

Working group on future irradiation facilities at CERN

Notes of the meeting of 14/4/2010

Present: M. Brugger, D. Kramer, L. Linssen, M. Moll

Apologies received from most other members.

Indico reference:

<http://indico.cern.ch/conferenceDisplay.py?confid=88283>

Agenda:

1. Approval of the minutes of 10/3/2010
2. News on GIF+ and Proton/mixed-field irradiations (L. Linssen)
3. Discussion on mixed-field facility, in particular the choice of options between SPS and PS implementation
4. Preparation of the LHCC document and presentation on proton irradiation and mixed-field irradiations (all)
5. AOB

0: News from the LHC power converter review:

- TE/EPC – testing
 - Do the test very soon – this year
 - 2015 the new design has to be ready
 - Full system tests possibly only in CNGS now
 - Development stage 6 months
 - Component testing
 - Card testing / sub system – mixed field -> candidate for the east area, provided the new facility is available sufficiently early

1: The minutes of the meeting of 10/3/2010

Approved

2: News on GIF+ and Proton/mixed-field irradiations

(see slides)

Following discussion with the research director and approval of the EU-funded AIDA project for detector development infrastructures, there appears to be growing support and financial coverage for GIF++ and the upgrade of the East Area facilities. Concerning the East Area facility, it is important that the working group follows as much as possible the CERN internal procedures. It is therefore desirable to present the case as soon as possible to the LHCC for scientific support.

3: Discussion on mixed-field facility, in particular the choice of options between SPS and PS implementation

(see slides)

There was a discussion about mixed-field rates attainable at the PS. Worse-case scenarios were looked at, such as placing twin-racks at 1.5 m from the target: it seems that the maximum required fluences can be reached within a week. To be checked in more detail with Helmut Vincke and Edi Feldbaumer. Consequences of symbiosis between proton and mixed-field facilities in the same line were also reflected upon. Mixed-field tests may sometimes

require lower incoming proton rates than tests with protons. In that case more shielding can be foreseen for the mixed-field irradiation. No showstoppers could be identified.

4: Preparation of the LHCC document and presentation on proton and mixed-field irradiations

(see document on indico)

The layout was discussed. The main aim of the LHCC proposal is to get the LHCC recognition for the scientific case and get support for pursuing the implementation studies at the PS. Therefore a short discussion about the pro's and con's of the SPS and PS options shall be included in the document. As the needs for these irradiation facilities come both from the experiments and the accelerator, it requires a prior discussion with Terry Wyatt. It also requires that the CERN hierarchy will be informed in time.

Author list: For the author list it was proposed to include all WG members, provided that they personally agree to become authors. In addition, the names of a few persons who have been closely involved were mentioned (e.g. Maurice Glaser, Edi Feldbaumer, Yves Thurel)

Updated versions of the LHCC document will be posted here:

<http://indico.cern.ch/conferenceDisplay.py?confId=91610>

It was decided that Michael Moll will represent the WG for the LHCC presentation. The date (possibly May 5th) is not yet confirmed.

5: Report from the EIROforum workshop

(See ppt presentation and conclusions noted on the various slides)

6: AOB

There was no AOB

Actions, all related to the LHCC document/presentation:

- Check interpretation of fluence numbers (with H. Vincke and E. Feldbaumer)
- Main editor (M. Moll)
- Provide spectra in LHC tunnel and behind shielding, and write section 4.4 on post-Chamonix developments (M. Brugger)
- Write a short text on CNGS facility (M. Brugger, D. Kramer)
- Write chapters 1,2, 5 and 6 (L. Linssen)
- Inform Roberto Losito (M. Brugger)
- Contact H. Vincke and check where he wants to contribute (M. Moll)
- Inform R. Saban, F. Bordry, P. Bloch, S. Myers (L. Linssen, once document is more advanced)
- Contact T. Wyatt for appointment (L. Linssen)

The next meeting will take place on April 21st at 9:00 hrs in room 1-1-025.