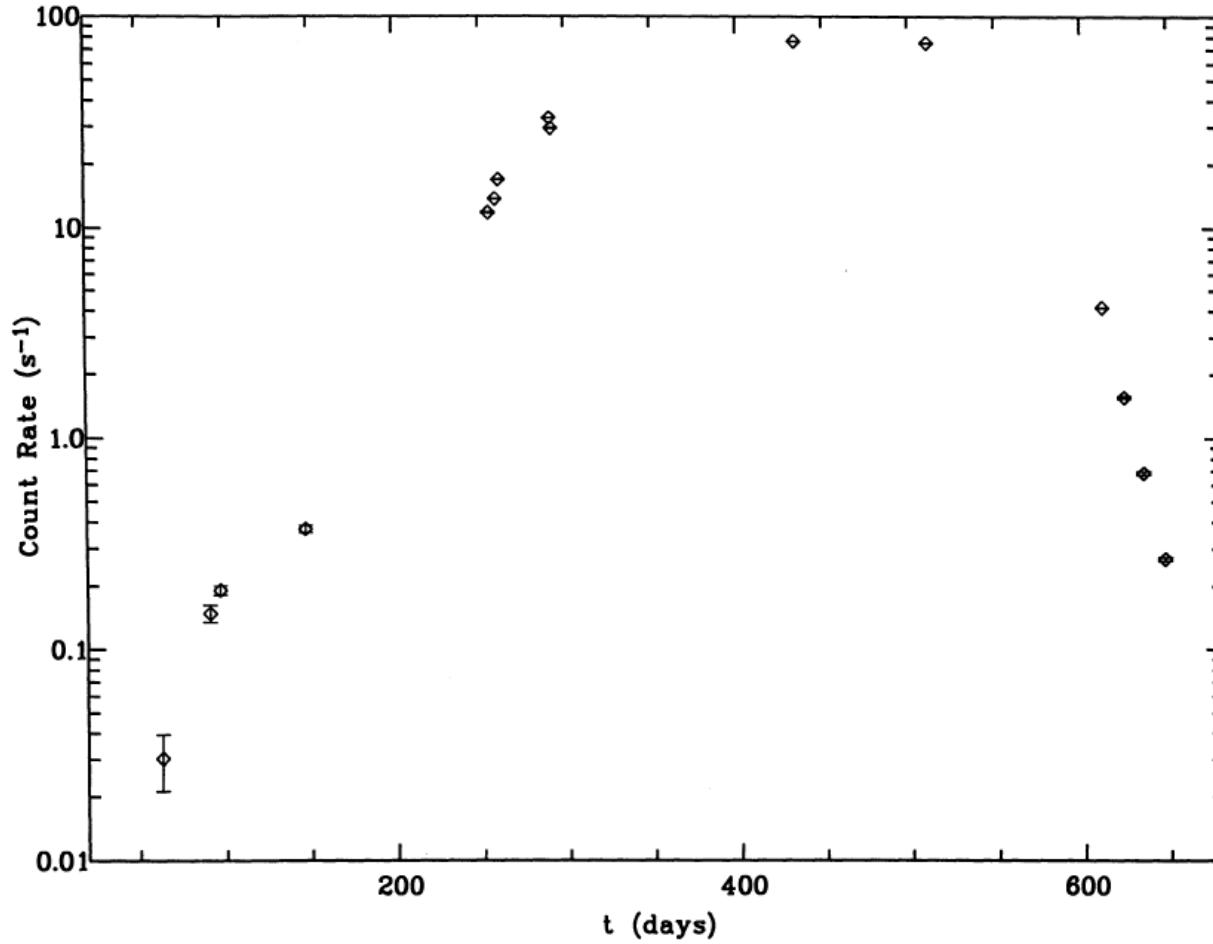




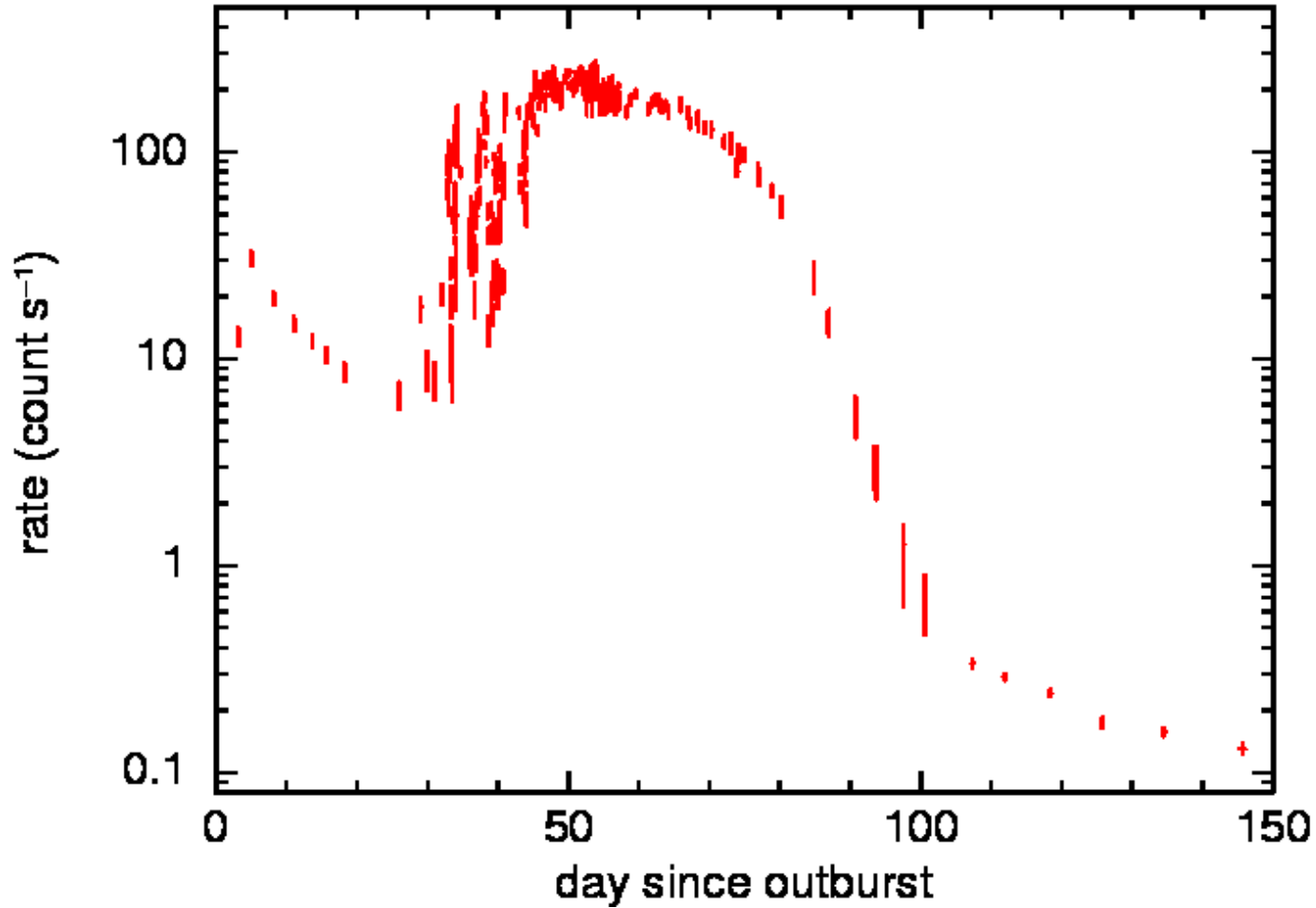
Multi-Wavelength Studies of Novae: Thermal Emission

