

# Workshop Goals and Objectives

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ALPS Workshop, May 8-9, 2000, Argonne, IL



# Goals and Objectives

- Present new results
- Review understanding of key issues
- Determine impact of results on feasibility of concepts and choices for materials
  - » Narrow focus
  - » Add new concepts/materials
- Identify key data/modeling needs

# Agenda

- Main topics
  - » Tokamak experiments
  - » Heat transfer/design
  - » PMI experiments and modeling
- Joint ALPS/APEX session on Plasma Edge and Plasma Material Interactions
- A significant portion of time has been left for discussion
- Use Chits to facilitate questions and comments and to keep a permanent record

# ALPS/APEX Chit

Name \_\_\_\_\_ Area/Subject \_\_\_\_\_

Question/Comment \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Action

No action required

Response \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Pass along to \_\_\_\_\_ for response

Incorporate into general discussion and program planning



# Trade-offs to be Considered

- Relative emphasis of fusion plasma experiments and lab. experiments.
- Tokamak applications compared to emerging concept applications.
- Near term vs. Long term applications
- Transient effects compared with equilibrium effects
- Areas where experiments are required compared with areas where modeling is preferred

# Near Term vs. Long Term

- Our main emphasis to date has been long term, advanced applications.
- Liquid surface plasma-facing systems provide a tool for adjusting plasma edge conditions and for plasma diagnostics.
  - » Edge temperature and density
  - » Particle gettering
  - » Measurements of influx into plasma
- Small modules could be used near term to provide plasma physicists with an additional tool.
- We should consider greater emphasis on near term applications working more closely with plasma physics community.

# Near Term Possibilities

- Look into how a liquid surface can be used as a diagnostic.
- Look into how a liquid surface can be used to pump out impurities to reduce the effective  $Z$  of the plasma.
- Look into how a liquid surface can be used to modify plasma edge.
- Near term engineering development can directly apply to long term development needs

# ALPS Schedule to be Modified

