Abstract

The moments of inertia for ^{93}Mo, ^{194}Ir and ^{196}Au are studied as a function of the nuclear deformation and the nuclear temperature. The calculations have been carried out in the framework of the Inglis cranking model by taking into account the pairing correlations using the path integral formalism. The single particle energies and eigen functions used are those of a deformed Woods-Saxon mean field. These nuclei were used in evaluations of induced neutron cross sections and revealed a strong dependence on momentum of inertia parameters