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The A+ upgrade for Advanced LIGO LISA BARSOTTI, Massachusetts Inst of Tech-MIT, LIGO COLLABORATION — The Advanced LIGO gravitational wave detectors, together with Virgo, have recently completed their second observing run, O2, making several detections of gravitational waves from binary black holes, and the first from a binary neutron star system. As the detectors evolve to reach their design sensitivity, the LIGO gravitational wave community is working on a concept for a near term upgrade, called A+, to improve the sensitivity of Advanced LIGO by up to a factor of 2 beyond its design goal. In this talk I will present the A+ concept, focusing on some key technologies that will be employed, such as squeezed light.

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