

Project Details

ROSES ID: NNH07ZDA001N

Selection Year: 2008

Program Element: Focused Science Topic

Topic: Focused science topics for Strategic Goal 2 (Sun-Climate): Solar Modulation of the galactic cosmic rays and the production of cosmogenic isotope archives of longterm solar activity, used to interpret past climate changes.

Project Title:

Workshop Support: Solar Variability, Earth's Climate and the Space Environment

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Summary:

We are organizing a cross-disciplinary International Workshop on "Solar Variability, Earth's Climate and the Space Environment", to be hosted by the Montana State University, in Bozeman, Montana from June 1-6, 2008. The Sun's influence on the Earth and the heliosphere involves numerous physical processes (solar dynamo output, magnetic reconnection, flares, CMEs, TSI and open flux variations), occurs over multiple spatial (solar convection to heliospheric) and temporal scales (space weather to space climate). Therefore, a unified understanding of Sun-Earth-System science requires crossing traditional boundaries and assimilating and building upon ideas and experiences of researchers across multiple disciplines. This is precisely the aim of this workshop -- linking together solar and space physicists to climatologists. The workshop will cover research topics ranging from the solar interior and internal processes, the Earth's atmosphere and climate, to the influence of the Sun on Earth's space environment and climate. Focused working groups on space weather modeling, long-term solar evolution and space climate, will bring together scientists with diverse expertise to review our current state of understanding and discuss future prospects. The presentations of the meeting will be made available online, the reviews by experts in the field will be put together in a book already approved by the Cambridge University Press and the focused working group outcomes will be published as research papers. Therefore, this workshop will have a lasting value that is expected to have a wide reach in the Sun-Earth-System community. This workshop addresses the LWS program's objective of "Understanding the changing Sun and its effects on the Solar System, life, and society", and NASA's strategic sub-goal 3-B - "Understand the Sun and its effects on Earth and the solar system".

Publication References:

Summary: no summary

Reference: Yurchyshyn, Vasyli; Tripathi, Durgesh; (2010), Relationship Between Earth-Directed Solar Eruptions and Magnetic Clouds at 1 AU: A Brief Review, Advances in Geosciences. Volume 21: Solar Terrestrial (ST). Edited by Ip, Wing-Huen; Duldig, Marc. Published by World Scientific. ISBN #978-981-2838-20-9, 2010, pp.51-70, doi: 10.1142/9789812838209_0004