

Workshop on Radiation Monitoring for the International Space Station (WRMISS) Programme

Thursday 4th November

INSTRUMENTATION SESSION

Chair: Guenther Reitz

- 8:45 Welcome and Status Report
G. Reitz
- 9:00 *Yukio Uchihori, Masashi Takada, Toshisuke Kashiwagi and Kazunobu Fujitaka*
Development of radiation detectors for space use
- 9:20 **P. Nieminen, E. Daly, A. Mohammadzadeh, A. Hilgers, P. Bühler, W. Hajdas**
ESA's Radiation and Plasma Monitoring Programmes
- 9:40 *M.I. Panasyuk, A.G. Myasnikov, **A.I.Akulin**, E.O.Asoskova, A.A.Belyaev, D.V.Kalinin*
Results of testing of ISS (Russian segment) Radiation Monitoring System components onboard of Mir station
- 10:00 **C S Dyer, E Daly, P Niemen, P Buehler, J Lemaire**
The Columbus Radiation Environments and Effects Package (CREEP)
- 10:20 **J. Semkova, P. Baynov, R. Koleva, N. Kanchev, V. Petrov, V. Shurshakov, V. Benghin, I. Tchhernykh, Yu. Akatov, V. Redko, Yu. Ivanov**
Investigation of radiation dose and flux dynamics inside the spherical tissue equivalent phantom on the Russian segment of ISS by Liulin-5 active dosimeter
- 11:00 **Ts. Dachev, B. Tomov, Yu. Matviichuk, Pl. Dimitrov, J. Lemaire, Gh. Gregoire, M. Cyamukungu, H. Schmitz, G. Reitz, R. Beaujean**
Analysis of the Calibration results obtained with the flight model of the mobile radiation exposure control system LIULIN for the "Dosimetric Mapping" experiment to be flown onboard US laboratory module of ISS.

- 11:20 *G. Reitz, I. Apathy, R. Beaujean, **S. Deme***
DOSTEL-PILLE-NEUDOS, a complex system for dose equivalent mapping on ISS
- 11.40 *W. Schöner, N. Vana, M. Fugger, **S. Deme**, I. Apathy, I. Hejja, I. Feher*
Implementation of the HTR – method in the PILLE system
- 12:00 ***T. Borak**, B. Gersey, C. Zeitlin, J. Miller, L. Heilbronn*
Dosimetry Measurements by Tissue Equivalent Proportional Counters for 56 Fe at 400, 600, 740, and 1000MeV per Nucleon

MEASUREMENTS SESSION

Chair: Jack Miller

- 13:40 ***G. Reitz**, R. Beaujean, Ts. Dachev, S. Deme, W. Heinrich, M. Luszik-Bhadra, J. Kopp, K. Strauch*
Space Radiation Dosimetry – Recent Measurements and Future Task
- 14.00 *M.I.Panasyuk, A.V.Bogomolov, M.I.Kudryavtsev, B.M.Kuzhevsky, **S.N.Kuznetsov**, V.I.Lyagushin, I.N.Myagkova, S.P.Ryumin, S.I.Svertilov*
Background Fluxes of Neutrons in Near-Earth Space: Experimental Results of SINP
- 14:20 ***T.Doke**, T.Hayashi, J.Kikuchi, T.Sakaguchi, E.Yoshihira, S.Nagaoka, T.Nakano, S.Takahashi, and G.D.Badhwar*
LET distributions measured by RRMD-III onboard the STS-84, -89 and -91
- 14:40 *Gautam D. Badhwar, **Mark Weyland***
Radiation Environment on MIR Orbital Station During Solar Minimum
- 15:00 ***E.G.Stassinopoulos**, C.A.Stauffer*
Measurement of Cosmic-Ray and Trapped-Proton Stopping Power on the STS-95 Discovery Mission
- 15:20 *Francis A. Cucinotta, Kerry George, Honglu Wu, and **Neal Zapp***
Radiation Quality in Low Earth Orbit

MODELS SESSION

Chair: Kazunobu Fujitaka

- 16:00 **D. Heynderickx**, *B. Quaghebeur, E. Speelman, and E.J. Daly*
Radiation environment and effects models implemented in ESA's
Space ENVironment Information System (SPENVIS)
- 16:20 *D. Boscher, A. Vacaresse, S. Bourdarie, J. Bourrieau,*
Effects of large storms on the radiation belts and their implications
on the ISS exposure
- 16.40 *J. B. Blake and M. D. Looper*
The Hydrogen Isotope Environment in Low Earth Orbit
- 17:00 *J. W. Wilson, J. L. Shinn, G. D. Badhwar, F. A. Cucinotta,*
F. F. Badavi, J. Miller
Space Flight Validation of the HZETRN Radiation Shielding Code
- 17:20 **J. Miller**, *L. H. Heilbronn and C. J. Zeitlin, M. S. Cloudsley, F. A.*
Cucinotta, L. W. Townsend, J. W. Wilson
ISS Crew Exposures to High Energy Heavy Ions and Neutrons—
What In-Flight Measurements are Needed?

Friday 5th November

- 09:00 **W. Schimmerling** and *F. Cucinotta*
Requirements for Dosimetry on the International Space Station
- 10:00 WRMISS - Round Table Discussion
- ISS dosimetry tasks (scientific-operational)
- Limitations of instruments, discussion of discrepancies in measurements
 - Instrument development
 - Intercalibration of instruments
 - Relevance of secondary products
 - Definition of necessary improvements of models
 - Data base
- 13.30 WRMISS - Conclusions/Recommendations
- 14:00 Adjourn