Abstract Submitted
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Spin and holographic metals[1] VICTOR ALEXANDROV, PIERS COLEMAN, Rutgers University — We examine the spin structure of the Green's function of the holographic metal, demonstrating that the excitations of the holographic metal are "chiral," lacking the inversion symmetry of a conventional Fermi surface, with only one spin orientation for each point on the Fermi surface aligned parallel to the momentum. This implies that ferromagnetic spin fluctuations are absent from the holographic metal, leading to a complete absence of Pauli paramagnetism. The talk will discuss a possibility of going to a 3-dimensional holographic metal, where electrons should have both left- and right-handed chiralities.

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