

Program of Aero/Space Medicine Symposium, San Antonio, Nov. 10-12

The following program of the Second International Symposium on the Physics and Medicine of the Upper Atmosphere and Space, to be held at the Hilton Hotel, San Antonio, Texas, November 10, 11 and 12, has been announced by Major General Otis O. Benson, Jr., USAF, and Dr. Hubertus Strughold, chairmen of the meeting:

November 10

Morning Program

Environment

Chairmen: DR. HUGH L. DRYDEN, Director, National Advisory Committee for Aeronautics, and DR. ALAN T. WATERMAN, National Science Foundation.

"High Energy Radiations at Rocket and Satellite Altitudes"—DR. JAMES A. VAN ALLEN, Professor and Head, Department of Physics, State University of Iowa.

"The Chemical Reaction of the Atmosphere as a Result of Solar Radiation"—PROFESSOR-DOCTOR MARCEL NICOLET, Secretary World IGY, Head, Department of Radiation, Meteorological Institute of Belgium, Brussels.

"Meteoritic Material in Space"—DR. FRED L. WHIPPLE, Smithsonian Astrophysical Observatory, Cambridge, Mass.

"Meteoric Erosion"—DR. FRED SINGER, Professor of Physics, University of Maryland.

"The Electromagnetic Environment in the Vicinity of the Earth and Near Space"—PROFESSOR-DOCTOR WALTER DIEMINGER, Institutsleiter des Max-Planck Instituts für Ionosphären-Forschung, Lindau, Harz, West Germany.

"The Chemosphere"—DR. JOSEPH KAPLAN, Professor of Physics, University of California, Los Angeles.

Afternoon Program

Environment

Chairmen: LT. GEN. WALTER E. TODD, USAF, Commander, Air University, Maxwell Air Force Base, Alabama, and BRIG. GEN. DONALD D. FLICKINGER, USAF, Air Research and Development Command

"Composition of the Upper Atmosphere"—J. W. TOWNSEND, Naval Research Laboratory, Washington, D. C.

"Ozonosphere"—DR. HANS G. CLAMANN, Professor of Biophysics, USAF School of Aviation Medicine.

"Gravitational Environment of Space"—DR. HUBERTUS STRUGHOLD, Professor of Space Medicine, and DR. OSCAR RYTTER, Associate Professor of Physics, USAF School of Aviation Medicine.

"Radiobiological Aspects of Solar Phenomena"—DR. HERMAN J. SCHAEFER, USN School of Aviation Medicine.

"Radiobiological Studies with Accelerated Heavy Ions"—DR. CORNELIUS A. TOBIAS, Donner Laboratories, University of California, Berkeley, California.

"Experimental Biological Studies of Cosmic Rays"—DR. JAKOB EUGSTER, Professor, University of Zurich, Switzerland.

INTERNATIONAL AERO SPACE MEDICINE PROGRAM

November 11

Morning Program

Vehicles

Chairmen: MAJ. GEN. BERNARD A. SCHRIEVER, USAF, Air Research and Development Command, and DR. DETLEV W. BRONK, Rockefeller Institute for Medical Research, New York.

"The Weight Limitations and Capabilities in Rocket Propulsion for Manned Space Operations"—MAJ. GEN. BERNARD A. SCHRIEVER, USAF.

"A Survey of Possible Propulsion Systems"—DR. L. R. SHEPHERD, President, British Interplanetary Society, London.

"Ion and Photon Propulsion"—DR. ERNST STUHLINGER, Army Ballistic Missile Agency, Huntsville, Alabama.

"The Firing of Space Vehicles"—DR. WERNHER VON BRAUN, Technical Director, Army Ballistic Missile Agency, Huntsville, Alabama.

"The Rocket Booster Glider as a Space Vehicle"—DR. WALTER R. DORNBERGER, Technical Assistant to the president, Bell Aircraft Corporation, Buffalo, New York.

"Manned Orbital and Lunar Space Vehicles"—KRAFFT A. EHRICKE, Convair, Astronautics Division, San Diego, California.

"Deceleration during Entry into Planetary Atmosphere"—DR. DEAN CHAPMAN, Ames Aeronautical Laboratory, Moffett Air Force Base, California.

Afternoon Program

Medical Problems

Chairmen: MAJ. GEN. DAN C. OGLE, USAF (MC), Surgeon General, USAF, and CAPTAIN LANGDON C. NEWMAN (MC) USN, Commanding Officer, U. S. Naval School of Aviation Medicine.

