

# HORIZONS

Houston, Texas

February 1992

## **Chairman's Corner**

**Dr. Zafar Taqvi  
Chairman**

In our last communication, we talked about the "momentum" trajectory, referring to the continuing progress of the Houston Section. It pleases us to see the achievements of the Section in providing services to our members. I am not sure, but I think we have the most broad-based membership service program of any AIAA section.

Our membership is up again. Twenty-three upgrades to Senior Member were reported last month. Local company executives will be approached soon to support our membership drive.

Educational activities of the Section are in full swing. In January, the Committee organized two key seminars. Dr. John Neff of the University of Colorado presented a four-hour special state-of-the-art tutorial seminar on Optics in Information Processing and Computing. The seminar was well attended. The other seminar, "More About Mars," also well attended, was presented by Dr. Nadine Barlow. If you were not there, you missed a real treat.

The Special Events Committee organized a seminar, "Space Activities in the College of Engineering at the University of Houston," the second in a series, on January 29. It provided extensive information on the research and advanced study opportunities available at the University.

International Space Year (ISY) activities are in the planning stage. A space essay contest among high schools of the area has been finalized. Region IV will use our contest set-up to hold a regional contest in July/August. An International Space Awareness Fair (ISAF) is being planned during the Space Fair time-

frame. Many international items are expected to be displayed. And, of course, the "ISY Commemorative Tour of Chinese Space Facilities" will provide special opportunities to our members to visit China on a low budget.

The 30th Anniversary Celebration of the Houston Section will bring back not only space memories but those who made it happen. On February 27 we will have all of our Fellows, past Section Chairmen, JSC dignitaries and many of our old friends we haven't seen for some time. As our special AIAA guests, we will have Terry Jordan, Region IV Director, and Dr. John Swihart, Immediate Past President of AIAA, on hand to congratulate our Section. We will have very special souvenirs for the attendees. I am sure you will want to attend this event.

Finally, nomination time for our annual election is upon us. I have appointed the following distinguished Section members to be part of the Nomination/Election Committee: Steve Zobal (chairman), Carl Huss, Jim McLane, Lou Livingston, André Sylvester, John Trebes and Walter Lueke. Please contact them if you are interested in being a candidate for any officer or councillor position. Good luck!

See you next month!

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## From Our Sister Section In China

**Jim McLane**  
ISAC - China Section

China's space program, which so far has been limited to unmanned earth orbiting satellites, may soon expand in new directions. That's what Min Guirong, President of the Chinese Academy of Space Technology (CAST), says in an interview reported in the December 1 issue of *Beijing Review*, an authoritative PRC weekly magazine. Min revealed that Chinese scientists are currently involved in research on the movement, control and communication of manned spacecraft. In addition, some astronauts are being trained.

Min also predicted that lunar and planetary exploration, completely new to the Chinese, will be an important program of their space activities in the early 21st century. While stating that there is no technological problem in making manned space vehicles, he admitted that a shortage of funds has delayed central government approval to proceed. In the meantime, Min expressed confidence that the 1990's will see rapid progress in their ongoing programs to develop applied satellites which the country needs badly. These include satellites functioning in the areas of communications, earth resources, meteorology, anti-disaster and transportation control.

The CAST, established in 1968 and described as

"the cradle of Chinese Satellites," is the main research center for development and application of space technology. It has 12,000 employees, of which 10% are senior engineers. With Headquarters in Beijing, CAST comprises thirteen unique disciplinary Institutes and three factories located at sites throughout China. Three of these are within the area of our Sister Section, the Shanghai Astronautical Society. ☺

## Automation & Robotics

**Dr. Zafar Taqvi**  
Chairman, Automation & Robotics TC

Dr. Yashvant Jani, Vice-President, Technology Systems Division, Togai Infralogic, Inc., presented a special seminar, "Fuzzy Logic Applications to Expert Systems and Control," on Tuesday, January 20, at the Gilruth Center. Fuzzy logic technology is becoming more important in many engineering and business applications and is already being applied in the automotive, aerospace, financial, transportation and consumer products industries. Dr. Jani's presentation was well received, especially the areas on practical applications.

