Decay of Pm151 - DTU Orbit (15/12/2018)

Decay of Pm$^{151}$

The disintegration scheme of Pm151 has been studied by conversion electron-gamma and beta-gamma coincidence techniques using a six-gap β-ray spectrometer. The internal conversion electron spectrum has also been studied at 0.05% resolution in a 180° magnetic spectrograph. Fifty-seven transitions have been observed between levels in Sm151. Levels are established in Sm151 at 0, 4.8, 65.8, 69.7, 91.5, 104.8, 167.7, 168.4, 209.0, 323.9, 344.9, 445.8, 745, 823 and 875 keV. The relative parities of the levels have been established from the multipolarities of transitions between levels. The total decay energy determined by beta-gamma coincidence experiments is 1188 ±10 keV.

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