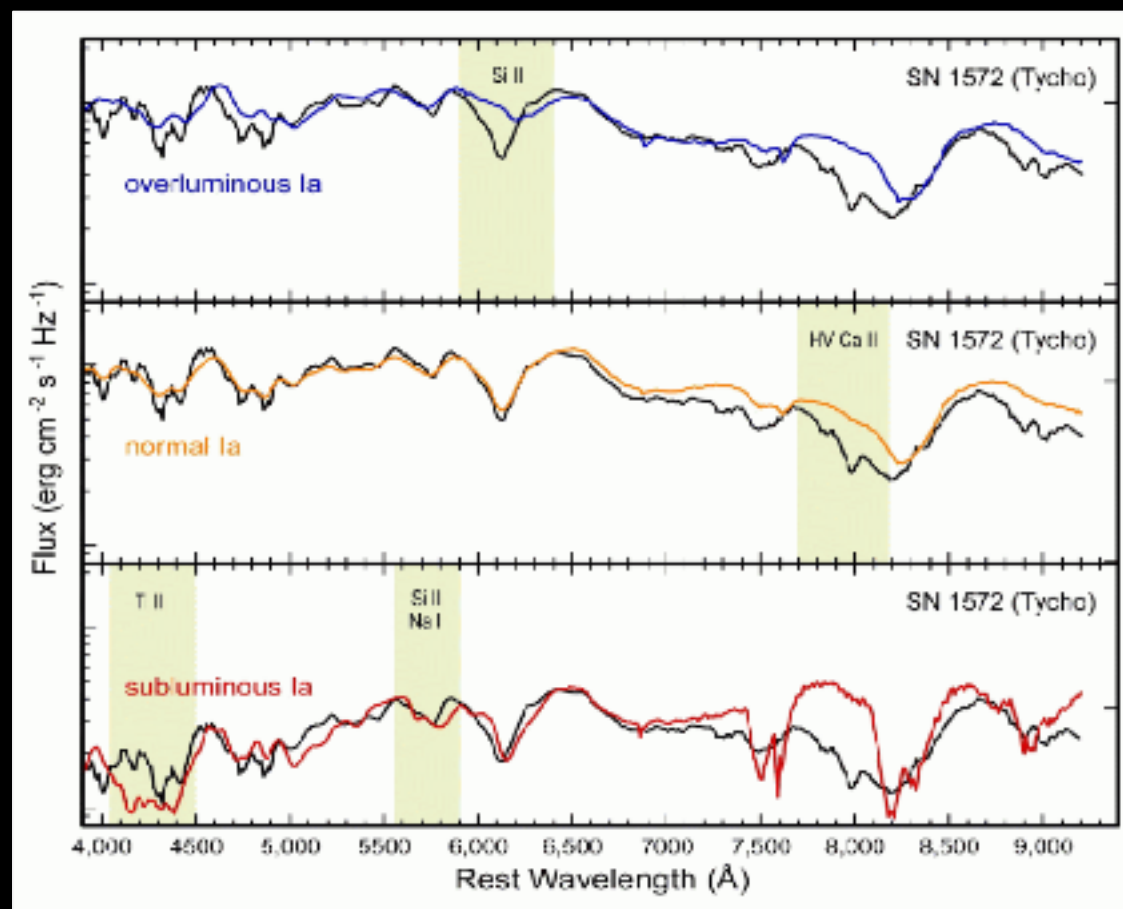


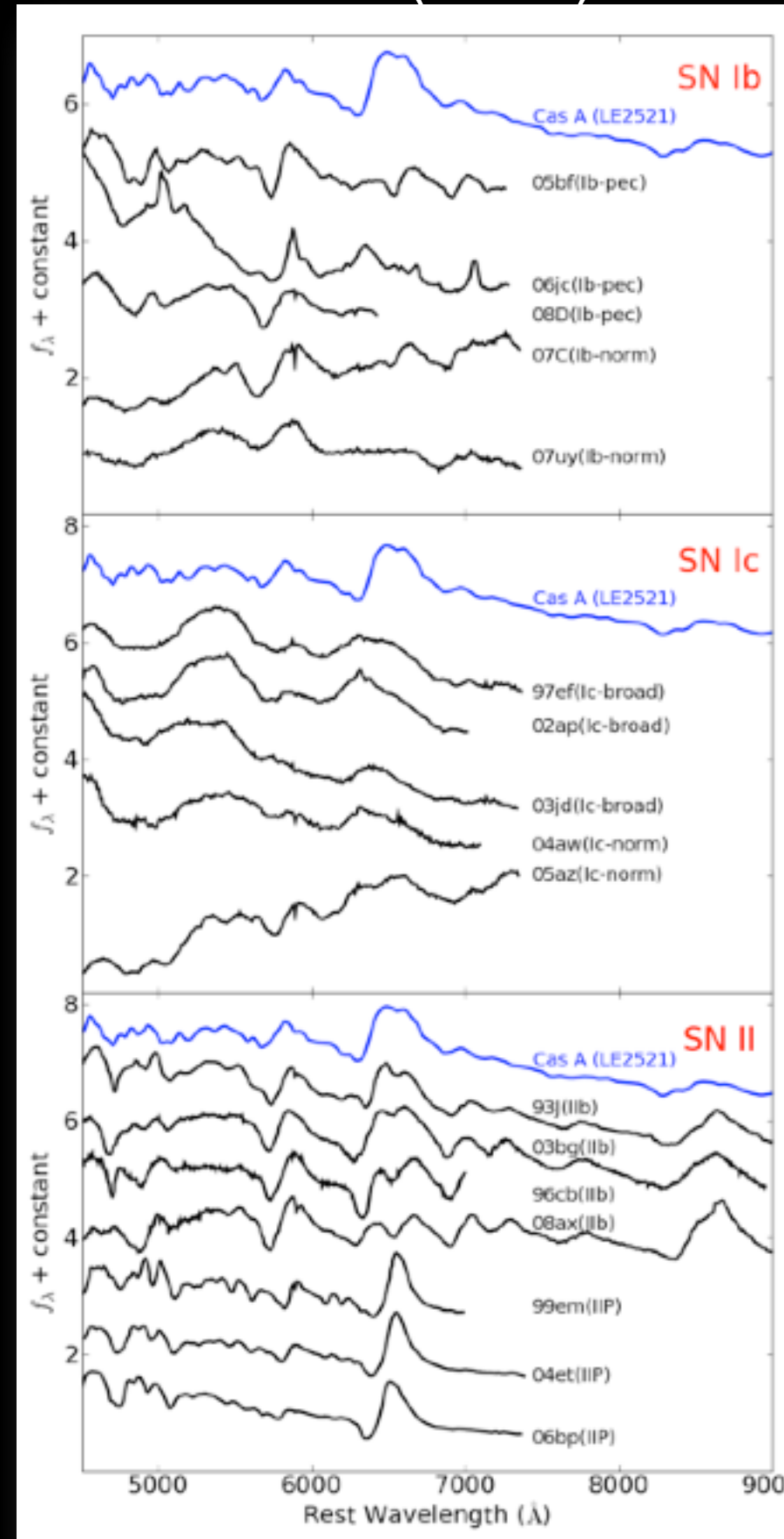
why study light echoes?

LEs give us the chance to take spectra of events occurred before spectra were invented and classify ancient astronomical transients

Tycho SN (1572)



Cas A (1680)



