



Contribution ID: 118

Type: talk

Virgo post-O5 plans

Monday, 17 May 2021 10:00 (20 minutes)

During last spring the Virgo Collaboration began an effort to define the scientific program in the decade ~ 2026-2036, which corresponds to the period between the end of the O5 data taking and a possible first Einstein Telescope data taking. This work encompasses two axes, developed in parallel: identifying the major science questions to which Virgo - in the framework of the LVK network - can contribute, and identifying what detector improvements are possible in this timeframe. Three main scenarios are considered: the first is a “minimal” one, in which the technologies used for O5 are slightly improved with a modest investment. The second is a “moderate” scenario, in which some major components of the instrument are changed (e.g. mirrors) or/and considerably improved, with an investment similar to Advanced Virgo and Advanced Virgo+. In the third scenario, the most ambitious one, completely new technologies are introduced, with a much large investment. The purpose of this talk, after recalling the working framework of the “Virgo post-O5 committee”, is to present our initial considerations and ideas about science, technology and relations with 3G detectors, and –if possible –stimulate a discussion in the GW Community.

Primary author: BARSUGLIA, Matteo (APC-CNRS)

Co-authors: PALOMBA, Cristiano; MILOTTI, Edoardo; TOURNEFIER, Edwige; GEMME, Gianluca; CARPINELLI, Massimo; PUPPO, Paola; NISSANKE, Samaya; HILD, Stefan; REGIMBAU, Tania; DAL CANTON, Tito; FAFONE, Viviana; CHAIBI, Walid

Presenter: BARSUGLIA, Matteo (APC-CNRS)

Session Classification: Recorded talks: Beyond Current Detectors

Track Classification: Advanced detectors: Beyond second generation