

Abstract Submitted
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Statistics of Swift discovered Gamma Ray Bursts DIRK GRUPE,
Morehead State University — Over the last 9 and a half years the NASA *Swift*
Gamma-Ray Burst Explorer Mission has discovered more than 900 Gamma-Ray
Bursts (GRBs). This unique data set allows for the first time a detailed statistical
analysis of GRBs. In my talk I will present new relations between the prompt and the
X-ray afterglow emission that will show that the prompt emission already dictates
the fate of the GRB afterglow. I will also present multi-variate statistical analysis of
the data set employing a Principal Component Analysis (PCA) and Cluster analysis.
The PCA shows that the properties of GRBs are primarily driven by energetics. The
Cluster Analysis allows to easily separate between three groups of GRBs - short and
long duration GRBs and X-ray Flashes (XRFs).

Dirk Grupe
Morehead State University

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