



Gamma Ray Burst: Double Peaks Model

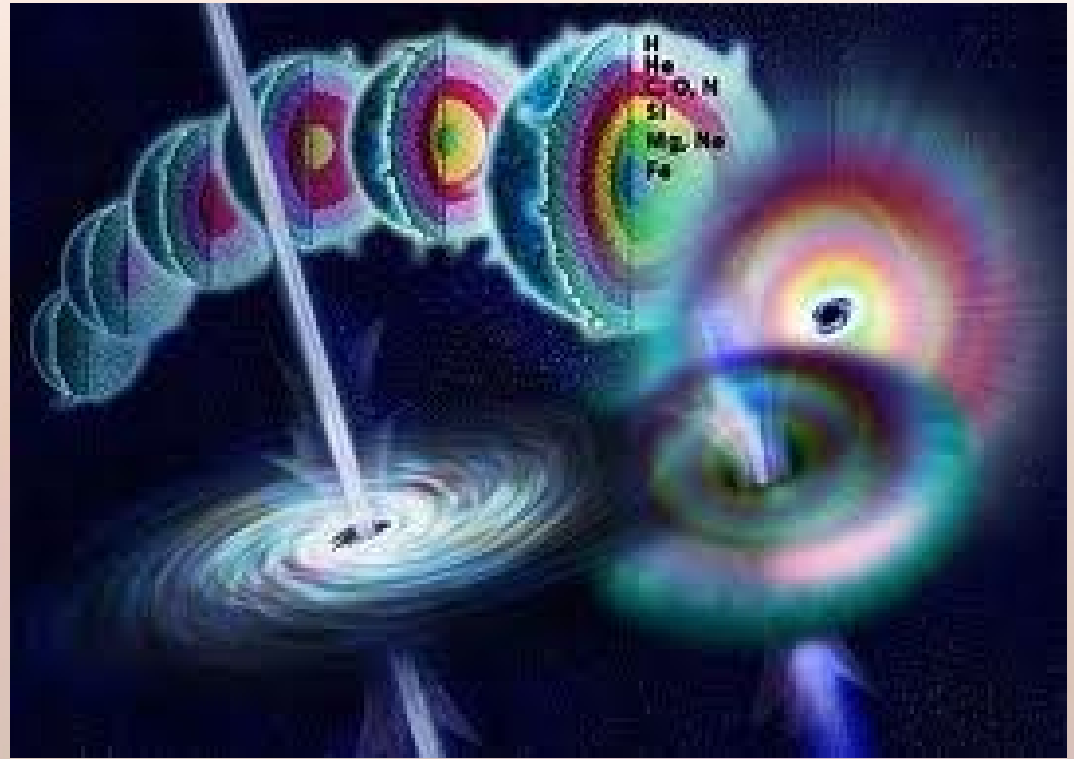
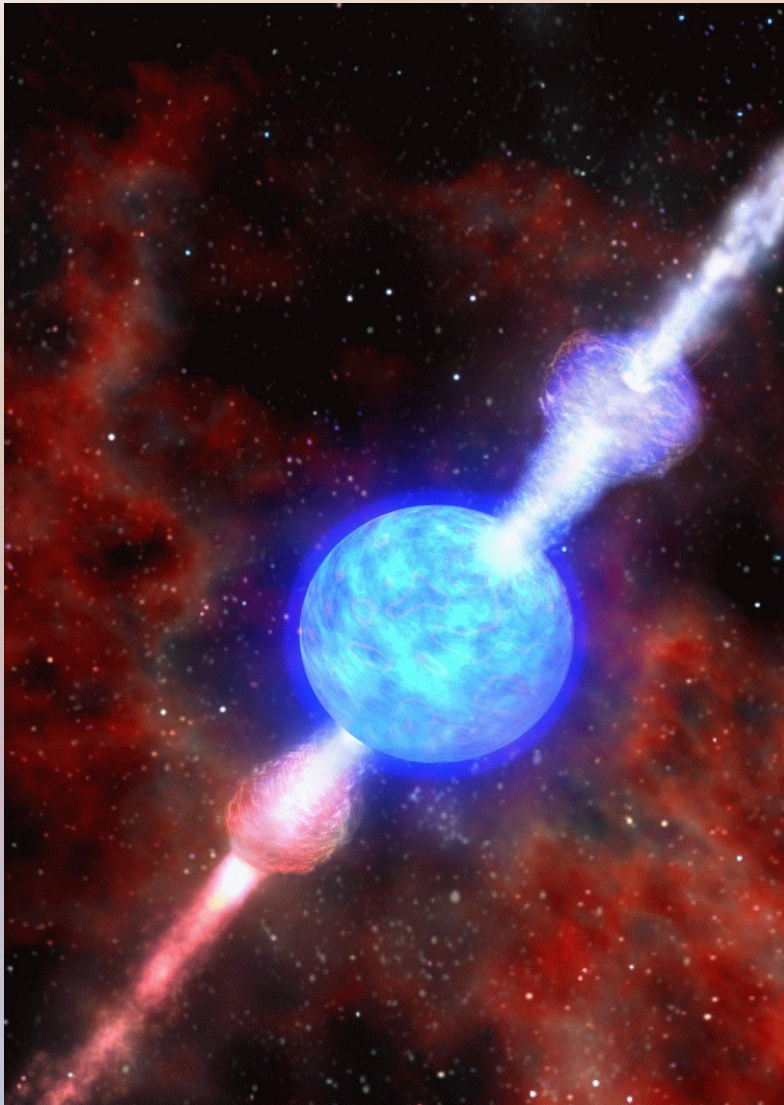
Luca Grassitelli

