

Electronic Air Pressure Methodology

(Last rev. 14/04/2017)

Atmospheric Air Pressure is measured using an electronic sensor located inside an equipment shelter (see Fig. 3) located in the BCI Clearing site.

Beginning in 1996, different sensors have been used. From 1996 to 2010 the CS106 sensor (also known as a Vaisala PTB101B) Barometric Pressure Sensor was used (see Barometric_Pressure_Sensor_Model_cs105.pdf).

Since 2011 the CS106 sensor (also known as a Vaisala PTB110) has been in use (see Figure 2 and Barometric_Pressure_Sensor_Model_cs106.pdf).

Air pressure is sampled every 10 seconds. The average, minimum and maximum values are recorded at the end of every 15 minute interval.

Records are provided with two Quality Control flags. Flag one indicates the fitness for use of each records. Possible values are: good, bad, doubtful, missing. Records are marked as bad if they fail one or more QC tests. Likewise, records are marked as doubtful if they are potentially bad, but without sufficiently strong evidence to be marked as bad. The second QC variable provides that reason for marking a variable as bad or doubtful. Potential values are: range, step, persistence, drift. At this time only range tests have been applied.

Figure 1



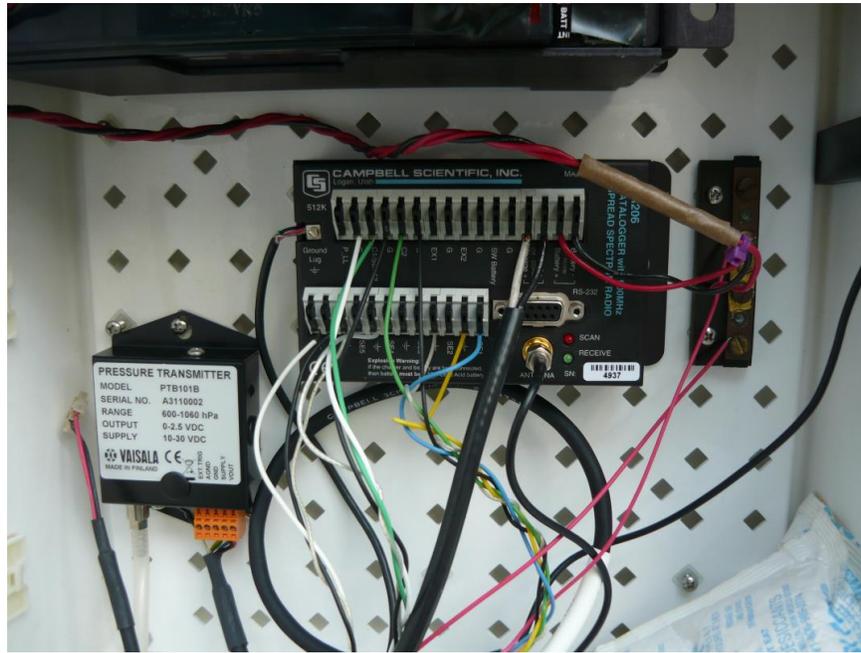
Vaisala PTB101B Barometric Pressure Sensor

Figure 2



Vaisala PTB110 Barometric Pressure Sensor

Figure 3



Location of pressure sensor inside of equipment shelter. Note plastic tube connecting sensor to the outside of the shelter.