

# Sea-Bird GmbH

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SENSOR SERIAL NUMBER: 2492  
CALIBRATION DATE: 04-Apr-13

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.40010680e-003  
h = 6.61196033e-004  
i = 2.57516511e-005  
j = 2.44348884e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121193e-003  
b = 6.12443120e-004  
c = 1.74836946e-005  
d = 2.44519644e-006  
f0 = 3101.247

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3101.247	-1.5000	0.00003
1.0000	3276.298	1.0000	-0.00001
4.5000	3533.188	4.4999	-0.00006
8.0000	3804.211	8.0000	-0.00001
11.5000	4089.724	11.5000	0.00002
15.0000	4390.080	15.0001	0.00006
18.5000	4705.614	18.5000	0.00003
22.0000	5036.658	22.0000	-0.00002
25.5000	5383.532	25.5000	-0.00005
29.0000	5746.540	29.0000	-0.00003
32.5000	6125.973	32.5000	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

