Supplement of Ocean Sci., 12, 275–283, 2016
http://www.ocean-sci.net/12/275/2016/
doi:10.5194/os-12-275-2016-supplement

Ocean Science Open Access EGU

Supplement of

The sound speed anomaly of Baltic seawater

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Plot data of Fig. 1. Measured sound speed differences δw from the Baltic and the diluted Atlantic sample (NA II) associated with the salinity anomaly for Baltic seawater at S_P=7.766 . The uncertainty $u(\delta w)$ (in $m \cdot s^{-1}$) is about 0.041, 0.025, and 0.024 for SVX, VPH, and VPOEM, respectively. δw is corrected for the slightly different temperature realizations at the preselected measurement points in both samples.

	SVX	VPH	VPOEM
T / °C		δw / $m \cdot s^{-1}$	
1.007	0.069	0.086	0.063
1.008	0.061	0.107	0.061
4.017	0.082	0.070	0.075
4.018	0.085	0.070	0.081
8.012	0.078	0.071	
8.013	0.077	0.064	
12.012	0.066	0.073	0.068
12.012	0.062	0.072	0.069
16.001	0.077	0.072	0.073
16.001			0.086
19.866	0.065	0.078	0.082
19.867		0.082	0.060
24.002	0.077	0.058	0.038
24.003	0.068	0.043	0.058
24.003		0.041	0.057
24.003	0.073	0.051	0.033
24.009	0.071	0.056	0.051
24.009		0.059	0.057
27.874	0.049	0.069	0.075
27.874		0.089	0.091
31.997	0.083	0.086	0.056
31.998		0.102	0.080
35.995	0.047	0.057	0.062
35.996		0.070	0.078
39.990		0.066	0.075
39.990	0.057	0.058	0.057
44.021		0.085	0.079
44.022	0.096	0.072	0.066

Plot data of Fig. 4. Time-of-flight sensor output (in $m \cdot s^{-1}$) of the VPH relative to speed of sound calculated with TEOS-10 and Chen and Millero (1977) equations of state, for pure water diluted North Atlantic seawater samples with S_P=7.765 and S_P=16.66 (laboratory measurements) .

	NA II, S_P=7.765			NA I, S_P=16.66	
T / °C	$w-w_{TEOS10}$	$w-w_{CM77}$	T / °C	$w-w_{TEOS10}$	$w-w_{CM77}$
1.007	-0.110	-0.062	1.907	-0.127	-0.139
1.008	-0.110	-0.062	1.907	-0.127	-0.140
4.017	-0.118	-0.053	3.907	-0.136	-0.132
4.018	-0.118	-0.053	3.907	-0.134	-0.130
8.012	-0.091	-0.047	7.906	-0.109	-0.110
8.013	-0.084	-0.039	7.906	-0.111	-0.111
12.006	-0.050	-0.040	11.908	-0.057	-0.079
12.007	-0.050	-0.040	11.908	-0.056	-0.078
12.012	-0.048	-0.037	15.909	-0.006	-0.049
12.012	-0.050	-0.040	15.909	-0.005	-0.048
16.001	0.001	-0.020	23.911	0.081	0.000
16.001	0.004	-0.017	23.911	0.099	0.018
19.866	0.024	-0.018	23.911	0.079	-0.002
19.867	0.024	-0.018	23.913	0.065	-0.016
24.003	0.055	-0.002	31.919	0.133	-0.004
24.003	0.055	-0.002	39.927	0.192	0.025
24.009	0.049	-0.007	45.935	0.126	0.084
24.009	0.054	-0.003			
27.874	0.072	0.004			
27.874	0.075	0.006			
31.997	0.094	0.008			
31.998	0.094	0.008			
35.995	0.137	0.023			
35.996	0.136	0.022			
39.990	0.185	0.029			
39.990	0.185	0.030			
44.021	0.272	0.062			
44.022	0.272	0.061			