

China / Innovation

Scientists report first measurement of antiproton interaction

(Xinhua)
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SHANGHAI - A team of physicists announced a huge breakthrough in the understanding of antimatter by being the first to measure interaction between antiprotons, hailed as a potential and powerful new source of energy.

Scientists have been aware of antiprotons, the antimatter equivalent of protons, for sometime, but it proves challenging to create sufficient antiprotons for measuring their interaction.

The team, led by Ma Yugang with Shanghai Institute of Applied Physics (SINAP) in China; and Tang Aihong with the Brookhaven National Laboratory in the US, collided gold atoms to produce abundant antiprotons and measured two important parameters of their interaction: the scattering length and the effective range.

They concluded that when two antiprotons interacted the scattering length and the effective range were consistent with proton-proton interaction, according to a paper published in the journal "Nature."

Scientists believe that almost equal amounts of matter and antimatter were created in the Big Bang, but it remains an unsolved problem why the visible universe today is composed mostly of ordinary matter.

While antimatter is rare, a huge amount of energy is released when particles collide with antiparticles, which many see as a new form of energy.

"Harnessing this form of energy can help with lighter and more powerful space engines ... a well as potential for energy and weaponry application," Ma told Xinhua.



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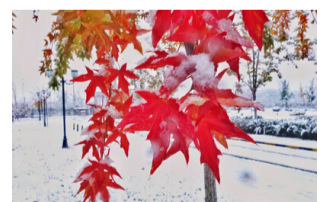


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