

Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, WA 98005-2010 USA
 Phone: (+1) 425-643-9866 Fax (+1) 425-643-9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1371
 CALIBRATION DATE: 10-Jan-14

SBE3 TEMPERATURE CALIBRATION DATA
 ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.83528507e-003
 h = 6.79361369e-004
 i = 2.68720765e-005
 j = 2.13820634e-006
 f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121160e-003
 b = 6.03256301e-004
 c = 1.52912888e-005
 d = 2.13968442e-006
 f0 = 6108.329

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6108.329	-1.4999	0.00005
1.0000	6458.450	1.0000	-0.00005
4.5000	6972.590	4.4999	-0.00005
8.0000	7515.376	8.0000	-0.00000
11.5000	8087.542	11.5000	0.00002
15.0000	8689.813	15.0000	0.00002
18.5000	9322.899	18.5001	0.00005
22.0000	9987.462	22.0001	0.00006
25.5000	10684.143	25.5000	-0.00001
29.0000	11413.543	28.9998	-0.00023
32.5000	12176.419	32.5001	0.00014

$$\text{Temperature ITS-90} = 1/\{g + h[\ln(f_0/f)] + i[\ln^2(f_0/f)] + j[\ln^3(f_0/f)]\} - 273.15 \text{ (}^\circ\text{C)}$$

$$\text{Temperature IPTS-68} = 1/\{a + b[\ln(f_0/f)] + c[\ln^2(f_0/f)] + d[\ln^3(f_0/f)]\} - 273.15 \text{ (}^\circ\text{C)}$$

Following the recommendation of JPOTS: T_{68} is assumed to be $1.00024 * T_{90}$ (-2 to 35 °C)

Residual = instrument temperature - bath temperature

