APR08-2007-000026

Abstract for an Invited Paper for the APR08 Meeting of the American Physical Society

Jets in Relativistic Cosmic Explosions SHRI KULKARNI, California Institute of Technology

In this talk the speaker will first review relativistic cosmic explosions: gamma-ray bursts and radio sparks. GRBs are now recognized to be the most relativistic and highly collimated explosions. Radio sparks is an entirely new phenomenon (we have only one example as of November 2007). However, circumstantial evidence shows that this event is at extra-galactic distance. If so, these involve ultrra-strong electromagnetic waves. The plasma physics of GRB jets and radio sparks is a frontier area of astronomy with only questions!