IMPROVED EXPERIMENTAL LIMIT ON THE ELECTRON STABILITY AND NON-PAULIAN TRANSITIONS IN I ATOM

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The background measurements have been performed in the Gran Sasso National Laboratory of INFN with the help of the large mass (≅100 kg) highly radiopure DAMA NaI(Tl) set up. Using statistics of 19511 kg ·day, new limit on the mean life of the electron was established for "disappearance" channel: $\tau_e(e^- \rightarrow \nu_e\nu_e\nu_e) > 4.2\ (2.4) \cdot 10^{24}$ y at 68 %(90 %) C.L.