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AMS Experiment on the International Space Station

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Alpha Magnetic Spectrometer (AMS-02) is a general purpose high energy detector which was successfully deployed on the International Space Station on May 19, 2011 to conduct a unique long duration mission of fundamental physics research in space. Among the physics objectives of AMS are a search for the understanding of Dark matter, Antimatter, the origin of cosmic rays and the exploration of new physics phenomena not possible with ground based experiments. This report overviews the performance of the AMS-02 detector on the ISS as well as the first results based on data during the first two months of operation in space.