

Energy level diagram for the $5d^5 4f^1$ configuration of Gd^{3+} ion. The diagram shows a vertical sequence of energy levels with their corresponding J values and energies in cm^{-1} . The levels are: $51/2^-$ (957.0), $47/2^-$ (922.9), $43/2^-$ (881.7), $39/2^-$ (833.9), $35/2^-$ (844.0), $31/2^-$ (1075.5), $27/2^-$ (1000.1), $23/2^-$ (854.2), $19/2^-$ (660.2), $15/2^-$ (372.8), and $11/2^-$ (358). The energy difference between $15/2^-$ and $11/2^-$ is labeled as 2.14 eV.

Energy level diagram for ^{132}Ba showing the $3/2^+$ ground state and various excited states. The energy scale is in keV. Transitions are labeled with their energies and multipolarities.

State	Energy (keV)	Transition(s)
$3/2^+$	0	
$33/2^-$	309	1112.0 ($33/2^- \rightarrow 3/2^+$)
$29/2^-$	955.6	710.2 ($29/2^- \rightarrow 3/2^+$), 796.0 ($29/2^- \rightarrow 25/2^-$)
$25/2^-$	796.0	754.6 ($25/2^- \rightarrow 21/2^-$)
$21/2^-$	726.0	812.8 ($21/2^- \rightarrow 17/2^-$)
$17/2^-$	86.8	526 ($17/2^- \rightarrow 3/2^+$)
$3/2^+$	747.0	

Energy level diagram for ^{132}Ba showing transitions from the $21/2^-$ state to the $13/2^-$ and $17/2^-$ states. The diagram includes the following energy levels (keV) and transitions (keV):

State	Energy (keV)	Transitions (keV)
$21/2^-$	845, 2158	845, 841, 596, 767.5, 725.0
$17/2^-$	1434	1434, 952.7, 593.9
$13/2^-$	481.6	481.6, 221.1