

Manual Precipitation Methodology

(Last rev. 23/10/2024)

Precipitation is measured in the Laboratory Clearing ('El Claro'). This is an open area surrounded by trees of up to 20m in height (see Figures 1 and 2).

Rainfall has been Manually measured on BCI since 1972.

Measurements are taken at approximately 9am. The frequency of measurements has ranged from almost daily to the current 2-3 times/week. Since rainfall is measured in the morning, the data recorded on day n, reflects the rainfall fall that mostly falls on the previous day – approximately 26% of rainfall occurs between midnight and 9am.

Two manual rain gauges are used (see Figure 3).

Because data are collected less than daily, missing data are backfilled by using the following technique

- For any gap of n days
- Divide the rainfall on day n+1 by the rainfall measured electronically during the same period
- Daily electronic precipitation is calculated to match the same measurement protocol as the manual data (ie. 9am to 9am)
- The prorated data are added to the data tables, however, the original data are also stored.

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 Laboratory clearing

Figure 2



Clearing Site showing location manual rain gauges.