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

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

SENSOR SERIAL NUMBER: 9714
CALIBRATION DATE: 16-Oct-25

Slocum Payload CTD CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g =	-1.003454e+00	CPcor =	-9.5700e-008
h =	1.486518e-01	CTcor =	3.2500e-006
i =	-4.743649e-04	WBOTC =	1.9188e-07
j =	5.839413e-05		

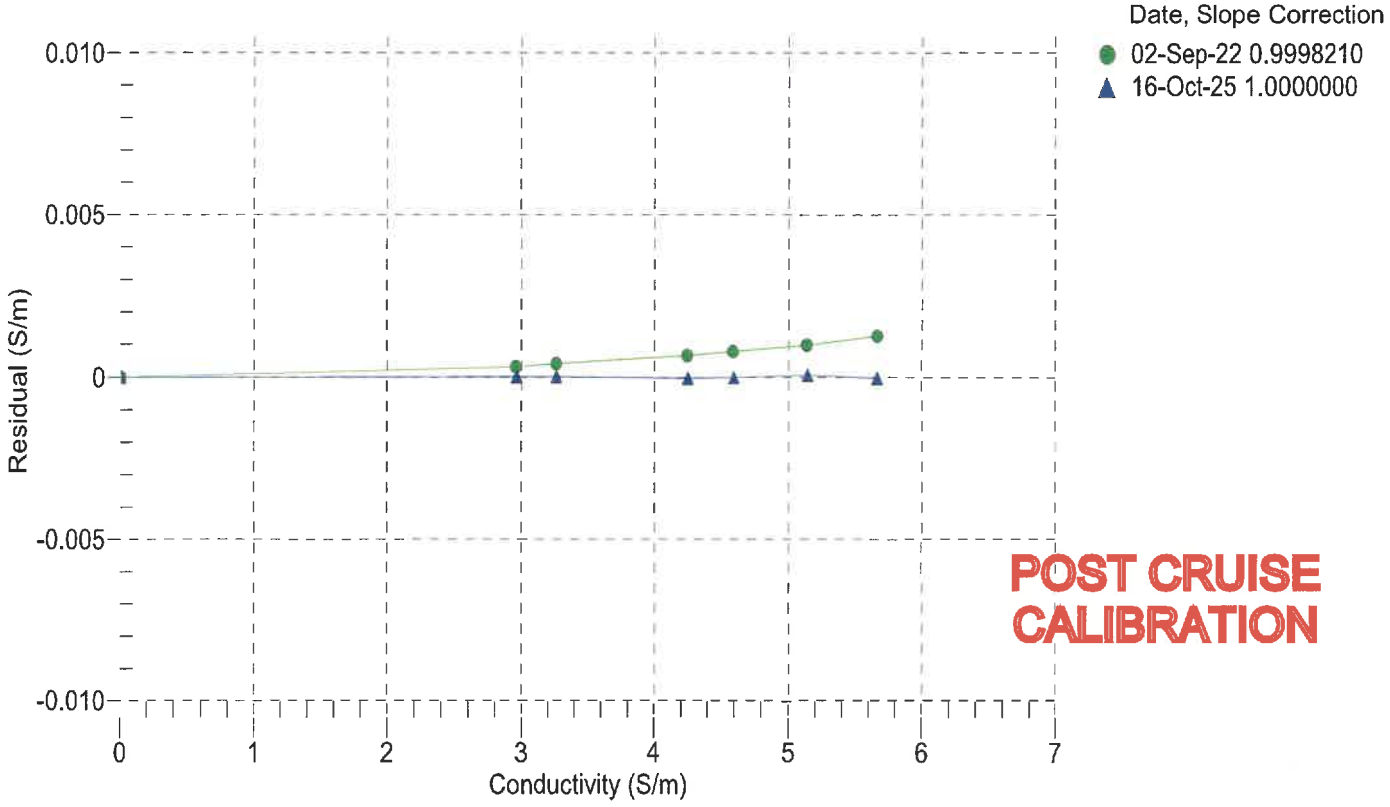
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2605.51	0.00000	0.00000
1.0000	34.6340	2.96186	5180.35	2.96187	0.00001
4.5000	34.6144	3.26755	5375.83	3.26755	0.00000
15.0000	34.5726	4.24487	5957.11	4.24484	-0.00003
18.5000	34.5634	4.58843	6148.11	4.58842	-0.00001
24.0000	34.5528	5.14374	6444.56	5.14380	0.00005
29.0000	34.5453	5.66291	6709.43	5.66288	-0.00003
32.5000	34.5380	6.03292	6891.87	6.03306	0.00013

f = Instrument Output(Hz) * sqrt(1.0 + WBOTC * t) / 1000.0

t = temperature (°C); p = pressure (decibars); δ = CTcor; ε = CPcor;

Conductivity (S/m) = $(g + h * f^2 + i * f^3 + j * f^4) / (1 + \delta * t + \varepsilon * p)$

Residual (Siemens/meter) = instrument conductivity - bath conductivity



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SENSOR SERIAL NUMBER: 9714
CALIBRATION DATE: 15-Oct-25

Slocum Payload CTD PRESSURE CALIBRATION DATA
1450 psia S/N 11705800

COEFFICIENTS:

PA0 =	1.895344e-01	PTCA0 =	5.245166e+05
PA1 =	4.421647e-03	PTCA1 =	3.368987e+00
PA2 =	9.995979e-12	PTCA2 =	-5.979202e-02
PTEMPA0 =	-6.071494e+01	PTCB0 =	2.511992e+01
PTEMPA1 =	5.393337e-02	PTCB1 =	3.759398e-04
PTEMPA2 =	-6.923058e-07	PTCB2 =	0.000000e+00

