

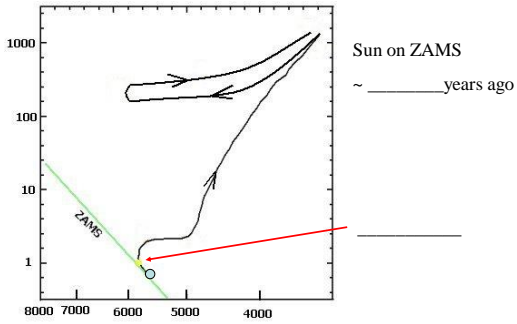
Post - MS Evolution

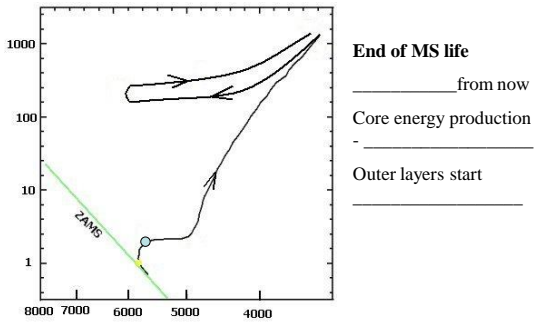
How do stars die?
It depends upon their _____

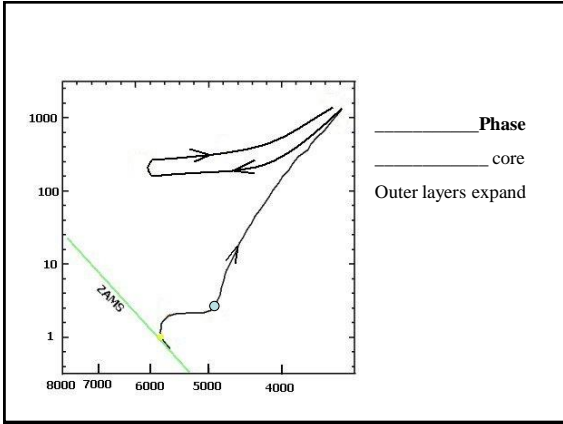
1 M_⊙ Post - MS Evolution

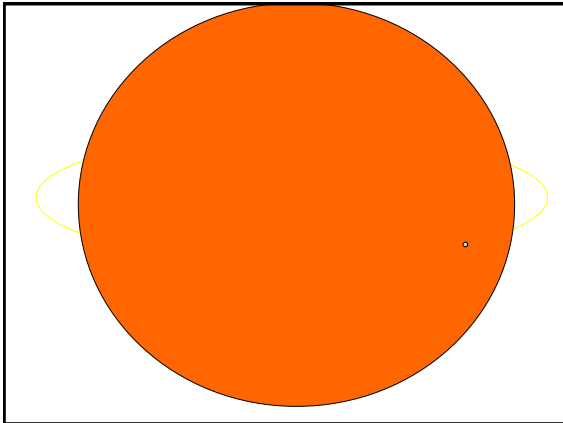
What will happen to the Sun?

