Answers to the questions of the DT Steering Board

WP4: Radiation Hard Semiconductor Detectors (RD50)

1) What is the relevance of this WP fitting for your experimental program?

   TOTEM intends to use more radiation hard edgeless silicon detectors mainly for the horizontal Roman Pots. We can use more radiation hard material and/or use the 3D technology. The same applies also for the project to install Roman Pots in IP3 using a collimator housing.

2) Are the deliverables expected by end of 2011 meeting your requirements?

   a. If yes, how many of these deliverables should be available and when and what else are you expecting (production, integration, ...)?

      It would be useful if some horizontal pots could be equipped with the new detectors, the rest could follow in 2013. The detectors for IP3 will come later. These detectors have to be bonded at CERN on hybrids and assembled with services etc. as it was done for the existing detector assemblies.

   b. If not, what are the extra developments needed and in which time scale?

3) Which resources are you able to inject in that particular project either to reach completion of new requirements or to customise or to integrate? With which time scale?

   TOTEM can provide personnel to test the detectors during different phases of assembly.

4) How do you see the long term future (beyond 2011) of this WP ? (e.g. extension, reduction, re-focus, conversion to service, absorption in experiment specific upgrade projects, …).

   As mentioned above the TOTEM programme can extend beyond 2013.

5) General comments

WP5: Micropattern Gas Detectors (RD51)

1) What is the relevance of this WP fitting for your experimental program?

   TOTEM intends to implement large area GEM chambers into the T1 telescope or even exchange the existing CSC chambers by large area GEM chambers.

2) Are the deliverables expected by end of 2011 meeting your requirements?

   a. If yes, how many of these deliverables should be available and when and what else are you expecting (production, integration, ...)?

      It would be useful if some of the large area GEM chambers could be installed in the long shutdown, starting end of 2011. Therefore some prototypes should be tested and approved in 2011. These chambers will be equipped with an upgraded version of VFATs.

   b. If not, what are the extra developments needed and in which time scale?

3) Which resources are you able to inject in that particular project either to reach completion of new requirements or to customise or to integrate? With which time scale?

   The production of these chambers could be done in a TOTEM collaboration institute. Help from DT would be needed for the assembly and the integration into the CMS end cap.

4) How do you see the long term future (beyond 2011) of this WP ? (e.g. extension, reduction, re-focus, conversion to service, absorption in experiment specific upgrade projects, …).

   Beyond 2013 there will be always a need of support from DT for dismounting and remounting of the T1 telescope.

5) General comments

WP6: Quality Control

1) What is the relevance of this WP fitting for your experimental program?

   TOTEM needs access to the bond lab for gluing, bonding and testing of silicon detectors and VFATs for their upgrade programme.

2) Are the deliverables expected by end of 2011 meeting your requirements?

   This activity will go on sporadically for the next years.

   a. If yes, how many of these deliverables should be available and when and what else are you expecting (production, integration, ...)?

   b. If not, what are the extra developments needed and in which time scale?

3) Which resources are you able to inject in that particular project either to reach completion of new requirements or to customise or to integrate? With which time scale?

   TOTEM personnel can help in gluing and testing.

4) How do you see the long term future (beyond 2011) of this WP ? (e.g. extension, reduction, re-focus, conversion to service, absorption in experiment specific upgrade projects, …).

   As mentioned above this activity could go beyond 2013.

5) General comments