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In-flight operations and status of the AMS-02 silicon tracker

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The AMS-02 detector is a large acceptance magnetic spectrometer operating on the International Space Station since May 2011. More than 60 billion events have been collected by the instrument as of today. One of the key subdetectors of AMS-02 is the silicon microstrip Tracker, designed to precisely measure the trajectory and absolute charge of cosmic rays in the GeV-TeV energy range. In addition with the magnetic field is also measuring the particles rigidity and the sign of the charge. This report presents the Tracker online operations and calibration during the first four years of data taking in space. The track reconstruction efficiency and the resolution will be also reviewed.

Collaboration

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Primary author: DURANTI, Matteo (Universita e INFN, Perugia (IT))

Co-authors: OLIVA, Alberto (Centro de Investigaciones Energ. Medioambientales y Tecn. - (ES); BERTUCCI, Bruna (Universita e INFN, Perugia (IT)); DELGADO MENDEZ, Carlos Jose (CIEMAT); PIZZOLOTTO, Cecilia (Universita e INFN, Perugia (IT)); RAPIN, Divic (Universite de Geneve (CH)); D'URSO, Domenico (Universita e INFN, Perugia (IT)); FIANDRINI, Emanuele (Universita e INFN, Perugia (IT)); CHOUMILOV, Evgueni (ITEP Institute for Theoretical and Experimental Physics (RU)); DONNINI, Federico (Universita e INFN (IT)); NOZZOLI, Francesco (Universita e INFN, Perugia (IT)); AMBROSI, Giovanni (Universita e INFN, Perugia (IT)); BAZO ALBA, Jose Luis (Universita e INFN (IT)); KONSTANTIN, Kanishchev (University of Warsaw); IONICA, Maria (Universita e INFN (IT)); HABIBY ALAOUI, Marion Assia (Universite de Geneve (CH)); CRISPOLTONI, Marta (Universita e INFN, Perugia (IT)); Prof. POHL, Martin (Universite de Geneve (CH)); GRAZIANI, Maura (Universita e INFN, Perugia (IT)); PANICCIA, Mercedes (Universite de Geneve (CH)); TOMASSETTI, Nicola (Centre National de la Recherche Scientifique (FR)); ZUCCON, Paolo (Massachusetts Inst. of Technology (US)); AZZARELLO, Philipp (Universite de Geneve (CH)); SAOUTER, Pierre Erwan (Universite de Geneve (CH)); BATTISTON, Roberto (Universita e INFN (IT)); HAINO, Sadakazu (Academia Sinica (TW)); VITILLO, Stefania (Universite de Geneve (CH)); FORMATO, Valerio (Universita e INFN, Perugia (IT)); VITALE, Vincenzo (Universita e INFN, Perugia (IT)); CHOUTKO, Vitaly (Massachusetts Inst. of Technology (US)); QIN, Xiaoting (Universita e INFN, Perugia (IT)); ZHANG, Zhan (Centre National de la Recherche Scientifique (FR))

Presenter: QIN, Xiaoting (Universita e INFN, Perugia (IT))

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