



AMERICAN
INSTITUTE OF
AERONAUTICS AND
ASTRONAUTICS
.....
HOUSTON SECTION

newsletter

MARCH 1978

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FROM THE CHAIRMAN

This issue's message from the Chairman is brief. Following this item is a candidate ballot for next year's Houston Section Officers and Councilors. The Houston Section membership can add to this ballot per the instructions enclosed. A final ballot will be mailed to the membership in mid-April. I urge each and every member to give serious consideration to each candidate and please vote when the final ballots are mailed in mid-April.

Tom Murtagh
Chairman
AIAA Houston Section

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MEMORANDUM TO ALL MEMBERS, AIAA-HOUSTON SECTION

PRE-BALLOT LIST OF CANDIDATES, 1978-79. It is time once again for the Houston Section, AIAA, to select officers and councilors for the coming year. The purpose of this letter is to forward the recommendations of the Nominating Committee and invite any nomination (s) you, as a member of AIAA, may wish to submit prior to the mailing of the official ballot.

The Nominating Committee, as appointed by the Section Officers, consisted of: Bill Hayes, McDonnell Douglas Chairman; Aleck Bond, NASA-JSC; Carl Huss, NASA-JSC; and Bill Dickson, Lockheed. The committee has completed its assigned functions, except for administering the ballot count, and has agreed that the members listed on the enclosure should be placed in nomination for 1978-79 officer and council vacancies. All nominees are members in good standing of the Houston Section, have agreed to have their names placed on the ballot, and agreed to serve faithfully in the offices to which nominated should they be elected.

Our Section bylaws provide that additional nominations may be made by a petition to the Secretary signed by 10 members of the Section. If you would like to serve, or if you would like to nominate another member (with his or her permission), please contact our Section Secretary, Mr. Bob Stephens, (713) 488-5660 x 279, and he will handle the necessary processing. In order to prepare the ballots for the subsequent election, Mr. Stephens must have your nominations by April 5, 1978.

Please note that all officer positions are 1-year terms and councilors serve 2-year terms; thus the limited number of Council positions up for election (4 of 8 positions). Present Councilors with 1-year remaining on their terms are H. P. Davis, P. M. Deans, W. E. Hayes, and S. G. Barnes. The immediate Past Chairman is an ex-officer member of the Council.

The election ballots will be mailed to each member by mid-April and will specify a deadline for submitting your vote. Your Section Officers and Council urge each member to vote in this election and to participate as often as you can in the wide variety of effective programs and activities your Section offers you.

NOMINEES FOR HOUSTON SECTION OFFICERS AND COUNCILORS (1978-79)

<u>POSITION</u>	<u>NOMINEE</u>	<u>GRADE</u>	<u>ORGANIZATION</u>
CHAIRMAN	E. L. "Ted" Hays	AF	Consultant
VICE-CHAIRMAN OPERATIONS	Bob McMurdo Bob Stephens	AF AF	Boeing MDAC
VICE-CHAIRMAN TECHNICAL	Winston Goodrich Earl Thompson	AF AF	NASA/JSC MDAC
SECRETARY	Bill Dickson Carl Huss	M AF	Lockheed NASA/JSC
TREASURER	Carolyn Conley Bob Glowczwski	M M	NASA/JSC MDAC

NOMINEES (Continued)

COUNCILORS	Aleck Bond	AF	NASA/JSC
	H. E. "Pete" Clements	M	NASA/JSC
	Ivy Hooks	M	NASA/JSC
	Frank Hughes	M	NASA/JSC
	Stan Lowy	AF	Texas A&M
	Dave Phillips	AF	TRW
	Mike Rasmussen	M	MDAC
	Fred Wierum	M	Rice

AIAA TO START CAREER REGISTER-REFERRAL SERVICE

The Member Services Department of the American Institute of Aeronautics and Astronautics announces the start of the Career Register-Referral Service (CR-RS). This is an employment service program and a logical follow-on to the Employment Workshops and the VEST operations in the past. The CR-RS will provide a beneficial service, both to the Applicant and to the aerospace industry.

The CR-RS is composed of three elements:

1. The Applicant (engineer/scientist)
2. The Career Register (file and punched cards of Applicants)
3. The Subscriber (company personnel department)

The Applicant describes his education, experience and skills by multiple choice selected. This data is easily transferred to a punch card for fast sorting and retrieval.

