

Background Estimation in Fermi Gamma-ray Burst Monitor lightcurves through a Neural Network

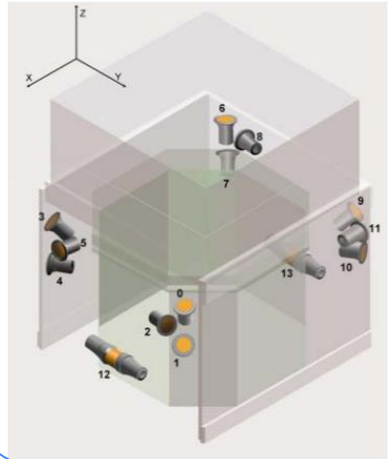
Riccardo Crupi

Fermi GBM



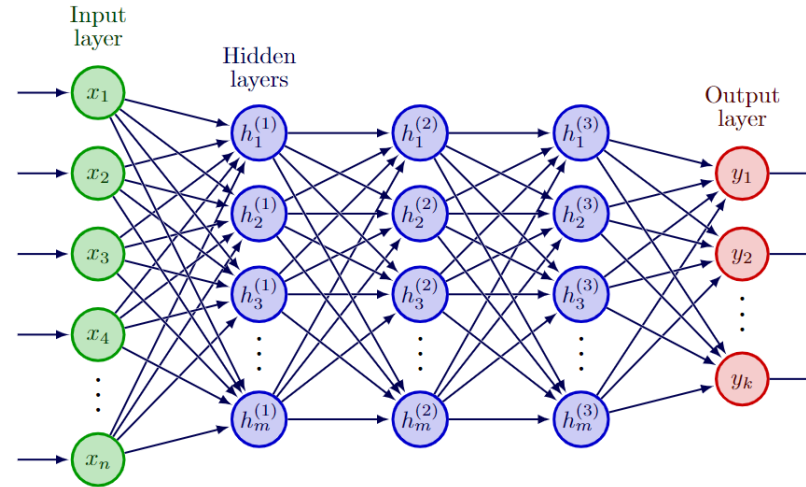
$$X \in \mathbb{R}^{60}$$

- Pos x, y, z
- Lat, Lon, Alt
- Det pointing
- McIlwain L-parameter
- ...

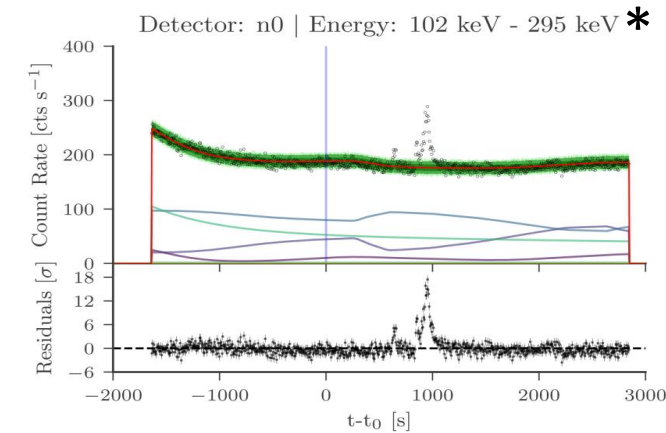
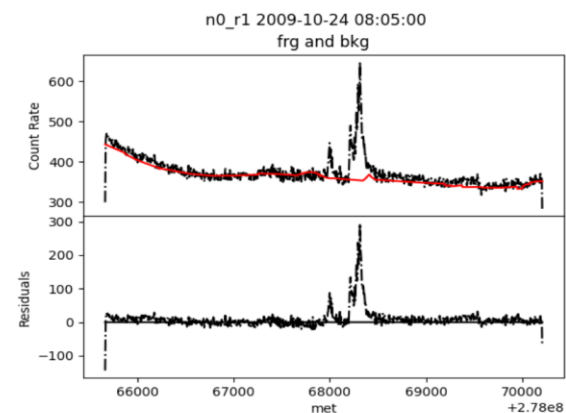
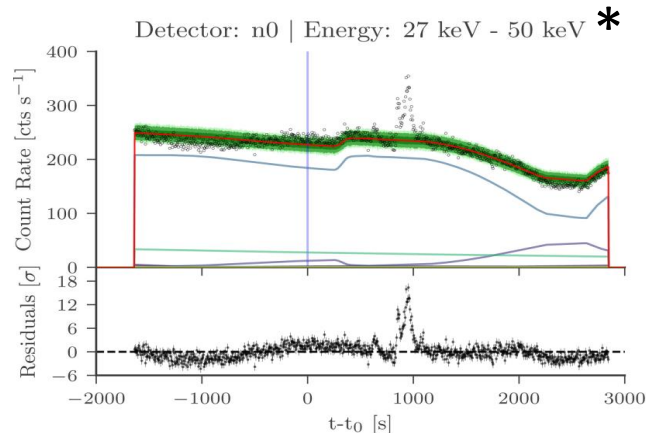
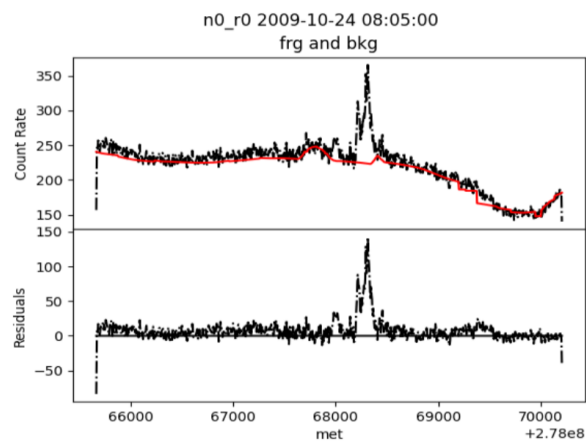


$$Y \in \mathbb{R}^{36}$$

- Det counts range 0
- Det counts range 1
- ...
- Det counts range 2



GRB 091024



(*) Björn Biltzinger, Felix Kunzweiler, Jochen Greiner, Kilian Toelge, and J Michael Burgess. A physical background model for the fermi gamma-ray burst monitor. *Astronomy & Astrophysics*, 640:A8, 2020