Abstract Submitted
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GRB 080319b: Modeling the Naked Eye Burst MARK SCHUBEL, UNC Chapel Hill, UNC GRB TEAM — Modeling Gamma-Ray Bursts (GRBs) requires both rapid response and attention to detail. GRBs often only last several seconds, and in that time, one needs to be able to image the field, and then begin to quickly reduce and analyze the data to determine if the burst can be found, and then to begin to determine its brightness. This is especially true when a truly unique burst occurs, such as GRB 080319b. This burst, often referred to as the "Naked-Eye" burst since it was so bright ($\sim$5 magnitude in R at peak) it could have been seen by the naked eye. We will discuss the process of getting this burst ready for modeling, including the prompt-response by the PROMPT telescopes (which responded 32 seconds after the burst and had detections in UVRI), reduction in IRAF, field-calibration and finally modeling the burst using Galapagos, a genetic-algorithm powered modeling suite that can efficiently maneuver the multi-dimensional parameter space to determine some of the environmental conditions of the burst, and shed some light on conditions of the early universe.

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