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Understanding the detector behavior through Montecarlo and calibration studies in view of the SOX measure

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Borexino is an unsegmented neutrino detector operating at LNGS in central Italy. The experiment has shown its performances through its unprecedented accomplishments in the solar and geo-neutrino detection. These performances make it an ideal tool to accomplish a state-of-the-art experiment able to test the existence of a sterile neutrino (SOX experiment). For both the solar and the SOX analysis, a good understanding of the detector response is fundamental. Consequently, calibration campaigns with radioactive sources have been performed over the years. The calibration data are of extreme importance to develop an accurate Montecarlo code. This code is used in all the neutrino analyses. The talk will show the calibration program and the advances on the detector simulation code in view of the start of the SOX data taking.

Presentation type

Section talk (10+5 min)

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