Title : INTERMEDIATE-MASS BINARY BLACK HOLE SEARCH WITH ADVANCED LIGO AND VIRGO

Abstract :

Binary black hole events detected by the Advanced LIGO and Virgo detector network have shown clear evidence of existence of massive stellar mass black holes up to 80 Msun. This network is also sensitive to detect the gravitational waves from the intermediate-mass black hole (mass range of 10^2-10^5 Msun) binary system. Though there is no direct evidence of such black hole in the electromagnetic window, a number of candidates exist. The observation of such system in the gravitational wave window will provide the first direct evidence of the existence of intermediate mass black hole. This talk summarizes the results from the all sky search for intermediate-mass black hole binary system in the first and second observing runs of the Advanced LIGO and Virgo detector.