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Contributed paper to Tenth Marcel Grossmann Meeting on General Relativity,
Rio de Janeiro, July 20-26, 2003

Parallel session: Space Detection of Gravitational Waves (LISA)

Title: Gravitational-wave data analysis from Earth to space

Abstract: I review the expected sources of gravitational waves for NASA/ESA's Laser Interferometry Space Antenna, and I discuss the required data-analysis techniques. I focus on the lessons that we can learn from the data-analysis effort for ground-based gravity-wave interferometers, and I discuss the peculiarities of space-based detectors, including the phase tracking of very long, complex signals, the problem of confusion noise, and the necessity of time-delay interferometry techniques. I describe in detail the results of current research on parameter estimation for galactic binaries, and on the detection of the gravitational-capture signals from solar-mass objects infalling into supermassive black holes.