

Rotating Shadowband Pyranometers (RSPs) have been deployed to measure global, beam, and diffuse irradiance because they do not require manual adjustment of trackers. However, a RSP requires the use of solar cell based pyranometers which underestimate diffuse irradiance by 20- 30% under clear sky conditions. Algorithms were derived to address many of the systematic errors in solar cell based measurements, and these algorithms were incorporated into a new series of RSP instruments. This is an analysis of how similar algorithms can be used to remove some of the systematic errors associated with the data from the original RSPs and an evaluation of the uncertainties and remaining errors in the corrected RSP data.