Follow-up of gravitational waves alerts with IACTs using Astro-COLIBRI

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Follow-up of gravitational wave alerts has proven to be challenging in the past due to the large uncertainty on the localisation, much larger than the field of view of most instruments. A smart pointing strategy helps to increase the chance of observing the true position of the underlying compact binary merger event and so to detect an electromagnetic counterpart.

To tackle this, a software called ***tilepy*** has been developed and was successfully used by the H.E.S.S. collaboration to search for very-high energy gamma-ray emission from GWs during the O2 and O3 runs. The optimised tiling strategies implemented in *tilepy* allowed H.E.S.S. to be the first ground facility to point toward the true position of GW 170817. Here we will present the main features of the (now publically available) software package and illustrate how several IACTs will use it for the follow-up for GW alert during the O4 run.

The *tilepy* software is now also integrated into the **Astro-COLIBRI** platform. This tool helps to plan follow-up of a large range of transient phenomena including GW alerts. The platform also provides an overview of the multi-wavelength context by grouping and visualising information coming from different observatories alongside GW alerts. We will illustrate the use of *Astro-COLIBRI* in searches for counterparts to GWs during the first months of O4.