

# SEA-BIRD ELECTRONICS, INC.

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ENTERED  
FEB 04 2005

SENSOR SERIAL NUMBER: 4325  
CALIBRATION DATE: 22-Dec-04

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

### ITS-90 COEFFICIENTS

g = 4.34857346e-003  
h = 6.46525222e-004  
i = 2.27786418e-005  
j = 1.87255047e-006  
f0 = 1000.0

### ITS-68 COEFFICIENTS

a = 3.68121132e-003  
b = 6.04392138e-004  
c = 1.68015233e-005  
d = 1.87410947e-006  
f0 = 2912.343

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.4999	2912.343	-1.4999	-0.00003
1.0001	3078.988	1.0002	0.00006
4.5002	3323.739	4.5002	-0.00003
8.0001	3582.195	8.0001	-0.00001
11.5002	3854.749	11.5001	-0.00006
15.0001	4141.757	15.0002	0.00009
18.5002	4443.572	18.5002	-0.00002
22.0001	4760.541	22.0001	0.00002
25.5001	5093.010	25.5001	0.00002
29.0002	5441.297	29.0001	-0.00008
32.5001	5805.720	32.5001	0.00004

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)

● 16-Jul-04 0.42  
▲ 22-Dec-04 0.00

