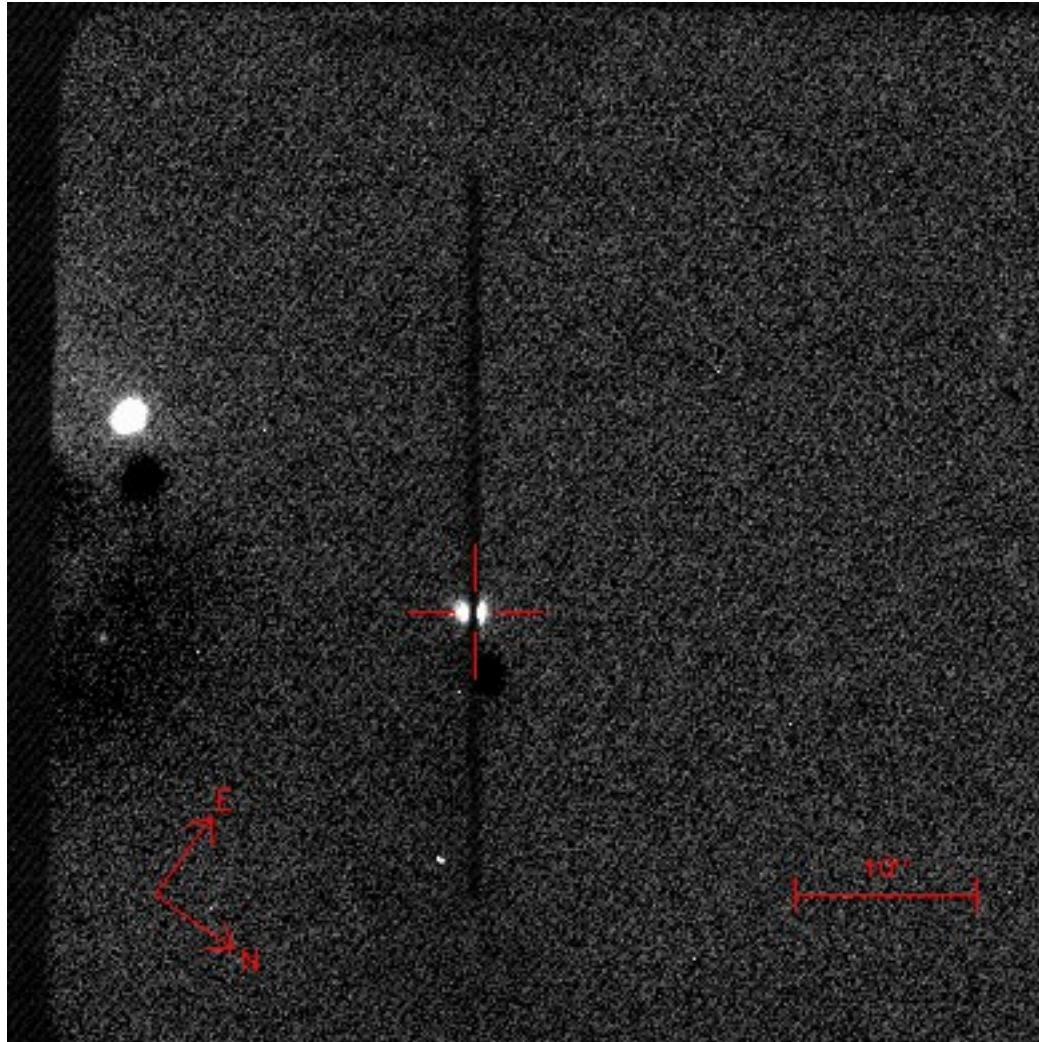


SN2013gy / CSP13aax



But first a *slight* detour:

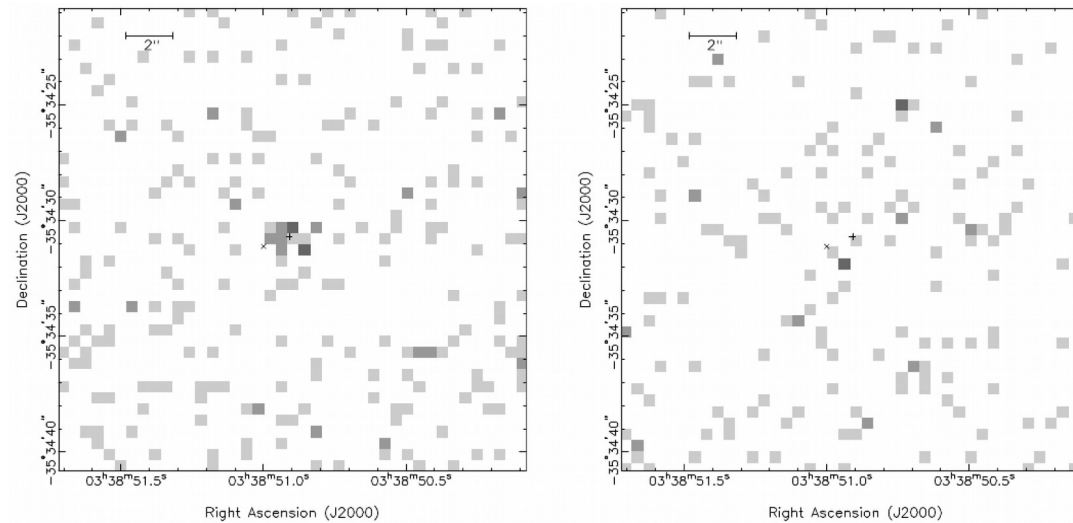
X-ray characteristics of type Ia SN
progenitors

Why X-rays?

