R2E annual meeting - 2018

Report of Contributions
Introduction and R2E Overview

Tuesday, 11 December 2018 09:00 (15 minutes)

Presenter: GARCIA ALIA, Ruben (CERN)
Radiation Test Service (RADWG support)

Tuesday, 11 December 2018 09:40 (25 minutes)

Presenter: DANZECA, Salvatore (CERN)
Project Management

Tuesday, 11 December 2018 09:15 (25 minutes)

Presenters: GARCIA ALIA, Ruben (CERN); GILARDONI, Simone (CERN)
MCWG support

Tuesday, 11 December 2018 10:20 (25 minutes)

**Presenter:** STEIN, Oliver (CERN)
Material testing and external facilities

Tuesday, 11 December 2018 10:45 (25 minutes)

Presenter: GUILLERMAIN, Elisa
LHC Injector Chain

Tuesday, 11 December 2018 11:10 (25 minutes)

Presenter:  GARCIA ALIA, Ruben (CERN)
CERN facilities

Tuesday, 11 December 2018 13:05 (25 minutes)

Presenter: DANZEGA, Salvatore (CERN)
RadMON Monitoring

Tuesday, 11 December 2018 13:30 (25 minutes)

Presenter:  DANZECAM, Salvatore (CERN)
Optical Fibre Dosimetry

Tuesday, 11 December 2018 13:55 (25 minutes)

Presenter:  DI FRANCESCA, Diego (CERN)
Shielding and Relocation

**Presenter:** LAZZARONI, Michael (CERN)
Radiation tolerant developments: Common Building Blocks

Tuesday, 11 December 2018 14:50 (25 minutes)

Presenters: GARCIA ALIA, Ruben (CERN); DANZEC, Salvatore (CERN)
Radiation tolerant developments: Vacuum

Tuesday, 11 December 2018 15:15 (25 minutes)

Presenter: PIGNY, Gregory (CERN)
Radiation tolerant developments: Beam Instrumentation

Tuesday, 11 December 2018 15:40 (25 minutes)

Presenters: JONES, Rhodri (CERN); LEFEVRE, Thibaut (CERN)
Radiation tolerant developments: QPS

Tuesday, 11 December 2018 16:05 (25 minutes)

Presenter: DENZ, Reiner (CERN)
Radiation tolerant developments: Power Converters

Tuesday, 11 December 2018 16:40 (25 minutes)

Presenter: UZNANSKI, Slawosz (CERN)
Radiation tolerant developments: Cryogenics

Tuesday, 11 December 2018 17:05 (25 minutes)

Presenter: TRIKOUPIΣ, Nikolaos (CERN)
Radiation tolerant developments: Controls

Tuesday, 11 December 2018 17:30 (25 minutes)

Presenter: DANILUK, Grzegorz (CERN)
Results of functional radiation tests of QPS equipment to be installed during LS2 using the CHARM facility

Wednesday, 12 December 2018 15:50 (15 minutes)

Presenter: Ms MUNDRA, Surbhi (Graduate Fellow)
Session Classification: Radiation tolerant developments for the accelerator sector
Current Transport Model for Heavy-Ion Degraded Silicon Carbide (SiC) Power MOSFETs

Wednesday, 12 December 2018 11:50 (15 minutes)

Presenter: MARTINELLA, Corinna (University of Jyväskylä (FI))

Session Classification: Radiation Facilities & Component Level Studies
Activities of the Monitoring Calculation Working Group (MCWG), from dedicated user requests to online radiation monitoring

Wednesday, 12 December 2018 10:15 (15 minutes)

Presenter: STEIN, Oliver (CERN)

Session Classification: Radiation Environment Monitoring & Calculation
Handling and analysis of radiation data sets, the advantages of automated calculations and fast accessibility of radiation measurements

Wednesday, 12 December 2018 10:30 (15 minutes)

Presenter:  Mr BILKO, Kacper (AGH University of Science and Technology (PL))

Session Classification:  Radiation Environment Monitoring & Calculation
Optical fiber dosimetry: recent achievements and future prospects

Wednesday, 12 December 2018 09:15 (15 minutes)

Presenter:  Dr DI FRANCESCA, Diego (CERN)

Session Classification:  Radiation Environment Monitoring & Calculation
Specialty of Optical Fibers for Radiation Sensing

Wednesday, 12 December 2018 09:30 (15 minutes)

Presenter: LI VECCHI, Gaetano (Universite Jean Monnet (FR))

Session Classification: Radiation Environment Monitoring & Calculation
Overview of FLUKA Monte Carlo studies related to R2E activities

Wednesday, 12 December 2018 09:00 (15 minutes)

Presenter: Dr INFANTINO, Angelo (CERN - EN/STI-FDA)
Session Classification: Radiation Environment Monitoring & Calculation
Update on the expected radiation levels for HL-LHC

Wednesday, 12 December 2018 10:55 (15 minutes)

Presenter: LERNER, Giuseppe (CERN)

Session Classification: Radiation Environment Monitoring & Calculation
Electron induced SEE in the VESPER facility

