

To: Editor of Science Magazine

Subject: News on Science Magazine

<http://www.sciencemag.org/news/2017/02/european-gravitational-wave-detector-falters>

Dear Editor,

We would like to point out that the article published in the review Science presents a biased picture of the status of Advanced Virgo. In particular, the article implies that the sensitivity of Advanced Virgo will not be in the range that was planned for its first run. That is not true. Although Advanced Virgo will not operate with monolithic fiber suspensions due to the breakages reported in the article, the sensitivity achievable with steel suspensions is entirely consistent with planned performance for Virgo's first joint run with Advanced LIGO later this year (Abbott B.P. et al, Living Reviews in Relativity 19, 1 (2016)).

On the base of modeled sensitivity performance with metallic suspensions, we expect that Advanced Virgo will be able to detect a gravitational wave emitted by the coalescence of a binary neutron star system of 1.4x1.4 solar masses up to at a distances of ~110 Mpc from the Earth with signal to noise ratio about 8, half of the present Advanced LIGO sensitivity.

The Virgo team has completed all installation activities planned for the first observing run, and commissioning of the interferometer is now in full swing. We are working to improve the stability of the detector as well as to optimize the sensitivity. This will take a few more months, at which point we expect to begin observing the gravitational wave universe with LIGO.

We are not 'frustrated' that Advanced Virgo is not yet running. On the contrary, we are excited that Advanced Virgo will be joining LIGO soon!

Sincerely,

Federico Ferrini,  
EGO director

Gabriela Gonzales  
LSC spokesperson

Dave Reitze  
LIGO director

Fulvio Ricci  
Virgo spokesperson