



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-11706
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2585.26
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	11076219	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 11706
CALIBRATION DATE: 31-Mar-19

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

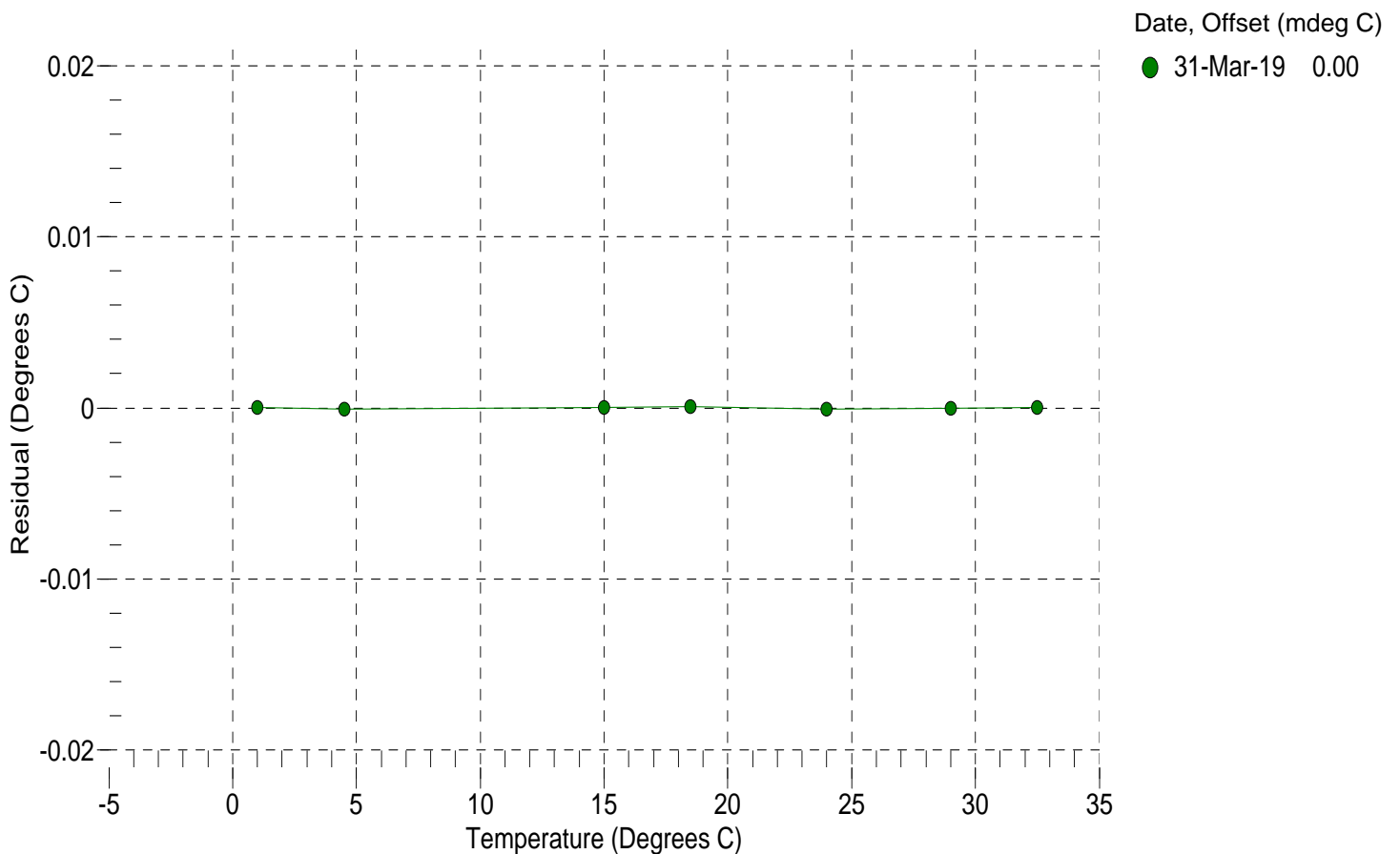
a0 = -9.251955e-004
a1 = 2.973995e-004
a2 = -3.943656e-006
a3 = 1.542759e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
0.9998	17155446.4	0.9998	0.0000
4.5000	14670432.7	4.4999	-0.0001
15.0000	9354161.6	15.0000	0.0000
18.5000	8100958.5	18.5001	0.0001
24.0000	6500379.8	23.9999	-0.0001
29.0000	5353610.8	29.0000	-0.0000
32.5001	4688886.0	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 = -1.006495e+000
h = 1.513763e-001
i = -4.511359e-004
j = 5.711254e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 1.9338e-007

