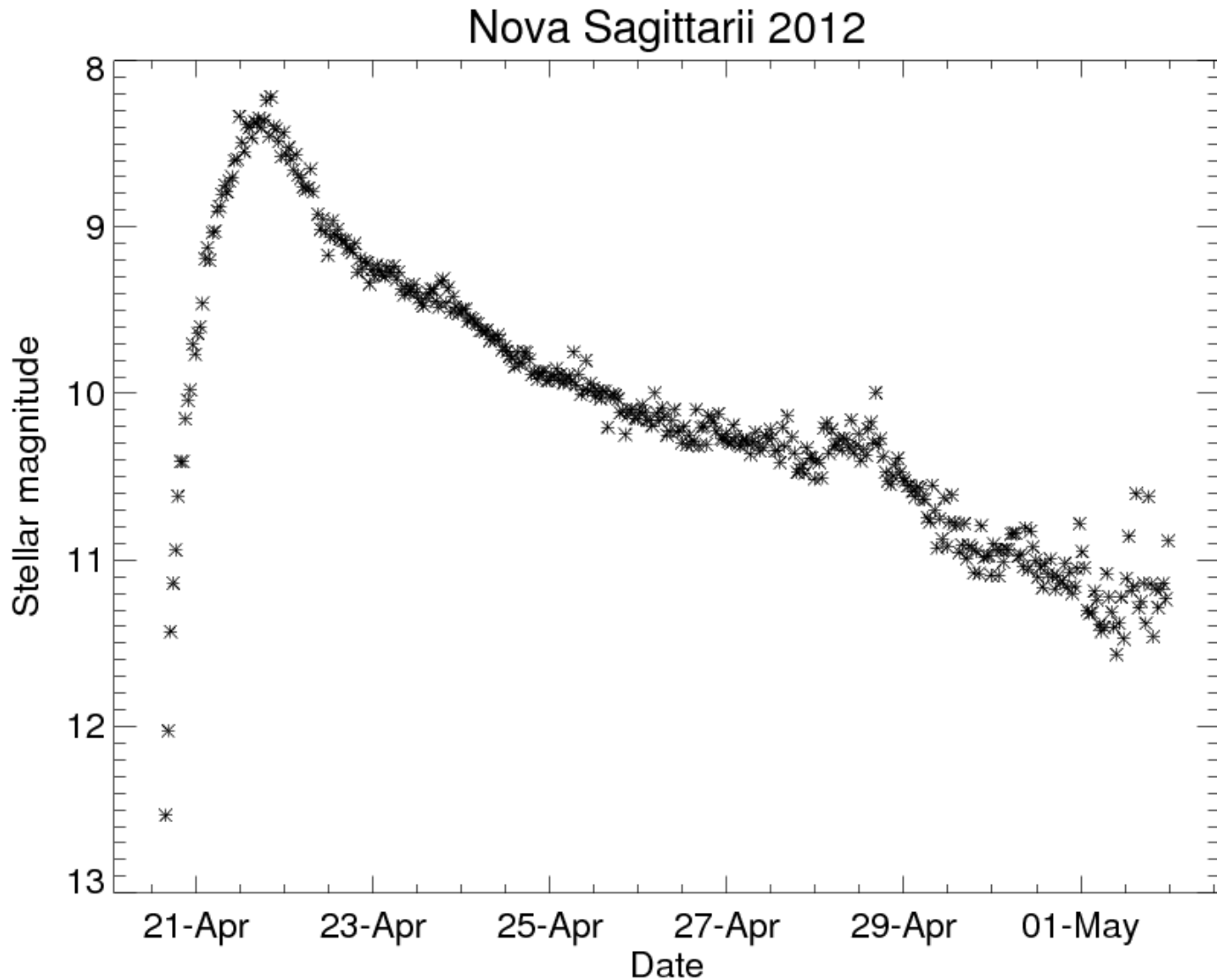


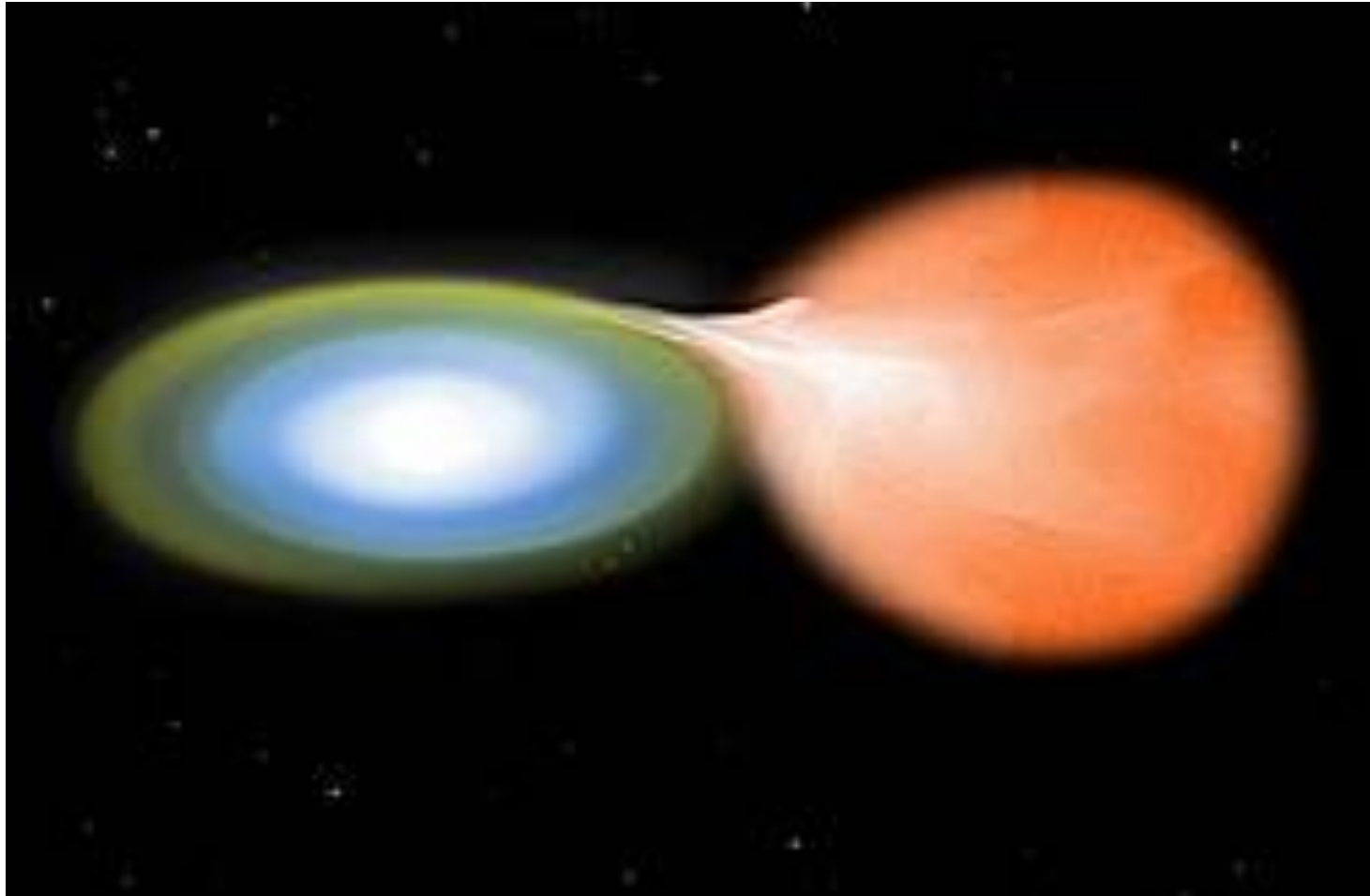
AGA 0100

9.3 Novas e Supernovas

