

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 6353  
CALIBRATION DATE: 07-Dec-11

SBE19plus TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

a0 = 1.280440e-003  
a1 = 2.594982e-004  
a2 = -1.672918e-007  
a3 = 1.448682e-007

BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	647461.322	1.0000	0.0000
4.5000	574643.322	4.5000	-0.0000
15.0000	393518.017	15.0000	0.0000
18.5000	344867.932	18.5000	0.0000
24.0000	278881.322	23.9999	-0.0001
29.0000	228737.441	29.0000	0.0000
32.5000	198506.356	32.5000	0.0000

$$MV = (n - 524288) / 1.6e+007$$

$$R = (MV * 2.900e+009 + 1.024e+008) / (2.048e+004 - MV * 2.0e+005)$$

$$\text{Temperature ITS-90} = 1 / \{a_0 + a_1[\ln(R)] + a_2[\ln^2(R)] + a_3[\ln^3(R)]\} - 273.15 \text{ (}^\circ\text{C)}$$

$$\text{Residual} = \text{instrument temperature} - \text{bath temperature}$$