Thermonuclear burning of H to He, C, O --> Supersoft X-ray sources:

- $T_{\text{BB}} \sim 30\text{-}150 \text{ eV}$
- $L_{\text{bol}} \sim 10^{38} \text{ erg/s}$

SN2007on



Voss & Nelemans (2008), Roelofs et al. (2008)

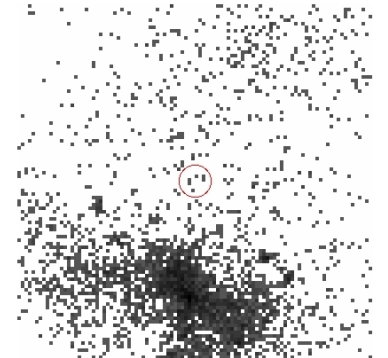
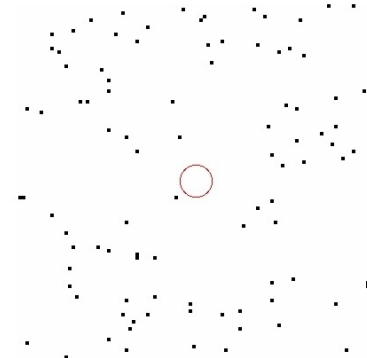
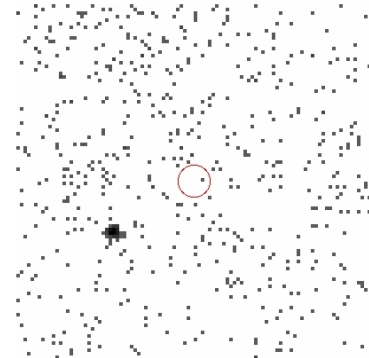
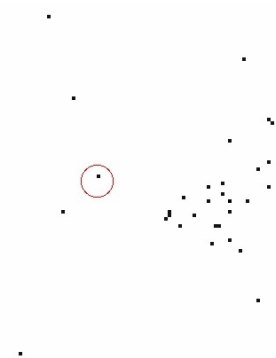
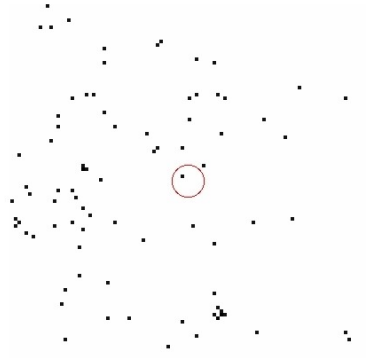
SN2002cv

SN2003cg

SN2004W

SN2006X

SN2006dd



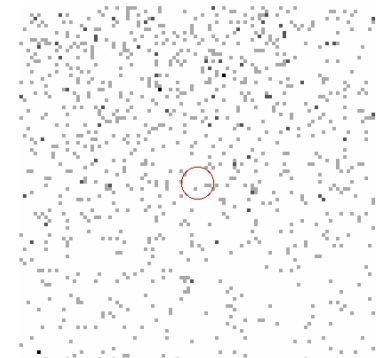
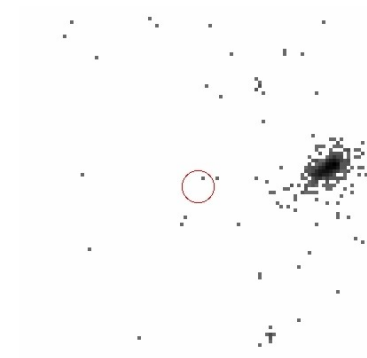
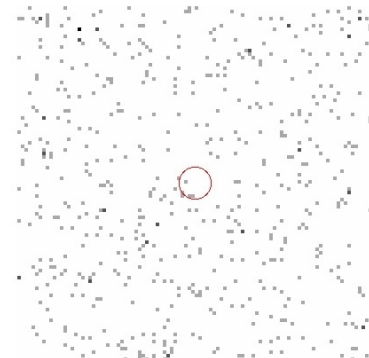
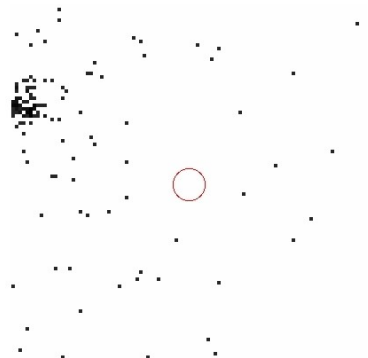
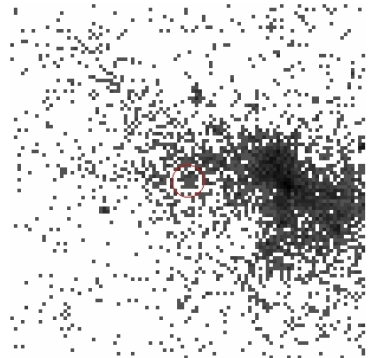
SN2006mr

