



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-11715
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2586.76
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	11162140	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 11715
CALIBRATION DATE: 29-Mar-19

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

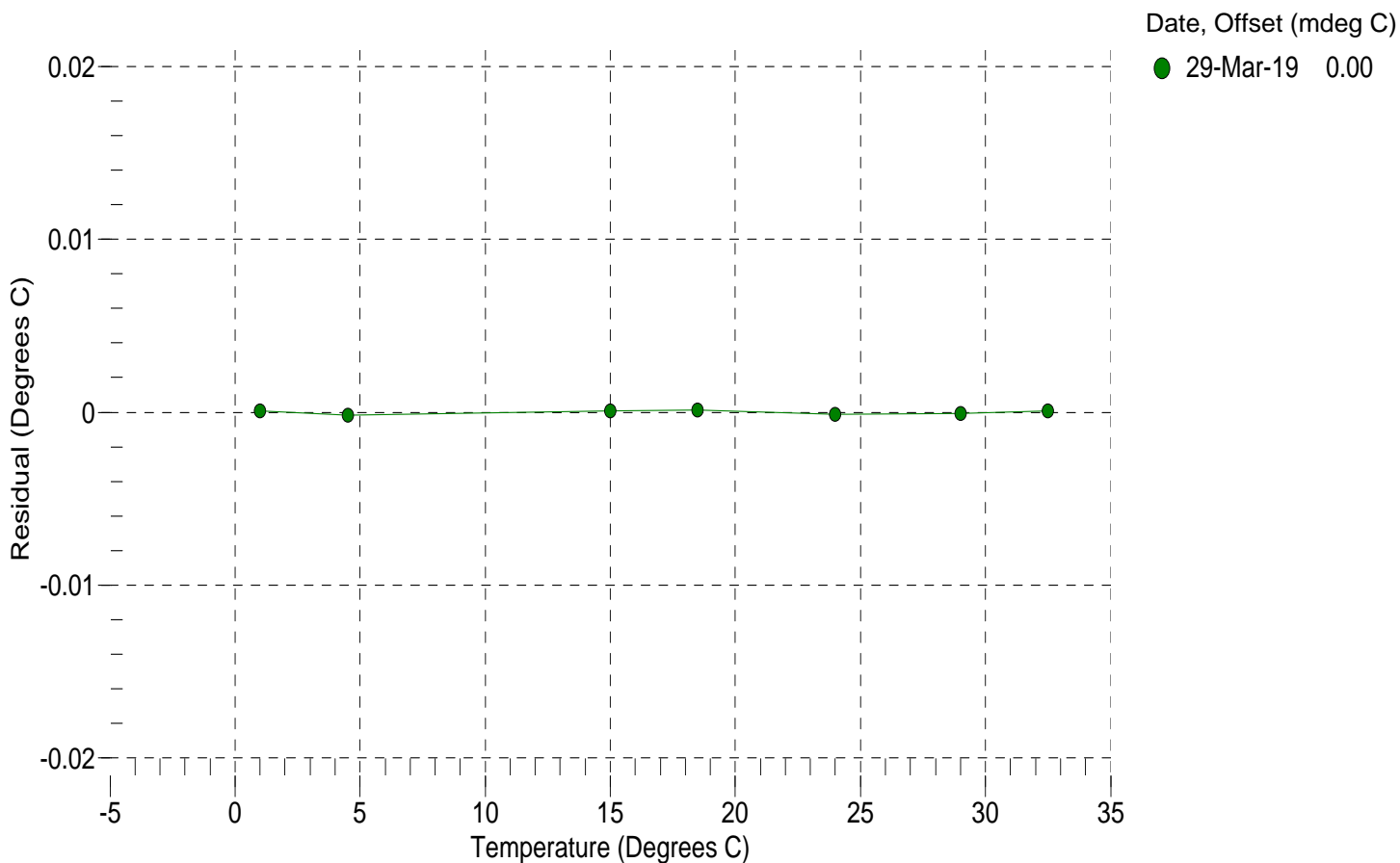
a0 = -8.508914e-004
a1 = 2.844541e-004
a2 = -3.152293e-006
a3 = 1.388528e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0005	16754733.2	1.0006	0.0001
4.5000	14331371.8	4.4998	-0.0002
15.0000	9143389.9	15.0001	0.0001
18.5000	7919896.8	18.5001	0.0001
23.9940	6358348.2	23.9939	-0.0001
29.0000	5236583.0	28.9999	-0.0001
32.5000	4587057.4	32.5001	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 = -1.007679e+000
h = 1.512871e-001
i = -4.031794e-004
j = 5.261293e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -3.5433e-007

