ARIES Town Meeting:

"Edge Plasma Physics and Plasma Material Interactions in the Fusion Power Plant Regime"

AGENDA

Thursday, May 20

8:00 Registration and pre-meeting refreshments

1. Background and power plant requirements (chair: A. R. Raffray)

8:30	M. Tillack (UCSD)	Meeting goals and logistics
9:00	S. Lisgo (ITER)	Description of ITER's edge regime
9:30	F. Najmabadi (UCSD)	Edge plasma and PMI concerns for fusion power plants
10:00	BREAK	
10:30	L. Snead (ORNL)	PMI materials behavior & constraints in a reactor environment
11:00	R. Nygren (SNLA)	HHFC designs & constraints in a reactor environment
11:30	LUNCH BREAK	

2. Physics of the edge - current understanding and projections to ITER and power plants (chair: N. Asakura)

12:30	Rajesh Maingi (ORNL)	Heat flux measurements and modeling from C-Mod, DIII-D, and NSTX for the FY10 Joint Research Milestone and implications for power producing devices.
1:00	Zeke Unterberg (ORNL)	Fuel retention studies in present-day tokamaks and its relevance to a future fusion power plant
1:30	Andrea Garofalo (GA)	QH-mode and ELM-free regimes
2:00	John Wesley (GA)	Disruptions and off-normal events
2:30	BREAK	

3. Modeling of the tokamak edge (chair: R. Maingi)

3:00	Tom Rognlien (LLNL)	UEDGE, edge turbulence, and kinetic effects
3:30	D. P. Coster (MPI, Garching)	SOLPS and PMI modeling
4:00	Daren Stotler (PPPL)	Neutral transport from wall to scrape-off layer
4:30	Nobuyuki Asakura (JAEA)	Power exhaust simulation for the SlimCS divertor with the SONIC code
5:00	ADJOURN	

6:30 Dinner at Rock Bottom Brewery (6:30-7:00 Happy Hour, 7:00 Buffet Dinner)

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8:00 Pre-meeting refreshments

4. Experimental benchmarking of models for power plants (chair: M. S. Tillack)

8:30 Chris Holland (UCSD) The status of edge plasma modeling and benchmarking

Panel Discussion

9:00 C. Kessel (PPPL), panel leader
George Tynan (UCSD)
Rajesh Maingi (PPPL)
others to be invited

10:30 BREAK

5. Innovative ideas (chair: J. Menard)

11:00 M. Kotschenreuther (U. Texas) The Super X-Divertor for high power density tokamaks

11:30 D. Ryutov (LLNL) Snowflake divertors for power plants

12:00 LUNCH BREAK

1:00 Richard Majeski (PPPL) Liquid metal PFC's for power plants

1:30 Peter Stangeby (U.Toronto) Carbon as a flow-through consumable PFC material

2:00 Christian Linsmeier (IPP MPG) Self-passivating tungsten alloys for first wall application

2:30 BREAK

6. New device contributions to edge physics benchmarking

Panel Discussion

3:00 A. Turnbull (GA), panel leader
Jon Menard (PPPL)
Ron Stambaugh (GA)
Martin Peng (ORNL)
others to be invited

7. Conclusions and Future Plans (Working Group)

4:30 Tillack/Kessel/Turnbull Discussion, Conclusions, Documentation, Next steps

5:00 ADJOURN