Geophysical Research Abstracts, Vol. 8, 09339, 2006
SRef-ID: 1607-7962/gra/EGU06-A-09339

The Virtual Solar-Terrestrial Observatory: Status and plans.

P. Fox (1), D. McGuinness (2), D. Middleton (3), J. Garcia (1), L. Cinquini (3), P. West (1), J.A. Darnell (1), J. Benedict (2)

(1) HAO/NCAR, Boulder CO USA (pfox@ucar.edu), (2) McGuinness and Associates, Stanford CA USA, (3) SCD/NCAR, Boulder CO USA

Virtual Observatories can provide vast stores of data concerning scientific observations. As these electronic stores become widely used, there is potential to improve the efficiency, interoperability, collaborative potential, and impact of a wide range of scientific research. In order to realize this potential, technical challenges need to be addressed concerning (at least) representations and interoperability of data, access, and usability. In the Virtual Solar Terrestrial Observatory (VSTO) project, we aim to provide an electronic repository of observational, data, theoretical models, and analysis and interpretation results in the solar terrestrial physics domain. We are also designing and implementing tools and infrastructure for accessing and using the data. Our main contributions include the repository, infrastructure, and tools for the particular solar terrestrial physics as well as the design and infrastructure that may be broadened to cover more diverse science areas and communities of use. In this presentation, we describe the goals, design, initial prototype, and technical infrastructure. We present what we have learned about the processes involved is developing VSTO and the required semantics, how they affect the framework architecture, choice of technologies and service interfaces. We also present what role virtual observatories, like VSTO, may play in supporting large international IGY+50 like-programs, such as eGY. VSTO is an NSF-funded joint effort between the High Altitude Observatory and the Scientific Computing Division at the National Center for Atmospheric Research (NCAR) and McGuinness Associates Consulting.