

VORTEX MOTION OF NUCLEONS AT ISOVECTOR DIPOLE EXCITATIONS OF NUCLEI

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S u m m a r y

Velocity fields for isovector dipole excitations in spherical nuclei have been considered in the framework of a semiclassical approach based on the Vlasov kinetic equation for a finite two-component Fermi system with moving surface. The velocity field was found to have a potential character in the energy range near the main maximum of a giant dipole resonance. However, at the energy of the high-energy maximum of the giant dipole resonance, which is caused by a neutron–proton asymmetry and dynamical surface effects, the velocity field reveals a vortex character in the near-surface region.