

Observational Evidence and Models for Expansion in SSS Spectra of Novae

European Space Astronomy Centre



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HARDY

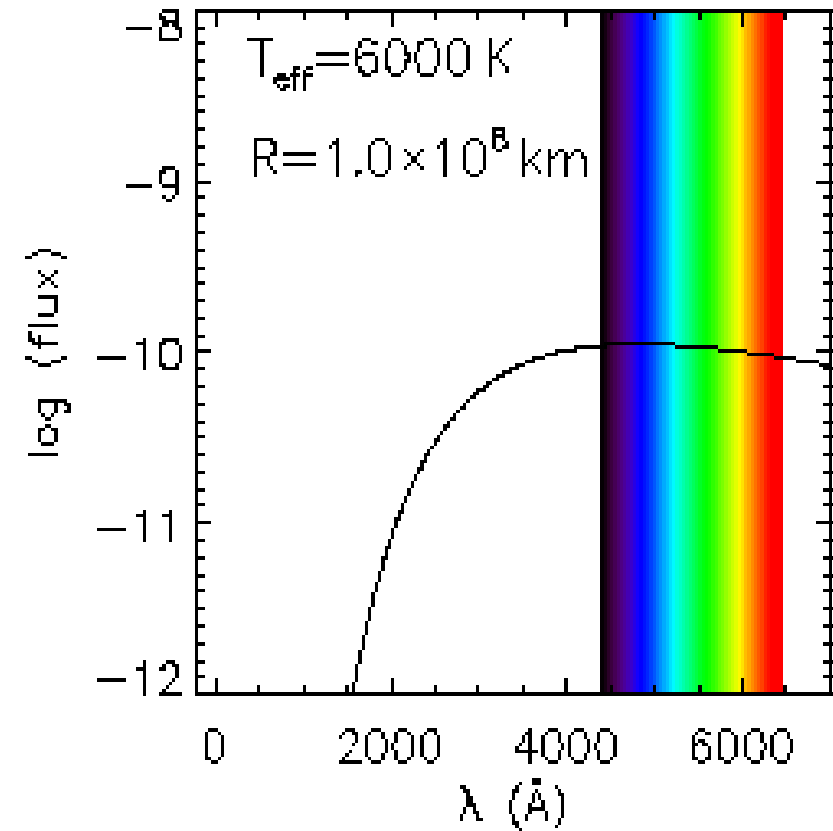
Constant Bolometric Luminosity phase