*Astronomical Observatory
Belgrade*

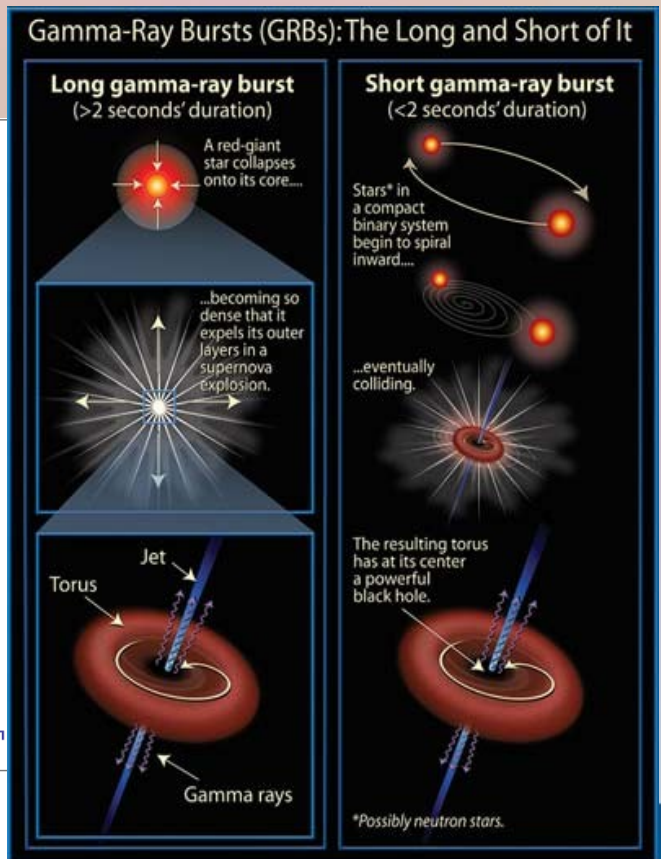
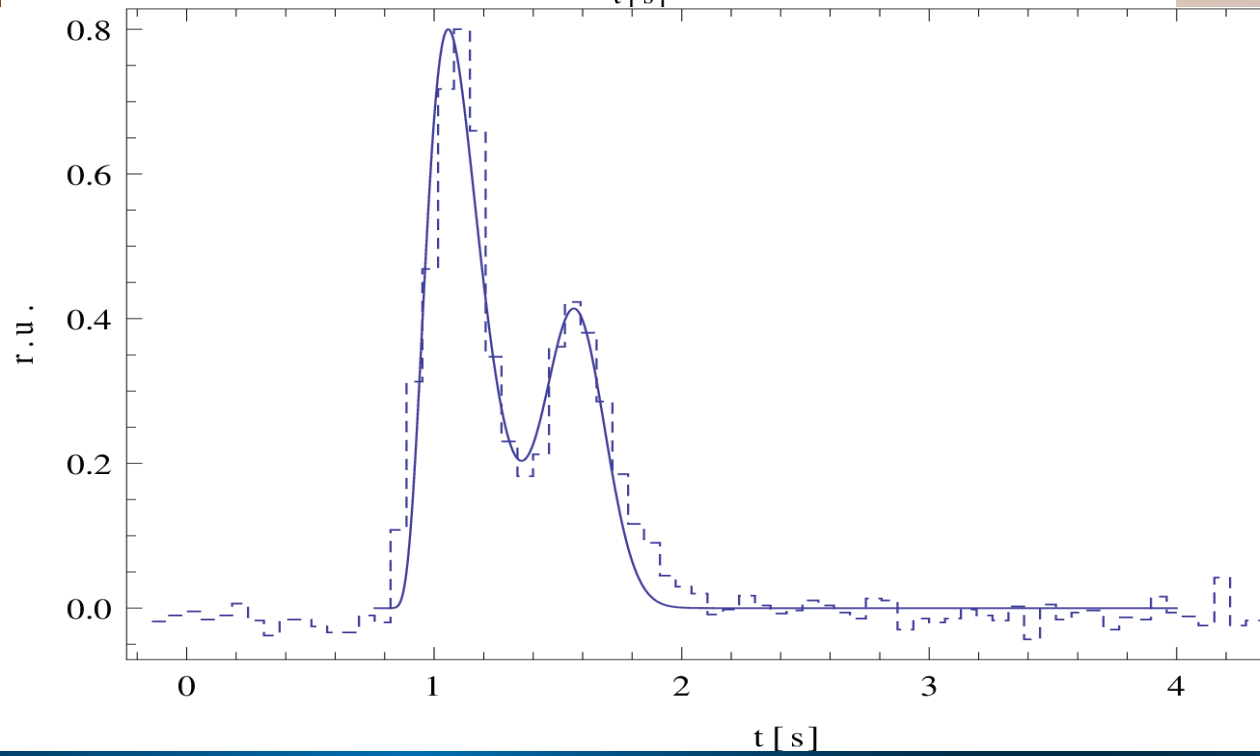
