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## LIST OF JUDGES

George M. Fuller	Douglas Aircraft Company
Paul Goldsmith	Jet Propulsion Laboratory
William H. Kuhlman	Douglas Aircraft Company
James L. Malakoff	Northrop Corporation
Erwin Pfeffer	Space Technology Laboratory
William S. Poole	North American Aviation, Inc.
James Revell	Northrop Corporation
Cecil D. Richardson	Douglas Aircraft Company
Dr. Al Stanley	Librascope
Robert A. Webster	Space Technology Laboratory

## PARTICIPATING SCHOOLS

<i>School</i>	<i>Faculty Advisor</i>
Antelope Valley College	Frank Roberts
California Polytechnic College, San Luis Obispo	Lester W. Gustavson
Northrop Institute of Technology	Richard Smith
California Polytechnic College, Pomona	George R. Graves
California Institute of Technology	Max Williams
University of California, Los Angeles	C. Y. Liu
University of California, Berkeley	E. V. Laitone
University of Utah	Gary A. Flandro
University of Washington	Victor M. Ganzer
San Diego State College	William Shutts

NAME

AFFILIATION



## AIAA THIRTEENTH WESTERN REGION STUDENT CONFERENCE

Western Region Headquarters  
Los Angeles, California

May 2 and 3, 1963

REGISTRATION ACTIVITIES AND  
STUDENT HOSTS  
Courtesy of the Students  
of  
California Polytechnic College, San Luis Obispo

## ABBREVIATED SCHEDULE

### Thursday, May 2, 1963

8:00 - 9:00 A.M.—Registration  
9:00 - 12:30 P.M.—Undergraduate Papers  
12:30 - 1:45 P.M.—Luncheon  
1:45 - 5:30 P.M.—Undergraduate Papers  
6:00 - 7:00 P.M.—Faculty Social Hour  
7:00 - 10:00 P.M.—Faculty Dinner

### Friday, May 3, 1963

8:00 - 9:00 A.M.—Registration  
9:00 - 12:00 P.M.—Graduate Papers  
12:00 - 12:30 P.M.—Luncheon  
12:45 - 5:30 P.M.—Field Trips  
6:00 - 7:00 P.M.—Social Hour  
7:00 - 10:00 P.M.—Awards Banquet

THE LOS ANGELES SECTION

of

THE AMERICAN INSTITUTE

of

AERONAUTICS AND ASTRONAUTICS



presents

## THE THIRTEENTH ANNUAL WESTERN REGION STUDENT CONFERENCE

MAY 2 and 3, 1963

AIAA WESTERN REGION HEADQUARTERS

7660 Beverly Boulevard Los Angeles, California

**THURSDAY, MAY 2, 1963****8:00-9:00 A.M.**

REGISTRATION Western Region Headquarters

AUTHORS MEETING Gardner Room

**9:00 A.M.**

WELCOMING Auditorium

Robert A. Hovey  
Space Technology Laboratory  
Member — Student Conference Committee

**9:15 A.M. - 12:30 P.M.**

UNDERGRADUATE PAPER PRESENTATIONS Auditorium

Chairman: Stan Nash-Boulden

An Analytic Investigation of the Gravity Turn Trajectory

David J. Sullivan  
California Polytechnic College, San Luis Obispo

A Stability Study of a Rotating Cylinder and Vertical Fin Combination with Respect to Yaw

Daniel L. Walker  
California Polytechnic College, Pomona

The Influence of Ambient Gas Pressure on the Rate of Gravity Flow of Powders

Charles Howard Gibbs  
University of Utah, Salt Lake City

**REFRESHMENTS**

Space Truss Analysis by the Stiffness Method

Jerry L. Lee  
University of Washington, Seattle

A Preliminary Investigation of the Aerodynamic Characteristics of Various Parawing Configurations

David C. Coe, Dale E. Knutsen and Robert E. Wulf  
California Polytechnic College, San Luis Obispo