$$L_{\text{bol}} = 10^{38} \text{ erg/s}$$

*IR and radio
from outer,
thin plasma
and companion,
but not from the WD*

WD

optical

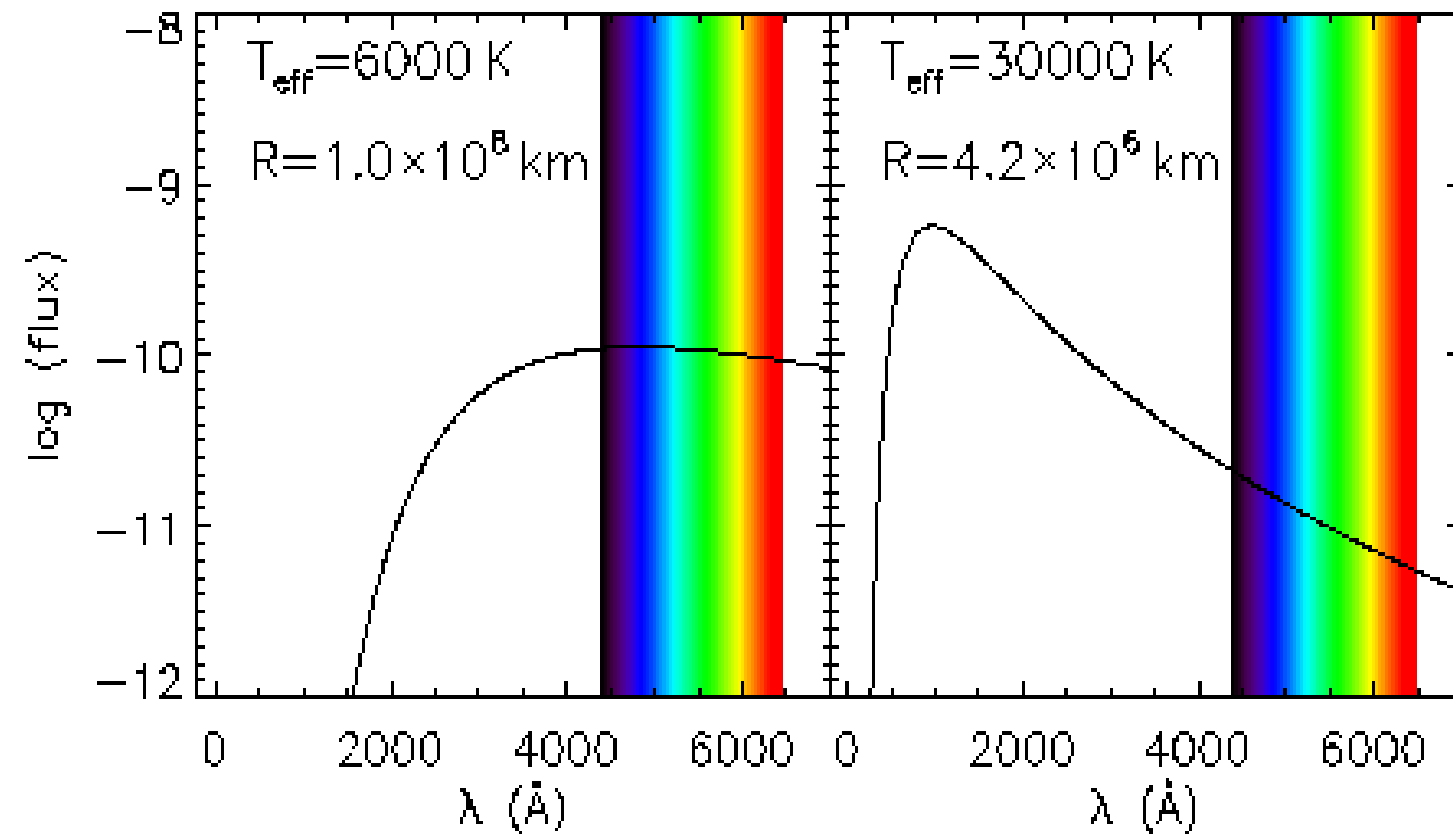
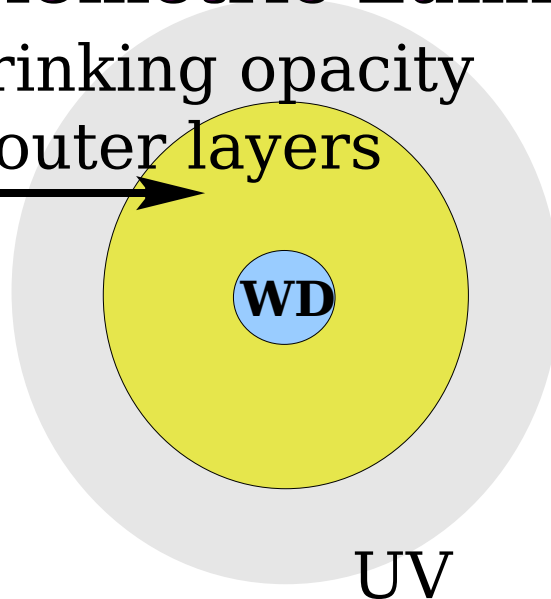
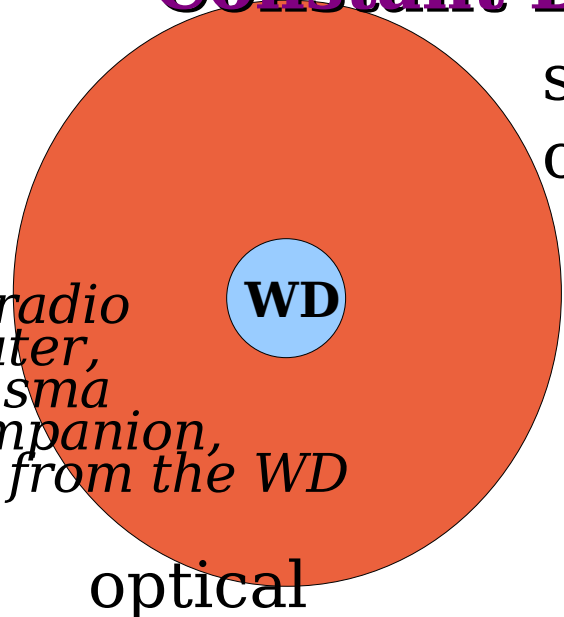


