

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS  
HOUSTON SECTION  
NEWSLETTER

January 1983

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The Houston Section NEWSLETTER is published periodically at the Houston Offices of IBM by the Houston Section AIAA. Address all Communications to Carolynn Conley, Associate Editor, NASA-JSC, Mail Code CH4, Houston, Texas 77058.

W. A. Stewart, Editor

o EDITORIAL

Section First! - Two Houston Members Approved for Advance in Grade to "Senior Members."

In May 1981, the AIAA approved a constitutional amendment establishing the Senior Member grade. This advanced grade was created to fill the gap between a Member status and an enhanced Associate Fellow grade. Senior Member designation allows for the honor of personal recognition and a reflection of the Member's standing in the professional community.

Senior Members are selected by a National Membership Committee. Qualifications for advance in grade include a demonstration of professionalism in the art, science, and technology of aeronautics and astronautics. Members must be recommended by four persons of whom two are Senior Member grade or higher.

In November 1982, the Houston Section was informed that two members had been accepted for advance in grade to Senior Member. These Members are Robert J. Maraia and Sharon Barnes Castle.

The Section sends its congratulations to these individuals.

-Chairman, Houston Section  
Sharon Barnes Castle

Section Membership Drops - Phil Deans, Chairman of the Membership Committee, has provided the accompanying chart showing a sharp and large decline in membership for the Houston AIAA Section. Figures from which this chart was drawn indicate a decline from a membership of 925 at the end of September to 648 at the end of October. There was a gain shown by the figure at the end of November, 720 members, but never the less, the remaining drop of 200 was sizable.

The chart shows a drop in membership of approximately 30 per cent. It is possible that the change in the method of billing of dues, etc., may have had an effect, but there the results of the change should disappear in the report for December and subsequent months. However, there was a gain of only 72 reported for November as compared with the low point shown at the end of October.

If it is any consolation, the pattern was shown repeated for the whole Institute with total national dropping to 23,310 on November 30 from 27,854 shown for 30 September, and to 20,815 at the end of October. For the partial year, 1 July through 30 November, a decline of 4,219 members was reported.

All of the regions reported similar percentage drops.

It would seem that there may be something other than the "recession" to be considered and evaluated. Perhaps new members feel that they have not obtained what they would like to get from their membership.

#### o NASA DIRECTOR ADDRESSES MEETING

Challenges to the Johnson Space Center and the AIAA - Gerald D. Griffin, Director of NASA, Johnson Space Center, addressed over 185 members and guests of the AIAA at the December 15 meeting. He focused on challenges to JSC and the AIAA in terms of the three major elements of aerospace-government, industry, and universities.

Although aerospace has come a long way in space in the last 10 years, near-term we are facing many challenges through the five Shuttle launches in 1983:

- STS-6 - The first flight of the second Orbiter, Challenger
- STS-7 - The first United States woman astronaut, Dr. Sally Ride
- STS-8 - The first night launch and landing
- STS-9 - The first flight of Spacelab
- STS-10 - The first dedicated DOD flight.

Other first to follow in 1984 include:

- STS-11 - The demonstration of the Manned Maneuvering Unit
- STS-13 - The first satellite repair mission, Solar Max.

These "firsts" in the Shuttle program represent well defined challenges to the aerospace community that we are well equipped to handle. There remain less well defined challenges to JSC and the AIAA that are of equal or greater importance. To meet the challenges from President Reagan's strong endorsement of our nation's space policy on July 4, 1982, the three elements of aerospace, government, industry, and universities, must work together.

First, the government, specifically JSC, must lead in innovations to reduce costs. Mr. Griffin emphasized that these new approaches must do more than focus on waste and inefficiencies. They must be true innovations. JSC must provide insight and leadership to promote new programs, projects and ideas. The AIAA can assist government agencies by articulating to the public and Congress the need for and impact of doing business in space.

Second, in the area of industry, JSC must work to promote fair and balanced competition, protect the aerospace industrial base from erosion, and devise innovative methods to incentivize contractors to provide quality products at lower costs while providing a fair profit. The AIAA can also continue to provide forums for exchange of information within the aerospace community. In addition to traditional technical areas of exchange, forums on business aspects, such as innovative procurement ideas, are needed.

