



Contribution ID : 118

Type : **Poster**

Assembly and space qualification of the scintillator detector LTOF for the AMS-02 spectrometer

Abstract content

The Time Of Flight detector of the AMS-02 experiment is composed by four layers of scintillator counters, two above (UTOF) and two below (LTOF) the superconducting magnet. All the 18 counters of the LTOF were characterized with a cosmic ray telescope and tested in vacuum, and the lower part of the TOF detector was assembled in the flight model. In order to demonstrate the ability of the LTOF to operate when exposed to extreme environmental conditions of the International Space Station, a thermal vacuum test was performed at the SERMS Laboratories in Terni. This test consisted of four thermal cycles in vacuum chamber, during which the Lower TOF was monitored in order to verify the absence of degradation or malfunctioning. With the purpose of qualify and accept the LTOF for the integration into the AMS-02 payload, a vibration test was performed. Functional tests monitored the status of the detector before and after the vibration.

If this papers is presented for a collaboration, please specify the collaboration

AMS TOF

Summary

Reference

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Session Classification : Posters 2 + Coffee

Track Classification : HE.1.5