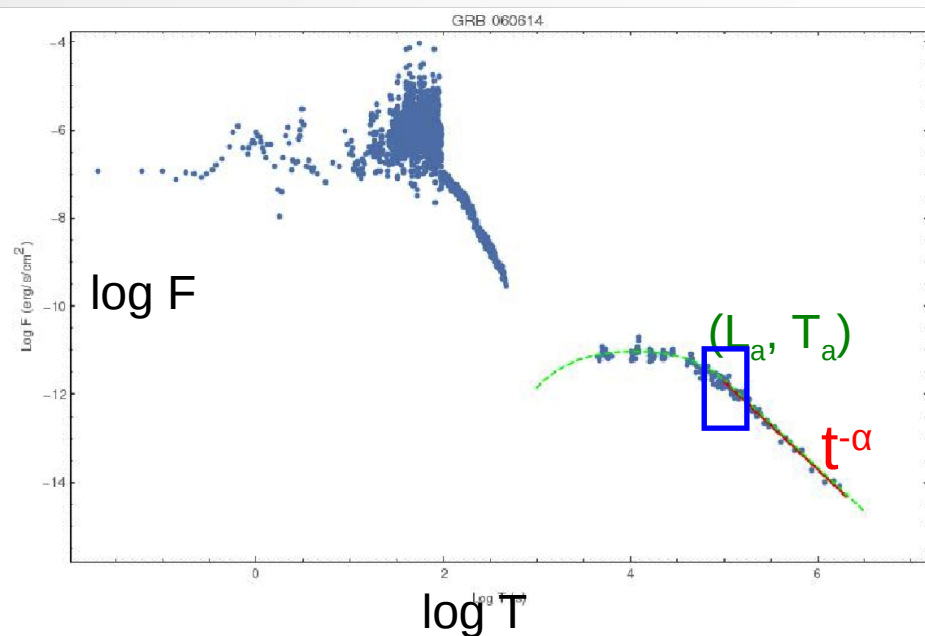


Study of GRB light curve decay indices in the afterglow phase

R. Del Vecchio, M.G. Dainotti, M. Ostrowski

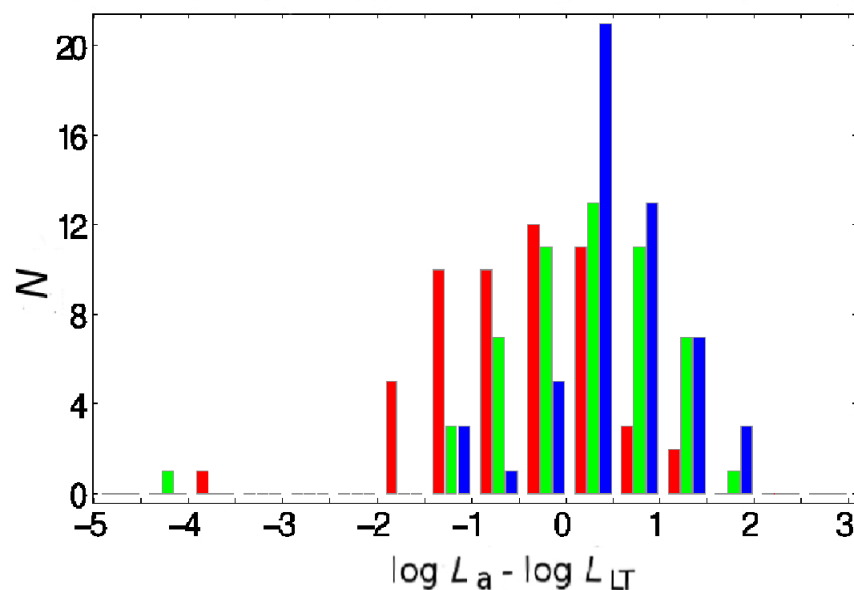
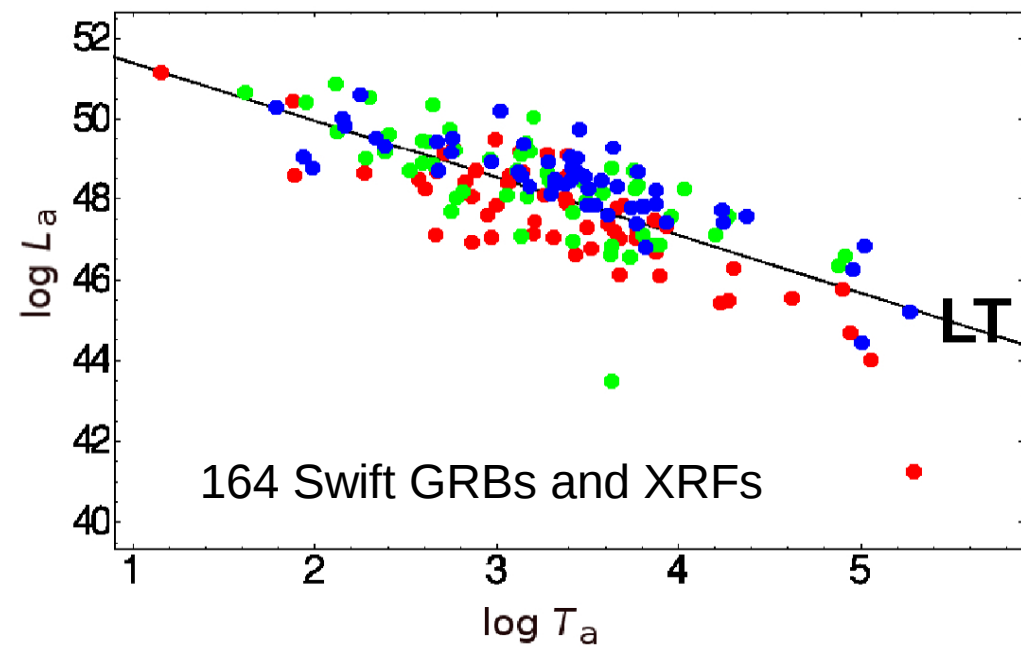


log L_a - log T_a (LT) correlation [Dainotti et al. 2008, ...]

The afterglow **power-law decay index** ranges:
 $0.53 < \alpha < 1.23$ (red), $1.23 < \alpha < 1.54$ (green) and
 $1.54 < \alpha < 3.41$ (blue).

A correlation between log L_a/L_{LT} and α at any T_a:

$$\log L_a - \log L_{LT} = 0.49 \alpha - 0.70$$



> GRB progenitor physical models

> possibility of GRB standardization vs. α