



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-19368
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2612.70
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	12406084	2000m(2000 dBar)



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SENSOR SERIAL NUMBER: 19368
CALIBRATION DATE: 17-Jun-23

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

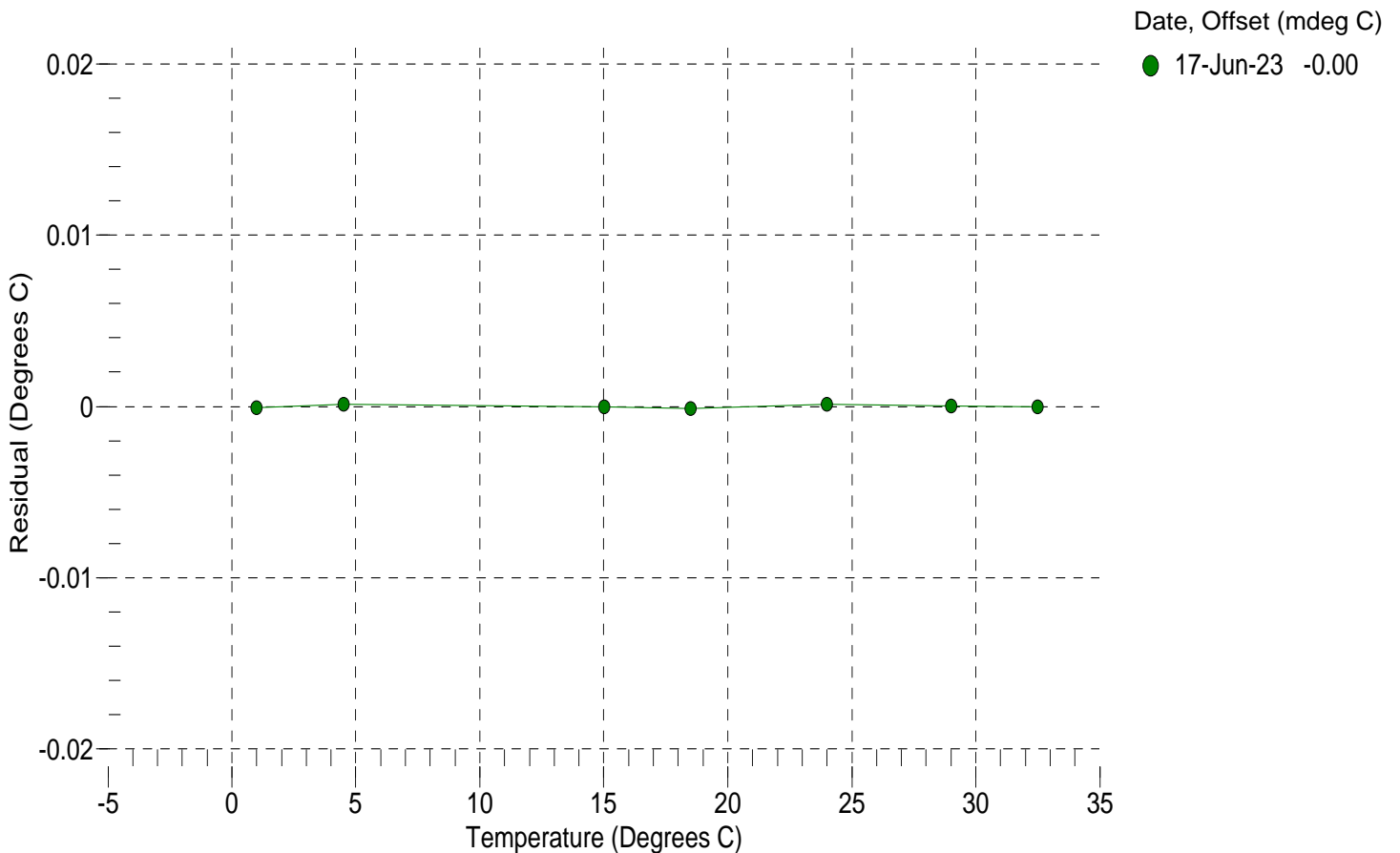
a0 = -1.151634e-003
a1 = 3.371294e-004
a2 = -6.209594e-006
a3 = 2.056860e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
0.9999	14809320.5	0.9998	-0.0001
4.5000	12702680.5	4.5001	0.0001
15.0000	8170580.5	15.0000	-0.0000
18.5000	7095751.8	18.4999	-0.0001
24.0001	5718088.9	24.0002	0.0001
29.0001	4727236.1	29.0001	0.0000
32.5000	4151106.3	32.5000	-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 = -1.008975e+000
h = 1.480101e-001
i = -1.649270e-004
j = 3.445242e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -1.5308e-006

