



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-12944
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2624.41
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	11496676	2000m(2000 dBar)



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SENSOR SERIAL NUMBER: 12944
CALIBRATION DATE: 10-Jun-20

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

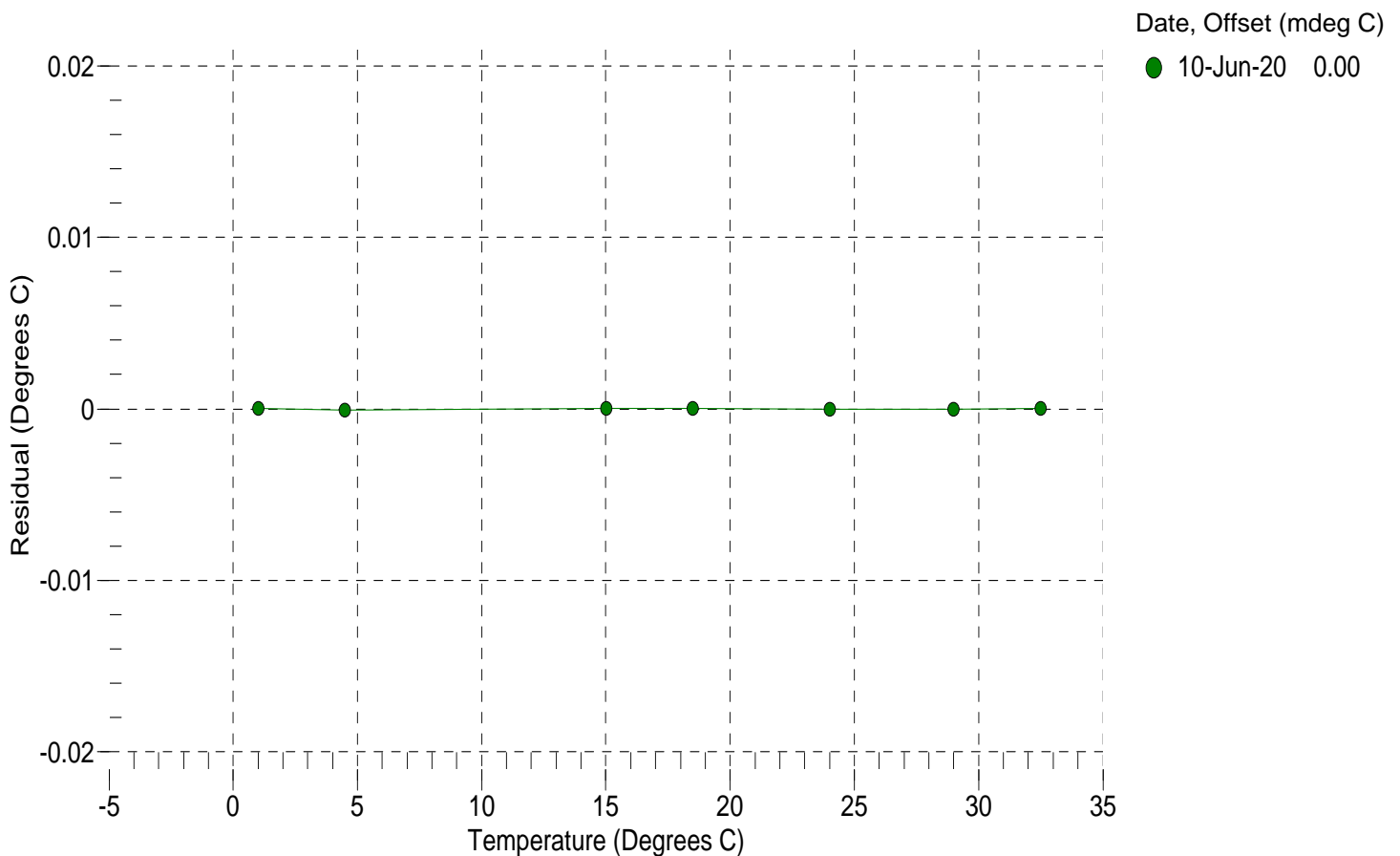
a0 = -9.052094e-004
a1 = 2.934042e-004
a2 = -3.714415e-006
a3 = 1.489220e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	17611242.4	1.0000	0.0000
4.5000	15055396.9	4.4999	-0.0001
15.0000	9590604.7	15.0000	0.0000
18.5000	8303261.5	18.5000	0.0000
24.0000	6659654.8	24.0000	-0.0000
29.0000	5482582.0	29.0000	-0.0000
32.5000	4800532.5	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 = -1.007645e+000
h = 1.464786e-001
i = -1.551888e-004
j = 3.322477e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 6.3499e-008

