

# Issues of Evaporation ~~Spray~~

## Cooling Concept

- Thermalhydraulics - *VAPOR/ LIQUID SEPARATION*
- Structural response and lifetime at very high temperatures
- Tritium breeding and shielding - *10 to 20*
- Design integration

## **Breakdown by Concept and Task**

### Evaporative Spray Cooling Concept (ESCC)

#### 9. Thermal hydraulics and power conversion assessment of spray cooling concepts.

ANL, 0.25 FTE (POWER CONVERSION, MHD MATERIALS LIMITS, DESIGN)  
UW, 0.05 FTE (thermalhydraulics)  
UCSD, 0.15 FTE (thermalhydraulics) FW - 2 PHASE FLOW  
SNL, {0.1 FTE from PFC Program}

#### 10. General mechanical design implementation and analysis, including neutronics and activation

ORNL, 0.1 FTE (design)  
UW, 0.15 FTE (neutronics)

## OTHER TASKS - ANL

DISRUPTION ANALYSIS - 0.25 FTE (HASSANEIN)

MATERIALS - 0.15 FTE (NATESAN  
BILLONE  
MASUMDAR  
MATTAS)

EVALUATION CRITERIA - 0.05 FTE (MATTAS)

~~POWER CONVERSION~~ - ~~0.15 FTE (SZE)~~

## STRUCTURAL CRITERIA AND HEAT LOAD LIMITS

- FW ? (MASUMDAR)
- JV