

RadWG May 18<sup>th</sup> 2010

# Feedback from RadWG Members

- Many of you replied -> **Thank You!**
- Quite some **common feedback**:
  - Standardized reporting
  - Intensified connection with PH/ESE
  - Prioritization of radiation tests
  - Development of Test-Guidelines
  - Collected information (website, simplified database)
  - Radiation Policy
  - ...
- We wait until the next meeting and then prepare a final proposal

# RadWG Slot

doodle poll resulted in:

Thursday afternoon: 15  
Tuesday morning: 14

for those having a preference we did another check:

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Who	Tuesday Morning	Thursday Afternoon
S. Grau	'O'	'A'
E. Calvo		'A'
E. v.d. Bij	'O'	'A'
G. Burdet		
R. Chery	'A'	
P. Dahlen	'A'	
H. Jena		'A'
J. Palluel	'Y'	
G. Penacoba	'A'	
S. Roesler		'A'
Y. Thurel	'A'	

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- **Prior to workshop:  
every two weeks**
- **Later:  
~each third weeks  
+on demand**

thus current count:

Thursday afternoon: 15  
Tuesday morning: 17

# Some News

- R2E Workshop Agenda in ‘refinement’ with session chairs (last version available [here](#))
- Mitigation Options ‘prepared’ for the June-Workshop:
  - Shielding:
    - UJ14/16/56 (final design)
    - RRs at P1/5 (what options)
    - UJ23/87 (reinforcement + ‘plug’)
    - UW85 (to be verified if enough in the long-term)
  - Relocation (critical and sensitive equipment, **other can and should remain**):
    - UJ76: remaining work
    - US85: full relocation
    - UJ14/16: full relocation into US15 and Uls (in study)
    - UJ56: full relocation
- Organization:
  - Ideas/Concepts discussed/developed in **R2E**, status communicated in **RadWG**
  - Integration iteration discussed and followed through **ICL**
  - Proposal iterated in R2E workshop
  - Final proposals submitted (after common approval) to management and approved by **LMC**
- a.o.b.,?

# Next RadWG Agenda (Suggestion!)

Date: Tuesday June 1<sup>st</sup>, 10:30h, [864-1C-02](#)

- Fire/ODH – Relocation Needs/Constraints/Costs/Options  
(S. Grau)
- What Equipment can remain and what has to be relocated  
(G. Spiezia)
- Radiation Tests of Power-Converters – Where are we?  
(Y. Thurel)
- COTS Equipment & Failure Rates (CNRAD 2010)  
Final Table  
(M. Brugger)
- RadWG Mandate and Objectives  
(M. Brugger)
- a.o.b.,

# Failure Rate Estimate (first draft)

LHC Point	Area(s)	2011 (integrated)	Nominal (integrated)	2010/11 $\times 10^7$	Nominal $\times 10^7$	Equipment			Comments	Failure Rate (year <sup>-1</sup> )	
						Type	#	Sensitivity		2011	Nominal
Point 1	UJ14 UJ16	2.5E+07	5.0E+09	2.5	500.0	PLCs:	50	1.00E+07	first guess	125	25000
	RR13 RR17	5.0E+06	1.0E+09	0.5	100.0	...	25	1.00E+07	first guess	12	2500
	UPS14 UPS16	5.0E+06	1.0E+09	0.5	100.0	alignm.	10	1.00E+09	hardness even higher?	0	10
Point 3	UJ33	6.3E+04	1.3E+06	0.0	0.1		50	1.00E+07	first guess	0	6
	UJ/RE32	8.4E+05	1.7E+08	0.1	16.7		50	1.00E+07	first guess	4	836
Point 5	UJ56	2.5E+07	5.0E+09	2.5	500.0		50	1.00E+07	first guess	125	25000
	RR53 RR57	5.0E+06	1.0E+09	0.5	100.0		25	1.00E+07	first guess	12	2500
	UPS54 UPS46	5.0E+06	1.0E+09	0.5	100.0		10	1.00E+09	hardness even higher?	0	10
Point 6	UA63 UA67	2.5E+06	5.0E+07	0.3	5.0		10	1.00E+07	Ducts can be sealed	2	50
Point 7	UJ76	1.0E+08	2.0E+09	10.0	200.0		50	1.00E+07	first guess	500	10000
	RR73 RR77	1.0E+07	2.0E+08	1.0	20.0		25	1.00E+07	first guess	25	500
Point 8	UX85b	1.0E+09	2.0E+09	100.0	200.0		0	1.00E+07	nothing left?	0	0
	US85	2.5E+08	5.0E+08	25.0	50.0		50	1.00E+07	first guess	1250	2500
	UW85	5.0E+07	1.0E+08	5.0	10.0		15	1.00E+07	first guess	75	150
TI2	UJ23	6.9E+06	6.9E+07	0.7	6.9		4	1.00E+07	shielding 2010/11 most likely possible	3	28
TI8	UJ87	6.9E+06	6.9E+07	0.7	6.9		4	1.00E+07	shielding 2010/11 most likely possible	3	28
Average Failure Rate (day <sup>-1</sup> )										2011:	11
										Nominal:	346