



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-11707
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2643.19
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	11076220	2000m(2000 dBar)



Sea-Bird Scientific
13431 NE 20th Street
Bellevue, WA 98005
USA

+1 425-643-9866
seabird@seabird.com
www.seabird.com

SENSOR SERIAL NUMBER: 11707
CALIBRATION DATE: 16-Apr-19

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

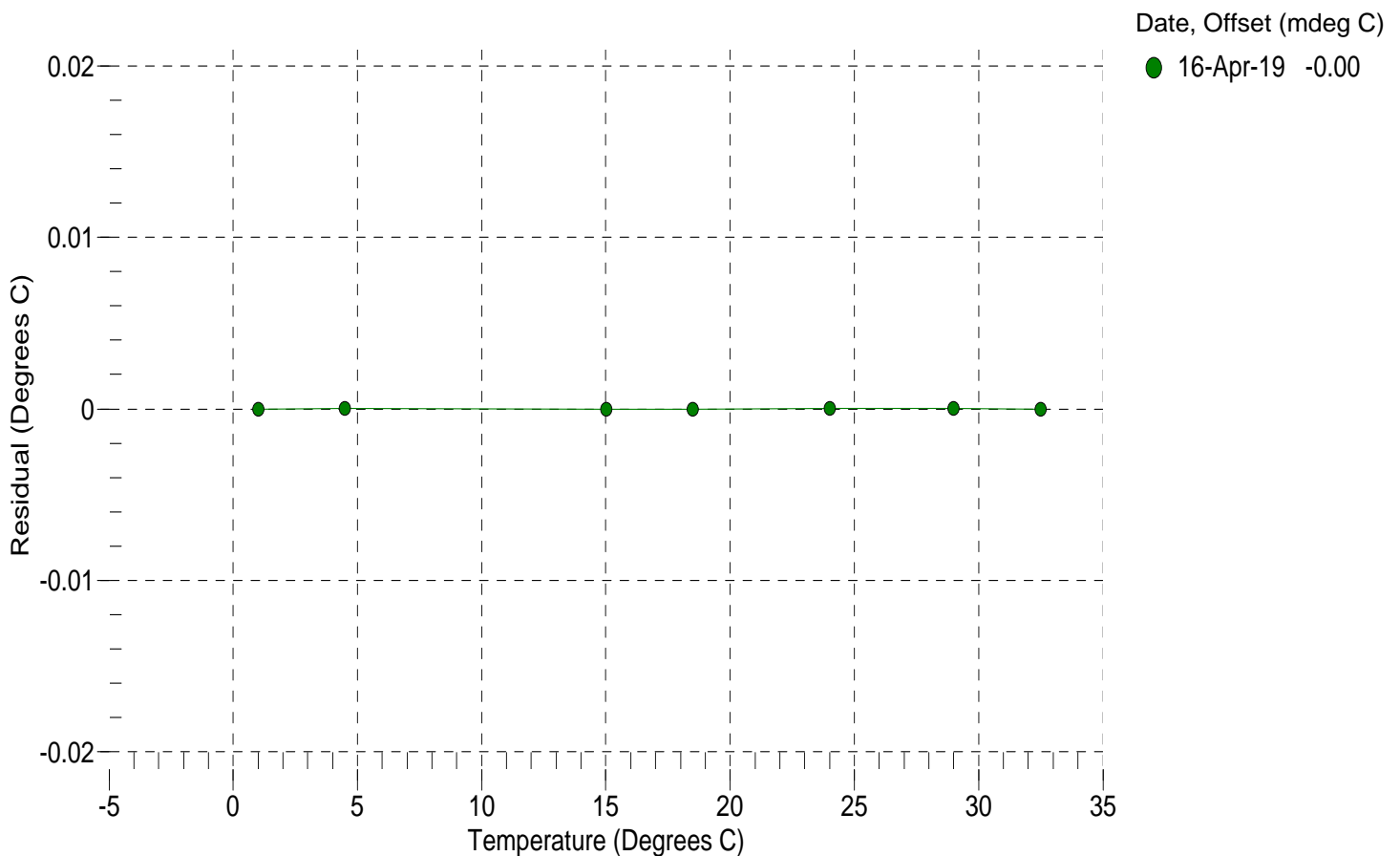
a0 = -9.354790e-004
a1 = 3.015636e-004
a2 = -4.211650e-006
a3 = 1.599660e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0182	16511244.1	1.0182	-0.0000
4.5000	14128882.6	4.5000	0.0000
15.0000	9004600.0	15.0000	-0.0000
18.5000	7797065.7	18.5000	-0.0000
24.0000	6255052.8	24.0000	0.0000
29.0000	5150538.2	29.0000	0.0000
32.5000	4510459.7	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 = -1.008889e+000
h = 1.450225e-001
i = -3.593678e-004
j = 4.798019e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -5.3590e-007