The Subscriber then places an order to the CR-RS, describing the ideal candidate for the open employment position. The Subscriber indicates by specifying a maximum of one each of the 8 fields of the specialization desired. A total of 666 total selections are available to describe the candidate for employment.

The names, addresses and phone numbers of those Applicants meeting the requirements of the Subscriber's order will be forwarded to the Subscriber requesting the search.

In addition, the CR-RS distributes each month to all Subscribers a list of all the new Applicants, by confidential registration number, along with the selected skill code for additional exposure.

AIAA's new Career Register-Referral Service provides the link between the engineers/scientists and the employing industry. If you desire more information write to: Career Register-AIAA, Suite 800, 9841 Airport Blvd., Los Angeles, CA 90045, or call Eugene D. Pettler, (213) 670-6643.

AIAA: NASA AND CENTER POLICY

It may be of general interest to the membership to understand NASA and Center policy with regard to AIAA activities. They are encouraged. Reasonable rules of judgment

are applied in any particular case. Institute business can be conducted as 'official business' so long as it can be conducted without prejudice to performance of one's official duties, a judgment that lies perforce in the mind of the responsible manager, and so long as the corollary aspects of that activity are permissible within government regulation. These considerations apply equally to government and contractor personnel and activities.

Duty time may be used for institute affairs at home or in travel status if the time or activity required can be allocated without adverse effect on assigned duties.

When acting as officers or members of the institute it is appropriate to note employment, but important to be sure that our audience and the press recognize that we are speaking or acting as representatives of AIAA not our employer.

NASA agency and JSC center management support, participate actively in AIAA, and encourage all employees to participate in any appropriate technical society activities. As in all aspects of our professional activities, discretion and proper coordination are required, but these constraints are part of the normal priority allocation process since resources of time and money are of necessity limited.

There are no simple rules because the nature of professional activity inherently explores new frontiers and options for which precedent and rule by formula would be at best awkward and confining. Rule by policy is inherently more complex, subtle, and difficult, but that is inherent in professional work.

The direction is clear, to enhance our contribution to society and the nation. The methods must be integrated effectively with all of our other responsibilities.

45 PAPERS PRESENTED AT MINISYMPOSIUM

A total of 45 papers were presented at the third annual Houston Section Minisymposium held 21 March at Gilruth. Topics included items in Space Shuttle Systems, Test and Simulation, Payloads and Remote Manipulator System; Space Science and Applications; Lunar and Planetary Science; Space Programs/Systems; Shuttle Nav aids, Methods - - Applications and Development.

Attendance at the several sessions was good. Material presented was excellent; the quality of papers very high. Means are under consideration for making the papers available to a wider audience; it is felt that material presented will be of technical interest to many who because of distance or other commitment were unable to be present in person. Further information will be provided later.

NEWSLETTER GIVEN AWARD

We are most pleased to announce that the Houston Section Newsletter has received an award in the annual competition: Second place in the 175-499 member group. Alabama was given first place. Other newsletters in this grouping included Cleveland-Akron and Wichita, both honorable mention.

Apparently we should have included some illustrations. (There's something about so many words per picture ...the Chinese are supposed to have had a name for it, or something.) The Section's Newsletter had been given first place in years past; maybe we should change our ways. However, we were very pleased with the award, and want to include in the commendation all those who have assisted in the writing, preparing and publishing of the periodical.

COMPETITION FOR ONR-AIAA AWARD ANNOUNCED

The AIAA and the Office of Naval Research have announced a competition for the 9th ONR-AIAA Research Award in Structural Mechanics for 1978. The award consists of an AIAA medal and a research contract of up to \$30,000 to support research of relevance to Naval Structural Mechanics problems. The investigation should devote a half-time to full-time effort to a 6 to 12 month project. The research is to be conducted in cooperation with the investigator's sponsoring organization. Applicants must submit a formal research proposal in order to be considered for the award. The proposal must include (1) a detailed plan of research; (2) applicant's resume; (3) a budget; and (4) sponsoring organizations approval of the research proposal. Deadline is May 1, 1978. For more detailed info., write to:

Russell.J. Reck, A3-214, MS 13-3
McDonnell Douglas Astronautics Co.
5301 Bolsa Ave.
Huntington Beach, Calif. 92647
(714)896-3761

ISA HOLDS SYMPOSIUM

The ISA Clear Lake Galveston Section, together with the UH/CLC Student Section, held its initial Minisymposium on Instrumentation in Energy and Control on Friday, 3 March, at UH/CLC. The schedule for the technical session showed a total of 11 papers, covering subjects from Optical Sensors, involving a discussion of the use of optical fibers, to digital magnetic recording codes.

