



Minutes of the 24th CTF3 Committee

Thursday 20th January 2011

Participants at CERN:

E. Adli (part-time), R. Corsini (Chairman), J.P. Delahaye (part-time), S. Doebert (part-time), W. Farabolini, G. McMonagle (part-time), L. Rinolfi (Secretary), R. Ruber, I. Syratchev, F. Tecker (part-time).

Participants via Webex:

Uppsala: V. Ziemann
CIEMAT: L. Sanchez

Excused:

G. Geschonke, F. Toral

Comment on Minutes of the 23rd CTF3 Committee:

The Minutes have been approved.

1. Collaboration news (R. Corsini)

a) ACE program is now available from the Web. See:

<http://indico.cern.ch/conferenceDisplay.py?confId=115921>

b) An energy gain of 26 MeV has been obtained into TBTS which corresponds to an acceleration of 106 MV/m.

c) V. Ziemann mentioned a new collaborator at Uppsala within the frame of NorduCLIC.

2. Status of CTF3 shut-down work and provisional schedule (L. Rinolfi)

Louis made a review of the activities which are ongoing during the present shut-down.

The different topics were already discussed in the TIC (Technical Installation Committee for CTF3) meeting.

The two RF structures which have been removed after the fire on girder 13 are now being reinstalled in the Drive Linac.

The coils of both septa in the Delay Loop will be replaced with new coils. The coils are affected due to the important water flow and need to be changed.

In the TBL line, 3 new PETS tanks will be installed in February.

The electrical connections of the segmented dump foreseen at the end of the line have been broken during the gilding process. The idea is to order new components quickly in order to be able to install this device before the end of the shut-down.

Concerning the CALIFES-Probe Beam, the campaign for calibration of RF couplers will continue to investigate the possible errors of beam energy.

Based on previous measurements made by the Radio-Protection group (RP), a new shielding has been requested between CLEX and CTF2. However new iron blocks are not available. Only old (slightly radioactive) iron blocks are available. Therefore RP has requested painting all faces towards CLEX.

The phase coding of the PHIN is almost finished. The 2 modulators should be optimized for the end of January in order to integrate them in the laser system in February.

A brief review about the klystron-modulators status was done. The main message is that with the very short shut-down, and the reduced time for the maintenance, a change of klystron could stop the CTF3 for 3 to 5 days of operation.

Finally, Louis shows the present CTF3 schedule: the Linac, the Rings and the CTF2 will be closed on 31st January 2011 while installation into CLEX could continue until 7th March 2011. The CTF3 schedule is kept updated from: <https://edms.cern.ch/document/1113722/>

2. Installation work and other planned activities in TBTS (I. Syratcev)

Igor presented slides prepared by G. Riddone with a great collaboration of A. Solodko. This talk was already presented in the RF structure meeting.

One of the main decisions is to suppress the VPA (Variable Power Attenuator) on the ACS side. The idea is to continue with the implementation of 2 tanks which should receive ACS structure: one is for TD24 (existing structure which is 15 MHz out of frequency), one is for T24 (new structure without damping material).

Igor showed pictures of the TD24 and described the process which is foreseen to apply. Then a long discussion about the RF wave guide connections, for the new one T24, took place to analyze the better solution. W. Farabolini proposed to install two loads instead of a splitter.

Also Low Level RF measurements would take place on the PETS when the structure will be open to redo calibrations. Stéphane Rey (BE/RF) will take care about all RF measurements.

Another point of discussion was: where to put RF data?

Finally the aim is to be ready to install the old or the new structure for the 18th February, in order to finish the installation for the 4th March. According to the CTF3 Schedule (see paragraph above), the CLEX tunnel will be closed on Monday 7th March 2011.

3. TBTS experimental program and future evolution start of discussion

Roger presented 5 R&D topics for TBTS line. He mentioned that this discussion would take place in a dedicated meeting in order to discuss in more details all items.

Four phases were discussed from the present status up to the installation of a complete module into TBTS.

Phase 1: from summer 2010 to summer 2011. It includes the commissioning of either the new ACS or the renovated ACS structure. The study of fundamental mode behavior is in progress. The studies of high order mode effects and the RF breakdown kicks measurements remain to be started.

Phase 2: from summer 2011 to winter 2011. Study the PETS on/off mechanism. During the shut-down 2011-2012, TBTS area should be rebuilt, with the installation of a full two-beam module.

Phase 3: all 2012. Study of the behavior with beam for a representative CLIC two-beam module. HOM, alignment and stability will be important issues to be studied. The potential cross-talk between drive and probe beams will also be investigated.

Phase 4: After spring 2013, a full system behavior would be studied, including the integration of three modules.

Roger mentioned that correlations have been tried between RF power and wake field signals but the BPM were not functioning properly and therefore the measurements are not valid. For the RF breakdowns studies, a long list of possible measurements has been established.

When the PETS on/off will be installed in summer 2011, the recirculation has to be removed. The on/off mechanism itself can be used for internal recirculation.

In conclusion, the phase 1 could require more time than expected. New beam acceleration should be performed with the correct frequency.

It was reported that for the CDR, there will not be results regarding the on/off mechanism.

Igor recalled that, at least, 150 MW are required to make a full demonstration.

4. Proposals for CTF3 modifications

Nothing was mentioned.

5.AOB:

Nothing was mentioned.

6. Next meeting

The next meeting is not yet fixed.

L. Rinolfi