



ID de Contribution: 5

Type: **Oral presentation**

Optimisation of the optical follow up of gravitational waves events

vendredi 28 février 2020 14:00 (15 minutes)

Gravitational waves from binary neutron star (BNS) coalescence, in association to short gamma-ray burst, opened a new era of multi-messenger astronomy. The identification of the counterpart and its multi-wavelength observations improved our understanding of the physics of strong-field gravity and put some constraints on astrophysical models related to matter during the merger and post-merger phase. With improved sensitivity of the LIGO-Virgo detectors, the year-long third observing run (O3) promises many merging binaries detection with an expected number of BNS mergers in the range 1-50. Therefore an intensive multi-wavelength follow-up of those events with ground and space instruments is performed all around the world.

But the identification of the electromagnetic counterpart of such event is very challenging knowing the wide sky localization area provided by LIGO-Virgo (from few tens of degrees to thousands of degrees) and requires complex observation strategies implying many telescopes. We will present our recent development on galaxies targeting strategies, the building of the Mangrove galaxies catalog and the publicly available tools dedicated to improve the follow up of gravitational waves events.

Field

Not in the above

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Classification de Session: Talk

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