

$^{168}\text{Er}(\text{pol p,p}), (\text{pol p,p}') \quad \mathbf{1984Ic01,1984Ic02}$

<u>Type</u>	<u>Author</u>	<u>History Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	Coral M. Baglin	NDS 111, 1807 (2010)	15-Jun-2010

Others: [1984SaZK](#), [1986Ic02](#), [1987Ic04](#), [1993FuZX](#).

[1993FuZX](#): E(p)=300 MeV; magnetic spectrograph, FWHM=25 keV.

[1984Ic01](#), [1984Ic02](#): E(pol P)=65 MeV; metallic Er targets (96.24% ^{168}Er); measured cross sections and analyzing powers (high-resolution mag spect (FWHM=20-26), $\theta(\text{c.m.})=11^\circ - 70^\circ$); used coupled-channel calculations for scattering from deformed optical potentials for the 0^+ , 2^+ , 4^+ , and 6^+ states of the g.s. rotational band ([1984Ic01](#)) and 2^+ and 4^+ members of the γ -vibration band ([1984Ic02](#)); deduced deformation parameters, multipole moments. [1986Ic02](#) and [1987Ic04](#) extended and further refined results. deduced presence of large hexadecapole term in γ vibration motion in addition to quadrupole term.

[1984SaZK](#): E(pol P)=65 MeV; $\theta(\text{lab})=6^\circ - 50^\circ$; measured E(p), I(p) (mag spect, FWHM=25); searched unsuccessfully for a 1^+ isovector collective state, predicted to be at ≈ 3.1 MeV.

Theory: microscopic model calculation of $\sigma(\theta)$ and $A_\gamma(\theta)$ ([1998Do16](#)).

 ^{168}Er LevelsE(level)[†]

0[@]
 80[@]
 264[@]
 549[@]
 821[‡]&
 995[‡]&
 1634[#]

[†] From [1984Ic01](#), except as noted.

[‡] From [1984Ic02](#).

[#] From [1984SaZK](#).

[@] Band(A): $K^\pi=0^+$ g.s. band.

[&] Band(B): $K^\pi=2^+$ γ vibration band.

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**Band(B): $K^\pi=2^+$ γ
vibration band**

995

**Band(A): $K^\pi=0^+$ g.s.
band**

821

549

264

80

0

$^{168}_{68}\text{Er}_{100}$