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SPEAKER TITLES/ABSTRACTS

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“Distributed Access and Analysis: NASA”

Data systems in NASA's Earth Science Division are primarily focused on providing stewardship of the products of remote sensing and are manifested as Digital Active Archive Systems. Each Instrument Team has a related Science Team which defines the algorithms and monitors the processing of the output of the instruments to produce the related data products and in a format and standards compliance of them. These teams are influenced also by the research and applied sciences components of the programs, but the primary focus is on proving the ongoing validity of the products. Across the distributed system, every product is different. However, this is not conducive to analytics. NASA's Advanced Information Systems Technology (AIST) program is developing an entirely new approach to creating Analytic Centers which focus on the scientific investigation and harmonize the data, computing resources and tools to enable and to accelerate scientific discovery. Stay tuned to find out how. A major element, in today's science interests, is the comparison of multi-dimensional datasets; this warrants considerable experimentation in trying to understand how to do so meaningfully and quantitatively; asked another way, "What do you mean by similar?" Uncertainty quantification has evolved considerably in the arenas of data reduction and full physics models; however, the emerging demand for machine learning and other artificial intelligence techniques has failed to keep uncertainty quantification and error propagation in mind and there is considerable work to be done.