

MONDAY, FEBRUARY 18, 2013

Alpha Magnetic Spectrometer PI to Reveal Dark Matter Discoveries in March 2013?



Nobel Laureate and MIT physicist **Samuel Chao Chung Ting** runs the **Alpha Magnetic Spectrometer (AMS)**, a \$1.5-billion piece of hardware currently whizzing around Earth on board the International Space Station that has revealed something significant about dark matter, the invisible stuff that accounts for most of the mass in the universe.

Since AMS was installed on the space station in 2011 by the space shuttle *Endeavour*, the AMS has registered some 25 billion cosmic ray particles, Dr. Ting says. Of those, some 7.7 million are electrons or positrons (the electron's antimatter counterpart). It is the ratio between the two that may ultimately reveal something about dark matter, reports *The Globe and Mail*.

Dr. Ting said his scholarly peer-reviewed paper to be published in a few weeks would concern dark matter, the unseen material whose gravity holds galaxies together. Researchers do not know what form this mysterious cosmic component takes, but one theory points to it being some very weakly interacting massive particle (or **WIMPs** for short), writes **Jonathan Amos at the BBC**.

The dark matter theory was born 80 years ago when Swiss astrophysicist Fritz Zwicky discovered that there was not enough mass in observable stars or galaxies to allow the force of gravity to hold them together, according to **Space Daily**.

Although the existence of WIMPs in nature is hypothetical at this point, it would resolve a number of astrophysical and cosmological problems related to dark matter. There is near consensus today among astronomers that most of the mass in the Universe is dark.

POSTED BY JACKKENNEDY AT 3:42 AM 

<http://spaceports.blogspot.com/2013/02/alpha-magnetic-spectrometer-pi-to.html>