

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1049  
CALIBRATION DATE: 31-May-97

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.84698453e-003  
h = 6.77266670e-004  
i = 2.69709912e-005  
j = 2.17207584e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68162913e-003  
b = 6.00371776e-004  
c = 1.50411697e-005  
d = 2.17353172e-006  
f0 = 6264.847

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5307	6264.847	-1.5307	-0.00001
1.0308	6634.880	1.0308	-0.00001
4.6046	7177.107	4.6046	0.00002
8.1110	7739.254	8.1111	0.00002
11.6149	8331.597	11.6149	-0.00001
15.1754	8965.655	15.1754	-0.00004
18.6388	9614.236	18.6388	-0.00003
22.1400	10302.489	22.1401	0.00005
25.6676	11029.739	25.6677	0.00003
29.1392	11779.213	29.1392	-0.00003
32.6142	12563.624	32.6142	-0.00000

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

