Historically mariners cared only about pressure trends, rising or falling, fast or slow...

...but that is no longer true.

Now we can benefit from absolute pressure as well.

Fischer Precision Aneroid Barometer provides pressures to ± 0.7 mb without an extra calibration curve.

Modern low-cost options for accurate absolute pressure

Conex-Electro
Large displays

Weems & Plath
History + precision

Conex-Electro
Remote sensor

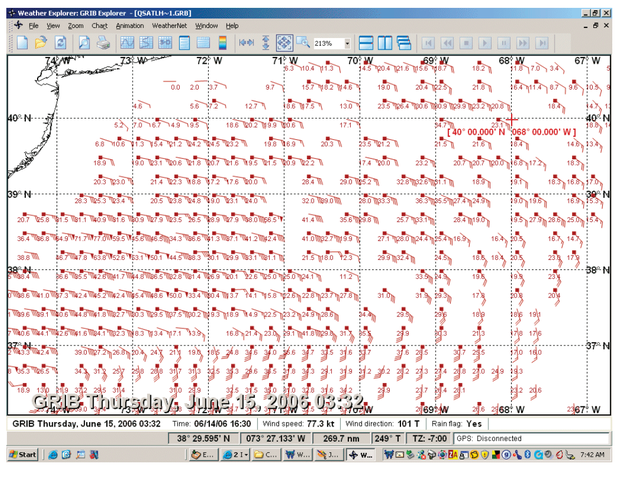
Garmin
Baro in GPS

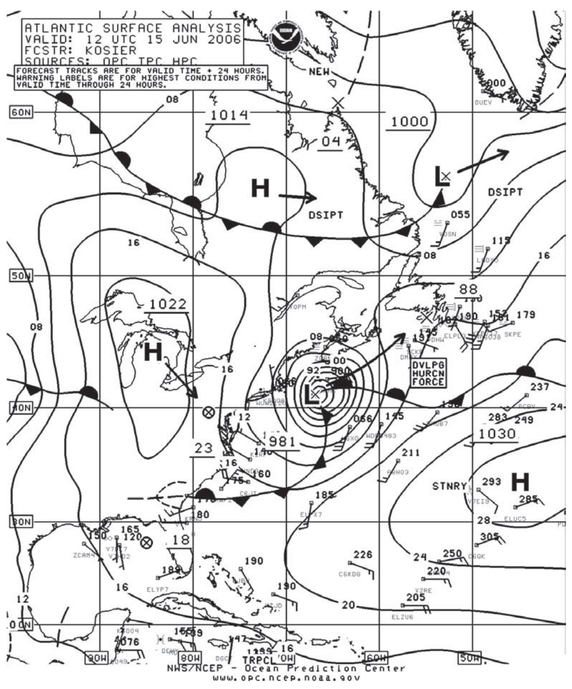
Seattle's OAR NW team now in Guinness Records Book as first vessel to row (shore to shore) from NY to UK, also winning by more than 1 week the inaugural Transatlantic Rowing Race.

Calibration still valid after
8 months and 3,500 miles, sitting within 3 ft of the ocean, and transiting major storms.

