



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-14419
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2598.78
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	11891204	2000m(2000 dBar)



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SENSOR SERIAL NUMBER: 14419
CALIBRATION DATE: 12-Jun-21

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

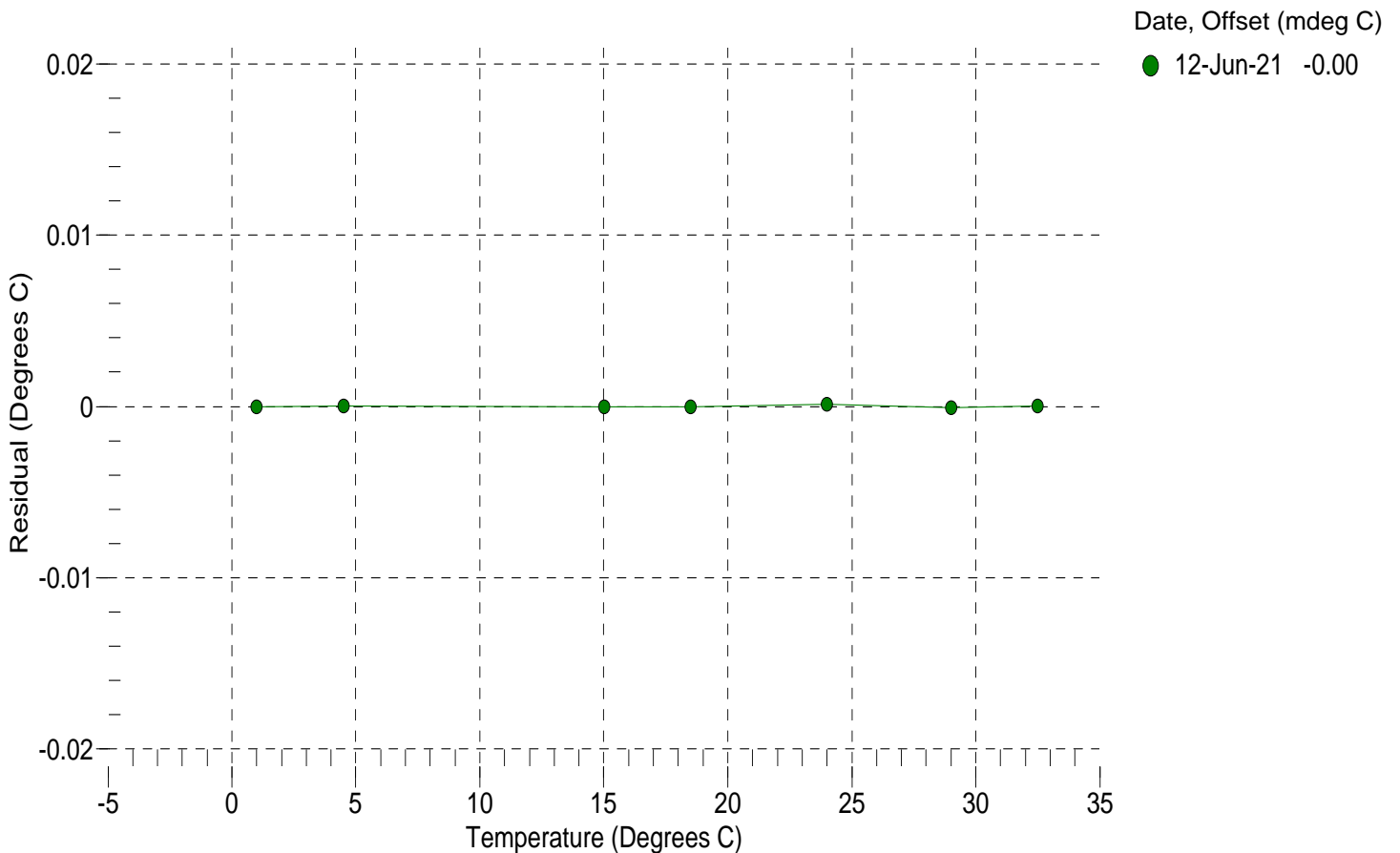
a0 = -9.618233e-004
a1 = 3.114594e-004
a2 = -4.828245e-006
a3 = 1.739100e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	14833360.8	1.0000	-0.0000
4.5000	12683523.8	4.5000	0.0000
15.0000	8084979.3	15.0000	-0.0000
18.5000	7001190.9	18.5000	-0.0000
24.0000	5617096.0	24.0001	0.0001
29.0000	4625697.0	28.9999	-0.0001
32.5000	4051080.9	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 = -1.015312e+000
h = 1.511800e-001
i = -4.829638e-004
j = 6.075588e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 0.0000e+000

