

Gamma-Ray Bursts across the electromagnetic spectrum and beyond

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Gamma-ray bursts provide the quintessential rapid-response, multiwavelength, multi-facility, and now multi-messenger, observational challenge. Well-coordinated discovery and follow-up campaigns potentially allow progress on diverse science topics, from the chemical evolution of the universe to ultra-relativistic physics. However, this requires coordination between many groups using facilities spanning a wide geographical range on the ground and also in space. Speed is of the essence, due to the rapid fading in most wave-bands, and ideally later observations make use of information gathered from earlier ones. Thus, the challenge going forward is to provide a broad suite of facilities which are flexible, can be triggered rapidly and reliably, and for which good data-reductions can be accomplished quickly; but also communication mechanisms to allow key information to be shared in an efficient manner. Autonomous robotic decision-making has a role to play, but it is also important that the infrastructure exists to expedite human involvement to ensure optimal use of precious resources.