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PTOLEMY: The Experimental challenge to Detect Relic Neutrinos from the Big Bang

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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 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. The current status and outlook of the project is presented.

In-person participation

Yes

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