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Developing the next neutrino mass experiment: Project 8 Phase III

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Project 8 is a next-generation direct neutrino mass experiment using tritium beta decay. To reach the target sensitivity of 40meV, major technological development is necessary. Building up on the milestones achieved so far, I will present the next developmental phases of Project 8: In Phase III, atomic tritium will be trapped magnetically, and cyclotron radiation emission spectroscopy (CRES) will be demonstrated in free space. The knowledge gained from Phase III will inform the design and operation of a large-volume atomic tritium experiment, sensitive to the entire mass range allowed by the inverse neutrino mass hierarchy.

Collaboration name

Project 8

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