



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-12905
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2674.42
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	11513814	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 12905
CALIBRATION DATE: 29-May-20

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

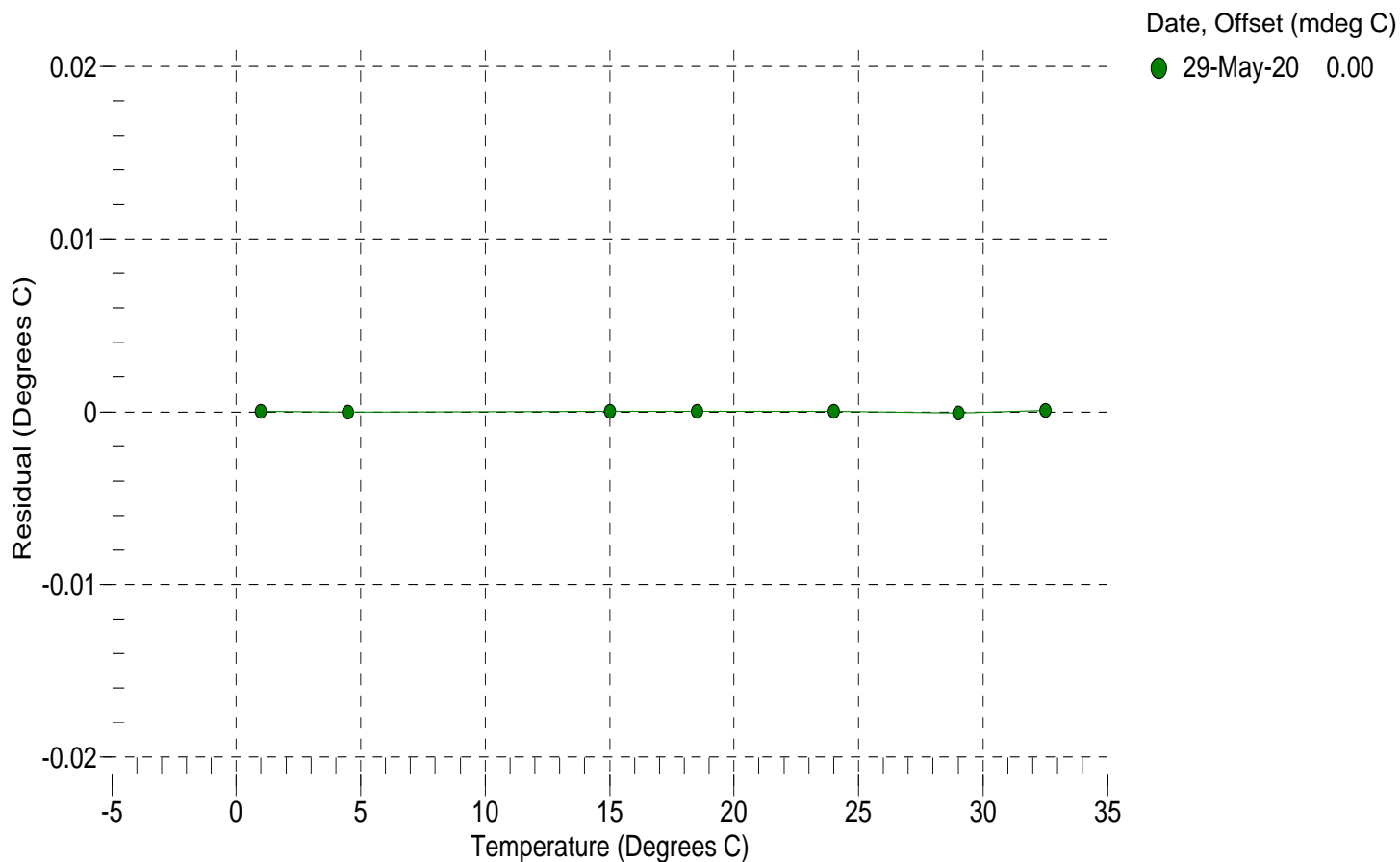
a0 = -8.720178e-004
a1 = 2.972969e-004
a2 = -4.041542e-006
a3 = 1.559766e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
0.9997	15366526.1	0.9997	0.0000
4.5000	13121063.2	4.5000	-0.0000
15.0000	8330568.7	15.0000	0.0000
18.5000	7204659.8	18.5000	0.0000
23.9940	5770468.5	23.9940	0.0000
29.0000	4742642.3	28.9999	-0.0001
32.5001	4148560.1	32.5002	0.0001

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 = -1.026608e+000
h = 1.437704e-001
i = -1.903164e-004
j = 3.704840e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 1.2774e-006

