

THE AMS MICROSTRIP SILICON TRACKER

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The Alpha Magnetic Spectrometer is designed for anti-matter and dark matter searches and for cosmic ray measurements in the GeV to TeV range. Its central part is a silicon tracker with $10\ \mu\text{m}$ spatial resolution and a dynamic range of 1 to 100 MIPS for dE/dx measurements. An operational period of 3 years is scheduled on the International Space Station (ISS) starting end of 2003. A precursor flight on a Space Shuttle occurred in 1998 with a reduced silicon surface of $2\ \text{m}^2$. The construction of the $7\ \text{m}^2$ second phase is in progress. We discuss the design, construction and performance of the detector.