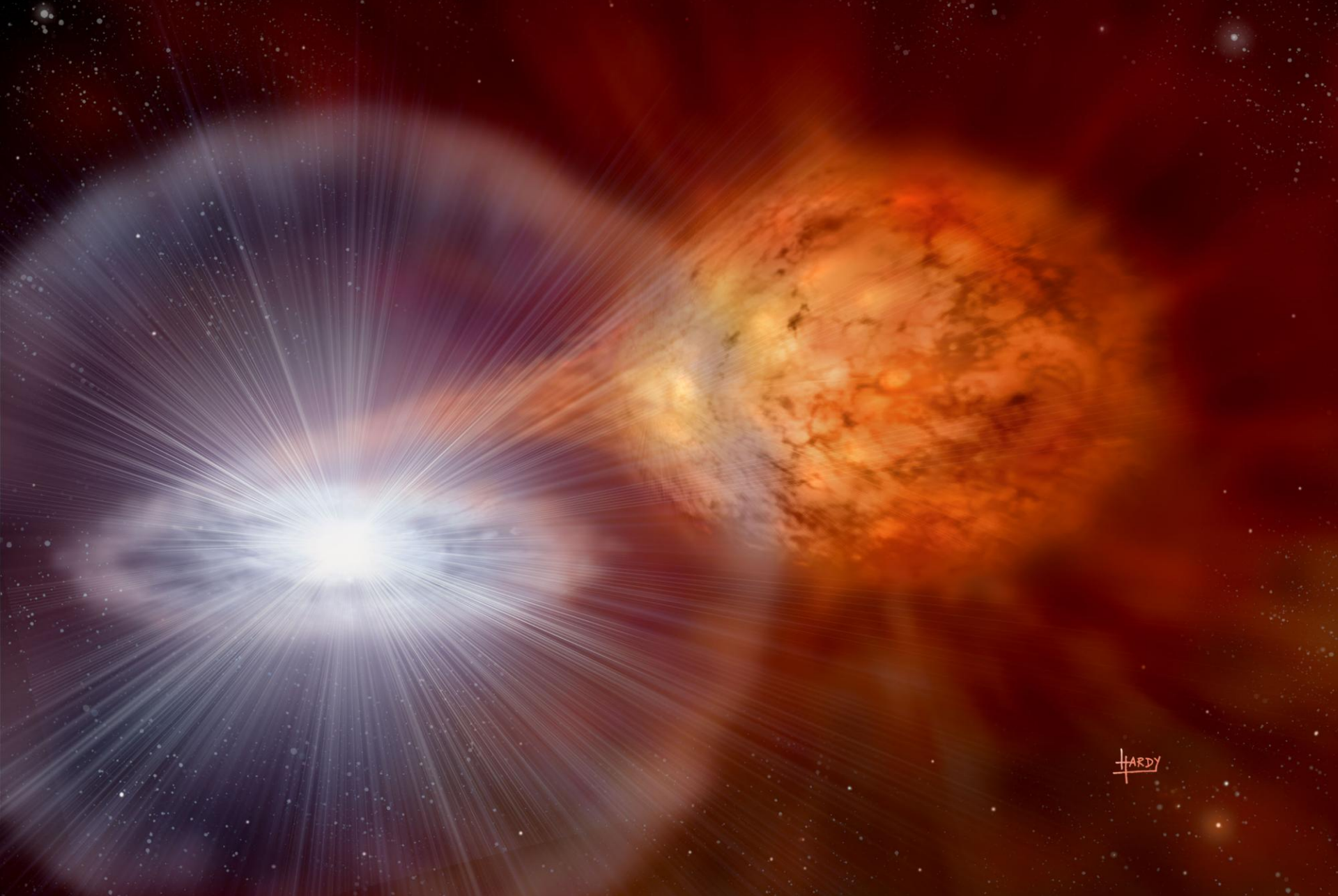
- Nova (Novae)
- Supernova (Baade & Zwicky, 1931)
- Novas anãs

