

HORIZONS

Houston, Texas

April 1992

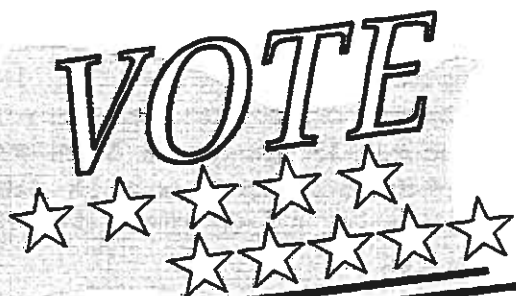
Chairman's Corner

Dr. Zafar Taqvi
Chairman

The 30th Anniversary Program was a source of inspiration, not only to me but to all those who participated in it. There were the past Section Chairmen, AIAA Fellows and Honorary Fellows, NASA senior staff and aerospace company executives. Region IV Director Teresa Jordan joined us from Sandia Lab, Albuquerque, and Dr. John Swihart, AIAA Immediate Past President, came from Seattle. Dr. Chris Kraft, past JSC Director, Henry Pohl, JSC Director of Engineering, and other speakers reminisced the glorious past, and how they did what they did.

We have really come a long way in our AIAA organization, thanks to these pioneers who provided the solid foundation for our Section. You saw the list of yearly achievements in our last issue of *Horizons*. We cannot possibly make such tremendous progress overnight. It requires a solid organization, a planning tool and dedicated workers. And we had them all. We need to provide a continuity in our achievements by selecting dedicated people in the current elections. We should volunteer ourselves for any section activity to which we can make a contribution.

Let us pursue our efforts to make the Houston Section the best of ALL. ☺



It's Section Election Time

About the time you receive this, an election mailing will be going out to all members. This mailing will include the list of nominees selected by the Nominating Committee, together with a closing date for nominations by petition.

Nomination by petition requires the signatures of at least 5% of the membership, or about 60 to 65 at the present time; the exact number varies this time of year because of delays in paying dues, etc.

Ballots will be mailed by April 15 with the complete list of nominees and the closing date for the return of ballots. Don't wait until the last minute, though. Mark your ballot and return it as soon as you get it. There's no easier way to participate in Section activities than to vote for the candidates of your choice. ☺

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Horizons is the monthly newsletter of the Houston Section of the American Institute of Aeronautics and Astronautics. It is created by members of the Houston Section and reproduced at the Houston offices of Lockheed Engineering and Sciences Company. Please address all communications to the Chairman, Dr. Zafar Taqvi, LESC/C80, telephone 333-6544, fax 333-7620.

Committee News

Trash Compactor Described

A Lunch & Learn under the auspices of the Materials, Structures & Dynamics TC was held February 26 on "The Orbiter's Extended Duration Orbiter (EDO) Trash Compactor" used in the middeck of the Orbiter. The speaker was Fred Abolfathi of Lockheed Engineering & Sciences Co. About 25 people attended the presentation.

The presentation included hardware description, analysis and a short film of the astronauts using the EDO trash compactor on a mission. The compactor was flown December 2, 1990, on the 9-day STS-35 mission and was a great success. It has become a permanent Orbiter subsystem as an important part of the waste management system for each mission. ☺



National Election Time

If you haven't yet mailed your ballot for the AIAA National elections, you may still have time, but not much. Remember, the ballot has to be *received in AIAA Headquarters* by April 1. Time's a-wastin'! ☺

Get Involved!

Join a National TC

Dr. Zafar Taqvi
Chairman

We need more Houston Section members in AIAA national technical committees. Of the 62 TCs at the national level, the Houston Section is represented in only 22. At the local level, we have only 12 functioning TCs.

Becoming a TC member benefits not only the individual members, but also their employers by getting first-hand information on new technical innovations.

If you are interested in any national TC, please contact Brigitte at 202/646-7641 and request the necessary application form. It is recommended that the form be sent directly to AIAA Headquarters with a copy to the Houston Section (Dr. Z. Taqvi, LESC/C80). ☺

Membership Upgrades

Dr. Zafar Taqvi
Chairman

If you are interested in an upgrade from Senior Member to Associate Fellow, you should contact Jim Visentine, JSC/ES5, 483-8123, *immediately* for an upgrade package. Normally, only a small percentage of the total Section membership can be recommended each year for this upgrade. We had an unusually large number approved last year, but that can't be expected to happen again.

