



SEA-BIRD
SCIENTIFIC

Sea-Bird Scientific
13431 NE 20th Street
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seabird@seabird.com
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SENSOR SERIAL NUMBER: 4358
CALIBRATION DATE: 22-Dec-17

SBE 4 CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -9.93978549e+000
h = 1.38384750e+000
i = -1.33454098e-003
j = 1.58413386e-004

CPcor = -9.5700e-008 (nominal)
CTcor = 3.2500e-006 (nominal)

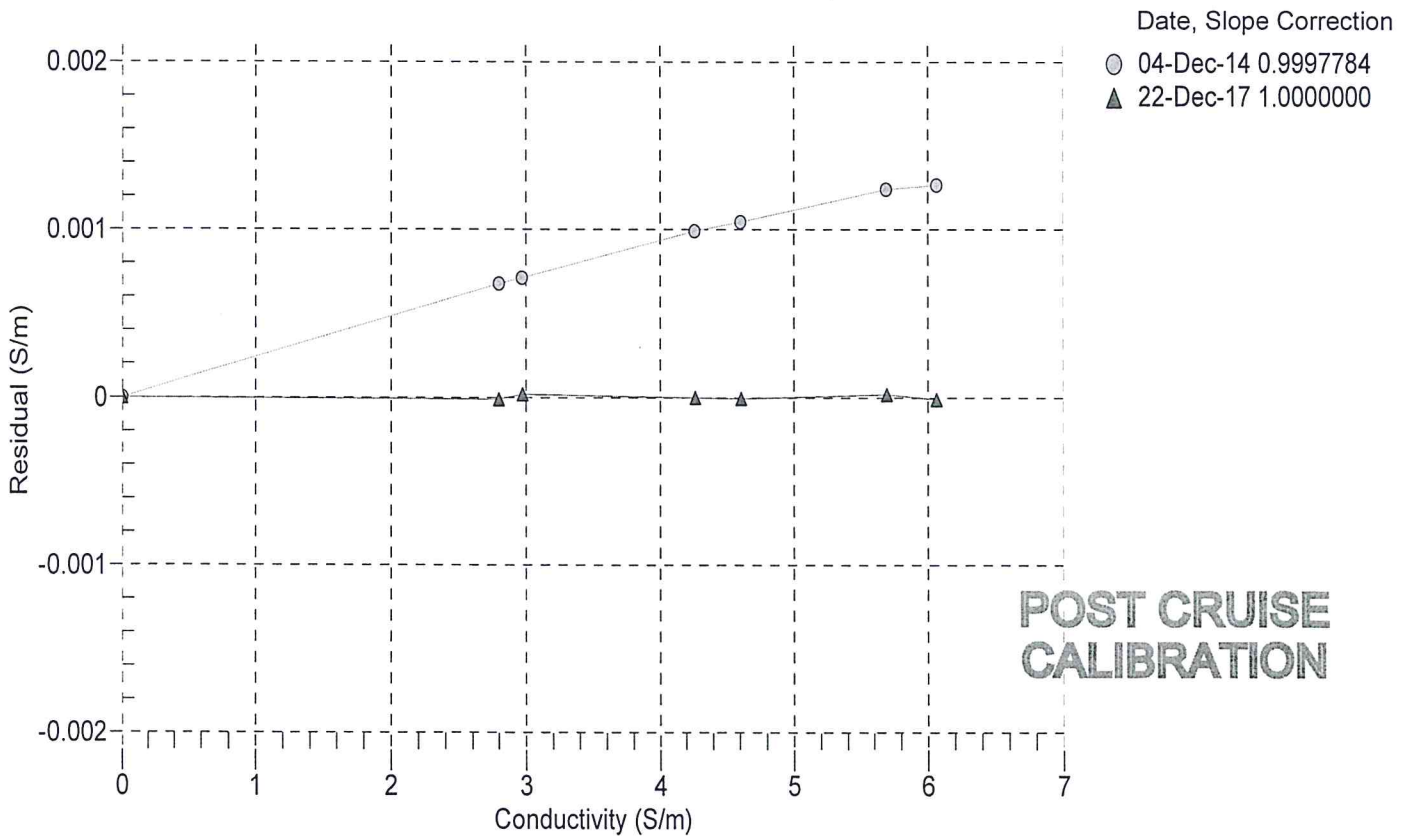
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (kHz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
0.0000	0.0000	0.00000	2.68243	0.00000	0.00000
-1.0001	34.7478	2.79956	5.24074	2.79955	-0.00001
0.9999	34.7476	2.97064	5.35756	2.97066	0.00002
14.9999	34.7457	4.26386	6.16899	4.26386	-0.00000
18.4999	34.7440	4.60980	6.36843	4.60979	-0.00001
28.9999	34.7339	5.69033	6.95435	5.69035	0.00002
32.5000	34.7173	6.06068	7.14399	6.06067	-0.00001