Workshop on Automation and Robotics (WAR '92), the popular annual Houston Section workshop, is scheduled for Thursday, March 12, 1992 at the Gilruth Center. This year we will focus on how development of terrestrial robotic technology can be applied to space applications. Make plans early. Details will be forthcoming in next month's *Horizons*. ☺

*The Houston Section of the  
American Institute of Aeronautics and Astronautics  
requests the honor of your presence at the celebration of its  
Thirtieth Anniversary  
on Thursday, February 27, 1992, at 5:00 P.M.*

*RJVP*

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## ***Been There, Done That... 25 Years Ago This Month***

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**Annie Platoff**  
History/Heritage TC

January 1967 filled the Manned Spacecraft Center with the excitement of the Apollo Program and the sorrow of the tragic loss of the three Apollo 1 astronauts. The Space News Roundup remembers this way...

### ***Two MSC Employees Commended for Rescue in Chamber Emergency***

Two MSC employees were awarded certificates of commendation for their role in saving the life of a suit technician who collapsed when his oxygen line let go during a high altitude test in a vacuum at the Manned Spacecraft Center.

MSC Director Dr. Robert R. Gilruth presented the awards to Henry A. Rotter and Clifford W. Hess, members of the Systems Test Branch, Crew Systems Division. Jim LeBlanc, the suit technician who was inside the eight-foot altitude chamber, lost consciousness when his Apollo suit lost pressure. (Excerpted, *Space News Roundup*, January 6, 1967.)

### ***Science-Applications Directorate Formed***

A new directorate has been formed at MSC to meet the Center's growing responsibility in the area of space science and applications. In announcing the new Science and Applications Directorate, MSC Deputy Director George M. Low emphasized that the new organization will provide a point of contact for scientists throughout the country interested in taking part in the manned space flight program.

Low said that increasing emphasis has been placed on MSC's scientific base with assignment of responsibility in three major areas: Lunar science programs, Earth resources programs, and Meteorology investigations using manned spacecraft. (Excerpted, *Space News Roundup*, January 20, 1967.)

### ***Apollo 204 Crew Die in Pad Flash Fire***

The first manned Apollo crew—Virgil I. Grissom, Edward H. White II and Roger B. Chaffee—died aboard Apollo spacecraft 012 January 27 while participating in a Launch Complex 34 test. A flash fire inside the command module killed the three men at 5:31 CST during a hold at T-10 minutes in a simulated countdown.

Pad safety crews attempted to remove the hatch, but heat and smoke penetrating outward from the cabin interior prevented hatch removal until five minutes after the flash. More than 25 pad crewmen were treated for smoke inhalation.

The length of delay to the Apollo 204 mission is dependent upon the findings of the board of inquiry and upon preparation and verification of a substitute spacecraft. (Excerpted, *Space News Roundup*, February 3, 1967.)

### ***The Spaceward Movement***

With the deaths last Friday of Apollo 204 crewmen Grissom, White and Chaffee, six pilots have died in the line of duty in the nation's manned space flight program. Just as Indian massacres failed to stop the movement westward in the last century, so should not accidents—even catastrophes—stop the movement of space exploration in this century.

In statements before their deaths, the three Apollo crewmen recognized the possibility of disaster not only on the ground but also in space. We are sure that they would be the first to agree that the spaceward movement should not be slowed or halted, but rather that those that follow benefit from the findings of the board of inquiry. (Excerpted, *Space News Roundup*, February 3, 1967.)

## Events

### Wednesday Afternoon at the Movies

**Dr. George Nield**  
Education/Professional Development Chairman

On the third Wednesday of every month, the Education & Professional Development Committee is presenting one or more videotapes of interest to the aerospace community. The presentations are held at JSC, Building 1, Room 820, starting at 4:15 PM. Come on by on your way home from work and enjoy some classic cinema!

Our next showing will be "SMS Tour" on February 19. This film is a video "tour" of the Shuttle Mission Simulator. It was created as a training film by the JSC Mission Operations Directorate. Astronaut Mike Coats explains how the simulator is used, and actual training footage is included to show how it works.

