

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 2130
CALIBRATION DATE: 22-Jun-05

SBE21 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

$g = 4.15938280e-003$
 $h = 5.96620837e-004$
 $i = 4.50419801e-006$
 $j = -1.68305727e-006$
 $f_0 = 1000.0$

ITS-68 COEFFICIENTS

$a = 3.64763521e-003$
 $b = 5.85186207e-004$
 $c = 8.89745006e-006$
 $d = -1.68261592e-006$
 $f_0 = 2375.521$

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	2375.521	1.0000	-0.00002
4.5000	2570.005	4.5000	0.00004
15.0000	3220.779	14.9999	-0.00011
18.5000	3461.247	18.5001	0.00006
24.0000	3864.084	24.0001	0.00011
29.0000	4257.668	28.9998	-0.00016
32.5000	4549.242	32.5001	0.00006

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 ITS-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

Date, Offset(mdeg C)

● 25-Jan-96 -4.89
▲ 22-Jun-05 -0.00