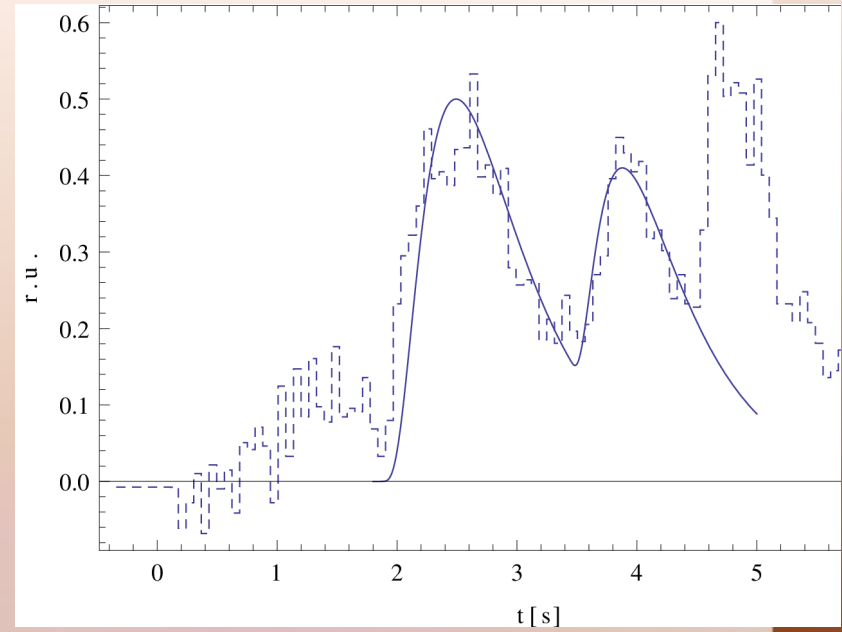
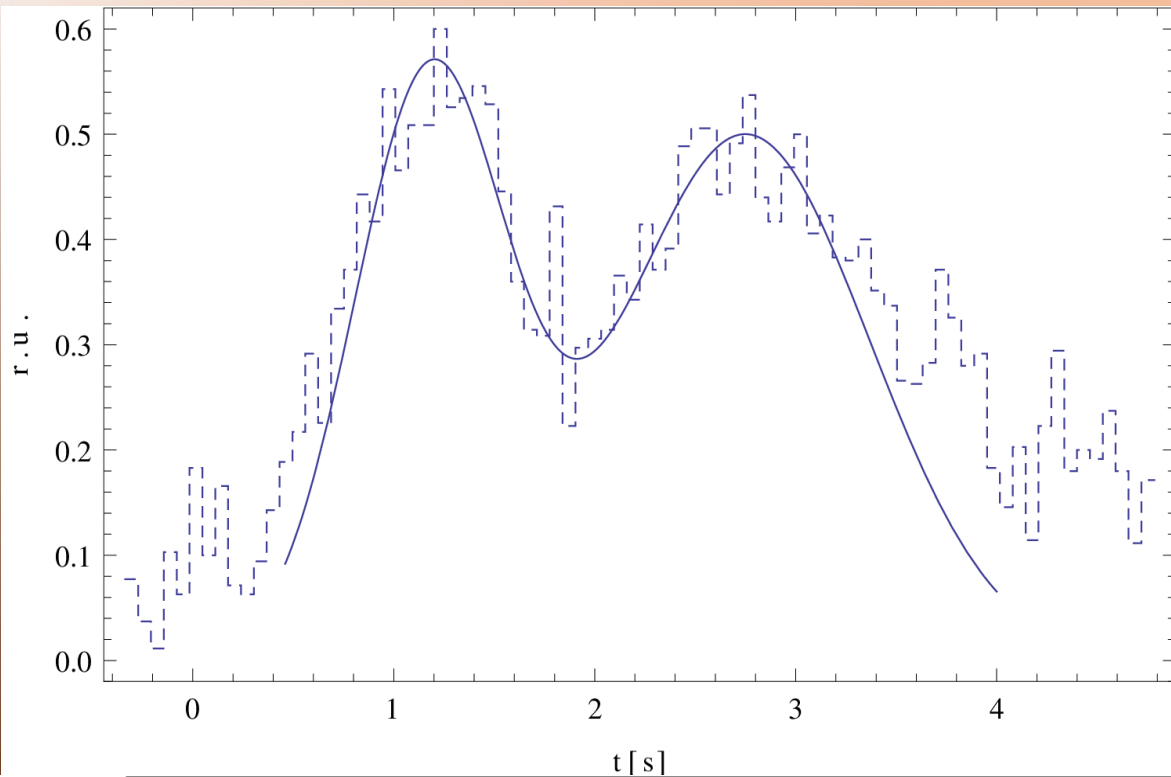
*Big Boss: Luka Popović
Small Boss: Saša Simić*

