

Discussion groups

1. Warm dense matter experiments and theory (Frank Bieniosek and Dick More, co-chairs)
2. IFE and shocks (Andrew Ng and John Barnard, co-chairs)
3. Beam Dynamics Experiments (Igor Kaganovich and Bill Sharp, co-chairs)
4. Collaborations (Dieter Hoffmann and Dick Lee, co-chairs)

Discussion Group: Warm Dense Matter – Experiments and Theory

- What are the main experimental objectives of all WDM facilities?**
- What is the range of temperature and density that encompasses the objectives?**
- What are the experiments to address the objectives?**
- What are potential new/improved diagnostics?**
- What are the theory needs for the experiments?**
- What are the theories that will be tested?**
- Can equations of state be built that have fundamental parameters that can be tuned by the experiments?**
- How will droplets and surface tension effects be incorporated into the theory?**
- Are there specialized questions that can be addressed at ion facilities?**

Discussion Group: Inertial Fusion Energy and Shocks

- What are the main areas where inertial fusion target topics can be explored on NDCX-II, GSI or other ion facilities?
- What are some conceptual experiments for ife relevant target experiments on NDCX-II, GSI or other ion facilities?
- What are some conceptual experiments for using ion driven shocks for determining material properties?
- Can we create experiments that put materials in a thermodynamically pure (or nearly pure) state?

Discussion Group: Beam Dynamics Experiments

- What are the beam dynamics experiments that can be tried on NDCX-II? Can these be expressed in terms of limits:
(For example: what factors limit minimum pulse duration?
what factors limit maximum intensity on target?
what factors limit maximum transportable current in solenoids?
-- in quadrupoles?
- What modes of plasma focusing can be employed on NDCX-II?
- What experiments can be done at LBNL, PPPL, GSI, U. Md that could be done in collaboration?

Discussion Group: Collaborations

- What diagnostics are common to each facility represented: (NDCX-II, LCLS, GSI, ...)
- What diagnostics are unique to each facility. (Are they by necessity unique?)
- Are there experiments that could cross check results between two facilities?
- Are there complementary experiments that require two facilities?
- What types of codes are being used at the various facilities?
- Are there codes that would be useful at more than one facility? (Can they be shared?)
- Are there common Equations of State, Conductivity theories, other physics modules that can be shared?