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Mixing of Triaxial and Intruder Configurations in ^{72,76}Ge Studied via Multistep Coulomb Excitation[1] A.D. AYANGEAKAA, R.V.F. JANSSENS, Argonne National Laboratory, ANL COLLABORATION, LLNL COLLABORATION, LBNL COLLABORATION, U. OF MARYLAND COLLABORATION, CSNSM COLLABORATION — The low-lying states in even-even Ge isotopes have been a subject of intense scrutiny for many years due to the inherent challenge of interpreting their low-energy structure. While several explanations such as vibrational-rotational coupling, 2p-2h intruder mixing and shape coexistence have been proposed, none have been able to satisfactorily reproduce the properties of these low-lying excitations. Recent theoretical calculations have, however, emphasized the importance of the triaxial degree of freedom and, indeed, ^{76}Ge is proposed to exhibit static triaxiality. In this study, the electromagnetic properties of low-lying states in ^{72,76}Ge were investigated via sub-barrier multiple Coulomb excitation with GRETINA and CHICO-2. In the case of ^{72}Ge, the extracted matrix elements seem to agree with the shape coexistence interpretation between the 0_1^+ and 0_2^+ states. However, significant mixing between the wavefunctions of these two states and triaxiality are required to reproduce the overall data. These results and calculations based on a triaxial rotor model with configuration mixing will be presented, and the role of triaxiality will be discussed. Preliminary results for ^{76}Ge will also be highlighted.

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