



Contribution ID: 601

Type: Parallel talk

Status of the Virgo gravitational-wave detector and the O3 Observing Run

Saturday, 13 July 2019 09:00 (20 minutes)

On April 1st 2019 the Virgo gravitational-wave detector, jointly with the two US-based LIGO detectors in Hanford and Livingston, entered the O3 Observing Run, which is foreseen to last one calendar year. After the past O2 Run, which was characterized by the first ever revelation of gravitational waves emitted by the coalescence of a binary neutron star system, all three detectors underwent an intense, one-year-long Upgrade & Commissioning phase, aimed at the improvement of the sensitivity and at the increase of the duty cycle. An important difference with respect to the prior Observing Run is the introduction of the “Open Public Alert” system, which is automatically providing low-latency information for events and superevents to the EM partners, increasing the possibility of a joint detection of events of astrophysical importance in the framework of multimessenger astronomy.

This talk will present an overview of the Upgrade & Commissioning phase of the Virgo detector which preceded the O3 Observing Run, and the detector’s current status during the first part of the Run. An overview of the scientific results obtained so far will also be presented. Finally, the current plans and expectations for the remaining part of the Run will be described, followed by a short overview of the future plans for the Virgo detector in the post-O3 phase.

Primary author: Dr BERSANETTI, Diego (INFN - National Institute for Nuclear Physics)

Presenter: Dr BERSANETTI, Diego (INFN - National Institute for Nuclear Physics)

Session Classification: Astroparticle Physics and Gravitational Waves

Track Classification: Astroparticle Physics and Gravitational Waves