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Cherenkov Telescope Array Data Management

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Very High Energy gamma-ray astronomy with the Cherenkov Telescope Array (CTA) is evolving towards the model of a public observatory. Handling, processing and archiving the large amount of data generated by the CTA instruments and delivering scientific products are some of the challenges in designing the CTA Data Management. The participation of scientists from within CTA Consortium and from the greater worldwide scientific community necessitates a sophisticated scientific analysis system capable of providing unified and efficient user access to data, software and computing resources. Data Management is designed to respond to three main issues: (i) the treatment and flow of data from remote telescopes; (ii) "big-data"archiving and processing; (iii) and open data access. The design is inspired by the lessons learned from current and past Atmospheric Cherenkov Telescopes, from CTA precursors, from existing astronomical observatories, and finally from the technical know-how of major computing, data centres and e-infrastructures that serve large international projects and world-wide communities. In this communication the current major developments, prototypes and the view on the technical design of the CTA Data Management are presented aiming at guaranteeing reliable processing, ensuring quality of services for access, transmission and dissemination of data.

Collaboration

CTA

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