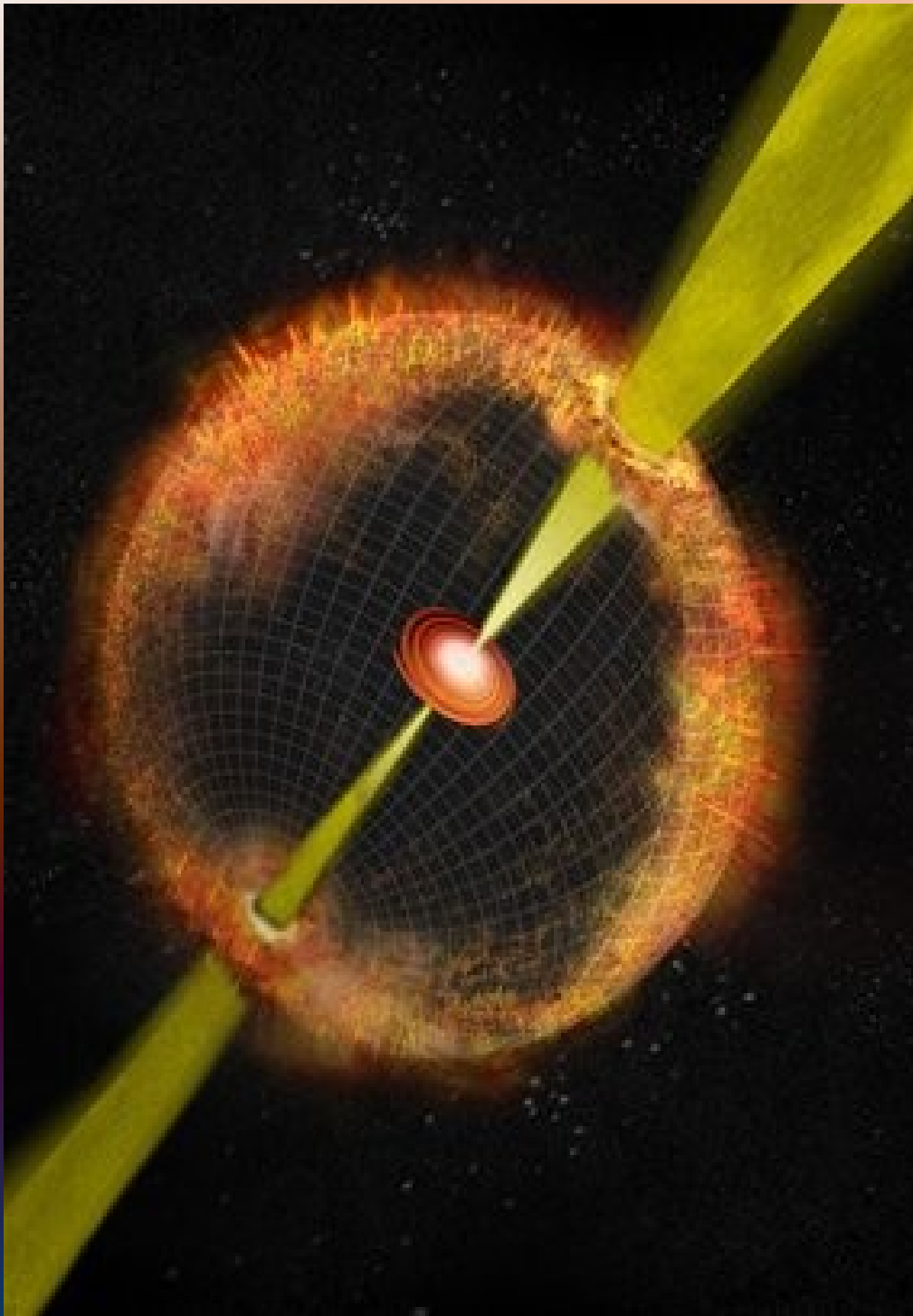


GRB:



Gamma-Ray Bursts (GRBs) are flashes of gamma rays associated with extremely