



ID contributo: 211

Tipo: **Parallel Contributed Talk**

The CUPID-Mo experiment for the search of neutrinoless double beta decay

mercoledì 24 febbraio 2021 10:40 (20 minuti)

The CUPID-Mo experiment is devoted to the search of neutrinoless double beta decay, $2\beta_{0\nu}$. This small-scale array of scintillating bolometers has set in 2020 the best limit to the half-life of $2\beta_{0\nu}$ in ^{100}Mo , with $2.17 \text{ kg} \times \text{y}$ of exposure. CUPID-Mo has demonstrated the maturity of the scintillating bolometric technique for CUPID (Cuore Upgrade with Particle Identification), the next generation $2\beta_{0\nu}$ ton-scale cryogenic experiment. CUPID-Mo consists of 20 enriched $\text{Li}^{2100}\text{MoO}_4$ scintillating crystals, at the Laboratoire Souterrain de Modane (France). The simultaneous measurement of heat and light allows rejecting the α background. In this talk we will present the data analysis corresponding to a 380 day period acquired between March 2019 and April 2020. This analysis lead to the new limit on $2\beta_{0\nu}$ in ^{100}Mo of $T_{1/2} > 1.5 \times 10^{24} \text{ yr}$ at 90% CI, corresponding to an effective Majorana mass $< (0.31 - 0.54) \text{ eV}$.

Collaboration name

CUPID-Mo

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Classifica Sessioni: Double Beta decays and Neutrino Masses

Classificazione della track: Neutrino Masses and Mixings