Rest+ 2011

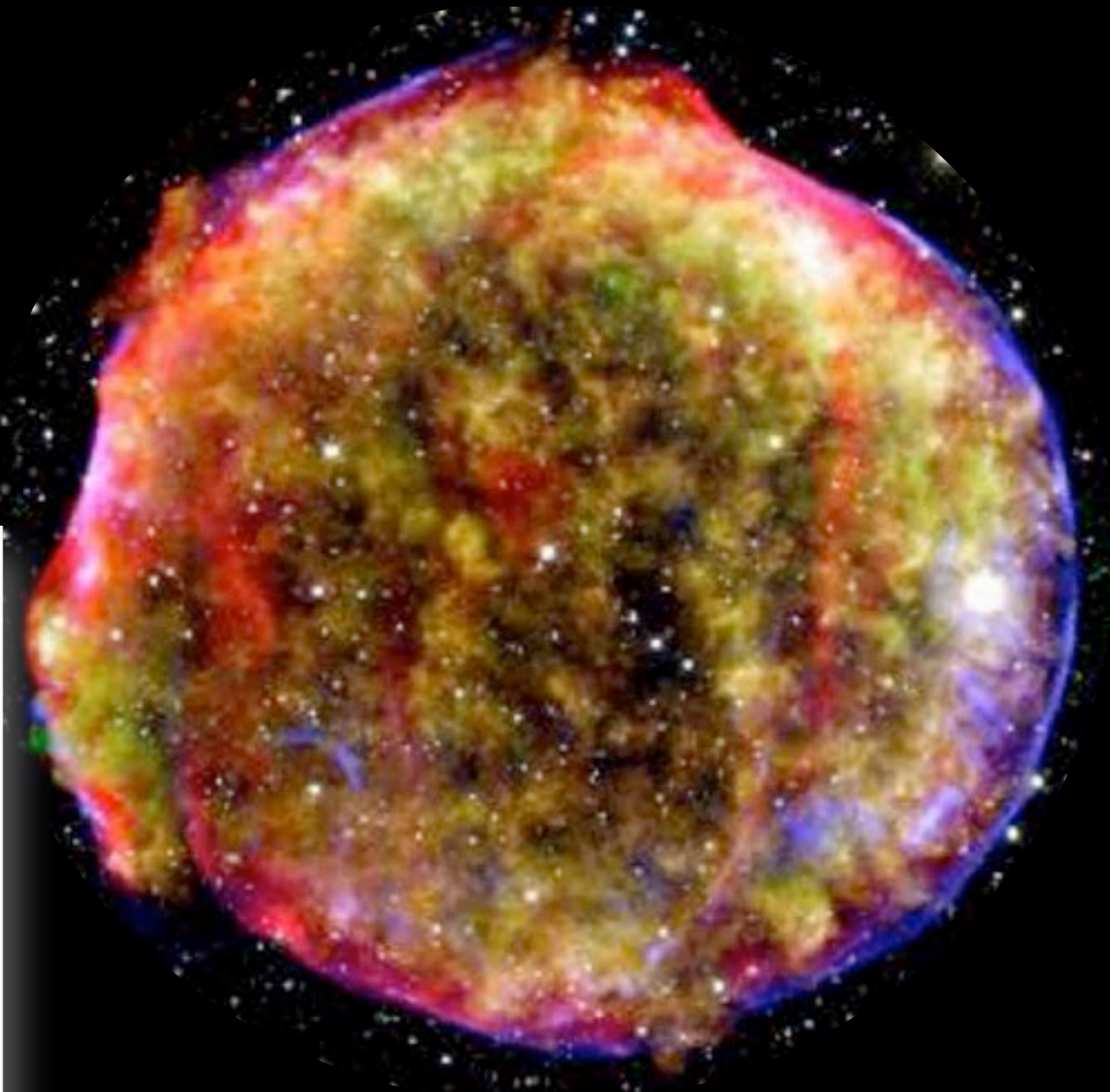
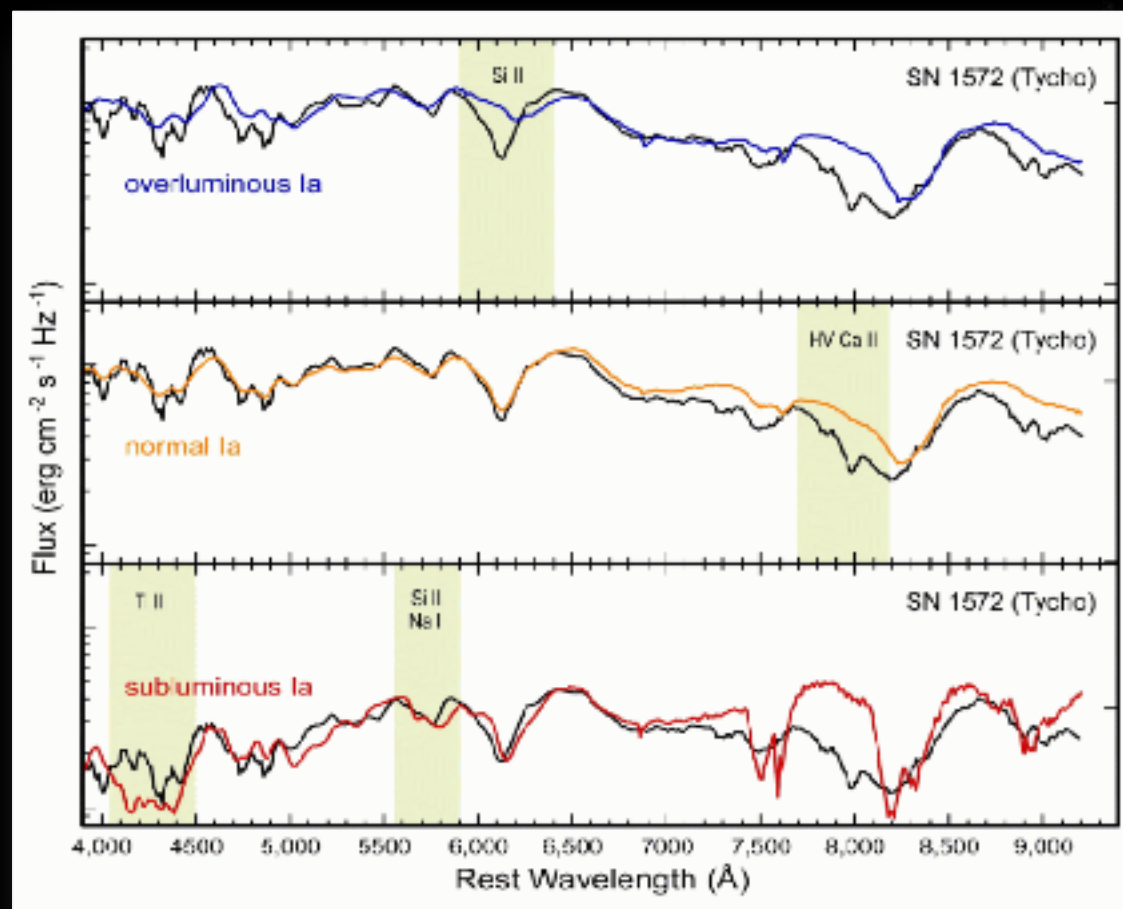
light echoes of η -Carinae

Krause+ 2008

why study light echoes?

Relating effect to cause:
cosmic bursts and their remnants

Tycho SN (1572)



Rest+ 2011

light echoes of η -Carinae