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# Effect of Equation of State on Magnetized Binary Neutron Star Mergers

*Tuesday 8 December 2015 14:42 (21 minutes)*

In this talk I will present some general relativistic magnetohydrodynamic simulations produced with the numerical code WHISKY. We have simulated magnetized binary neutron star mergers with two different Equations of State: ideal-fluid and H4. We have focused in particular on high-mass systems (both equal and unequal-mass ones) that produce after the merger a spinning black hole surrounded by a magnetized accretion disk. These models are indeed one of the main candidates for the central engine of short gamma-ray bursts (SGRBs). I will discuss the possible connection between these models and SGRBs as well as their gravitational wave signal.

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