Kim Page

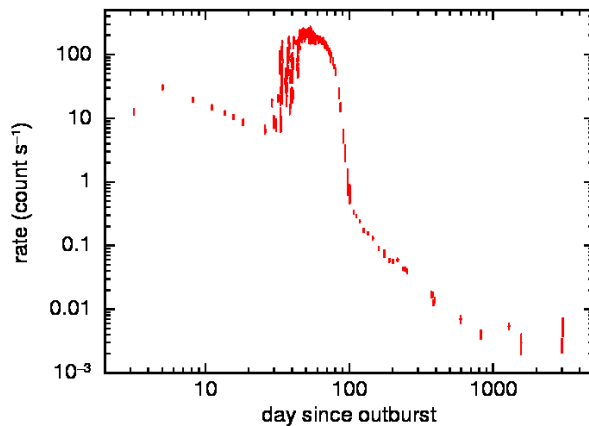
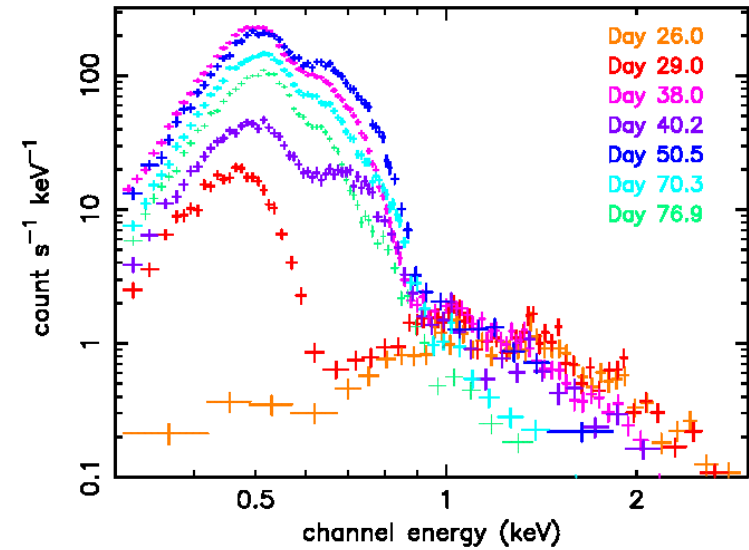
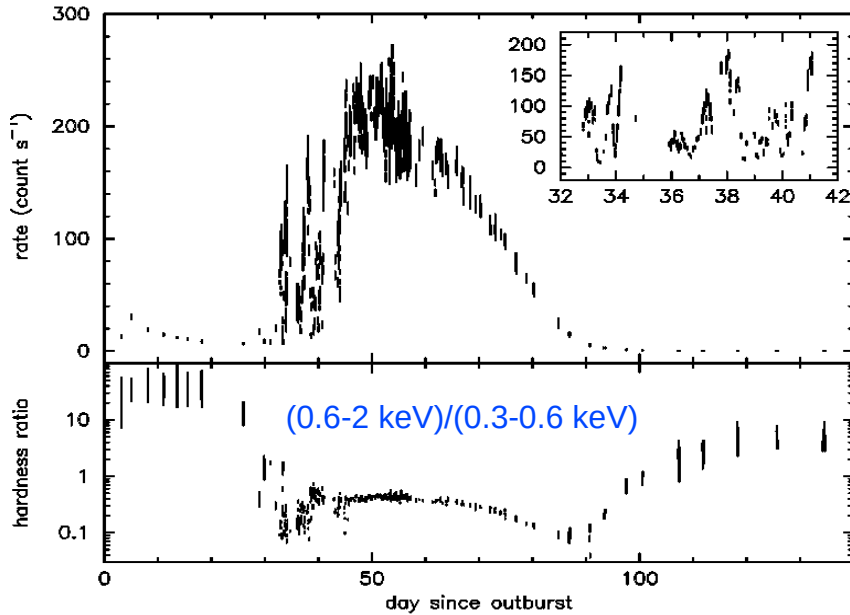
(On behalf of the *Swift* Nova-CV Group)