SN2007gi

SN2007sr

SN2008fp

SN2011fe

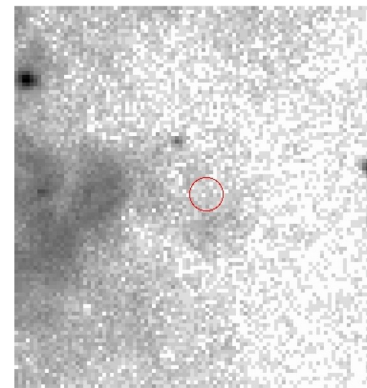
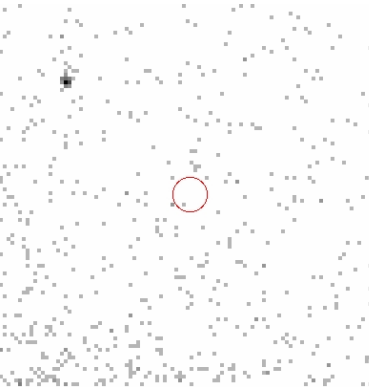
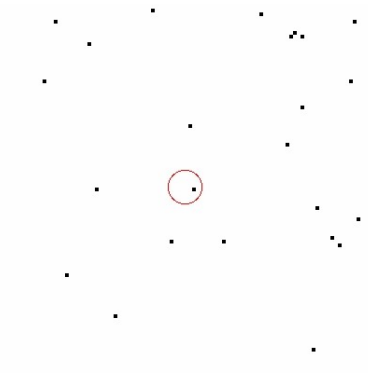
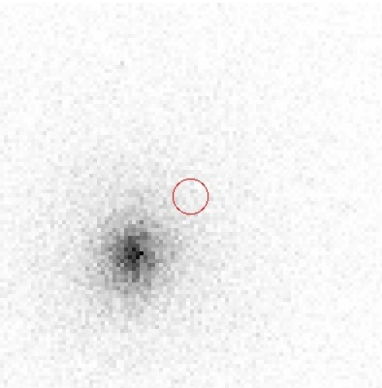


