Abstract Submitted
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**Kerman's Problem in the Continuum**[1] A. O. MACCHIAVELLI, Lawrence Berkeley National Laboratory, R. F. CASTEN, Yale University, R. M. CLARK, C. M. CAMPBELL, H. L. CRAWFORD, M. CROMAZ, P. FALLON, M. D. JONES, M. SALATHE, Lawrence Berkeley National Laboratory — In 1956 Kerman published a seminal paper on rotational perturbations in nuclei [1]. Since then, Coriolis and rotational alignment effects have been extensively studied and are rather well understood [2,3]. With the development of exotic beam facilities and advanced instrumentation it is becoming possible to access regions of deformation in the nuclear chart, near the neutron drip-line. Here, the effects of weak binding are expected to play an important role, affecting the dynamics of the nuclear motion. In this work we study Kerman's problem when the single-particle levels involved are resonant states. We will present results showing the behavior of the kinematic and dynamic moments of inertia as a function of the state widths. Connection to possible experiments will be discussed.

1. A. K. Kerman, Mat. Fys. Medd. 30. No.16 (1956).
2. F. S. Stephens, Rev. Mod. Phys. 47 43 (1975).
3. R. Bengtsson and S. Frauendorf, Nucl. Phys. A137 129 (1979).

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