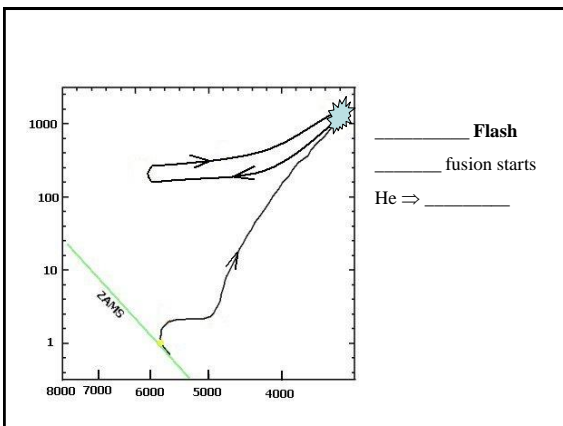
Summary of Evolution

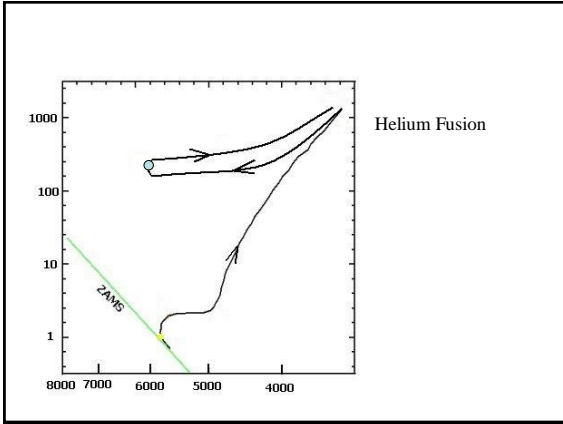


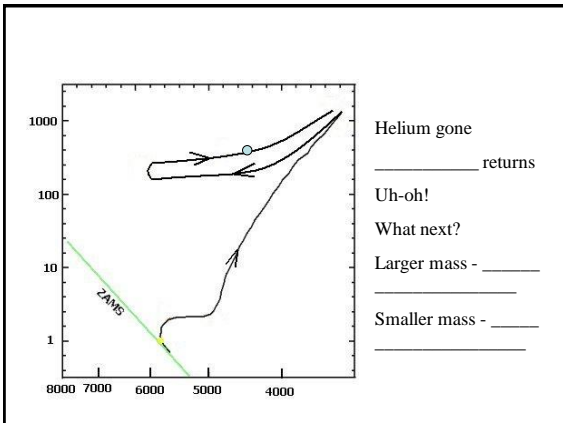












Helium gone
 _____ returns
 Uh-oh!
 What next?
 Larger mass - _____

 Smaller mass - _____

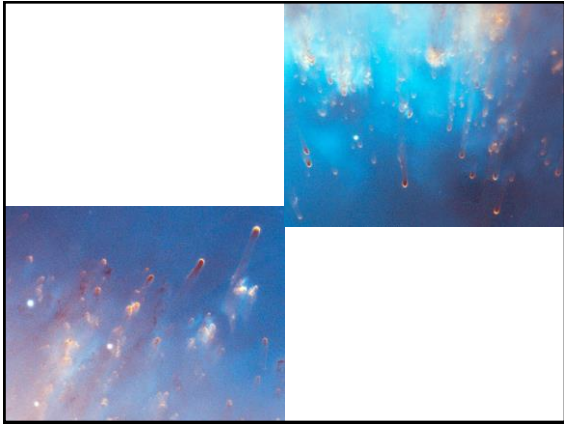
No more major fusion
 Core gets _____ \Rightarrow _____
 Outer layers expand
 and expand
 and expand
 Forces push outer layers out and totally away
 Star enters into its _____ **Stage**