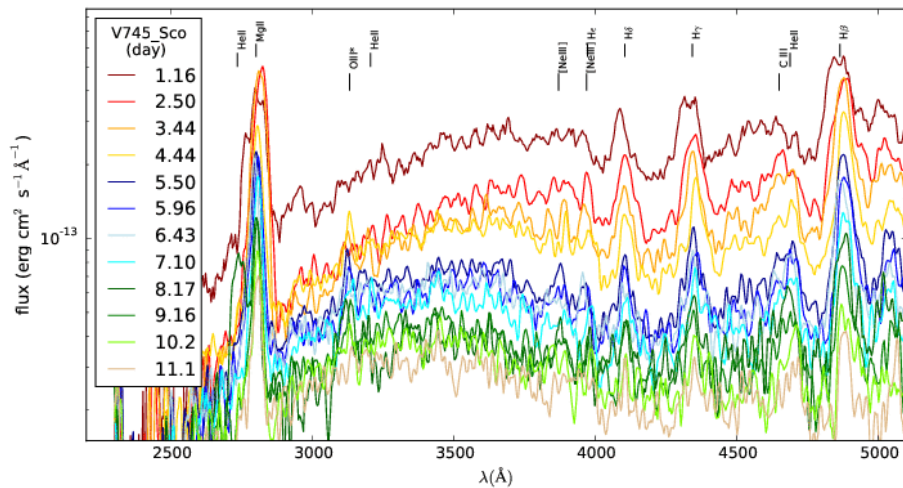
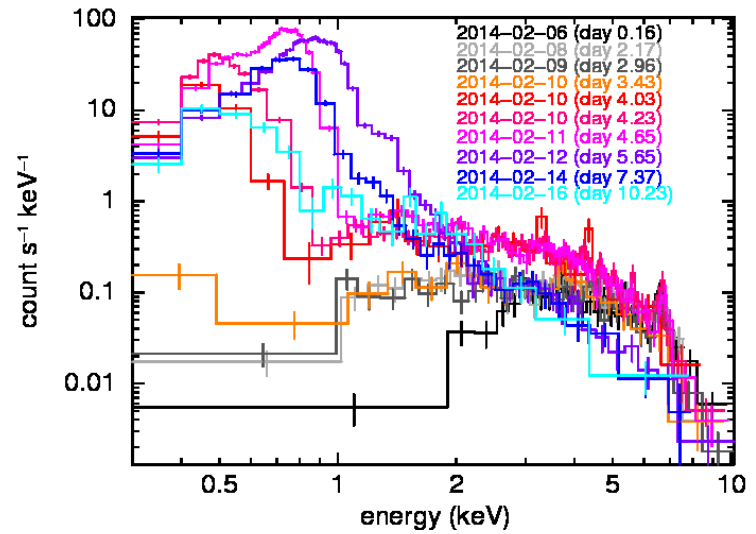
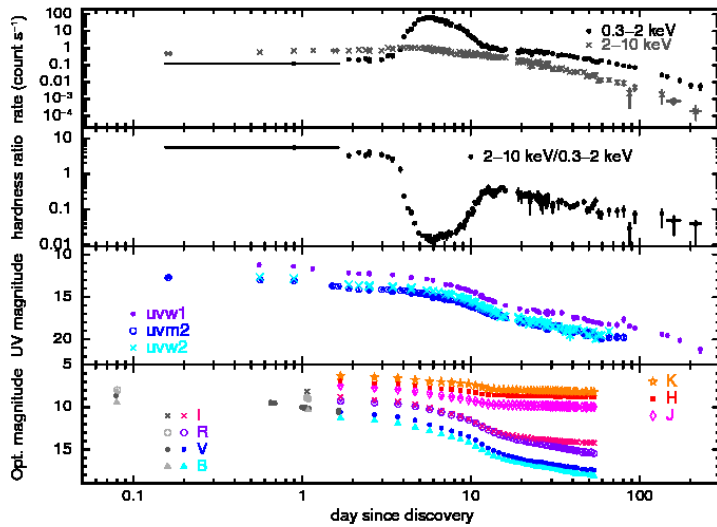
Nova V1974 Cyg 1992
Krautter et al. (1996)



