



Sea-Bird GmbH  
 Postfach 1167  
 87401 Kempten  
 Germany

+49 831 9 60994 701  
 seabird.eu@seabird.com  
 www.seabird.com

SENSOR SERIAL NUMBER: 6244  
 CALIBRATION DATE: 19-Jan-23

SBE 19plus V2 TEMPERATURE CALIBRATION DATA  
 ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

a0 = 1.315697e-003  
 a1 = 2.514556e-004  
 a2 = 7.803156e-007  
 a3 = 1.074303e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	627462.864	1.0001	0.0001
4.5000	555843.492	4.4999	-0.0001
15.0000	378599.983	15.0000	0.0000
18.5000	331214.356	18.5000	0.0000
24.0000	267090.983	24.0000	0.0000
29.0000	218482.492	28.9998	-0.0002
32.4997	189223.729	32.4998	0.0001

n = Instrument Output (counts)

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

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

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

$$\text{Residual (°C)} = \text{instrument temperature} - \text{bath temperature}$$

