

Full pp-chain solar neutrino spectroscopy accomplished with Borexino

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Borexino is running at the “Laboratori del Gran Sasso” in Italy since 2007. Its technical distinctive feature is the unprecedented ultralow background of the inner scintillating core, which is the foundation for the outstanding achievements accumulated by this experiment.

In over a decade Borexino has performed the simultaneous real time spectroscopy of the neutrinos from the entire pp nuclear fusion chain in the Sun.

The remarkable 2.7% accuracy of the Be7 flux has opened the era of precision measurements also in the realm of the sub-MeV solar neutrinos.

In terms of their flavor conversion interpretation, such results put Borexino in the unique situation of performing alone the full validation of the MSW-LMA paradigm across the solar energy range.

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