

The 144-Ce source for SOX

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The SOX project plans to deploy a radioactive antineutrino source made from 144 Cerium at the Borexino detector. It will be produced at PA Mayak from spent nuclear fuel. This source is a key component of the experiment and issues several challenges due to requirements on activity, purity and emission flux knowledge for the scientific success of the project. Moreover handling and safety with such radioactive material has its own constraints adding to the equation.

This presentation will focus on the recent developments concerning the source characterization and the actions taken to obtain a precise prediction of the source radioactive emission using 144-Ce samples.

Presentation type

Section talk (10+5 min)

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