From Whisky to Spritz: Simulating Magnetized Binary Neutron Star Mergers

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Magnetic fields play an important role in the dynamics of binary neutron star mergers and on their gravitational wave and electromagnetic emission (such as the production of relativistic jets and short gamma-ray bursts). In this talk I will review some of the main results in the field of fully general relativistic magnetohydrodynamic (GRMHD) simulations of these systems focusing in particular on a set of simulations performed with my WhiskyMHD code. I will also briefly discuss the open problems in this field and the need for more accurate GRMHD codes, such as the recently published Spritz code.

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