

ReNeW Theme III Workshop Agenda
March 4-6, 2009

| Cross-Cutting Presentations and Thrusts (Joint with Theme 4) | | | | | |
|---|---|--|------------------------|------------------|-----------------|
| Date | Time | Topic | Presenter | Duration | |
| 3/4/09 | 9:00 | Technology Readiness Levels for Fusion | M. Tillack | 20:00 | |
| | 9:20 | Overview of the Fusion Development Facility | R. Stambaugh | 20:00 | |
| | 9:40 | Fusion Nuclear Science Research Thrust Using a Full Fusion Nuclear Environment | M. Peng | 20:00 | |
| | 10:00 | Additional Q&A, Discussion | All | 20:00 | |
| | 10:20 | Coffee Break | | 20:00 | |
| | 10:40 | Plasma Facing Component Development on NHTX | R. Goldston | 20:00 | |
| | 11:00 | An Energy Sustainment Science Mission | D. Whyte | 20:00 | |
| | 11:20 | Plasma Facing Component Development Needs | D. Youchison | 20:00 | |
| | 11:40 | Additional Q&A, Discussion | All | 20:00 | |
| | 12:00 | Lunch | | | |
| | Taming The Plasma Material Interactions Theme Workshop | | | | |
| | Date | Time | Topic | Presenter | Duration |
| | 3/4/09 | 13:00 | Theme III Introduction | M. Ulrickson | 25:00 |
| 13:25 | | Discussion | All | 05:00 | |
| 13:30 | | PWI Panel Introduction | J. Brooks | 25:00 | |
| 13:55 | | Discussion | All | 05:00 | |
| 14:00 | | PFC Panel Introduction | C. Wong | 25:00 | |
| 14:25 | | Discussion | All | 05:00 | |
| 14:30 | | Internal Component Introduction | R. Callis | 25:00 | |
| 14:55 | | Coffee Break | All | 30:00 | |
| 15:25 | | Discussion | All | 05:00 | |
| 15:30 | | Introduction to Large Thrusts | M. Ulrickson | 05:00 | |
| 15:35 | | Super X Divertor | M. Kotschenreut | 30:00 | |
| 16:05 | | Discussion | All | 20:00 | |
| 16:25 | | Taming PMI - energy Sustainment | D. Whyte | 30:00 | |
| 16:55 | | Discussion | All | 20:00 | |
| 17:15 | | Addressing PMI Knowledge Gaps | Baylor | 30:00 | |
| 17:45 | | Discussion | All | 20:00 | |
| 18:05 | End Session | | 05:00 | | |

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3/5/09

Parallel sessions

PWI Panel

| Time | Topic | Presenter | Duration |
|-------|---|-----------|----------|
| | Towards building a credible vision for a DEMO | | |
| 9:00 | Edge Transport | LaBombard | 15:00 |
| 9:15 | Discussion | | 05:00 |
| | Development and Validation of a Boundary | | |
| 9:20 | Plasma Model | Leonard | 15:00 |
| 9:35 | Discussion | | 05:00 |
| | Prediction of PFC plasma fluxes by improved | | |
| 9:40 | edge/scrape-off-layer simulations | Rognlien | 15:00 |
| 9:55 | Discussion | | 05:00 |
| 10:00 | Coffee Break | | 20:00 |
| | Plasma Material Interactions (PMI)-Thrust for | | |
| | Enhancing Modeling & Predictive | | |
| 10:20 | Computations | Brooks | 15:00 |
| 10:35 | Discussion | | 05:00 |
| | Integrated Edge-Plasma and Plasma-Wall | | |
| 10:40 | Interaction Research | Stotler | 15:00 |
| 10:55 | Discussion | | 05:00 |
| | Fundamental science of the synergy of multi- | | |
| | species interactions in a high plasma-heat- | | |
| 11:00 | flux environment | Krstic | 15:00 |
| 11:15 | Discussion | | 05:00 |
| | Off-Normal Events in a Fusion Development | | |
| 11:20 | Facility | Strait | 15:00 |
| 11:35 | Discussion | | 05:00 |
| | Enhancing Modeling and Simulation of Plasma | | |
| | Instabilities/Surface Interactions with | | |
| 11:40 | innovative mitigation techniques | Allain | 15:00 |
| 11:55 | Discussion | | 05:00 |
| 12:00 | Lunch | | 1:00 |

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| | | | | |
|---------------|------------------------------------|--|----------|-------|
| 3/5/09 | 13:00 | PWI issues and research opportunities | Stangeby | 15:00 |
| | 13:15 | Discussion | | 05:00 |
| | | Innovative divertor development to solve the | | |
| | 13:20 | plasma heat-flux problem | Rognlien | 15:00 |
| | 13:35 | Discussion | | 05:00 |
| | | Simulating the Demo Edge Plasma in a | | |
| | 13:40 | Compact High Heat Flux Experiment | Maingi | 15:00 |
| | 13:55 | Discussion | | 05:00 |
| | | The Role of a Long-Pulse, High-Heat-Flux, Hot- | | |
| | | Walls Experiment in the Study of PWI | | |
| | 14:00 | Interactions for CTF and Demo | Goldston | 15:00 |
| | 14:15 | Discussion | | 05:00 |
| | 14:20 | Management of dust in fusion devices | Maingi | 15:00 |
| | 14:35 | Discussion | | 05:00 |
| | 14:40 | Coffee Break | | 20:00 |
| | PMI Theme Joint Session | | | |
| 15:00 | Engineering Instrumentation | Nygren | 30:00 | |
| 15:30 | Discussion | | 20:00 | |
| 15:50 | ICRF-Edge and Surface Interactions | D'Ippolito | 30:00 | |
| 16:20 | Discussion | | 20:00 | |
| 16:40 | Diagnostic Investments for PMI | Stangeby | 30:00 | |
| 17:10 | Discussion | | 20:00 | |
| 17:30 | Panel Leaders meeting | Closed* | 30:00 | |
| 18:00 | End Session | | | |

