abcNEWS

# Antimatter Detector to Catch Last Shuttle to Space

**US Air Force takes charge of $2 billion antimatter detector en route for last shuttle to space**

**By FRANK JORDANS**

***The Associated Press***

**GENEVA**

A $2 billion machine that will jump-start the search for antimatter and other phenomena was loaded onto a massive U.S. Air Force plane Wednesday for the final leg of its journey on Earth before it catches the last scheduled shuttle flight into space.

Airmen struggled to stow the 8.3-ton (7.5 metric ton) Alpha Magnetic Spectrometer into a C-5M Super Galaxy at Geneva airport ahead of Thursday's takeoff to Kennedy Space Center in Florida.

The military planes are normally used to fly tanks and helicopters around the world, but scientists at the European Center for Nuclear Research, or CERN, had to ask the U.S. Air Force to help them out when they found their 8.3-ton (7.5 metric ton) device wouldn't fit into a 747 jumbo jet.

Even then, workers had to saw off part of the giant shipping crate to squeeze the machine into the Galaxy's hold.

Sam Ting, a Nobel laureate and professor of physics at the Massachusetts Institute of Technology, said the Alpha Magnetic Spectrometer would be docked to the International Space Station to collect evidence of antimatter, dark matter and other elusive elements of the universe over the next 20 years.

The AMS detector will complement CERN's Large Hadron Collider, a massive atom smasher deep beneath the Swiss-French border that scientists are using to simulate conditions similar to those just after the Big Bang in the hope of better understanding the makeup of the universe.

Antimatter, which the device was primarily designed to find, is sometimes referred to as the 'evil twin' of ordinary matter and scientists believe the Big Bang created both in roughly equal amounts meaning that, in theory, there could be an identical universe to ours out there made entirely of antimatter.

But so far scientists have been unable to detect antimatter except in the lab. By searching outside the protective shell of Earth's atmosphere they hope to find solid proof of the elusive particle's existence or reasons for its absence.

The Alpha Magnetic Spectrometer, which took about 15 years to build and was part-funded by the U.S. Department of Energy, will be one of two payloads carried to the space station on Endeavour STS-134, NASA's last shuttle mission scheduled for Feb. 26, 2011.

Separately, CERN staff protested Wednesday against proposed cuts to their next five-year budget,

saying this could "dangerously compromise the running of the organization" they say helped develop scientific breakthroughs such as medical scanners, computer grids and the World Wide Web.

Member states have pressed CERN to sharply reduce its 5 billion Swiss francs ($4.87 billion) budget for the period from 2011 to 2015. The organization recently offered to cut back its funding demands by about 480 million Swiss francs ($467 million) a move that will require all particle accelerators to be switched in 2012. The $10 billion Large Hadron Collider had already been scheduled to rest that year while technical upgrades take place.

"I don't think this is going to have a major effect on our research program," CERN spokesman James Gillies said of the proposed budget cuts.

The AMS detector was funded separately and wouldn't be affected by any cuts that might be agreed when the organization's finance committee meets Sept. 16, he said.