

LNGS SEMINARS

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Analytical approach to the description of the solar neutrino data of Borexino experiment

Abstract

Borexino experiment obtained outstanding results in solar neutrino spectroscopy. The Phase I data allowed a precise measurement of 7Be neutrino flux, the first prompt observation of pep neutrinos and the best upper limit on the CNO neutrino flux. The data acquired at the beginning of Phase II were used for the first measurement of the neutrino flux from the proton-proton reaction at the Sun. Currently it is planned to perform a global solar neutrino analysis in a wide energy range with large statistics including the whole Phase II and possibly Phase I. This task has a number a difficulties due to gradually decreasing number of live photomultipliers in the detector and evolution of the background composition. These problems are to be solved with the analytical spectral fitting procedure used for the previous analyses and being improved for the current study.

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