"Parameters of Human Adaptation"—DR. ALBERTO HURTADO, Director, Institute of Andean Biology, Lima, Peru, and DR. ROBERT T. CLARK, JR., Chief, Department of Physiology-Biophysics, USAF School of Aviation Medicine.

"Medical Experimentation in Space Cabin Simulator"—LT. COL. GEORGE R. STEINKAMP, Space Medicine Division, USAF School of Aviation Medicine.

"The Use of Photosynthesis in a Closed Ecological System"—DR. JACK MYERS, Department of Zoology, University of Texas.

"Psychological Problems of Space Flight"—DR. GEORGE T. HAUTY, Associate Professor of Psychology, Department of Space Medicine, USAF School of Aviation Medicine.

"Psychophysiological and Medical Studies of Weightlessness"—DR. SIEGFRIED J. GERATHEWOHL, Associate Professor of Psychology, and CAPT. JULIAN E. WARD, USAF (MC), Department of Space Medicine, USAF School of Aviation Medicine.

"Biological Aspects of Nuclear Propulsion"—COL. JOHN E. PICKERING, USAF, Chief, Department of Radiobiology, USAF School of Aviation Medicine.

"Atmospheric Re-entry-Biomedical Aspect"—WM. RANDOLPH LOVELACE, II, M.D., The Lovelace Foundation, Albuquerque, New Mexico, and SCOTT CROSSFIELD, North American Aviation, Inc., Los Angeles, California.

"Biodynamics of Launch and Re-entry"—COL. JOHN P. STAPP, USAF, Chief, USAF Aero Medical Laboratory, Dayton, Ohio.

INTERNATIONAL AERO SPACE MEDICINE PROGRAM

November 12

Morning Program

Rescue in Space

Chairmen: COL. PAUL A. CAMPBELL, USAF, Chief, Space Medicine Division, USAF School of Aviation Medicine, and CAPT NORMAN LEE BARR, USN, Naval Medical Research Institute, Bethesda, Md.

"Introduction to the Problems of Rescue and Survival in Space"—COL. PAUL A. CAMPBELL, USAF.

"Escape at Launching and in the Atmosphere"—ROBERT N. STANLEY, Stanley Aviation Corporation, Denver, Colorado.

"Rescue from Space by a Secondary Vehicle"—KRAFFT A. EHRLICH, Convair, Astronautics Division, San Diego, California.

"Rescue through Retrieve"—NORMAN V. PETERSEN, Palo Alto, California.

"The Vehicle—Combined Requirements"—ALFRED M. MAYO, Douglas Aircraft Company, Inc., El Segundo, California.

Medical Problems of Time

Chairman: DR. E. J. BALDES, Mayo Clinic, Rochester, Minnesota.

"Metabolic Aspects"—DR. HANS G. CLAMANN, Professor of Physiology-Biophysics, USAF School of Aviation Medicine.

"Time Dilation and the Astronaut"—MAJOR EVAN R. GOLTRA, USAF (MC), USAF School of Aviation Medicine.

"Perception and Reaction Times"—DR. HEINRICH W. ROSE, Professor of Ophthalmology, USAF School of Aviation Medicine.

Afternoon Program

Planets

Chairmen: DR. HUBERTUS STRUGHOLD, Professor of Space Medicine, USAF School of Aviation Medicine, and DR. FRED L. WHIPPLE, Smithsonian Astrophysical Observatory, Cambridge, Mass.

"The Physics of the Sun"—PROF. WALTER ORR ROBERTS, Professor of Astronomy, University of Colorado.

"The Environment of the Moon and the Planets"—DR. GERARD P. KUIPER, Yerkes Observatory, University of Chicago.

"The Physical Environment on Mars"—DR. GERARD DE VAUCOULEURS, Research Associate, Harvard College Observatory, Cambridge, Mass.

"Terrestrial Micro-organisms Under Simulated Martian Conditions"—LT. COL. JOHN D. FULTON, USAF (MSC), Chief, Department of Microbiology, USAF School of Aviation Medicine.

"Interplanetary Travel from the Viewpoint of the Physicist"—DR. HEINZ HABER, Professor of Engineering, University of California, Los Angeles.

"Interplanetary Travel from Viewpoint of the Physician"—DR. HUBERTUS STRUGHOLD, Professor of Space Medicine, USAF School of Aviation Medicine.