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Spin-triplet pairing in very large nuclei GEORGE BERTSCH, YUAN

LUO, University of Washington — Spin-triplet pairing is expected to compete favorably against ordinary spin-single pairing when neutron and proton numbers are equal the nucleus becomes very large. Using empirically derived interactions, the spin-triplet region was found to start just beyond the domain of physically realizable nuclei^{*}. We investigate here how the dominant pairing mode depends on nuclear deformation and neutron excess. We find that the spin-triplet pairing can persist to large deformations when N=Z and in spherical nuclei with some small neutron-proton asymmetry.

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