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Third-generation gravitational-wave detectors - how we will reach the edge of the Universe

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The detection of gravitational waves from binary black hole and binary neutron star systems suggests that many such sources will be observed by the current generation of detectors. These sources will, however, be mostly confined to the local universe ($z \lesssim 1$), and many will have a signal to noise ratio just above the detection threshold. In this talk I will discuss the next generation of ground-based instruments, such as the Einstein Telescope and Cosmic Explorer, which will be sensitive enough to detect binary systems throughout the Universe. These detectors will yield a wealth of information about the population of sources as a function of cosmic time, and will reveal many local sources with high signal to noise ratios.