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Abstract for an Invited Paper for the SES16 Meeting of the American Physical Society

## **Results from the first Advanced LIGO observing run and their astrophysical implications** TYSON LITTENBERG, NASA/Marshall Space Flight Center

The discovery of merging black holes during Advanced LIGO's first observing run (O1) signaled the culmination of a decades-long quest to detect gravitational waves and the beginning of a new observational field of astrophysics. This talk will summarize our new understanding of the gravitational-wave sky, placing results from the O1 observing campaign in context with other astrophysical observations and predictions, before closing with forecasts for the exciting future of ground-based gravitational wave observations.