Preparing for Advanced LIGO's second observation run and beyond

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Advanced LIGO made the first direct detection of gravitational waves during its first observation period, which ended in January 2016. Since then, the interferometers have been undergoing a series of upgrades to improve their sensitivity to various potential gravitational wave sources. I will describe several of these improvements, and how they will enhance our sensitivity to events such as massive black holes at lower frequencies and mergers involving neutron stars at higher frequencies, as well as facilitate tests of general relativity with higher signal-to-noise ratio detections. I will conclude with an outlook on future upgrades that may be added after the next observing run, to further improve our ability to detect gravitational waves.