Third, universities, the "well spring" of our future, need support by JSC and the AIAA. JSC must consider placing more emphasis on promoting and expanding university involvement in JSC projects. The AIAA must continue to promote student and faculty membership in the AIAA and work with JSC to promote student and faculty involvement in space-related areas. The AIAA should expand and promote more on-campus involvement of aerospace managers from industry and government.

Together JSC and the AIAA can work to strengthen the aerospace industry by constantly articulating the relevance and potential value of space to the public, by melding civilian and military space activities into a national resource in the public's view and by increasing productivity.

-Carolynn Conley  
Associate Editor

#### o SECTION RECEPTION GET "R" RATING

At the December reception a situation arose for which there was no prior stated precedent. This year the Section has placed a great emphasis on young members, but the emphasis should not be taken to extremes!

The situation that occurred concerned children in attendance at the reception. Since the Section serves liquor in the social portion of its programs, it is felt that it is not only inadmissible for persons below the legal drinking age to attend, but also inappropriate for their maximum beneficial learning.

The AIAA Houston Section is pleased to see technical interest at an early age, and welcomes the opportunity to be of service, but forums other than dinner/receptions are recommended. For example, the Section has a large number of Technical Committees which offer Lunch-and-Learns. These programs provide a broader technical experience and more personal involvement for young learning minds.

In a contingency, parents intending to bring children will have full responsibility for them, and the children would be admitted at the student rate. Further, in the tradition of the professional society, admittance at all programs is on the honor system.

-Chairman, Houston Section  
Sharon Barnes Castle

o NEW HONORS AND AWARDS CHAIRMAN NAMED

The Operational Committee for Honors and Awards now has a new chairman. The newly named chairman is Aleck C. Bond. -- A hearty Section "Welcome Aboard."

- Chairman, Houston Section  
Sharon Barnes Castle

o CASSIDY ADDRESSES HOUSTON SECTION

SPACE INSURANCE - AN INSTRUMENT OF COMMERCIAL SPACE to be presented by Daniel E. Cassidy at Houston Section of AIAA January 27, 1983. Insurance is playing a major role in fostering the development of space for commercial purposes. Essentially all commercial and non-U.S. Government Satellites launched today are insured to cover third party liability and to cover all or a major part of the cost of the spacecraft and launch vehicle. Increasingly, insurance is being provided to cover satellite failures during on-orbit operations including contingencies of business interruption.

Mr. Cassidy will provide background on the development of space insurance including loss experiences of underwriters and the insurance coverages which are currently available. Effects of NASA's launch services agreement and user indemnification will be addressed with particular attention given to flying on Space Shuttle. Consideration will be given to continued commercialization of satellite services as well as launch vehicle services.

o COMMITTEE REPORTS

CONTINUING EDUCATION

UH/CLC is offering a number of technical courses during the Spring 1983 semester which should be of interest to the JSC community. There are several degree programs in Technologies for Junior, Senior, and Graduate students:

...Computer Applications (BS, MS), ... Electro-Optics (BS, MA), ... Process Monitoring and Control (BS, MS), ... Computer Information Systems (BA, MA)

The course offerings for the Spring 1983 Semester are:

TITLE

PROCESS CONTROL TECHNOLOGY:  
 PROC 3131 01 ELECTRONIC INSTRUMENTATION  
 PROC 3131 02 ELECTRONIC INSTRUMENTATION  
 PROC 3132 01 LINEAR INTEGRATED CIRCUITS  
 PROC 3331 01 CONTROL SYSTEMS  
 PROC 4235 01 SYNTHESIS OF DYNAMIC PROCESS MODELS  
 PROC 4531 01 SIGNALS & LINEAR SYSTEMS  
 PROC 5435 01 TOPIC: TRNSPT PHEN IN CHEM PROC  
 PROC 5931 01 TOPIC: TRANSFORM METHODS  
 PROC 5931 02 TOPIC: DYNAMICS AND CONTROL: LRGE SPACE STRUCTURE II  
 PROC 5931 03 TOPIC: FILTERING, PREDICTION AND ESTIMATION  
 PROC 5931 04 TOPIC: INDUSTRIAL SEPARATIONS