Curva de luz de estrelas novas



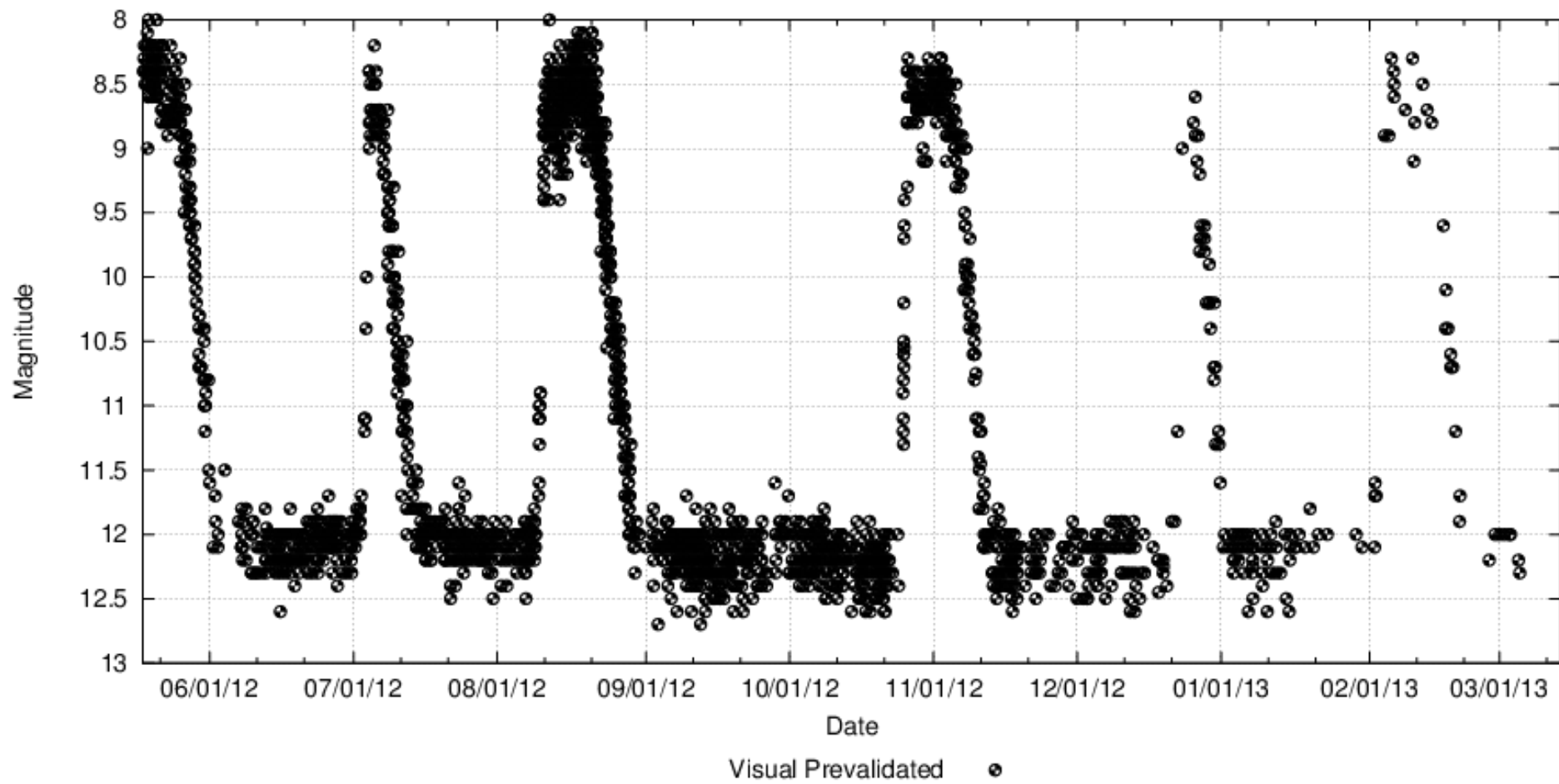


Concepção artística – Variável cataclísmica (wikipedia)