SN2011iv

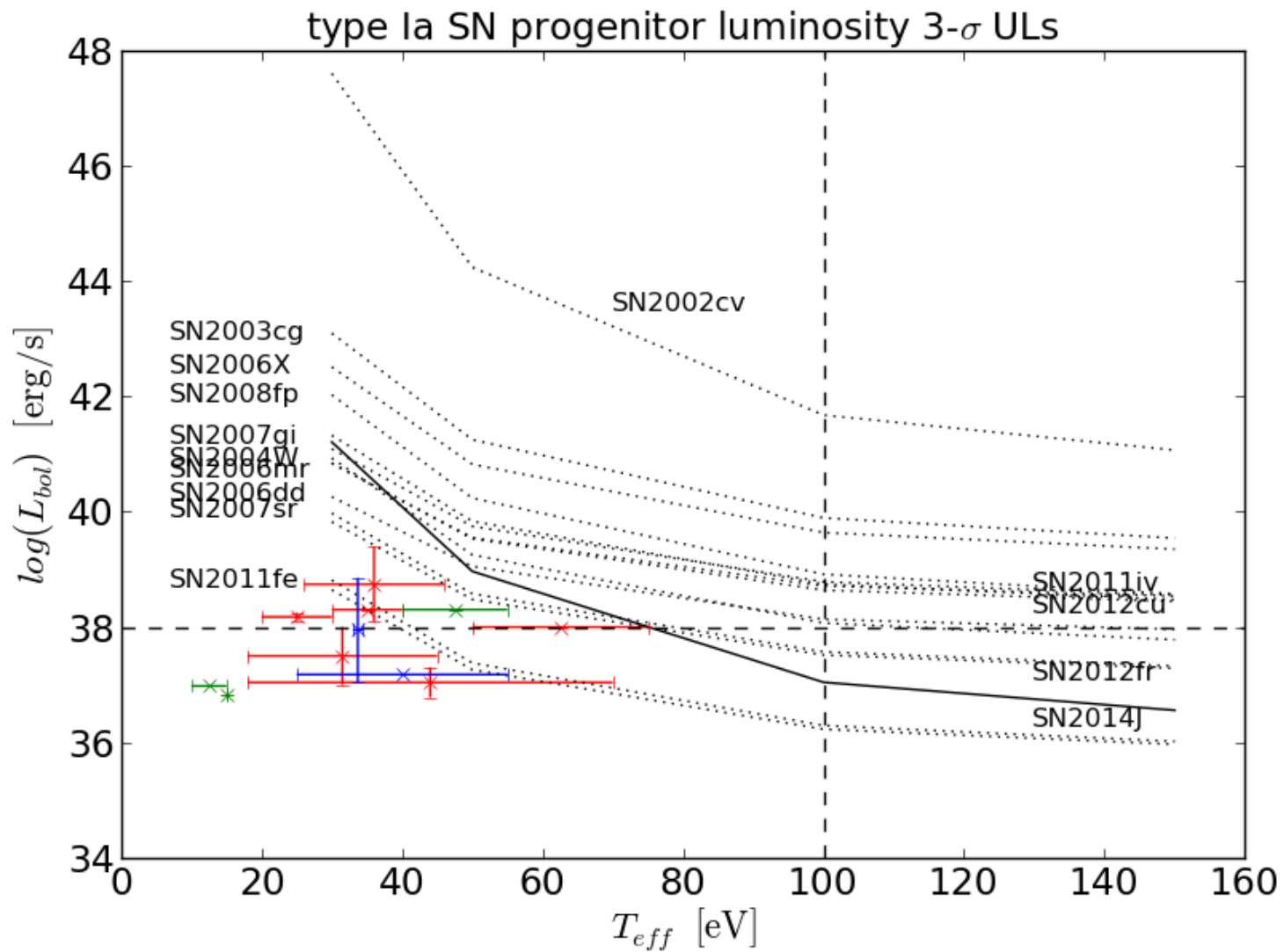
SN2012cu

SN2012fr

SN2014J



Nielsen et al.
(2012, 2013,
2014)



Nielsen et al. (2012, 2013, 2014)

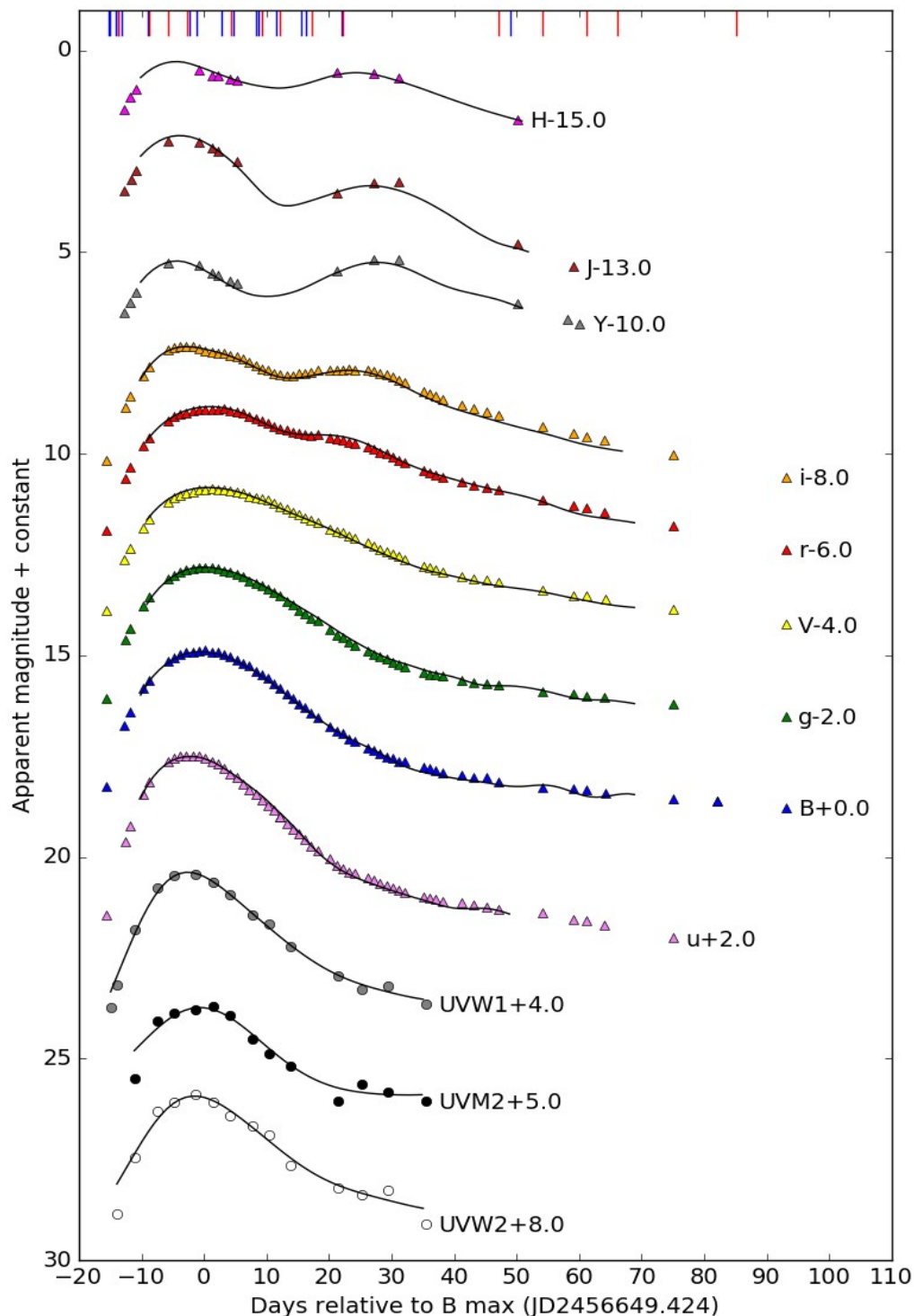
All right, back to SN2013gy...