RS Oph
Osborne et al. (2011)



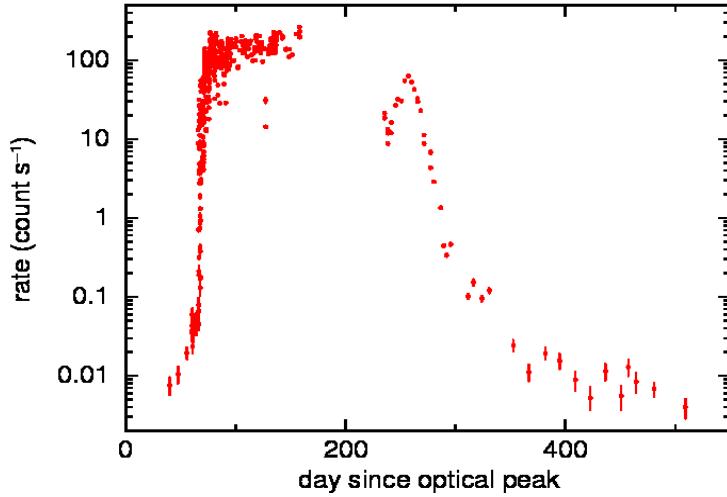
See Osborne et al., 2011, ApJ, 727, 124 for more details.



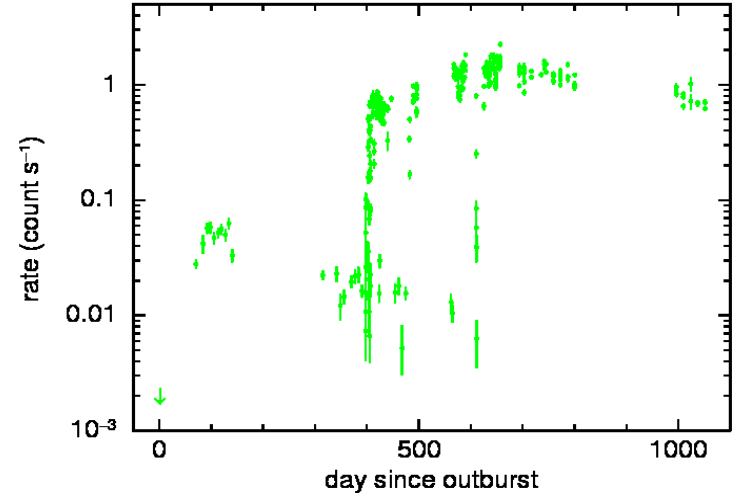
See Page et al., 2015, MNRAS, 454, 3108 for more details.

