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Anisotropic staggered magnetization in electron-doped Fe-based superconductors HONG-YI CHEN, National Taiwan Normal University, C.S. TING, University of Houston — Based upon a two-orbital model with competing collinear antiferromagnetism and s_{\pm} pairing superconductivity, the electronic structures are investigated by solving Bogoliubov-de Gennes equations. Our results for the optimally electron-doped compound exhibit the anisotropic staggered magnetization. The Fourier transformation of the staggered magnetization shows two uneven peaks at $Q_x = (\pi, 0)$ and $Q_y = (0, \pi)$. The spatial variation of the s_{\pm} pairing superconductivity and the electronic charge distribution show a checkerboard-like pattern with C_2 symmetry. Finally, in the calculation of the local density of states, we found that the anisotropic staggered magnetization does not open a gap. Our results are good in agreement with the recently reported experimental results.

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