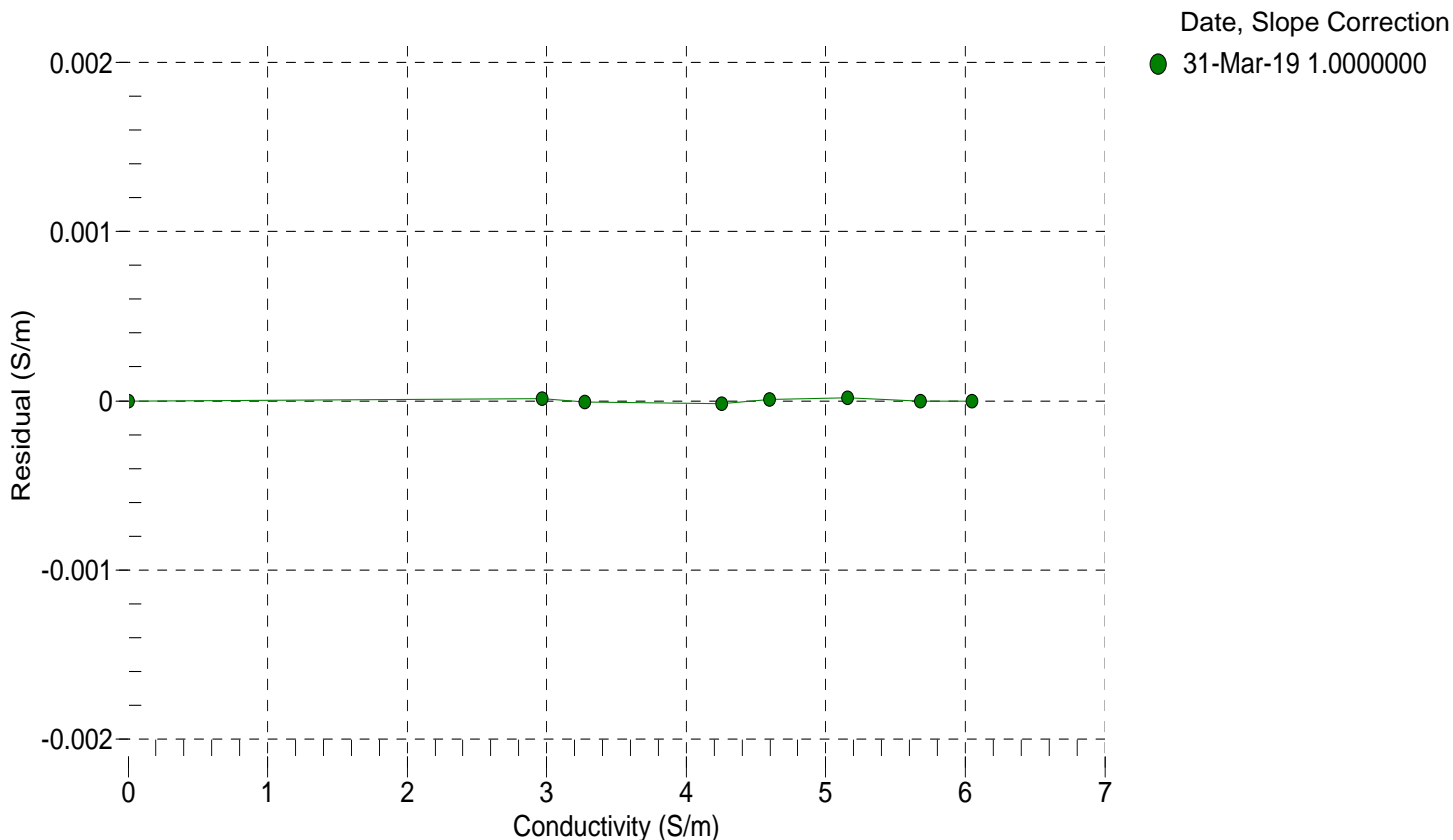
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2585.26	0.00000	0.00000
0.9998	34.7297	2.96925	5138.62	2.96926	0.00001
4.5000	34.7099	3.27567	5332.48	3.27566	-0.00001
15.0000	34.6674	4.25528	5908.94	4.25526	-0.00002
18.5000	34.6582	4.59965	6098.39	4.59966	0.00001
24.0000	34.6483	5.15639	6392.45	5.15641	0.00002
29.0000	34.6435	5.67719	6655.40	5.67719	-0.00000
32.5001	34.6413	6.04893	6836.70	6.04892	-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: 19-Mar-19

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11076219

COEFFICIENTS:

PA0 =	5.079006e-001	PTCA0 =	7.299936e+003
PA1 =	3.904787e-004	PTCA1 =	6.977553e+001
PA2 =	-2.690782e-013	PTCA2 =	-6.066281e-001
PTHA0 =	2.911571e+002	PTCB0 =	3.155863e+005
PTHA1 =	-6.063106e-005	PTCB1 =	3.393816e+000
PTHA2 =	-1.023106e-012	PTCB2 =	1.697377e-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)
14.62	45324.2	4128198.6	14.84	0.01	32.50	3996579.20	46793.40
590.18	1521051.1	4118157.4	590.12	-0.00	29.00	4047375.80	46734.81
1166.16	3001749.9	4117090.0	1166.18	0.00	24.00	4119843.60	46568.88
1742.16	4485426.9	4116030.4	1742.20	0.00	18.50	4199392.00	46296.49
2318.31	5972144.2	4114650.2	2318.22	-0.00	15.00	4249918.60	46078.64
2894.17	7461581.2	4113525.8	2894.09	-0.00	4.50	4401166.40	45451.21
2318.32	5972539.4	4113489.0	2318.36	0.00	1.00	4451191.80	45316.03
1742.43	4486988.2	4113202.4	1742.79	0.01			
1166.57	3002325.7	4113142.0	1166.38	-0.01	TEMPERATURE (°C) SPAN		
590.38	1521116.0	4113189.4	590.14	-0.01	1.14	315590.35	
14.61	44733.4	4111930.6	14.59	-0.00	20.40	315726.13	
					33.26	315886.91	

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)

● 19-Mar-19 -0.00

