

Minutes of the SPL steering group

meeting no. 15

date: 31 October 2008

present: O. Brunner, E. Ciapala, R. Garoby, F. Gerigk, R. Losito, J. Tuckmantel, W. Weingarten

Agenda

1. General news and facts
2. SPL collaboration meeting
3. New Actions
4. Next meeting
5. Comments to the minutes

1. General news and facts

- RG reported on a meeting with civil engineering (M. Poehler, L-A. Lopez-Hernandez), where a provisional planning for the construction of SPL and PS2 was discussed. The current planning foresees a start of the integration studies at January 09, a frozen integration at the end of the 3d quarter of 2009 and a frozen civil engineering design for the end of the 3d quarter 2010. A cost estimate would be ready in the middle of 2011 and construction can start in January 2012. The delivery of the buildings and infrastructure is then foreseen for the middle of 2016. Assuming a further 2 years for installation and commissioning brings the start of operation to 2018, which is still acceptable. It is clear however, that this schedule can only be kept if there are enough resources to push the machine and infrastructure design to a level that allows the integration work to proceed. Otherwise one has to take large safety margins on the infrastructure design, which would increase the cost estimate and delay the start of operation to a date, which is not compatible with the lifetime of LHC. RG will continue to inform department heads, and nominate someone to deal with the environmental impact study, land procurement, local communes, etc.
- CEA will continue their HIPPI work within the frame of FP7, the work on cavities (2 beta=1, and one b=0.65) and couplers is within the CNI-PP and the design and construction of a cryo-module comes as a French in-kind contribution.
- FG reported on a first meeting with V. Fedosseev, B. Marsh and M. Petrarca on the possibility of laser stripping for the SPL. They will start with some general considerations on: i) needed laser power, ii) space requirements in the beam line and for the laser, iii) feasibility of laser, iv) power requirements, v) maximum energy variance out of the linac that can be accepted (e.g. the case of failing cavities). A possible show stopper may arise from the long bunches for neutrino applications, which have to be stretched in real space in order to reduce the energy spread.
- FG reported on a first meeting with J. Lettry, Y. Kadi, T. Stora and R. Scrivens with the goal to establish a mode of operation for EURISOL, which is approved by the SPL and EURISOL teams. The goal is also to get a better understanding of the infrastructure needs for EURISOL (size of buildings, electricity needs, etc), so that we can define a possible location on the CERN site. At this stage only realistic estimates are needed, but the civil engineering aspects will not be studied at the same level as for the SPL.

2. SPL collaboration meeting

- a package on beam dynamics was added and the packages on cavity design and cavity construction were merged,

- the package splitting of the workshop can be changed for the collaboration itself,
- and INDICO website will be prepared by Madeleine Cobas,
- for the meeting we proceed with 2 chairs per package, one from CERN (who leads) and a second one from an institute, which will do a large fraction of the work, the preliminary proposal is:
 - ◆ high-power RF: Ciapala/Carter (Lancaster University UK),
 - ◆ Cavity design: Weingarten/Chel (CEA, France),
 - ◆ cryo-modules: Parma/ IN2P3,
 - ◆ beam dynamics: Gerigk or Lombardi/R. Baartman,
- during the meeting we should discuss:
 - ◆ where the electropolishing for additional cavities is done, if we manage to order more cavities than foreseen in the CNI-PP (see above),
 - ◆ discussion on HOMs, it seems the Ilan Ben-Zvi uses ferrites instead of couplers, we need to understand the details,
 - ◆ multipacting in HOM couplers and power couplers,
- we need to define detailed descriptions of the work packages. A first description was made for the collaboration with the Cockroft institute on the RF distribution network (see attached document).
- The next collaboration meeting will take place at PAC'09. Since the abstract deadline is on December, 1st, we have to define very soon who can go. Abstracts should be proposed to group leaders, even if they do not deal directly with the SPL. It is important that there is a significant representation from CERN at this next meeting.

3. New Actions

| Assigned to | Start date | Description | State | Result |
|-------------------------------|------------|---|-------|--------|
| Main.Madeleine, Main.Catin | 2008-10-31 | set up INDICO web-site for SPL collaboration meeting | | edit |
| FrankGerigk | 2008-10-31 | advance on work-package descriptions for collaboration meeting | | edit |

4. Next meeting

tentative: November, 28th (next SPL study group meeting November, 17th)

5. Comments

-- FrankGerigk - 04 Nov 2008

- [definition_of_RF_parameters_for_collaboration_with_Cockroft_institute.pdf](#):
[definition_of_RF_parameters_for_collaboration_with_Cockroft_institute.pdf](#)

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