



Department of Physics and Astronomy
SPRING 2023 Colloquium Series

“Spectacular Explosive Events in the Universe Associated with Black Holes and Neutron Stars”

Dr. Pawan Kumar

University of Texas at Austin

I will provide a brief historical overview of some of the most spectacular explosive events astronomers have observed since the big bang, and their connections to black holes and neutron stars. These include supernovae, gamma-ray bursts, stars falling in a black hole, and fast radio bursts (FRBs). The last of these (FRBs) is a new class of bursts detected by radio telescopes at a few GHz frequency. FRBs last for a few milliseconds and have puzzled astrophysicists for about 10 years. Only in the last few years we have come to realize that these are associated with neutron stars of very high magnetic field strength, the so called magnetars. I will end the talk by describing how these bursts are turning out to be useful probes for cosmology.

Thursday, April 13, 2023

4:00 - 5:20PM

MND1015

Open & Free to all students, faculty and public