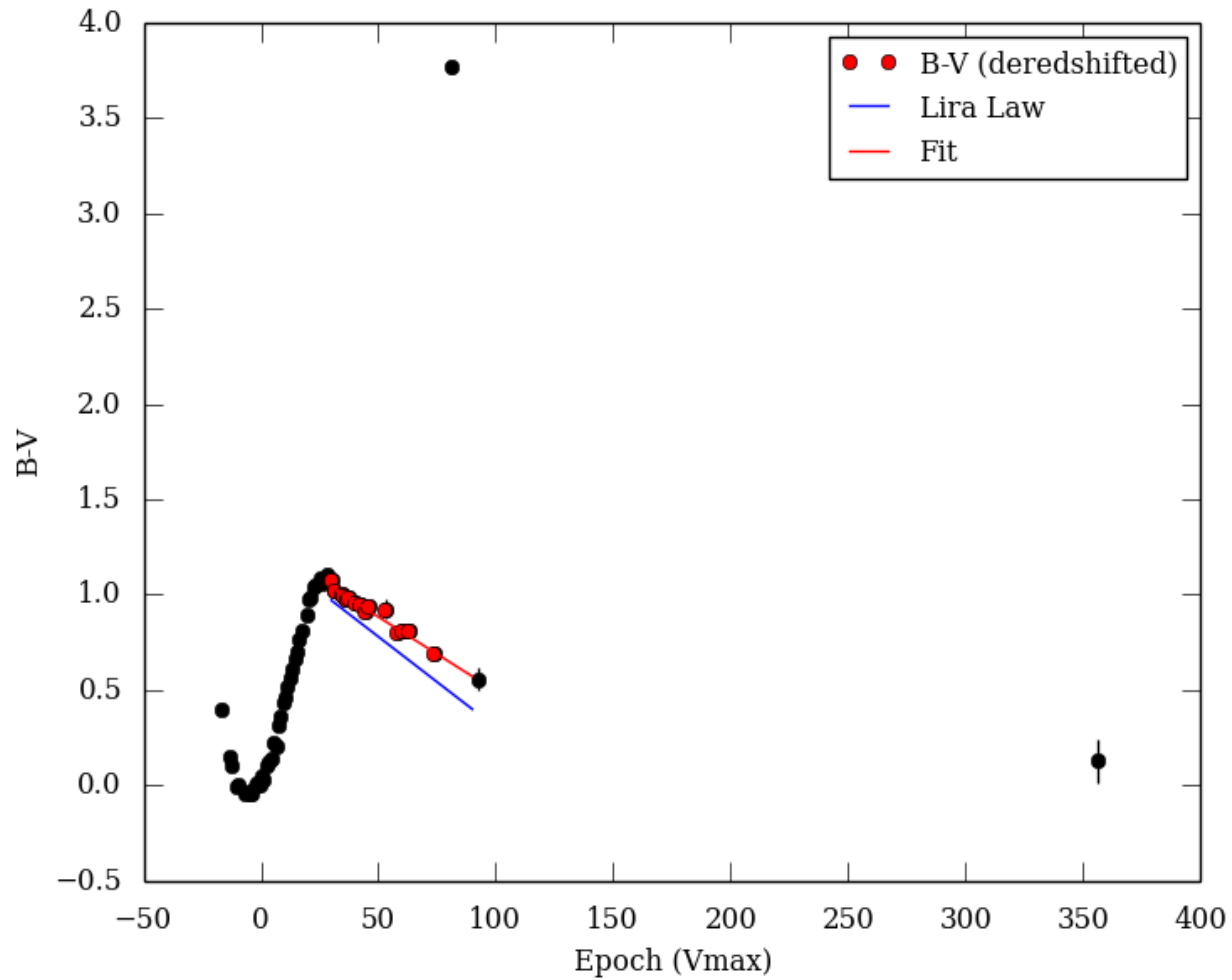
- SN2013gy
- PSN J03421688-0443185
- CSP13aax
- 03:42:16.88 -04:43:18.48
- 55.570333 -4.721800
- Type: Ia
- Host: NGC 1418
- z: 0.014

- SWOPE & SWIFT lcs,

EBV_model2 fits summary:

- $EBV = 0.059 \pm 0.004$
- $T_{max} = 2456649.349 \pm 0.043$
- $DM = 33.564 \pm 0.010$
- $Dm15 = 1.250 \pm 0.008$