Widespread interest in instrumentation in the Houston Area was evidenced by the applications reported.

A clinic, Minicomputer Systems for Acquisition and Control, is scheduled for 12 May. Technical Meetings are scheduled for 20 April and 18 May. For further information please call Dr. Zafar Taqvi at 483-6108.

75TH ANNIVERSARY OF THE WRIGHT BROTHERS'

FIRST POWERED FLIGHT, 1903-1978

A PROJECT OF THE HISTORY TC & THE WICHITA SECTION

WRIGHT CYCLE COMPANY

by Mal Holcomb, Ed. Wichita Section

The invention of the airplane was not just a Friday-night brainstorming session followed by a Saturday building spree; it was in reality a concerted R & D effort spread over several years. It entailed the development of airfoil and propeller theories, control concepts, lightweight structure and a suitable power plant. An R & D program such as this was not funded by cutting out Saturday night trips to the corner nickelodeon and ice cream parlor. It was instead funded by the profits of a company engaged in the manufacture, sales and servicing of bicycles. If it had not been for their success with the Wright Cycle Company, Wilbur and Orville would not have been able to afford the development program which resulted in a successful airplane.

Orville Wright owned an old high wheel bike he had bought used for \$3.00. Then in 1892, he spent \$160.00 to buy a Columbia bicycle of what was then called the safety-type bicycle; that is, it had pneumatic tires on wheels of equal size and was chain driven. Orville was soon in to track racing. Six months later his older brother Wilbur bought a bicycle at an auction for \$60.00. The cycling craze was sweeping across the country and those two businessmen brothers (partners in the printing and publishing business), Wilbur and Orville Wright, decided that there was money to be made with the two-wheelers.

Thus, in December 1892 the brothers formed the Wright Cycle Company to sell bicycles. The shop they rented was across the street from their print shop and this enabled Orville to divide his time between the bicycle shop and the print shop. As the Wrights got involved deeper in the bicycle business, they turned more and more of the print shop responsibilities over to others until, in 1898, they had gotten completely out of printing. Soon the Wrights found they had to add a repair shop to service the bikes they were selling. Business was brisk and the cycle shop moved several times to larger quarters.

In 1896 the Wrights expanded into the manufacturing of their own bicycles. Their first production bike was a high-priced model called the Van Cleve. This was followed by a lower priced model, the St. Clair, and finally they added an economy line, the Wright Special, which was aimed at the high school market and sold for \$18.00. But going into manufacturing was not just done at the snap of a finger. It required tools, much of which were built by the brothers themselves. And machine tools required power which they obtained by designing and building a one-cylinder gasoline engine.

In the late 1890's and early 1900's, it was the successful bicycle business of the Wright Cycle Company that provided the income and the facilities for the aeronautical experiments of the Wright brothers.

When the brothers returned from Kitty Hawk in December 1903, they completed the bicycles on hand but did not start any new production. At this point they concentrated their efforts on the development of the flying machine.

YOUR FUTURE IN SPACE, COMMENT.

The Space Program is one of the few major endeavors of recent United States history which has consistently achieved its stated objectives. In short, the Space Program works! If there is one characteristic of the space program which best explains this success, it is the organization and effective employment of skilled and dedicated people.

The fact that the Space Program works successfully is a direct reflection of the nature of the people involved in these organizations. These people include the membership of the AIAA. Dedication to the demands of individual assignments and a determination to excell--both as individuals and as creative members of a group--to produce an analysis, test, plan or assemblage of equipment which works--to respond to unforeseen events in positive, creative and innovative ways to preserve vehicles, missions, budgets, schedules or even lives--to seek out and remove the hidden flaws which may otherwise jeopardize success--all of these attributes are those of the people of the Space Program.

Since 1965, some four years before the first lunar landing, the Space Program of the United States has been subjected to steady pressure to yield to other, more immediate and visibly "relevant" national goals. Total employment on NASA programs has, in this interval, declined by a factor of about four! We have all witnessed the unplanned and unwilling departure of valued associates and friends from the program. Many of these career changes of space people have infused their new organizations with the spirit of Mercury, Gemini, and Apollo and the Space Program has indirectly strengthened the national fabric. Uncertainty and some degree of self-doubt among those of us unaffected are, however, natural consequences of these departures.

