

## **Prospectus for Subgroup B, Fusion Development Path**

Some of the major objectives and organizing principles of this subgroups discussion are:

1. The discussions in this subgroup fall in the intermediate ground between today's fusion status and experiments and the ultimate vision of a fusion reactor. We focus on the problems of fusion energy development that might be taken up in the next 20 years.
2. The discussions should provide an educational opportunity for the attendees to look longer term at what has to be done to actually move to fusion energy. The tasks that must be undertaken tend to evolve from today's largely scientific investigations to eventually nuclear technology issues.
3. The meetings are organized so that everyone gets to hear every presentation and to discuss all the same questions.
4. The meetings are organized so that MFE and IFE people must discuss matters together and educate each other.
5. The focus of the first two days is on overall forward looking roadmaps and the general issues of fusion development that lie ahead, in order to provide framework material for the second two days.
6. The second two days are devoted to discussions of specific machine proposals, examining them for what contributions they can make to fusion development and what research is needed to move them forward.

For each of the next-step opportunities, speakers in the plenary sessions are requested to address their presentations to answering the following questions::

- 1) What technical issues will the proposed step address? What critical fusion energy science and technology issues will this step not address?
- 2) What is the degree of technical risk does the proposed next step entail and is the schedule achievable? Does it depend on critical parallel or previous work as a prerequisite?
- 3) What opportunities are offered by the proposed step to reduce fusion development costs (either in the near term or integrated over time) and to achieve attractive economic and environmental features?
- 4) What are the prospects for significant international participation in the proposed step and what role might this step play in the international fusion program?
- 5) What position will the results, if as expected, put us in to move fusion forward to the next step beyond this proposed step?