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Spectral fit of Borexino Phase-III data for the detection of CNO solar neutrinos

Borexino experiment, located at the Laboratori Nazionali del Gran Sasso, was built with a primary goal of the low-energy solar neutrino detection. In more than 12 years of data taking, Borexino has demonstrated the unprecedentedly high sensitivity towards solar neutrinos from the complete pp-chain, dominant process in the Sun fusion. After a number of developments in both hardware and software, Borexino is now ready to tackle the measurement of neutrinos produced in a subdominant Carbon-Nitrogen-Oxygen (CNO) cycle mechanism. One of the key steps of the analysis is the performance of spectral fit to disentangle neutrino signals from backgrounds in the detector. All the important aspects of the performed spectral fits are explained in the poster.

Mini-abstract

Fitting Borexino data to detect CNO solar neutrinos

Experiment/Collaboration

Borexino

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