

## **Michelson Doppler Imager Observations of the Solar Radius over Cycle 23**

*Rock I. Bush [rbush@solar.stanford.edu], Solar Physics Group, Stanford University, California; J. Kuhn, Institute for Astronomy, University of Hawaii, Honolulu; and M. Emilio, Universidade Estadual de Ponta Grossa, Parana, Brazil.*

The Michelson Doppler Imager (MDI) instrument on the SOHO spacecraft has been observing the Sun since early 1996. Full disk continuum images with 4 arc-second resolution provide reliable long term observations of the solar limb. The position of solar limb is measured by fitting the observed limb darkening function from which an apparent solar radius is determined.

The solar radius obtained from these images must be corrected for instrument focus adjustments made to compensate for aging of the entrance filter window and for temperature variations in the MDI optics package. An a priori instrument model of the MDI optical and thermal performance has been produced to correct the solar radius determination.

The previous MDI solar radius determinations have been extended by another 4 years and now provide excellent coverage of the entire solar cycle 23. Analysis of these additional measurements is being completed, and will provide an upper bound if not a definitive measure of the solar radius variation over a solar cycle.

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