



Physics Colloquium



Tuesday, November 19, 2019, 3:30PM in SC 10

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What Do We Really Know About Gamma-ray Burst Progenitors?

More than 20 years after the discovery of the first afterglow of a gamma-ray burst (GRB) and the definitive determination of its cosmological distance, there are still a number of unsolved fundamental questions related to the central engines and progenitor systems that produce GRBs. Although we have some constraints on necessary progenitor properties from GRB energetics, timescales, locations in their host galaxies, etc., there is still room for a vast zoo of massive single and binary star progenitors to explain these enigmatic events. In this talk, I will summarize what we currently know about GRB progenitors and present some recent results that might offer constraints on these systems. In addition I will discuss how certain GRB properties like energy, luminosity, duration, and jet opening angle seem to evolve over cosmic time, and will discuss how these results can be used to learn about the nature of the beast behind these most powerful explosions in the universe.

Refreshments at 3:00PM in SC 103