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**Larkin-Ovchinnikov-Fulde-Ferrell (LOFF) Phase in (TMTSF) $2X$  Conductors: Theory versus Experiment**<sup>1</sup> ANDREI LEBED, Dept. of Physics, University of Arizona — We consider a problem of a formation of the LOFF phase in a quasi-one-dimensional (Q1D) conductor, where we take into account both the paramagnetic spin-splitting effects and the orbital effects against superconductivity. We show that due to a weakness of the orbital effects in a Q1D case, the LOFF phase appears in (TMTSF) $2X$  ( $X=\text{ClO}_4$  and  $\text{PF}_6$ ) superconductors for real values of the Q1D band parameters. We compare our theoretical calculations with the recent experimental data by Y. Maeno group, obtained on (TMTSF) $2\text{ClO}_4$  superconductor, and show that there is a good qualitative and quantitative agreement between the theory and the experimental data. Note that the LOFF phase naturally appears in a singlet Q1D superconductor, whereas it may also appear in triplet Q1D superconductor under special conditions. Our work is supported by the NSF through the grant DMR-0705986.

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