High-amplitude variability

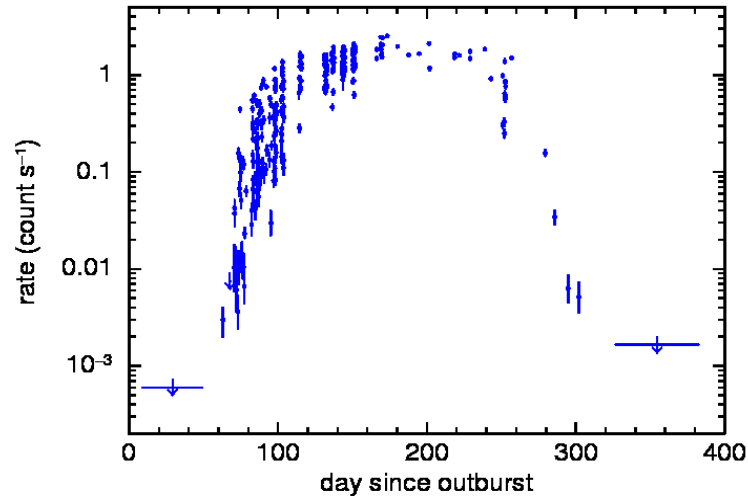
KT Eri



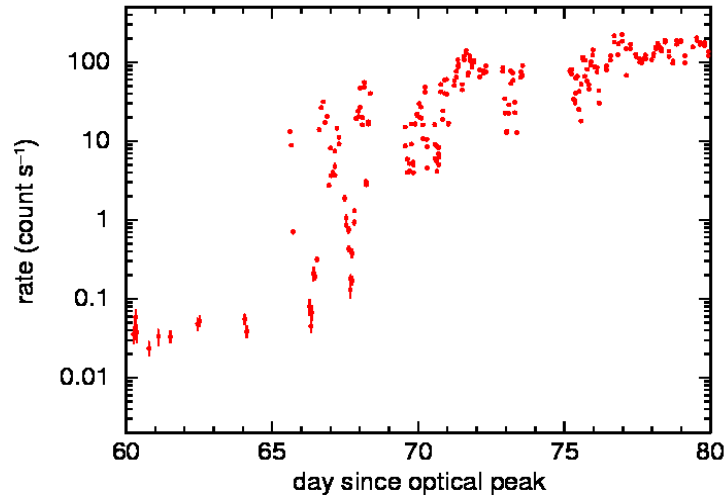
V458 Vul



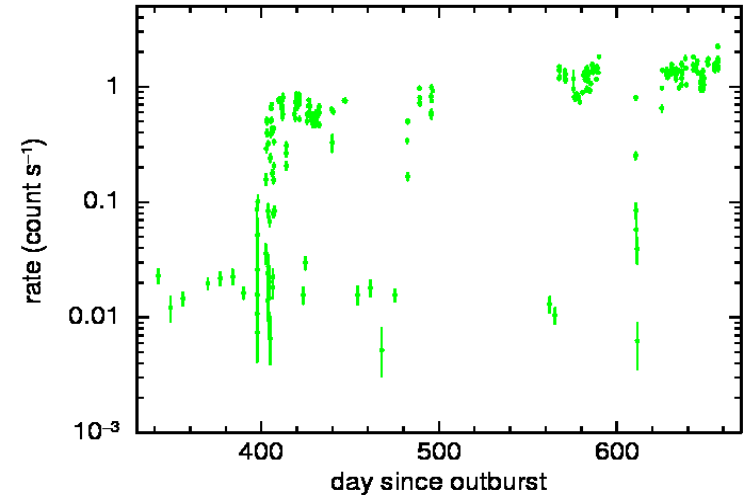
Nova LMC 2009a



