SUGAR : Leget's PhD

SUGAR results: fit SUGAR parameters

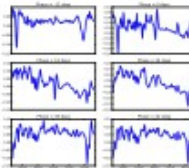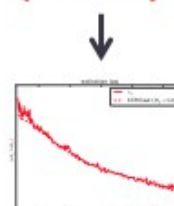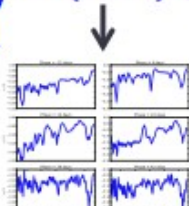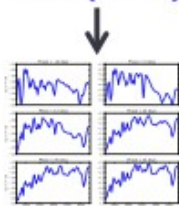$$M(t; \lambda) = M_0(t; \lambda) + \sum_{i=1}^{i=3} \alpha_i(t; \lambda) q_i + A_V f(R_V; \lambda) + \Delta M_{grey}$$

$$q_1, q_2, q_3$$

$$A_V$$

$$\Delta M_{grey}$$
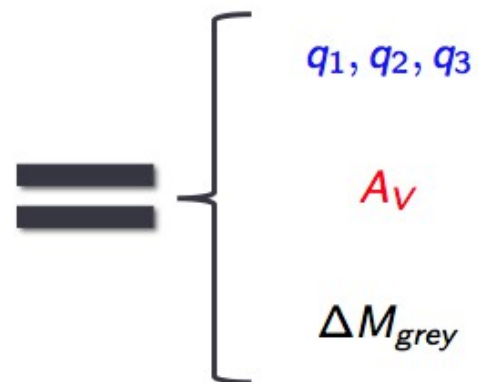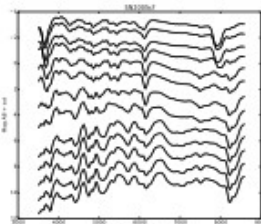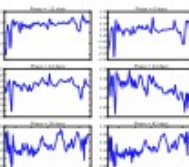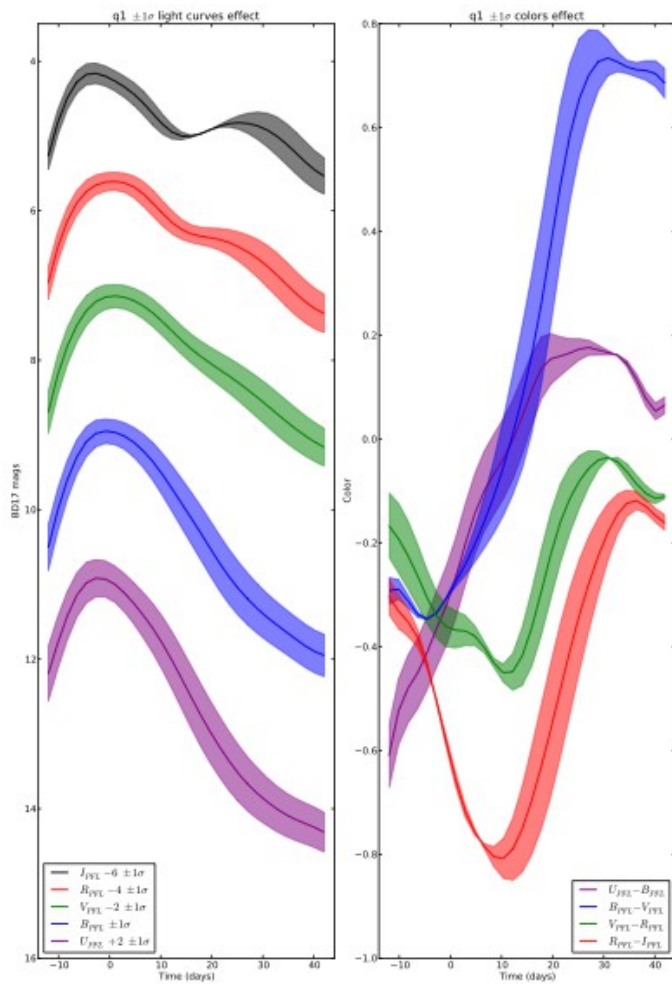
Correction scheme :
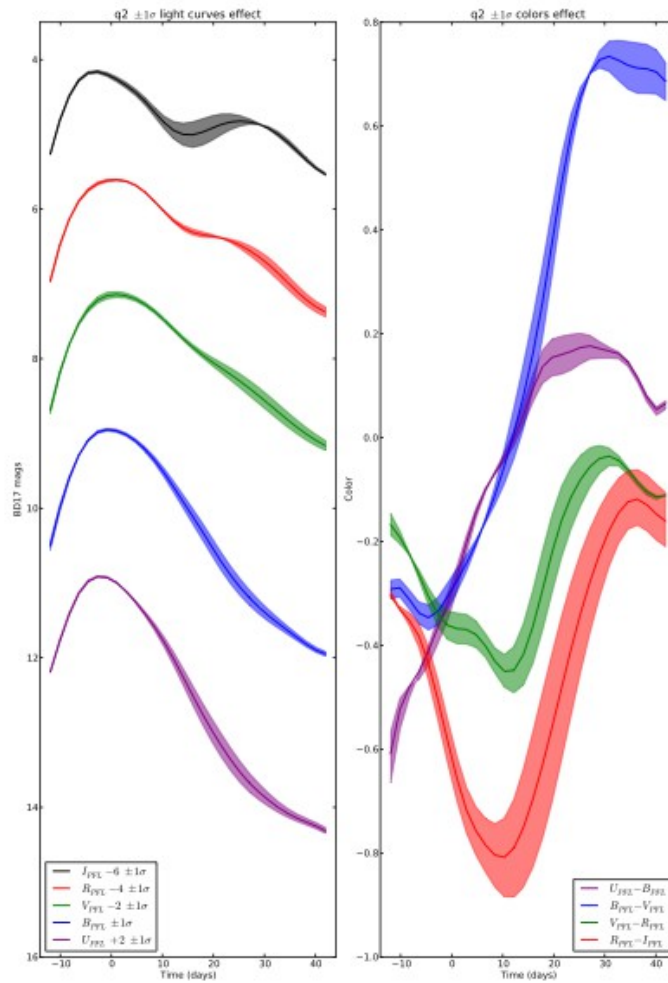- stretch
- color
+ velocities
+ detached Ca