energetic explosions.





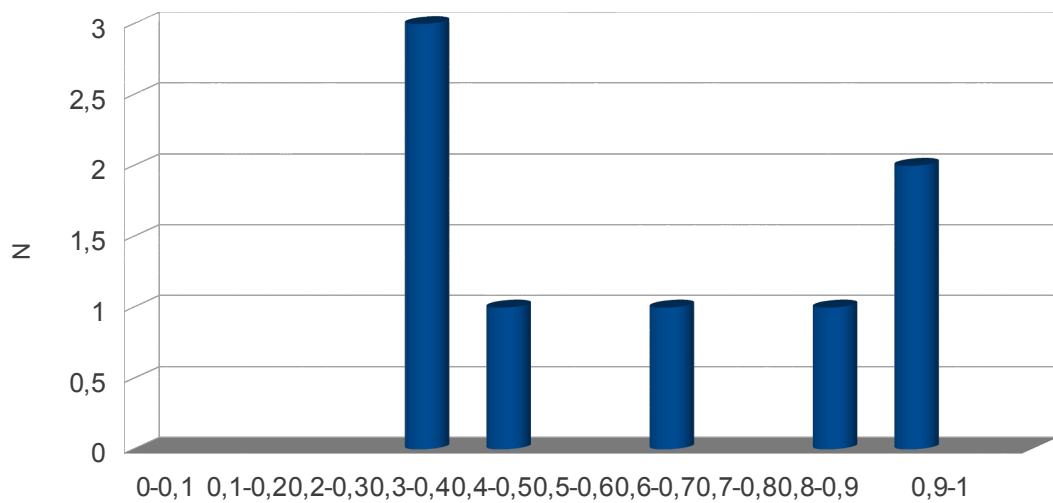
UltraRelativistic Collisionless SHOCKS

Internal Shock:

