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Dynamically Generated Gaps in Holographic Models of Interacting Fermions GARRETT VANACORE, PHILIP PHILLIPS, University of Illinois at Urbana-Champaign — Previous investigations have shown that a dynamical gap forms in the holographic theory dual to fermions interacting via a dipole (Pauli) coupling in an AdS_{d+1} -Reissner-Nördstrom background. We examine the analogous problem in an AdS_{d+1} -Schwarzschild geometry with a probe gauge field, finding that the gap persists. Our results suggest that bulk field interactions – rather than emergent symmetries of the boundary theory – are the origin of the gap.

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