

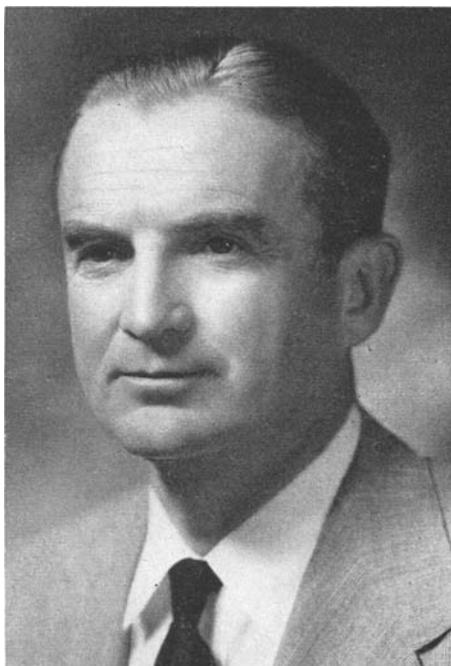
# Scientific Program and Highlights of 1955 Meeting in Washington

To begin its second quarter of a century, the Aero Medical Association will present an outstanding scientific and social program at the twenty-sixth annual meeting at the Statler Hotel in Washington, D. C., March 21-23, 1955, under the presidency of Brigadier General Otis O. Benson, Jr., USAF (MC).

The Honorable Stuart Symington, United States Senator from Missouri and the first Secretary of the Air Force, will be the guest of honor and principal speaker at the colorful banquet on the evening of March 23.

Dr. John F. Fulton, Sterling Professor of the History of Medicine at Yale University School of Medicine, will deliver the first Louis H. Bauer Lecture. His presentation, "Louis H. Bauer and the Rise of Aviation Medicine," will be given on the morning of March 21.

The traditional Fellows' Dinner will be held on the evening of March 21 at the Officers' Club of the Naval Gun Factory. The annual business meeting luncheon of the Association is scheduled for March 22 at the Statler Hotel. The Lederle Laboratories will be host this year to members and their guests at the cocktail hour preceding the Association's annual banquet, the final event of the meeting. The recipients of the Lyster, Longacre and Tuttle Awards, and the newly elected fellows, will be announced on that eve-



SENATOR STUART SYMINGTON  
Guest of Honor and Banquet Speaker

ning. The U. S. Air Force Band will present a program of music and entertainment.

#### WIVES' WING PROGRAM

The fourth annual meeting of the Wives' Wing of the Association, under the presidency of Mrs. W. P. Dana includes a gala program of social events beginning with a welcoming tea and fashion show at the Statler Hotel on the afternoon of March 21. Mrs. Otis O. Benson, Jr., is honorary president of the Wing and Mrs. Langdon

## SCIENTIFIC PROGRAM

C. Newman is general chairman of the program.

On March 22, the ladies will visit the new National Institutes of Health in Bethesda, Maryland, followed by a luncheon and business meeting in the South American Room of the Statler Hotel. A tour of some of the most interesting foreign embassies in Washington has been arranged for March 23.

The chairmen of the various committees for this year's meeting include: Mrs. Joseph A. Baird, hostess; Mrs. Theodore C. Bedwell, Jr., luncheon; Mrs. Sheldon S. Brownton, tea; Mrs. George B. Green, embassy tour; Mrs. Ludwig G. Lederer, registration; and Mrs. Verne C. Lyon, Institutes tour. Dues of two dollars for the present calendar year are now payable to the

Secretary-Treasurer, Mrs. Norman L. Barr, Box 5589, Washington 16, D. C.

### ALL EXHIBIT SPACE ALLOCATED

Extensive scientific exhibits, displaying the most recent developments in aviation medicine, will be presented by the U. S. Navy, U. S. Air Force, the Civil Aeronautics Administration and the Royal Canadian Air Force. All available space for technical exhibits had been allocated as this number of THE JOURNAL went to press, indicating the widespread interest of the aeronautical, pharmaceutical and medical supply industry in the Association's 1955 meeting.

The following scientific program was arranged by a committee under the chairmanship of Captain Clifford P. Phoebus (MC) USN:

## MONDAY, MARCH 21

### *Opening Ceremony—9 a.m.*

#### THE NATIONAL ANTHEM AND PRESENTATION OF COLORS

United States Navy Band

#### INVOCATION

Major General Charles I. Carpenter, USAF, *Chief of Air Force Chaplains*

#### WELCOME

Brigadier General Otis O. Benson, Jr., USAF (MC), *President of the Aero Medical Association*

### *The Louis H. Bauer Lecture*

#### LOUIS H. BAUER AND THE RISE OF AVIATION MEDICINE

John F. Fulton, M.D., *Yale University*

### *Scientific Program*

#### THE CHANGING COMPLEX OF AVIATION MEDICINE

T. C. MacDonald, Air Commodore, Royal Air Force, *Director of Hygiene and Research, Air Ministry, London*

#### THE MEDICAL ASPECTS OF ARMY AVIATION

William S. Moore, Colonel, MC, USA, Spurgeon H. Neel, Jr., Lieut. Col., MC, USA, and Leonard A. Crosby, Jr., Major, MC, USA, *Office of the Surgeon General, Department of the Army, Washington, D. C.*