The schedule for the remainder of the year is shown below:

February 19 - "SMS Tour."  
March 18 - "Preparation and Packaging of Food for Space Flight."  
April 22 - "Research Project X-15."  
May 20 - "Shuttle Flow at KSC."

If you have any questions, please call George Nield at 483-1364.

### Tech Symposium in Work

**Bill Best**  
Vice-Chairman, Technical

The 17th Annual Technical Symposium is now in the active planning stage. The planning committee, composed of Bill Best (chairman), Shirley Brandt, Bill Geissler, Michael Laible and Walt Lueke, is

meeting on a regular basis.

The symposium will be held at UH-CL on Wednesday, May 20. This year's theme is "Taking the Lead." In keeping with the spirit of the International Space Year we hope to have some papers from some of our sister sections. We will also need some volunteers for help on the day of the symposium and for leading the sessions. Additional details will follow in subsequent issues.

### Registration Opened for Chinese Facilities Tour

**Jim McLane**  
ISAC - China

Applications will be received until March 13 to join Houston Section's delegation to tour Chinese space facilities. The group will depart Houston for Beijing on Friday, May 1, and return from Shanghai on May 15, 1992. Membership in the delegation is open to all AIAA members, member applicants and accompanying family members. Places to be visited include Beijing, Chengdu, Xichang (launch site in southern Sichuan province), Shanghai and Suzhou. Transportation to mainland China will be by regularly scheduled Continental Airlines and China East Airlines. All arrangements in China have been made by the Chinese Astronautical Society, which will provide official escorts for the group.

The cost from Houston is \$3,085 per person double occupancy. Single occupancy hotel rooms are available for a supplemental cost of \$400. The tour is designed to qualify as an educational expense for aerospace professionals who itemize miscellaneous deductions on their federal tax returns. A journal will be maintained and published to document delegation activities. The number of persons in the group will be limited to thirty.

For more information, and to apply to join the delegation, contact Jim McLane, telephone (713) 488-0312.

## ***Also Noted***

### **Lobbying for NASA Select**

**Steve Clifford**  
Chairman, Public Policy Committee

If you live in the Clear Lake area and subscribe to Storer Cable, you may have noticed that over the past several years there has been a significant decline in the time allotted to NASA Select programming. This contrasts with the fact that the community around the Johnson Space Center represents one of the greatest concentrations of people interested in the space program to be found anywhere in the country. If you would like to see a full restoration of NASA Select coverage, you need to make your voice heard by writing to Scott Marshall, Area Manager for Storer Cable (2505 Bisby, Houston, TX 77017) and to City Councilman Frank Mancuso (P.O. Box 1562, Houston, TX 77251). The City Council periodically reviews the permit for cable operations in this area. One of the criteria by which the performance of a cable company is evaluated is the responsiveness of the company to the community's programming concerns and interests. Writing to the company's Area Manager and your City Councilman is one way to ensure that your viewing concerns and interests are clearly understood. ●

### **International Journals**

**Larry Friesen**  
International Space Activities Committee

I have recently completed a survey of international journals available in the JSC Technical Library. There are 60 or more, depending on how you define "international." If you would like a copy of the list, contact Larry Friesen, LESC/B12, 333-6799. If there is sufficient interest in international journals not on the list, it may be possible to arrange for a subscription. ●

## ***Technical Activities Calendar***

### **February**

#### ***3 - Monday***

NASA Area Macintosh Users (Group) "NAMU."  
National Instruments demo.  
RSOC Cafeteria, 600 Gemini, 7:00 PM.  
Information: 488-2262.

#### ***4 - Tuesday***

American Society for Quality Control (ASQC).  
Program TBA.  
American Host Motel, 2020 NASA Rd. 1,  
5:00/6:00/7:00.  
Information: Hank Williams, 338-2676.

#### ***5 - Wednesday***

JSC Astronomy Seminar.  
Open discussion.  
JSC, Bldg. 31, Rm 129, noon to 1:00 PM.  
Information: Al Jackson, 333-7679.