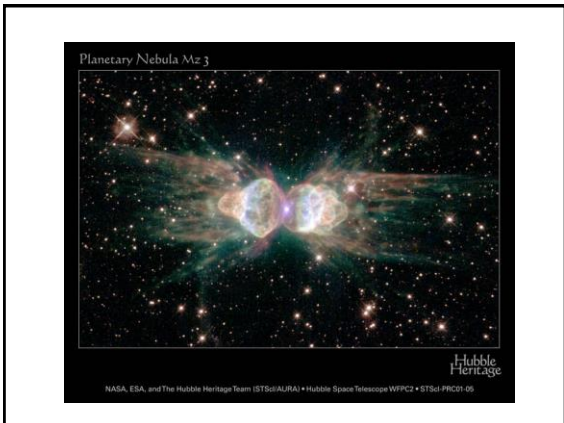
Planetary Nebula Stage





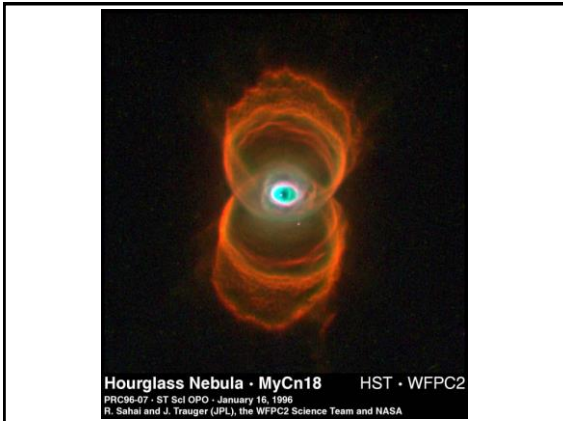


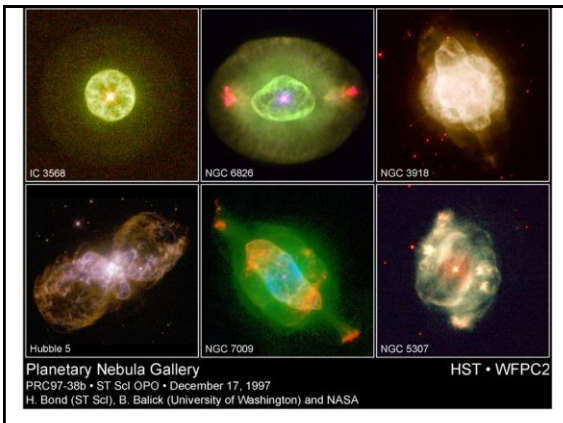


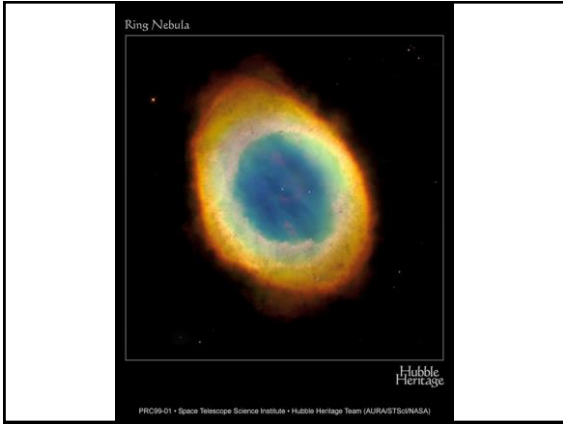


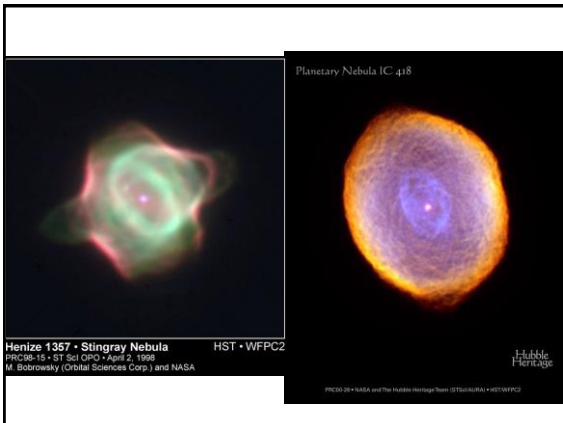


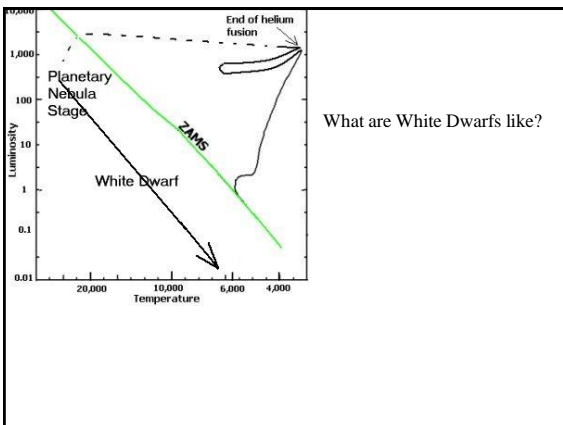












White Dwarfs

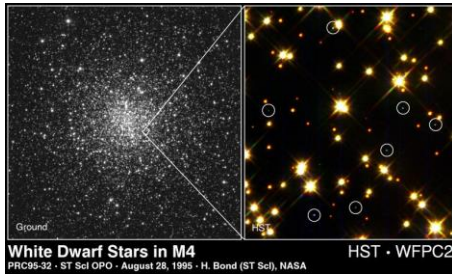
Hot - Temperature typically 10,000's K

Small - Radius = _____

Faint

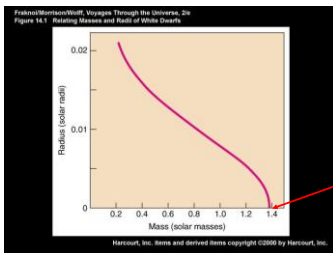
Dense - 1,000,000 gm/cc = 1 Volkswagen/cc





Mass - limited to less than ____ M_{\odot} - why?

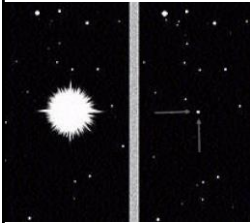
Subramanyan Chandrasekhar



The _____

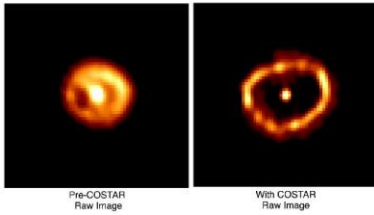
_____ M_{\odot}

White Dwarf in a [close binary system](#).....

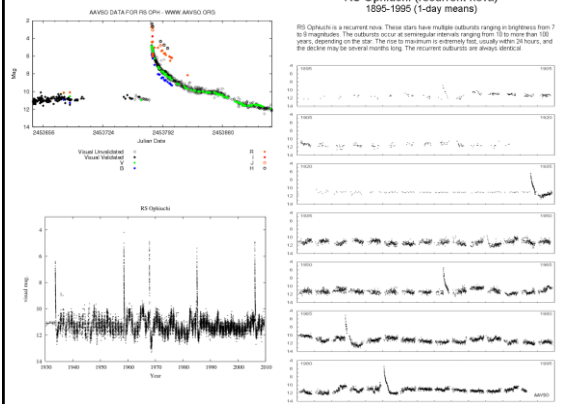


Close binary white dwarf system
 100,000 L_{\odot}
 Bright for days or weeks
 Has the potential to repeat

Nova Cygni 1992
 Hubble Space Telescope
 Faint Object Camera



RS Ophiuchi (recurrent nova)
 1995-1995 (1-day means)



| | $M < 0.1 M_{\odot}$ | $0.1 M_{\odot} < M < 2 M_{\odot}$ | $2 M_{\odot} < M < 8 M_{\odot}$ |
|------------------|---------------------|-----------------------------------|---------------------------------|
| Main Sequence | | | |
| Red Giant | | | |
| Planetary Nebula | | | |
| White Dwarf | | | |
| Life span? | | | |