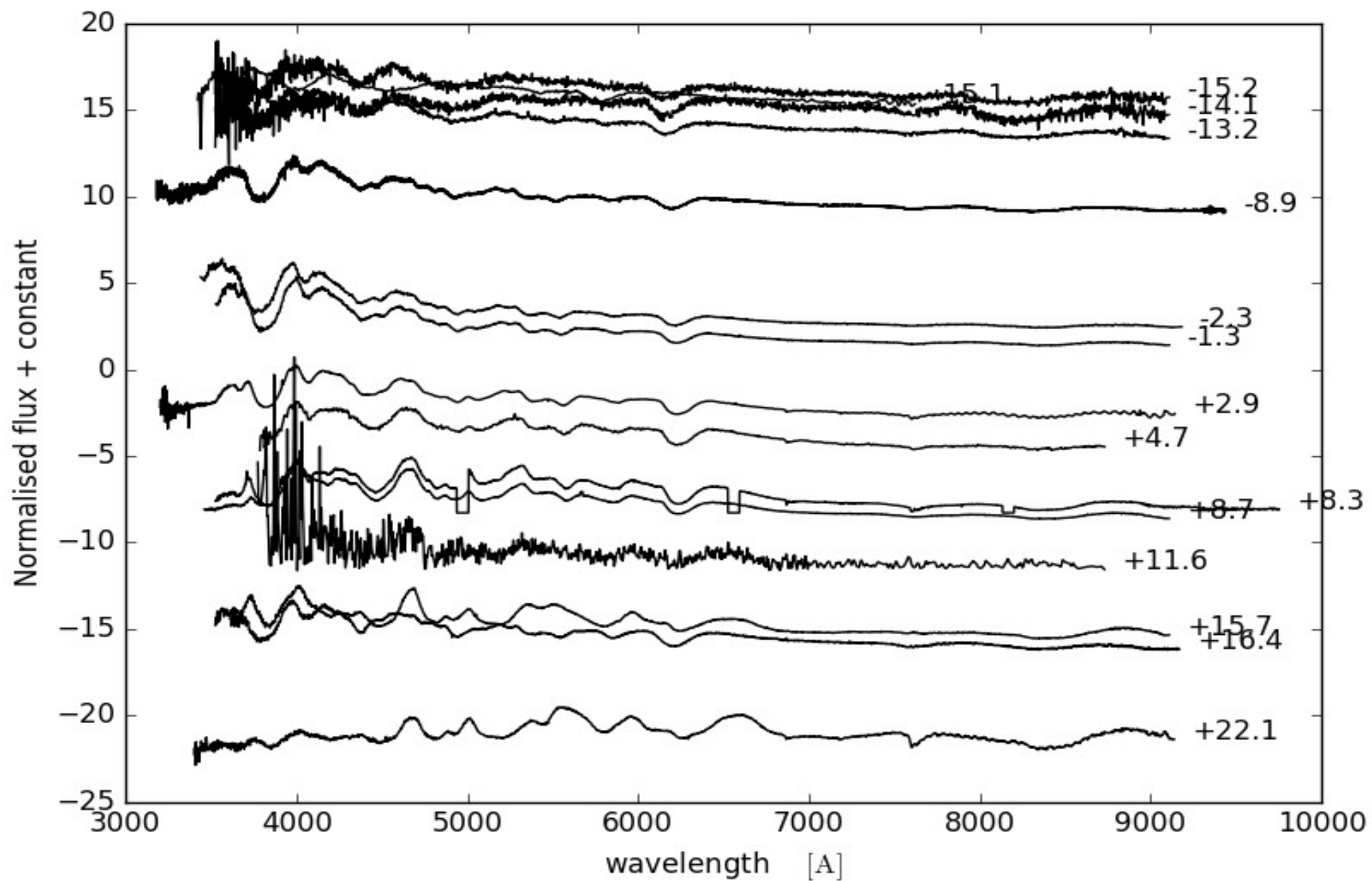




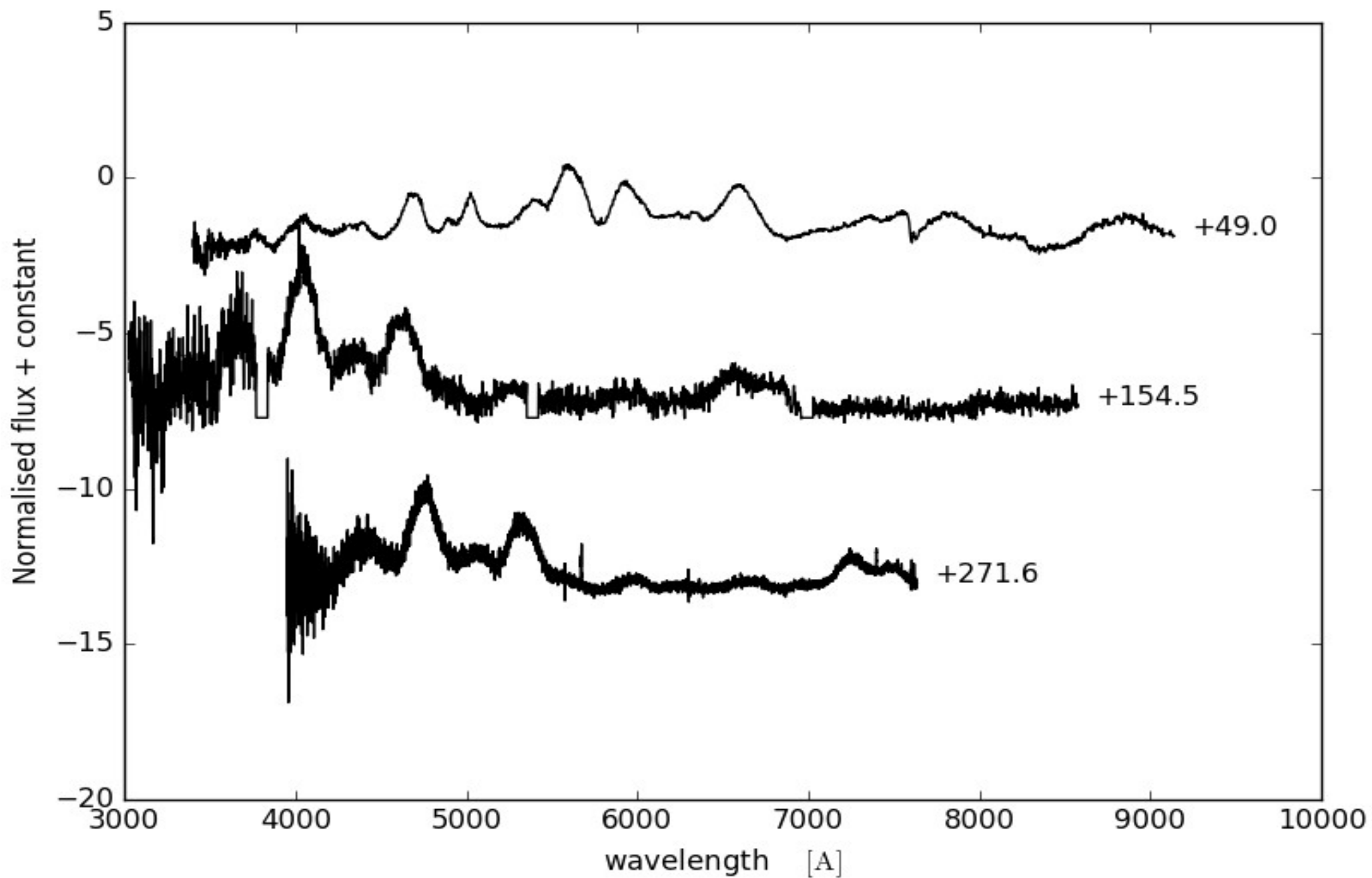
Lira law fit:

- $EBV = 0.089093 \pm 0.004760$

