



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-12942
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2656.08
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	11515732	2000m(2000 dBar)



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SENSOR SERIAL NUMBER: 12942
CALIBRATION DATE: 10-Jun-20

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

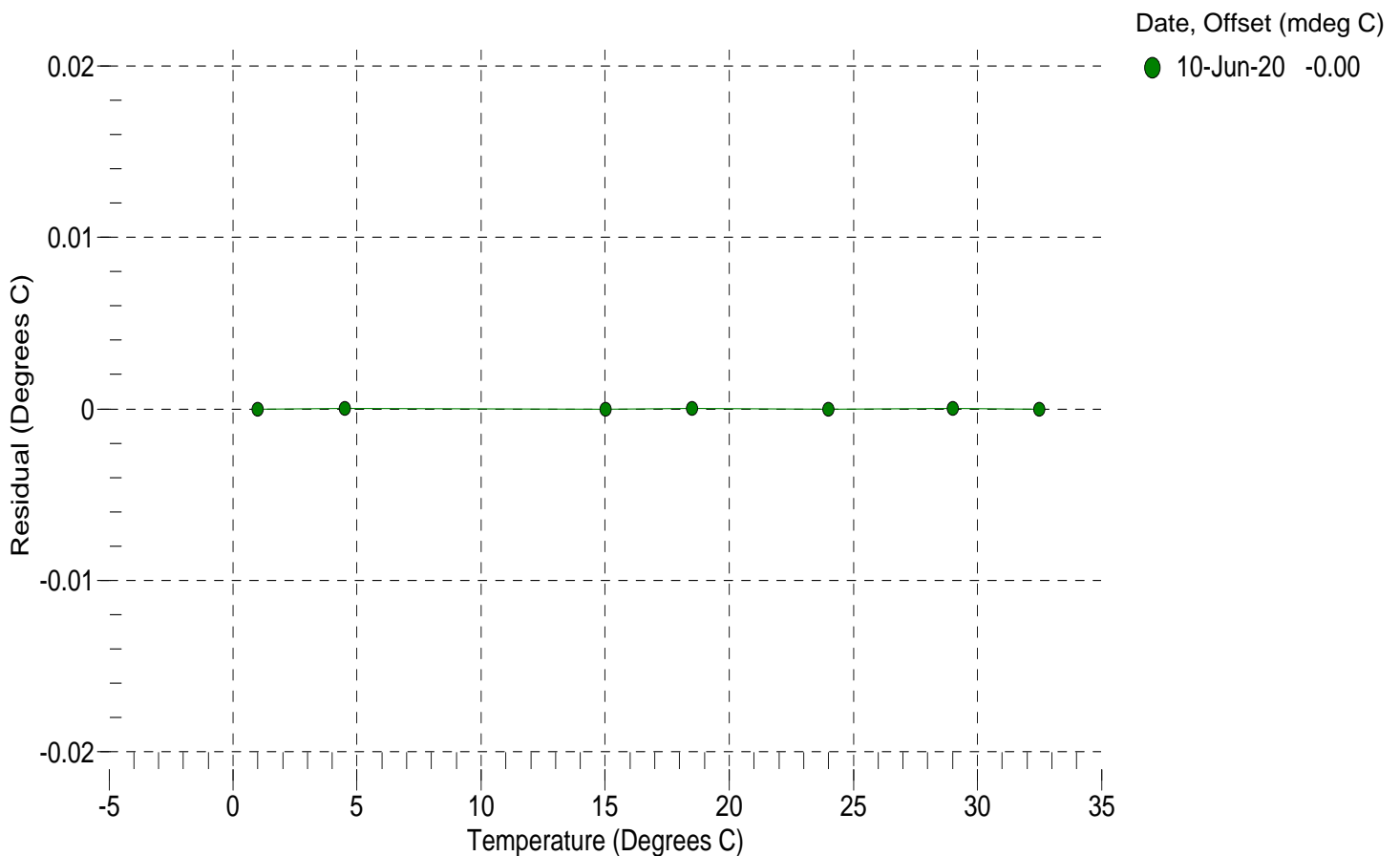
a0 = -9.157806e-004
a1 = 3.016334e-004
a2 = -4.203811e-006
a3 = 1.612839e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	14974834.0	1.0000	-0.0000
4.5000	12808193.9	4.5000	0.0000
15.0000	8171181.5	15.0000	-0.0000
18.5000	7077679.6	18.5000	0.0000
24.0000	5680739.8	24.0000	-0.0000
29.0000	4679646.1	29.0000	0.0000
32.5000	4099281.6	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 = -1.023086e+000
h = 1.452414e-001
i = -1.816900e-004
j = 3.666743e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 1.1294e-006

