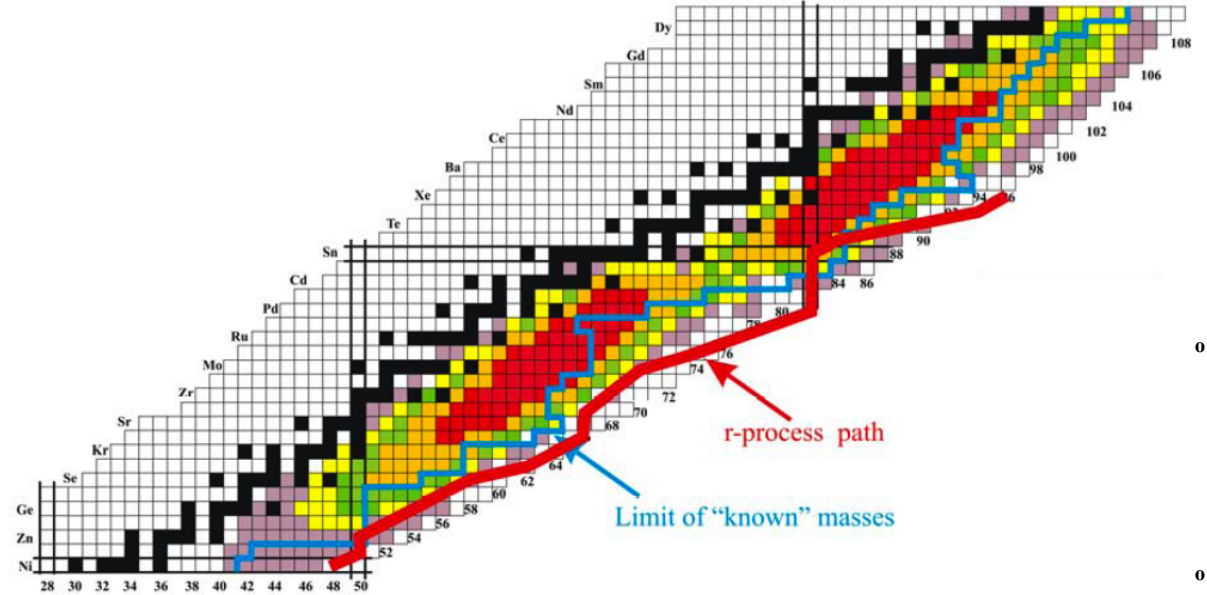
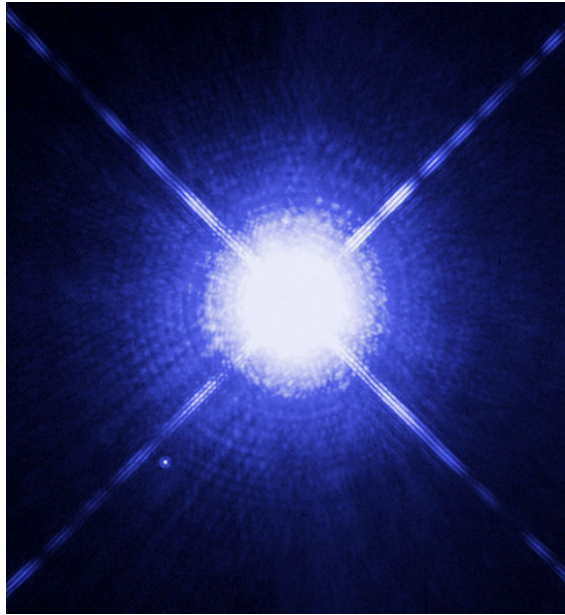


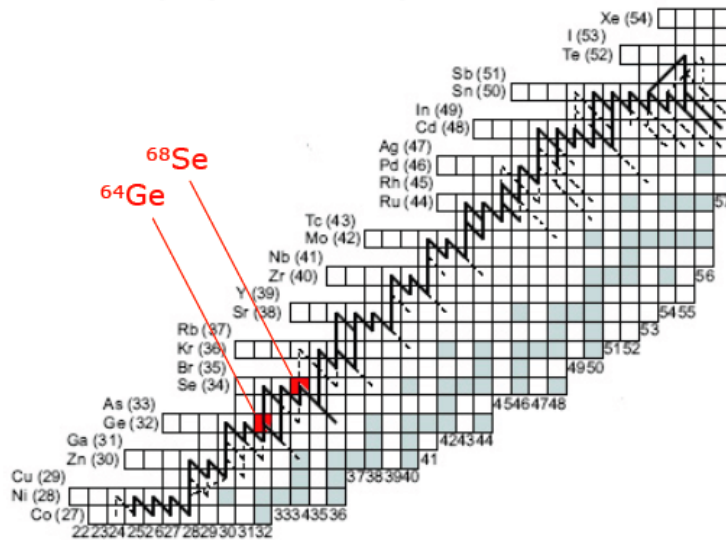
Where are NLD Needed: Nuclear Astrophysics

