

HOW WELL DO WE REALLY UNDERSTAND THE VARIABLE SUN?

Jeff R. Kuhn

Institute for Astronomy, University of Hawaii, USA

The solar variability is a problem that's been with us for over a thousand years, but many solar physicists would argue that our understanding of its cycle is still fundamentally incomplete. Global solar variability is being measured exquisitely by helioseismic, astrometric, and magnetic techniques over spatial scales from sub-arcsecond to full-disk imagery. This talk will explore clues to the Sun's rhythm obtained from space and ground measurements and from other stars. We'll examine some of the interesting physical mechanisms that may be needed to account for the solar cycle and show how future progress is imminent.