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Dynamical ejecta from binary neutron star mergers DAVID RADICE, Caltech, FILIPPO GALEAZZI, Frankfurt University, JONAS LIPPUNER, LUKE ROBERTS, CHRISTIAN OTT, Caltech, LUCIANO REZZOLLA, Frankfurt University — Binary neutron star mergers can drive dynamical outflows of neutron rich material. These ejecta might be the astrophysical site of production of the r-process elements. In this talk, I will present very recent full-GR, numerical relativity, simulations of binary neutron star mergers with microphysical equation of state and a simplified treatment of neutrino radiation done with the WhiskyTHC code. I will discuss the mechanisms driving the mass ejection, the role played by neutrino cooling and heating in shaping composition and morphology of the ejecta, as well as the impact on the final yields of the r-process nucleosynthesis.

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