SnT 2025 8 SEPTEMBER ONLINE DAY 9 TO 12 SEPTEMBER AT HOFBURG PALACE, VIENNA & ONLINE
CTBT: SCIENCE AND TECHNOLOGY CONFERENCE

Increasing the resolution of a scintillation detection cell using a diffuse reflective coating and assessment of the retention of performance characteristics during aging of a protective coating

LIGHTNING TALK

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- Our poster is about improving scintillation detectors for radioactive xenon using two approaches: a diffuse reflective coating to enhance light collection and a poly(chloro-para-xylylene) barrier coating to reduce memory effects.
- I am going to tell you why increasing detector efficiency and stability is crucial for radiation monitoring systems in the framework of the nuclear test ban verification.
- And what we did about it was to develop a barium sulfate–based reflective layer and to study the long-term stability of Parylene C barrier coatings under natural and accelerated aging.
- The most important result of our work is that the reflective coating increased signal registration efficiency by ~50%, while the barrier coating preserved its properties within acceptable limits even after simulated 10 years of operation.
- If you want to find out more, come over for a chat in front of our poster