

Program Advisory Committee for the National Compact Stellarator Experiment (NCSX)

Charter (Rev. August, 2001)

I. Introduction

The U.S. stellarator community has undertaken a program to develop the physics of compact stellarators. The central element is the National Compact Stellarator Experiment (NCSX), a proof-of-principle experiment for integrated testing of the physics of the high-beta, low aspect ratio, quasi-axisymmetric stellarator concept. The Princeton Plasma Physics Laboratory (PPPL), in partnership with the Oak Ridge National Laboratory (ORNL), leads the NCSX project team.

The NCSX is the focus of PPPL's stellarator research activities, which also include 3D plasma theory and computation, collaborations with other stellarator groups, and (in the future) participation in reactor studies. Good coordination of these activities within PPPL and effective coupling with the wider community are important for optimizing our stellarator efforts. The NCSX project is a major responsibility for the Laboratory, whose success is of high importance to DOE and the fusion program. Community input on a continuing basis is critical to achieving these goals.

A Program Advisory Committee (PAC) has guided NCSX from its inception as a national design study, through the proposal development phase, to a successful physics validation review. Now that the project has moved into conceptual design, the PAC will continue to advise on the physics aspects of NCSX and will broaden its advisory role to encompass other PPPL stellarator activities. The committee advises the PPPL Director on these matters. In addition, other stellarator groups will be invited to present their activities, at their discretion, to the PAC for the purpose of optimizing coordination of the national stellarator program.

II. Responsibilities

The PAC will review the progress of PPPL's stellarator program and advise on plans and priorities. The PAC's responsibilities are 1) to provide the Director of PPPL with technical advice that will help NCSX meet the needs of the U.S. stellarator program and fusion science development generally, 2) to provide the Director of PPPL with

technical advice that will help optimize PPPL's overall stellarator effort, and 3) to provide advice sought by U.S. stellarator groups outside of PPPL, at their discretion.

III. Membership

The PAC members and Chair will be appointed by the PPPL Director. Membership may vary from time to time as the needs of the program evolve.

IV. Meetings

Meetings will be scheduled by the PPPL Director in consultation with the PAC Chair and membership at appropriate intervals. Before each meeting an agenda and a charge, consisting of a specific set of questions for the committee to answer, will be developed by the Director in consultation with the chair. At each meeting, the Laboratory and its collaborators will present briefings and written material to help the committee formulate its advice. Ex-officio members will participate as non-voters in executive sessions of the committee. At the close of each meeting, the PAC will verbally report its findings and recommendations to the Director and the team. The PAC will provide its advice, including but not limited to a response to the charge questions, in a written report to the Director submitted within two weeks after each meeting.