A Statistical Constraint on the Hubble Constant Using the Latest Gravitational Wave Detections

Rachel Gray for the LIGO-Virgo Collaboration

The field of gravitational wave cosmology opened up with the detection of the binary neutron star merger GW170817, alongside its electromagnetic counterpart. It is currently understood that many detections, in particular binary black holes, are not expected to be accompanied by electromagnetic counterparts. To this end, we have developed a method of statistically inferring the Hubble constant using compact binary mergers in combination with galaxy catalogs to provide the complementary redshift information. I discuss details of this method and present the latest Hubble constant results from the LIGO-Virgo Collaboration using events from GWTC-1 (Gravitational Wave Transient Catalog 1).