

GW170817 has already provided the first observational constraints from binary neutron star (BNS) systems inspiralling with the emission of gravitational wave (GW) radiation and we expect many more BNS detections in the upcoming era. The interior of neutron stars can be thought of as a fluid whose oscillation modes can get excited during the process of the inspiral. r-modes arise resonantly in spinning neutron stars when the frequency of the axial mode matches that of the orbital frequency, leading to a phase shift in the GW phasing. In this work, we investigate possible constraints on r-modes from BNS inspirals and present results from a simulated GW170817-like system. We also extend the work to consider multiple BNS detections with Advanced LIGO and Virgo at design sensitivity, and also estimate what constraints can be put with Einstein Telescope.