



RADWG 5TH - 2013

12TH SEPTEMBER 2013

G. Spiezia (EN/STI/ECE)

AGENDA

- ❖ Matters arising
 - ❖ Calendar of the PSI tests
- ❖ CNRAD test: Survey equipment
- ❖ Cryogenic equipment P4
- ❖ Summary NSREC

PSI test – Done

Date	Equipment Owner	Test group	DUT
16-17 February	EN/STI-BE/BI	EN/STI, BE/BI	Cypress memory, potentiometer, Samsung, BLM
24-Feb	TE	TE	Switches
16-17 March	BE CO	BE CO	NanoFip
23-24 March	TE/EPC, EN/STI	EN/STI	Voltage reg, Voltage ref, Mux, Amplifier
13-14 April	TE/EPC	TE/EPC, EN/STI	ADC, SRAM for latch-up study
25-26 May	TE/EPC, EN/STI	EN/STI	LM45, Oscillator, Current source, SRAM
25 Jun	TE/EPC, EN/STI	TE/EPC, EN/STI	ADC ADS1271
28-29 June	TE/EPC,EN/STI	EN/STI	Analog switch, Mosfets, Amplifiers, LVDT conditioner
20-21 July	TE/CRG	TE/CRG	Components for beam screen heaters

PSI test: September-December

- ❖ 8 weekends used
- ❖ 7 weekends available
- ❖ Gathered information
 - ❖ QPS: >20 hours ideally over two weekends
 - ❖ TE/EPC: two slots (Full weekend?)
 - ❖ TE/CRG: one slot (half weekend)
 - ❖ PH
 - ❖ ASIC test. ready as of 26 October; >15 hours; can be parasitic (F. Anghinolfi)
 - ❖ Request for another test of 24 hours (F. Faccio)

PSI test

Date	Equipment Owner	Test group	DUT
21-22 September	EN/STI, TE/EPC	EN/STI	Voltage reg, Amplifiers, Isolated regulator, Transceiver
(05)-06 October	TE/ EPC EN/STI	TE/ EPC EN/STI	ADC test (SEL study) - (R. Garcia Alia, S. Uznanski)
12-13 October	TE/EPC	TE/EPC	FGC lite (S. Uznanski)
19-20 October	EN/STI TE/EPC	EN/STI	RadMon, ADC, Trigger Schmitt, FG
1-3 November	TE/CRG QPS	TE/CRG QPS	Heater board (N. Trikoupis) Components for QPS (J. Steckert)
(23)-24 November	TE/EPC, EN/STI	EN/STI	Thermocouple board, RadMon, LVDT cond, Components
14-15 December	QPS PH	QPS PH	Components for QPS (depend on the previous results) (J. Steckert) ASIC test (F. Anghinolfi)

- ❖ Not covered yet
- ❖ Urgent PH request for CMS (F. Faccio)
- ❖ 1 additional slot for the FGC lite (TE/EPC)

CEA

Date	Equipment Owner	Test group	DUT
29-30 April	EN/STI	EN/STI	Components, Pin diodes
14-May	BE/BI, IT, EN/EL, PH/ESE	passive	Diode, Beacon, LED, Silicon chip
10 September	EN/STI	EN/STI	RADMONV6, Experiment devices

- ❖ Transport of the irradiated material was finally approved
- ❖ Material will be sent to 867
 - ❖ IT beacon
 - ❖ Diodes for BLM
 - ❖ Light EN/EL
- ❖ Request for 2014
 - ❖ 3 slots have been asked

Fraunhofer institute - Germany

- ❖ All the information and the news are on the web

<http://radwg.web.cern.ch/RadWG/radTests.htm>

Status of various projects

- ❖ Follow up from CNRAD test (J. Mekki), H4IRRAD test (M. Calviani) and TID measurement requests on 2011-2012