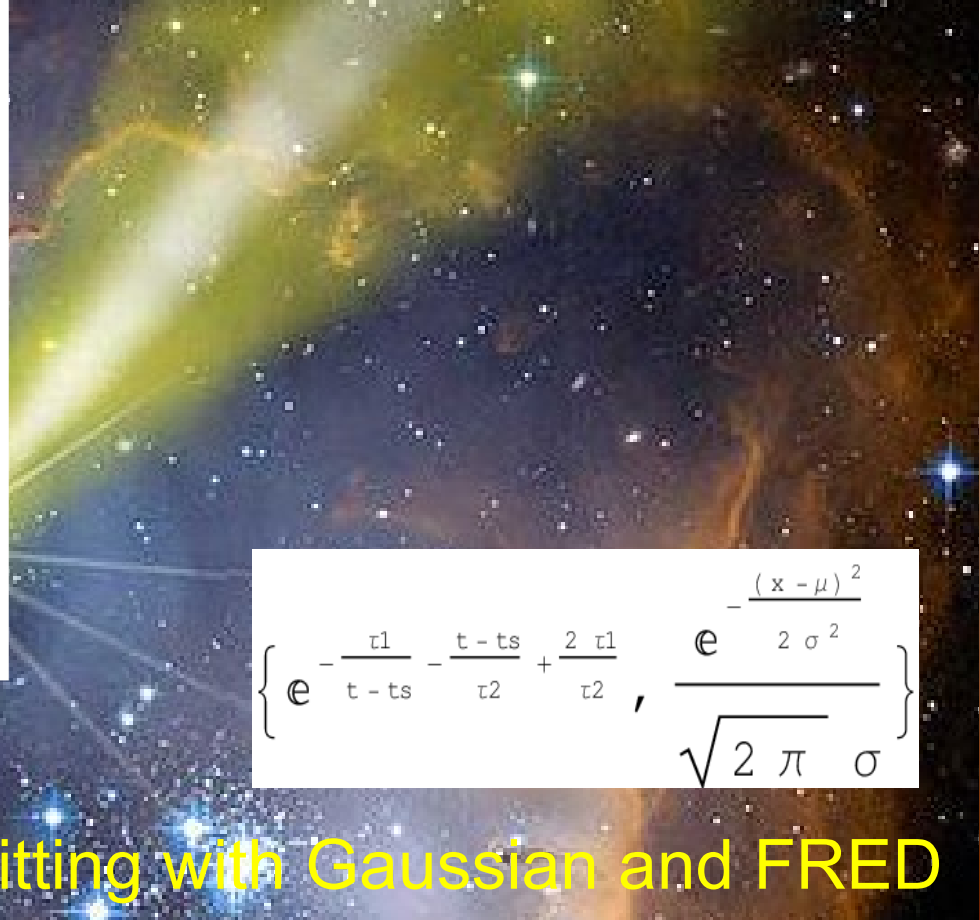
collisions of multiple shells,
converting Kinetic into
Thermal energy, and then in
Synchrotron radiation/IC
(magnetic fields)

External Shock:

ejected matter into a single
shell traveling outward into
the ISM or Stellar-Wind