For those of us who remain, it is easy to view this contraction as a disincentive for the very qualities which have lead to the successes we have shared. This long siege upon budget and manpower authorizations can understandably lead to a "fortress mentality" toward careers and organizations and can provide self-justification for failure to promptly execute each assignment to the best of our abilities. These destructive attitudes cannot be allowed to govern our behavior in the critical months ahead. We are privileged to continue to work in the Space Program; with this privilege comes an equivalent responsibility.

The Space Shuttle Program, the largest single program of the NASA, has been placed in our trust. We have succeeded, so far, in meeting the milestones set forth at the beginning of the program. The next two years will see the Space Shuttle transformed from a development activity to a resumption of manned orbital flight by the United States, at an unprecedented pace.

The resumption of manned orbital flight will provide highly visible evidence that the United States remains a leader in the application of technology to meet human needs on Earth. Space Shuttle flights will provide both short and long term opportunities for effective application of the hard-won experience of our space team.

There is a prerequisite, however: The Space Shuttle system must continue to be a success, in all of its myriad details. Space flight is no less demanding today than it was 15 years ago. The rewards for success and the penalties of failure are as tangible and real today as they were earlier in the history of manned space flight.

This article is not putting forth a recommendation for any drastic changes or asking the impossible. It is challenging each and every one of us, as professionals and as members of the AIAA, to personally commit ourselves to remember and adhere to the high standards we have known so long--to approach each job with imagination, insight, and fortitude. The success of the Shuttle Program will be determined by the vigor and skill with which we accomplish each engineering, managerial, and scientific task. We can do it, and we, you and I, must do it!

The recent visit of Orbiter 101, "Enterprise," to Ellington Air Force Base resulted in some 243,000 people viewing the spacecraft. Many of these people walked long distances to view the "Enterprise" due to the congestion of automobiles and lack of parking space. We believe this overwhelming response to be indicative of continued interest in and enthusiasm for manned space flight by the American people, and that this enthusiasm will be increased as the "payoff" of the Shuttle investment becomes more visible.

The remainder of this article presumes that we will execute our current assignments as we always have--that the Space Shuttle is brought to full operational status in 1980.

The NASA STS Mission Model of October 1977 describes, in rather sterile tables and charts, the planned Space Shuttle flight activity. The startling fact is that this Mission Model indicates that one thousand payloads are scheduled to be flown by the Space Shuttle during the next 13 years, an interval of time four years less than our manned flight history!

This Mission Model reflects only the immediately visible need for the services of the Space Transportation System. Beyond the Mission Model other initiatives and opportunities in space flight are emerging. These include long-duration Shuttle Orbiter flight employing the "Orbital Support Module," a solar-electric power module to provide unlimited duration electrical power to sustain the Orbiter, Spacelab and other payloads in orbit. This system is now under intensive study and will be requested by NASA as a "new start" for operation with the Orbiter beginning in 1984. New automated flight systems are planned to be available around the same time, including the Solar Electric Propulsion Stage--a system to increase by almost a decade the specific impulse of planetary exploration propulsion systems and the "teleoperator," a maneuvering, television-equipped flying robot with docking and manipulator capabilities. These three new systems will extend the sphere of influence of the Shuttle crew members well beyond their physical reach.

Under study for possible operation in the late 1980's are a multi-purpose orbiting power module of 250 kW or more and a manned orbit transfer vehicle which will re-open cislunar space, including Earth geostationary orbit, to frequent visitation by Americans. Numerous applications and science flight projects are also under study to employ these new capabilities, including the initiation of a totally new field of space activity--construction of satellites in place in their orbits. With the development of the science and art of space construction, launch vehicle size will no longer constrain the size, mass and benefits to be derived from large structures in space.

Should new space activities be established as national goals which are beyond the launch capability of the Space Shuttle, preliminary designs are already available for Shuttle-derivative launch systems which can provide more than a three-fold increase in payload

while achieving reductions in the cost per flight. These improvements can be obtained by an orderly progression of systems development which fully preserves the national investment in the Shuttle and requires less additional resources than are now planned to acquire the basic Shuttle system. These extensions of the Space Shuttle system capability will, of course, become reality only if the presently-planned system is fully employed.

