

NASA Earth-Sun Science System Components Knowledge Base

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The mission of the NASA Applied Sciences Program is to expand and accelerate the realization of economic and societal benefits from NASA affiliated Earth-Sun system science, information, and technology. The overarching goal is to bridge the gap between Earth-Sun system science research results and the adoption of observations and prediction capabilities for reliable and sustained use in decision support. In order to systematically identify the opportunities to extend the NASA research results to operational partner decision support tools, it was first necessary to identify and categorize the standard NASA research products, and to identify specific partner decision support tools and the requirements for those tools. NASA has initiated the Earth-Sun Science System Components Knowledge Base to catalogue this information and make it readily available to define potential collaborations with its partners. Features of the NASA Earth-Sun Science System Components Knowledge Base include an inventory of NASA affiliated Missions, Sensors, Data Products, Models, Model Products and partner Decision Support Systems. Data products are categorized as measurements of specific geophysical parameters, and model products as specific predictions. Requirements for Decision Support Systems are then defined in terms of input geophysical parameters and predictions, allowing an initial survey of the NASA products which have potential to contribute to meeting partner requirements. Results of the NASA Earth-Sun Science System Components Knowledge Base Project are available through web interface, a System Components chart, and as reference booklets on NASA affiliated Missions, Models, and partner Decision Support Systems. The near term goal is to provide detailed Integrated System Solutions for each of the NASA Applied Science partner Decision Support Systems.