208	15.0005	0.00047
18.5000	3621.186	18.4999	-0.00007
24.0000	4036.298	24.0000	-0.00002
29.0000	4441.398	28.9995	-0.00048
32.5000	4741.276	32.5003	0.00033

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

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

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

Residual = instrument temperature - bath temperature



**POST CRUISE
CALIBRATION**