



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-17484
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2648.09
Communications Format: RS232
Communications Settings: 9600 baud, 8 Data Bits, No Parity

Installed Devices/Sensors

<i>Data Format</i>	<i>Measurement</i>	<i>Sensor Type</i>	<i>Serial Number</i>	<i>Rating</i>
Count	Temperature	Internal	N/A	N/A
Frequency	Conductivity	Internal	N/A	N/A
Count	Pressure	Druck	12091714	2000m(2000 dBar)



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SENSOR SERIAL NUMBER: 17484
CALIBRATION DATE: 23-Apr-22

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

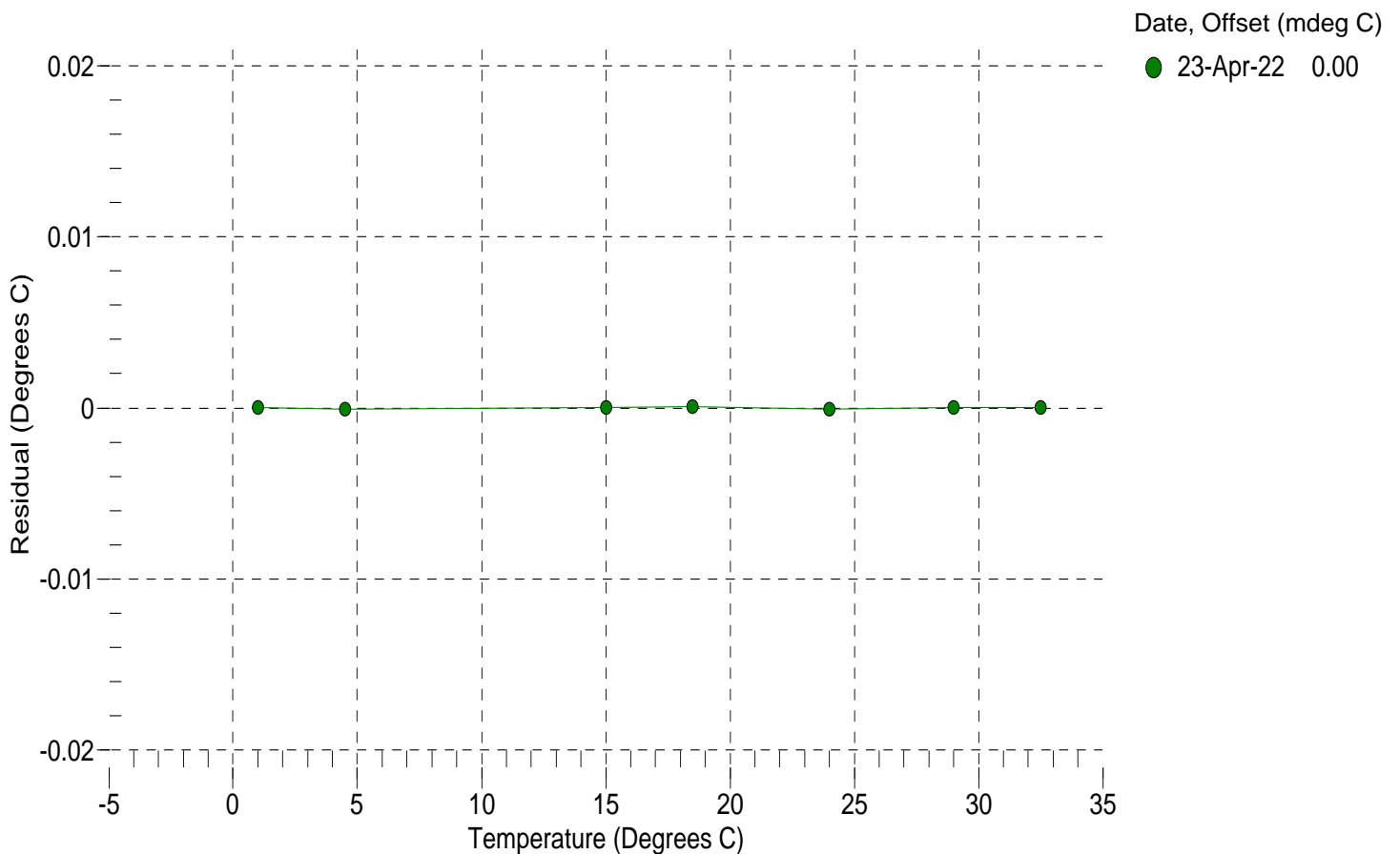
a0 = -8.194993e-004
a1 = 2.858748e-004
a2 = -3.220700e-006
a3 = 1.416977e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	14187413.9	1.0000	0.0000
4.5000	12136554.3	4.4999	-0.0001
15.0000	7746001.0	15.0000	0.0000
18.5000	6710282.8	18.5001	0.0001
23.9940	5388212.7	23.9939	-0.0001
29.0000	4438339.1	29.0000	0.0000
32.5001	3888276.8	32.5001	0.0000

