

## **Suggestions for Literature Projects (Part I)**

1. Nucleosynthesis yields for different stellar masses
2. Early galactic and extragalactic chemical evolution
3. Line profiles, spectra of SNe
4. Light curves of SNe
5. Equation of state for hot, dense matter
6. Neutrino heating/cooling mechanisms
7. *Large scale instabilities in the core collapse (the SASI mechanism)*
8. r-process environment
9. Type Ia mechanisms
  - a) detonation/deflagration
  - b) nucleosynthesis
  - c) progenitors of Type Ia SNe
10. Radioactive isotopes in SNe and ISM
11. supernova remnants
  - a) nucleosynthesis
  - b) hydrodynamic structure
12. SN 1987A ring collision
13. *What have we learned from SN 1987A?*
14. *Detection of neutrinos from SNe*
15. Gravitational waves from collapsing stars
16. Dust formation in SNe
17. *Type IIn SNe*
18. Luminous Blue Variables
19. Simulations of convection and nuclear burning
20. Binary evolution of massive stars
21. Determinations of nuclear burning rates

22. Different end points (black hole or neutron star) as function of stellar mass of progenitor

23. GRBs

- a) progenitors
- b) explosion models
- c) host galaxies and environment
- d) merger models