Draft Agenda
Sunday, June 14, 1998
Mission Inn

Music Room 1:00 pm – 5:00 pm
Welcome & Announcements
Walter Schimmerling & Greg Nelson

Centers & Facilities

- Loma Linda
  - Nelson, G. — Loma Linda Accelerator Facility Research Beamline and Cooperative Research Agreement Status Report.
  - Moyers, M. — Characteristics of the Research Proton and Cobalt Beams – Initial Configurations.
- Brookhaven
  - Lowenstein, D. — Accelerator Based Space Radiation Research Opportunities at Brookhaven National Laboratories.
  - Vazquez, M. — AGS Activities: BNL-3 & BNL -4

Break – 15 Minutes

- NIRS
  - Fujitaka, K. — NIRS Activities
- NSCORT
  - Chatterjee, A. — NSCORT Activities
- NSBRI
  - Williams, J. — NSBRI Activities
    Alpha and Omega: A Model of Radiosensitivity Based on Multiple Induced Cellular Response States.

Round Table Discussion
Priorities in Proton Radiation Research

Ho-O-Kan Room and Oriental Gardens 5:00 pm – 7:00 pm
Welcoming Reception

Monday, June 15, 1998
Loma Linda University Wong Kerlee Conference Center

Peterson Auditorium 8:30 am – 12:00 pm
Welcome
Loma Linda University Administration

Radiation & Risk (1 hr.)

- Session Chair – S. Curtis
  - Katz, R. — Applications of Track Theory for Study of Unique Effects of Heavy Ions in Therapy and CNS Damage.
  - Peterson, L. — Uncertainty in Radiogenic Risks for International Space Station and Mars Missions.
  - Singleterry, R. — Overview of the Atmospheric Ionizing Radiation Model and Validation.

Todd, P.	Combined Effects of Space Flight Factors and Radiation on Humans.
Turner, R.	Forecasting Solar Particle Events.

Break – 15 Minutes

AGS Experiments (2 hr.)

- Session Chair – B. Sutherland

Balcer-Kubiczek, E.	Comparison of Gene Expression Profiles in MCF7 Cells Irradiated to Iso-Survival Doses of X-rays, Fission Neutrons and 1 GeV/nuc.
Kronenberg, A.	Mechanisms of Mutagenesis in Syngenesis Human Lymphoid Cells Exposed to a Low Fluence of 1GeV Fe Ions: Mapping Studies and Gene Dosage Analysis Dissect Recombinational and Deletional Pathways as a Function of P53 Status.
Metting, N.	Cellular Responses to 1GeV/amu Iron Ion Exposure: DNA Strand Breaks and Repair Protein Up-Regulation.
Rabin, B.	Effects of Exposure to ^{56}Fe Particles on Behavior Mediated by the Central Dopaminergic System.
Rydberg, B.	Unjoined DNA Double-Strand Breaks Induced by 900 MeV/n and 480 MeV/n Iron Ions; Comparison with Low Energy Helium Ions.
Wu, H.	Analysis of Incomplete Chromosome Exchanges Using Fluorescence in Situ Hybridization with Telomere Probes.
Yang, T.	Effects of Polyethylene Shielding on Chromosomal Aberrations in Human Lymphocytes by 1 GeV/u Iron Particles.

Lunch – Slate Auditorium **12:00 pm – 1:00 pm**

Peterson Auditorium **1:00 pm – 5:30 pm**

Cell & Molecular Radiobiology

- Session Chairs – A. Grosovsky & E. Blakely

Blakely, E.	Proton Irradiation Alters Expression of FGF-2 in Human Lens Epithelial Cells.
Cheong, N.	Evidence for the Presence of Factors Modulation Radiation-Induced G2 Delays.
Cucinotta, F.	Mathematical Model of Protein Regulation of Cell-Cycle Progression.
Green, L.	Cell Cycle, Cytotoxicity and Chromosome Damage in Thyroid Follicular Cells Exposed to Gamma and Proton Radiation.
Kiefer, J.	Limits and Potentials of Track Structure Analysis of Biological Heavy Ion Effects on Cells.
Miller, A.	Radiation-Induced Oncogene Activation and Tumor Suppressor Alterations Associated with Carcinogenesis: Potential Chemoprevention Strategies.