Note that there is a once-per-year window for SM-AF upgrades. However, upgrades from Member to Senior Member may be submitted at any time. An application form for this upgrade is attached to this issue of Horizons, already signed by Dr. Zafar Taqvi and Jim Visentine. All you have to do is fill it out and send it in. ☺

Events

Wednesday Afternoon at the Movies

Dr. George Nield
Education/Professional Development Committee

The next "Wednesday Afternoon at the Movies" will be April 22, featuring a film on the development of the X-15 research airplane, one of the most famous vehicles in our aerospace heritage. The film includes dramatic photography of the X-15's flights and its landings at the Edwards AFB dry lakebeds.

The presentations are held on site 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!

The schedule for the remainder of the year is:

- April 22 - "Research Project X-15"
- May 13 - "Shuttle Flow at KSC"

(Note date change)

Space Awareness Fair

Chris Burmeister
International Space Year Committee

Planning is under way for the International Space Activities Awareness Fair (ISAAF), set for Tuesday, July 14, 1992. This event is designed to inform the JSC community of the space activities of other countries, foster an appreciation for international cooperation in space activities, and increase public awareness of the International Space Year, 1992.

We now have commitments from six countries. Brochures, pictures and some table models will be shown by Germany, India, the Commonwealth of Independent States, Belgium and the United Kingdom. In addition, we will have the privilege of representatives from at least the first three countries listed. If you are interested in helping with the VIP tour set for Monday, July 13, or in helping with the

publicity or day-of-event support, please contact Chris Burmeister at (713) 333-6866.

Also Noted

The AIAA Connection

[The following has been received from AIAA HQ.]

The AIAA Connection is a new system designed exclusively for AIAA members which provides easy access to vast information resources and electronic communication via your desktop PC (IBM or Macintosh). It consists of three components:

1. Bulletin Boards - provide coverage of AIAA region and section news, upcoming AIAA-sponsored meetings, AIAA staff phone numbers, and AIAA member information. Establish private or public bulletin boards for your TC or AIAA Section in order to advertise events and coordinate activities.
2. Electronic Mail - communicate with TC members, other AIAA members, and AIAA staff. Disseminate TC or Section newsletters electronically to mailing lists of colleagues. Use the E-mail system to submit award nominations and complete committee forms.
3. Database Searching - The AIAA Connection provides you easy menu access to over 300 databases, including the Aerospace Database, the world's premier source of aerospace-related R&D. Use the AIAA Connection to access the Official Airlines Guide, Commerce Business Daily, and other useful sources of business, scientific and general information such as full-text newspapers and journals.

All you need to access the AIAA Connection is a PC, a modem, a telephone line, and communications software. Subscribe now for the one-time fee of \$25 and you will receive free search time for the Aerospace Database up until June 30, 1992. Call Robert Resnick today at the AIAA Connection Customer Service Desk, 1-800-348-7737.

Houston Section Highlights, 1975-76

**Loren Wood
Past Chairman**

I like to think 1975-76 was a "turning point" for our Houston Section. We had a great year. The programs were educational. A lot more of our members became involved and discovered that we have a lot to talk about and to share. We had a very hard-working group of officers and "volunteers." Our membership at the start was 414 and our attendance at monthly dinner meetings averaged well over 100. The officers and council members were the Program Planning Group. We outlined an impressive array of programs for the year, and one of our Planning Group volunteered for each program to be responsible for obtaining the feature attraction on the topic of greatest interest to him/her. This approach resulted in a friendly competitive spirit and outstanding speakers each month.

We started off with a JSC "State of the Union" message from our Director, Dr. Christopher Kraft—a great start. As Chairman, I remember stating some ambitious goals that first meeting, and receiving some encouraging support from Dr. Kraft—especially when I stated we would indeed hold our first Technical Minisymposium at JSC.

To help us get off to a good start, I selected as "potential" Technical Symposium Chairman Hubert Davis of Lunar Module and propulsion engineering fame. When I first asked Hu, he squinted at me and said "I'll do it, provided you get either (1) the "R" of TRW, Dr. Simon Ramo, or (2) the President's Science Advisor as banquet speaker." A tall order, right? So, as a TRW employee at that time, I gave the "big boss," Dr. Ramo, a call and offered a choice of dates (he picked March 2) and a topic I felt sure his creative mind couldn't resist, "Technologies for the 80's." Dr. Ramo brought along his beautiful wife, Virginia, gave us a great talk, with 15 minutes of questions and answers, and 250 of us had a wonder-

ful evening. Ann and I drove them to their executive plane without a hitch after the banquet (but I sure made a dry run earlier!). The Symposium itself was very successful for the first one—some 35 excellent papers. One of my goals for the Symposium has been fulfilled over and over since then—to give an opportunity for *all* our engineers and professionals in this area to share their work, and especially our younger pros who can benefit themselves and all of us with their innovative presentations on favorite topics. Hu Davis, Norm Chaffee, Chet Vaughn, Vice-Chairman Clay Hicks and several others did a great job on that first Symposium. My congratulations to all Houston Section members who have added to and expanded this Symposium to the larger annual event it is today.