Constant Bolometric Luminosity phase

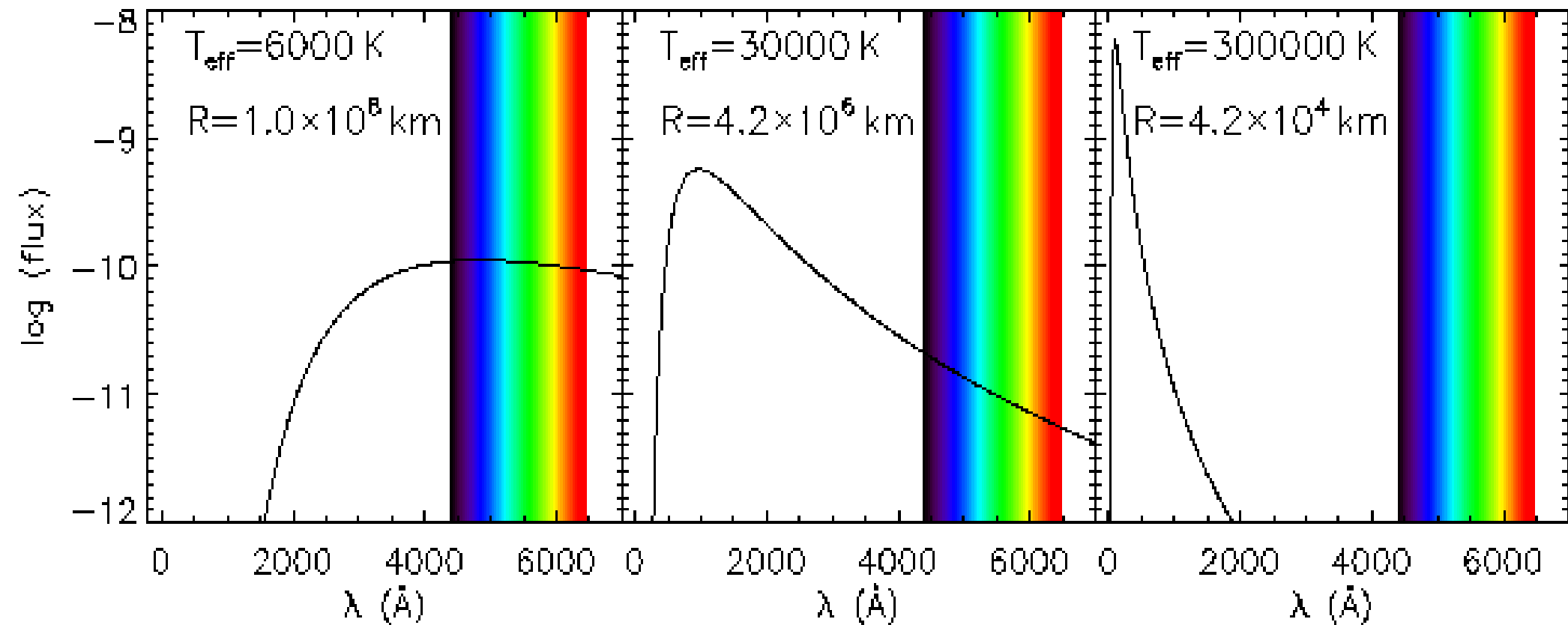
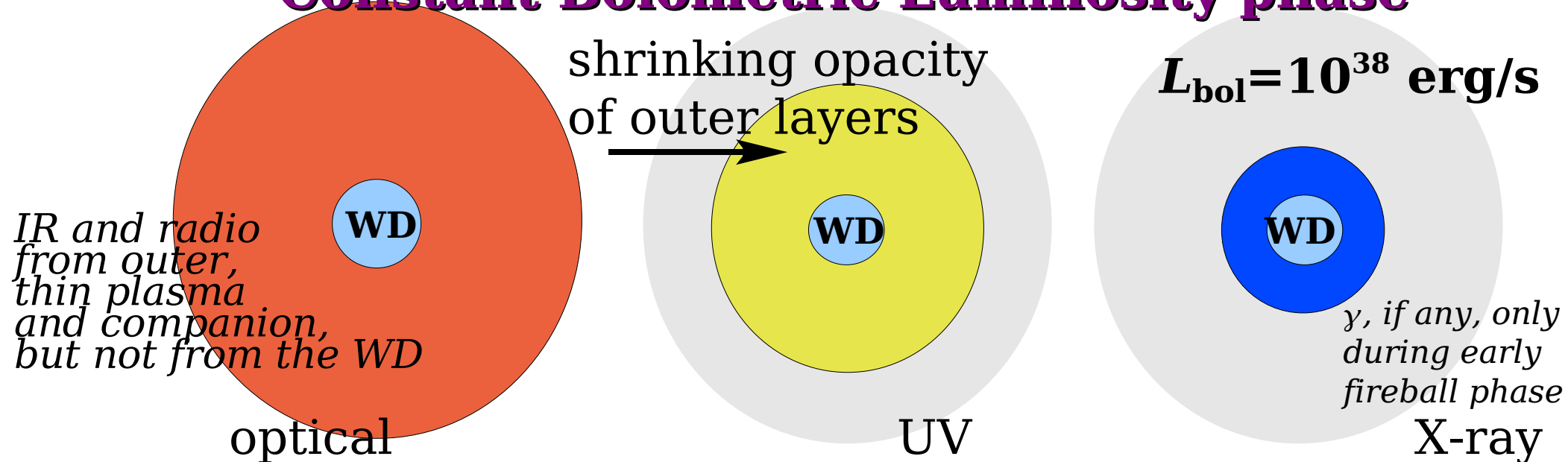
$$L_{\text{bol}} = 10^{38} \text{ erg/s}$$

