

# 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: 1324  
CALIBRATION DATE: 25-Jun-96

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.85855941e-003  
h = 6.79997768e-004  
i = 2.89018905e-005  
j = 2.51445420e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68159870e-003  
b = 5.98925181e-004  
c = 1.49489096e-005  
d = 2.51594610e-006  
f0 = 6380.733

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5285	6380.733	-1.5285	-0.00002
1.0321	6758.405	1.0322	0.00000
4.6059	7312.091	4.6060	0.00007
8.1116	7886.072	8.1116	0.00000
11.6146	8490.924	11.6146	-0.00005
15.1749	9138.535	15.1748	-0.00007
18.6375	9800.916	18.6375	0.00003
22.1384	10503.909	22.1384	0.00005
25.6657	11246.721	25.6656	-0.00002
29.1370	12012.267	29.1370	0.00002
32.6118	12813.404	32.6117	-0.00002

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

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

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

Residual = instrument temperature - bath temperature

