The 2021 outburst of RS Oph observed in X-rays by Swift: a comparative study

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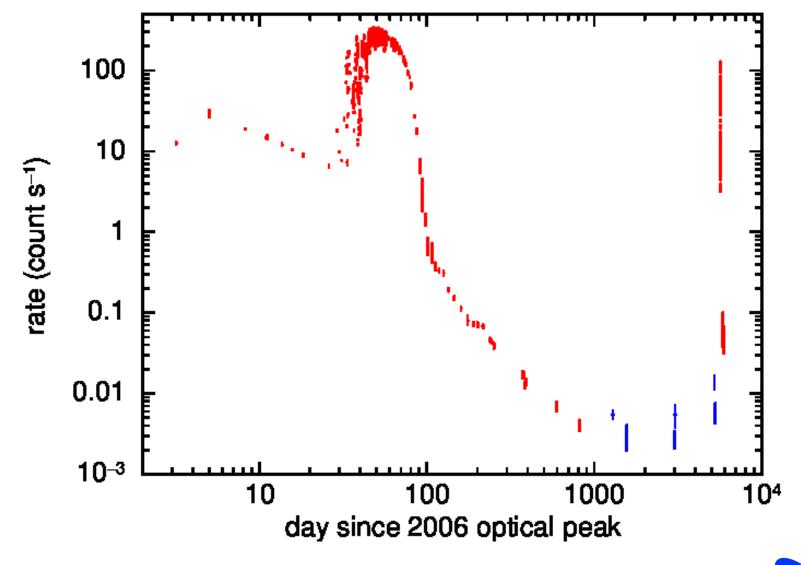


Complete Swift-XRT dataset from 2006-2022



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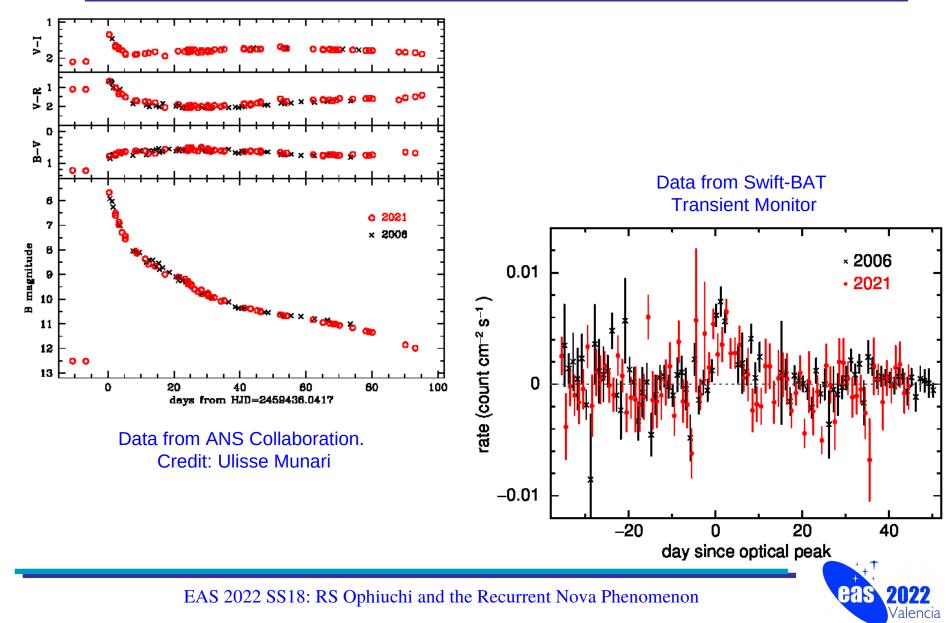
Valencia





