

Abstract Submitted
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White Paper on the Status and Future of Ground-based Gamma-ray Astronomy: GRB Science Working Group Report ABRAHAM FALCONE, Penn State University, WHITE PAPER GRB WORKING GROUP TEAM — In the fall of 2006, the Division of Astrophysics of the American Physical Society requested a white paper about the status and future of ground based gamma-ray astronomy. Several working groups have formed to define the scientific goals that may be addressed by future instruments. In an effort to involve and inform the broader scientific community, we are reporting here on the preliminary findings of the gamma ray burst working group for the white paper. In addition to discussing the status of current instruments attempting to observe GRBs at GeV-TeV energies, we will discuss the potential of future ground based gamma-ray experiments to observe the highest energy emission ever recorded for GRBs, particularly for those that are nearby and have high Lorentz factors in the GRB jet. We will then discuss the key implications of these observations on GRB models, as well as cosmic ray origin. These topics will include a discussion of the relevance of recent exciting discoveries by the Swift GRB mission. Additional involvement in the white paper will be encouraged.

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