



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-19441
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2846.16
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	12198118	2000m(2000 dBar)



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SENSOR SERIAL NUMBER: 19441
CALIBRATION DATE: 24-Jul-23

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

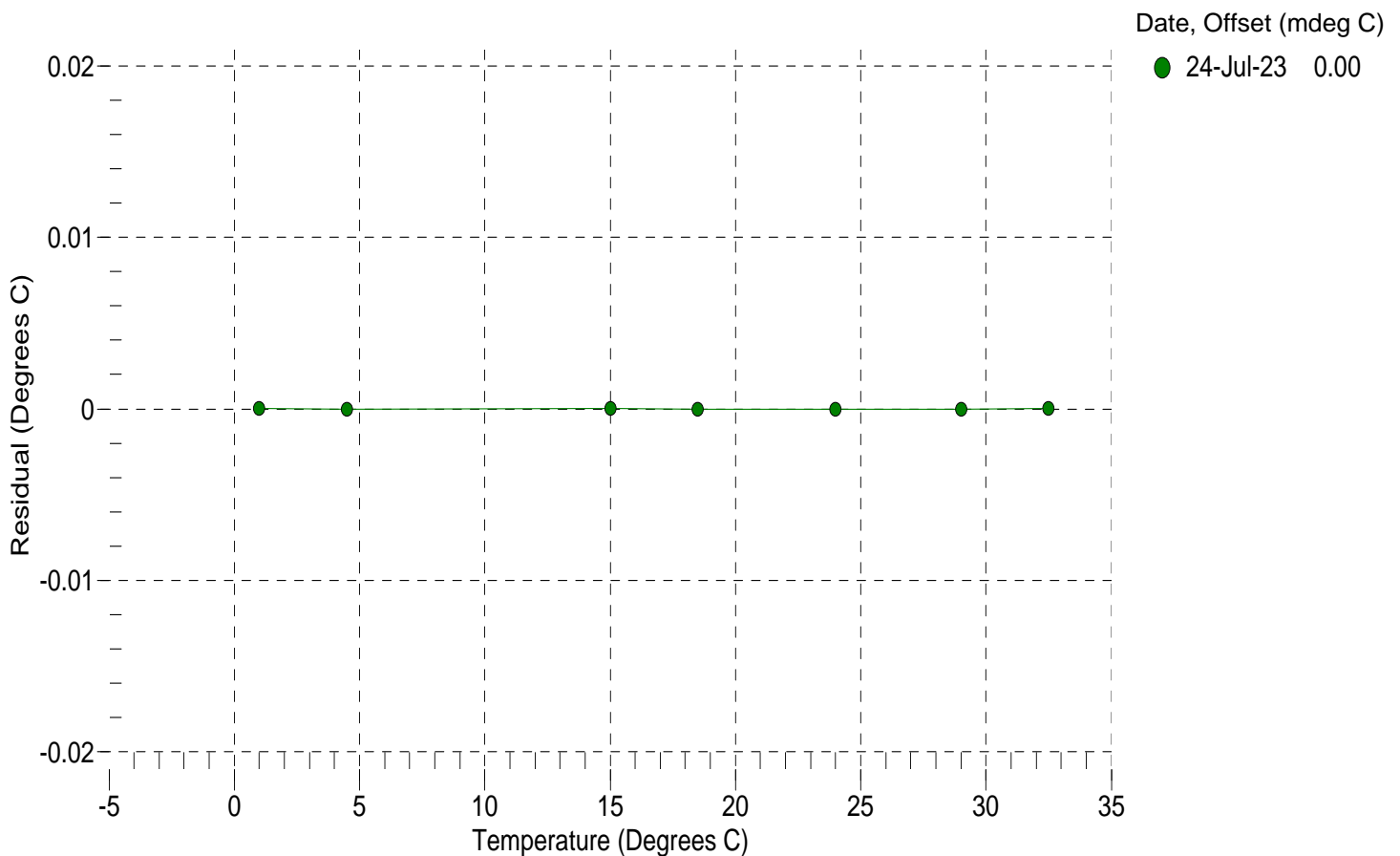
a0 = -8.041094e-004
a1 = 2.859995e-004
a2 = -3.305274e-006
a3 = 1.408441e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	14647066.8	1.0000	0.0000
4.5000	12508883.8	4.5000	-0.0000
15.0001	7945701.8	15.0001	0.0000
18.5000	6872967.8	18.5000	-0.0000
24.0000	5504848.8	24.0000	-0.0000
29.0001	4526369.3	29.0001	-0.0000
32.5000	3960006.1	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 = -1.027601e+000
h = 1.272312e-001
i = -2.234650e-004
j = 3.233795e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -9.3681e-007

