Nuclear Data for the International Fusion Materials Irradiation Facility (IFMIF)

U.S. Attendees

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General Information

- IAEA Technical Meeting (by invitation) – October 4-6, 2005, FZK, Karlsruhe, GE
- Attendance: 24 invited participants from Belgium, Czech Republic, Germany, Japan, The Netherlands, Russia, United Kingdom, and United States
- Objective: Review the needs for and status of nuclear data for the development of IFMIF
- IFMIF: 40-MeV d+Li neutron source for materials testing in support of future nuclear fusion Demo project (not ITER!)

Topics Discussed

- Overview of IFMIF development project and its anticipated nuclear data needs
- Characterization of the d+Li neutron source
- Overview of neutronics calculations for IFMIF
- Status of relevant nuclear data libraries (JENDL-HE, IEAF-2001, EAF-2005, d+Li X-sec data…)
- Deuteron-induced activation
- Overview of experimental nuclear data facilities in Europe, Japan, Russia, and the U.S.
- Nuclear data library testing pertinent to IFMIF
- NEA Nuclear Data Request List
- Suggested IFMIF data development approach
- Plans for a Materials Test Station at the Los Alamos LAMPF facility

Conclusions and Recommendations

- Evaluated nuclear data libraries for IFMIF development needed within next 5-10 years
- Existing libraries such as EAF and FENDL could be extended to meet IFMIF needs
- Experimental facilities exist that could provided IFMIF data but they need support
- The IAEA should establish CRP’s or DDP’s to encourage data development for higher energy neutron reactions and deuteron activation
- There is a need for coordination to insure that available resources are supported and utilized effectively to meet the data needs for IFMIF

Details and Additional Comments

- Meeting documents (agenda, PPT presentations, proceedings…) will be made available in due time at the IAEA-NDS website (http://www-nds.iaea.org/)
- First proposals for CRP and DDP projects will be submitted to the INDC for consideration at its May 2006 meeting
- Additional comments from Ed Cheng and Bob Haight ?