

# Lifetime measurements of low-spin negative parity levels in $^{160}\text{Gd}$



$^{160}\text{Gd}(n,n'\gamma)$  experiments were performed with accelerator-produced monoenergetic neutrons. Excitation functions at neutron energies from 1.5 to 2.8 MeV aided in the placement of  $\gamma$  rays in the level scheme and angular distributions at three neutron energies resulted in the determination of 28 excited-level lifetimes or limits in  $^{160}\text{Gd}$ , including the lifetimes of several negative-parity levels attributed to octupole vibrations.

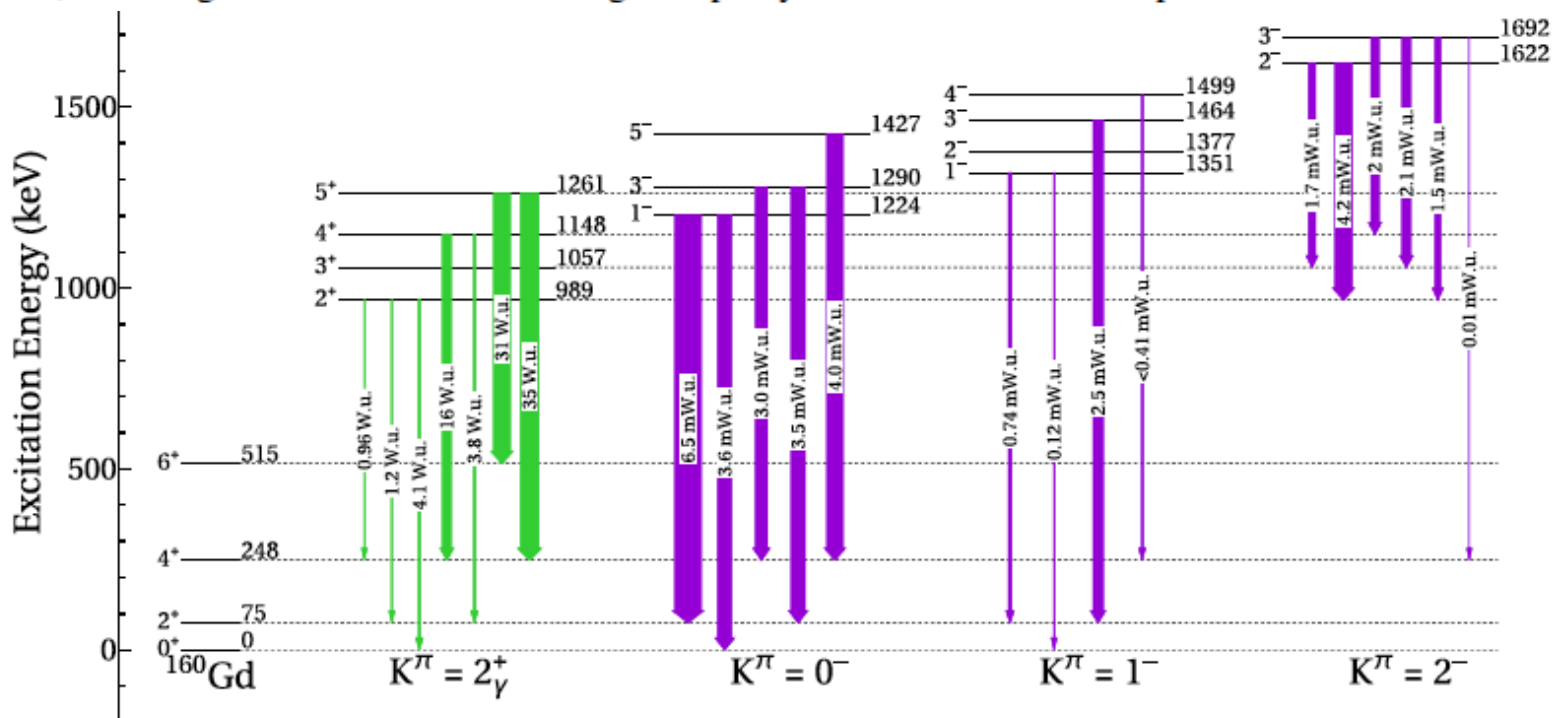


FIG. 2. A partial level scheme of  $^{160}\text{Gd}$  highlighting the  $K^\pi = 2^+$   $\gamma$  and negative-parity bands. The  $B(E2)$  values in W.u. are shown in green and  $B(E1)$  values in mW.u. in purple and scaled separately. All values are also listed in Table I.