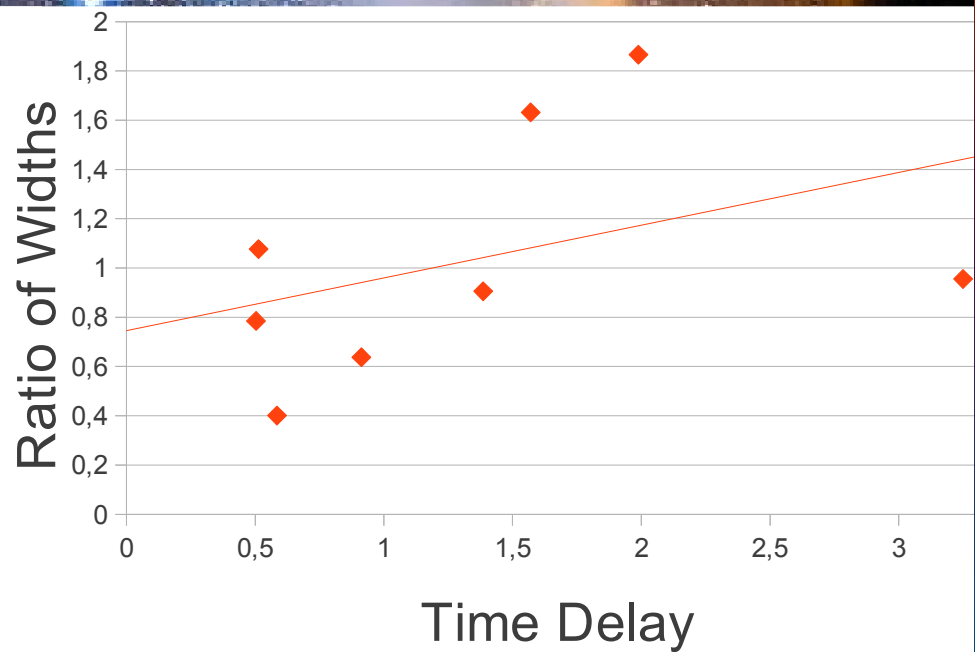
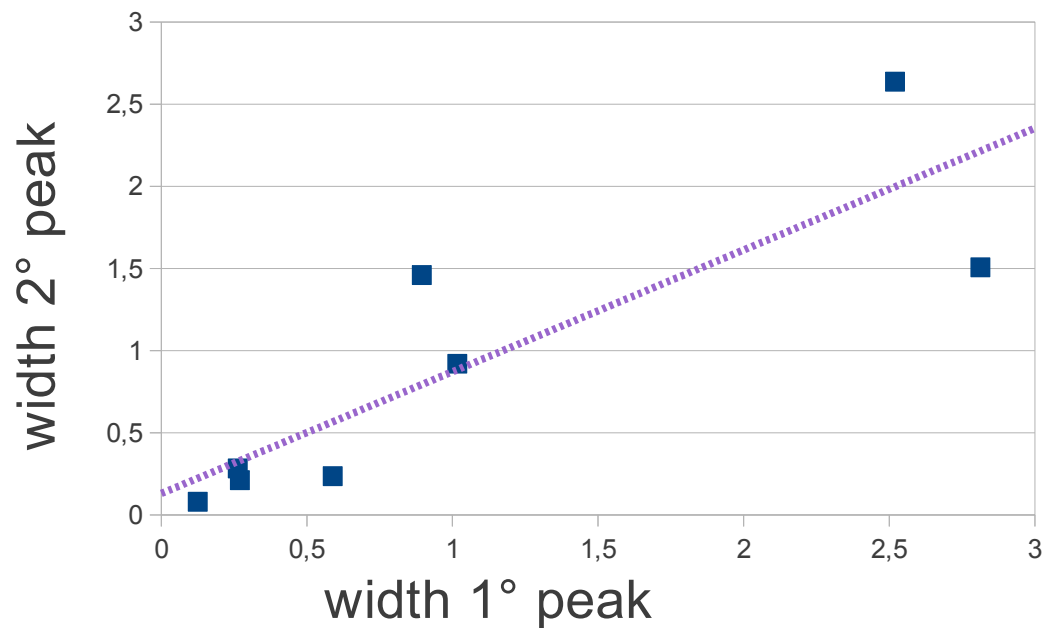


