

Abstract Submitted  
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**Past, present and future of the LIGO-Virgo gravitational-wave early alerting system** E KATSAVOUNIDIS, Massachusetts Inst of Tech-MIT, LIGO-VIRGO COLLABORATION — The first two observing runs in 2015-2017 of the advanced LIGO-Virgo gravitational-wave detectors have ushered a new era in multi-messenger astronomy. The discoveries of compact binary systems and the ability to provide early alerts of their detection by LIGO-Virgo have enabled breakthrough observations across the electromagnetic spectrum and neutrinos. The LIGO-Virgo resuming of observations in late 2018 will signal the beginning of making such early alerts for gravitational-wave detections open to the scientific community and the broader public. We will summarize the operations of such early alerting system during the first two runs of the instruments and present the highlights and challenges we face as we transition to an open, public alert system expected to be in place later in 2018.

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