

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0701
CALIBRATION DATE: 07-Feb-14

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.81806809e-003
h = 6.80471263e-004
i = 3.03817551e-005
j = 2.79718803e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121180e-003
b = 5.98731011e-004
c = 1.53862443e-005
d = 2.79875474e-006
f0 = 5990.663

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	5990.663	-1.5000	0.00004
1.0000	6336.730	1.0000	0.00002
4.5000	6845.163	4.4999	-0.00008
8.0000	7382.245	7.9999	-0.00010
11.5000	7948.725	11.5000	-0.00001
15.0000	8545.308	15.0001	0.00011
18.5000	9172.662	18.5002	0.00016
22.0000	9831.440	22.0001	0.00009
25.5000	10522.253	25.4998	-0.00015
29.0001	11245.772	28.9998	-0.00031
32.5000	12002.640	32.5002	0.00023

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

