**Quadrupole moment of the $\gamma$-soft $^{196}$Pt** E. NOVITSKI, WNSL, Yale
University, V. WERNER, WNSL, Yale University — The $^{196}$Pt nucleus is considered
to be one of the best examples of the O(6) $\gamma$-soft symmetry in the Interacting Boson
Model (IBM) based on energies and B(E2) values, especially the $2_2^+ \rightarrow 0_1^+ / 2_2^+ \rightarrow
2_1^+$ B(E2) ratio, which is close to the O(6) limit of 0. However, the quadrupole
moment of $^{196}$Pt (and that of neighboring $^{194}$Pt) is known to be positive and sizeable,
which hints at a considerable oblate deformation of the nucleus. It is impossible to
describe the O(6)-like features and the nonzero quadrupole moment simultaneously
within the commonly-used consistent-Q formalism in the IBM-1, in which the same
quadrupole operator is used in the Hamiltonian and the E2 transition operator.
Therefore, IBM-1 calculations were performed breaking the consistent-Q formalism.
An alternative approach was taken in the proton-neutron version of the IBM (IBM-
2), choosing different parameters for the proton and neutron quadrupole operators,
thus introducing triaxiality by different deformations of the proton and neutron
bodies. Work supported by US DOE grant number DE-FG02-91ER-40609 and the
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E. Novitski
WNSL, Yale University

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