One small strain in LIGO, one giant leap for Gravitational Wave astronomy

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Predicted by Einstein 1n 1916, Gravitational waves (GW) have eluded direct detection till last year. The first two detections of GW by Advanced LIGO and the remarkable success in reconstructing the black hole binary source are a sneak preview of what is possible in the coming decade. As GW detections become routine, inaugurating GW astronomy requires extension of the global network to improve sky localization of the GW sources. LIGO-India will play a key role in better localizing the GW sources making possible improved multi-messenger follow-ups. This new window to the dark universe has implications for astrophysics, cosmology and eventually fundamental physics.