Contribution ID: **361** Type: **Poster**

Production of ultra–low-background NaI(Tl) crystals for the SABRE experiment

Wednesday 27 August 2025 18:00 (2 hours)

The SABRE experiment aims to perform a model-independent search for dark matter using arrays of ultra–low-background NaI(Tl) crystals.
The expected background rate in the ROI [1–6] keV is on the order of 0.5 dru. To achieve this level of radiopurity, SABRE North will make use of zone refining purification process of the NaI powder.
The SABRE North collaboration has recently validated, through a series of tests, the technology for producing 5 kg NaI(Tl) crystals following zone refining purification and is now starting crystal production for the experiment. The first crystal grown using this technology is expected to be produced and delivered to LNGS in July 2025 for characterization.
Poster will present the current status of this development and initial results.

Collaboration you are representing

SABRE North

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