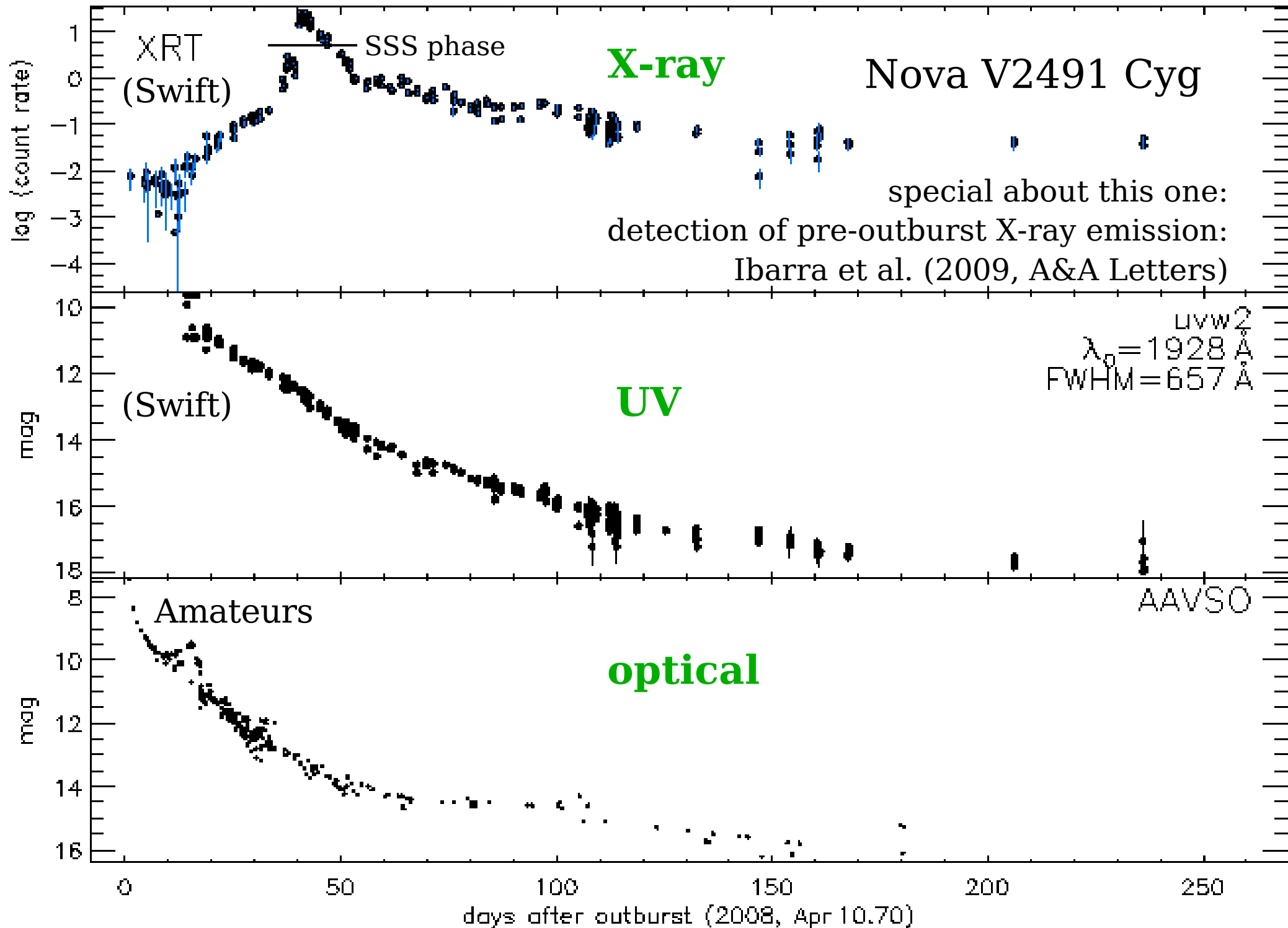
shrinking opacity
of outer layers

