

# US-Japan IEC Workshop Summary

**Richard A. Nebel**

## **I. Thank you!**

- a. Kudos to Jerry, John, Sue Ann, and UW for a well done workshop.
- b. Thanks to Bob Hirsch for the keynote talk.

## **II. What's new?**

- a. Cylindrical device at Kyoto University.
  - i. More emphasis on this configuration.
- b. First results on electron well in INS-e (LANL).
- c. Fusion product source measurements (UW).
- d. Magnetron source.
  - i. Common theme: lower density operation.
- e. Isotope production from  $D-^3\text{He}$  fusion protons.
- f. Neutral beam injected IEC (UI).
- g. Kansai University IEC fully operational.
- h. Marshall Space Flight Center performing experiments.

## **III. What's improved?**

- a. Modelling.
  - i. Better atomic physics.
  - ii. Better kinetics.
  - iii. Closer agreement with experiment.
    1. Kyushu U, Tokyo Inst of Tech, Kyoto U, UW, UI, Kansai U
- b. Ion sources
  - i. Lower pressure operation
    1. UI, Kyoto U, UW
- c. Applications
  - i. Cylindrical sources for nuclear assay
    1. UI, Kyoto U, Tokyo Inst of Tech
  - ii. "Super-charged" interplanetary space vehicle (UI)