Credit: David. A. Hardy / www.astroart.org / STFC

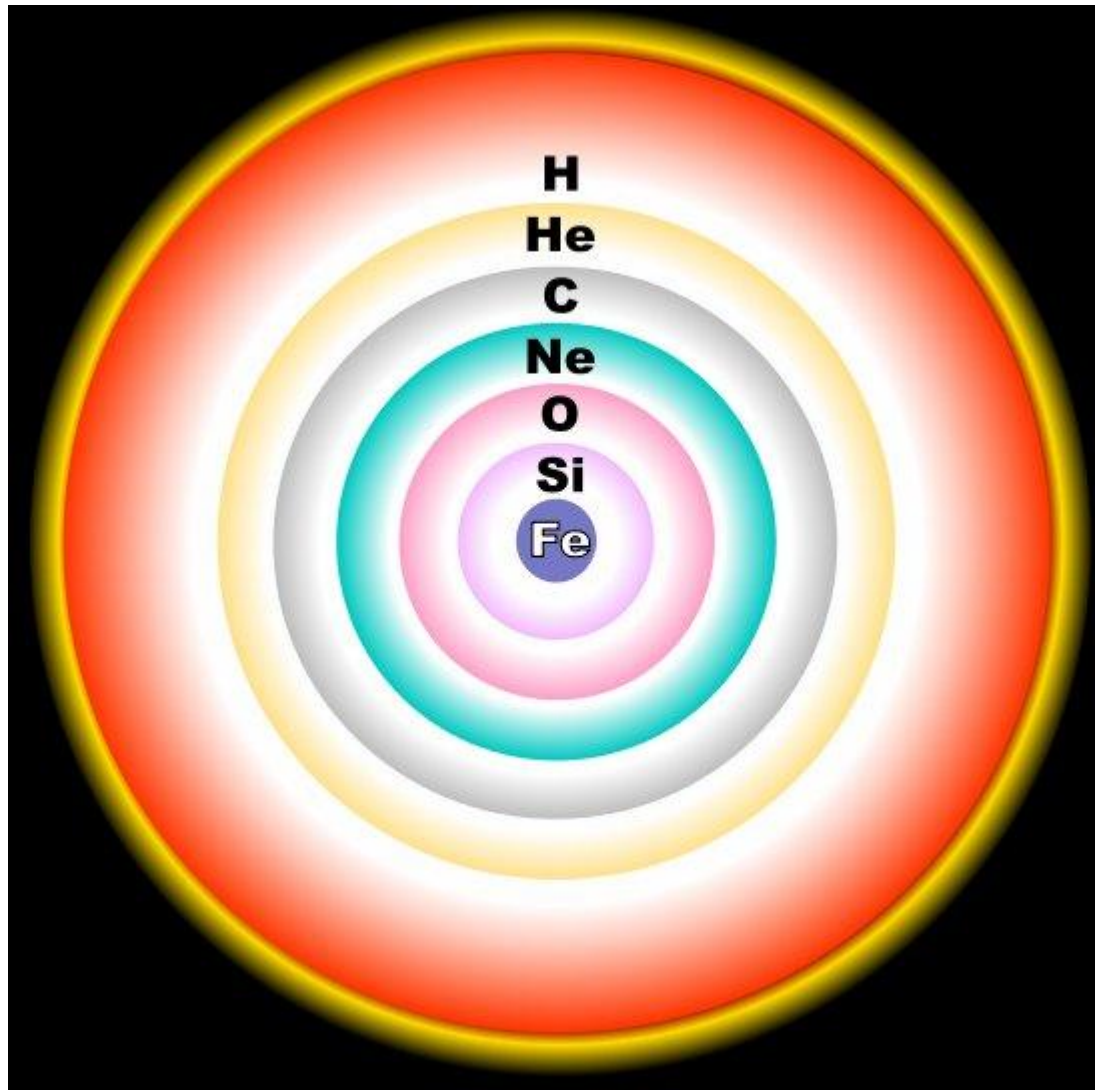
AAVSO DATA FOR SS CYG - WWW.AAVSO.ORG



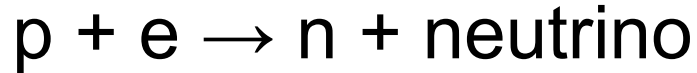
SN (Ia) 1994D
na galáxia
NGC 4526
(wikipedia)



Alquimia cósmica: estrutura de uma supergigante vermelha (wikipedia)



