Poster Session #F
Gravitational Wave detectors and other sources

F07

LIGO-Virgo detector characterization and data quality: from the O3 performance to the preparation of O4

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Detector characterization and data quality – in short "DetChar" – activities are key to optimize the performance of data-taking periods ("runs") and to turn gravitational-wave (GW) candidates into confirmed events. The LIGO and Virgo DetChar groups are active from the detector to the final analysis and cover various latencies: online first, to tag the data that search pipelines can analyze in real-time; then, the quick vetting (few tens of minutes at most) of the open public alerts targeting the broad astronomer community for follow-up observations; finally, offline work to define the final datasets and the final lists of GW events to be published and released publicly. This poster summarizes the DetChar performance during the O3 run (April 2019 - March 2020) and describes the main improvements and upgrades that are foreseen for the O4 run that should start during Summer 2022 and include a fourth detector: KAGRA.