

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Data Systems and Technology (4)

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A WEB HUB FOR COLLABORATIVE RESEARCH THROUGH ONLINE ANALYSIS AND
VISUALIZATION OF EARTH OBSERVATION SATELLITES DATA**Abstract**

Geospatial big data from Earth observation satellites system are analyzed for addressing a specific research or management problem on global scale, and science gateways have been widely adopted in recent years as an effective platform for an entry to computational resources, research collaboration, dissemination of data, applications and publications, and community engagement. This paper describes an innovative web platform to combine the Earth observation satellite data sciences and the cyber-infrastructure, which is being developed based on Hub technology that enables researchers and educators to increase the impact of their efforts by publishing and sharing geospatial models with the broader community. The Geospatial Hub provides access to computing resources for simulation, analyzing and visualization utilities that the researchers can use without relying on any local resources. We describe the design, implementation, key components and underlying technologies. To enable sharing and enhancement through collaboration, a web-based platform is developed for accessing and analyzing the large amount of land observation satellite data achieves, which allows researchers to manage, analyze, visualize and share land observation satellite data for purposes ranging from predicting damaging disasters to projecting land change effects. This work will build geospatial data analysis capabilities into Hub-based platform, and open the way for easy development of a variety of web-enabled tools for presenting geospatial data and digital information in ways that can help addressing issues around the globe.