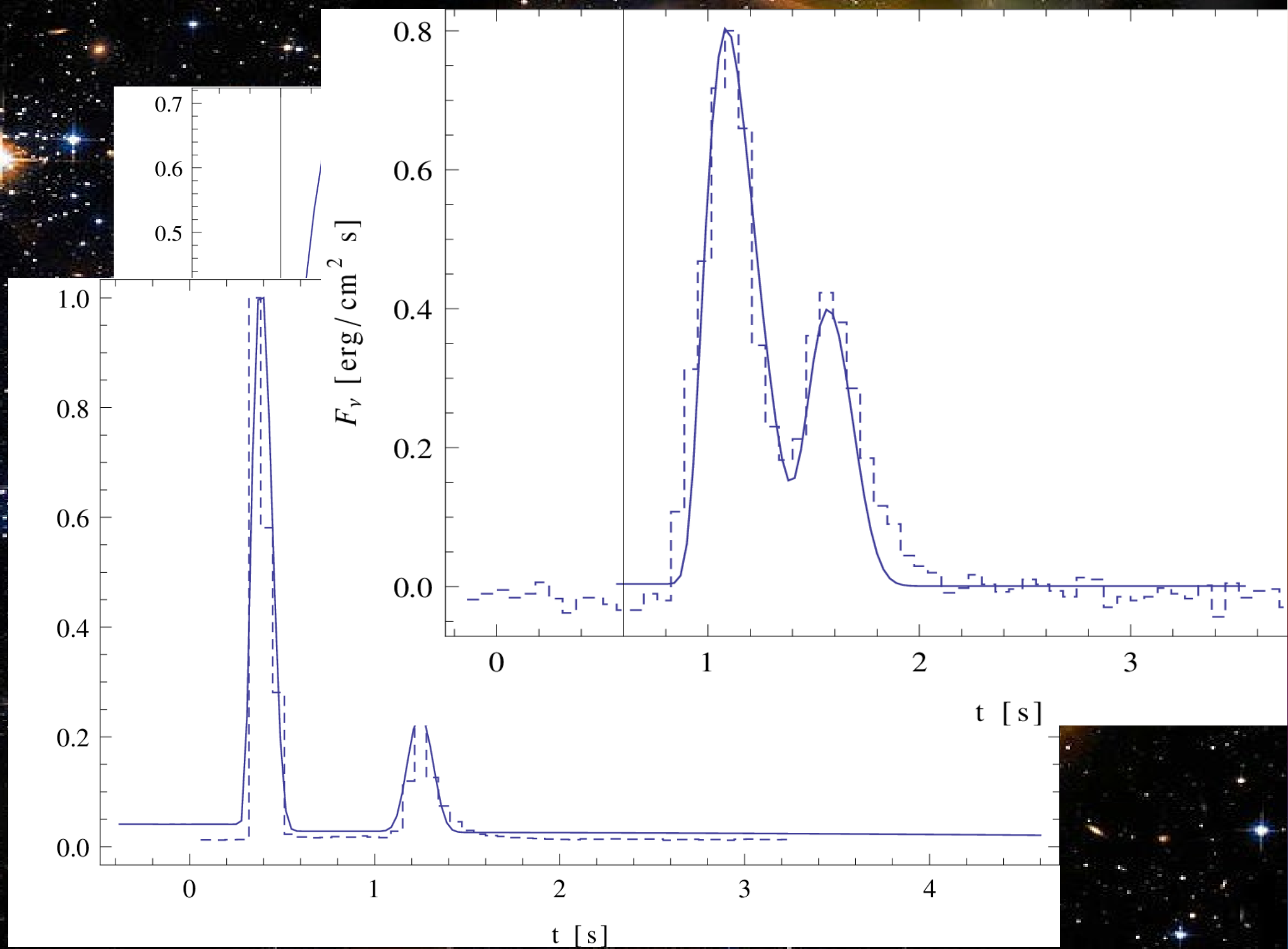
Ratio heights peaks



$$\left\{ e^{-\frac{\tau_1}{t-t_s} - \frac{t-t_s}{\tau_2} + \frac{2\tau_1}{\tau_2}}, \frac{e^{-\frac{(x-\mu)^2}{2\sigma^2}}}{\sqrt{2\pi}\sigma} \right\}$$

From Fitting with Gaussian and FRED





FINE

GRAZIE

ХВАЛА

DANKE

ΕΥΧΑΡΙΣΤΙΕΣ

شکریہ

СПАСИБО