## SCIENTIFIC PROGRAM

### THE MEDICAL PROBLEMS OF AIRLINE FLIGHT PERSONNEL

John J. Welsh, M.D., *American Airlines, Flushing, New York*

### THE HUMAN FACTORS IN LONG RANGE FLIGHT

Charles A. Dempsey, B.S., N. R. Burch, Capt., USAF (MC), D. Chiles, 1st Lieut., USAF (MSC), D. E. Warren, 1st Lieut., USAF (MSC), and N. E. Schmitt, Lieut., USAF (MSC), *U. S. Air Force Aero Medical Laboratory, Wright-Patterson AFB, Ohio*

### *Afternoon Program—2 p.m.*

#### *Session on Space Medicine*

#### INTRODUCTION

A. P. Gagge, Col., USAF (MSC), *Chairman*

#### DEMONSTRATION OF COSMIC RAYS IN HUMAN TISSUE (SKIN)

Dr. J. Eugster, *Professor of Geographical Medicine, University of Zurich, Switzerland*

#### PHYSIOLOGICAL AND RADIOBIOLOGICAL ASPECTS OF THE 1954 AEROMEDICAL FIELD LABORATORY BALLOON FLIGHTS

David G. Simons, Major, USAF (MC); and C. H. Steinmetz, 1st Lieut., USAF (MSC), *U. S. Air Force Aeromedical Field Laboratory, Holloman AFB, New Mexico*

#### THE BIOLOGICAL SIGNIFICANCE OF THE NATURAL BACKGROUND OF IONIZING RADIATION AT SEA LEVEL AND AT EXTREME ALTITUDE

Hermann J. Schaefer, Ph.D., *U. S. Naval School of Aviation Medicine, Pensacola, Florida*

#### COSMIC RAY EFFECTS ON MATTER AT HIGH ALTITUDES

S. Fred Singer, Ph.D., *Department of Physics, University of Maryland, College Park, Maryland*

#### FLIGHT AT THE UPPER BORDER OF THE ATMOSPHERE

Walter R. Dornberger, Ph.D., *Bell Aircraft Corp., Buffalo, New York*

#### HUMAN TOLERANCE OF MULTI-STAGE ROCKET ACCELERATION CURVES

H. Preston-Thomas, Ph.D.; J. Miller, M.D.; and J. Henry, M.D., *Canadian National Research Council, Ottawa, Canada*

#### THE BOILING OF BLOOD AND BODY FLUIDS AT EXTREMELY HIGH ALTITUDES

Fred A. Hitchcock, Ph.D., *Professor of Physiology, Ohio State University, Columbus, Ohio*

#### THE EXPERIMENTAL SEALED CABIN OF THE U. S. AIR FORCE SCHOOL OF AVIATION MEDICINE

H. Strughold, M.D., *Chief, Department of Space Medicine, U. S. Air Force School of Aviation Medicine, Randolph AFB, Texas*

## TUESDAY, MARCH 22

### *Morning Session—8:30 a.m.*

#### A TRIBOLUMINESCENT MICRO-ACCELEROMETER

W. R. Franks, M.D., *Banting Institute, University of Toronto, Canada*

#### THE DESIGN AND EVALUATION OF AVIATION PROTECTIVE HELMETS

Edward M. Wurzel, Comdr. (MC) USN, *U. S. Navy Aero Medical Equipment Laboratory, Philadelphia, Pennsylvania*

#### ESCAPE FROM VERTICAL TAKE-OFF TYPE AIRCRAFT

Roland A. Bouse, Comdr. (MSC) USN, and W. C. Buhler, B.S., *U. S. Naval Parachutz Unit, El Centro, California*

## SCIENTIFIC PROGRAM

### ESCAPE BY DOWNWARD EJECTION AT HIGH SPEED AND HIGH ALTITUDE

Ira M. Barash, 1st Lieut., USAF (MSC); Edward G. Sperry, Capt., USAF, and Henry P. Nielsen, 1st Lieut., USAF, *U. S. Air Force Aero Medical Laboratory, Wright-Patterson AFB, Ohio*

### EFFECTS OF MECHANICAL FORCE ON LIVING TISSUES

#### I. EXPOSURE TO ABRUPT DECELERATION

#### II. EXPOSURE TO ABRUPT WINDBLAST

John P. Stapp, Lieut. Col., USAF (MC), *Chief, Aeromedical Field Laboratory, Holloman AFB, New Mexico*

### THE APPLICATION OF EPIDEMIOLOGICAL PRINCIPLES TO A STUDY OF AIRCRAFT ACCIDENTS

Ross A. McFarland, Ph.D., *Harvard School of Public Health, Boston, Massachusetts*

### AVIATION CRASH INJURY RESEARCH

A. Howard Hasbrook, *Director, Aviation Crash Injury Research, Cornell-Guggenheim Aviation Safety Center, New York, New York*