Equipment under test	Location	Status
BPM- BE/BI/QP (C. DePlano, J. L. Gonzalez)	SPS tunnel	rad test postponed. Priority on installation
Beam Profile- BE/BI/PM (J. Focker)	PS, LINAC	rad test at Fraunhofer (to be done)
GEM,XWCA - BE/BI/EA(J. Spangaard)	TT83	SEU on the FPGA. Status not known
MosFETs for the PSB, BE/RF/IS (M. Paoluzzi)	PS Booster	Test at Jparc
Control PSB Dump, EN/CV, EN/STI (G. Mason, A. Morvillo)	PSB Dump	Test at PSI to be done. CV equipment ok
Interlock TE/MPE (P. Dahlen)	SPS	Measurement of TID at SPS. Status not known
Actuators, EN-MME-ES (K. Artoos)	CLIC	Test at H4. Status not known

Status of various projects

Equipment under test	Location	Status
QPS, TE/MPE/EP (R. Denz, J. Steckert)	LHC tunnel	Test at PSI and Fraunhofer
Power converter TE/EPC (Y. Thurel)	LHC	Replacement of the AC/DC converter Component test on going
Power converter-FGC Lite (A. Dinius)	LHC	Prototype test to be done
Cryo - Beam screen heaters, TE/CRG (N. Trikoupis)	LHC tunnel	Component testing ok. Full board to be tested
LED Warning system, EN/EL/BT (J. M. Foray)	LHC tunnel, PS, SPS	CNRAD test OK. Test at CEA (To be checked)
Ethernet switch, IT/CS	LHC (shielded areas)	installation only in safe area
Wifi Access point, IT/CS	LHC(Tunnel or shielded areas)	installation only in safe area (no information on the results)
Survey Equipment, BE/ABP/SU (Mateusz Sosin)	LHC shielded areas- Point 2 and 5	Test at Fraunhofer
IT beacons, IT/CS/CS (A. G. Molero)	LHC tunnel SPS tunnel	Problem for location at high dose, Test on going at CEA and Fraunhofer
PLC EN/ICE (J. Ortola Vidal)	LHC Shielded areas	Tested. Results not known
DerivFIP, BE/CO/FE (J. Palluel)	LHC tunnel and shielded area	Tested
Beam Loss Monitor, BE/BI/BL, (E. Del Busto)	LHC tunnel	Tested
NanoFip BE/CO, (E. Gousiou)	LHC tunnel	Tested; FieldDrive to tested at Fraunhofer



Back-up

Test reports

- ❖ Share the knowledge of the tested components
 - ❖ Reports are on EDMS
 - ❖ Add your own reports (PSI, CNRAD, H4IRRAD)
 - ❖ Many tested components are useful for other groups
- ❖ Table of the tested components
 - ❖ http://radwg.web.cern.ch/RadWG/Pages/reports/Radiation_report_menu.htm

Passive dosimetry along 2012

- ❖ Used RadFets and BatMons (battery version of the RadMon)
- ❖ Removed from the machines
- ❖ Results given for the following areas
 - ❖ TT83 (requested by Spanggaard)
 - ❖ TT2 (requested by BE/ABP, S. Gilardoni)
 - ❖ PSB Dump (requested by Calviani)
 - ❖ Door 352 (requested by RAMSES, M. Pangallo)
 - ❖ LINAC3 (requested by M. Calviani)
 - ❖ PS (requested by RF, M. Paoluzzi)
 - ❖ SPS (requested by BE/BI, J Gonzalez)
 - ❖ SPS (requested by TE/MPE, P. Dahlen)
 - ❖ ATLAS-LAR (requested by Luis Hervas)

Conferences

❖ SEE symposium

❖ http://radhome.gsfc.nasa.gov/radhome/see_mapld/#

❖ NSREC

❖ <http://www.nsrec.com/>

❖ RADECS

❖ <http://www.radecs2013.com/>

CERN facilities

- ❖ CNRAD and H4IRRAD
- ❖ East area



Technical stop