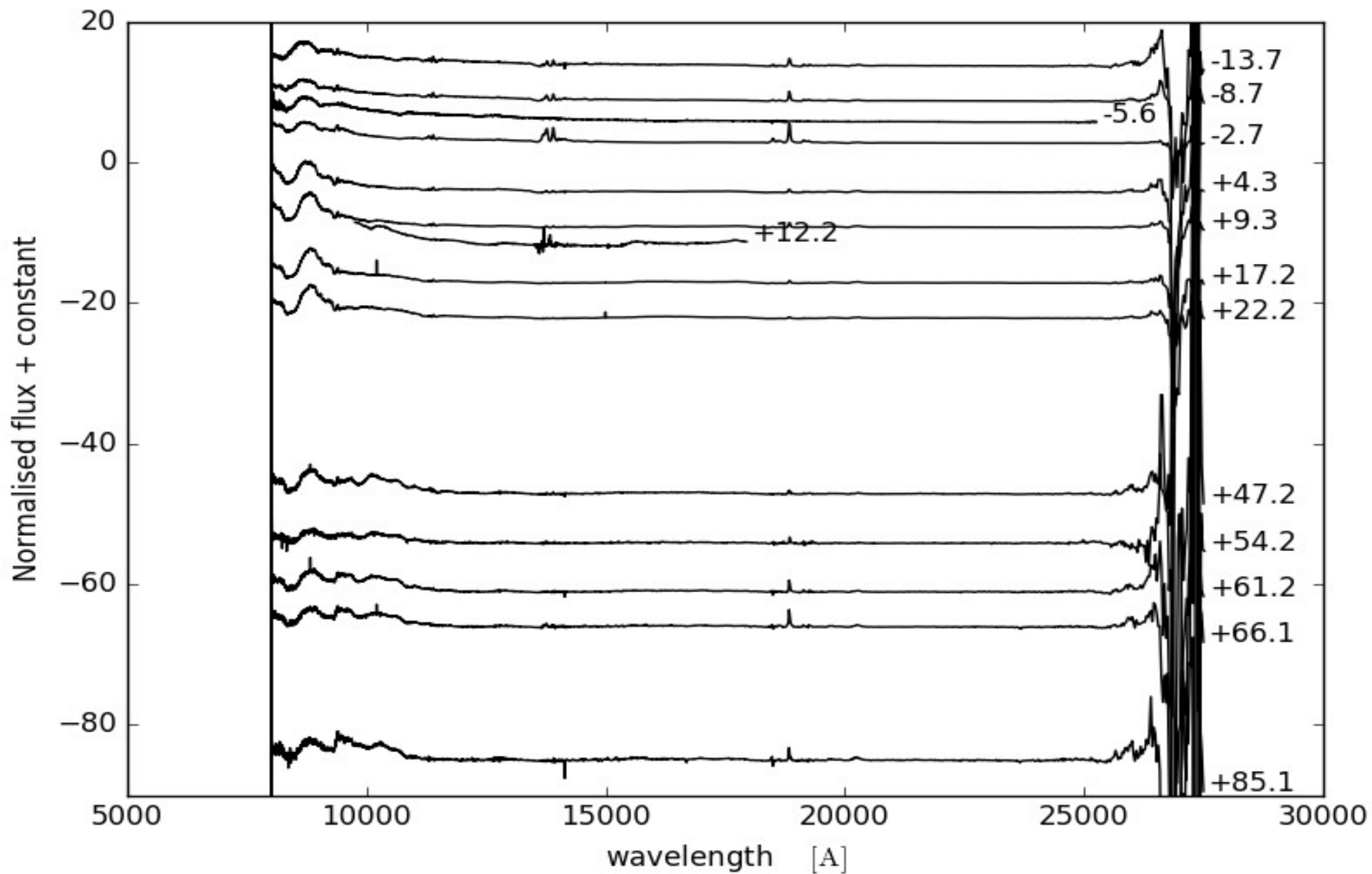
Optical spectra (pre-day +45), Asiago, Baade, Dupont, NOT, ...



