

# SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington 98005 USA  
Phone: (425) 643 - 9866 Fax: (425) 643 - 9954 Internet: seabird@seabird.com

SENSOR SERIAL NUMBER = 1652  
CALIBRATION DATE: 14-Nov-00s

TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

$g = 4.83623376e-03$   
 $h = 6.76388749e-04$   
 $i = 2.51667248e-05$   
 $j = 1.85865205e-06$   
 $f_0 = 1000.000$

## IPTS-68 COEFFICIENTS

$a = 3.68126845e-03$   
 $b = 6.03592480e-04$   
 $c = 1.50819653e-05$   
 $d = 1.86007679e-06$   
 $f_0 = 6132.092$

BATH TEMP (ITS-90 °C)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90 °C)	RESIDUAL (ITS-90 °C)
-1.5043	6132.092	-1.5041	0.00011
1.0569	6492.140	1.0569	-0.00009
4.6315	7019.738	4.6313	-0.00014
8.1382	7566.456	8.1381	-0.00005
11.6405	8142.037	11.6406	0.00010
15.2009	8758.170	15.2012	0.00032
18.6643	9388.110	18.6642	-0.00009
22.1645	10056.237	22.1642	-0.00021
25.6919	10762.265	25.6918	-0.00002
29.1622	11489.464	29.1622	0.00003
32.6365	12250.475	32.6365	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 IPTS-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

