



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-12943
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2675.79
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	11515733	2000m(2000 dBar)



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SENSOR SERIAL NUMBER: 12943
CALIBRATION DATE: 07-Jun-20

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

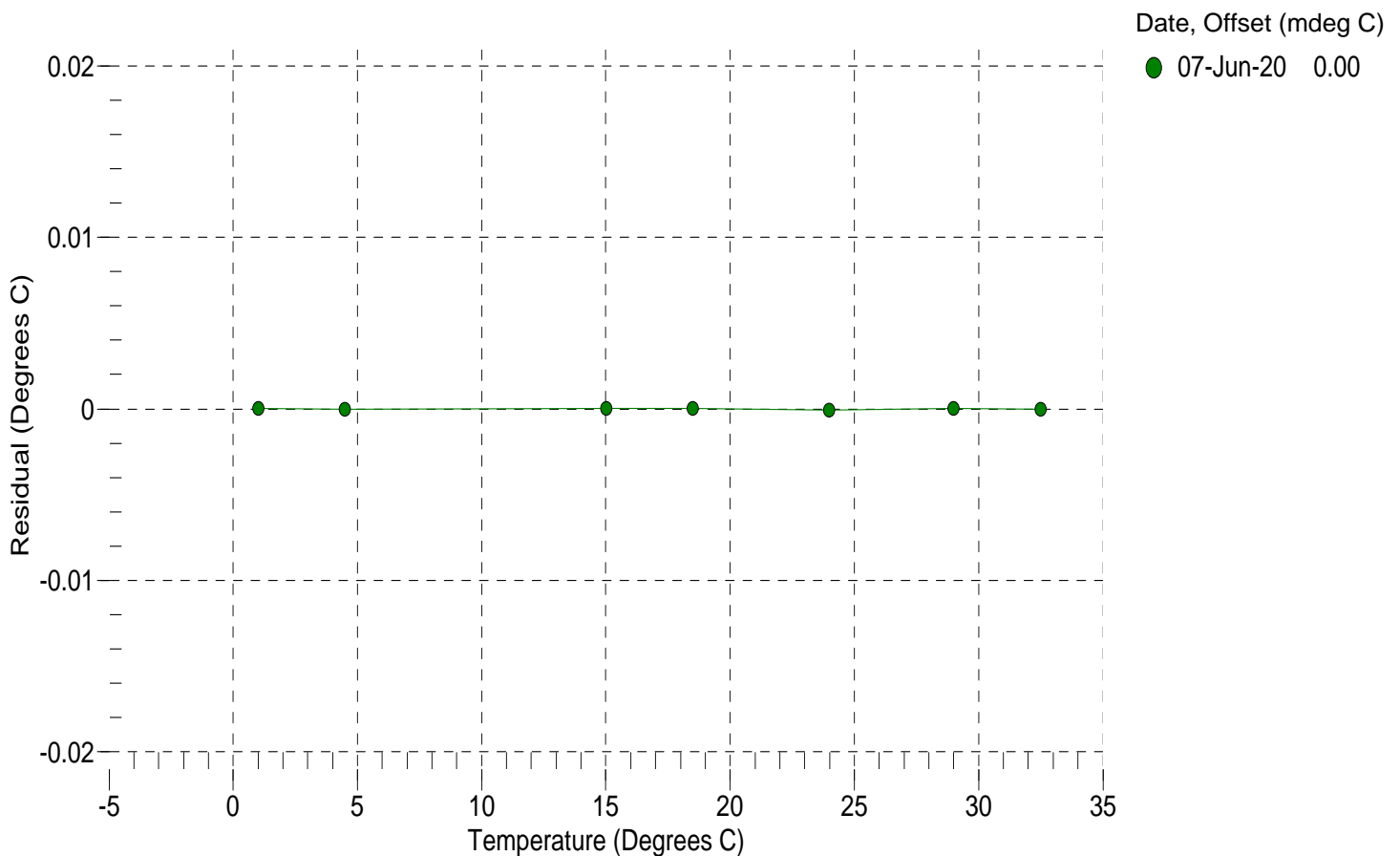
a0 = -8.616395e-004
a1 = 2.885586e-004
a2 = -3.377332e-006
a3 = 1.440000e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
0.9996	15714628.8	0.9996	0.0000
4.5000	13443934.3	4.5000	-0.0000
15.0000	8582634.2	15.0000	0.0000
18.5000	7435695.5	18.5000	0.0000
23.9940	5971475.5	23.9939	-0.0001
29.0001	4919336.7	29.0001	0.0000
32.5001	4310045.0	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 = -1.030670e+000
h = 1.441292e-001
i = -1.574680e-004
j = 3.381741e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 5.9166e-007