CONTINUING EDUCATION Cont.ELECTRO-OPTICAL TECHNOLOGY

EOPT 3130 01 INTRO CLASSICAL ELECTRO-OPTICS  
 EOPT 3431 01 INTRO TO LASERS AND MASERS  
 EOPT 4432 01 EOPT SYSTEMS COMPONENTS  
 EOPT 4531 01 EOPT INSTRUMENT ANALYSIS  
 EOPT 4534 01 FUNDAMENTALS FOURIER OPTICS  
 EOPT 5331 01 FUND IMAGE PROC HOLO  
 EOPT 5431 01 DIFFRACTION COHERENCE

ASTRONOMY & SPACE SCIENCE

ASTR 5931 01 PERTURB METHODS IN ASTRODYNAMICS

Spring semester registrations closed 13 January. Those interested in these courses should check with UH/CLC for the next open registrations.

o ENERGY SYSTEMS MEETS

The December Lunch and Learn meeting of the Energy Systems TC was held on the 17th of December at the JSC Building 3 Cafeteria. The program featured a 14 minute film produced by the Department of Energy on the Solar Central Receiver Program.

The DOE has supported a number of demonstration projects which utilize mirrors to concentrate solar energy on a central thermal receiver to produce steam for process heat or electrical power generation. Results of the Solar One Pilot Plant were summarized.

Solar One is a central receiver 10Mw power system featuring 1818 heliostats -- giant movable mirrors -- which concentrate heat on the central receiver which is mounted atop a 240-foot tower. Located near Barstow in the California desert. Solar One was dedicated on November 1, 1982.

Although it feeds Southern California Edison's existing electrical grid in Southern California, the primary purpose of Solar One is to demonstrate the functional capabilities of solar power plants ranging in size from 1 Mw to 100 Mw. Several aerospace companies provided systems for Solar One -- a down-to-earth application of aerospace technology.

Future meetings of the Committee will alternate between aerospace power systems and terrestrial energy systems. Contact Dick West, 488-5660, ext. 244, for information on coming activities.

- Chairman, ESTC

o THE CRUNCHER REPORTS

The C.C. has taken this month off and will be back for next month's issue.

## 1982-83 AIAA HOUSTON SECTION

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Vice Chairman, Technical Robert E. Lewis	NASA/EH13	483-3566
Secretary Richard B. Davidson	NASA/LN	483-5545
Treasurer Carl R. Huss	NASA/Retired 16522 Clear Cress, Hou. 77058	488-6310

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Carl B. Peterson	TRW/H5 301	333-3133 X283
Donald R. Puddy	NASA/CF	483-5145
Richard J. Williams	NASA/SN7	483-2781
Dr. Phillip M. Hopkins	LEMSCO/C-22	483-4119
Dr. Sarwar Naqvi	IBM/MO4	333-7149
Troy Welsh	P.O. Box 58172, HOU 77058	488-5514
Ed Whitsett, Jr.	JSC/EC5	483-6193
Jack C. Heberlig	IBM/MC92	333-7094

Senior Advisors

Norman H. Chaffee	JSC/EP	483-3995
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William H. Simmons NASA/Retired	7511 Glen Heath, Hou. 77061	649-2558
Robert R. Stephens	MDTSCO/B-1	488-5660 X207
Loren E. Wood	TRW/H5	333-3133 X253

Staff

Joseph S. Algranti - RAC IV Rep.	NASA/CC	483-7226
Dr. E.A. Kiessling - ECH Rep. U of H	15402 Wandering Trail Friendswd.	749-1721
Ernest R. Hillje - CLCTC Rep.	NASA/ET-3 77546	483-3404
Dr. Edward C. Ezell - Historian	NASA/BE4	483-2838
Robert V. Glowczwski - Region IV, Deputy for Membership	Martin Marietta/MMC	333-4150

Committee Chairman

Phillip M. Deans - Membership Committee	NASA/EK3	483-6486
William A. Stewart - Newsletter	Box 57913 Webster 77598	476-1630
Richard J. Crane - Publicity	1111 Oak Circle Seabrook 77586	334-2465
Bob Cohen - Public Affairs/Speaker Group	NASA/WT3	483-6161
Thomas B. Murtagh - PA/Tour Group	NASA/FD4	483-3217



