

FY 2002 Tasks

III.0 Task Coordination (Size 0)*

III.1 Mechanical design, maintenance and integration (Nelson/Fogarty)

- a. Document requirements and system parameters (ORNL 10K, Size 0)
- b. Configuration, layout and CAD, maintenance and start up (ORNL 60K)
- c. Define penetration (ORNL 10K)

III.2 Pumping and divertor function integration

- a. Design for divertor functions (SNL 100K)
- b. Hydrodynamics and heat transfer Included in III.3-b\
- c. Particle pumping (LLNL 20K, SNL 20K)

III.3 Liquid wall fluid flow configuration and design

- a. Hydrodynamics and heat transfer for inlet, main flow, penetration and exit (UCLA Morley, Smolentsev and Wang 70K)
- b. Plasma-liquid surface interactions (rognlien, cover under Task-A)
- c. Plasma-liquid wall interaction (Hassanein 50K)
- d. Alternative confinement concept investigating (Moir 20K)

III.4 Tritium recovery and control (Size 0)

III.5 Nuclear analysis

- a. Neutronics (Youssef 50K) The key issue is to do multi-dimensional calculation on penetration.
- b. Activation (Khater 20K) Na, Ga activation. Flibe/flinabe activation products production rates.

III.6 Material support to be determined

III.7 Safety Merrill

- a. Safety assessment for Na and Ga system. (20K)_
- b. Safety assessment on Be system (20K)(Can we use BE?)
- c. Flinabe support (20K)

III.8 Power conversion (Size 0)

III.9 Flibe./flinabe chemistry (Size, 0)

III.10 Task-VI support (Size 0)

* Size is supported by VLT