



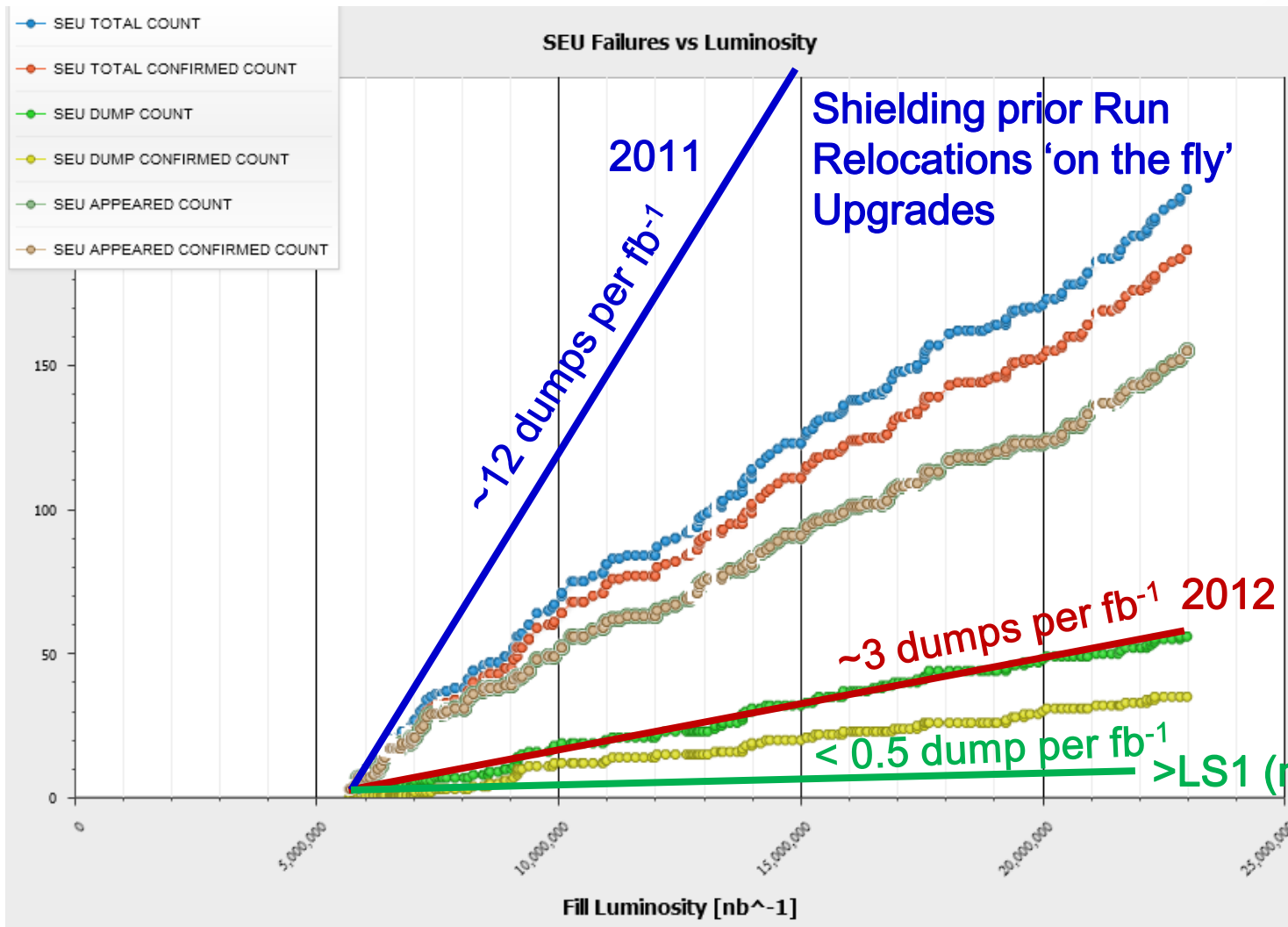
Project Status & Safety

(R2E) Mitigation Project: www.cern.ch/r2e

Extended Project Meeting October 23rd 2012

!!! Many Thanks To Everybody !!!