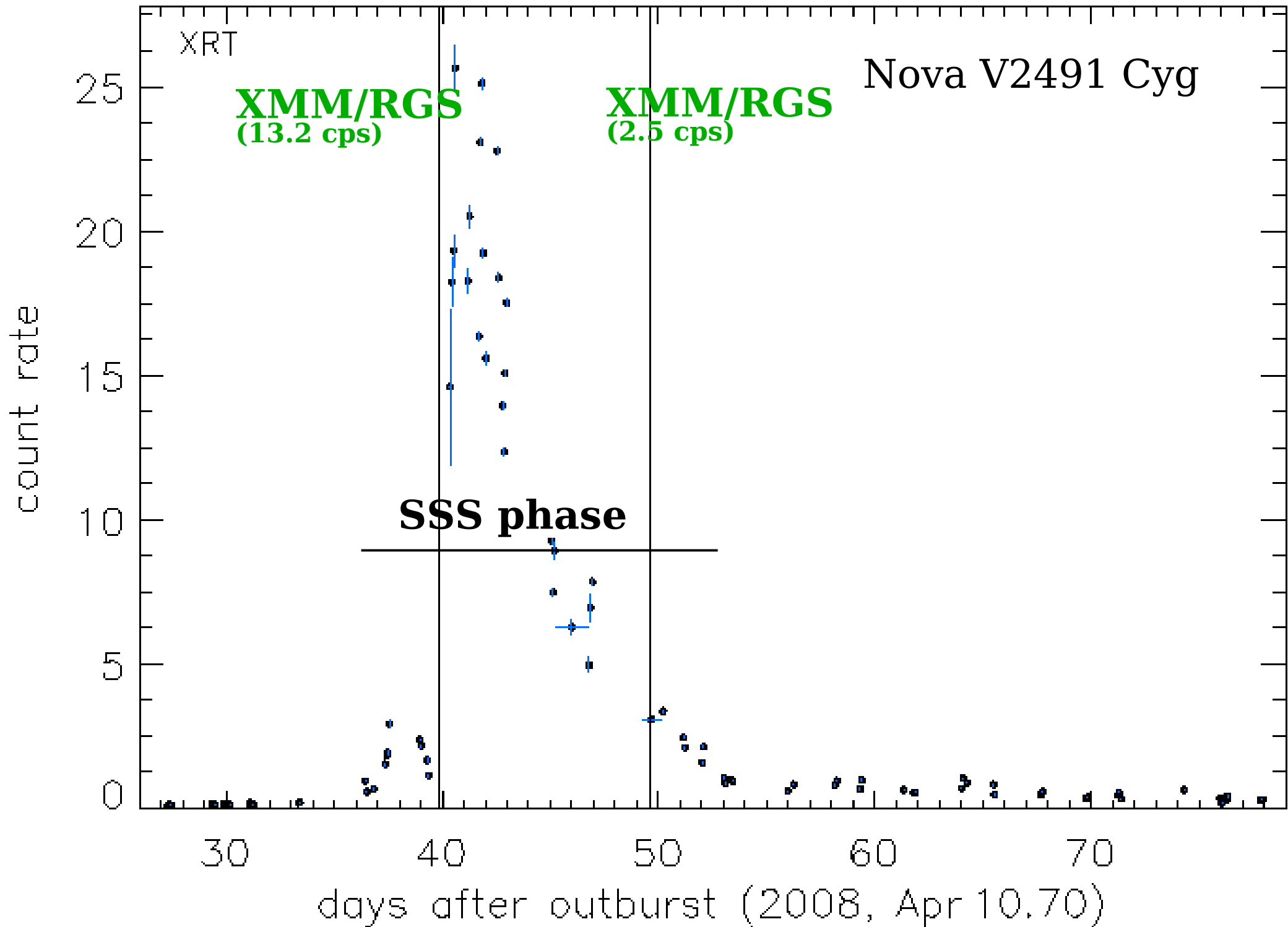