There is at least one space application which has the potential of causing explosive growth of our space flight activity--the Solar Power Satellite (SPS). This system has been studied in depth by both JSC and MSFC. Boeing recently completed a system definition study for JSC which reaffirmed basic technical feasibility and projected the installed costs of the system as being competitive with other "renewable resource" power generation systems. An "Apollo-pace" scenario was displayed by Boeing at the final review which projected the installation of 170,000 mw of capacity by the turn of the century, almost one-third of the mid-70's installed capacity of the U.S. Of perhaps greater significance, a pathway was defined for developing and demonstrating the space power concept with a subscale SPS "precursor" which could begin to provide power from space for use on Earth within 4-1/2 years of the beginning of in-space operations!

A joint NASA-Department of Energy SPS program plan was officially issued in February 1978. This document describes a concept development and evaluation program ending with a recommendation for continuation or abandonment of the SPS concept in FY 1980. FY 79 expenditures of \$4.64 million are currently programmed in this plan. A bill is in process in the U.S. House of Representatives which will, if passed, augment this evaluation activity by \$25 millions in FY 79. A broad spectrum of support for the SPS concept in the House is evidenced by over 30 co-sponsors for this bill to date.

Serious scientific inquiry is currently underway to determine the possible economic benefits of acquiring glass, silicon, and aluminum for SPS construction from the lunar surface materials. Use of lunar materials, after an SPS program is well underway, offers the possibility of significant reduction in the cost of space-derived power by a return of Americans to the moon--not as explorers but as exporters.

These exciting prospects are principally dependent upon just one thing--success of the current Space Shuttle Program. That success is up to us. Let us meet the challenge of the present with the dedication and zeal of Apollo so that this bright future for mankind can be the legacy of the national investment in our Space Program. Your future in Space? It is largely up to you.

Hubert Davis, NASA/JSC
Sharon Barnes, NASA/JSC

CONTINUING EDUCATION

The Continuing Education Committee has received five new programs in the AIAA Recorded Lecture Series. The are:

1. Low Speed Wing Theory - by R. T. Jones
2. The Baleful Influences of the Boundary Layer - by W. R. Sears
3. How to Plan an Investment Program - by A. Pope

4. An Introduction to Guidance and Control System Concepts - by D. G. Hoag

5. Fundamentals of Combustion in Aerospace Propulsion - by R. A. Strehlow

The new lectures as well as many others in the series are available to all AIAA members on a loan basis. The recorded lectures are a great way to "bone up" on a technical subject and all members are urged to make use of this service.

To borrow a lecture or for more information on the recorded lectures available - call John Sunkel, 483-4611.

TECHNOLOGY APPLICATIONS COMMITTEE, PURPOSE

The purpose of the Technology Applications Committee is to publicize the applications of technology derived from the US aerospace program. This is accomplished by gathering information from many sources and disseminating it to the public through science fairs, symposiums, conferences, speeches at local civic organizations and newspaper articles.

One of the active items the committee is undertaking is to prepare an update of the brochure "Down-to-Earth Benefits". This brochure describes the benefits we are receiving and will be available within the next couple months for distribution as needed. Another method we are using to publicize the space technology is seen through the movies shown during the social hour at the AIAA monthly meeting. Each member is responsible for providing a movie on some form of technical advancement developed by his company.

The committee currently has seven members composed of representatives of NASA and aerospace companies with major contingents in the local area. Each organization is represented by an individual who is endorsed by his organization's management. The committee currently is composed of the following individuals:

D. E. Hass	Rockwell, Chairman
W. H. Dickson	Lockheed
D. F. Grimm	NASA
A. G. Mitchell	GE
J. R. Scott	TRW
D. Nelson	McDac
B. A. Bishop	Boeing

In the past the committee has been active in supporting the Houston Science Fair through a display of technical accomplishments. Also, for the past three years the Technical Applications Committee was responsible for the judging of the AIAA/Bendix Design Competition. This year, this activity has been given to the Los Angeles AIAA Chapter since we had served in this capacity for a number of years.

This is an active committee and dedicated to serve the chapter and the community.

We thank you for this opportunity to learn more about the Technology Applications Committee and our membership is always open to new organizations.

Donald Hass, Chairman
Technical Applications Committee

NATIONAL STUDENT CONFERENCE - TEXANS WIN ALL!

