

Advanced Virgo Status

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The detection of a gravitational wave signal in September 2015 by LIGO interferometers, announced jointly by LIGO collaboration and Virgo collaboration in February 2016, opened a new era in Astrophysics and brought to the whole community a new way to look at - or “listen” to - the Universe. In this regard, the next big step will be the joint observation with at least three detectors at the same time. This configuration will provide a twofold benefit: increase the signal-to-noise ratio of the events by means of triple coincidence and allow a narrower pinpointing of GW sources, and, in turn, the search for Electromagnetic counterparts to GW signals. Advanced Virgo (AdV) is the second generation of the gravitational-wave detector run by the Virgo collaboration. After a shut-down lasted 5 years for the upgrade, AdV is being now commissioned to get back online and join the two aLIGO interferometers to realize the aforementioned scenario.

We will describe the challenges and the current status of the commissioning of AdV, and its current performances and perspectives.

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