f = Instrument Output (kHz)

t = temperature (°C); p = pressure (decibars); δ = CTcor; ϵ = CPcor;

Conductivity (S/m) = $(g + h * f^2 + i * f^3 + j * f^4) / 10 (1 + \delta * t + \epsilon * p)$

Residual (Siemens/meter) = instrument conductivity - bath conductivity





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SENSOR SERIAL NUMBER: 4935
CALIBRATION DATE: 23-Dec-17

SBE 3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

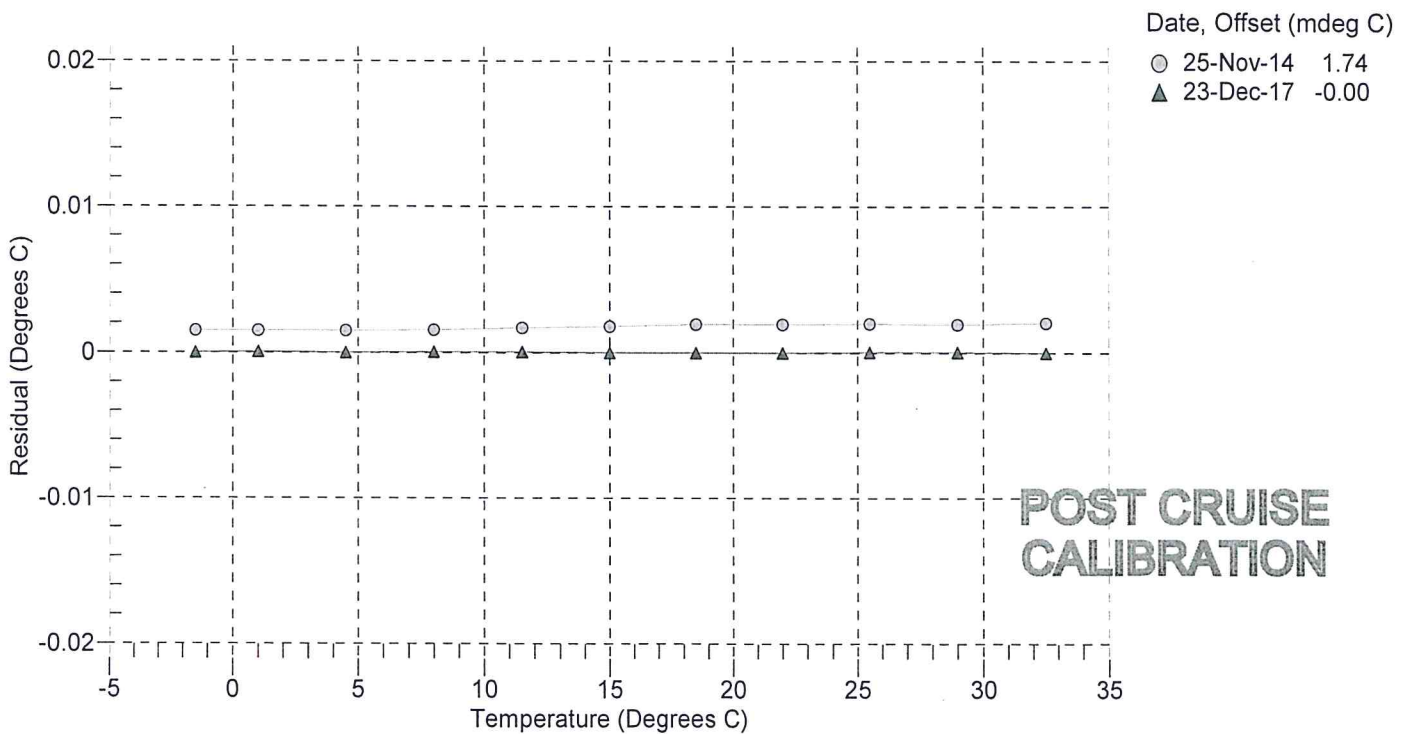
g = 4.35153588e-003
h = 6.39657053e-004
i = 2.09140484e-005
j = 1.75766918e-006
f0 = 1000.0

