

THE LIGO-VIRGO OBSERVATION RUN 3 (APRIL 2019 – APRIL 2020)

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On behalf of the LIGO Scientific Collaboration and the Virgo Collaboration

Observation Run 3 (O3) is the longest period of data taking for the two Advanced LIGO detectors and the Advanced Virgo detector to date. From April 1<sup>st</sup>, 2019 to April 30<sup>th</sup>, 2020, the instruments accumulated 12 months of data, with a 1-month commissioning break in October 2019. In this talk, I will review the performance of the three detectors both separately and within the global network of ground-based gravitational-wave interferometric detectors: sensitivity, duty cycle, noise stability and variations. I will briefly describe the O3 public alerts and the first published results of this run. To conclude, I will summarize the plans of the two collaborations for the coming years: alternatively upgrade phases and data taking periods with improved performance.