

Presentation Summary: **Comparison of Pyranometers and Reference Cells on Fixed and One-axis Tracking Surfaces**

F. Vignola¹, Josh Peterson¹, Chun-Yu Chiu¹, Michael Dooraghi², Manajit Sengupta², Fotis Mavromatakis³

¹University of Oregon, USA

²National Renewable Energy Laboratory, USA

³TEI, Crete, Greece

Contact: Frank Vignola: fev@uoregon.edu

Summary: Photodiode-based pyranometers and reference cells are compared to high quality thermopile pyranometers on a fixed and one-axis tracking surface. Spectral and angle of incidence effects were examined. The spectral effects are clearly apparent in photodiode-based pyranometers, especially on a one-axis tracking surface where the pyranometer is pointed more directly at the sun in the morning and evening hours. Reference cells also exhibit spectral effects but also have a large angle of incidence effects.