BATH TEMP (° C)	INSTRUMENT OUTPUT (Hz)	INST TEMP (° C)	RESIDUAL (° C)
-1.5000	2952.922	-1.5000	-0.00000
1.0000	3122.931	1.0000	0.00001
4.5000	3372.650	4.5000	-0.00001
8.0000	3636.382	8.0000	0.00001
11.5000	3914.503	11.5000	0.00003
15.0000	4207.376	15.0000	-0.00001
18.5000	4515.367	18.5000	-0.00002
22.0000	4838.821	22.0000	-0.00003
25.5000	5178.082	25.5000	0.00005
29.0000	5533.455	29.0000	0.00001
32.5000	5905.263	32.5000	-0.00002

f = Instrument Output (Hz)

Temperature ITS-90 (°C) = $1 / \{g + h[\ln(f0 / f)] + i[\ln^2(f0 / f)] + j[\ln^3(f0 / f)]\} - 273.15$

Residual (°C) = instrument temperature - bath temperature





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SENSOR SERIAL NUMBER: 1136
CALIBRATION DATE: 26-Jan-18

SBE 9plus PRESSURE CALIBRATION DATA
10000 psia S/N 127421

DIGIQUARTZ COEFFICIENTS:

C1 = -4.373304e+004
C2 = 2.440268e-001
C3 = 1.442500e-002
D1 = 3.686900e-002
D2 = 0.000000e+000
T1 = 3.002769e+001
T2 = -1.951630e-004
T3 = 4.244630e-006
T4 = 2.954280e-009
T5 = 0.000000e+000

AD590M, AD590B, SLOPE AND OFFSET:

AD590M = 1.28120e-002
AD590B = -8.82994e+000
Slope = 0.99999
Offset = -2.0693 (dbars)

PRESSURE (PSIA)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT TEMPERATURE (°C)	INSTRUMENT PRESSURE (PSIA)	CORRECTED PRESSURE (PSIA)	RESIDUAL (PSIA)
14.635	33311.70	21.0	17.502	14.500	-0.135
2001.252	34058.60	21.1	2004.255	2001.225	-0.027
3988.264	34787.20	21.1	3991.379	3988.321	0.057
5975.263	35498.50	21.1	5978.453	5975.366	0.103
7962.196	36193.50	21.2	7965.354	7962.239	0.043
9949.898	36873.40	21.2	9952.833	9949.689	-0.209
7962.265	36193.50	21.2	7965.347	7962.231	-0.034
5975.268	35498.50	21.2	5978.443	5975.356	0.088
3988.221	34787.20	21.2	3991.367	3988.309	0.088
2001.309	34058.70	21.2	2004.514	2001.484	0.175
14.640	33311.70	21.3	17.492	14.491	-0.149

Residual (PSIA) = corrected instrument pressure - reference pressure