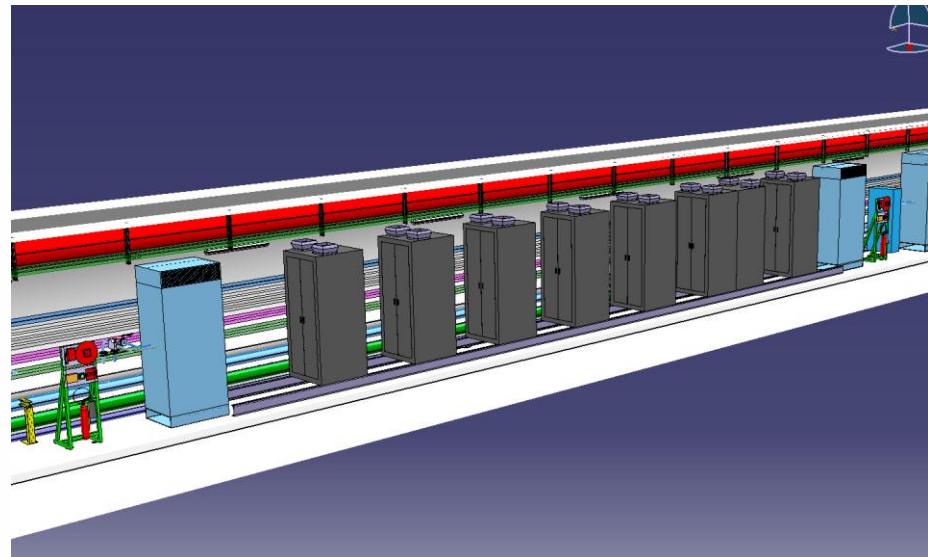
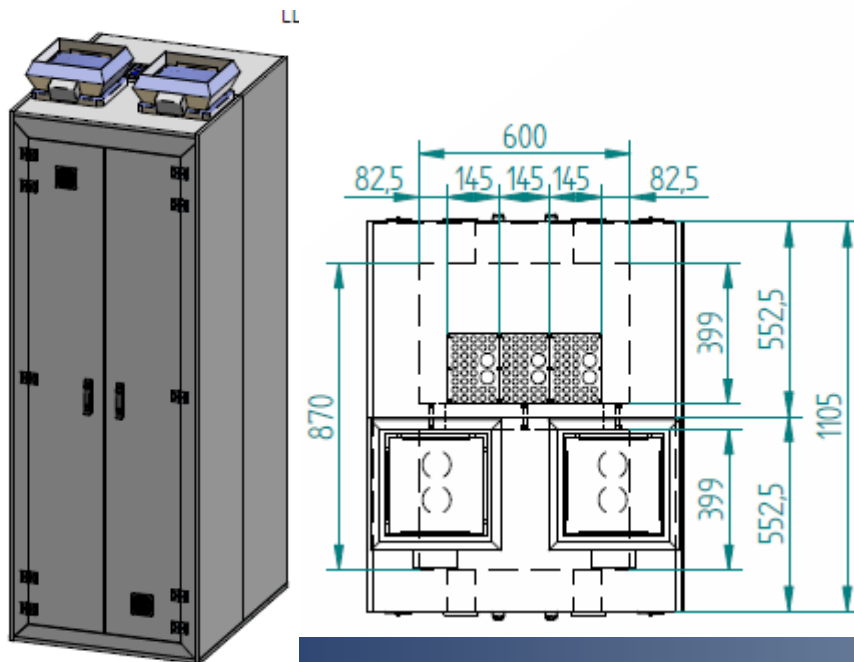
on behalf of the R2E Project



'Early' Relocation
Shielding
Upgrades

- ④ **Safe-Rooms:**
 - ④ **Both points (P5/7) clarified**
 - ④ Special solution for TZ76 (see next slide)
- ④ **Radiation Protection:**
 - ④ Transport/Control of material (tunnel side mainly)
 - ④ Storage/Re-installation of shielding
 - ④ Coordination during LS1 very important
 - ④ **Radioactive workshop – Availability/Procedures**
- ④ **General Safety:**
 - ④ LS1 activities:
 - ④ Planning available, continuously iterated
 - ④ **Safety aspects followed through Work-Package meetings**
 - ④ **Well defined structure (point coordinators, etc.)**

- ❑ **Local fire-resistant racks** agreed upon
- ❑ **Performed visit (HSE, EN-EL, R2E)** to clarify details
- ❑ **Solution fully integrated** (thanks to EN/MEF, ICL, EN/EL)
- ❑ **Fire tests** scheduled
- ❑ **First rack** already delivered
- ❑ **No further show-stopper** ahead



