Project Details

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Project Title:
Student support for the "Tracing the Connections in Solar Eruptive Events" meeting, December 2012

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Summary:
Goal and Objectives

We propose to host to a workshop to assess, validate and compare existing observational, theoretical and modeling tools by comparing model predictions with a spectrum of different data sets, where possible for the same events. The goal of this workshop is to examine the connections amongst the phenomena that lead to solar eruptive events . This naturally leads to the 4 following science objectives: (i) addressing the theoretical and observational challenges in understanding the build up and energy release processes, taking into account new observational and theoretical results; (ii) the formulation of an enhanced understanding of computational challenges to address the vast data load currently available, and in connecting existing models to each other and to the new data; (iii) maximizing our science return from the multiple solar observatories by making new connections across the breadth of current instrumentation expertise; (iv) summarizing and projecting our ability to predict the occurrence of solar flares and CMEs, with emphasis on the all-clear prediction possibility. Addressing these objectives with a contingent of observers, theorists and modelers spanning the gamut of solar activity research will undoubtedly create new insights into the connections between the flare / CME process in the Sun and their effect in the heliosphere. It will identify the future challenges and requirements of these connected facets of heliophysics.

Request to NASA and cost effectiveness

From previous experience in organizing this series of workshops, we expect about 150-200 registered delegates. We are requesting funding to provide financial support for 20 students, at a cost value to NASA at almost dollar for dollar, to attend what he hope will prove to be another pivotal assembly of experts in the field.

Relevance to NASA

The Connections meeting addresses topics directly relevant to the Heliophysics strategic goal to Understand the Sun and its interactions with the Earth and the solar system under the NASA strategic plan (2010). Specifically in concentrating on the solar eruptive events this meeting is directly relevant to the sub-goal to Understand the physical processes of the space environment from the Sun to Earth, to other planets, and beyond to the interstellar medium. directly connects to the TR&T objectives of data analysis, theory, and modeling, and the development of tools and methods (e.g., software for data handling) . It issue of connections focuses specifically on the LWS primary goal of to make progress in understanding this complex system, focusing on the most critical interconnections .

Publication References:

no references