Another monthly program topic in 1975-76 was "Space Colonies" by Dr. Gerard O'Neill from Princeton, very well done and technically sound. Though ahead of its time, the people-populated colony presented was very plausible for the day when our earth overflows, and could happen for some of our citizens in the distant future.

We made room for a program on "The Future of Commercial Aircraft." That technology has not changed a large amount since then. This was a colorful presentation from a top industry executive. It did not "draw" like most other programs (about 70 attended) but was very informative at the time.

I must mention the panel on "God, Science and Space." The panel featured a astronaut-believer, an ethics professor from Baylor College of Medicine, a Jesuit college president with a degree in physics, and a self-proclaimed non-believer, also a science manager at JSC. The moderator was Cal Thomas, now a syndicated columnist, then a TV news anchor in Houston. The program looked like "trouble" from the start, but turned out to be very fascinating and informative when finally held. It was supposed to be held on a Tuesday night, when all these important people had a clear date, but a couple of weeks ahead, Cal called to tell me he was on assignment Tuesday, an election day. So, we boldly rescheduled to

Monday night—in the heyday of Monday night football. Could you believe that 150 still showed up at this dinner meeting? It was a super evening. And I know all Houston Section Chairmen before and since my day have had many "super evenings" they are proud of.

We could go on about our programs, like the one on "Flying Saucers," but there were other goals back at that first meeting—like the one to broaden our membership to young engineers and to various minority groups. We really worked hard on this. For example, Dorothy Lee, respected aerothermodynamicist, did an excellent job of enlisting lady members and so did Vernon Shields working on other minority categories. We finally attracted enough younger members to make our Section really attractive to younger professionals—and we had many Rice and Texas A&M groups join us for dinner meetings. And we continued our Space Technology Applications and other technically oriented committees, which became much more active and effective later on, after my term.

Our Vice-Chairman, Clay Hicks, did a great job on arrangements for all our dinner meetings and special events. We had only one Vice-Chairman in those days, along with Treasurer, Secretary and Council members. The Vice-Chairman role was like Vice-Chairman, Operations today. The Vice-Chairman, Technical position—which Hu Davis filled in my term without the title—came later. He was Chairman of our Technical Committee as well as the Technical Symposium Chairman.

The AIAA Houston Section, 1975-76, won our first National Outstanding Section awards, thanks to a great year and a super job by Norm Chaffee putting our "package" together for the judges to review. It was a huge honor for me to accept this award at the AIAA National Conference. I am very grateful to all who had a part in bringing this award to Houston, and we have had many more like it since then.

I also had the honor to chair our Section's first two National Outstanding Section Event awards, in

1971-72 and 1972-73, both years as Chairman, Technology Applications Committee. Jim McLane and Ernie Kistler were Section Chairmen in those years and both did an excellent job for our Section. I will save this "special event story" for another day. Thanks for reading this and sharing some of our 1975-76 experiences. ☺

Bringing Space Home to the American People

Peter Clarke
Director, The Annenberg School for
Communication
University of Southern California

[The following is extracted from an address given at the Seventh Annual National Space Symposium in Colorado Springs, Colorado, on April 10, 1991. The Annenberg School focuses on communication management and the application of information and communication technologies to meet organizational goals.]

People often ask me: Can public-spirited bodies sell ideas the same way that business firms sell products or services? Can we spread the quest for good health, for example—like smoking cessation or early screening for cancer—the same way that companies market sporty cars or mouthwash? The answer, reassuring or sad depending on your point of view, is "no."

Why don't good ideas, like America's economic and technological harvest from space research, catch on like fast food? The answers are not hard to find. The business community pushes its goods with advertising budgets that would bankrupt any non-profit group. Besides this, the promotion of goods and services joins hands with an enormous apparatus of distribution—incentives to wholesalers, cultivation of retail location, point-of-purchase advertising, and other supportive activities.