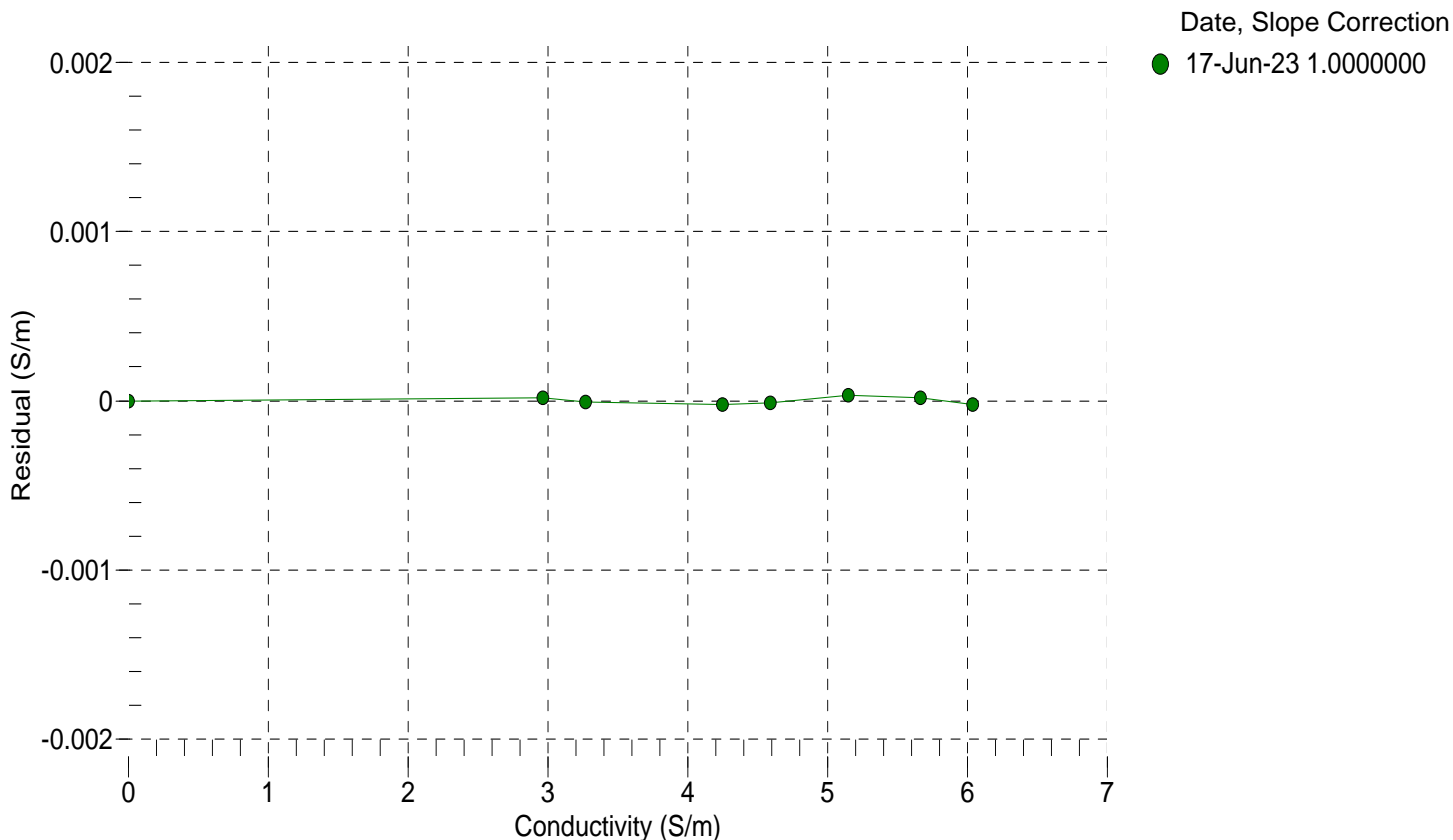
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2612.70	0.00000	0.00000
0.9999	34.6592	2.96380	5179.65	2.96382	0.00002
4.5000	34.6395	3.26968	5374.67	3.26968	-0.00001
15.0000	34.5982	4.24768	5954.84	4.24766	-0.00002
18.5000	34.5897	4.59154	6145.58	4.59153	-0.00001
24.0001	34.5807	5.14745	6441.75	5.14748	0.00003
29.0001	34.5761	5.66740	6706.60	5.66741	0.00002
32.5000	34.5706	6.03797	6888.97	6.03795	-0.00002

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

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 12406084

COEFFICIENTS:

PA0 =	1.280339e-001	PTCA0 =	3.759388e+003
PA1 =	3.885576e-004	PTCA1 =	3.065433e+001
PA2 =	-2.662577e-013	PTCA2 =	-7.111871e-001
PTHA0 =	2.865406e+002	PTCB0 =	3.198639e+005
PTHA1 =	-6.101325e-005	PTCB1 =	2.310797e+001
PTHA2 =	-8.789202e-013	PTCB2 =	-3.428681e-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)
14.50	41049.2	4089900.0	14.47	-0.00	32.50	3940085.40	42580.90
589.99	1525656.2	4085374.0	590.09	0.00	29.00	3991542.40	42711.42
1165.87	3013915.8	4082779.2	1165.94	0.00	24.00	4064927.60	42773.74
1741.66	4504895.0	4080352.4	1741.66	-0.00	18.50	4145578.80	42706.16
2317.58	5999709.0	4078094.4	2317.67	0.00	15.00	4196826.00	42618.37
2893.57	7497341.2	4075920.8	2893.57	-0.00	4.50	4350050.20	42515.68
2317.48	5999108.8	4074715.6	2317.43	-0.00	1.00	4400940.00	42424.06
1741.58	4504605.8	4073634.8	1741.53	-0.00	TEMPERATURE (°C) SPAN		
1165.71	3013054.8	4072528.0	1165.59	-0.00			
589.95	1525381.2	4071460.0	589.97	0.00			
14.50	41066.4	4070113.2	14.48	-0.00			
					2.01	319908.98	
					20.89	320196.97	
					33.01	320253.08	

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)

● 13-Jun-23 -0.00

