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Bayesian procedure for characterizing the physical parameters of the black hole binary coalescence GW-170814

After the first detection of Gravitational Waves (GWs) lead to win the Nobel of Physics, characterizing the parameters of the systems creating these events have become more important to shed light on our knowledge of the Universe. In this work, we aim to follow the scientific procedure used by the LIGO-VIRGO interferometer's network to characterize the physical parameters describing the event of the collision of a two Black Hole (BHs) Binary system using PYCBC toolkit. We show that our results for estimated masses M1=31.1±7.5 M2=23.1±6.5 Solar masses and Luminosity distance d_{L}= 710±250 that are in good agreement with the parameters estimated by the different inference processes done by the LIGO-VIRGO network.

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