

# Pressure calibration Check

SBE9plus s/n 785. August 08, 2008.

Unit: SBE9plus s/n 785 with Paroscientific model 410K-105 s/n pressure transducer.

Pressure calibration at room temperature (21.3 +/- 0.5 °C). CTD oriented vertically, powered from SBE11plus s/n 528.

Calibration performed on August 08, 2008 at WHOI CTD Calibration Lab by M. Swartz. File: SBE9\_785\_20080808\_Pcal.xls

Pressure standard is Paroscientific 760-10K s/n 63489, with pressure source Ruska model 2480 deadweight tester.

P<sub>760-10K offset, dbars</sub> 9.232

Conversion: dbar/PSI= 0.689476

Pstd gage	Pstd abs	fp, ctd	tp counts	tp °C calc	Pcalc	Pcorr	Pstdabs-P <sub>corr</sub>
Pstd gage, dbars	Pstd abs, dbars	fctd pressure, Hz	Psensor temp counts	tp ctd pres sensor, °C	P <sub>factory calc, dbar</sub>	P <sub>corrected, dbar</sub>	Perr
		(SBE11+ chan 2)	(SBE11+ chan A)				

Data from observing CTD in vertical orientation during calibration:

using factory coefficients  
of slope and offset.

0.00	9.23	33157.406	2721	25.8	8.79	9.09	-0.14
385.94	395.17	33357.652	2722	25.9	394.85	395.15	-0.02
730.49	739.72	33535.215	2722	25.9	739.47	739.77	0.05
1419.59	1428.82	33887.106	2723	25.9	1428.67	1428.97	0.15
2108.80	2118.03	34234.877	2723	25.9	2117.98	2118.28	0.25
2798.12	2807.35	34578.573	2724	25.9	2807.24	2807.54	0.19
3487.44	3496.67	34918.332	2725	25.9	3496.47	3496.77	0.10
4176.78	4186.01	35254.360	2725	25.9	4185.87	4186.17	0.16
4866.26	4875.49	35586.626	2726	25.9	4875.15	4875.45	-0.05
5555.69	5564.92	35915.345	2727	25.9	5564.52	5564.82	-0.10
6244.98	6254.21	36240.572	2727	25.9	6253.90	6254.20	-0.02
5555.73	5564.96	35915.361	2728	25.9	5564.55	5564.85	-0.11
4866.26	4875.49	35586.676	2729	26.0	4875.19	4875.49	0.00
4176.78	4186.01	35254.398	2729	26.0	4185.89	4186.19	0.18
3487.44	3496.67	34918.400	2729	26.0	3496.56	3496.86	0.18
2798.12	2807.35	34578.629	2730	26.0	2807.29	2807.59	0.24
2108.81	2118.04	34234.924	2730	26.0	2118.02	2118.32	0.27
1419.59	1428.82	33887.155	2731	26.0	1428.71	1429.01	0.19
730.46	739.69	33535.254	2731	26.0	739.49	739.79	0.10
385.94	395.17	33357.684	2732	26.0	394.86	395.16	-0.01
0.00	9.23	33157.455	2733	26.0	8.78	9.08	-0.15
Offset from horizontal orientation:							
0.00	9.23	33158.163	2733	26.0	10.14	10.44	1.21

Digiquartz Factory Coefficients: as of May 12 2004.

C1=	-4.617992E+04
C2=	-7.341121E-01
C3=	1.340470E-02
D1=	3.758800E-02
D2=	0.000000E+00
T1=	3.017251E+01
T2=	-4.619284E-04
T3=	4.108730E-06
T4=	5.343720E-10
T5=	0.000000E+00
AD590M=	0.0127836
AD590B=	-8.9362256

Slope	1.00000
Offset, dbar	0.3000

Note:

Digiquartz Factory Coefficients are from SBE Report for 410K-105 s/n 94763, May 12, 2004. including Digiquartz, AD590 and slope/offset data.