INITIAL RUNS OF THE NEMO 3 EXPERIMENT

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The NEMO collaboration is looking to measure neutrinoless double beta decay. The search for the effective neutrino mass will approach a lower limit of 0.1 eV. The NEMO 3 detector is now operating in the Fréjus Underground Laboratory. The fundamental design of the detector is reviewed and the expected performance detailed. Finally, a summary of the data collected in the first runs which involve energy and time calibration and studies of the background are presented.

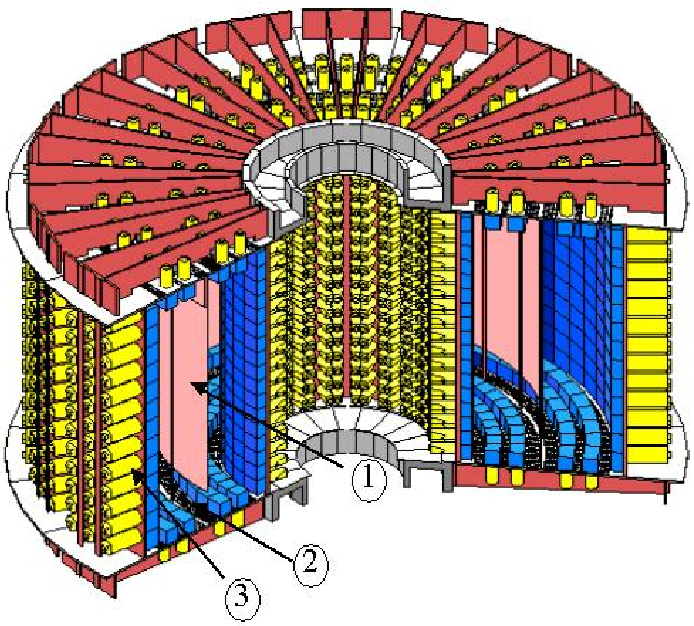

Figure 1: Schematic of the NEMO 3 detector: 1 - Source foil; 2 - Tracking volume with 6180 drift cells; 3 - Calorimeter of 1940 plastic scintillators coupled to low activity photomultipliers.