Contribution ID: **682** Type: **Parallel session talk**

CUPID: a next generation bolometric neutrinoless double beta decay experiment

Wednesday, May 26, 2021 6:42 AM (18 minutes)

CUPID is a next-generation tonne-scale bolometric neutrinoless double beta decay experiment to probe the Majorana nature of neutrinos and discover Lepton Number Violation if the effective neutrino mass is greater than 10 meV. CUPID will be built on experience, expertise and lessons learned in CUORE,CUPID-Mo and CUPID-0. The detector technology is based on scintillating bolometers of Li2MoO4 enriched in the isotope of interest 100Mo. CUPID will consist of about 1500 hybrid heat-light detectors for a total isotope mass of 250 kg. The CUPID scientific reach is supported by a detailed and safe background model that uses CUORE, CUPID-Mo and CUPID-0 results. The required performance in terms of energy resolution, alpha rejection factor and crystal purity have already been demonstrated and will be presented.

TIPP2020 abstract resubmission?

No, this is an entirely new submission.

Funding information

Primary authors: CUPID COLLABORATION; CUPID-0 COLLABORATION; SPEAKER TO BE ASSIGNED; Mrs HELIS, Dounia (CEA-IRFU); BENATO, Giovanni

Presenter: BENATO, Giovanni

Session Classification: Experiments: Neutrino

Track Classification: Experiments: Experiments: Neutrino