

SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington, 98005 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1008
CALIBRATION DATE: 19-Sep-07

SBE3 TEMPERATURE CALIBRATION DATA
IPTS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.80489081e-003
h = 6.75371621e-004
i = 2.73570389e-005
j = 2.25073344e-006
f0 = 1000.0

ITS-68 COEFFICIENTS

a = 3.68121207e-003
b = 5.99750023e-004
c = 1.54159282e-005
d = 2.25222828e-006
f0 = 5885.576

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	5885.576	-1.5000	0.00002
1.0000	6224.976	1.0000	-0.00001
4.5000	6723.584	4.5000	-0.00003
8.0000	7250.246	8.0000	0.00002
11.5000	7805.687	11.5000	0.00000
15.0000	8390.649	15.0000	0.00004
18.5000	9005.806	18.5000	-0.00002
22.0000	9651.863	22.0000	-0.00001
25.5000	10329.452	25.5000	-0.00001
29.0000	11039.204	29.0000	0.00001
32.5000	11781.704	32.5000	0.00000

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

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

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

Residual = instrument temperature - bath temperature

