

From Data Curation to Data Analytics: A Big Data Project in NASA Earth Science

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Abstract:

NASA's airborne, space borne, ground network, and field campaigns constantly generate a large amount of data. Over the years NASA's science data centers, including the virtual observatories, focus on the curation, preservation, and dissemination of the science data. Increasingly, we have observed significant amount of time and energy our scientists are spending on staging the data for analysis. This is a very inefficient way to spend our precious resources. In the past 5 years, NASA Earth science has worked on a big data project "NASA Earth Exchange (NEX)." The NEX includes modern concepts of high-end computing, cloud computing, big data analytics, social networking, and science research workflow. In this talk, we will report the current progress and future work on this project.