TUNNELING ALONG γ-AXIS BETWEEN PROLATE AND OBLATE SHAPES

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Using Zickendraht - Dzyublik - Filippov coordinates; we derived equation to determine the rotation and monopole + quadrupole vibrations of the nuclear ellipsoid of inertia. Apart from the monopole part, it coincides with the Bohr - Mottelson equation. However, our mass parameter turns out to be about 2.5 times larger than the hydrodynamic one. The equation is solved quasi-classically for nonrotating β rigid but γ soft nuclei, whose energy landscape has prolate and oblate minima, connected by the collective path along the γ axis. The γ tunnelling strength appears to be twice the usual one, taking place for the one-dimensional potential with two minima, separated by the barrier. The E0 transition strength between levels of the ground 0^+ doublet is calculated. The results are consistent with the experiment for ^{74}Kr.