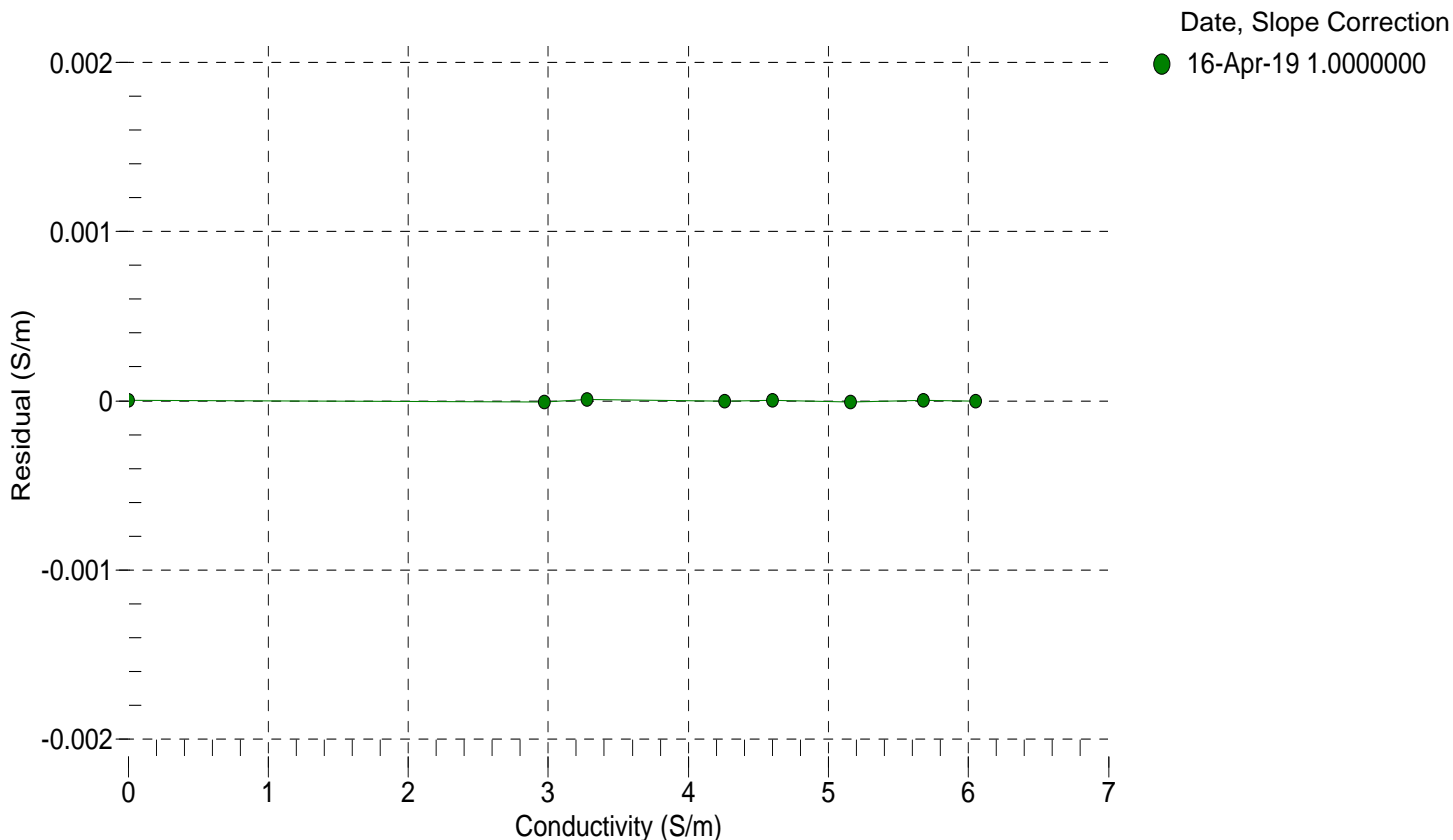
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2643.19	0.00000	0.00000
1.0182	34.7558	2.97286	5250.08	2.97285	-0.00001
4.5000	34.7358	3.27788	5446.93	3.27788	0.00001
15.0000	34.6928	4.25806	6035.37	4.25806	-0.00000
18.5000	34.6834	4.60264	6228.75	4.60264	0.00000
24.0000	34.6729	5.15965	6528.92	5.15964	-0.00001
29.0000	34.6665	5.68054	6797.30	5.68054	0.00000
32.5000	34.6623	6.05217	6982.25	6.05217	-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 11076220

COEFFICIENTS:

PA0 =	8.610453e-001	PTCA0 =	3.312158e+003
PA1 =	3.901473e-004	PTCA1 =	8.862660e+001
PA2 =	-2.611277e-013	PTCA2 =	1.807494e-001
PTHA0 =	2.985386e+002	PTCB0 =	3.157935e+005
PTHA1 =	-6.249235e-005	PTCB1 =	-4.117205e-001
PTHA2 =	-8.626234e-013	PTCB2 =	2.733960e-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	41233.2	4158268.6	14.79	0.01	32.50	4032673.20	42533.30
590.18	1518298.7	4144837.6	590.14	-0.00	29.00	4083009.40	42268.33
1166.16	3000100.3	4143692.4	1166.23	0.00	24.00	4154856.80	41792.64
1742.16	4484647.4	4142598.6	1742.23	0.00	18.50	4233740.40	41213.36
2318.31	5972298.0	4141217.2	2318.27	-0.00	15.00	4283862.00	40826.38
2894.17	7462403.4	4140075.6	2894.11	-0.00	4.50	4433847.20	39896.00
2318.32	5972489.3	4140023.4	2318.34	0.00	1.02	4483424.00	39623.64
1742.43	4485797.9	4139703.2	1742.65	0.01	TEMPERATURE (°C) SPAN		
1166.57	3000562.6	4139618.0	1166.38	-0.01			
590.38	1518491.4	4139649.2	590.19	-0.01			
14.61	40868.5	4138389.6	14.59	-0.00			
					1.14	315793.38	
					20.40	315898.85	
					33.26	316082.22	

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