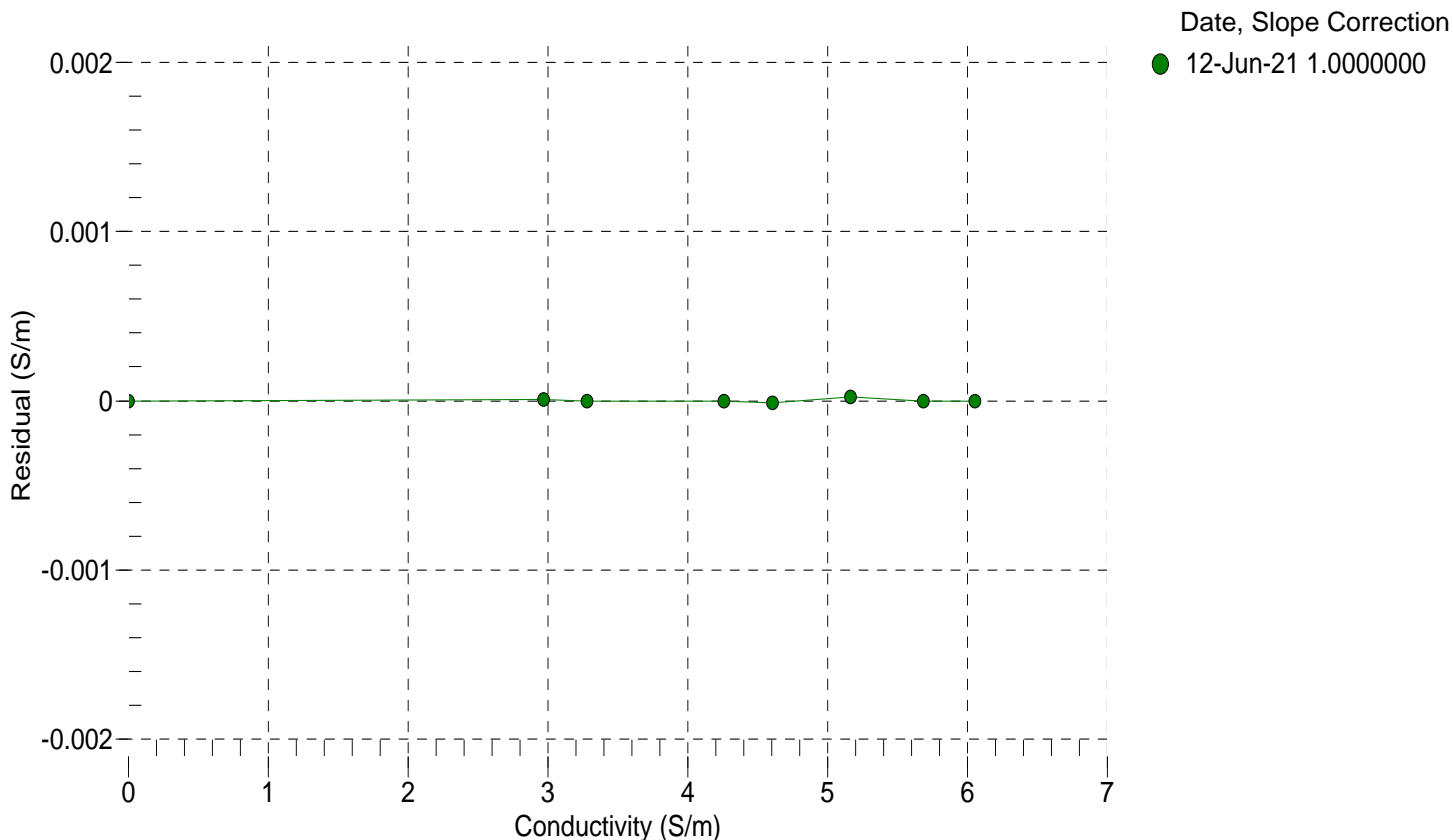
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2598.78	0.00000	0.00000
1.0000	34.7812	2.97325	5151.38	2.97326	0.00001
4.5000	34.7621	3.28011	5345.35	3.28011	-0.00000
15.0000	34.7211	4.26117	5922.21	4.26117	-0.00000
18.5000	34.7125	4.60608	6111.77	4.60607	-0.00001
24.0000	34.7032	5.16366	6406.05	5.16368	0.00002
29.0000	34.6982	5.68515	6669.12	5.68515	-0.00000
32.5000	34.6941	6.05709	6850.36	6.05708	-0.00000

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

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

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

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





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CALIBRATION DATE: 09-Jun-21

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11891204

COEFFICIENTS:

PA0 =	7.132449e-001	PTCA0 =	8.047517e+003
PA1 =	3.930922e-004	PTCA1 =	1.229650e+002
PA2 =	-2.865047e-013	PTCA2 =	-1.997367e+000
PTHA0 =	3.164501e+002	PTCB0 =	3.219297e+005
PTHA1 =	-6.146512e-005	PTCB1 =	-8.749350e+000
PTHA2 =	-1.343012e-012	PTCB2 =	3.115097e-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)
14.56	45132.7	4338209.0	14.58	0.00	32.50	4228939.80	46357.50
589.79	1510192.3	4333127.4	589.88	0.00	29.00	4276940.20	46421.73
1165.39	2979173.7	4331699.8	1165.48	0.00	24.00	4345396.00	46367.99
1740.92	4451059.9	4330252.6	1740.98	0.00	18.50	4420490.20	46113.15
2316.41	5926158.5	4328981.0	2316.49	0.00	15.00	4468213.00	45850.28
2891.88	7404208.8	4327521.6	2891.90	0.00	4.50	4610695.40	45003.54
2316.22	5925216.4	4327159.0	2316.12	-0.00	1.00	4658105.40	44659.85
1741.14	4451310.7	4327040.0	1741.07	-0.00			
1165.32	2978512.8	4326930.0	1165.21	-0.00	TEMPERATURE (°C) SPAN		
589.82	1509977.1	4326809.0	589.78	-0.00	1.96	321913.80	
14.56	45006.1	4325514.2	14.52	-0.00	20.62	321881.77	
					32.96	321979.78	

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)

● 09-Jun-21 -0.00