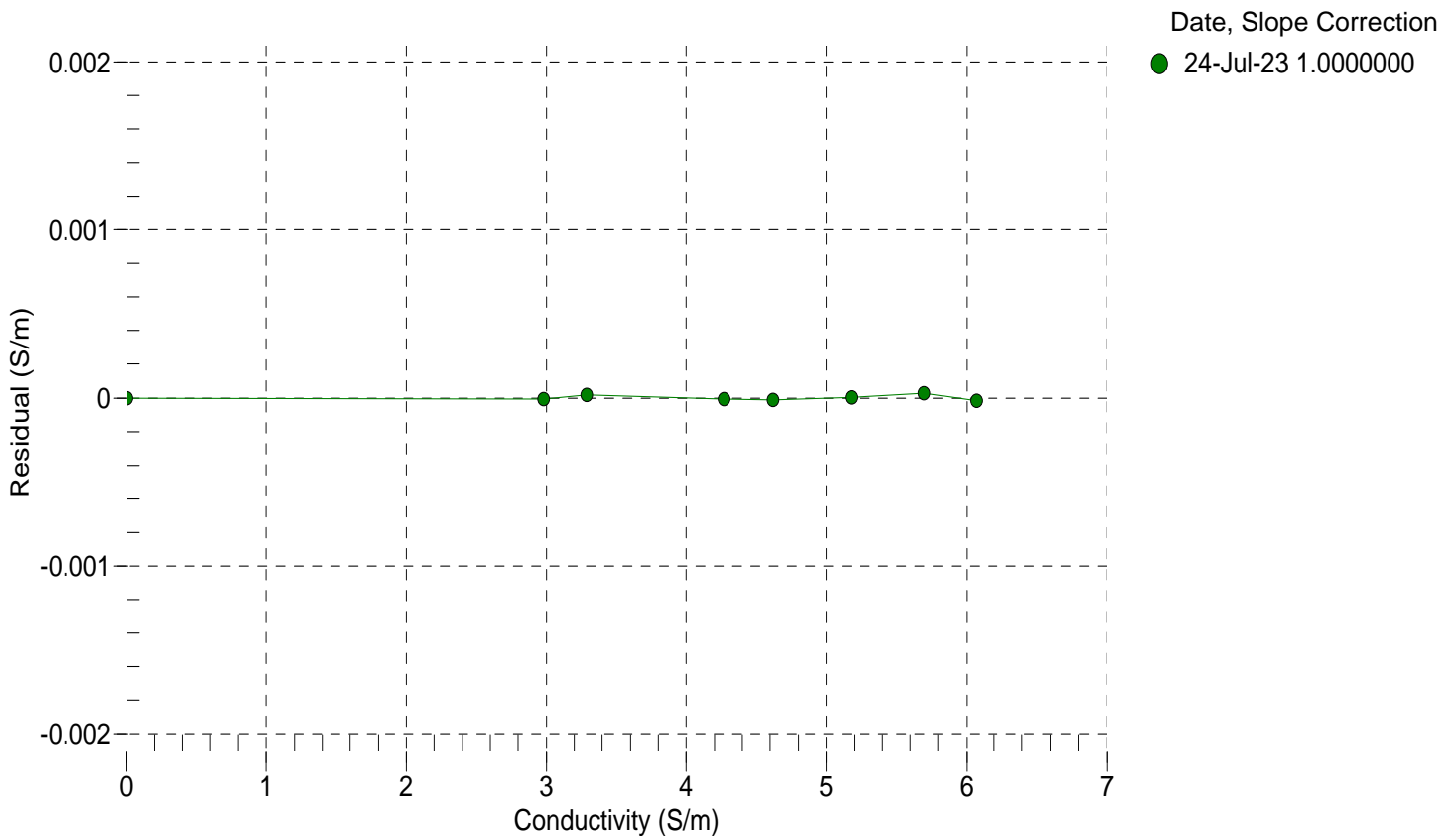
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2846.16	0.00000	0.00000
1.0000	34.8754	2.98053	5617.92	2.98053	-0.00001
4.5000	34.8560	3.28810	5828.83	3.28812	0.00002
15.0001	34.8147	4.27145	6456.18	4.27144	-0.00001
18.5000	34.8062	4.61717	6662.41	4.61716	-0.00001
24.0000	34.7968	5.17605	6982.61	5.17605	0.00000
29.0001	34.7903	5.69855	7268.87	5.69857	0.00003
32.5000	34.7832	6.07087	7465.91	6.07085	-0.00002

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

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 12198118

COEFFICIENTS:

PA0 =	3.863407e-001	PTCA0 =	1.346169e+004
PA1 =	3.909264e-004	PTCA1 =	5.591790e+001
PA2 =	-2.652923e-013	PTCA2 =	-5.304614e-001
PTHA0 =	2.930622e+002	PTCB0 =	3.171096e+005
PTHA1 =	-6.135721e-005	PTCB1 =	1.518373e+000
PTHA2 =	-9.395597e-013	PTCB2 =	2.889514e-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	50620.0	4146605.6	14.52	-0.00	32.50	4001471.60	52259.00
589.92	1525212.4	4143482.8	590.03	0.00	29.00	4052224.60	52234.49
1165.55	3002904.2	4142000.0	1165.60	0.00	24.00	4124656.20	52111.42
1741.21	4483583.4	4140688.0	1741.17	-0.00	18.50	4204134.80	51874.22
2317.10	5968272.2	4139339.6	2317.12	0.00	15.00	4254687.80	51708.43
2893.00	7455838.2	4138094.8	2893.01	0.00	4.50	4405766.40	51303.23
2316.86	5967735.6	4137959.2	2316.90	0.00	1.00	4455966.80	51077.65
1740.99	4482894.4	4137715.6	1740.88	-0.00			
1164.76	2999971.0	4137494.8	1164.44	-0.01			
589.71	1524414.4	4137241.6	589.71	-0.00			
14.55	50651.2	4136141.6	14.52	-0.00			

TEMPERATURE (°C)	SPAN
2.01	317113.79
20.73	317265.19
32.17	317457.37

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-Jul-23 0.00