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Parallel sessions

PFC Panel

| Time | Topic | Presenter | Duration |
|-------|--|-----------|----------|
| 9:00 | Synergistic Effects of Radiation Damage and PMI | Hsu | 15:00 |
| 9:15 | Discussion | | 05:00 |
| 9:20 | Advanced refractory alloys | Allain | 15:00 |
| 9:35 | Discussion | | 05:00 |
| 9:40 | Carbon as a flow-through, consumable PFC material | Stangeby | 15:00 |
| 9:55 | Discussion | | 05:00 |
| 10:00 | Coffee Break | | 20:00 |
| 10:20 | BW-Surface for CTF and DEMO | Wong | 15:00 |
| 10:35 | Discussion | | 05:00 |
| 10:40 | Liquid Metal Plasma –Facing Components | Majeski | 15:00 |
| 10:55 | Discussion | | 05:00 |
| 11:00 | Long-Pulse, High-Heat-Flux, Hot-Walls Device for PFC | Goldston | 15:00 |
| 11:15 | Discussion | | 05:00 |
| 11:20 | FDF and PFC solutions | Leonard | 15:00 |
| 11:35 | Discussion | | 05:00 |
| 11:40 | FDF Divertor | Garafalo | 15:00 |
| 11:55 | Discussion | | 05:00 |
| 12:00 | Lunch | | 1:00 |

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Strengthened Sustained and Integrated
Approach for Modeling and Testing

| | | | | |
|---------------|------------|---------------------------------------|-----------|-------|
| 3/5/09 | 13:00 | HHFCs | Nygren | 15:00 |
| | 13:15 | Discussion | | 05:00 |
| | | The Case for Helium-Cooled Refractory | | |
| | 13:20 | PFCs | Youchison | 15:00 |
| | 13:35 | Discussion | | 05:00 |
| | | | | |
| | 13:40 | PFC test facilities | Youchison | 15:00 |
| | 13:55 | Discussion | | 05:00 |
| | | | | |
| | 14:00 | An ITER-TBM Experimental Thrust | Morley | 15:00 |
| 14:15 | Discussion | | 05:00 | |

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Parallel sessions

Int Comp Panel

| Time | Topic | Presenter | Duration |
|-------|--|-----------|----------|
| 9:00 | Major measurements gaps | Peebles | 15:00 |
| 9:15 | Discussion | | 05:00 |
| 9:20 | Reliable Plasma Heating and Current Drive using ICRF | Caughman | 15:00 |
| 9:35 | Discussion | | 05:00 |
| 9:40 | The Problem of RF Launchers in a DEMO | Wilson | 15:00 |
| 9:55 | Discussion | | 05:00 |
| 10:00 | Coffee Break | | 20:00 |
| 10:20 | RF Launchers that Survive | Temkin | 15:00 |
| 10:35 | Discussion | | 05:00 |
| 10:40 | 3D Internal Coils | Menard | 15:00 |
| 10:55 | Discussion | | 05:00 |
| 11:00 | RF Antennas, Launching Structures | Callis | 15:00 |
| 11:15 | Discussion | | 05:00 |
| 11:20 | Panel to join other panels | | |

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| 3/6/09 | Discussion and Thrust Forming | | |
|--------|----------------------------------|----------------|----------|
| Time | Topic | Presenter | Duration |
| 9:00 | Introduction to Thrust Formation | Maingi | 10:00 |
| 9:10 | PWI Thrusts | All | 55:00 |
| 10:05 | Break | All | 05:00 |
| 10:10 | PFC Thrusts | All | 55:00 |
| 11:05 | Break | All | 05:00 |
| 11:10 | IC Thrusts | All | 55:00 |
| 12:05 | Break | All | 05:00 |
| 12:10 | Lunch | All | 1:00 |
| 13:10 | Panel working session | Closed* | 20:00 |
| 13:30 | IC Panel | Closed* | 55:00 |
| 14:25 | Break | Closed* | 05:00 |
| 14:30 | PFC Panel | Closed* | 55:00 |
| 15:25 | Break | Closed* | 05:00 |
| 15:30 | PWI Panel | Closed* | 55:00 |
| 16:25 | Break | Closed* | 05:00 |
| 16:30 | Wrap-up | Closed* | 30:00 |
| 17:00 | End Workshop | | |

***Closed means priority will be given to panel members when issues are discussed.
This is primarily a working session to polish the thrusts.**