n = Instrument Output (counts)

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

Residual (°C) = instrument temperature - bath temperature





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SBE 41 CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.022965e+000
h = 1.465085e-001
i = -3.663514e-004
j = 4.842399e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 5.6639e-007

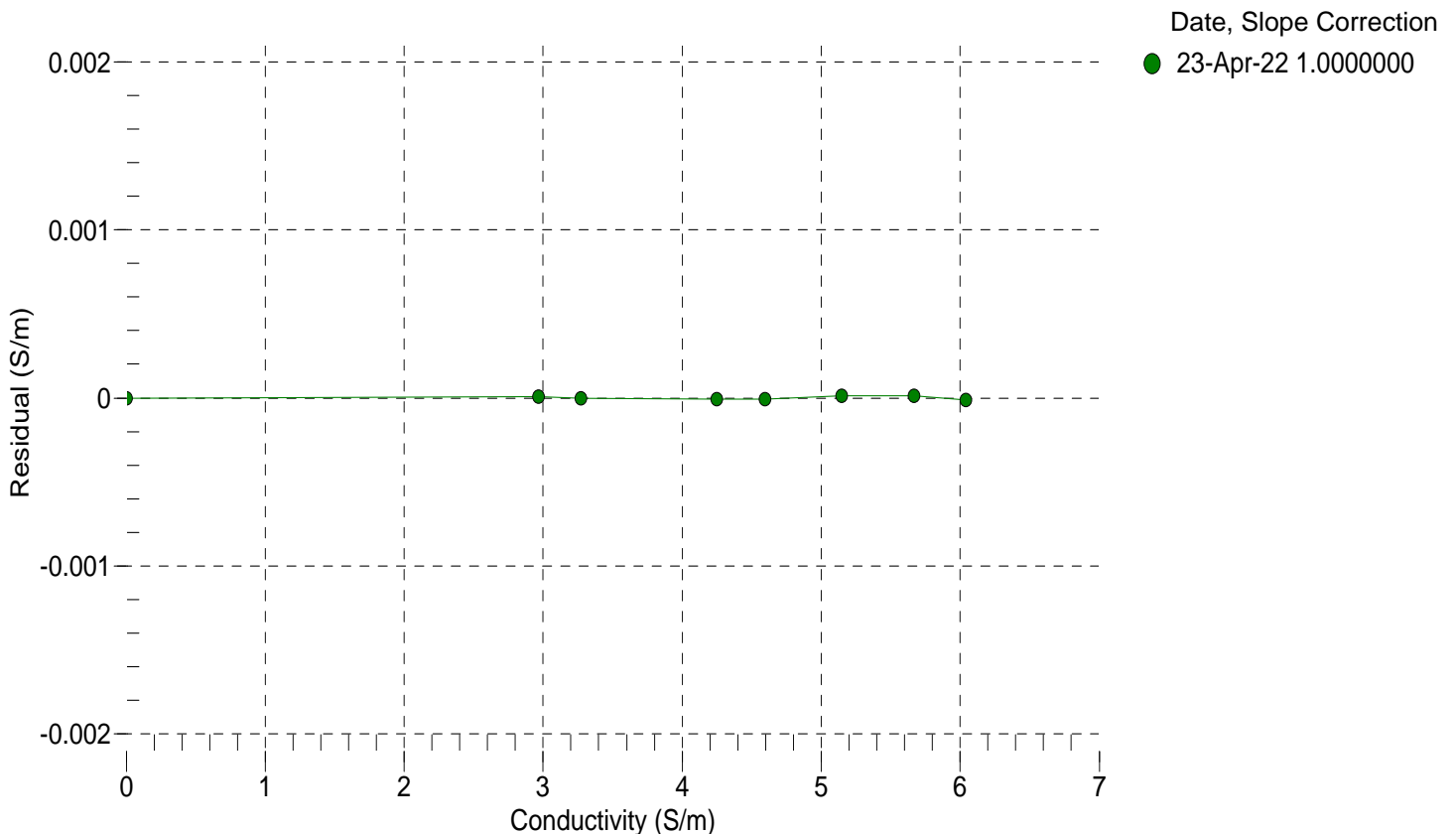
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2648.09	0.00000	0.00000
1.0000	34.6727	2.96486	5227.77	2.96486	0.00001
4.5000	34.6533	3.27086	5424.10	3.27086	-0.00000
15.0000	34.6122	4.24922	6008.18	4.24921	-0.00001
18.5000	34.6038	4.59321	6200.19	4.59320	-0.00001
23.9940	34.5944	5.14864	6497.97	5.14865	0.00001
29.0000	34.5896	5.66935	6764.88	5.66937	0.00001
32.5001	34.5860	6.04037	6948.59	6.04035	-0.00001

