'God particle' research and other top physics stories of 2011

These events and discoveries make up the key stories in the field of physics this year.

Endeavor's alpha magnetic spectrometer

On the space shuttle Endeavor's final flight, it brought with it a $2 billion, seven-ton cosmic experiment about 17 years in the making. The brainchild of Nobel Prize-winning physicist Samuel C.C. Ting, an experiment called the alpha magnetic spectrometer will sniff space for cosmic rays, antimatter, dark matter and other exotic and poorly understood phenomena. If the mission goes as planned, the device will deliver marquee science to the international space station, pictured here.

NASA / Getty Images
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The Energy Department says it contributed $50 million to the AMS experiment, and NASA will spend an additional $104 million through 2020, not including the expense of the shuttle flight. Fifteen other countries picked up the rest of the tab. Here space shuttle Endeavour makes its final landing at the Shuttle Landing Facility at Kennedy Space Center in Florida.

Ell Ingalls / NASA
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Endeavor’s alpha magnetic spectrometer

One mystery scientists hope the experiment will unlock is what happened to the antimatter that prevailing theories say the big bang was supposed to create. Here, the Earth frames space shuttle Endeavour’s payload bay, vertical stabilizer and orbital maneuvering system while in orbit.

NASA / AFP/Getty Images