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Pinpointing Gravitational Wave Sources with LIGO-Australia LINQING WEN, UWA & Caltech, STAN WHITCOMB, Caltech, ACIGA COLLABORATION — In the next decade, we are expecting to witness two revolutionary developments in gravitational-wave (GW) astronomy: (1) detection of the first gravitational wave, and (2) detection of the electromagnetic counterparts of gravitational-wave sources. A larger network of ground-based GW detectors are essential to achieve the second task. A proposal of placing one copy of the advanced LIGO detector from the US to Western Australia (LIGO-Australia) has been put forward and was formally approved by the NSF. LIGO-Australia will add to the detector network the longest baseline, break the plane degeneracy of the detectors in the northern Hemisphere and therefore improve the network angular resolution dramatically. In this talk, we'll report the status and discuss the scientific benefit of LIGO-Australia.

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