Improves SED fitting
And standardization

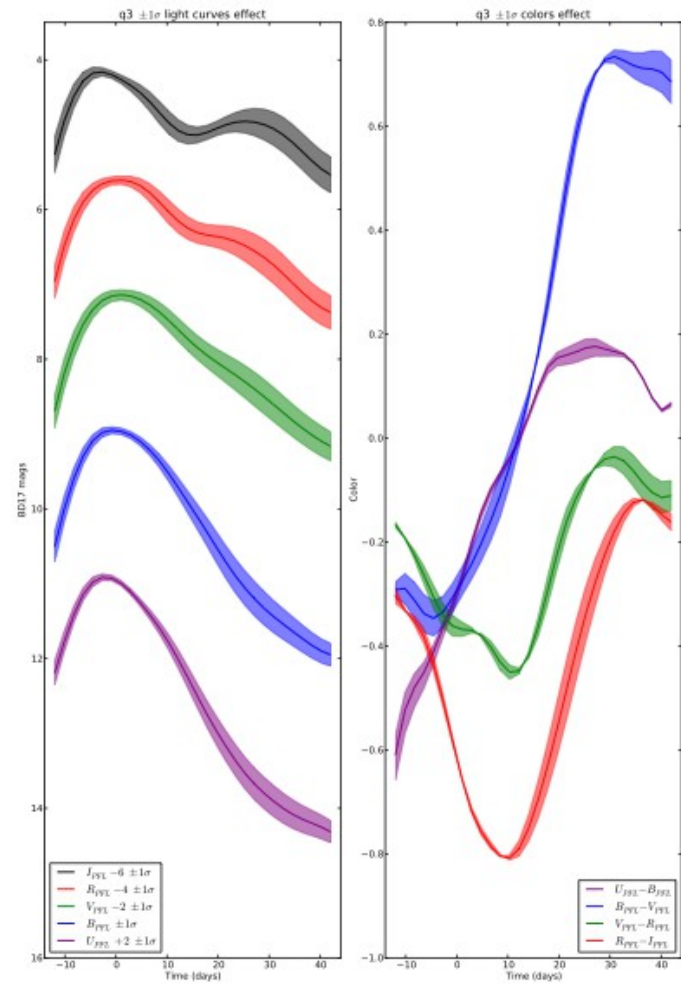Mas step still there

Vec 1   Vec 2   Vec 3

What's next

- Paper being written

  - *S* : Still some technical work

    - Error snake of the new model
    - Link with SALT2 parametrization (Florian M2 internship)

- *U* : Interest for LSST

  - *G* : More realistic SN simulation (via SNCosmo)

  - *AR* : New LC fitter (test on JLA sample cf. Masha Pdoc)

- Improved model

  - *2* : Co-training with photo data (Oct 2017-starting PhD)