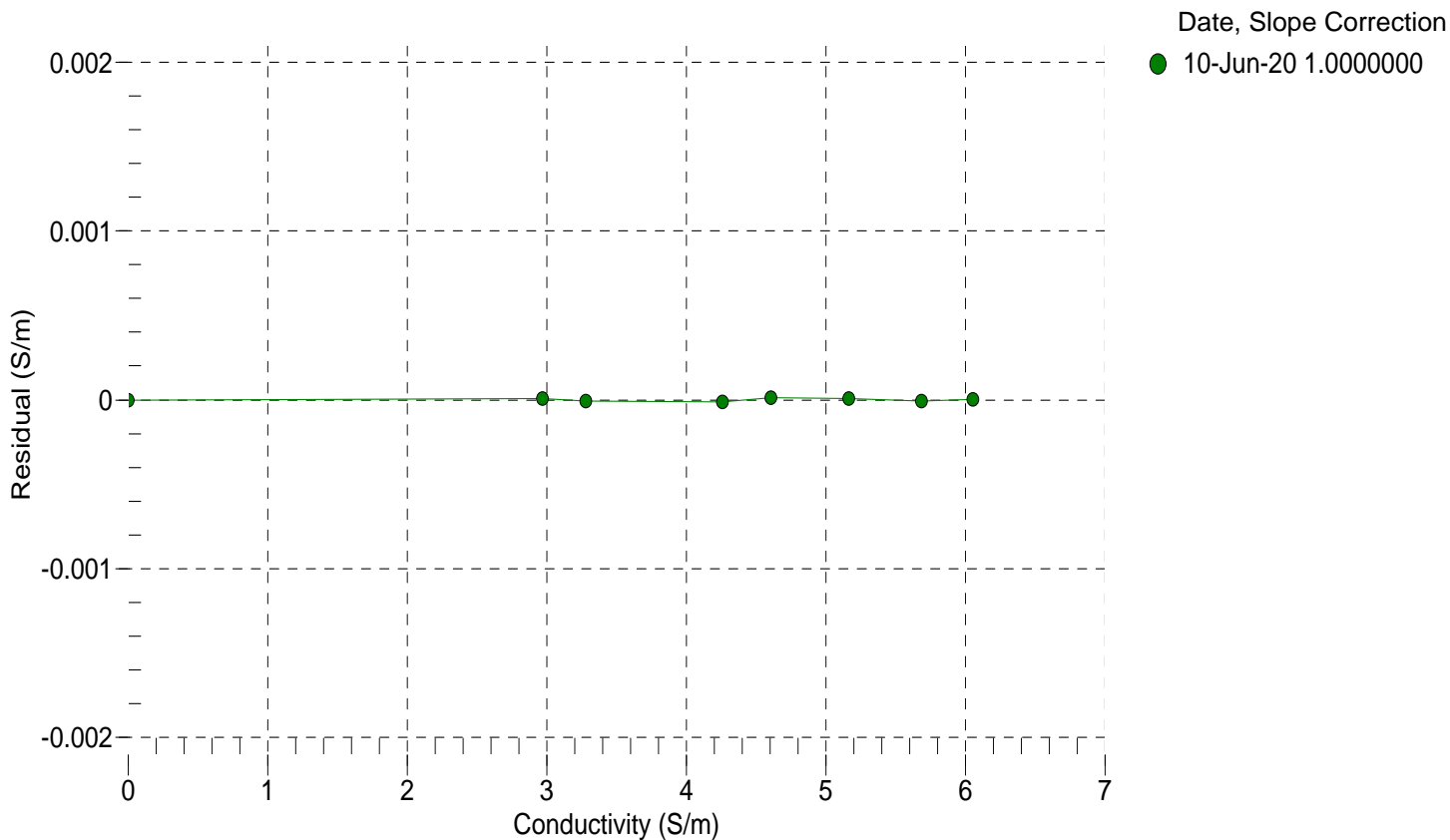
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2624.41	0.00000	0.00000
1.0000	34.7751	2.97278	5211.23	2.97279	0.00001
4.5000	34.7565	3.27964	5407.67	3.27963	-0.00001
15.0000	34.7170	4.26072	5991.96	4.26071	-0.00001
18.5000	34.7090	4.60567	6184.05	4.60568	0.00001
24.0000	34.7006	5.16331	6482.25	5.16332	0.00001
29.0000	34.6967	5.68493	6748.96	5.68493	-0.00001
32.5000	34.6945	6.05715	6932.84	6.05715	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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SENSOR SERIAL NUMBER: 12944
CALIBRATION DATE: 04-Jun-20

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11496676

COEFFICIENTS:

PA0 =	3.277235e-001	PTCA0 =	-1.394566e+003
PA1 =	3.935468e-004	PTCA1 =	5.037161e+001
PA2 =	-2.853010e-013	PTCA2 =	-6.486955e-001
PTHA0 =	3.219496e+002	PTCB0 =	3.087606e+005
PTHA1 =	-6.222733e-005	PTCB1 =	5.116664e+000
PTHA2 =	-1.326019e-012	PTCB2 =	1.390380e-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)
14.56	35573.8	4380821.6	14.54	-0.00	32.50	4264050.40	37094.80
590.04	1501472.7	4367114.6	590.39	0.01	29.00	4311579.80	37161.80
1164.91	2966558.4	4359066.8	1164.67	-0.01	24.00	4379387.20	37098.81
1739.91	4437262.8	4355896.4	1739.93	0.00	18.50	4453792.40	36899.97
2315.10	5911427.0	4353672.0	2315.30	0.01	15.00	4501001.60	36736.18
2890.43	7387708.9	4352860.6	2890.26	-0.01	4.50	4642221.60	36436.85
2315.45	5912393.4	4353082.6	2315.67	0.01	1.00	4689149.20	36247.63
1740.33	4437707.0	4353269.4	1740.09	-0.01			
1164.88	2967146.4	4353309.4	1164.88	0.00	TEMPERATURE (°C) SPAN		
589.36	1498669.5	4353422.8	589.26	-0.00	1.28	308767.40	
14.56	35568.2	4353133.6	14.52	-0.00	20.35	308922.33	
					34.23	309098.70	

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)

● 04-Jun-20 0.00

