

Abstract Submitted
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Bulk Viscosity of Kaons in Warm CFL Quark Matter MATT BRABY, MARK ALFORD, Washington University, SANJAY REDDY, Los Alamos National Lab, THOMAS SCHAEFER, North Carolina State University — We are interested in calculating the bulk viscosity of color superconducting quark matter inside neutron stars, taking into account the effects of the charged and neutral kaon modes. There have already been some calculations published calculating such transport properties as the specific heat and neutrino emissivities (Alford et al 2004, Reddy et al 2003), however a lot of the emphasis has been on calculating the bulk viscosity (Madsen 1992, Wang and Lu 1984). The bulk viscosity directly impact the dissipation of r-modes, a problem that has concerned astronomers for years. It seems quite reasonable to expect quark matter to have a different bulk viscosity than nuclear matter, so this provides a great test to distinguish between them.

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