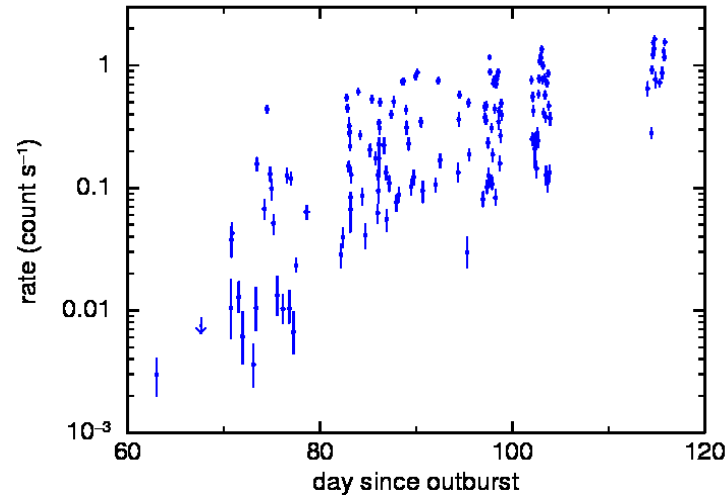
KT Eri

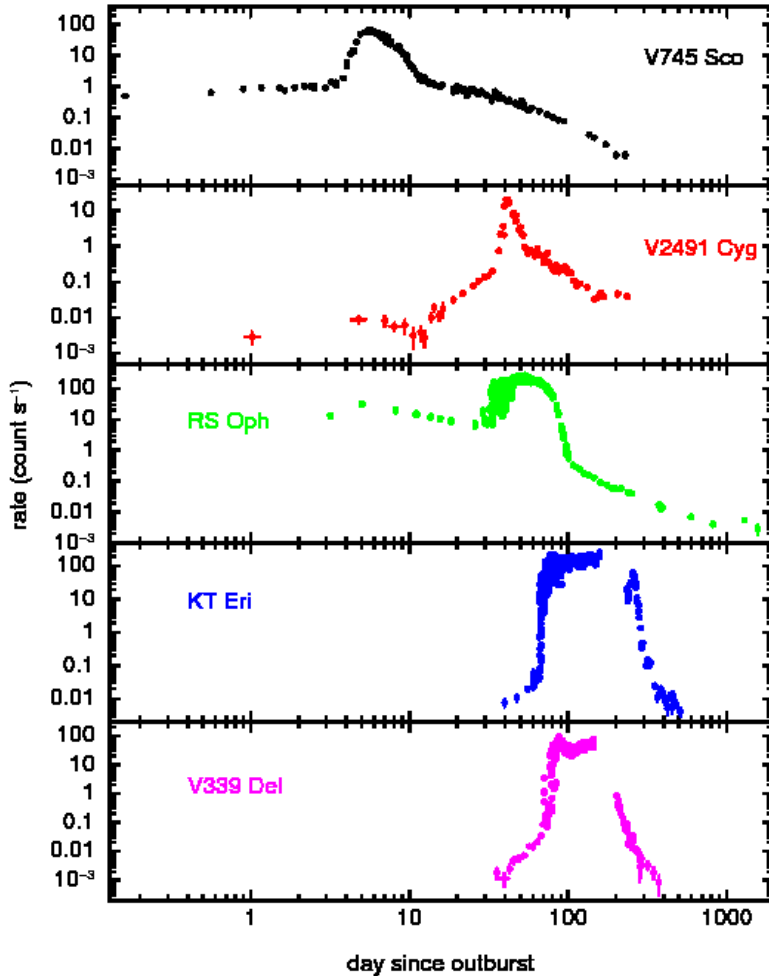


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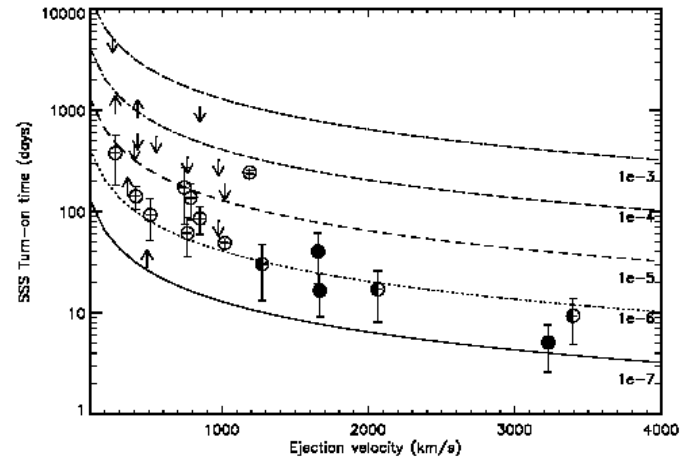
Nova LMC 2009a