This year's National Student Conference was held during the AIAA Annual Meeting on February 8, 1978. Seven papers were presented in the Undergraduate Division and seven papers were presented in the Graduate Division. Each of these papers was a winner in their respective regional conference. Transportation to the National Student Conference for the students is paid for by the AIAA. The winner in the Undergraduate Division was David Keese from Texas A&M with a paper entitled "Zero Pressure Balloon Design". The winner in the Graduate Division was Dudley Smith from the University of Texas at Arlington with a paper entitled "Measurements of a Developing Laminar Flow Field via Laser Doppler Anemometry". Both students attended the AIAA Awards Banquet as guests of the AIAA and were presented medals for their achievements. Congratulations David and Dudley!

Tom Murtagh
Chairman, National Student
Activities Committee

PROJECT ENTERPRISE: THE PROSPECTUS (AS AMENDED ON FEB. 3, 1978)

Rice University and the American Institute of Aeronautics and Astronautics Houston Section (AIAA/HS) intend to undertake a program entitled Project Enterprise. The objective of this program is to promote, within the framework of a university education, an awareness of the benefits of space for mankind. To this end, outstanding students will be given the opportunity to send experiments of their own creation into space aboard the Space Shuttle. Experiments will be restricted to engineering or engineering-related fields of investigation. Responsibilities within the program follow.

The AIAA/HS, for its part, shall:

- (a) Reserve an initial 2.5 cubic feet of payload bay space by making the appropriate downpayment;
- (b) Serve as a point of contact with NASA in obtaining student access to government-owned equipment and facilities as available;
- (c) Provide expertise, on request, in areas relating to the design, construction, and testing of payloads;
- (d) Assist Rice University in fund-raising activities as required.

Rice University, for its part, shall:

- (a) Form a Shuttle Experiments Steering Committee composed of an appropriate number of faculty members and a representative of the AIAA/HS;
- (b) Provide a faculty advisor for each experiment selected;
- (c) Establish student access to laboratories and shops, as appropriate, and supply all materials and equipment necessary to construct the experiment.

The Shuttle Experiments Steering Committee shall:

- (a) Coordinate the purchase of the initial payload space and the downpayment and purchase of all subsequent payloads;

- (b) Solicit proposals of engineering experiments from university students and select the experiments to be flown;
- (c) Assure that adequate resources are available for each experiment selected;
- (d) Review each experiment's progress at appropriate intervals to assure flight readiness;
- (e) Assure that each experiment is brought to a satisfactory conclusion through post-flight analysis and documentation;
- (f) Assure program continuity and coordinate fund raising activities as required.

FEBRUARY 1978 MEETING - AVIATION HISTORY & STUDENT APPRECIATION NIGHT -

On Wednesday, February 15, 1978, the American Institute of Aeronautics and Astronautics, NASA-Houston Section, conducted a most interesting program at the Gilruth Recreation Center, NASA/Johnson Space Center, revealing "Aviation History" in its many odd, light-hearted and very successful events leading to World War II. Dr. John Bertin made the presentation, using as his theme "The Wrights and Wrongs of Aviation". This was also "Student Appreciation Night", during which the role of the "student" was emphasized.

Dr. Bertin, after graduating from Rice University, was employed for nearly four years at the NASA-Johnson Space Center and currently is an Assistant Professor of Aerospace Engineering at the University of Texas - Austin. His presentation encompassed many early and later varied aspects of Aviation History.

Using slides, accompanied by a most descriptive dialogue, Dr. Bertin began with early "hot air" Balloon Flights of the late 1700's, followed by Free Flight Attempts from cliffs and high terrain. Early in 1800 many curious Aircraft appeared in strange forms from man-powered "pedal" Bi-wing and Tri-wing craft, to wierd designs that usually ended in failure and many in complete collapse. The first successful powered flight was accomplished by the Wright Brothers at Kitty Hawk in December 1903 and a French "Bleriot" powered aircraft successfully crossed the English Channel, an outstanding event at the time. Early 1900 Observation Aircraft and Bi-Wing Fighter Aircraft with machine-gun installations appeared during the World War I era, with such noted "flyers" as Eddie Rickenbacker and the "Red Baron" as the "dare-devil" pilots.