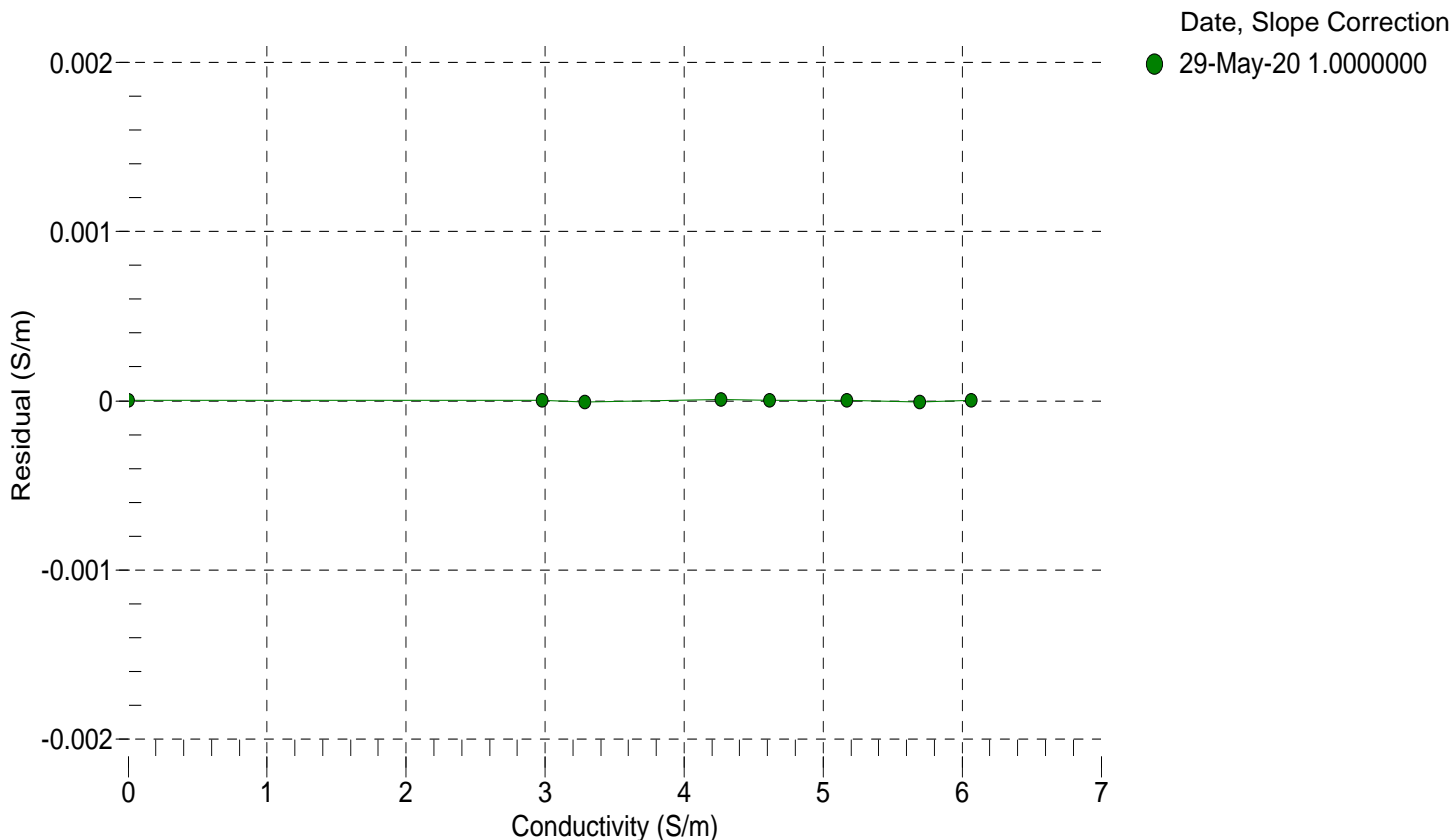
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2674.42	0.00000	0.00000
0.9997	34.8330	2.97723	5276.70	2.97723	0.00000
4.5000	34.8152	3.28463	5474.74	3.28462	-0.00001
15.0000	34.7787	4.26749	6063.89	4.26749	0.00001
18.5000	34.7719	4.61311	6257.60	4.61311	0.00000
23.9940	34.7647	5.17118	6557.98	5.17118	0.00000
29.0000	34.7608	5.69425	6827.19	5.69424	-0.00001
32.5001	34.7572	6.06686	7012.46	6.06686	0.00000

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

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

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: 26-May-20

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11513814

COEFFICIENTS:

PA0 =	3.885683e-001	PTCA0 =	3.126690e+003
PA1 =	3.943274e-004	PTCA1 =	7.038747e+001
PA2 =	-2.824515e-013	PTCA2 =	-1.180253e+000
PTHA0 =	3.221657e+002	PTCB0 =	3.087364e+005
PTHA1 =	-6.245718e-005	PTCB1 =	1.871680e+001
PTHA2 =	-1.297787e-012	PTCB2 =	-3.095548e-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	40230.7	4396305.0	14.62	0.00	32.50	4260658.80	41435.30
591.38	1505863.7	4394228.2	591.42	0.00	29.00	4308171.60	41535.82
1168.30	2974961.5	4393335.8	1168.38	0.00	23.99	4376071.00	41521.28
1745.18	4446971.6	4392343.6	1745.25	0.00	18.50	4450430.20	41345.54
2322.19	5922502.8	4391533.2	2322.28	0.00	15.00	4497724.80	41172.86
2899.03	7400332.4	4390743.4	2898.98	-0.00	4.50	4638951.60	40733.43
2322.03	5921896.1	4390967.0	2322.04	0.00	1.00	4685927.60	40536.65
1745.44	4447279.9	4391149.0	1745.37	-0.00	TEMPERATURE (°C) SPAN		
1168.13	2973902.0	4391190.4	1167.96	-0.01			
591.12	1505045.4	4391319.2	591.10	-0.00			
14.59	40112.6	4390719.0	14.57	-0.00			
					0.99	308754.61	
					20.40	308989.34	
					33.41	309016.14	

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)

● 26-May-20 -0.00