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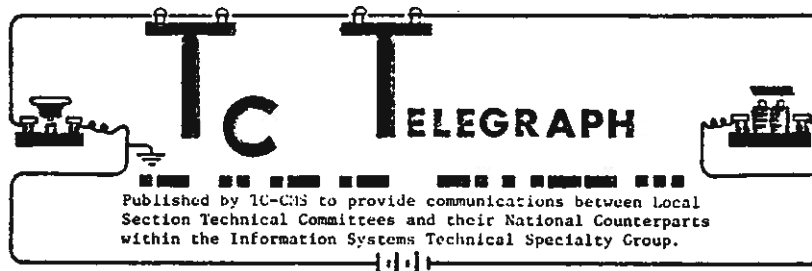
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AIAA HOUSTON SECTION  
VICE CHAIRMAN, TECHNICAL  
P.O. BOX 57524  
WEBSTER, TX 77598

## National T C Activities



### THE "TC TELEGRAPH" IS BORN!

In connection with last month's summary of the National TC-CMS (Communications Systems) meeting highlights, my attempt to get a Local Section TC Liaison Newsletter launched seems to be making headway. Dr. Peter Kurzhals, Director of the Aerospace and Information Systems Technical Speciality Group (TSG), has gotten wind of this Newsletter project and asked that it be written up for A & A Magazine. The Newsletter letterhead and title "The TC Telegraph" have been created and an article submitted to him to meet the December 20 deadline for the forthcoming A & A issue.

Members of TC-CMS have already begun to solicit the interest of their local sections and I have received an enthusiastic response via that channel from the New England Section in Lexington, Massachusetts. Accompanying that response was a copy of their Section Newsletter which is included herewith for your interest in what goes on in other sections remote from our region. I have responded by forwarding a copy of our outstanding Houston Section Newsletter to them for like purpose and interest in the "Far East"!

C.V. Wolfers  
Chairman Elect

For Information call Paul Berry at 944-6850.



# AIAA

## NEW ENGLAND SECTION

NEWS LETTER - DECEMBER 1982

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HUBERT I. FLOMENHOFF  
Vice-Chairman  
PHILIP O. JARVINEN  
Secretary  
JOSEPH F. TURNBULL  
Treasurer  
JANIS O. A. STANKEVICS

The New England Section welcomes the following new and transferred members:

New Members

Mr. Douglas A. Bailey  
Mr. Wayne H. Hathaway  
Mr. James A. Beckman  
Mr. Richard M. Elkin

Mr. Allen J. Kleinman  
Mr. William A. Podgorski  
Mr. George Rivera Prado  
Mr. Donald C. Weldon

Transferred Members

Dr. Donald Paul McErlean  
Capt. David William Melanson  
Mr. Gerald Ouellette  
Dr. Clarke E. Hermance  
Mr. Faize Jamil  
Mr. David Elden Jeong  
Dr. Glen I. Langston  
Capt. Martin L. Marler  
Mr. Albert S. Ogden  
Mr. Raymond L. Sheen  
Mr. Robert T. Williams  
Mr. Morgan Williams

Major Richard F. Fischer  
Ens. Richard Carl Locke  
Mr. Edward T. Bullister  
Mr. Thomas Richard Bussing  
Mr. Lawrence DeWitt Davis  
Dr. Farouk El-Baz  
Lt. Jeffrey L. Fitzsimmons  
Vice-Adm. John T. Hayward  
Dr. Dean Stafford Jorgenson  
2nd Lt. John Mark Schiavi  
Mr. Arlan R. Van Koevering  
Mr. Vernon Francis Vutech

Special Reminder to all Younger Members

Please complete and return the address form you received from the Young Members Committee. These forms will be condensed into a mailing list for providing you with information about AIAA activities of special interest to younger members. For further information call Bob Bishop at 258-1638.

Message from the Chairman

This year's activities are well underway with two very interesting and informative meetings in September and October. In October, William O'Neil of DoD developed the thesis that numerical superiority is not nearly as important for military success as is knowing your enemy's location better than he knows your location. He supported this view with several dramatic case histories. For example, in World War I, 125 German submarines could not be stopped by 4000 surface ships on anti-sub duty. Mr. O'Neil's audience was very knowledgeable, so the question-and-answer session was long and interesting. The meeting benefited from the hospitality of Raytheon Missiles System, which was our host at the social hour and arranged for a delicious buffet dinner.

Some of you may have been receiving your meeting notices rather late, perhaps even after the meeting occurred. We apologize, and have taken corrective action to foil the postal service's inability to deliver 3rd class mail from Boston to you in less than two weeks. This mailing was made at least three weeks before the next meeting (Dec. 14). Let's see how they can foul us up now!