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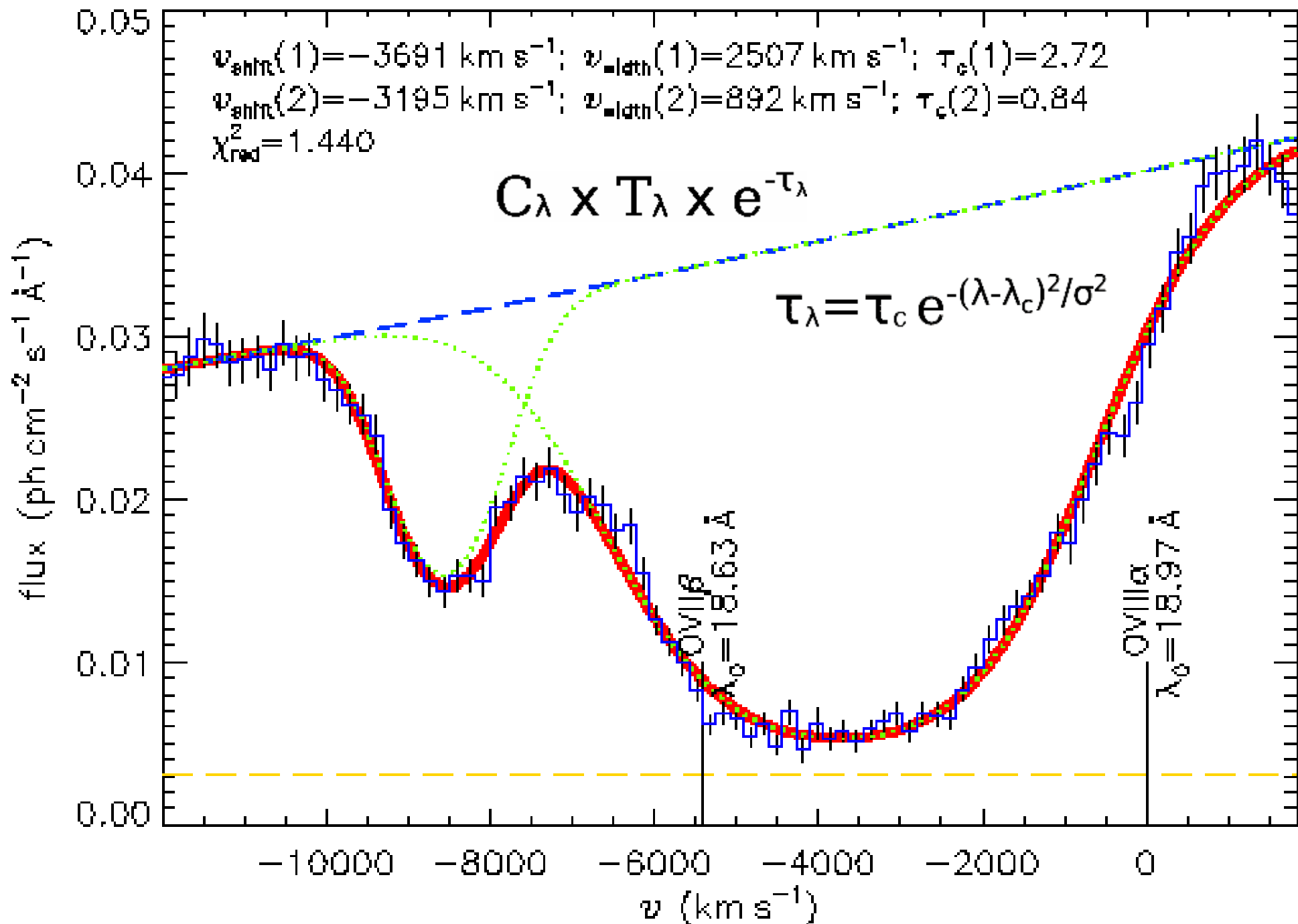


