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## **File and Metadata Management for BESIII Distributed Computing**

*Tuesday, May 22, 2012 1:30 PM (4h 45m)*

The BES III experiment at the Institute of High Energy Physics (IHEP), Beijing, uses the high-luminosity BEPC II  $e^+e^-$  collider to study physics in the  $\tau$ -charm energy region around 3.7 GeV; BEPC II has produced the world's largest samples of  $J/\psi$  and  $\psi'$  events to date. An order of magnitude increase in the data sample size over the 2011-2012 data-taking period demanded a move from a very centralized to a distributed computing environment, as well as the development of an efficient file and metadata management system. While BES III is on a smaller scale than some other HEP experiments, this poses particular challenges for its distributed computing and data management system. These constraints include limited resources and manpower, and low quality of network connections to IHEP. Drawing on the rich experience of the HEP community, an AMGA-based system has been developed which meets these constraints. The design and development of the BES III distributed data management system, including its integration with other BES III distributed computing components, such as job management, are presented here.

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