

# Space Station to Receive New Anti-Matter Detector Component

27 April 2010, by John Messina



NASA photo of International Space Station.

(PhysOrg.com) -- Scientist plan on replacing the liquid helium cooled magnet, in the anti-matter detector, with an Alpha Magnetic Spectrometer. This will increase the life span of the detector from 3 years to about 18 years.

The AMS (anti-matter spectrometer) is designed to search for anti-matter particles as well as perform other experiments. The device is equipped with over 300,000 data channels that require compression with an on-board supercomputer before the information can be transmitted to Earth.

AMS functions by sampling high-energy particles from deep space. The sensitivity of the AMS is more than 100 to 1,000 times more sensitive than previous instruments.



AMS removed from storage facility and being tested.

Samuel Ting of MIT is overseeing a 500 member global team of scientist to work on this 1.5 billion dollar project. This was made possible because US President Barack Obama has proposed to extend the space station for a minimum of 5 years beyond 2015, with an additional budget of 3 billion dollars per year.

In an interview with BBC News Ting stated: "This really is the very first very, very precise particle physics detector. You enter into a totally new domain. It's very hard to predict what you'll find."

The AMS is a prototype that flew on a 1998 space shuttle mission and was recently taken out of a clean room storage facility in Germany. By replacing the liquid helium cooled magnet with the AMS cuts the power of the magnetic field that is used bend the path of charged cosmic particles while they pass through various detectors.

Ting is optimistic that having the less powerful AMS in orbit the extra years would more than compensate for the liquid helium cooled magnet. There are also spares on hand if it ever requires replacement.

**More information:** Via: [BBC News](#)

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