## Journées de Rencontre des Jeunes Chercheurs 2019



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## The hunt for VHE gamma-rays in the Gravitational Waves era.

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In multi-messenger astrophysics, we combine different astronomical messengers in order to study different aspects of an object or a process in the Universe. Nowadays, four astronomical messengers exist: electromagnetic waves, cosmic rays, neutrinos and Gravitational Waves (GW). The first direct discovery of GW emitted from the inward spiral of two black holes in 2015 took multi-messenger astrophysics to the next level, adding direct detection of GW to the list of messengers coming from the sky. Almost two years later, the first detection of GW from a binary neutron star merger alongside electromagnetic counterparts in several bands started a new era in multi-messenger astrophysics triggering worldwide search programs for GW counterparts. Very High Energy (VHE) gamma-rays covers the highest band in the electromagnetic spectrum and provides valuable information for the characterization of astrophysical phenomena. This is why the search for VHE gamma-ray from GW events is in the heart of these search campaigns. In this contribution I report on GW follow-up program with the H.E.S.S. Imaging Atmospheric Cherenkov Telescopes and its outcome until now.

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