

Project Details

ROSES ID: NRA-00-OSS-01

Selection Year: 2001

Program Element: Independent Investigation: LWS

Project Title:

A Problem-Solving Environment for Living With a Star

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Summary:

The unique aspect of the Living With a Star program is its systems approach to understanding our space environment. For this approach to be successful, the program must start from the beginning as a unified system itself. A working environment that presents the LWS components as a unified whole is essential to keeping the focus on this system approach.

We propose a unique architecture and data assimilation environment which addresses this critical issue. Our Problem-Solving Environment for Living With a Star (PSELWS) places the data users at center stage -- providing a virtual workbench with the tools, and infrastructure needed for seamless, timely and efficient access to the various data sources. In this environment users will be able to form complex queries that far exceed the simple catalog searches of existing systems -- and thus receive only the data they require for their research, rather than being overwhelmed by irrelevances.

Our approach combines the substantial, existing software infrastructure developed for solar data analysis (SolarSoft) with state-of-the-art software agents for distributed computing. Our team members are all contributors to the key technologies and software involved in this effort. We are ready to focus our skills to develop prototype systems in time for the first LWS missions. In addition the architecture and software elements developed through our proposed research will be useful throughout the Sun-Earth Connections theme, including the current suite of space instrumentation and those upcoming in the Solar-Terrestrial Probes line. And they will form an excellent foundation for educational and public outreach efforts.

Publication References:

no references