MAS17-2017-000059

Abstract for an Invited Paper
for the MAS17 Meeting of
the American Physical Society

Mergers of Compact Objects in the Gravitational Wave Era[1]

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The observation of gravitational waves has opened a new, unexplored window onto the Universe. Among the sources of gravitational wave transients, compact objects such as neutron stars (NSs) and black holes (BHs) play the most important role. In this talk, I will discuss the expected gravitational wave signal when two compact objects (either NS-NS or NS-BH) in a binary merge. These events are believed to be accompanied by a strong electromagnetic signature in gamma-rays, followed by longer-wavelength radiation. I will discuss what we can learn from the complementary observations of the electromagnetic and the gravitational wave signals during these events.

[1]National Science Foundation