### AIRCRAFT ACCIDENTS WITH HAPPY LANDINGS

Richard B. Phillips, Capt. (MC) USN, *Naval Air Station, Glenview, Illinois*, and Charles C. Dugan, Major, USAF (MC), *Barksdale AFB, Louisiana*

### *Afternoon Session—2 p.m.*

### FURTHER EVALUATION OF "FEAR OF FLYING SYNDROME"

Lucio E. Gatto, Col., USAF (MC), *Sampson AFB, New York*

### OTOLOGICAL PROBLEMS MET IN AVIATORS

Edgar E. Poos, M.D., *Detroit, Michigan*

### THE PROBLEM OF HIGH INTENSITY NOISE AT A JET AIR BASE AND SOME SUGGESTED SOLUTIONS

Kenneth S. Scott, Comdr. (MC) USN, *Naval Air Test Center, Patuxent River, Maryland*

### BRIGHTNESS CONTRAST AND TARGET IDENTIFICATION THRESHOLDS ON THE RADAR PPI

Siegfried J. Gerathewohl, Ph.D., *U. S. Air Force School of Aviation Medicine, Randolph AFB, Texas*

### PHYSICAL EVALUATION OF PERSONNEL EXPOSED TO MICROWAVE EMANATIONS

Charles I. Barron, M.D.; Andrew A. Love, M.D., and Albert A. Baraff, M.D., *California Division of Lockheed Aircraft Corporation, Burbank, California*

### CABIN AIR CONTAMINATION PROBLEMS IN JET AIRCRAFT

George Kitzes, Ph.D., *U. S. Air Force Aero Medical Laboratory, Wright-Patterson AFB, Ohio*

## WEDNESDAY, MARCH 23

### *Morning Session—8:30 a.m.*

### FATAL DECOMPRESSION SICKNESS IN FLIGHT

Webb Haymaker, M.D., and Vincent M. Downey, Lieut. Col., USAF (MC), *U. S. Air Force School of Aviation Medicine, Randolph AFB, Texas*

### FACTORS AFFECTING THE ENDURANCE OF PSYCHOMOTOR SKILL

Robert B. Payne, Major, USAF (MSC), and George T. Hauty, Ph.D., *U. S. Air Force School of Aviation Medicine, Randolph AFB, Texas*

## SCIENTIFIC PROGRAM

### AN ANALYSIS OF METHODS OF G-PROTECTION

David H. Lewis, Lieut. (MC) USNR, *Aviation Medical Acceleration Laboratory, Naval Air Development Center, Johnstown, Pennsylvania*

### AVIATOR'S OXYGEN BREATHING DEVICES; TRANSITION TO VARIABLE INTEGRATED SYSTEMS

Aaron Bloom, B.S., *Aeronautical Medical Equipment Laboratory, Naval Air Experimental Station, Philadelphia, Pennsylvania*

### OXYGEN WANT WARNING SYSTEMS FOR MILITARY AIRCRAFT

Edward L. Michel, M.S., *Aeronautical Medical Equipment Laboratory, Naval Air Experimental Station, Philadelphia, Pennsylvania*

### HEAD MOVEMENT MEASUREMENTS IN RELATION TO SPATIAL DISORIENTATION AND VESTIBULAR STIMULATION

Walter H. Johnson, Ph.D., *Canadian Defence Research Medical Laboratories, Toronto, Canada*

### PHYSIOLOGICAL ASPECTS OF BINOCULAR VISION; SOME FACTORS WHICH MAY BE HAZARDOUS TO FLIGHT

Louis F. Raymond, M.D., *East Orange, New Jersey*

### AN INTRODUCTION TO DYNAMIC VISUAL ACUITY

Elek Ludvig, Ph.D., *Director of Research, Kresge Eye Institute, Detroit, Michigan*

### CURRENT DEVELOPMENTS IN IMPROVING INFORMATIONAL PRESENTATIONS FOR THE NAVY PILOT.

Fred R. Brown, M.S., *Aeronautical Medical Equipment Laboratory, Naval Air Experimental Station, Philadelphia, Pennsylvania*, and William L. Lovejoy, B.S., *USN, Bureau of Aeronautics, Washington, D. C.*

## *Afternoon Session—2 p.m.*

### IMPROVEMENTS FOR THE PILOT CAN INCREASE AIRCRAFT EFFICIENCY

Alfred M. Mayo, M.E., *Douglas Aircraft Co., El Segundo, California*

### SIMPLIFYING THE PILOT'S TASK THROUGH DISPLAY QUICKENING

Franklin V. Taylor, Ph.D., and Henry P. Birmingham, A.B., *Naval Research Laboratory, Washington, D. C.*

### A NEW LOOK FOR AIRCRAFT INSTRUMENTATION

George W. Hoover, Lieut. Comdr., USN, *Office of Naval Research, Washington, D. C.*

### SKY UNLIMITED: A Panel on Extreme Speed and Altitude

In this unique feature of the program, a group of the world's fastest humans will discuss the aeromedical aspects of their experiences. The participants are the leading civilian and military test pilots.