$f = \text{Instrument Output(Hz)} * \sqrt{1.0 + \text{WBOTC} * t} / 1000.0$

t = temperature (°C); p = pressure (decibars); $\delta = \text{CTcor}$; $\epsilon = \text{CPcor}$;

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

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





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SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 12091714

COEFFICIENTS:

PA0 =	4.568537e-001	PTCA0 =	-3.125619e+003
PA1 =	3.898668e-004	PTCA1 =	8.334797e+001
PA2 =	-2.581383e-013	PTCA2 =	-1.368873e+000
PTHA0 =	3.152699e+002	PTCB0 =	3.240260e+005
PTHA1 =	-5.982607e-005	PTCB1 =	5.062104e+000
PTHA2 =	-1.571817e-012	PTCB2 =	1.146991e-001

PRESSURE SPAN CALIBRATION

THERMAL CORRECTION

PRESSURE (PSIA)	INSTRUMENT OUTPUT (counts)	THERMISTOR OUTPUT (counts)	COMPUTED PRESSURE (PSIA)	RESIDUAL (%FSR)	TEMP (°C)	THERMISTOR OUTPUT (counts)	INSTRUMENT OUTPUT (counts)
14.32	33334.4	4393926.6	14.21	-0.00	32.50	4251723.20	35621.60
590.62	1515140.2	4381123.2	591.00	0.01	29.00	4299258.20	35699.50
1167.63	2999941.7	4377733.4	1167.81	0.01	23.99	4367496.00	35661.06
1744.71	4487969.4	4375535.4	1744.74	0.00	18.50	4442096.00	35487.65
2321.75	5979200.1	4373539.6	2321.76	0.00	15.00	4489590.20	35287.23
2898.62	7473365.9	4371734.6	2898.76	0.00	4.50	4631105.60	34732.63
2321.51	5978162.4	4371018.8	2321.34	-0.01	1.00	4678044.00	34507.82
1745.04	4488391.2	4370266.6	1744.88	-0.01			
1167.72	2999117.9	4369551.4	1167.47	-0.01			
590.54	1514257.5	4368378.6	590.63	0.00			
14.30	33269.6	4367076.4	14.17	-0.00			

TEMPERATURE (°C)	SPAN
2.60	324039.96
21.32	324186.02
33.54	324324.87

y = thermistor output (counts)

t = PTHA0 + PTHA1 * y + PTHA2 * y²

x = instrument output - PTCA0 - PTCA1 * t - PTCA2 * t²

n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t²)

pressure (PSIA) = PA0 + PA1 * n + PA2 * n²

Residual (%FSR) = (computed pressure - true pressure) * 100 / Full Scale Range

Date, Offset (%FSR)

● 18-Apr-22 0.00