Wednesday, 12 December 2018 14:50 (15 minutes)

Presenter: TALI, Maris (European Space Res. & Tech. Cent. (NL))
Session Classification: Radiation Facilities & Component Level Studies
Overview of RADSAGA activities at CHARM

*Wednesday, 12 December 2018 15:05 (15 minutes)*

**Presenter:** CORONETTI, Andrea (CERN)

**Session Classification:** Radiation Facilities & Component Level Studies
SEE mechanisms in power MOSFET devices: theoretical, experimental and simulation approaches

Wednesday, 12 December 2018 11:35 (15 minutes)

**Presenter:** Dr FERNANDEZ-MARTINEZ, Pablo (CERN)

**Session Classification:** Radiation Facilities & Component Level Studies
Ultra-High-Energetic heavy ion tests campaigns at CHARM and North Area CERN Facilities

Wednesday, 12 December 2018 14:35 (15 minutes)

Presenter: KASTRIOTOU, Maria (CERN)

Session Classification: Radiation Facilities & Component Level Studies
SEE flux and spectral hardness calibration of neutron spallation and mixed field facilities

Wednesday, 12 December 2018 14:20 (15 minutes)

Presenter: CECCHETTO, Matteo (Universite Montpellier II (FR))
Session Classification: Radiation Facilities & Component Level Studies
CHARM Dosimetry challenges and new opportunities

Wednesday, 12 December 2018 12:20 (15 minutes)

Presenter: CANGIALOSI, Chiara (CERN)

Session Classification: Radiation Facilities & Component Level Studies
Investigation of new technologies and concepts for reliable computation and fast communication

Wednesday, 12 December 2018 15:35 (15 minutes)

Presenter: TSILIGIANNIS, Georgios (CERN)

Session Classification: Radiation tolerant developments for the accelerator sector
A new Floating Gate Dosimeter for CERN application

*Wednesday, 12 December 2018 10:00 (15 minutes)*

**Presenter:** BRUCOLI, Matteo (Universite Montpellier II (FR))

**Session Classification:** Radiation Environment Monitoring & Calculation
Predictive Maintenance Strategies to Prevent Radiation Induced End-of-Life Failures

Wednesday, 12 December 2018 16:50 (15 minutes)

Presenter: FELSBERGER, Lukas (Ludwig Maximilians Universitat (DE))

Session Classification: Radiation tolerant developments for the accelerator sector
Powerlink: status and developments

Wednesday, 12 December 2018 16:05 (15 minutes)

Presenter: RIZZI, Mattia (CERN)
Session Classification: Radiation tolerant developments for the accelerator sector
A Generic Radiation-Tolerant Power Supply for Distributed I/O Tier project

*Wednesday, 12 December 2018 17:05 (15 minutes)*

**Presenter:** PATNAIK, Lalit (Beams Department, CERN)

**Session Classification:** Radiation tolerant developments for the accelerator sector
Radiation hardness in single-mode optical links for Accelerator Instrumentation

Wednesday, 12 December 2018 17:35 (15 minutes)

Presenter: SCARCELLA, Carmelo (CERN)

Session Classification: Radiation tolerant developments for the accelerator sector
ASIC design for the Beam Loss Monitor upgrade

*Wednesday, 12 December 2018 17:20 (15 minutes)*

**Presenter:** GIANGRANDE, Luca (CERN)

**Session Classification:** Radiation tolerant developments for the accelerator sector
Radiation hardness tests on fiber-ethernet converters at CHARM

Wednesday, 12 December 2018 17:50 (15 minutes)

**Presenter:** CELESTE, Damiano (Ministere des affaires etrangeres et europeennes (FR))

**Session Classification:** Radiation tolerant developments for the accelerator sector
Overview of the CERN Injector Radiation Environment and Equipment

Wednesday, 12 December 2018 10:45 (10 minutes)

Presenter: KRAWINA, Melanie (Vienna University of Technology (AT))
Session Classification: Radiation Environment Monitoring & Calculation
Radiation Tolerant Conditioning Electronics for Vacuum Measurements

Wednesday, 12 December 2018 18:05 (15 minutes)

Presenter:  CHATZIGEORGIOU, Nikolaos (CERN)

Session Classification:  Radiation tolerant developments for the accelerator sector
Radiation Hardness of Pressure Sensors Suitable to Measure in the 0-100mbar Range

Wednesday, 12 December 2018 18:20 (15 minutes)

**Presenter:** LES, Michal Jozef (AGH University of Science and Technology (PL))

**Session Classification:** Radiation tolerant developments for the accelerator sector
Radiation-tolerant LED lighting system for CERN tunnels

Wednesday, 12 December 2018 12:05 (15 minutes)

Presenter: FLORIDUZ, Alessandro (CERN)

Session Classification: Radiation Facilities & Component Level Studies
From Accelerators to Space Applications: Projects within the collaboration agreement with CNES

Wednesday, 12 December 2018 09:45 (15 minutes)

Presenter: KERBOUB, Nourdine (Universite Jean Monnet (FR))

Session Classification: Radiation Environment Monitoring & Calculation