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GAIA- GLOBAL ASSIMILATION OF INFORMATION FOR ACTION

Abstract

JHU/APL and its partners have been working to establish a new way of interacting to determine the needs of particular research communities. We call this GAIA – Global Assimilation of Information for Action (see http://gaia.jhuapl.edu). In this talk we describe GAIA and its application to a variety of problems – particularly space weather. The Space Weather activity is call SWIFTER ACTION. There are several major challenges that face the space weather community. The first comes from within the basic research community which often focuses on understanding the underlying physics rather than phenomenology. The challenge that arises is that the basic research community may either look at overarching themes that are broadly applicable or that address the microscopic processes rather than the mechanisms by which these processes affect space systems. Science is generally concerned with explaining observed behaviour and extrapolating that behaviour to other systems or situations. Space weather users are concerned with impacts and so are more interested in the probability of occurrence of a particular impact. These are two different views of the same phenomena. In order to make the connection between research and operations we need to develop a new way of looking at these problems. GAIA does this by building a social network that connects subject matter experts to decision makers. The construction of this virtual organization will be described.