

Storage Strategy of AMS Science Data at Science Operation Center at CERN

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This paper introduces the storage strategy and tools of the science data of the Alpha Magnetic Spectrometer (AMS) at Science Operation Center (SOC) at CERN.

The AMS science data includes flight data, reconstructed data and simulation data, as well as the metadata of them. The data volume is 1070 TB per year of operation, and currently reached 5086 TB in total. We have two storage levels: active/live data which is ready for analysis, and backups on CASTOR. Active/live data is stored on AMS local storage, and after the introduction of CERN EOS system, also on EOS. A system is designed to automate the data moving and data backup.

The data validation, the metadata design, and the ways to preserve the consistency between the data and the metadata are also presented.

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Tertiary Keyword (Optional)

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