

## Electronic Temperature and Relative Humidity Methodology

(Last rev. 01/11/2024)

The Punta Galeta meteorological station (Figure 1) temperature and relative humidity are measured electronically on the side of the platform tower using combination sensors housed in naturally aspirated radiation shields\* approximately 2m above MSL on the station platform tower (Figure 2).

\*(From the manufacturer: the naturally aspirated 6 and 10-plate radiation shields' louvered construction allows air to pass freely through the shield, keeping the probe at or near ambient temperature. The shields' white color reflects solar radiation.)

Several types of sensors have been used. Currently Campbell Sci. HygroVue10 sensors are used at this location (see Figure 3).

A Hydrological Services Model TB3 tipping bucket is being used (see Figure 3).

The tipping bucket is calibrated at least yearly according to the manufacturer's specifications (see Figure 4).

Records are provided with two Quality Control flags. Flag one indicates the fitness for use of each record. 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



Location of the Punta Culebra station.

Figure 2



Punta Culebra meteorological tower (left) and 6-gill radiation shield with sensor (right)

Figure 3



Campbell Sci. HygroVue10 Temperature & Humidity