(continued on page 6)

Bringing Space Home... (from page 5)

Against this backdrop, consider the plight of space research. This idea cannot claim shelf space in our local supermarkets or 7-11 Stores. It lacks a marketing plan, and is not likely to get one soon. As a consequence, the mobilization of mass opinion about space falls prey to real-world events, and how journalists in the news media interpret them.

Last fall, we spent three evenings with different groups of ordinary Americans, talking about space research. Thirty people—a cross-section in educational background, occupation, race, gender, and political beliefs—took part in our study. They ranged in age from their 20s to mid-60s. We showed them a selection of the public service announcements in the striking series "Space Technology—This Is What's In It For You." We wanted to trigger people's reactions to alleged benefits from the space program, in order to plumb their feelings in depth.

The lessons we learned from the three groups were remarkably consistent. The groups met on separate evenings in suburban Los Angeles, but their conversations about space across the two-hour meetings unfolded in similar ways. Here, in a nutshell, is what they had to say.

Two points came through loud and clear, and you may have heard them before yourselves. People are convinced that space exploration is frivolous, a luxury, a hobby to be indulged only after other societal tasks are well in hand. The environment, housing, transportation, and health problems strike folks as far more vital—especially in a tight economy and in a nation burdened by debt and unfavorable balances in world trade. In terms of people's interest in national issues, space ranks lower in importance than even military defense.

Besides this, people's knowledge about space is confined to a few dramatic incidents—shuttle launches and the like. Until prompted—as by the TV spots—only one out of every 15 people can name any spin-offs or direct benefits from space. Decades of exploration and research may have whipped up publicity,

but we can find only the barest residue of knowledge.

In short, the general public's view of space is fragile and leaves them vulnerable to misconceptions. Now, years of public opinion polls have portrayed a largely supportive citizenry. From these, one might serenely believe that most folks consider themselves supporters of the shuttle program, or of space stations, or whatever—when asked the pollster's usual glib questions over the phone. But when average people actually sit down like neighbors and co-workers might, to talk about space, they don't find much to celebrate. Where people can frame beliefs their own way, using their own habits of discourse, space research comes up, at best, as a blank.

Our average citizens turn incredulous, even furious, when invited to be grateful for spinoffs from space like new scratchproof glasses or devices for the handicapped as justifications for our missions. "Is this all you can show us?" they ask. "Prove to me why these products couldn't have been developed just as easily down here on Earth, at a fraction of the cost." Instead of the mundane, people hunger to learn that the U.S. space venture has wrought grand, sweeping accomplishments. They beg to hear about great discoveries and triumphs over vexing and exotic technological barriers. They are left frustrated and unfulfilled with tales about ordinary, even convenient achievements from the space program.

In the view of our focus groups, film stars, vocalists, and political celebrities trivialize the space effort. Instead, they say, show an astronaut or a scientist. Give us heroes of creativity, not masters of consumption. Let credible voices speak for what we can learn from deep space probes, or about human physiology from the space station, or about managing the geosphere with satellite sensing.

I submit to you that while Americans know very little about space, they are canny, intelligent spectators of the public stage. They sense that magnificent stories require narrators to match. And with billions

of tax dollars and the nation's pride at stake, people yearn for splendor and achievement.

Americans' sense of wonderment lies fallow these days. Perhaps this is why people take so little pleasure in many of the events that surround us. Space, to our everlasting advantage, gives us a chance to rekindle the public's awe and the knowledge about ourselves and about our futures that awe can spark.

Our textured conversations with 30 ordinary Americans confirmed that they hunger to learn. They really want to understand something about what pictures of the surface of Mars tell us. They are ready to grasp some of the reasons why it helps to experiment with drugs under weightless conditions. They wish to be told how remote sensing traces the impact of forest destruction in the Amazon Basin on desertification in Africa.

I want to close by stressing that educating the public about space gives all of us a golden opportunity. We who are pundits, government officials, scholars, or corporate executives can rise to meet the capabilities of our own people. In the year 1780, John Quincy Adams, who was to become the nation's sixth president, was 13 years old and about to embark on a trip to Europe with his father. John's mother, Abigail, wrote to prepare the young lad for the splendors of Western, and in particular English-speaking, culture he was about to encounter. Abigail, that most remarkable of Colonial women, admonished:

"Learning is not attained by chance, it must be sought for with ardor and attended to with diligence."