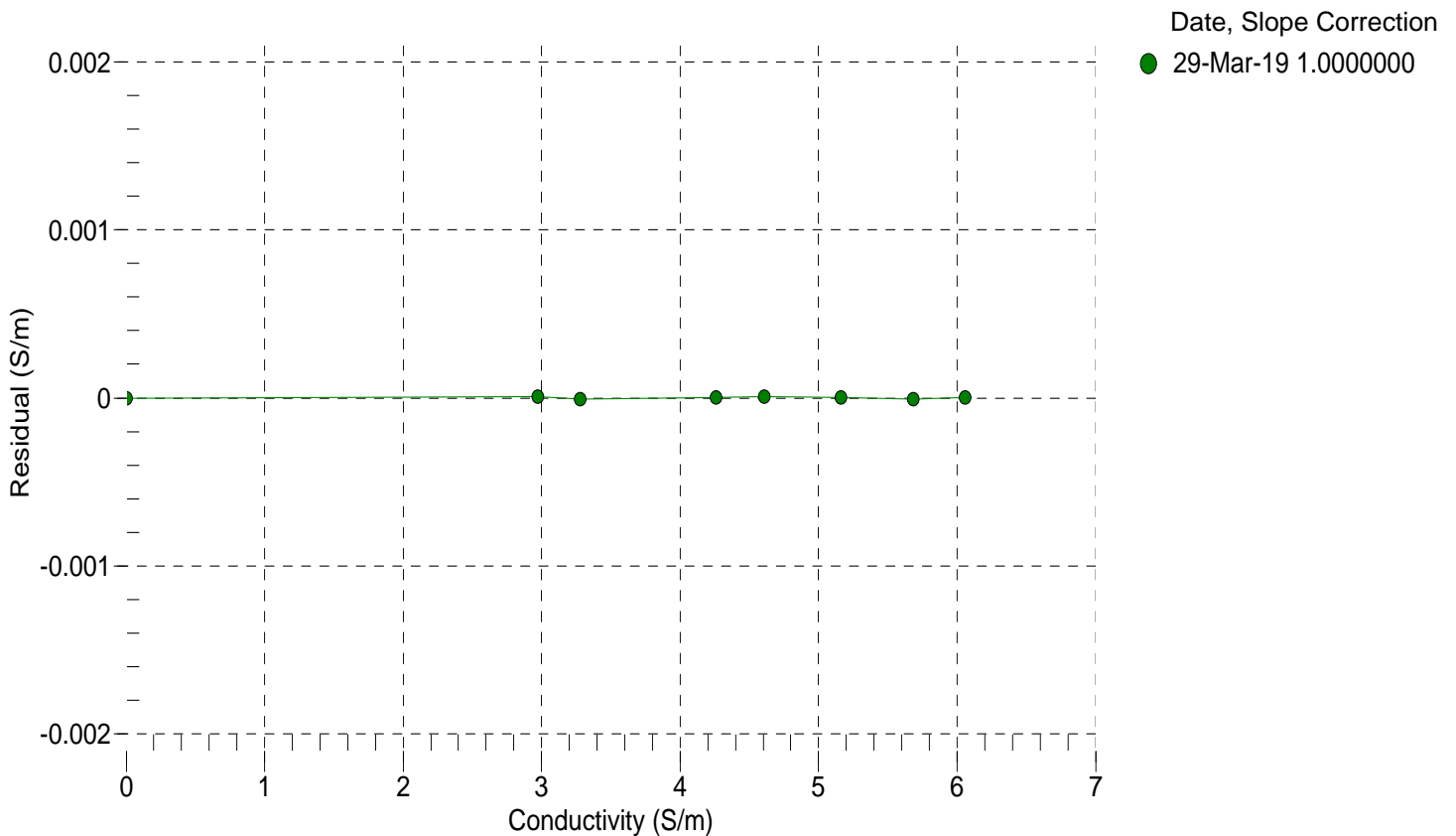
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2586.76	0.00000	0.00000
1.0005	34.7798	2.97319	5141.27	2.97319	0.00001
4.5000	34.7602	3.27995	5335.19	3.27994	-0.00001
15.0000	34.7179	4.26082	5912.01	4.26082	0.00000
18.5000	34.7089	4.60566	6101.58	4.60566	0.00001
23.9940	34.6988	5.16246	6395.52	5.16246	0.00000
29.0000	34.6933	5.68444	6658.95	5.68443	-0.00001
32.5000	34.6898	6.05642	6840.30	6.05643	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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SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11162140

COEFFICIENTS:

PA0 =	3.004123e-001	PTCA0 =	1.843111e+003
PA1 =	3.938452e-004	PTCA1 =	4.751134e+001
PA2 =	-2.914711e-013	PTCA2 =	-6.335050e-001
PTHA0 =	2.991815e+002	PTCB0 =	3.095388e+005
PTHA1 =	-6.188799e-005	PTCB1 =	9.022137e+000
PTHA2 =	-9.692042e-013	PTCB2 =	1.929985e-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)
14.55	38708.3	4183289.2	14.50	-0.00	32.50	4051994.60	40697.40
591.43	1506856.4	4182925.6	591.48	0.00	29.00	4102087.20	40689.85
1168.40	2978098.4	4182348.6	1168.41	0.00	23.99	4173729.80	40628.02
1745.32	4452576.8	4181860.4	1745.34	0.00	18.50	4252176.60	40491.31
2322.24	5930283.7	4181402.6	2322.27	0.00	15.00	4302067.00	40374.26
2899.18	7411114.9	4181090.6	2899.14	-0.00	4.50	4451139.80	40073.61
2322.16	5930093.9	4181696.4	2322.20	0.00	1.00	4500893.20	39859.07
1745.41	4452588.5	4182163.2	1745.35	-0.00	<div>TEMPERATURE (°C) SPAN</div> <div>2.12 309558.85</div> <div>20.82 309810.31</div> <div>32.81 310042.60</div>		
1168.27	2977615.1	4182656.4	1168.22	-0.00			
591.28	1506272.0	4183146.4	591.25	-0.00			
14.55	38950.3	4183690.6	14.60	0.00			

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)

● 20-Mar-19 -0.00

