

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1324  
CALIBRATION DATE: 07-May-98

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.85874726e-003  
h = 6.80210330e-004  
i = 2.89843695e-005  
j = 2.52614751e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68156195e-003  
b = 5.98950548e-004  
c = 1.49658806e-005  
d = 2.52764189e-006  
f0 = 6381.154

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5257	6381.154	-1.5258	-0.00004
1.0353	6758.901	1.0354	0.00002
4.6094	7312.638	4.6094	0.00008
8.1160	7886.783	8.1160	0.00001
11.6199	8491.800	11.6198	-0.00006
15.1806	9139.514	15.1805	-0.00009
18.6442	9802.118	18.6442	0.00003
22.1449	10505.106	22.1449	0.00003
25.6724	11248.012	25.6725	0.00003
29.1439	12013.608	29.1439	0.00003
32.6190	12814.850	32.6190	-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