Radiation Levels & Monitoring

@ Levels and Coverage:

- @ Well within predictions (confidence)
- @ UJ14/16 shielding very efficient
- @ **P4 a remaining 'head-ache'** (also towards 25ns)
- @ **DS/ARC levels** very low -> future? (25ns + p/Pb/Pb)
- @ Long-list for new/changed locations (LHC ok, Injectors?)
- @ IR3/IR7 sharing -> update to be requested through collimation/BLM teams

@ RadMon V6:

- @ **Prototype(s)** successfully tested
- @ Some design questions to be clarified/finalized
- @ Flexible design to allow for future upgrades
- @ **RadMon 'mini-review' to be scheduled**

Operation & Failures

@ Operation

- @ Clear impact of collimator settings
- @ **25ns no news -> run before the end of the year?**
- @ p/Pb (and later Pb/Pb) to be looked at

@ Failures

- @ Follow-Up: a daily/weekly effort -> THANKS!
- @ **Nicely within Chamonix predictions**
- @ 2012 'Winners' ;-): **QPS + EPC**
 - @ -> what's remaining after LS1 (see next slide(s))
- @ **Mitigation strategy clearly effective**
 - @ -> confidence for >LS1

Relocation & Shielding

@ Shielding

- @ (almost) all purchases at CERN
- @ Layouts/installation procedures defined and integrated in planning

@ LS1 preparations

- @ Very well prepared/documentated (approvals, ECRs, etc.) -> **R2E on critical Path**
- @ Strong coordination structure set up (THANKS)
- @ **Critical follow-ups**
 - @ Installation drawings/+ 'Cablotheque'
 - @ Material procurement
 - @ Storage space (cross check required)
 - @ Timing and flexibility along the way of LS1
 - @ Check, check, check...

Power Converters

@ Status

- @ **FGClite development on track** (prototype almost ready)
 - @ Strong team in place
 - @ Time-line justified by observed failures (>LS1 needs)
- @ 600A auxiliary PS understood (fully mitigated >LS1)
- @ **Power design started (delay)**
- @ Component list defined (testing started)

@ Needs

- *ST memory: possibly also useful for other groups (QPS)?*

- @ R2E Tester development progress limited, resources required -> **can it be specified to be given to a company?**
- @ Database effort: progressing slowly, in-house resources required (**can interest/resources be raised in PH?**)
- @ **PS-EA availability is critical**
- @ **Repair/Workshop availability** to be clarified

QPS Developments

QPS mini-Review: <http://indico.cern.ch/event/QPSminiReview2012>

@ Status

- @ High number of LS1 activities (not only R2E!)
- @ QPS R2E failures: foreseen relocations/shielding + new design and firmware upgrades
- @ **Major impact will be mitigated after LS1**
- @ **LS1-2/>LS2 needs to be clarified (>LS1)**

@ Requirements

- @ **Solution for high-res ADC**
- @ Several parallel developments
- @ **Man-power and other support (companies)?**
- @ **Radiation tests and access to facilities**
- @ Radiation levels in the DS/ARC LS1-2/>LS2

Radiation Tests & Facilities

@ Test Campaigns

- @ A year of new records (campaigns + reports!)
- @ Still: **REPORTS are essential** (and partly missing!)

@ Facilities

- @ PSI contract aiming for 15 campaigns
- @ Louvain to be clarified (batch check + other?)?
- @ CNRAD will be phased out, H4irrad remains available (limited) -> PS-EA
- @ ^{60}Co @ CERN currently under investigation

@ Organisation

- @ Test campaigns well coordinated (efficient use of slots)
- @ **Strong effort (man-power & budget!)**
- @ RadWG proved being a good forum

Conclusions

- Ⓢ **Well on track**
- Ⓢ **Thanks to the effort of you all**
- Ⓢ Follow-ups as listed before
(future subject to small project meetings)
- Ⓢ Budget's assigned (EVM for Relocation/Shielding)
- Ⓢ **Next**
- Ⓢ LS1 preparations (Friday's meetings) -> LS1
- Ⓢ RadMon V6 'mini-review'
- Ⓢ Evian-Workshop (SEE Failures & Actions)
- Ⓢ PS-EAirrad facility and 2013/14 test-beam time (PSI/UCL)
- Ⓢ ...
- Ⓢ xMasDrink/Lunch
-> rather a 2013 New-Year welcome ?