

FIRST CIRCULAR:

The Symposium from the International Astronomical Union **IAUS 340:**

Long – Term Datasets for the Understanding of Solar and Stellar Magnetic Cycles

Where? **B. M. Birla Auditorium**, Jaipur, India

When? – February 19 - 24, 2018

Website? <http://www.iiap.res.in/iaus340/>

Solar variations have significant influence on the Earth's space environment and climate via its magnetic field, irradiance and energetic particles. Long-term and reliable historical datasets of solar and stellar activity indices are crucial for understanding the variations and predicting the future solar cycle. Cosmogenic and radionuclides can extend our knowledge of solar variations back to the Holocene. There are a number of important and hot issues relevant to the evolution of solar activity and variability. These include, how to build up long-term consistent datasets, e.g., sunspot number and solar irradiance, how to realistically reconstruct the physical parameters, like the interior convection spectrum and photospheric open flux, based on the longest records, how to understand the relations among different indices, how to model the solar cycles based on the observed data. Furthermore, the progress in the understanding of the stellar variability and activity cycles helps us to understand the solar cycle over a much wider sample of Sun-like parameters.

We invite contributions on the following topics:

1. Helio/asteroseismology long-term data: solar/stellar interior velocity fields -- status, divergence, and challenges
2. Long term magnetic field measurements in the sun and stars
3. Sunspot number datasets: status, divergences, and unification
4. Solar total irradiance and spectral irradiance long-term data: status, divergences, and challenges
5. Solar cycle database of solar activity: variations in solar eruptions (flares, CMEs, SEPs, etc.)
6. Long-term monitoring of stellar activity: lessons for the solar cycle
7. The variable solar wind and the heliosphere
8. Solar behavior over centuries using radioisotopes
9. Physical causes of the solar/stellar cycle irregularities
10. From past to future: predicting upcoming solar cycle 25

Requests for IAU Financial Support can be submitted until **September 30th 2017**. IAU grants are meant to support qualified scientists to whom only limited means of support are available, e.g., colleagues from economically less privileged countries and young scientists.

The abstract submission deadline is 30 September 2017. The deadline for early registration (200 EUR) is set to **November 30th 2017**. Late registration (250 EUR) is possible until **December 30th 2017**. Very late registration, on-site registration fee 300 EUR.

For more information, please visit the website at the following URL:
<http://www.iiap.res.in/iaus340/>

If you have any question concerning the Symposium, please contact us at iaus340@iiap.res.in.

Looking forward to welcoming you in Jaipur, India.

The IAUS 340 Scientific Organizing Committee: Dipankar Banerjee, Jie Jiang, Kusano Kanya, Sami Solanki (Co-Chairs) & Paul Charbonneau, Frédéric Clette, Ilaria Ermolli, Sarah Gibson, Todd Hoeksema, Alexei Pevtsov, Leonid Kitchatinov, P.K. Manoharan, Ralph Neuhaeuser, Nandita Srivastava, Ilya Usoskin