

Electronic Precipitation Methodology

(Last rev. 13/11/2024)

Precipitation is measured at the top of AVA tower which is located to the north of the 50ha plot on Barro Colorado Island (BCI) (see Figure 1 and 2).

Currently, the 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 3).

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.

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

Figure 1



Location of the AVA Tower. Red lines are trails. White rectangle is the 50ha plot.

Figure 2



Campbell Sci. HygroVue10 Temperature & Humidity sensor inside 10-gill naturally aspirated radiation shield (left) and out (right)

Figure 3



Hydrological Services Model Campbell Sci. TB3/CS700 tipping bucket

Figure 4



Tipping Bucket Calibration