SSC Aperture Task Force Coordination Meeting
24 April 1985 at CDG/LBL

I. Status Review

A meeting of the SSC Aperture Task Force Coordinators was held at the Central Design Group in LBL on 24 April 1985. Attendees were:

Alex Chao	Central Design Group
Ernest Courant	Brookhaven
Alex Dragt	U of Maryland
Don Edwards	Fermilab
Gene Fisk	Fermilab
Christoph Leemann	CDG/LBL
Steve Peggs	CDG
Jack Peterson	CDG

This coordination meeting followed the informal general review meeting of ATF held at LBL on 22 and 23 April, at which Tigner reviewed the schedule for the remainder of FY85. The ATF part of the schedule calls for

5/25 "linear aperture" determination
6/15 "non-linear aperture" status report No. 1
7/31 "non-linear aperture" status report No. 2

The status of the interim summary or progress reports of the ATF working groups was reviewed. The present report schedule is:

Group A, Lattices; basically done, final draft 7 May.

Groups B and G (combined),
The three "aperture" reports (by Edwards, Collins, Harrison) given at review form the present Aperture Summary. These are final and are to be issued as SSC Reports.

Two reports (Spear Expts by Morton et al and Tevatron Expts by Edwards et al) being written for the Vancouver Accelerator Conference in May, will form the present Machine Experiments Summary.

Group C, Magnetic Errors, Report is 85% complete. Tables of systematic and random magnetic errors have been prepared. Final report last week of May.

Group D, Data Base, Accelerator Design Codes, and Computer Networks; Summary report by 4/30 and a separate report on Accelerator Scaling in May.

Groups E and F, Tracking and Analytic Methods. Because of material overlap, there will be a joint report, with Leemann overlooking the analytic aspects and Dragt the tracking aspects. Final draft by 7 June.

The purposes of these reports are to update everyone involved with the SSC and to aid in the magnet selection.

A relationship between required magnet-core radius and cell length would be useful in the magnet-selection process. A sub-group is about to look into this problem.

II. Plans for May, June, July

Updates, for each area:

a) lattice improvements
- Go back to 124.29 (1/7 resonance) in D2 lattice and allow tune scan in $\pm$ 0.01 steps in both X and Y. (85.29 in D1 lattice.)
- Larger β^* (say, 20-30 m) - later.
- Formulate lattices with 50-meter half-cell lengths, as:

name:	D1L	D2L	D1S	D2S	
μ:	60°	90°	60°	90°	phase shift per cell
$L_{1/2}$:	100	100	50	50	meters per half cell

- Same extensions for the C-lattices if D1S and D2S show promise.

b) magnet data
- Improved set of systematic errors (PK-15 coil configuration) to trackers for designs D(4 cm) and D(5 cm) after 1 May.
- Changes after 7/1 will be too late to affect magnet selection.

c) tracking-code developments
- July meeting to review code development results. We need to have definitive suggestions after the meeting as to which program(s) is to be used at CDG to evaluate apertures.
- Two problems with kick codes at present:
  1.) They do not run every time.
  2.) Are the answers correct?
- PATPET to be fixed up.
- Tracking effort to concentrate on C and D lattices (instead of A and C) after Vancouver.

d) D. Edwards will be responsible for a short report for Tigner concerning the linear aperture by 5/25. CDG will provide support. This is high priority.

III. Organization

The seven ATF groups organized for magnet selection are to be combined into five:

A&D Lattice and Data-base, Design Codes
B&G Aperture and Machine Expts
C Magnet Errors
E Tracking
F Analytic

Parallel efforts:

a) Clustered IR's, first meeting 4/25.
b) Realistic Lattices, one meeting of locals so far, not yet organized.

notes by JMP