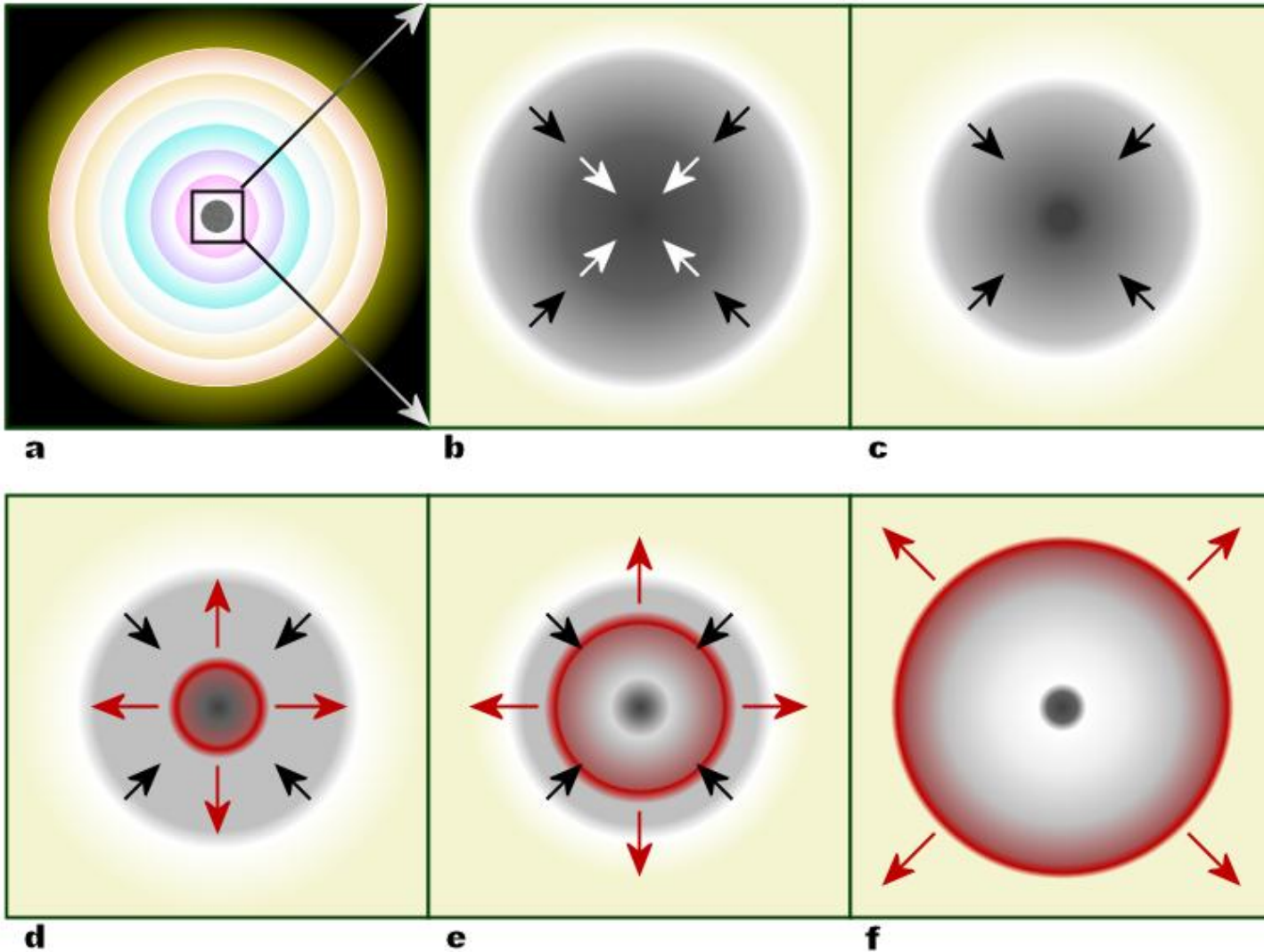
Processo URCA



Colapso e explosão (1 segundo)

