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**Anisotropic Pauli depairing effects and field-induced nodal excitations in superconductors without inversion symmetry** SATOSHI FUJIMOTO, Department of Physics, Kyoto University — Superconductors without inversion symmetry has been currently attracting much interest. Here, we investigate theoretically a novel effect in the vortex state realized when the magnitude of the spin-orbit splitting due to the inversion symmetry breaking (ISB) is of the same order as the superconducting gap. Such a situation with the small ISB may be relevant to a superconductor without inversion symmetry  $Y_2C_3$ , which was recently discovered by Akimitsu et al. We show that in this case the Pauli depairing effect is anisotropic in the momentum space, and thus induces nodal excitations even for s-wave superconductors. We calculate the density of states and the specific heat coefficient on the basis of the Eilenberger's quasiclassical method, and compare the results with experiments for  $Y_2C_3$ .

Satoshi Fujimoto  
Department of Physics, Kyoto University

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