Conclusions from Previous LHC Radiation Workshop – December 2004

> Emmanuel Tsesmelis TS/LEA 5th LHC Radiation Workshop 29 November 2005

Conclusions I

- Collaboration & synergy between LHC machine & experiments, outside HEP laboratories and space agencies, with similar radiation problems, is recommended.
- The LHC experiments have considered as a major problem the effect of radiation on installed equipment from the outset.
- A greater understanding is needed of the sensitivity of equipment to local radiation fields.
 - Much of the equipment ordered is in standard form (COTS)
 - e.g. Oxygen Deficiency System, Survey Position Sensors, Optical Fibres

Conclusions II

- A great deal of interesting work remains to be done to ensure that radiation effects do not make LHC commissioning even more difficult than expected as a result of frequent failures of equipment (including SEUs) in the tunnel, experimental areas and service areas.
 - Necessary to monitor radiation fields during early LHC commissioning to prepare for high intensity running and to prepare appropriate shielding or other measures.
- It is essential to have a radiation monitoring system adapted to the needs of radiation tolerance understanding from the first day of LHC operation.