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Nature of superconducting state in the new phase of $(TMTSF)_2PF_6$ under pressure LEV GOR'KOV, NHMFL, Florida State University, PAVEL GRIGORIEV, Landau Institute for Theoretical Physics, RAS, Russia — The unusual phase has been recently observed in the organic material $(TMTSF)_2PF_6$, where superconductivity coexists with spin-density wave in the pressure interval $p_{c1} below the first order transition into superconducting or normal metal phase. Assuming that the coexistence takes place on the microscopic scale, we consider the properties of the intermediate phase. We show that the new superconducting state inside spin-density wave phase just above <math>p_{c1}$ must bear a triplet pairing.

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