PRESSURE SPAN CALIBRATION

PRESSURE (PSIA)	INSTRUMENT OUTPUT (counts)	THERMISTOR OUTPUT (volts)	COMPUTED PRESSURE (PSIA)	RESIDUAL (%FSR)
14.55	527772.2	1562.6	14.38	-0.01
300.26	592511.2	1564.8	300.59	0.02
587.22	657320.4	1565.6	587.18	-0.00
874.25	722178.2	1566.0	874.08	-0.01
1161.34	787076.0	1567.0	1161.24	-0.01
1448.44	852005.0	1567.0	1448.62	0.01
1161.50	787121.4	1567.2	1161.44	-0.00
874.31	722205.4	1567.0	874.20	-0.01
587.16	657309.0	1567.0	587.13	-0.00
300.29	592521.0	1567.4	300.63	0.02
14.55	527769.8	1574.2	14.37	-0.01

THERMAL CORRECTION

TEMP (°C)	THERMISTOR OUTPUT (volts)	INSTRUMENT OUTPUT (counts)
32.50	1769	527799.10
29.00	1701	527817.70
24.00	1604	527796.80
18.50	1497	527812.50
15.00	1430	527787.80
4.50	1229	527770.50
1.00	1161	527765.00

TEMPERATURE (°C)	SPAN
-5.10	25.12
34.80	25.13

y = thermistor output (counts)

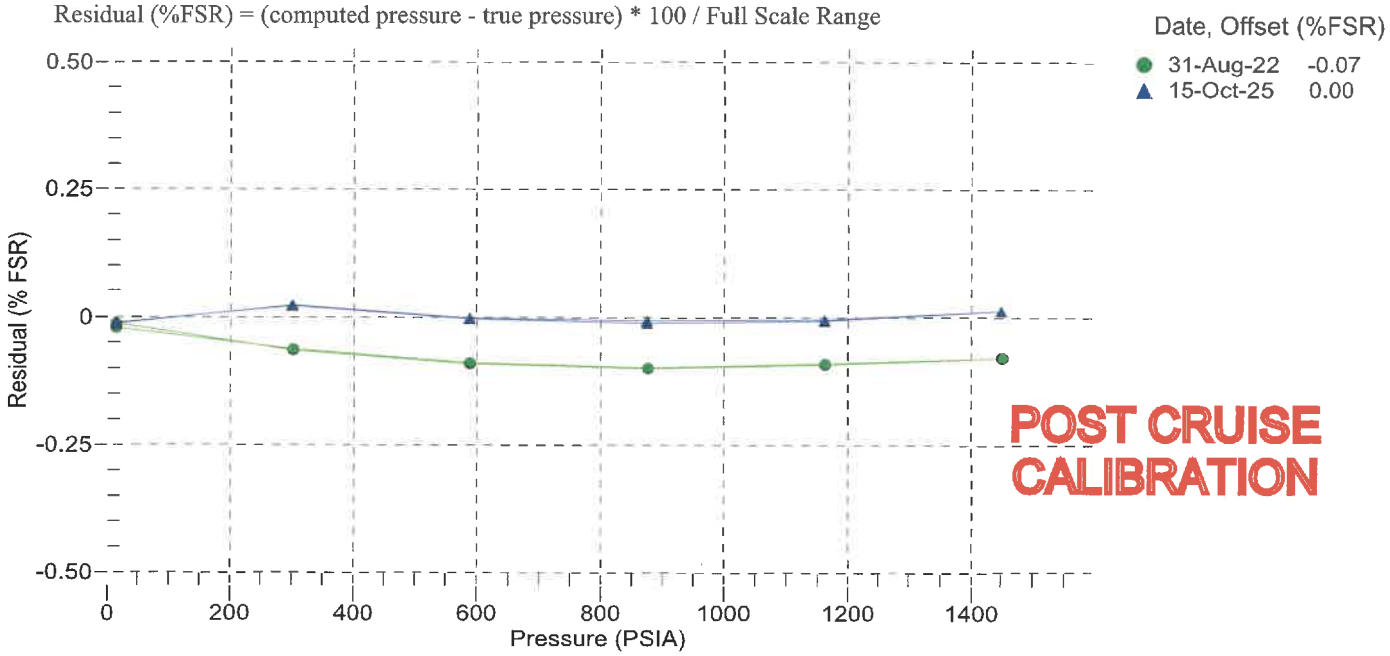
$t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$

$x = \text{instrument output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$

$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$

$\text{pressure (PSIA)} = PA0 + PA1 * n + PA2 * n^2$

Residual (%FSR) = (computed pressure - true pressure) * 100 / Full Scale Range



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Slocum Payload CTD TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

a0 = -2.363484e-04
a1 = 3.243209e-04
a2 = -5.322383e-06
a3 = 2.252791e-07

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	562641.3	0.9999	-0.0001
4.5000	483007.3	4.5001	0.0001
15.0000	311530.2	14.9999	-0.0001
18.5000	270813.3	18.5001	0.0001
24.0000	218595.8	23.9998	-0.0002
29.0000	180993.9	29.0003	0.0003
32.5000	159115.9	32.4999	-0.0001

n = Instrument Output (counts)

Temperature ITS-90 (°C) = $1/\{a0 + a1[ln(n)] + a2[ln^2(n)] + a3[ln^3(n)]\} - 273.15$

Residual (°C) = instrument temperature - bath temperature