Monday, March 23, 2020

Opening Session

8:10 am  Presentation of the Colors
Joint Armed Forces Honor Guard
from the Military District of Washington, DC

Singing of the National Anthem
Kimberly Jordan
U.S. Nuclear Regulatory Commission

8:15 am  NCRP Welcome
Kathryn D. Held
President, NCRP

8:20 am  Introduction
Jacqueline P. Williams
University of Rochester Medical Center
Cary J. Zeitlin
NASA Johnson Space Center
Program Co-Chairs

Seventeenth Annual Warren K. Sinclair Keynote Address

8:30 am  Introduction of the Speaker
Kathryn D. Held

Perception of Radiation Risk from the Astronaut Office
Serena M. Auñón-Chancellor
NASA Johnson Space Center

Flight Environments & Combined Stressors

Mark Shavers & Cary J. Zeitlin, Session Co-Chairs

9:00 am  NASA Space Radiation Laboratory Galactic Cosmic Ray Simulator
Lisa C. Simonsen
NASA Langley Research Center

9:20 am  Characterization & Prediction of the Aircraft Ionizing Radiation Environment
Christopher J. Mertens
NASA Langley Research Center

9:40 am  Flight Doses & Associated Health Implications at Civil, Commercial & Military Altitudes
Kyle Copeland
U.S. Air Force School of Aerospace Medicine/Occupational and Environmental Health Analytical Services Division

10:00 am  It's Not Just Radiation: Other Environmental Factors Affecting Space Flight Health Risks
Marianne B. Sowa
NASA Ames Research Center

10:20 am  Q&A

10:35 am  Break

Cancer Risks

Jeri Anderson & Michael M. Weil, Session Co-Chairs

10:55 am  Cancer Risk Assessment for Astronauts Participating in Deep-Space Missions
Tony Slaba
NASA Langley Research Center

11:15 am  Space Radiation Cancer Biology: Individualizing Risk
Michael M. Weil
Colorado State University

11:35 am  Radiation Dose & Risks to Flight Crews: The European Perspective
Werner Rühm
German Research Center for Environmental Health, Munich
11:55 am  Cancer in U.S. Pilots & Flight Attendants: NIOSH Aircrew Studies  
Jeri Anderson  
National Institute for Occupational Safety & Health, Centers for Disease Control & Prevention

12:15 pm  Q&A
12:30 pm  Lunch

Noncancer Risks  
Janice L. Huff & Jacqueline P. Williams, Session Co-Chairs

1:30 pm  Radiation in the Context of Human System Risks in Exploration Spaceflight  
Erik L. Antonsen  
NASA Johnson Space Center

1:50 pm  Long-Term Effects of Space Radiation on Cognition  
Antiño R. Allen  
University of Arkansas for Medical Sciences

2:10 pm  Cosmic Radiation & Human Health: Evidence from Aircrews & Astronauts  
Robert J. Reynolds  
Mortality Research & Consulting, Inc.

2:30 pm  Effects of the Space Flight Environment on Bone Health  
Jeffrey Willey  
Wake Forest School of Medicine

2:50 pm  Q&A
3:05 pm  Break

Forty-Fourth Lauriston S. Taylor Lecture on Radiation Protection & Measurements

3:40 pm  Reproductive Hazards in Flight Crew: Radiation & Beyond  
Candice Johnson  
National Institute for Occupational Safety & Health, Centers for Disease Control & Prevention

4:00 pm  Cardiovascular Effects of Low-Dose Ionizing Radiation  
Marjan Boerma  
University of Arkansas for Medical Sciences

4:20 pm  Sleep, Circadian Rhythms, and Workload in Spaceflight  
Ajitkumar Mulavara  
NASA Johnson Space Center

4:40 pm  Q&A
4:50 pm  Break

Noncancer Risks (continued)

Zarana Patel & Gayle E. Woloschak, Session Co-Chairs

3:20 pm  Fight-or-Flight: Immune Status & Radiation Resilience  
Dörthe Schau  
University of California - Los Angeles

5:00 pm  Introduction of the Lecturer  
Michael M. Weil  
Taking Up Space: The Path to Understanding Radiation Risks  
Robert L. Ullrich  
Radiation Effects Research Foundation

6:00 pm  Reception
Tuesday, March 24

8:15 am  NCRP Annual Business Meeting

9:15 am  Break

Fourth Thomas S. Tenforde Topical Lecture

9:30 am  Introduction of the Lecturer
Donald A. Cool

Collision or Cooperation? The Law, Ethics & Science of Personalized Risk Assessments for Space & Air Travel
Paul A. Locke
Johns Hopkins Bloomberg School of Public Health

10:00 am  Hibernation & Radioprotection: Reduced Tissue Damage in Rats Under Synthetic Torpor
Marco Durante
GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt

10:20 am  Strategy for Maturing Active Radiation Shielding Concepts
Dan Fry
NASA Johnson Space Center

10:40 am  Using DNA Damage to Investigate the Individual Variability of Human & Mouse Sensitivity to Ionizing Radiation
Sylvain Costes
NASA Ames Research Center

11:00 am  Mitigation Strategy for Health Risks Induced by Space Radiation
Janice L. Huff
NASA Langley Research Center

11:20 am  Q&A for All Speakers

Conclusions

11:50 am  Flying High - Program Wrap-Up
Jacqueline P. Williams & Cary J. Zeitlin
Program Committee Co-Chairs

12:00 pm  NCRP Vision for the Future & PAC Activities
Kathryn D. Held
President, NCRP

12:30 pm  Adjourn