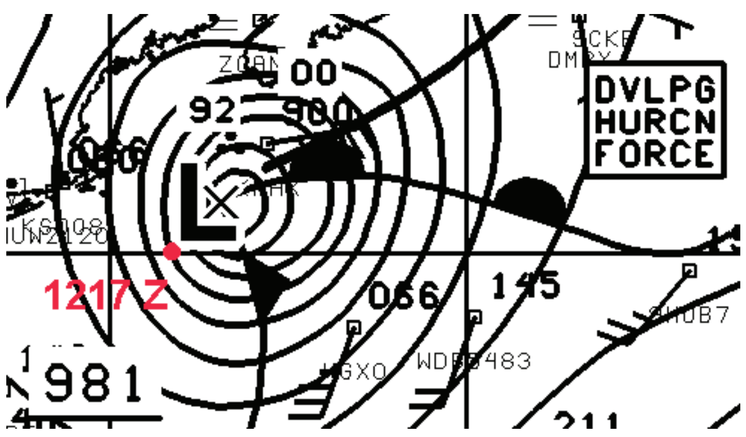
	A	B	C	D	E	F	G	H	I
1	PST 2/10/07	westpoint	boat	WP avg	delta1	correction	delta 2	correction	
2	12:00 pm	1008.5	998.8	1009.1	10.3		9.7		
3	11:00 am	1009.7	1001.2	1010.2	9.0	8.47	8.5	8.35	
4	10:00 am	1010.6	1002.6	1011.1	8.4		8.0		
5	9:00 am	1011.5	1003.6	1011.9	8.3		7.9		
6	8:00 am	1012.3	1004.2	1012.5	8.3		8.1		
7	7:00 am	1012.6	1004.7	1013.0	8.3		7.9		
8	6:00 am	1013.3	1005.4	1013.6	8.2		7.9		
9	5:00 am	1013.9	1005.7	1014.1	8.4		8.2		
10	4:00 am	1014.3	1006.1	1014.7	8.5		8.2		
11	3:00 am	1015.0	1006.7	1015.2	8.5		8.3		
12	2:00 am	1015.4	1007.1	1015.6	8.5		8.3		
13	1:00 am	1015.8	1007.5	1016.0	8.5		8.3		
14	12:00 am	1016.2	1007.9	1016.5	8.6		8.3		
15	11:00 pm	1016.6	1007.8	1016.5	8.7		9.0		
16	10:00 pm	1016.1	1007.4				8.7		
17									
18									
19	first calibration june 5, this one feb 10, eight months later								
20	elevation from google earth = 224 ft + 5 = 229 = 8.4 mb (starpath = 167 ft)								
21	elevation on topo map = 74m = 243 ft + 5 = 248 ft = 9.0 mb								
22									

Quick scat report shows approaching winds





Alberto passes over the top of the barometer. Map shows 996 mb at 12Z, logbook records baro 998.8 mb at 1217 Z.

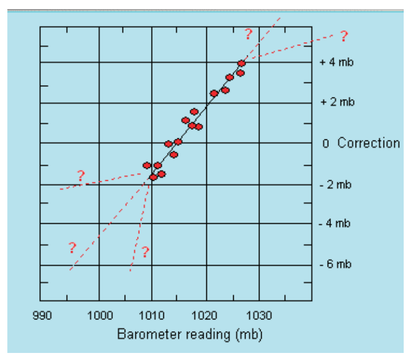


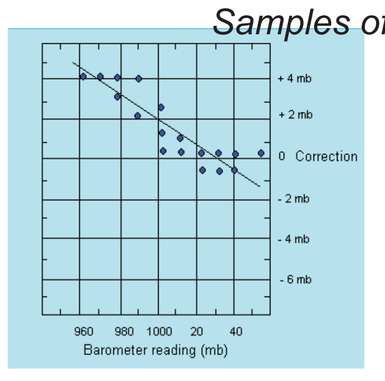
Why we could not use absolute pressures earlier.

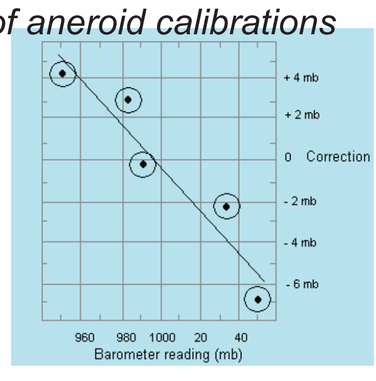
Commonly used aneroid barometers are typically not linear, thus requiring a calibration curve. Before the Internet, it was difficult to measure the curve accurately. Even with Internet pressure archives it is difficult as the unit must experience the full range of pressures to get the full curve of corrections.

