Contribution ID: **44** Type: **Talk**

The impact on GW waveform SNR of the site dependent noise recorded at the Einstein Telescope candidate sites.

Wednesday 28 August 2024 11:00 (20 minutes)

In this work we present an evaluation of how site dependent noise can affect the signal to noise ratio (SNR) of compact binary coalescence (CBC) signals in the future 3rd generation gravitational wave (GW) detector Einstein Telescope (ET). Actually, the design of ET is pushing the scientific community to study its scientific potential and to assess its sensitivity with respect to known, and possibly unexpected, GW signals using its design sensitivity. Nevertheless, local ambient noise may have an impact on the ET sensitivity and therefore affect the SNR of CBC signals at low frequency. Therefore, we study the impact of ambient noise on the ET sensitivity curve at the two sites candidate to host ET - Sardinia, in Italy, and the Euregio Meuse-Argonne (EMR) between the Netherlands and Belgium - and infer how the SNR of CBC signals at low frequencies is affected.

Internet talk

Maybe

Is this an abstract from experimental collaboration?

No

Name of experiment and experimental site

Einstein Telescope

Is the speaker for that presentation defined?

Yes

Details

Dr. MATTEO DI GIOVANNI
La Sapienza Università di Roma & INFN Sezione di Roma
Italy
https://www.phys.uniroma1.it/fisica/

Authors: Dr ROZZA, Davide (University of Milano-Bicocca and INFN-MIB); DI GIOVANNI, Matteo (La Sapienza Università di Roma)

Presenter: DI GIOVANNI, Matteo (La Sapienza Università di Roma)

Session Classification: Cosmology, Astrophysics, Gravity, Mathematical Physics

Track Classification: Main topics: Cosmology, Astrophysics, Gravity, Mathematical Physics