Break – 20 Minutes

Testard, I.	Chromosome Aberrations Induced in Human Cells by High-LET Irradiation, What Could Be Long Term Effects for Astronauts?
Tabocchini, M.	Distributions of DNA DSB Induced in V79 Cells by 31 KeV/μM Protons and G-rays.
Warters, R.	Aminothiol Modulation of Radiation Response.
Yatagai, F.	Mutation Induction by Mir Flight in a Bacterial RSPL Shuttle Vector.

5:00 pm – 5:30 pm

Radiobiology Lab Tour

Tuesday, June 16, 1998
Loma Linda University Wong Kerlee Conference Center

Peterson Auditorium **8:30 am – 12:00 pm**

Space Flight Activities

- Session Chairs – V. Petrov & J. Keifer

Davies, P.	A Flight Platform for Space Radiation Studies.
Demo, D.	International Spacestation – Capabilities and Access for Space Radiation Research.
Nelson, G.	Meeting Report: International Space Life Sciences Working Group (ISLSWG) and Biorack Science Results Investigators Working Group.
Petrov, V. & Ostrovski, M.	Mir Program Activities.
Reitz, G.	Report on the Workshop on Radiation Monitoring for the International Space Station.
Schimmerling, W.	Project Re-Entry Workshop Report.
Turner, R.	Solar Particle Events and International Space Station.

Break – 15 Minutes

Animal & Tissue Radiobiology

- Session Chairs – M. Fry & MH Barcellos-Hoff

Costes, S.	Development of Confocal Image Analysis of Laminin in Skin Basement Membranes Following Whole Body Iron Particle (1GeV/nuc) Irradiation.
Cox, A.	Progress in Extrapolation Among Data on Radiation Cataracts in Animal Models and Humans.
Gridley, D.	Development of a Preclinical Radiation and TNF-α Gene Therapy Model for Cancer Treatment.
Ohnishi, T.	Accumulation of a Tumor Suppressor P53 in Rat Muscle After a Space Flight.

Lunch – Slate Auditorium **12:00 pm – 1:00 pm**

Peterson Auditorium **1:00 pm – 2:30 pm**

AGS Experiments – II

- Session Chair – A. Kronenberg & P. Chang

Brooks, A.	Induction of Cytogenetic Dammage by HZE Fe Particles *in vivo* in Both Dividing and Non-Dividing Tissues.
Chang, P.	Analysis of Heavy-Ion Induced Genetic Damage in Transgenic Animals.
Evans, H.	Characteristics of Genomic Instability in a Human Diploid Lymphoblastic Cell Line.
Furusawa, Y.	TBS
Hall, E.	Genomic Instability and Heavy Ions.
Nelson, G.	Modulation of Charged Particle-Induced Chromosome Aberrations in *C.elegans* by Mutations in Genes Which Manage Oxidative Stress.
Wiese, C.	The Fidelity of DNA Double Strand Break Repair in Synchronized Human Lymphoblastoid Cells: Correlation of Mutations Frequencies and DSB Rejoining.

Adjourn **2:30 pm**

Social Event

- Palm Springs Aerial Tramway

  Ellen S. Baker, M.D., M.P.H. (USRA will fill in information about E. Baker)

Wednesday, June 17, 1998
Loma Linda University Wong Kerlee Conference Center

Peterson Auditorium **8:30 am – 12:00 pm**

Physics Experiments and Models

- Session Chairs – F. Cucinotta & J. Miller

Borak, T.	The Influences of Wall Effects for Measurements of Energy Deposition in 1μm Diameter Volumes of Tissue by ^{56}Fe at 600 and 1000 MeV per Nucleon.
Miller, J.	Accelerator-Based Calibrations of Space Radiation Detectors.
Moscovitch, M.	Observations of Radiation Effects on 3D Optical Random-Access Memory Materials for Use in Radiation Dosimetry.
Sutherland, J.	Direct Electronic Imaging of Heavy Ion Beam Dose Distribution.
Zeitlin, C.	Status of Fragmentation Studies of GCR-Like Ions.

Break – 15 Minutes

Flight Measurements

- Session Chairs – G. Reitz, G. Badhwar

Badhwar, G.	Radiation Measurements Onboard the Mir Orbital Station and Their Implications for the International Space Station.
Benton, E.	Target Fragmentation Measurements Aboard the Russian Mir Station and at the Loma Linda Proton Therapy Beam.
Dachev, T.	Lessons Learned From the 6 Years Use of the Liulin Instrument on the Mir Space Station. Description of Liulin-4 Subsystem for the Russian Segment of ISS.

Closing Remarks
Walter Schimmerling

LLU Accelerator Tour **12:00 pm – 1:00 pm**