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## **Cross section measurements of fusion reactions at astrophysically relevant energies: the LUNA experiment**

*Thursday, 23 May 2013 18:05 (20 minutes)*

Accurate knowledge of thermonuclear reaction rates is important in understanding the generation of energy, the luminosity of neutrinos, and the synthesis of elements in stars.

The LUNA Collaboration has shown that, by going underground and by using the typical techniques of low background physics, it is possible to measure nuclear cross sections down to the energy of the nucleosynthesis inside stars.

This talk will give an overview of the experimental techniques adopted in underground nuclear astrophysics and will present a summary of the main recent results and achievements.

The future developments of the LUNA experiment will also be shown .

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