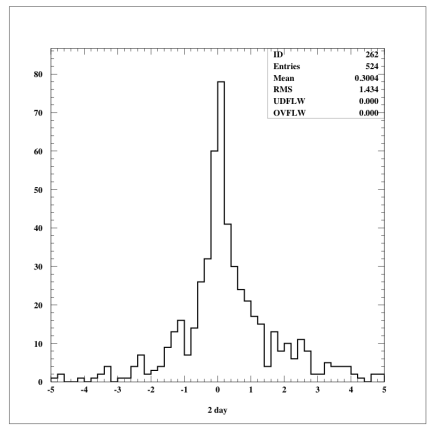
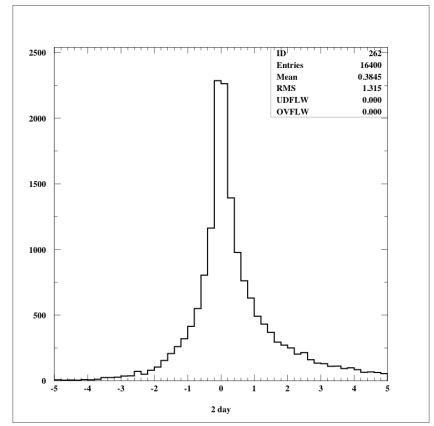
Time Correlations

http://sdssdp62.fnal.gov/sdsssn_data/Technotes/Marriner/SN_point_correlations.pdf

$$r(t)r(t+\Delta t)$$

$$\chi(\Delta t) = \frac{\sum_{i=1}^{N} r_i(t) r_i(t+\Delta t)}{\sqrt{\sum_{i=1}^{N} r_i(t)^2 \sum_{i=1}^{N} r_i(t+\Delta t)^2}}$$

