

The AMS-02 Silicon Tracker : *First Year on ISS in Space*

Divic Rapin, DPNC, Université de Genève, *on behalf of the AMS-Tracker Collaboration*

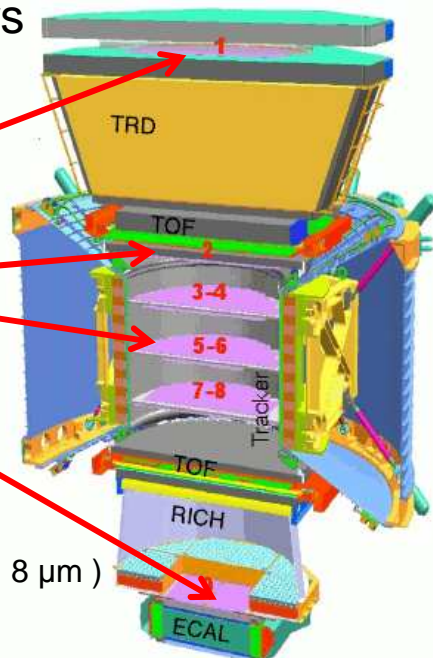
7 m² of *double sided* microstrip detectors
arranged in 9 layers

196'608 channels

Upper tracker
(1 layer)

Inner tracker
(7 layers)

Lower tracker
(1 layer)



Pitch p-side: **Y** (bend)

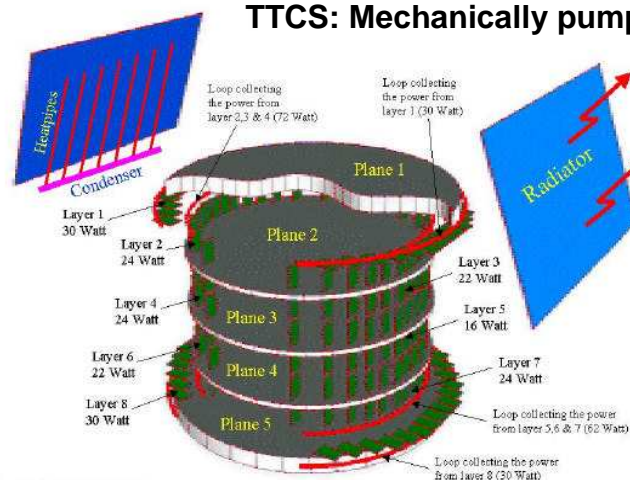
- 27.5 μm (110 read-out σ_{th} : 8 μm)

Pitch n-side: **X** (non-bend)

- 104 μm (208 read-out)



