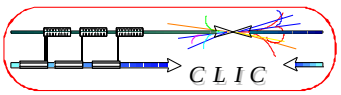

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

Laboratoire Européen pour la Physique des Particules
European Laboratory for Particle Physics

CTF3-Cttee-Min-20

Minutes of the 20th CTF3 Committee

Thursday 15th July 2010

Participants at CERN:

E. Adli, J.P. Delahaye, T.Ekelöf, G. Geschonke (chairman), G.McMonagle, W. Farabolini, F. Tecker, G. Riddone, K. Schirm, S. Stabnes, R. Ruber.

Participants via WebEx:

JAI: K. Peach

RH : G. Blair

IRFU-Saclay: O. Napoly, F. Peauger

UPC :Gabriel Montoro

Excused:

L. Rinolfi, R. Corsini, F.Toral

The transparencies shown are here:

http://indico.cern.ch/conferenceDisplay.py?confId=100725

Comments on Minutes of the 19th CTF3 Committee:

The Minutes are approved.

News from the collaboration:

Olivier Napoly was welcomed as the new representative of IRFU-Saclay. Jean-Pierre informed that Australia intends to join the CLIC collaboration. A possible area of contribution could be the damping rings.

1. Test Module Schedule (G. Riddone):

Germana presented an updated schedule for the test module program both in the Lab and in CLEX. The test module program in a dedicated lab will start in Nov. 2010 and

will conclude in Dec. 2012. This program is independent from CTF3 operation. The schedule for the module program in CLEX aims for a first installation period during the winter shutdown 2011/2012, experimental exploitation of this first installed module during the year 2012. A second installation period during the following winter shutdown 2012/2013 is envisaged followed as well by an experimental program throughout 2013. The presented schedule is roughly 3 month delayed compared to the previous one and therefore removes the potential conflict with TBTS exploitation which had been asked to be continued until the end of 2011 in the previous meeting.

The committee asked to prepare a detailed experimental program with the modules installed to better understand the requirements for beam parameters and beam time.

2. Update on CTF3 Operations and schedule (F. Tecker)

Frank reported on the start up of CTF3 after the fire. His main message is that there was no major problem to get the linac running again. A temperature stabilisation feedback has been implemented for the pulse compressor cavities which tries to better compensate changes of the temperature in the gallery. The beam reached TL1 yesterday after the injector and the linac rf had been set up carefully. Califes conditioned the new phase shifter with high power successfully during the last week and is now ready to receive beam. Frank discussed the near term objectives to get the full beam combination in delay loop and combiner ring back and serve finally TBL and TBTS in CLEX with beam. In the end he showed that the overall schedule slipped another two weeks due to a delayed start up of the beam. The committee thanked everybody involved for their big effort to get the machine back on.

3. Preliminary results from the PHIN run (S. Doebert)

Steffen reported on the preliminary results of the recent PHIN run which lasted two weeks in parallel with the start up of the CTF3 linac. The PHIN run concentrated on two topics, the charge production and the beam dynamics. A new cathode was studied with a 4 times larger laser spot this time. The surface charge limit experienced in the last run with a smaller laser spot could be pushed to somewhat higher bunch charges but remains a serious concern towards a CLIC photo injector while largely sufficient for PHIN and CTF3. A concern towards CLIC is as well the lifetime of these cathodes which seem to suffer more than anticipated from the long pulse operation. Therefore this subject will be in the focus of future experiments.

The beam dynamic side is well understood. With the beam diagnostics working reliably numerous parameters could be measured during the run. The highlights are certainly the time resolved measurements of both the longitudinal and transversal phase space.

The experimental program originally foreseen for PHIN based on CTF3 parameters slowly comes to an end since all major parameters with the exception of the phase coding have been demonstrated. Consequently the focus will shift in the future to study beam parameters relevant for a CLIC DB photo injector.

The next steps are the phase coding and a laser amplitude feedback.

It was asked when the next PHIN run could or should be scheduled. It turned out in the discussion that a more detailed planning of all CTF3 experiments is needed for the second half of this year to see potential opportunities and conflicts more clearly.

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4. ITB project (W. Farabolini)

Wilfrid showed several possible layouts to implement an instrumentation test beam line (ITB) as originally foreseen in CLEX. The problem with the different layouts comes from space requirements for the installation of modules and other equipment in the existing beam lines after ITB installation. These possible layouts have to be discussed with safety people as a next step. Wilfrid mentioned that a study has been done by V. Ziemann on generating very short bunches apparently required for experiments he wants to do in this line. He showed as well a brief list of experiments which could be done in this line. Wilfrid finished with mentioning hardware needs and the necessity of providing additional cooling water and cable channels in CLEX in order to host the ITB in CLEX.

The committee requested a more detailed and concrete list of potential experiments and the associated requirements on the CALIFES beam. This would help to see if he CALIFES beam can actually fulfil these requirements and if these experiments can be done elsewhere.

5. Next meeting

The next meeting is scheduled for the 19th of August.

S. Doebert