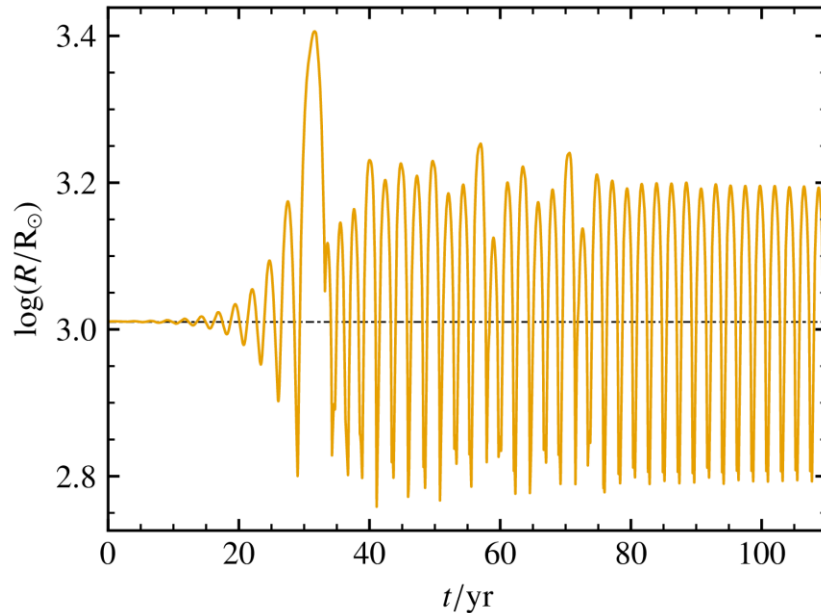


Pulsating Red Supergiants: A New Perspective on Type II Supernova Light Curve Diversity

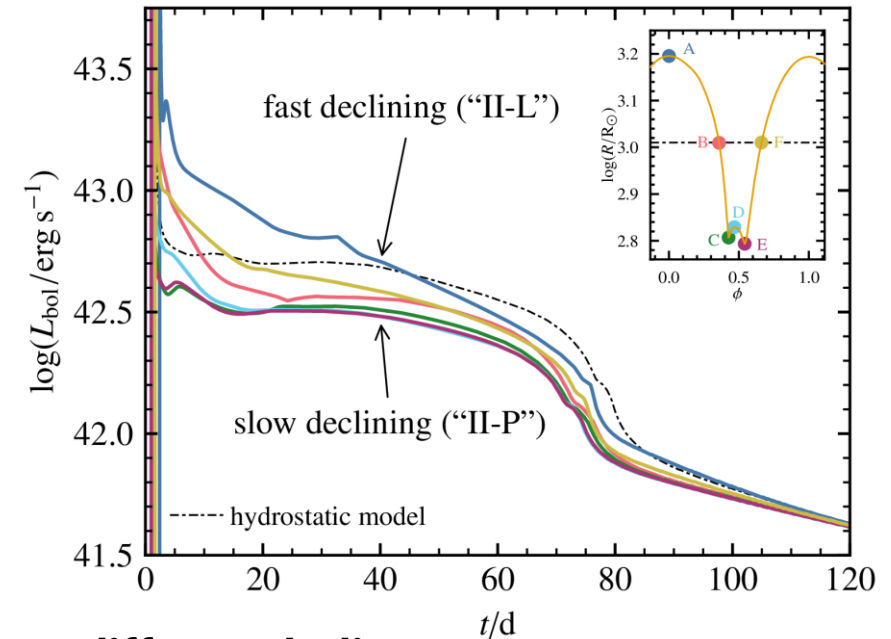
Vincent. A. Bronner, Eva Laplace, Fabian R. N. Schneider, Philipp Podsiadlowski

Red supergiants pulsate ...



- modeling pulsations **selfconsistently**
- period between 400 and 800 days
- $\Delta \log L$ up to 1.3 dex, ΔT_{eff} up to 5000 K

... causing diversity SN light curves



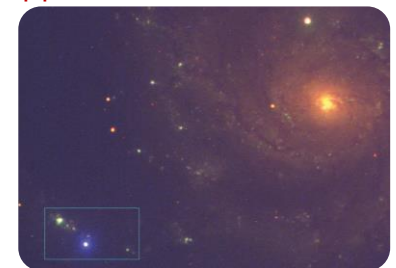
- **different decline rates**
- features in light curves linked to density structure → driving mechanism

check out
this cool
movie

2 new papers on arXiv this Monday



application to **SN 2023ixf**



Zimmerman+ 2024