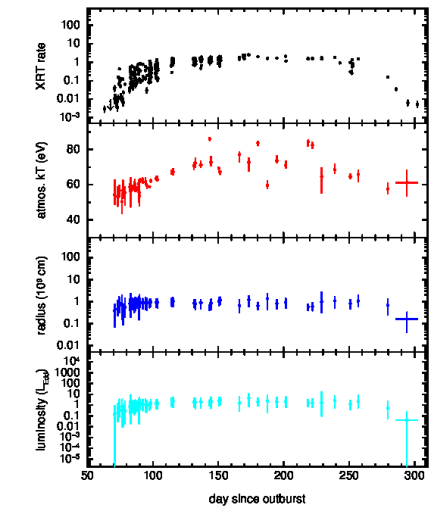
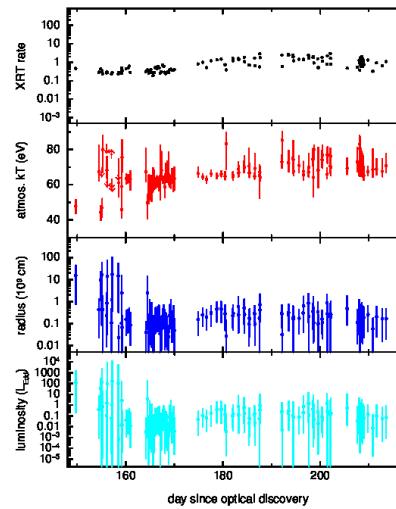
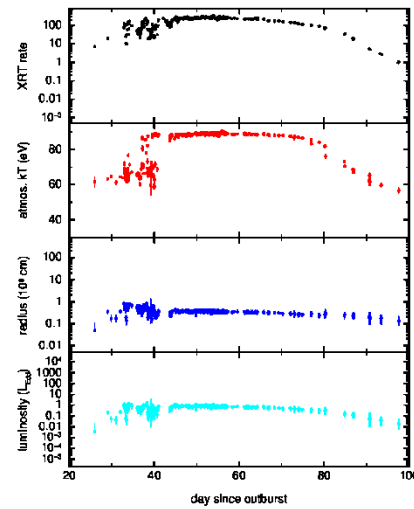
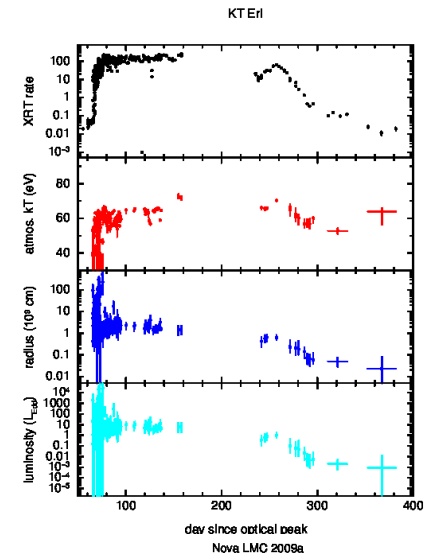
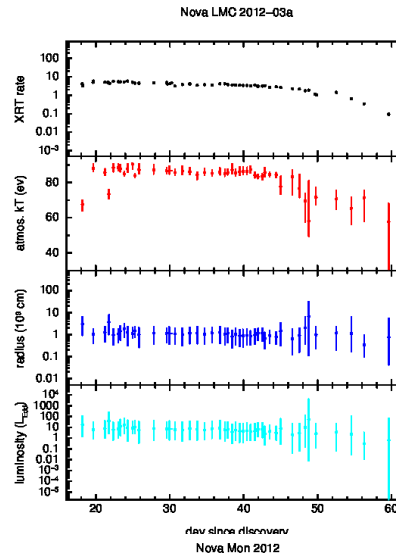
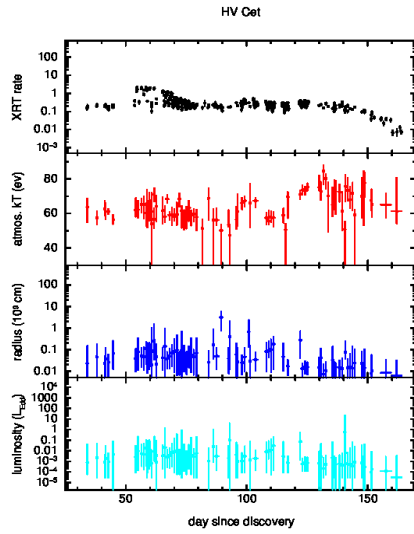


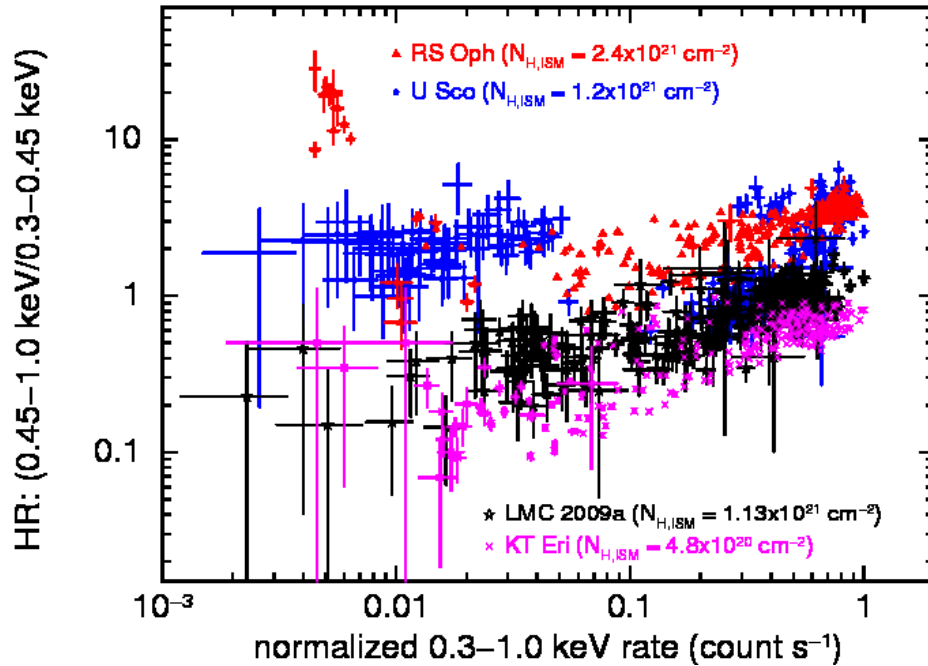
This shows Swift XRT count rate light-curves for five novae with a super-soft phase for which the start and stop times can be identified. The earliest start time yet measured is ~4 days after optical discovery, lasting only 2 days.