"Barn Storming" of the 1920's was then discussed with photos, as well as early passenger planes, such as the Ford Tri-Motor, the DC3 and Military C-47, which were the first real passenger and cargo "work-horses" of the Aviation Era. Dr. Bertin also discussed the later Fighters, Bombers and Military Aircraft of the World War II period.

The Program Co-ordinator for the evening was Ms. Sharon Barnes of the Micro-Electronic Section, Experiment Systems Division, NASA/Johnson Space Center.

R. J. Crane
Publicity Staff

MEMBERSHIP MATTERS

New Section Members. A hearty welcome to the following new members of the Houston Section. We urge each of you to actively participate in the Section activities, for in this way you can more fully realize the benefits of your membership - particularly in these days of travel restrictions. If you are interested in some particular phase of our activities call Tom Murtagh, Section Chairman (483-4546) and he'll put you in touch with the appropriate Committee Chairman.

JANUARY 1978

Accola, Anne L.	JSC	Koons, Wayne E.	JSC
Akkerman, James W.	JSC	Konradi, Andrei	JSC
Austin, Ann O.	JSC	* Krieger, William F.	?
Baiamonte, Frank L.	JSC	Kuehnel, Helmut A.	JSC
Balfe, John McK.	Boeing	Larsen, Axel M.	JSC
Behaine, Jorge O.	JSC	Lausten, Merlyn F.	JSC
Bettner, Ronald A.	JSC	Leger, Lubert J.	JSC
Bickner, John O.	McDonnell	Marino, Anthony J.	McDonnell
Blakely, Robert L.	McDonnell	McFadin, Louis W.	JSC
Boatright, James A.	Ford Aero	McCullough, Clay E.	JSC
Bodmer, James E.	JSC	* Menendez, Alfred P.	?
Bourgeois, Lawrence S. Jr.	JSC	Merritt, W. Merlin	JSC
Brandt, Shirley	McDonnell	Montoya, Gonzalo	McDonnell
Brasher, Warren L.	JSC	Morrison, Gerald K.	Texas A&M
Brown, Don C.	JSC	Perry, Richard U.	JSC
Chandler, Richard D. Jr.	Lockheed	Pipkins, Donald L.	Ford Aero
Coan, Paul P.	JSC	Pollock, David G.	USAF
Collins, Michael A. Jr.	JSC	Price, Charles R.	?
Crenshaw, Jogn R.	Gen Dynam	Puddy, Donald R.	JSC
Crudden, Alan	McDonnell	Putcha, Mallik S.	McDonnell
Curtis, Frank L.	Boeing	Ramsell, Richard B.	JSC
Davidson, William R.	McDonnell	Rich, Thomas M.	McDonnell
Dingell, Debbie T.	JSC	Richards, Stephen M.	JSC
Doiron, Harold H.	JSC	Ritz, William F.	JSC
Freeman, John W.	Rice Univ	Rosenberg, Harold R.	JSC
Gaylor, Walter J.	JSC	Rotter, Henry A. Jr.	JSC
Gerlach, Ronald H.	JSC	Roy, Arda J.	JSC
Gibson, James L.	JSC	Samouce, John W.	JSC
Hamilton, Lowell R.	JSC	Shelley, Carl B.	JSC
Hartwell, Claudine	Schlumber.	Shows, James C.	JSC
Heineman, Willie	JSC	Smith, P. Donald	JSC
Heiskala, Raymond C.	JSC	Sova, Viljar	JSC
Hengst, Louis M.	?	Strong, Ken	McDonnell
High, Richard W.	JSC	Swann, Michael R.	JSC
* Hite, Gregory C.	?	Tokerud, Robert E.	Lockheed
Holkan, Robert K.	JSC	Trevino, Robert C.	JSC
Johnston, Ralph K. Sr.	Rockwell	Wardell, Anthony W.	JSC
Jones, James C.	JSC	Watkins, Carl W. L.	JSC
Jones, Enoch M.	JSC	White, David R.	JSC
Joyner, James A. Jr.	McDonnell	Williams, John H.	McDonnell
Kane, Raymond C. Jr.	?	Williams, Richard J.	JSC
Kaupp, Henry J.G. Jr.	JSC	Wolfe, Dale E.	Boeing
Kline, Gerald Jr.	Pullman	Wright, Marion C.	Lockheed
Klusendorf, Roy E.	Gen Elec	Wren, Robert J.	JSC
Koos, Richard H.	JSC		

