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**LIGO and the network of terrestrial gravitational wave detectors**

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Gravitational Wave detectors based on the idea of measuring GW-induced strains via laser interferometry are poised to make first detections in the next few years. This talk will give an overview of this approach to developing a new astrophysical window, using the US LIGO effort as the example. The basic detection mechanism — and its limitations — will be described, and the interesting upper limits and non-detections to date with the initial detectors reviewed. The second generation of instruments, exemplified by Advanced LIGO, is just coming on line, and those instruments and the astrophysics potential with the more sensitive detectors will be discussed. Lastly, means to move beyond the Advanced LIGO sensitivity will be sketched.

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