

Solar Radiation Methodology

(Last rev. 23/11/2015)

Incoming solar radiation is measured electronically using LiCor Model Li200x Pyranometers (see figure 1). At most locations, two Pyranometers are used (see Figure 2). The reported value is the larger of both sensors for any given reporting interval.

Incoming solar radiation is sampled once every 10 seconds. The average, minimum and maximum values are recorded every 15 minutes.

When the meteorology station for the PNM crane was installed in 1996, the station was located mid-way up (~25m) the tower and to one side (see Fig. 1). The sensors were located at the ends of a metal cross bar located below the tipping bucket.

In March of 2008 two SR sensors were installed on the top of the tower (see Figure 3). The relationship between the solar radiation measured at the two locations is shown in Figure 4.

Sensor elements are replaced with newly recalibrated sensors every year according to the manufacture's recommendations.

Figure 1



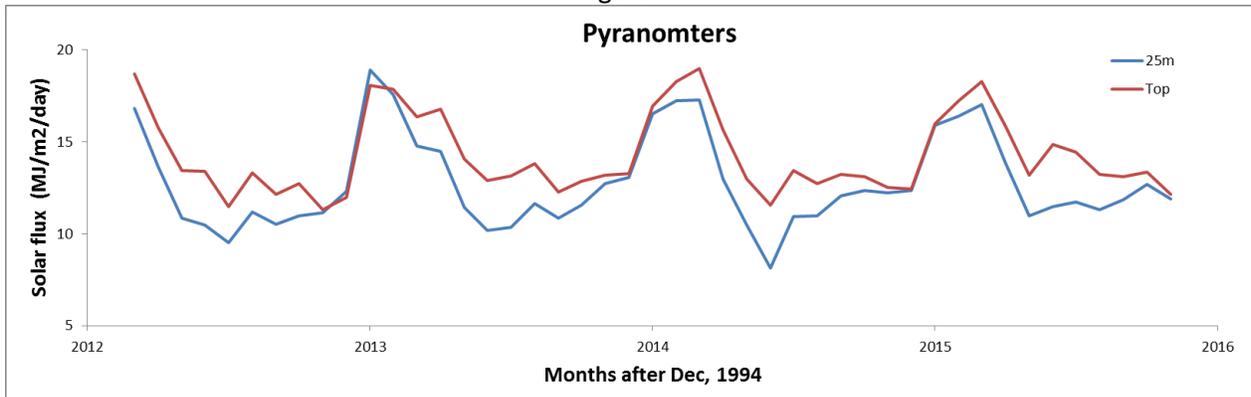
PNM tower showing met. station approximately at the middle of the tower

Figure 2



Tipping bucket on top of the PNM crane.

Figure 2



Monthly total Solar flux as measured at the 25m and Crane Top locations