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Vortex structure in p+ip superfluid mixture with Bose JING-BO WANG, JIAN-SONG PAN, YI WEI, Key Laboratory of Quantum Information, Chinese Academy of Sciences, School of Physics, University of Science and Technology of China, Hefei, Anhui — We study the vortex structure of p+ip-wave interaction fermion superfluid with Boson, including the majorana zero mode stay in the center of vortex, due to charity symmetry of 2D p+ip wave superfluid. we find with the Bose in the core of fermi vortex, it will efficiently influence the vortex structure, and the Bose will by trapped in the center of the core. more over, if the Bose has one angular momentum, it will shaped the core to a double minimum and gives the current a double peak structure. above all the zero mode always hold in the topological regime, but the wave function will shift from the gauss form to ring type with the interaction between Bose fermi increase.

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