DECAY RATE OF TRIAXIALLY DEFORMED PROTON EMITTERS*

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The decay rate of a triaxially-deformed proton emitter is calculated in a particle-rotor model, which is based on a deformed Woods-Saxon potential and includes a deformed spin-orbit interaction. As an application, the wave function of the $I = 7/2^-$ ground state of the deformed proton emitter ^{141}Ho is obtained in the adiabatic limit, and a Green's function technique is used to calculate the decay rate and branching ratio to the first excited 2^+ state of the daughter nucleus. Only for values of the triaxial angle $\gamma < 5°$ is good agreement obtained for both the total decay rate and the 2^+ branching ratio. The figure shows the calculated value of the branching ratio *vs*. triaxial angle γ (solid line) and the experimental value (shaded area) [1]. The generic error bar on the calculated value represents the uncertainty due to the uncertainty in the measured proton energy [2].

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[1] K. Rykaczewski *et al*., Proc. of Int. Conf. on Nucl. Structure "Mapping the Triangle", Grand Teton National Park, Wyoming, 22-25 May 2002, AIP Proceedings **638**, 149 (2002).
[2] C. N. Davids *et al*., Phys. Rev. Lett. **80**, 1849 (1998).