Binary stars XRB: Sirius



SN 1987 A

the rp-process path

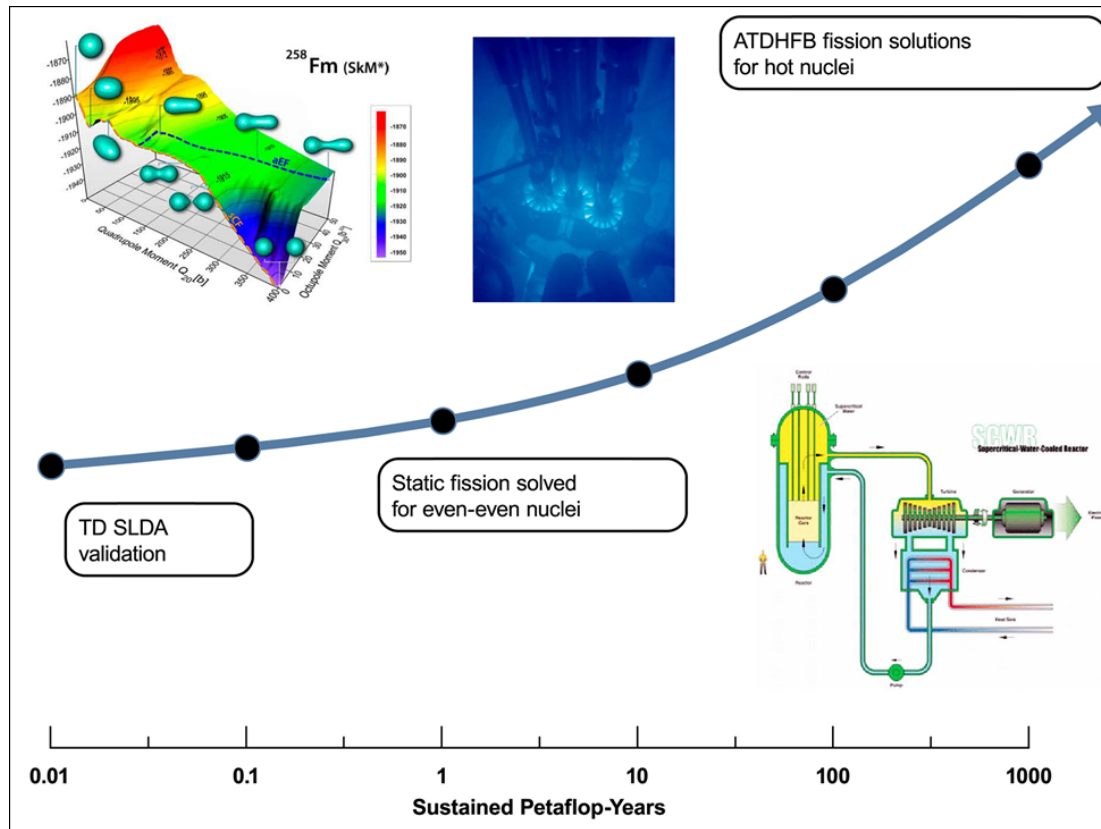


Schatz et al. Phys. Rep 294 (1998) 167-298



Extreme Computing Goals

<http://extremecomputing.labworks.org/nuclearphysics/report.stm>



UNEDF:

- Masses
- Spectroscopy
- Level densities
- $d\sigma/d\Omega$

Reaction DB:

talys (CEA),
McGNASH (LANL)

MCNPX:
mcnpx.lanl.gov

DFT Extensions Talks

DFT Extensions

- 11:10 - 11:20 Introduction (Horoi)
- 11:20 - 11:50 QRPA code for arbitrary axially-symmetric nuclei (Terasaki/Engel)
- 11:50 - 12:20 Quantum Dynamics with TDSLDA (Bulgac)
- 12:20 - 12:50 Making Effective Interactions more Effective (Johnson)

2:00 - 3:00 Leadership Class Configuration Interaction Code Meeting Report (Vary/Johnson)

4:00 - 5:00 Hands-on experience with LCCI codes (Brown/Maris/Krastev)

DFT Extensions

- 7:00 - 7:30 New High-Performance Algorithm for Nuclear Level Densities and Applications (Senkov/Horoi)
- 7:30 - 7:50 Progress with the LCCI Code NuShellX@MSU (Brown/Mcdonald)
- 7:50 - 8:20 Progress and Applications of BIGSTICK CI Code (Krastev/Johnson/Ormand)
- 8:20 - 8:50 TD Approaches to Structure and Reactions (Nakatsukasa)