We would do well to remember these words today—and to be both ardent and diligent in bringing the story of outer space home to the American hearth. ☉



AIAA Calendar

April

2 - Thursday

Executive Board meeting.
Lockheed Plaza 4, 5:00-6:30.

9 - Thursday

Dinner meeting.
"Human Experiences in Space - A Personal View,"
Story Musgrave.
JSC Gilruth Center, 5:30/6:15/7:00.
Info: Norm Chaffee, 483-9995.

22 - Wednesday

Education & Professional Development Committee
film.
"Research Project X-15."
JSC Bldg. 1, Rm. 820, 4:15 PM.
Info: George Nield, 483-1364.

May

14 - Thursday

Executive Board meeting.
Lockheed Plaza 4, 5:00-6:30.

20 - Wednesday

17th Annual Technical Symposium.
UH-CL.
Info: Bill Best, 283-0261.

Education & Professional Development Committee
film.
"Shuttle Flow at KSC."
JSC Bldg. 1, Rm. 820, 4:15 PM.
Info: George Nield, 483-1364.

June

4 - Thursday

Executive Board meeting.
Lockheed Plaza 4, 5:00-6:30.

11 - Thursday

Honors & Awards Banquet.
JSC Gilruth Center, 5:30/6:30/7:30.
Info: Norm Chaffee, 483-9995.

OUTSTANDING SECTION AWARD



1975-1976
1976-1977
1979-1980
1980-1981
1981-1982
1983-1984
1986-1987
1988-1989

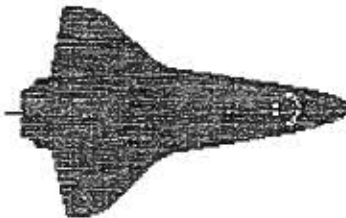
SECTION SPECIAL EVENT AWARD



1971-1972
1972-1973
1979-1980
1981-1982
1983-1984
1985-1986
1988-1989



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ZAFAR TAQVI
CHAIRMAN 1991-92

American Institute of Aeronautics and Astronautics

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

Thursday, April 9, 1992

HUMAN EXPERIENCES IN SPACE A PERSONAL VIEW

Dr. F. STORY MUSGRAVE
NASA ASTRONAUT



PRESENTER

Dr. Musgrave entered the USMC in 1953 and served in various capacities while completing duty assignments in Korea, Japan, Hawaii, and aboard the carrier USS Wasp. He has flown 17,000 hours in 160 different types of civilian and military aircraft. An accomplished parachutist, he has made more than 460 free falls-- including over 100 experimental free-fall descents involved with the study of human aerodynamics. He served a surgical internship at the U. of Kentucky Medical Center from 1964 to 1965, and continued there as a USAF post-doctoral fellow working in aerospace medicine and physiology and teaching and doing research in cardiovascular and exercise physiology. Dr. Musgrave was selected as a scientist-astronaut by NASA in August 1967. He completed astronaut academic training and then worked on the design and development of the Skylab program. Dr. Musgrave participated in the design and development of all Shuttle EVA equipment including spacesuits, life support equipment, airlocks and manned maneuvering units. A veteran of four space flights, he was a mission specialist on STS-6 in 1983, Spacelab-2 in 1985, STS-33 in 1989, and STS-44 in 1991.

SOCIAL: 5:30

**Chips & Dips
Hors d'oeuvres
Beer & Wine**

PROGRAM: 6:15

**AIAA HOUSTON SECTION MEETINGS
ARE HELD AT THE JOHNSON SPACE CENTER
ROBERT R. GILRUTH RECREATION CENTER**

MEMBERS & SPOUSES	\$5.00
NONMEMBERS	\$6.00
STUDENTS/YOUNG MEMBERS	\$4.00

FRANKIE HAP 333-6064 LOCKHEED	SANDY BARRY 845-0735 COLLEGE STATION	ARDELL BROUSSARD 283-4214 McDONNELL DOUGLAS	CARROLL ROBINSON 283-6000 EAGLE	SARAH LEGGIO 282-3160 BENDIX
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**NOTE: RESERVATION DEADLINE IS MONDAY, APRIL 6, AT 12:00 NOON.
ANY CANCELLATIONS ARE REQUIRED PRIOR TO DEADLINE. NO-SHOWS WILL BE BILLED.
ALL ARE WELCOME.**

