

## §27. 6<sup>th</sup> Japan-US Workshop on the Physics and Engineering of Heavy Ion Beam Inertial Fusion

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On March 4-5, 2002, over twenty Japanese and US researchers participated in the workshop. The first day we met at Lawrence Berkeley Laboratory, to hear talks from both sides, with tours of the US Virtual National Laboratory's High Current Experiments (HCX) and component of Neutralized Transport Experiment (NTX). The second day, at Lawrence Livermore National Laboratory, we discussed additional topics, and toured the 500kV Source Test Stand (STS500) and the National Ignition Facility.

During the meeting, most segments of the HIF (Heavy Ion Fusion) community were

presented, including beam physics, from source to target, chamber dynamics, and target physics. Talks on ion sources, laser plasmas for ion sources, ion beam transport simulations, simulated electron experiments, beam loading effects, and core material research were presented as well as reviews of the major Heavy Ion Facilities and experiments in both Japan and the US.

The objectives of the workshop were to provide an update technical progress and future plans by both parties, and to identify the opportunities for future technical exchanges and possible collaborations. We explored areas where increased collaboration would be mutual benefit, identifying a number of topics. These included bunch compression physics (required in both Muses and IRE projects), technology for high repetition rate induction cells, double focused systems which would use quadrupoles for the first part of the final focus section and a plasma lens for the final part), and simulations and modeling. The workshop also marked the beginning of the second year of US/Japan exchanges in which researchers from each nation make one or two week visit to the other's nation to get a more extensive understanding of the mutual progress being made in Heavy Ion Fusion.

### Reference

- 1) Proceedngs of 6<sup>th</sup> Japan-US Workshop
- 2) HIF news, LBNL-PUB-844-02-05, May (2002) (Virtual national Laboratory for Heavy Ion Fusion)