**TTCS: Mechanically pumped 2-phases
cooling
system.**

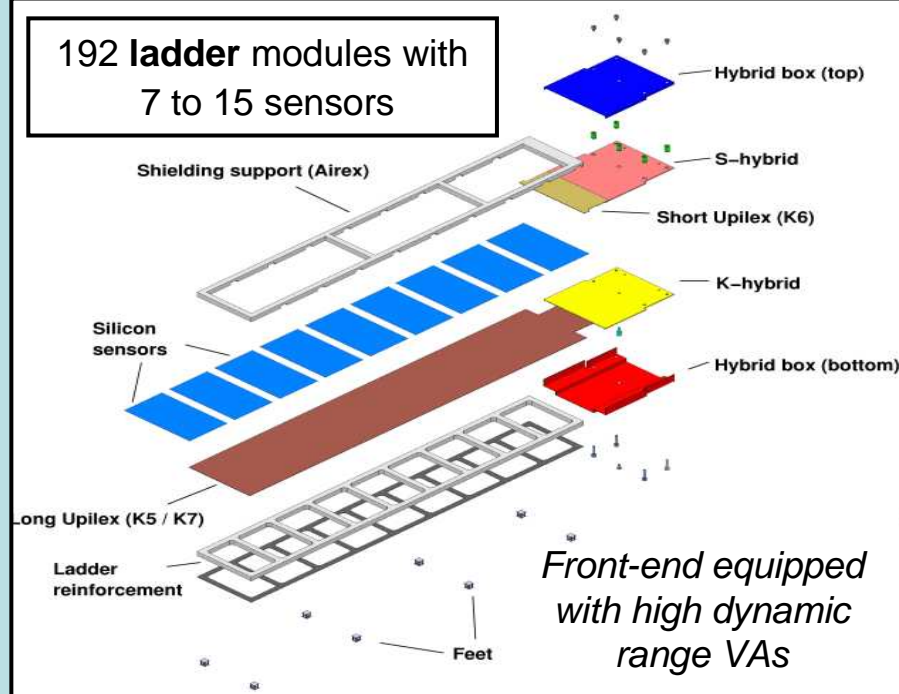


**B. Verlaet
2000.**

J. van Es

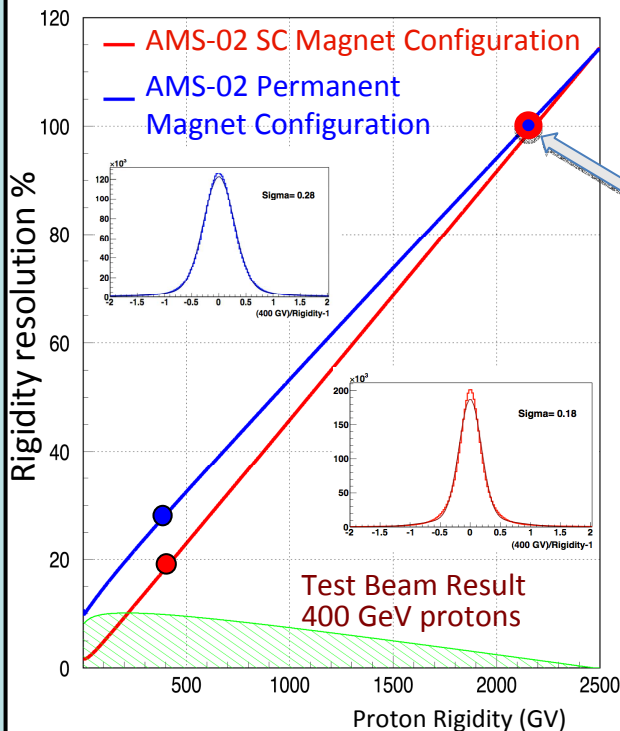
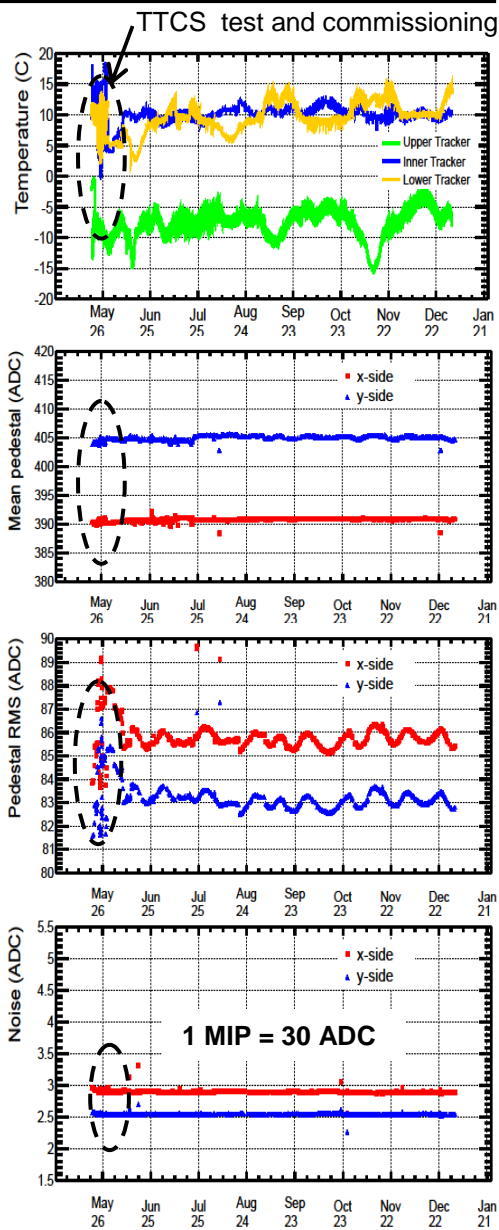


**192 ladder modules with
7 to 15 sensors**

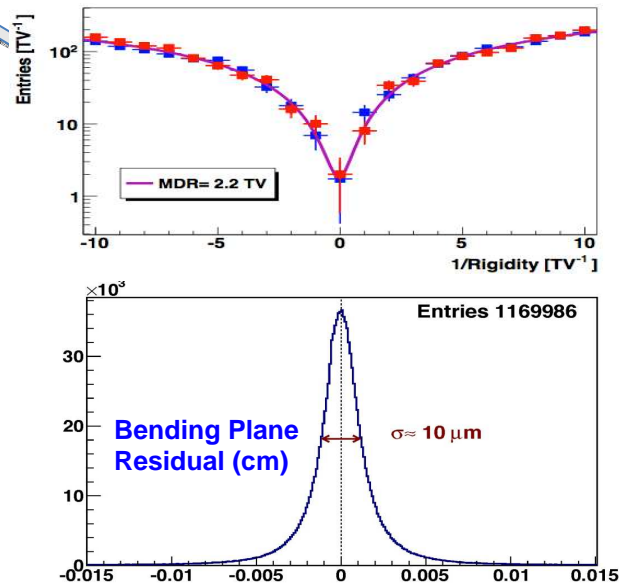


*Front-end equipped
with high dynamic
range VAs*

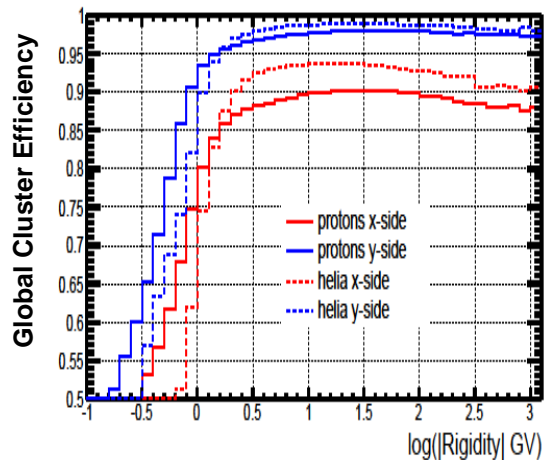
Tracker Environmental Conditions and Stability



Performances with Test Beam and Atmospheric Muons



In Flight Performances



Ion Charge ID by dE/dx

