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Parameter estimation on gravitational waves from neutron star binaries with spinning components BEN FARR, University of Chicago, CHRISTOPHER BERRY, University of Birmingham, KIPP CANNON, Canadian Institute for Theoretical Astrophysics, WILL FARR, University of Birmingham, PHILIP GRAFF, University of Maryland-College Park, CHAD HANNA, Pennsylvania State University, CARL-JOHAN HASTER, ILYA MANDEL, HANNAH MIDDLETON, University of Birmingham, CHRIS PANKOW, University of Wisconsin-Milwaukee, LARRY PRICE, California Institute of Technology, TREVOR SIDERY, University of Birmingham, LEO SINGER, NASA Goddard Space Flight Center, ALEX URBAN, University of Wisconsin-Milwaukee, ALBERTO VECCHIO, JOHN VEITCH, University of Birmingham, SALVATORE VITALE, Massachusetts Institute of Technology — As we prepare to enter the advanced-detector era of ground-based gravitational-wave astronomy, it is critical that we understand the abilities and limitations of the analyses we are prepared to conduct. Of the many predicted sources, binary neutron star (BNS) coalescences are paramount; their progenitors have been directly observed, and the advanced detectors will be sensitive to binary mergers up to 400 Mpc away. By simulating detector noise and the gravitational waves from an astrophysically motivated BNS source population, we examine the constraints that can be placed on masses and spins of detectable BNS systems in the early advanced-detector era.

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