Title: Measuring the impact of the gravitational wave intrinsic geometry on the Hubble constant measure

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The first multi-messenger detection of a binary neutron star on 17th Aug 2017 has officially opened the era of multi-messenger astronomy. One of the most important milestone reached with this detection, is the possibility of testing several aspects related to cosmology. In particular, for binary neutron stars with an electromagnetic counterpart, observed in the local universe (redshift z~0), it will be possible to measure the Hubble constant H0. An additional channel for the estimation of the Hubble constant in the local Universe is crucial to fill the gap between the measured H0 discrepancy at higher red-shift (CMB-based) and lower redshifts (supernova standard candles). The H0 measurement accuracy
depends on the uncertainties over a number of factors including the proper velocity of the host galaxy, the gravitational-wave source sky localisation, and the binary luminosity distance. A number of works have already tackled the first two factors. In this poster, we address the latter and relate the statistical uncertainties in the luminosity distance estimation to the intrinsic properties of GWs and binary inspirals, as well as to the detector network. Our framework allows to make predictions on the accuracy on H0 from gravitational-wave observations for the upcoming LIGO-Virgo observing runs.