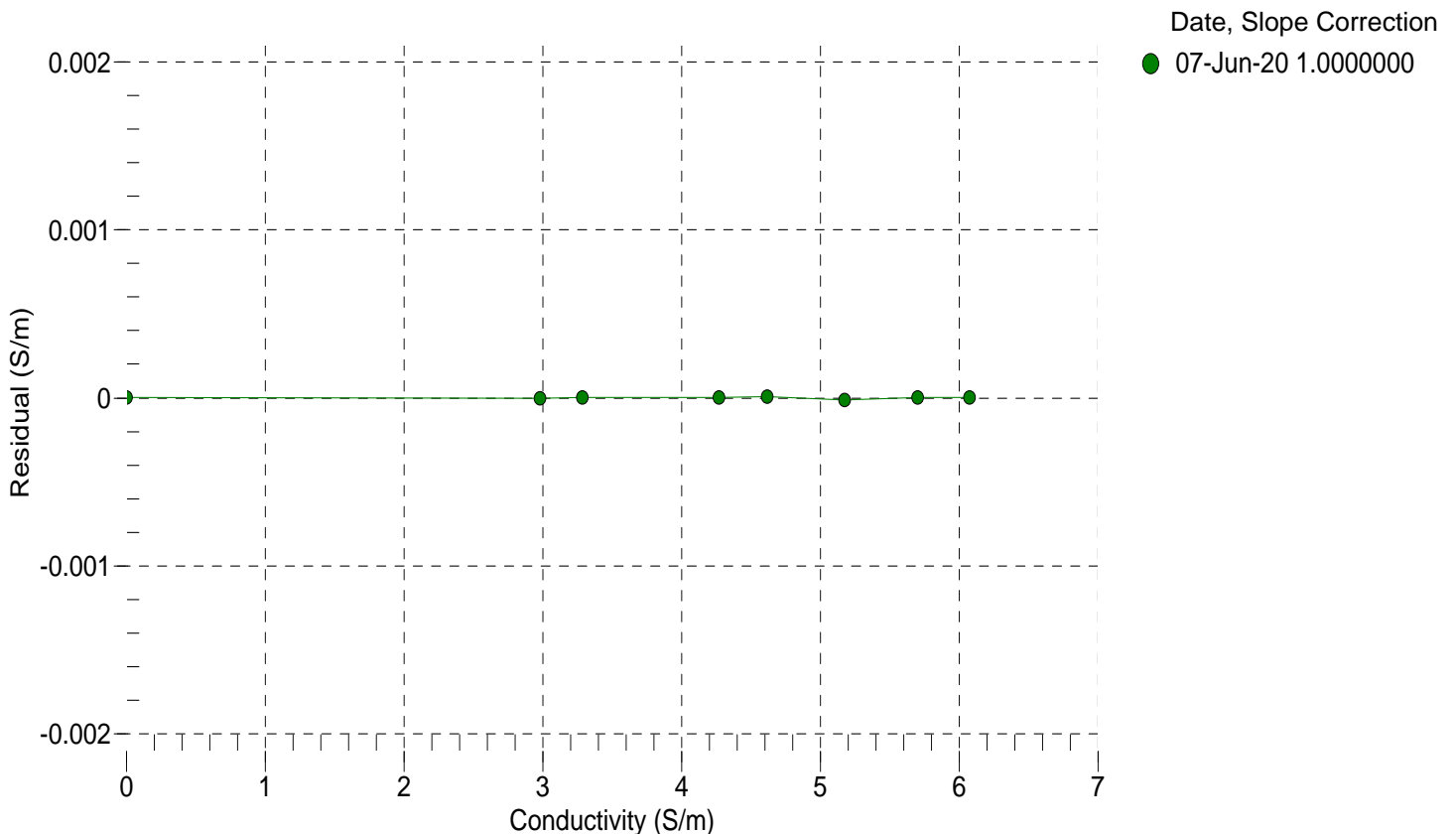
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2675.78	0.00000	0.00000
0.9996	34.8805	2.98089	5273.70	2.98089	-0.00000
4.5000	34.8627	3.28867	5471.51	3.28867	0.00000
15.0000	34.8259	4.27267	6060.00	4.27267	0.00000
18.5000	34.8193	4.61872	6253.53	4.61873	0.00001
23.9940	34.8124	5.17749	6553.65	5.17748	-0.00001
29.0001	34.8085	5.70119	6822.66	5.70120	0.00000
32.5001	34.8054	6.07431	7007.82	6.07432	0.00000

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

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

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

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





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SENSOR SERIAL NUMBER: 12943
CALIBRATION DATE: 02-Jun-20

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11515733

COEFFICIENTS:

PA0 =	3.228918e-001	PTCA0 =	-1.025605e+003
PA1 =	3.909076e-004	PTCA1 =	1.021491e+002
PA2 =	-2.813049e-013	PTCA2 =	-2.872552e+000
PTHA0 =	3.284478e+002	PTCB0 =	3.145050e+005
PTHA1 =	-6.303330e-005	PTCB1 =	1.719517e+001
PTHA2 =	-1.323633e-012	PTCB2 =	9.095959e-002

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)
14.59	36457.9	4431939.8	14.63	0.00	32.50	4305832.20	36874.20
590.70	1514034.5	4428981.6	590.76	0.00	29.00	4352708.20	37159.94
1166.66	2994420.8	4427883.6	1166.75	0.00	23.99	4419810.60	37417.66
1742.65	4478012.4	4426822.4	1742.75	0.00	18.50	4493267.80	37516.82
2318.69	5965024.1	4425727.6	2318.83	0.00	15.00	4539972.40	37479.52
2894.62	7454427.0	4424548.6	2894.58	-0.00	4.50	4679439.80	36974.34
2318.52	5964025.7	4424471.0	2318.43	-0.00	1.00	4725881.20	36728.69
1742.93	4478442.2	4424542.8	1742.90	-0.00	TEMPERATURE (°C) SPAN		
1166.74	2994038.4	4424640.4	1166.59	-0.01			
590.56	1513282.7	4424781.4	590.46	-0.00			
14.58	36290.3	4424437.8	14.57	-0.00			
					1.28	314527.13	
					20.35	314892.59	
					34.23	315200.21	

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)

● 02-Jun-20 -0.00

