

**Continuity and Preservation of Long-Term Synoptic Observations of the Sun**

**Alexei A. Pevtsov** [pevtsov@email.noao.edu], National Solar Observatory, Boulder, CO, USA

Heliophysics research community is pushing hard to explore the Sun and its cosmic neighborhood with new instruments in new wavelength bands, with the highest-possible spatial resolution and the fastest time cadence. We justify this by the need to better understand the physics of solar activity and the societal “mandate” to develop a reliable space weather forecast. However, our understanding of solar activity will be incomplete and even distorted, if we do not know how present activity compares with the past and what changes may have been occurring in properties of solar phenomena. The latter necessitates long-term monitoring of solar activity. The success of synoptic observations requires long-term sustainable funding, but unfortunately, we are witnessing an alarming decline in funding levels for these programs. The uniformity of synoptic data also requires careful planning for on-time replacement of aging instruments and their cross-calibration. Equally important is a long-term preservation of existing data, but in absence of proper planning, we may already be witnessing irreversible loss of some important historical datasets. This talk will review the present efforts aimed at addressing the continuity of long-term observations of solar activity including establishing close international collaboration in this area of research.