Optical & Gamma-ray light-curves



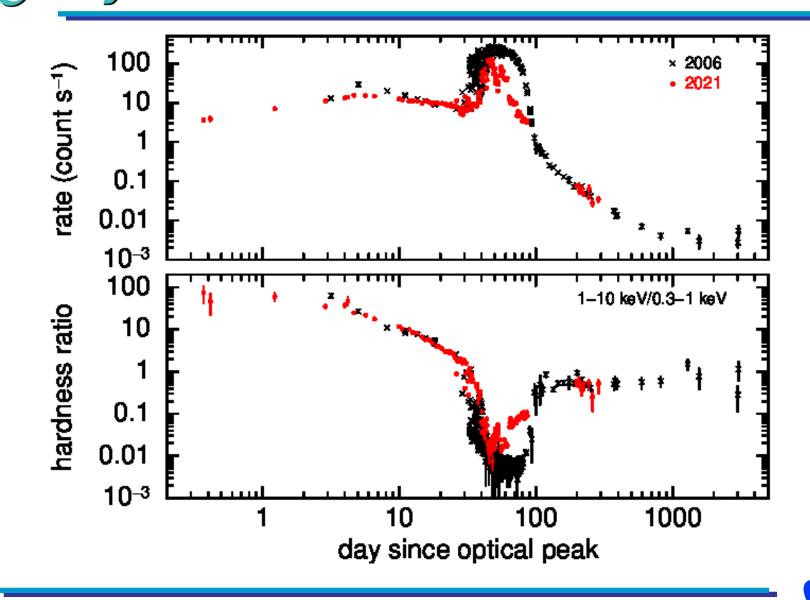


X-ray light-curves from 2006 and 2021



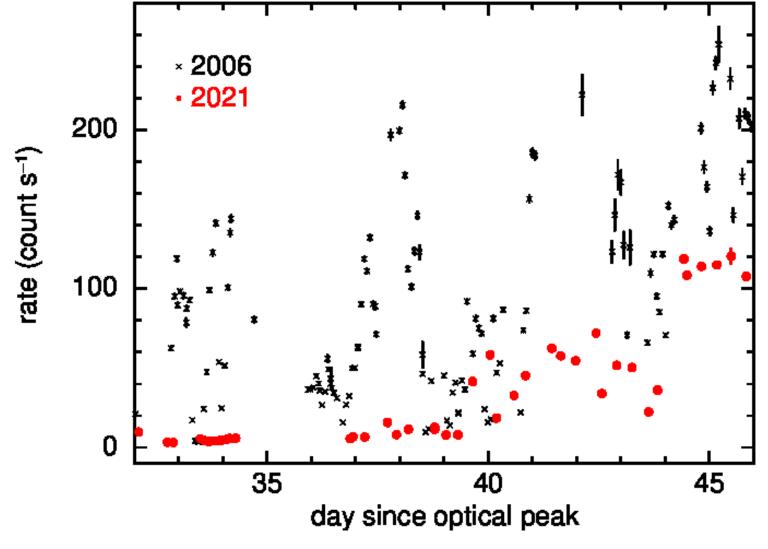
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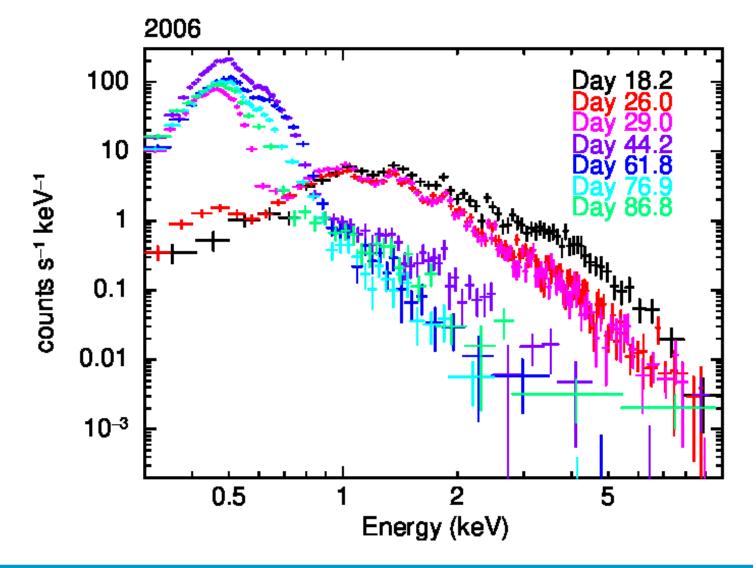