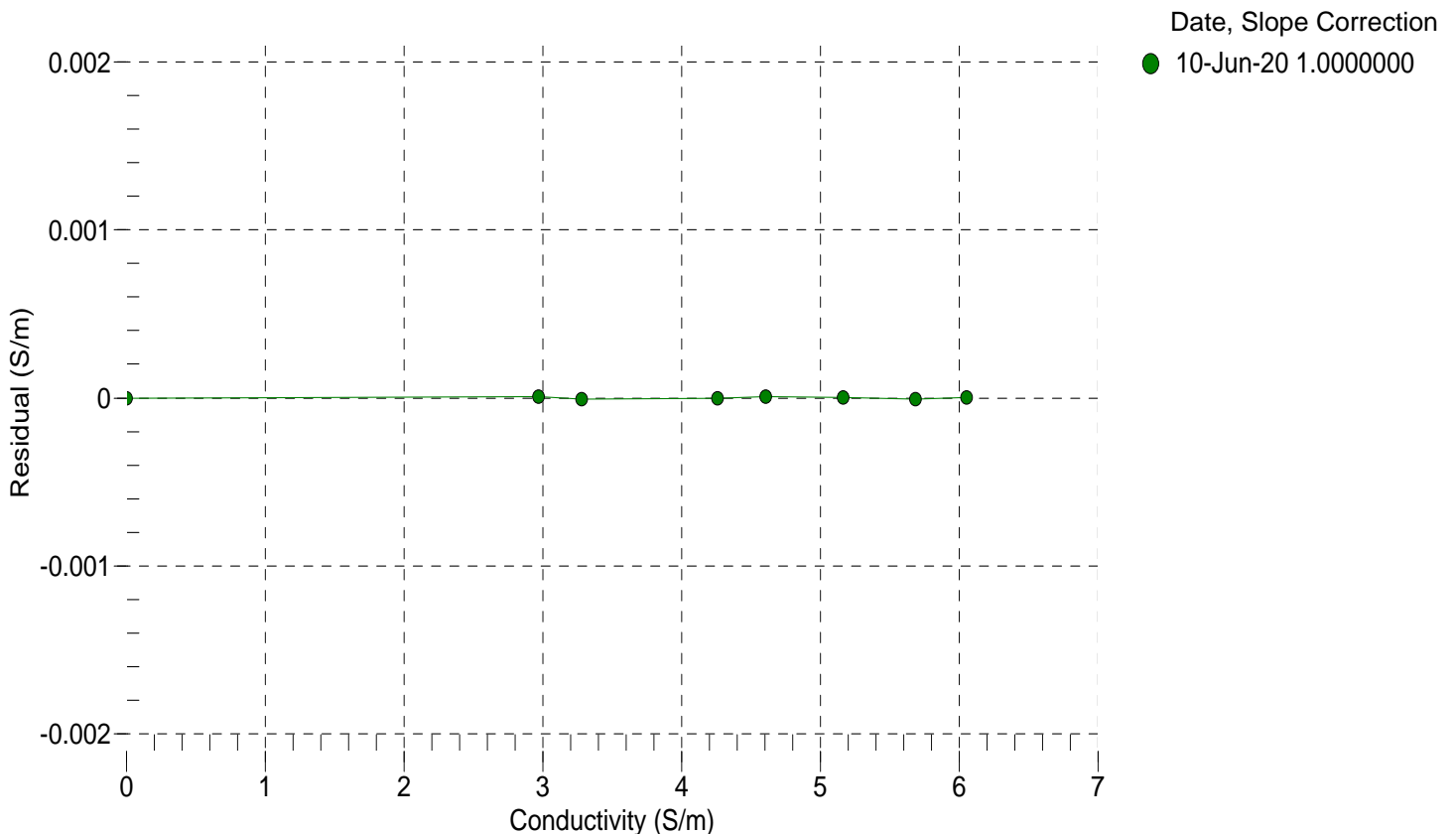
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2656.08	0.00000	0.00000
1.0000	34.7751	2.97278	5244.18	2.97278	0.00001
4.5000	34.7565	3.27964	5441.05	3.27963	-0.00001
15.0000	34.7170	4.26072	6026.69	4.26072	-0.00000
18.5000	34.7090	4.60567	6219.23	4.60568	0.00001
24.0000	34.7006	5.16331	6518.15	5.16331	0.00000
29.0000	34.6967	5.68493	6785.50	5.68492	-0.00001
32.5000	34.6945	6.05715	6969.82	6.05715	0.00000

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

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

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: 02-Jun-20

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11515732

COEFFICIENTS:

PA0 =	6.452582e-001	PTCA0 =	-2.173340e+003
PA1 =	3.934488e-004	PTCA1 =	1.352036e+002
PA2 =	-2.747630e-013	PTCA2 =	-2.777834e+000
PTHA0 =	3.242234e+002	PTCB0 =	3.139858e+005
PTHA1 =	-6.115709e-005	PTCB1 =	1.579837e+001
PTHA2 =	-1.530167e-012	PTCB2 =	-1.239893e-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)
14.59	35133.2	4430967.0	14.66	0.00	32.50	4306039.60	36402.90
590.70	1501989.6	4428888.0	590.62	-0.00	29.00	4353262.40	36585.21
1166.66	2972042.4	4427972.4	1166.65	-0.00	24.00	4420199.00	36653.34
1742.65	4445239.5	4427109.6	1742.72	0.00	18.50	4493731.60	36541.41
2318.69	5921342.5	4426225.0	2318.73	0.00	15.00	4540454.20	36355.22
2894.62	7400027.4	4425291.4	2894.55	-0.00	4.50	4679727.00	35469.78
2318.52	5920940.1	4425400.0	2318.57	0.00	1.00	4726383.20	35158.55
1742.93	4445656.9	4425605.6	1742.88	-0.00	TEMPERATURE (°C) SPAN		
1166.74	2972425.1	4425818.0	1166.80	0.00			
590.56	1501512.4	4426067.8	590.43	-0.00			
14.58	34995.0	4426035.2	14.61	0.00			
					1.28	314005.80	
					20.35	314255.97	
					34.23	314381.34	

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