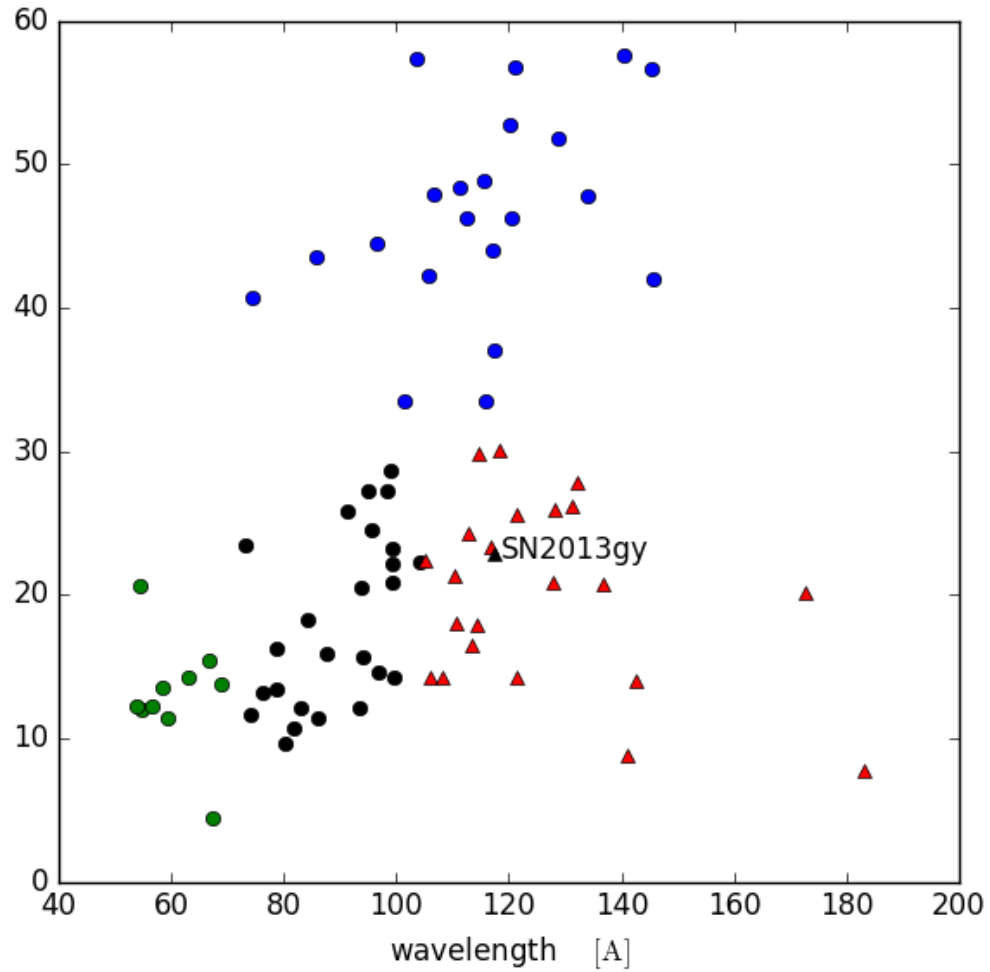
Optical spectra (post-day +45), Baade, NOT and WISEREP



NIR spectra (all epochs), CSP & Gemini



Branch type



Folatelli et al.: cool=blue, core normal=black,
shallow silicon=green, broad line=red