Os neutrinos foram detectados na SN 1987A

Supernovas tipo II: implosão e explosão

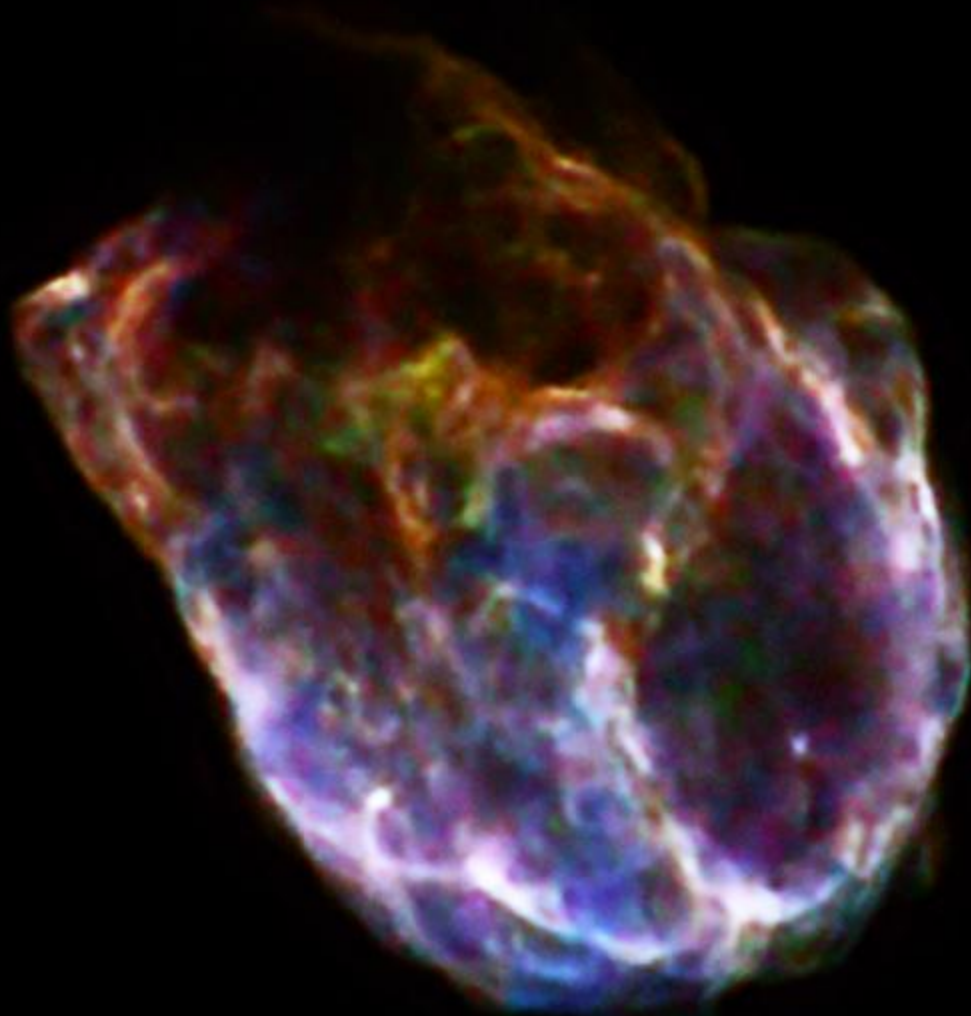


A Nebulosa do Caranguejo

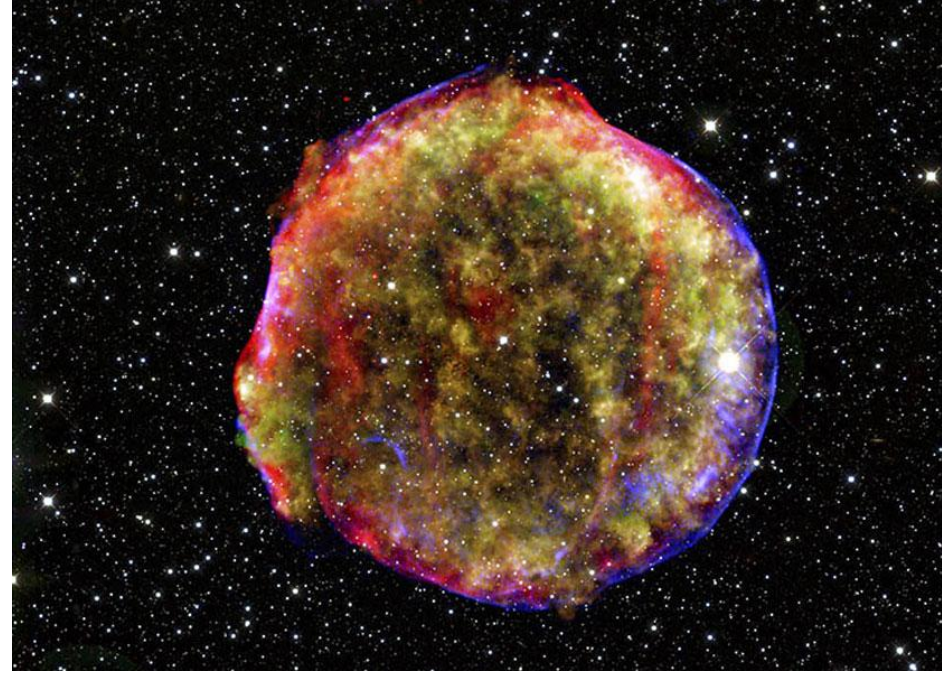
Supernova de 1054 (NASA: Chandra)



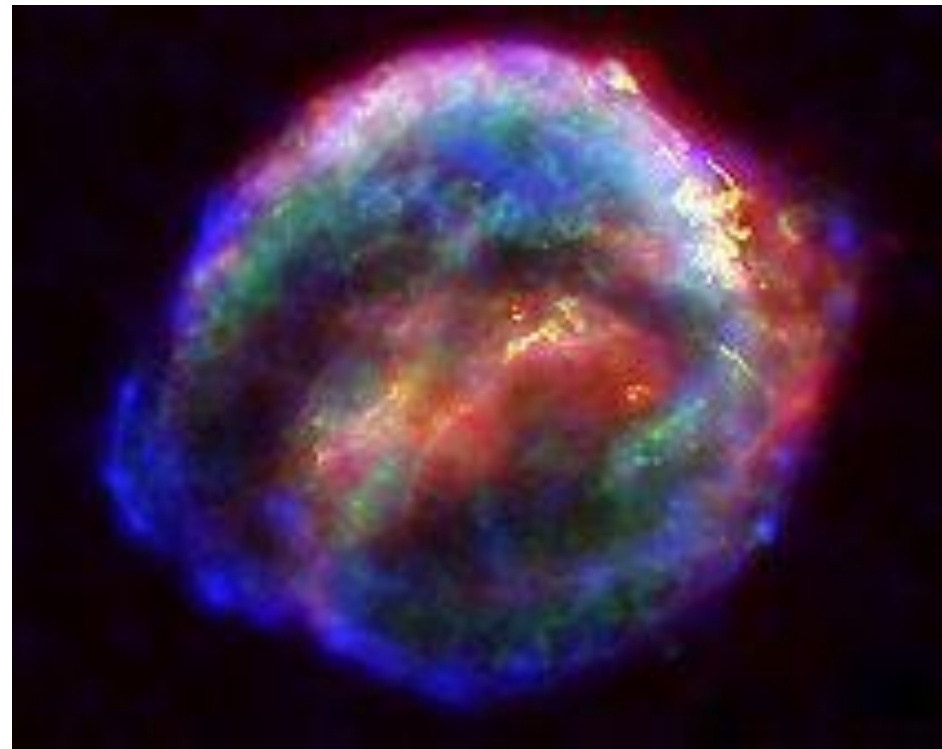
N 132 em Raios-X
(Chandra-NASA)