The turn-on time provides information about the mass of the ejected shell. Generally, the quicker the start of the SSS, the smaller the mass ejected, though velocity is also important. This will be related to the WD mass.



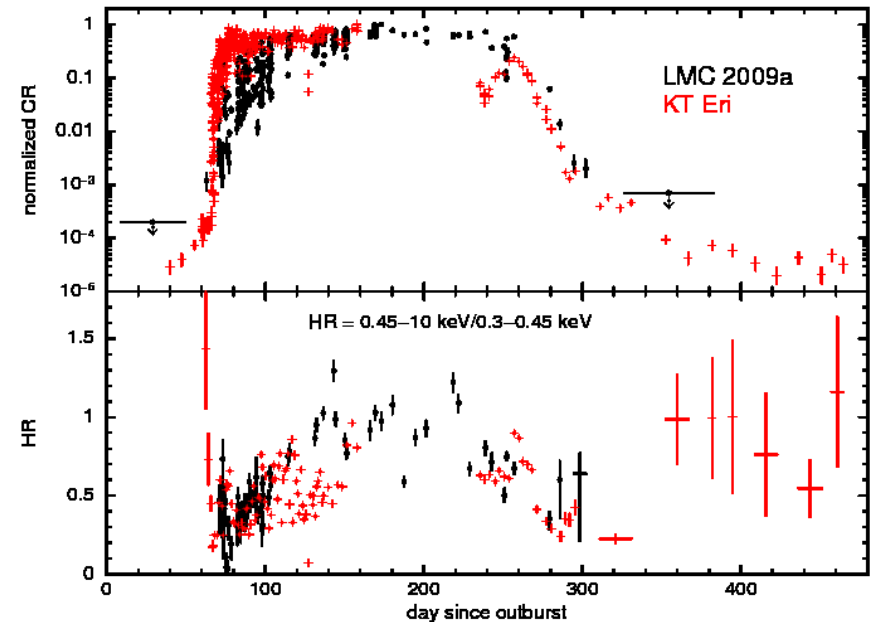
Plot from Schwarz et al., 2011, ApJS, 197, 31.



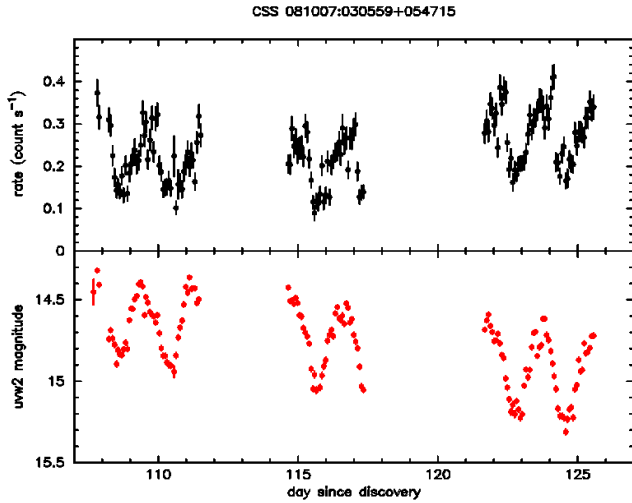


Left: the evolution of the X-ray hardness ratios with the count rate (normalised to the peak counts in each case) for four well-observed novae.

Below: comparison of LMC 2009a and KT Eri. The count rates have again been normalised.

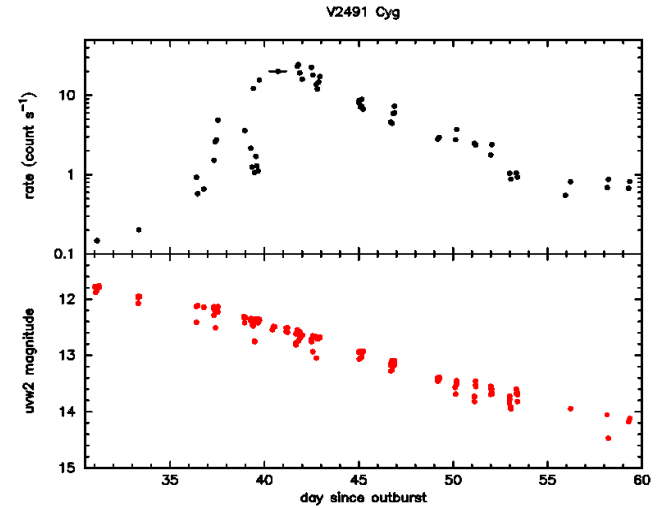


See Bode et al., 2016, ApJ, 818, 145 for more details.



In phase: obscuration
in a high-inclination
system?

Anti-phase:
temperature
variations?



No correlation:
different emitting
regions for X-ray and
UV?

