

Abstract Submitted  
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**Magnetars in General Relativity**<sup>1</sup> ERIC HIRSCHMANN, Brigham Young University — Magnetars are neutron stars for which surface magnetic fields can be in excess of a quadrillion Gauss. The magnitude and orientation of the magnetic field internal to these stars is largely unknown. We describe an effort to understand the magnetic field configuration of such stars within full general relativistic magnetohydrodynamics. Taking a self-consistent approach and assuming only axisymmetry, we numerically calculate the spacetimes and the electromagnetic field configurations of neutron stars with ultra-strong magnetic fields.

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