- Supernova de Tycho (1572)



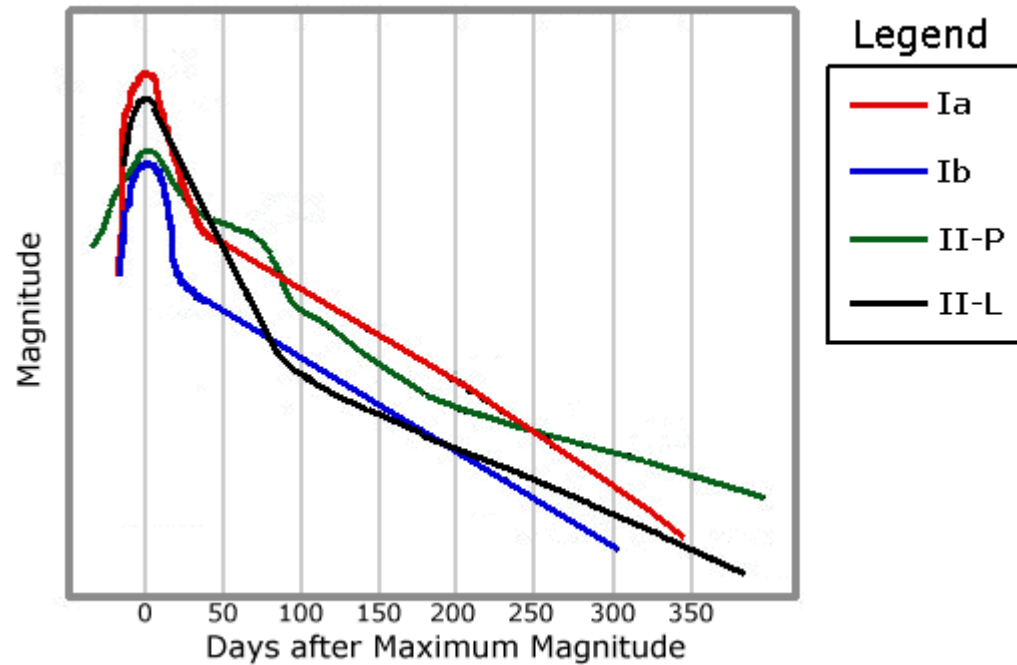
- Supernova de Kepler (1604)



Supernovas do tipo I e II:

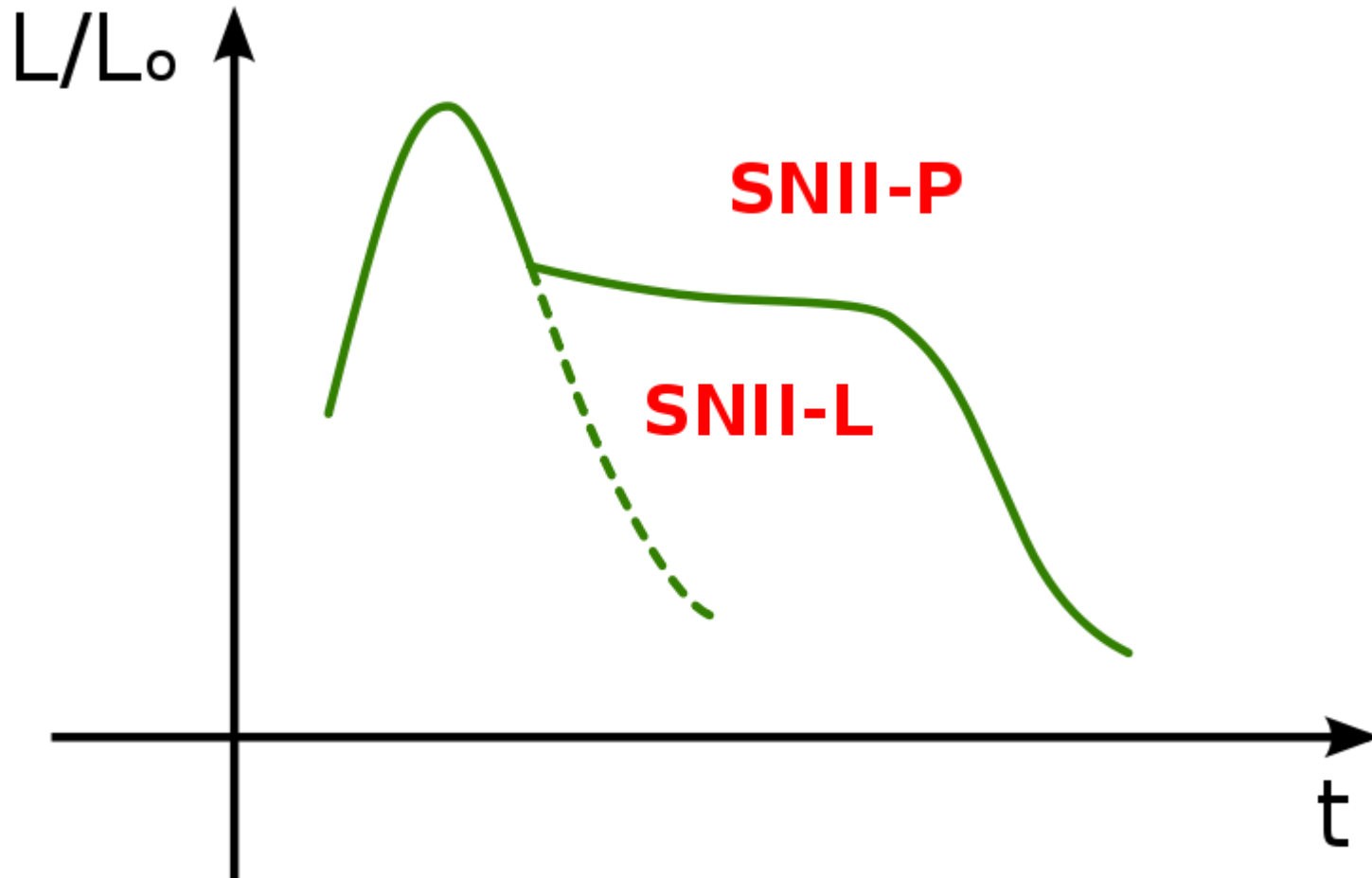
tipo I: não tem H

tipo II: tem H

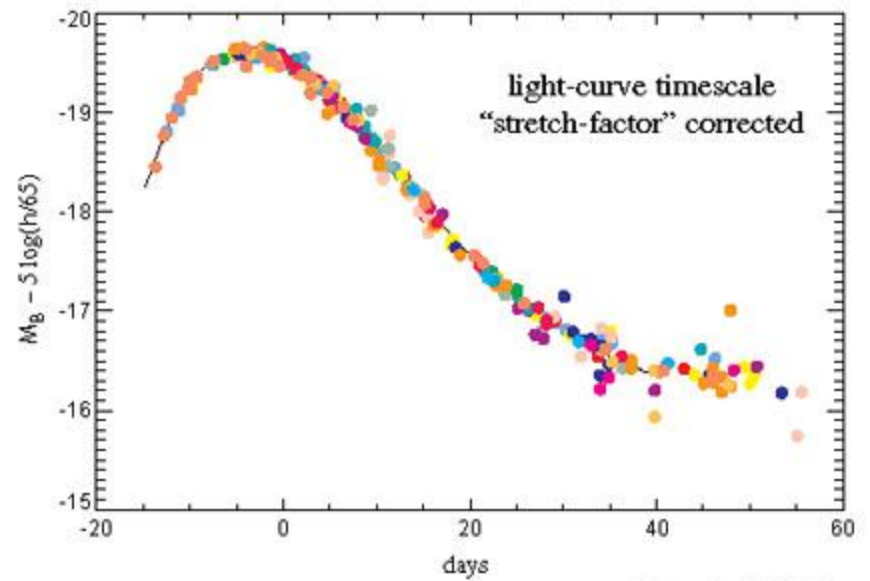
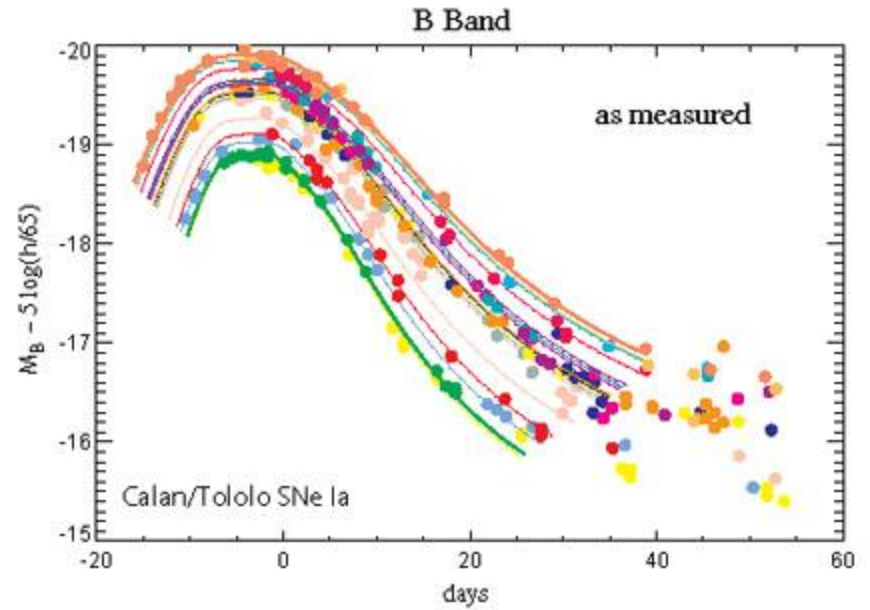


SNII-P (com plateau)

SNII-L (sem plateau)



SNIa



Kim, et al. (1997)

- SNIa
- Variável cataclísmica
- $M(a.b.) > 1.4 M_{sol}$



Credit: NASA/CXC/M. Weiss

Curva de luz de SNIa

- Ni^{56} → meia vida = 6 dias
- Co^{56} → meia vida = 77 dias

