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Equilibrium models of general relativistic magnetars ERIC HIRSCHMANN, Brigham Young University — We consider equilibrium configurations of strongly magnetized neutron stars in general relativity. Working in axisymmetry but without circularity, we construct rigidly rotating magnetars with both poloidal and toroidal fields in the interior. Using a self-consistent field approach, we investigate the relative contributions from both poloidal and toroidal components. We sketch how our procedure can be extended to incorporate differential rotation and convective motions.

Eric Hirschmann Brigham Young University

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