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The Gravitational-Wave Signature of Core-Collapse Supernovae¹ CHRISTIAN D. OTT, ERNAZAR ABDIKAMALOV, SARAH GOSSAN, HANNAH KLION, ROLAND HAAS, PHILIPP MOESTA, CHRISTIAN REISSWIG, USCHI C.T. GAMMA, TAPIR, Caltech, EVAN O'CONNOR, CITA, University of Toronto, ERIK SCHNETTER, Perimeter Institute — The next galactic or nearby extragalactic core-collapse supernova (CCSN) may be detected in gravitational waves (GWs) by the network of advanced-generation GW observatories. We briefly summarize the state of multi-D models of CCSNe and the current understanding of GW emission from core collapse events. We then present new results on the GW signals of neutrino-driven and magnetorotational CCSNe on the basis of fully general-relativistic 3D simulations of core collapse and postbounce evolution.

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