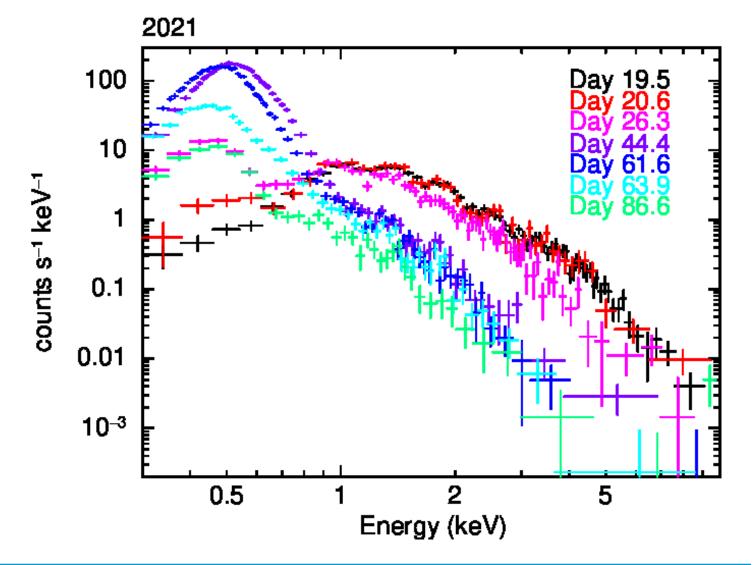






Swift-XRT spectra: 2021





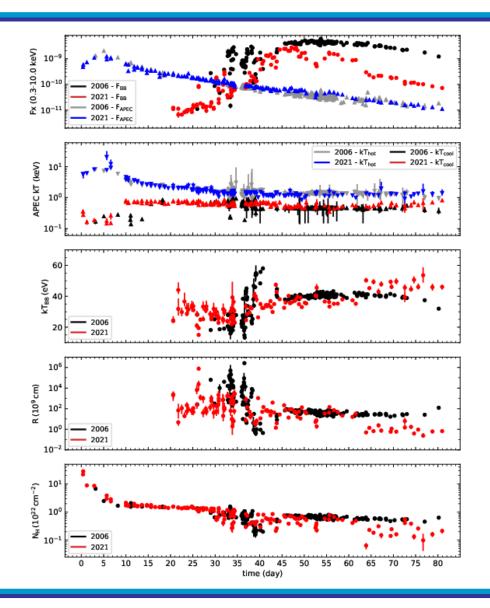






X-rays spectral fitting results



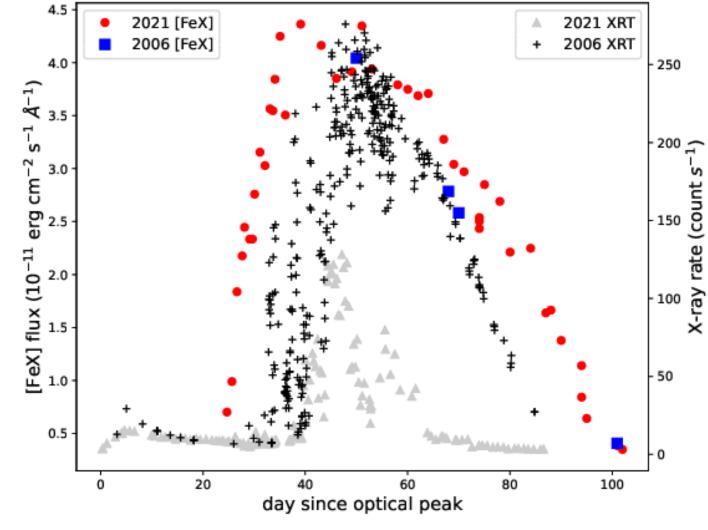






[Fe X] – indicator of photoionization?











- The 2006 and 2021 eruptions were 15.5 yr apart the average recurrence time. 2006 occurred after a longer 21 yr gap.
- The difference in soft X-ray counts measured (4-5x greater in 2006) is much larger than the difference in quiescent intervals.
- While absorption might seem like a good explanation for decreased soft counts, fitting neutral N_H does not support this. More complex absorption?
- The BB effective emitting radius in 2021 (~2 months after eruption) is significantly smaller. Could be a sign of the expected shrinking of the bloated WD atmosphere as nuclear burning switches off though the [Fe X] data suggest this interval was about the same both years.

Page et al., 2022, MNRAS, 514, 1557 (arXiv:2205.03232)

