



Contribution ID: 310

Type: Poster

## SuperNEMO double-beta decay detector progress

SuperNEMO uses a tracker-and-calorimeter technology, surrounding foils of double-beta decaying isotope, to measure the energies and trajectories of particles in the detector. This topological event reconstruction could distinguish between neutrinoless double-beta decay mechanisms, and can probe the complex nuclear physics affecting double-beta decay processes. The technique can be used to study the double-beta decay of any isotope that can be formed into thin foils.

The SuperNEMO Demonstrator Module at LSM, France, is currently taking commissioning data, and expects physics data within the year. Running for 2.5 years with 6.3kg of selenium-82 foils, SuperNEMO is projected to have a sensitivity to neutrinoless double-beta decay half-lives at  $6 \times 10^{24}$  years, and will conduct detailed studies of the two-neutrino double-beta decay mechanism. We present the progress on the construction and commissioning process, and discuss SuperNEMO's potential.

### Mini-abstract

SuperNEMO's tracker-calorimeter will investigate double-beta decay mechanisms of Se-82 from 2021.

### Experiment/Collaboration

The SuperNEMO Collaboration

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**Session Classification:** Poster Session 1