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Clark, Karen M	JSC	Mallini, Charles J. Jr	?
Degioanni, Joseph J.	JSC	McCoy, James E.	JSC
*Denton, Michael D.	?	Mendenhall, Edward D.	JSC
*French, John E. Jr.	?	*Pearson, Colonel M.	McDonnell
Gay, Billy J.	?	Ripma, Edward J.	JSC
Hartold, John C.	JSC	Williams, Robert J.	JSC
Harvey, Billy T.	JSC	Wright, Stanley G. Jr.	Rockwell
Llewellyn, John S.	JSC		

* Transfer from another Section

Advance in Grade. Congratulations to Bob Glowczwski, McDonnell Douglas, the Section Membership Chairman, who has been advanced to the grade of Associate Fellow.

Membership Status - Region IV Sections.

	ASSIGNED MEMBERS			MEMBERS RECRUITED	
	#6/30/77	2/28/78	% Change	#Number	% of Base
Albuquerque	160	170	+ 6.3	17	10.6
Central Texas	22	20	- 9.1	2	9.1
Holloman-Alamogordo	34	33	- 2.9	2	5.9
HOUSTON -----	507	585	+15.4	129	25.4
Inland Missile Range	39	40	+ 2.6	5	12.8
North Texas	541	518	- 4.4	36	6.7
Oklahoma	90	101	+12.2	15	16.7
Southwest Texas	100	99	- 1.0	11	11.0

Comment: WOW!! What a change since the last report! If we keep this up we'll have radishes as big as diamonds. This goes to show that a recruiting campaign can pay off - if it is planned and organized and if the Section membership gets behind the Membership Chairman and his Committee as was the case with this one. We picked up 70 new members at the January meeting alone! Headquarters tells us that this is the largest number that any Section has ever picked at any meeting, regardless of the size of the section. Our hats are off to Bob Glowczwski and his Committee of Super-Salesmen! Now let's keep our momentum and round off our Section with at least 600 members assigned on June 30th; it can be done!!!

* Base for 1977-78 calculations # Cumulative since 7/1/77

- AIAA Regions (Column headings as above)

Region I	6477	6382	- 1.5	464	7.2
Region II	1750	1818	+ 3.9	189	10.8
Region III	1835	1794	- 2.2	164	8.9
REGION IV -----	1493	1566	+ 4.9	217	14.5
Region V	1536	1503	- 2.1	129	8.4
Region VI	7967	7832	- 1.7	515	6.5
NATIONAL	21058	20925	- 0.6	1678	8.0

Comment: Our Region (IV) is still maintaining its reputation as the TOP region in AIAA, thanks in no small part to the Houston Section.

Membership Chairman Awards Status. Three awards are given each year to the Section Membership Chairmen who accrue the greatest number of points given for recruiting and for increased section strength. One award is given in

each of three categories based on section size at the beginning of the year (July 1st). Houston is with the Big Boys (over 500); the mid-size is for sections with 175-499 members and the small-size is for sections under 175. Here are the standings as of February 28th:

Large Sections: Houston is #1 with 91.71 points; Pacific Northwest (Seattle) is #2 with 40.13 and Long Island is #3 with 35.85. It looks like Bob Glowczwski is almost ready to close the bag on this one. There are 14 Sections in this category, including N Tex.

Medium Sections: Palm Beach is #1 with 67.79; Wichita #2 with 41.86; New York is #3 with 34.95. There are 15 Sections in this category; none from Region IV.

Small Sections: Vandenberg is top with 132.53; Delaware is #2 with 94.12; Central Florida (Orlando) #3 with 81.25. The Region IV Sections are back in the pack, ranging from Oklahoma with 62.22 to Holloman-Alamogordo with 14.71.

Comment: While it looks like Bob Glowczwski is a cinch for an award, let's not take any chances with last minute efforts by another section - let's put on our own sprint in the home stretch and keep on signing up new members. Surely you know someone who is not a member but who should be one! Remember, a new member is not penalized by joining near the end of the year - his 1977-78 dues are pro-rated into 1978-79, thereby reducing his dues for that year. Also, the \$10 Incentive Plan is still in effect; you can get coupons to reduce your 78-79 dues, or you can assign them to the new member that you recruit. Let's have at it, fellers, and do yourself, Bob, the Section and AIAA some good. Good Huntin'!

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