List of Publications

June 23, 2018

Electronic links

Links to my publications on INSPIRE and on the ADS database.

Refereed Journal articles

2018 Siegel D. M. *&* Metzger B., 2018a, *Three-dimensional GRMHD simulations of neutrino-cooled accretion disks from neutron star mergers*, ApJ **858**, 52, arXiv:1711.00868

2018 Siegel D. M., Mösta P., Desai D. *&* Wu S., 2018, *Recovery schemes for primitive variables in general-relativistic magnetohydrodynamics*, ApJ **859**, 71, arXiv:1712.07538

2018 Horowitz C. J. et al. 2018, *r-Process Nucleosynthesis: Connecting Rare-Isotope Beam Facilities with the Cosmos*, topical review, submitted to J. Phys. G, arXiv:1805.04637

2017 Siegel D. M. *&* Metzger B., 2017, *Three-dimensional general-relativistic magnetohydrodynamic simulations of remnant accretion disks from neutron star mergers: outflows and r-process nucleosynthesis*, PRL **119**, 231102, arXiv:1705.05473
(selected PRL Editors' Suggestion, featured in *Physics*: Viewpoint by S. Rosswog)

2017 Ciolfi R., Kastaun W., Giacomazzo B., Endrizzi A., Siegel D. M. *&* Perna R., 2017, *General relativistic magnetohydrodynamic simulations of binary neutron star mergers forming a long-lived neutron star*, PRD **95**, 063016, arXiv:1701.08738

2016 Siegel D. M. *&* Ciolfi R., 2016a, *Electromagnetic emission from long-lived binary neutron star merger remnants I: formulation of the problem*, ApJ **819**, 14, arXiv:1508.07911

2016 Siegel D. M. *&* Ciolfi R., 2016b, *Electromagnetic emission from long-lived binary neutron star merger remnants II: lightcurves and spectra*, ApJ **819**, 14, arXiv:1508.07939

2015 Ciolfi R. *&* Siegel D. M., 2015a, *Short gamma-ray bursts in the "time-reversal" scenario*, ApJ Letters **798**, L36, arXiv:1411.2015

2014 Siegel D. M., Ciolfi R. *&* Rezzolla L., 2014, *Magnetically driven winds from differentially rotating neutron stars and X-ray afterglows of short gamma-ray bursts*, ApJ Letters **785**, L6, arXiv:1401.4544

2014 Siegel D. M. *&* Roth M., 2014, *An upper bound from helioseismology on the stochastic background of gravitational waves*, ApJ **784**, 88, arXiv:1401.6888

2013 Siegel D. M., Ciolfi R., Harte A. I. *&* Rezzolla L., 2013, *Magnetorotational instability in relativistic hypermassive neutron stars*, PRD Rapid Communication **87**, 121302(R), arXiv:1302.4368

2012 Siegel D. M. *&* Roth M., 2012, *On the feasibility of employing solar-like oscillators as detectors for the stochastic background of gravitational waves*, AN **333**, 978, arXiv:1401.6883

2011 Siegel D. M. *&* Roth M., 2011, *Excitation of stellar oscillations by gravitational waves: hydrodynamic model and numerical results for the sun*, ApJ **729**, 137, arXiv:1103.0373

2010 Siegel D. M. *&* Roth M., 2010, *Excitation of non-radial stellar oscillations by gravitational waves: a first model*, MNRAS **408**, 1742, arXiv:1006.4803

Refereed Proceedings

2015 Siegel D. M. *&* Ciolfi R., 2015c, *Magnetically-induced outflows from binary neutron star merger remnants*, Proceedings of Swift: 10 Years of Discovery, Rome, 2014, Proceedings of Science (SWIFT 10)169 (2015), arXiv:1505.01423

2015 Ciolfi R. *&* Siegel D. M., 2015b, *Short gamma-ray bursts from binary neutron star mergers: the time-reversal scenario*, Proceedings of Swift: 10 Years of Discovery, Rome, 2014, Proceedings of Science (SWIFT 10)108 (2015), arXiv:1505.01420

2015 Siegel D. M. *&* Ciolfi R., 2015d, *Magnetic field amplification in hypermassive neutron stars via the magnetorotational instability*, in Proc. of the 1st Karl Schwarzschild Meeting on Gravitational Physics, Frankfurt, 2013, ed. P. Nicolini et al., Springer Proceedings in Physics **170** (2015), arXiv:1401.5275 (awarded Karl Schwarzschild Prize)

Code publications

2018 Siegel D. M. *&* Mösta P., 2018, *GRMHD_con2prim: a framework for the recovery of primitive variables in general-relativistic magnetohydrodynamics*, Zenodo, doi:10.5281/zenodo.1213306

Theses

2015 Siegel D. M., 2015, Ph.D. thesis, *Binary neutron star mergers and short gamma-ray bursts: magnetohydrodynamics and electromagnetic emission*, Albert Einstein Institute and Univ. of Potsdam

2011 Siegel D. M., 2011, Diploma thesis, *Excitation of stellar oscillations by gravitational waves*, KIS and Univ. of Freiburg

Press releases, newspaper articles *&* others

2017 Science advisor for the *New York Times* story covering the recent observation of a binary neutron star merger by LIGO (GW170817) and associated EM counterparts

2015 Siegel D. M. *&* Ciolfi R., *It ain't magic: "Time-reversal" in Neutron Star Collisions*, press release, AEI (January 29, 2015)

2015 Siegel D. M., *Short gamma-ray bursts and the strongest magnetic fields in the Universe*, invited research report for the 2015 Yearbook of the Max Planck Society

2014 Siegel D. M., *Rätselhafte Blitze*, press interview and popular science newspaper article, Märkische Allgemeine Zeitung (MAZ; August 7, 2014)

2013 Siegel D. M., Ciolfi R. *&* Rezzolla L., *The largest magnetic fields in the universe*, press release, AEI (July 26, 2013)