

# Summary: ITER/US-PFC Work/Issues (Session old 4)

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- US ITER contributions: portion of magnets, diagnostic packages, ICRH/ECH, module 18, pumps, divertor cooling, pellet injector
- Some tasks through ITPA, e.g., oxygen baking, gas-kill disruption
- Some key issues: tritium inventory, ELMs, PFC material (Sauthoff)
  
- Radial convective plasma transport gives enhanced Be sputtering
- Far-SOL plasma, second X-point needs to be included (Rognlien)
  
- Be main-chamber sputtering with convection  $\sim 1\text{nm/s}$  (Brooks)
- WBC modeling of PISCES-B Be photon emission “marginally” agrees
  
- HEIGHTS includes vapor, splashing for large ELMs (Hassanein)
- Core C contamination through private-flux during ELM may occur
  
- PFC code survey shows a wide range of capability (Rognlien)
  
- PFC exper. survey includes single-purpose & integrated (Bastaz)

# Summary: ITER/US-PFC Work/Issues (Session 4) cont.

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- **DiMES has many uses: tile-gap, Mo mirrors, CH<sub>4</sub>, dust; extended to midplane through MiMES (Wong)**
- **PISCES-B Be experiments providing much needed data (Doerner)**
- **ELM simulator plasma with theta-pinch is beginning to work (Ruzic)**
- **Sprayed Be has improved structure with castellation (Youchison)**
- **Test-blanket mod.: two options - pebble bed & liquid Pb-Li ( Morley)**
- **Discussion**
  - May need to shift more effort toward ITER-relevance (Nardella)
  - Liquid-wall work has high leverage, payoff (Brooks, Majeski, Kaita)
  - Solid material temperature effects are very important (Wong)
  - Priorities seem to be tritium and ELMs (Ulrickson, Maingi)
  - Consider expanding ITPA divertor with more Technology (Sauthoff)
  - EU-style task-force may also be effective (Skinner)