

Physics Colloquium

Tuesday, May 1st, at 3:30 pm in SC 234

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GW170817 and its non-thermal emission

The detection of gravitational waves, gamma-rays, and multi wavelength radiation from the binary neutron star merger GW170817 has been an enormous breakthrough in astrophysics. It has confirmed some theoretical expectations and opened new riddles. I will extensively introduce the observations and physics of the event and then concentrate on the non-thermal component of the emission and on the possible the association of binary neutron star mergers with short-duration gamma-ray bursts. I will show that the most likely scenario is the one in which GW170817 produced a canonical short gamma-ray burst jet that was misaligned with our line of sight, resulting in unusual behavior. I will finally discuss the prospect for the incoming O3 observation period of LIGO.

Refreshments at 3:00 pm in SC 103