

SEA-BIRD ELECTRONICS, INC.
 1808 136th Place N.E., Bellevue, Washington, 98005 USA
 Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 6047
 CALIBRATION DATE: 11-May-08

SBE16plus TEMPERATURE CALIBRATION DATA
 ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 1.287782e-003
 a1 = 2.582246e-004
 a2 = 1.185527e-007
 a3 = 1.362299e-007

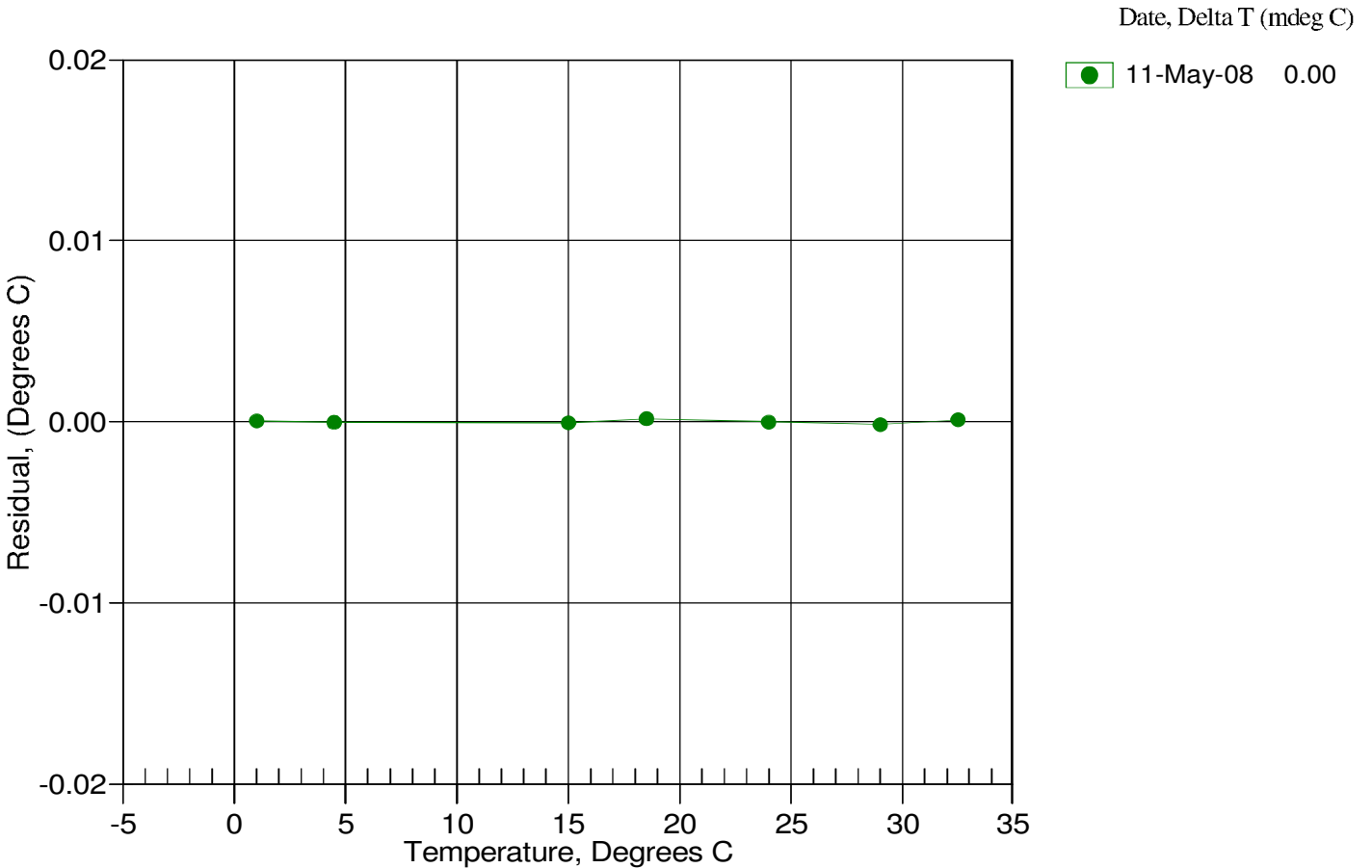
| BATH TEMP (ITS-90) | INSTRUMENT OUTPUT(n) | INST TEMP (ITS-90) | RESIDUAL (ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| 1.0000 | 627557.182 | 1.0000 | 0.0000 |
| 4.5000 | 556356.818 | 4.4999 | -0.0001 |
| 15.0000 | 379951.455 | 14.9999 | -0.0001 |
| 18.5000 | 332718.182 | 18.5001 | 0.0001 |
| 24.0000 | 268743.545 | 24.0000 | -0.0000 |
| 29.0000 | 220187.727 | 28.9998 | -0.0002 |
| 32.5001 | 190929.455 | 32.5002 | 0.0001 |

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

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

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

Residual = instrument temperature - bath temperature



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SBE16plus CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.000180e+000
h = 1.445345e-001
i = -4.137279e-004
j = 5.191335e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006

| BATH TEMP (ITS-90) | BATH SAL (PSU) | BATH COND (Siemens/m) | INST FREQ (Hz) | INST COND (Siemens/m) | RESIDUAL (Siemens/m) |
|-----------------------|-------------------|--------------------------|-------------------|--------------------------|-------------------------|
| 22.0000 | 0.0000 | 0.00000 | 2637.26 | 0.0000 | 0.00000 |
| 1.0000 | 34.7172 | 2.96830 | 5253.44 | 2.9683 | 0.00002 |
| 4.5000 | 34.6973 | 3.27460 | 5451.88 | 3.2746 | -0.00002 |
| 15.0000 | 34.6541 | 4.25382 | 6041.95 | 4.2538 | -0.00001 |
| 18.5000 | 34.6442 | 4.59800 | 6235.82 | 4.5980 | 0.00001 |
| 24.0000 | 34.6328 | 5.15434 | 6536.69 | 5.1544 | 0.00001 |
| 29.0000 | 34.6250 | 5.67450 | 6805.58 | 5.6745 | -0.00001 |

$$f = \text{INST FREQ} / 1000.0$$

$$\text{Conductivity} = (g + hf^2 + if^3 + jf^4) / (1 + \delta t + \epsilon p) \text{ Siemens/meter}$$

t = temperature[°C]; p = pressure[decibars]; δ = CTcor; ϵ = CPcor;

Residual = instrument conductivity - bath conductivity

Date, Slope Correction