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

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

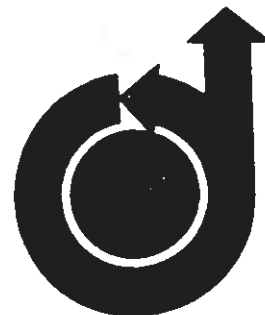
The International Space Year Committee of AIAA-Houston, in cooperation with NASA-JSC, invites you, the NASA community and public, to the

International Space Activities Awareness Fair (ISAAF)

**Tuesday, July 14, 1992
9:00 am until 5:30 pm
Gilruth Center, NASA-JSC**

This is an event designed and planned to meet the following objectives:

- Informing the JSC community of the activities of other countries, relevant to space engineering, science, exploration, products and services
- Fostering an appreciation for international cooperation in space activities
- Increasing public awareness of International Space Year, 1992



Expected participants include representatives from agencies or companies on six continents. Several countries have already committed to this Fair. We cordially encourage you start off Space Week celebrations with your attendance this summer. The program is free to the public.

For details contact Chris Burmeister at (713) 333-6866.

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS
370 L'Enfant Promenade, S.W.
Washington, DC 20024
(202) 646-7400

Ack.	Appr.
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FOR OFFICE USE ONLY

APPLICATION FOR SENIOR MEMBER GRADE

Dear AIAA Member:

AIAA Membership Grades are both a means of personal recognition and a reflection of the member's standing in the professional community. You are encouraged to review the criteria for Senior Member grade as stated below. There is no fee for application for advance in grade.

Members are encouraged to nominate other Members, as well to apply themselves for an advance in grade. It's essential that you complete both sides of the form. Processing of advance in grade applications includes a review of the applicant's qualifications by the Membership Committee; this procedure generally requires eight weeks. As soon as the review is completed you will be notified of the Committee's decision.

AIAA Membership Committee

Membership number _____

Section _____

Please Print or Type

Name _____ Position _____

Address (Business) (Home) _____ Phone _____
 please circle

City _____ State _____ Zip Code _____

Your Duties and Responsibilities _____

(Use additional sheets as necessary)

SENIOR MEMBERS

"Senior Members shall be persons who have demonstrated a successful professional practice in the arts, sciences, or technology of aeronautics or astronautics for the equivalent of at least eight (8) years."

NOTE: Post baccalaureate engineering or science degrees from an educational institution of acceptable standing shall be considered equivalent to professional practice for an equivalent number of years, up to a maximum of 4 years. Bylaw 3.2.1

College or University _____ Degree Received _____ Date _____

Advanced or Additional Degrees Received _____ College or University _____ Date _____

_____ College or University _____ Date _____

Other Technical Schools or Colleges or Special Educational Programs _____

Date _____ Applicant's or Nominator's Signature _____

APPLICATION FOR AIAA SENIOR MEMBER GRADE

PROFESSIONAL RECORD

DATES From To	EMPLOYER OR AFFILIATION	TITLE	DUTIES AND RESPONSIBILITIES

PROFESSIONAL REFERENCES

Senior Member Grade applicants shall furnish two (2) references, both of whom shall be Senior Member grade or higher. Bylaw 3.1.4

INSTRUCTIONS—Professional References—Please give the full name, title and address of each of your references. Be sure to identify in the appropriate areas (SM) Senior Member; (AF) Associate Fellow; (F) Fellow; (HF) Honorary Fellow, for each reference's grade of membership.

THE NOMINATOR MUST OBTAIN SIGNATURES FROM TWO REFERENCES WHO MUST BE OF SENIOR MEMBER GRADE OR HIGHER.

1. Name DR. S. Z. TAQVI Title Adv. Systems Engg. Specialist SM AF F HF
 Address LESC, C-80, 2400 NASA RD 1 Phone (713) 333-6544
 City HOUSTON State Tx Zip Code 77058

The applicant is qualified as a Senior Member. Signature [Signature] Date 10/15/91

2. Name JAMES T. VISENTINE Title STS EXPERIMENTS MANAGER SM AF F HF
 Address NASA JSC, ESS Phone (713) 483-8923
 City HOUSTON State TX Zip Code 77058

The applicant is qualified as a Senior Member. Signature [Signature] Date 10/15/91

	Date Rec'd.	For Committee use only				
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	Appr.	Not Appr.*	Date Ret.			

REVIEWER: _____
 Comments: _____
 Signature: _____

(*Returned for additional information — see comments)

Please return to:
 Senior Member Grade Committee
 AIAA, 370 L'Entant Promenade, S.W.
 Washington, DC 20024