

MODELLING THE GRB LIGHT CURVES USING A SHOCK WAVE MODEL

S. Simić, L. Č. Popović and L. Grassitelli

We discuss main topics of Gamma Ray Burst (GRB) phenomena with special attention on the mechanisms for gamma-ray creation and observed temporal variability of GRB light curve. We have demonstrated the applicability of modified internal shock wave model to fit the GRB light and spectral curves of 30 GRBs observed with BATSE. From the best fitting, we obtain basic parameters of the relativistic shells. It is shown that calculated parameters are in good agreement with predictions given earlier. We compare measured GRB parameters with those obtained from the model and discuss connections between them in the frame of the physical processes laying behind GRB events.