

Dear Colleagues,

On behalf of the conveners of the AOGS session ST 30 (The Strange State of the Heliosphere during the Weak Solar Cycles 24 and its Implications), I request you to submit an abstract on a related topic.

The deadline of the abstract submission is February 18, 2015 (only a couple of days away!).

Below you will find the abstract of the session and the important dates; more information on AOGS Meeting can be found at: <http://www.asiaoceania.org/aogs2015/>

Please circulate this message to your colleagues and encourage them to submit contributed papers to ST30.

Looking forward for your positive response,

Best regards,

Nat Gopalswamy  
2015 February 13

ST30: The Strange State of the Heliosphere during the Weak Solar Cycles 24 and its Implications

The solar activity in cycle 24 has been at the lowest level since the dawn of Space Age. The low solar activity has resulted in a weak heliosphere with diminished density, magnetic field and pressure among other interesting signatures. The effect of the weak solar activity has been observed from the solar interior, solar surface, corona, interplanetary medium, geospace, Earth's atmosphere, and even the termination shock. The modified physical state of the heliosphere has resulted in significant impact on the propagation of coronal mass ejections (CMEs) and shocks, resulting in extremely mild space weather. Cycle 24 has witnessed the weakest level and frequency of large geomagnetic storms since 1957. Similarly, CMEs have produced the lowest number of high-energy (>500 MeV) solar energetic particle events since they were discovered in the 1940s. The weak activity is also a good opportunity to understand the role of the Sun in global warming. Since the low solar activity in cycle 24 resulted from the weak polar field of cycle 23, the natural question is whether this trend will continue resulting in a grand minimum over the next few solar cycles. Thus we have an opportunity to understand the weakening solar activity in terms of the variability of the solar dynamo. In order to promote active research to understand the peculiar state of the heliosphere its consequences, we invite papers dealing with observations, theory, and modeling investigations related to current solar activity. Comparative studies involving the current weak activity with historical low-activity periods are also solicited.

Conveners:

Nat Gopalswamy  
Alexis Rouillard  
Martin Mlynczak  
Kanya Kusano  
John Richardson