**12:30 - 1:45 P.M.**

LUNCHEON Auditorium

"The Apollo Program" by Scott Crossfield of North American Aviation

**1:45 - 5:30 P.M.**

UNDERGRADUATE PAPER PRESENTATIONS Auditorium

Chairman: Dean Borgman

Two Dimensional Model of an Attitude Control System for a Space Vehicle

David N. Kempe  
University of Utah, Salt Lake City

On the Application of the Slab Analogy in Determining Thermal Stresses in Solid Propellant Rocket Motor Grains

Bruce Douglas Shriver  
California Polytechnic College, Pomona

Automatic Load Alleviator

S. Joel Premselaar  
California Polytechnic College, San Luis Obispo

**REFRESHMENTS**

Preliminary Design Study of a Man-Powered Airplane

Michael Neff and Robert Martin  
University of Washington, Seattle

Merging of IAS and ARS Student Branches — A Panel Discussion by the student branch of Northrop Institute of Technology

Moderator: James Brannan  
Northrop Institute of Technology, Inglewood

**FACULTY DINNER**

(Invitation Only)

**6:00 - 7:00 P.M.**

SOCIAL HOUR Von Karman Room

**7:00-8:00 P.M.**

DINNER Von Karman Room

**8:00-10:00 P.M.**

INFORMAL DISCUSSION Von Karman Room

Host: George P. Sutton  
Rocketdyne

**FRIDAY, MAY 3, 1963****8:00 - 9:00 A.M.**

REGISTRATION Western Region Headquarters

AUTHORS MEETING Gardner Room

**9:00-11:00 A.M.**

GRADUATE PAPER PRESENTATIONS Auditorium

Chairman: Robert Wulf

Determination, Analysis and Potentialities of Advanced Freefall Inter-Planetary Trajectories

Michael Minovich  
University of California, Los Angeles

Title not available at Press Time

Author not available at Press Time  
Stanford University, Stanford

**REFRESHMENTS**

Initial Ionization Rates in Shock Heated Argon, Krypton and Xenon

Kenneth E. Harwell  
California Institute of Technology, Pasadena

Title not available at Press Time

Author not available at Press Time  
Stanford University, Stanford

**11:00 A.M.-12 NOON**

Soviet Film, "Stellar Brothers", describing the dual space flights of Lt. Col. Pavel Popovich and Major Andrian Nikolayev last summer. Color — approximately 60 minutes.

**12:00 - 12:30 P.M.**

LUNCHEON Auditorium

**12:30 - 5:30 P.M.****FIELD TRIPS**

BUS LOADING (12:45 P.M.)

Headquarters Parking Lot

TRIP NO. 1 Limit: 20 People

DOUGLAS AEROPHYSICS LABORATORY

One by one foot trisonic tunnel, Four by four foot trisonic tunnel, Hypersonic tunnel, Wind Tunnel Models of Space Boosters.

TRIP NO. 2 Limit: Bus Load (Approx. 35)

**ROCKETDYNE**

Bus Tour of Rocketdyne Propulsion Field Station in the Santa Susana Mountains where manned, Lunar Space Vehicle Engines are Tested.

TRIP NO. 3 Limit: 35 People

**JET PROPULSION LABORATORY**

Solar Space Simulator, Space Assembly Facility, Space Flight Operations Center (Computer Facility) and Environmental Labs.

**AWARDS BANQUET**

Chairman: Evert Hemenway

**6:00 - 7:00 P.M.**

SOCIAL HOUR Lobby

**7:00 - 8:00 P.M.**

DINNER Auditorium

**8:00 - 10:00 P.M.**

AWARDS AND SPEAKER Auditorium

Dr. William Pickering, Director Jet Propulsion Laboratory — "AIAA Looks At The Future"

**CASH AWARDS**

Minta Martin Aeronautical Student Fund

**Undergraduate**

1st Prize .....\$100.00  
2nd Prize .....\$ 75.00  
3rd Prize .....\$ 50.00

**Master's Level**

1st Prize .....\$100.00  
2nd Prize .....\$ 75.00  
3rd Prize .....\$ 50.00

**Ph.D. Level**

1st Prize .....\$100.00  
2nd Prize .....\$ 75.00  
3rd Prize .....\$ 50.00

**SPECIAL AWARD**

A special prize of \$100.00 will be awarded for the best overall presentation technique by an undergraduate level student.