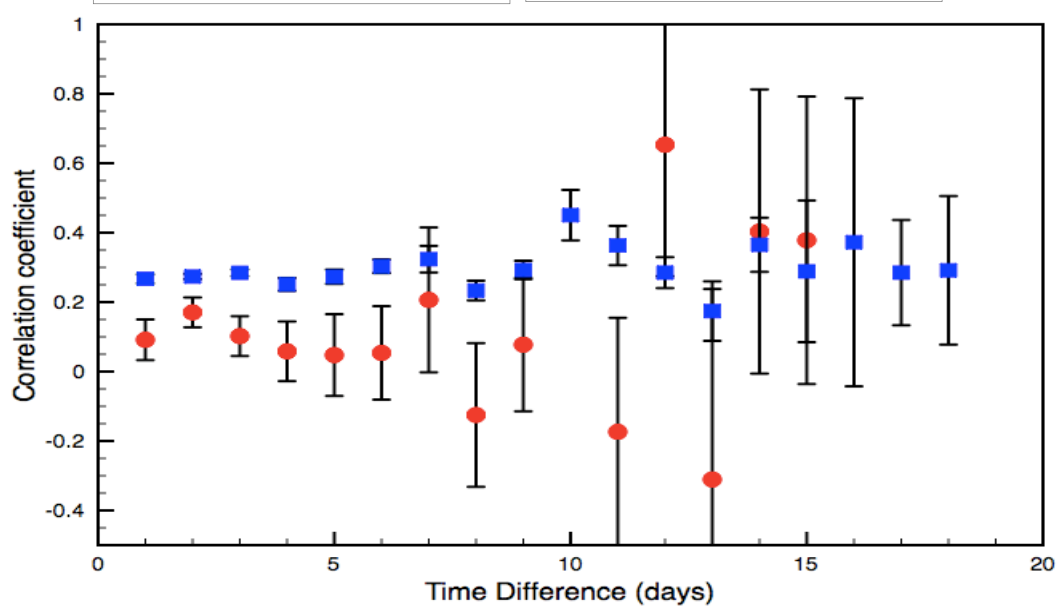




$$-8 < t_r < 10$$

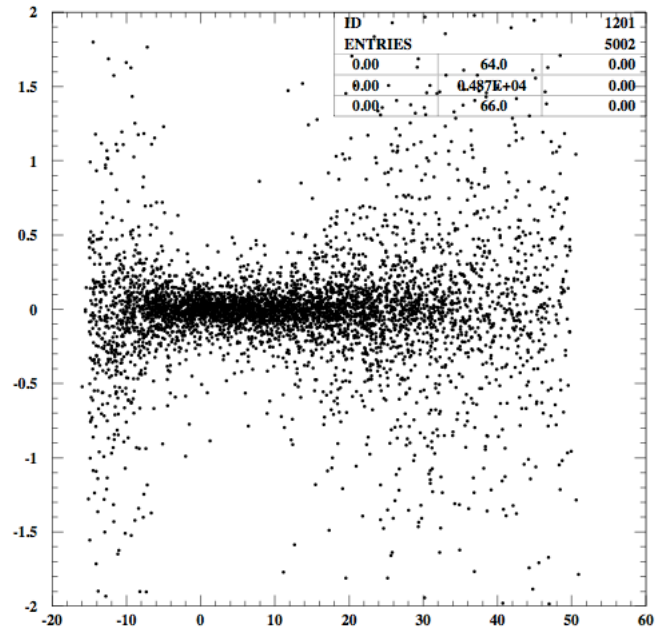
$$\sigma_t, \sigma_{t+\Delta t} < 0.05$$

$$\left| \frac{\Delta m_t \Delta m_{t+\Delta t}}{\sigma_t \sigma_{t+\Delta t}} \right| < 5$$

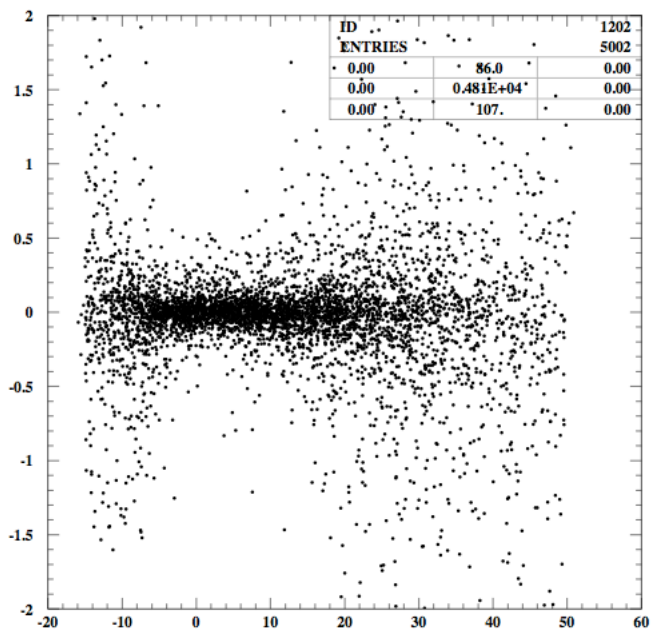


Residual classification

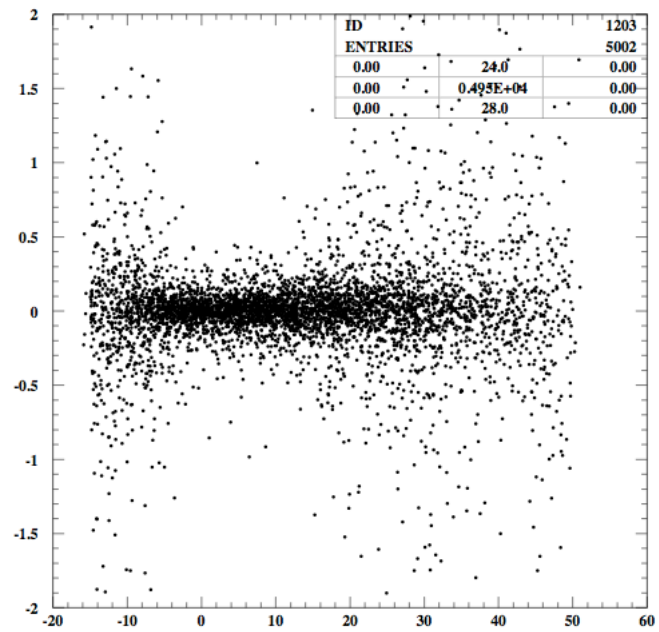
dm	0.577	0.577	0.577
dc	-0.772	0.154	0.617
dt	0.267	-0.802	0.535



Magnitude residual vs trest



Color residual vs trest



Other residual vs trest