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Recent results from Borexino

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Borexino is a large volume liquid scintillator detector mainly devoted to the study of solar neutrinos. It is located under the Gran Sasso mountain in Italy and has been taking data since 2007. Thanks to its low background and its large mass, Borexino has been able of performing an almost complete spectroscopy of solar neutrinos.

In this talk I will focus on the latest result published by Borexino, namely the first direct observation of pp-neutrinos. These neutrinos represent the vast majority (~90%) of neutrinos emitted by the Sun, but had so far eluded real-time detection, due to their low energy. The observation of pp-neutrinos provides us with a direct glimpse at the keystone fusion process that keeps the Sun shining. Although the experimental uncertainty (11%)

does not allow to distinguish between different solar model hypothesis (high or low metallicity), this measurement strongly confirms our understanding of the Sun.

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