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## **KAGRA, LIGO, VIRGO observations**

*Friday, 12 July 2024 12:00 (30 minutes)*

After the first groundbreaking observation of gravitational waves emitted by the collision of two black holes on 14 September 2015, the LIGO-Virgo-KAGRA network has completed three successful observing runs yielding nearly a hundred events. All detections were compatible with short transients emitted by the coalescence of compact binaries composed of black holes and/or neutron stars. The first half of the fourth observing run, which took place from May 2023 to January 2024, brought 81 new high-confidence gravitational wave candidates. This number has been steadily increasing since the LIGO and Virgo interferometers have resumed observations after a mid-run break of a few months. The ongoing run has already made new and fascinating discoveries. The talk will summarise the main observational results obtained by the current network of gravitational wave detectors until now.

**Presenter:** COLLEONI, Marta

**Session Classification:** Friday plenary session