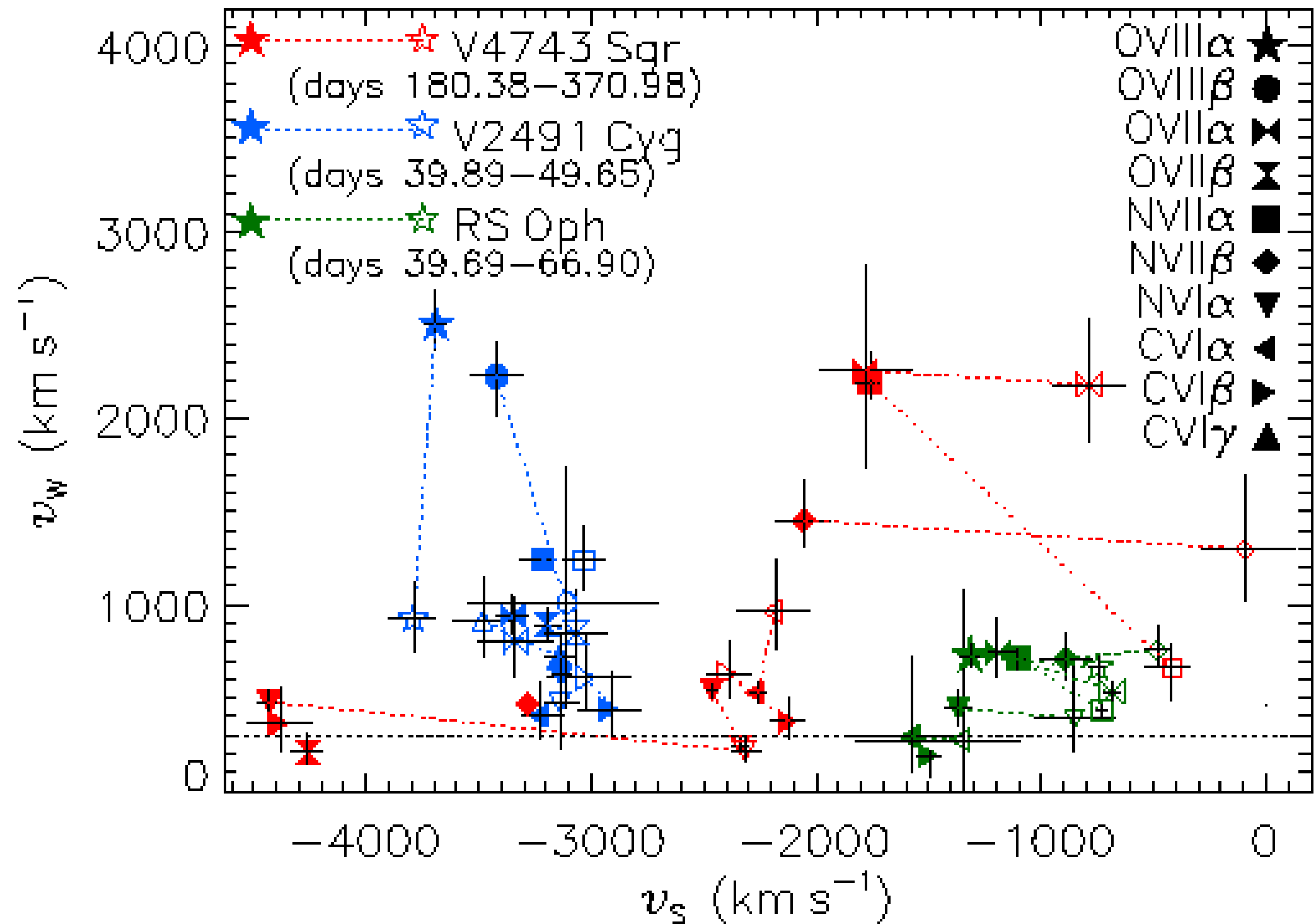
Constant Bolometric Luminosity phase



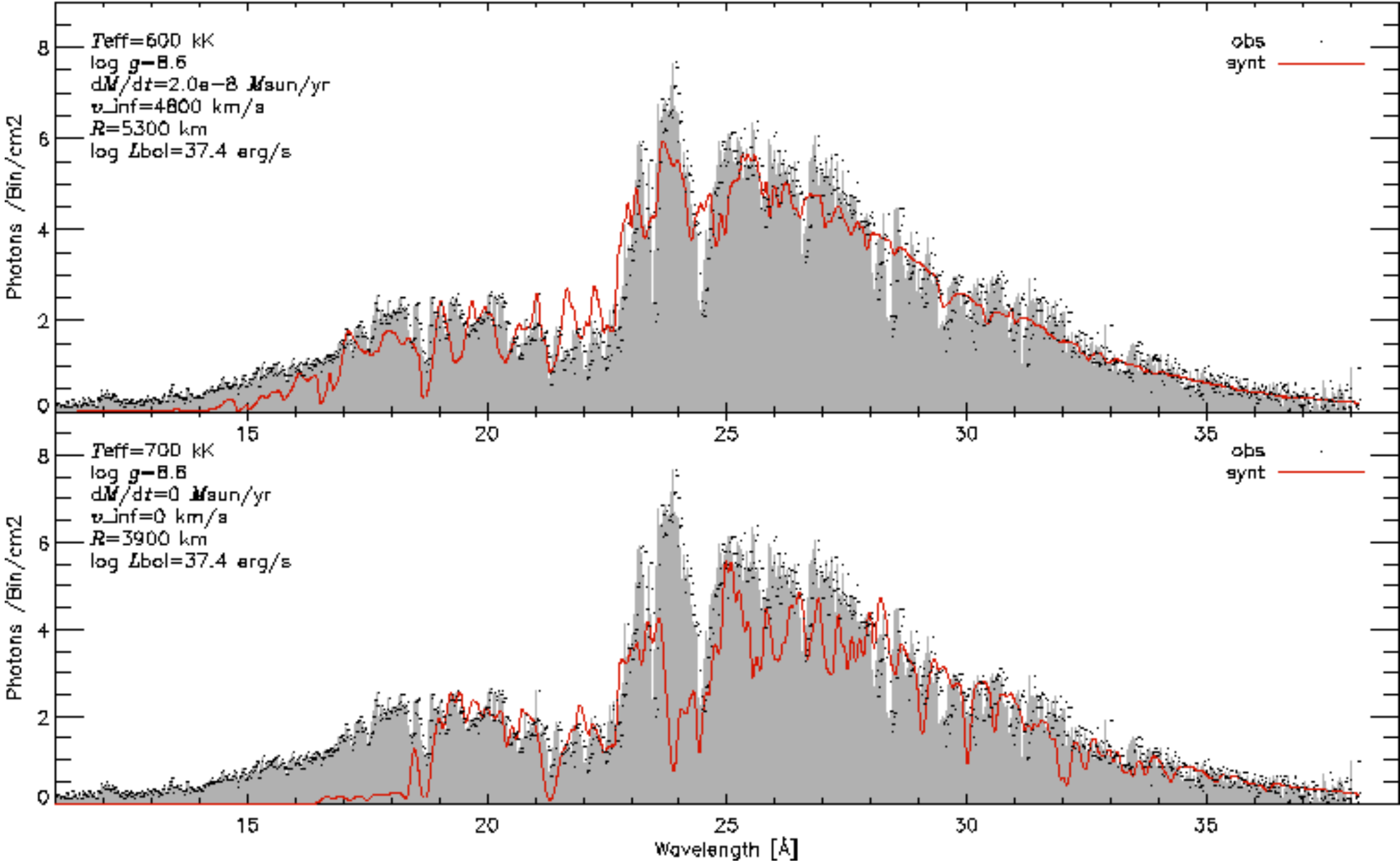








V2491 Cyc (day 49.7, RGS) $NH=2.8e21 \text{ cm}^{-2}$



Summary

- Swift monitoring allows accurate scheduling of deeper exposures with XMM-Newton/Chandra
- SSS spectra are atmospheres with blue shifted absorption lines.
- Expansion of atmospheric layers have to be accounted for in models
- Multi-component SPEX models allow us to find composition of ejecta and ISM. Also, the presence of dust grains can be detected.