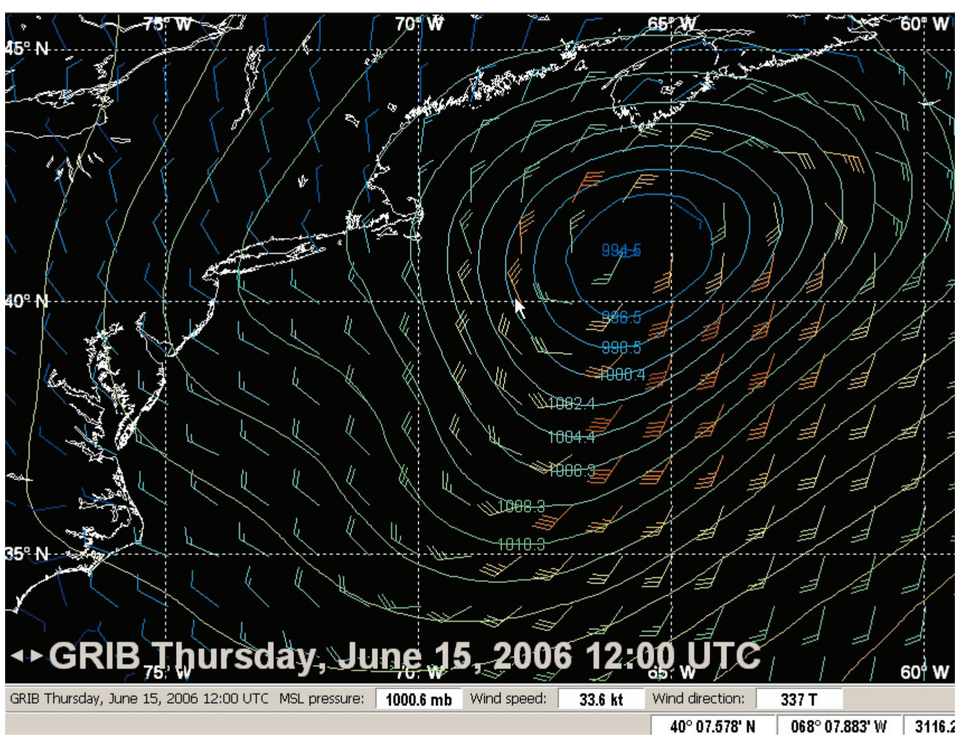
Now we have devices that are linear over the full range and easy to set using readily accessible Internet archives from marine or aviation sites.

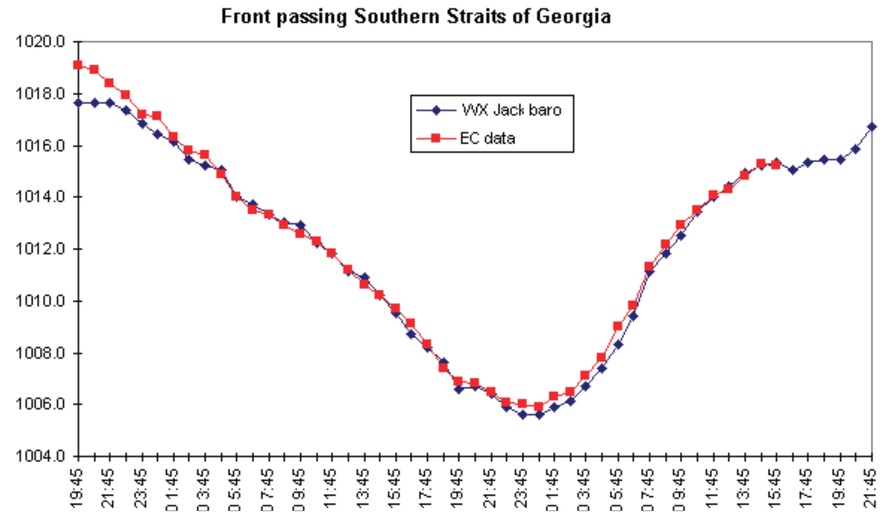
Samples of aneroid calibrations











Prudent use of GRIB data

(1) Compare present wind and pressure with GRIB *and* NWS maps.

(2) Compare 48h and 96hr GRIB map with NWS map.

(3) If all agree, GRIB data can be useful for in between data and for getting data not discernible from the maps.

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