#### ***6 - Thursday***

Clear Lake SigAda Executive Council meeting.  
Tindy's, 18307 Egret Bay Blvd., 11:45 AM.  
Information: Paul Kennedy, 282-6262.

#### ***7 - Friday***

LPI Colloquium Series.  
"Magnetic Puzzles in the Protoplanetary Nebula," Tomasz Stepinski, LPI.  
LPI, 3600 Bay Area Blvd., auditorium, 3:30 PM.  
Information: Dr. Deborah Dominique, 486-2167.

#### ***12 - Wednesday***

CLCTS Annual Luncheon for Chairs and Reps.  
Red Lobster, 888 Bay Area Blvd., 11:45 AM.  
Information: Andy Lindberg, 483-1474.

JSC Astronomy Seminar.  
Open discussion.  
JSC, Bldg. 31, Rm 129, noon to 1:00 PM.  
Information: Al Jackson, 333-7679.



AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

**HOUSTON SECTION 30TH ANNIVERSARY DINNER**

THURSDAY, FEBRUARY 27, 1992

*SPACE EXPLORATION: THE NEXT 30 YEARS*



**Pat Rawlings, Art Director for Science Applications International Corporation, will provide a look at possible space activities within the next 30 years. Through this presentation of Mr. Rawlings' conceptual artwork, the viewer will witness the exploration of Earth-orbit, the Moon, Mars, and beyond.**

Gilruth Center Ballroom  
5:00-6:00 p.m. Social  
6:00-8:00 p.m. Dinner/Program

**Corporate Tables-\$200.00\***

Members & Spouses	-\$15.00
Nonmembers	-\$18.00
Students/Young Members	-\$12.00

Frankie Hap  
333-6064

Ardell Broussard  
283-4214

Carroll Robinson  
283-6000

Sarah Leggio  
282-3160

Dinner Reservation deadline is Monday, February 24 at noon. All attendees will receive a commemorative poster and lapel pin.

**\* Corporate Table seats eight. Two seats may be designated for NASA/AIAA Honored guests. Reserve Corporate Table by contacting Norman Chafee at 483-9995**

# AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

HOUSTON SECTION P.O. BOX 57524 WEBSTER, TEXAS 77598

## AIAA-HOUSTON SECTION

### 17th ANNUAL TECHNICAL SYMPOSIUM

CO-HOSTED BY

THE UNIVERSITY OF HOUSTON-CLEAR LAKE HIGH TECHNOLOGIES LABORATORY

***THEME: TAKING THE LEAD***

MAY 20, 1992

AT THE

UNIVERSITY OF HOUSTON - CLEAR LAKE

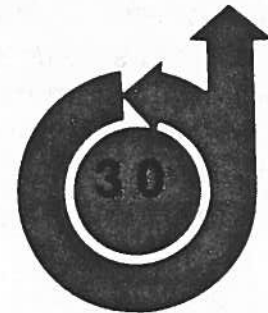
### CALL FOR ABSTRACTS

**DUE: MARCH 20, 1992**

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#### GUIDELINES FOR ABSTRACTS AND PRESENTATIONS

1. Subject of your choice on space activities. Suggested topics include: Communications Systems, Computer and Software Systems, Energy Systems, Simulation, Materials, Structures, Dynamics, Space Systems, Guidance, Navigation and Control, Life Sciences, Management, International Space Activities, Flight Mechanics, Space History, and Human Support
2. The abstract should be 250 words or less. (Abstracts must be typed double spaced. Floppy discs are strongly encouraged; see attached example for format.)
3. Presentations should be 10 to 15 minutes. VU-graph or 35 mm slides are preferred.
4. Formal publication is not required. However, please have handouts available at your presentation.
5. Include with your abstract:
  - Completed NASA Form FF427
  - All information on attached example
6. Submit abstracts or inquiries to:



30th  
Anniversary  
Houston  
Section

Bill Best, AIAA Vice-Chairperson, Technical  
RSOC/R12A-130  
600 Gemini, Houston, TX 77058  
(713) 283-0261

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