Contribution ID: **207** Type: **Parallel session talk**

Tackling the experimental challenge to detect relic neutrinos from the Big Bang with Ptolemy

Friday 19 July 2024 15:00 (15 minutes)

Neutrinos produced in an early stage of the Big Bang are believed to pervade the Universe.
The Ptolemy project is studying novel experimental techniques to observe this relic cosmological background neutrinos and to eventually study their flux and compare it with cosmological models.
This requires to face challenges in material technologies as tritium storage on nanostructure and radio-frequency radiation detection associated in a novel type of electromagnetic spectrometer. It will be employed to observe the electrons emerging from a tritium target, used to absorb the relic neutrinos.
Ptolemy is entering the construction phase for the first complete high precision measurement module with a first physics goal to be measure the neutrino mass from the beta endpoint.
The current status and outlook of the project is presented.

Alternate track

1. Detectors for Future Facilities, R&D, Novel Techniques

I read the instructions above

Yes

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