

PFC Session 9 Summary: Four main questions

- What is the right balance between small test stands, bigger test stands, and FNSF?
 - One view: need staged single effect test stands, graduated to a few multi-effects ones, and then maybe one or two larger ones, since many small ones won't get you all the needed R & D.
 - Need test stands for future machines, but also near term long pulse Asian superconducting tokamaks
 - New effects will be discovered in multi-effect test stands: discovery science. General consensus is that a multi-purpose linear device user facility has a role in the current PMI/PFC portfolio.
 - Mission of FNSF should be defined to identify the needs
- What is or should be the role/mission of FNSF?
 - Different opinions on what the right balance should be between neutron source vs. burning plasma physics; much work done in 80's and 90's considering these questions
 - nuclear heating, tritium control and handling, and breeding are important

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- What is the right balance solids and liquids?
 - People in this community generally, but not unanimously, in favor of more liquid metal work, especially looking more closely at Sn, Sn-Li, and Ga. Possibility to look at Sn in LTX.
 - All agree that ITER's success top priority; continued evaluation and testing of W, Be, and C are important; however, some design features in ITER don't extrapolate to a DEMO
 - Various discussions of pros/cons of liquid metals, especially lithium; need to do more work on liquid metal MHD: expt. + modeling
- Role of international collaborations?
 - General idea that JET's ILW expt. should be supported by modeling from this community, as well as, direct participation
 - General sense that more people would like to work with EAST, which is planning a PFC upgrade for long pulse - how to make this happen?
 - Time table of call for international proposals unclear; Zarnstorff committee report nearly finalized, and will be taken up by FESAC