Paul Berry of TASC is our Chairman of Member Services, and stands ready to provide or refer you to any information you need about the AIAA. Don't be afraid to volunteer to help out with our section activities. If you want to limit the scope of your help, we will be happy to provide a specific task of interest to you. Especially, let us know if you would like to speak to student or civic groups. You can help the New England Section to be more effective locally, just as the AIAA has a strong impact on the national level.

---- Hugh Flomenhoft

#### AIAA N.E. Section Media Award

The New England Section has instituted a Media Award to be presented each year to the author(s) working in the New England media who best convey to the public an aerospace subject. The 1981-1982 Media Award was presented, on June 16, to WCVB-TV (Channel 5) for the program "Flight 30, Margin of Safety," covering the January 1982 World Airways accident at Logan Airport in Boston. Accepting the award for Channel 5 was the producer, Dick Amaral. Section members are urged to submit articles or program titles and authors as nominations for the 1982-1983 award. Send them to Rick DeMeis, 126 Powers St., Needham, MA 02192 before May 1983.

#### Stan Kent Advocates Space Entrepreneurship

Stan Kent, aerospace engineer and President of Delta Vee Inc., a non-profit citizen-supported space corporation, spoke to about 55 attendees at the April 15th dinner meeting of the New England Section. He suggested that a new way of doing business in the aerospace industry must be found if the industry is to survive. Decrying the stagnation and cancellation of many NASA programs, Kent maintained that finding innovative methods of financing certain space missions is a part of the solution. He gave, as a prime example, a privately-funded mission to Halley's Comet, in lieu of the cancelled NASA mission. A scientifically valuable pre-perihelion mission, using a modified RCA Dynamics Explorer vehicle, could cost as little as \$80 million. Kent believes that it could be financed by sales of rights to pictures beamed back from the spacecraft, merchandising tie-ins, and philanthropic support. This is very much like the method used by the Olympic Committee to finance their operation. He emphasized that laying the foundation for missions of this type is more important than the success of this particular mission. Delta Vee (3033 Moorpark Ave., Suite 27, San Jose, CA 95128, 408/243-9145) is currently conducting design and feasibility reviews of this and other low-cost missions. A final decision about the Halley's Comet mission will be made soon. Kent also emphasized the need for students and younger members to get involved in the activities of the AIAA, and to contribute to the private exploration, utilization and development of outer space.

--- Scott Mize



# aiaa newsletter

AMERICAN  
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.....  
HOUSTON SECTION

## LIST OF COMING ATTRACTIONS

Date		
Jan 27, 1983 4:30PM	After Work Reception Guest Speaker: Daniel E. Cassidy, Vice President & Director, Marsh & McLennan Aviation & Aerospace Services, "Space Insurance An Instrument of Commercial Space"	Gilruth Center
Feb 10, 1983 4:30PM	After Work Reception Guest Speakers: STS-5 Flight Crew (1 to 4) Brand, Overmyer, Allen, Lenoir "STS-5 Crew Report"	Gilruth Center
Mar 17, 1983 6:00PM	Dinner Meeting	Gilruth Center
Apr 28, 1983 6:00PM	Dinner Meeting Guest Speaker: Michael Yarymovych, AIAA President, V-P Advanced Systems Div., Rockwell "National Space Issues"	Gilruth Center
May 20, 1983 7:00PM	Reception	Bldg 2, Visitors Center



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A4  
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AIAA HOUSTON SECTION 1982-1983 MEETINGS  
HELD AT JOHNSON SPACE CENTER  
ROBERT R. GILRUTH RECREATION CENTER

**RECEPTION**

Registration: 4:30 to 5:00

Social & Program: 4:30 to 6:30



AMERICAN  
INSTITUTE OF  
AERONAUTICS AND  
ASTRONAUTICS

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

**THURSDAY - JAN. 27, 1983**



## SPACE INSURANCE

An Instrument Of  
Commercial Space

DANIEL E. CASSIDY

VICE PRESIDENT AND DIRECTOR  
MARSH & McLENNAN  
AVIATION AND AEROSPACE SERVICES

Insurance is playing a major role in fostering the development of space for commercial purposes. Essentially all commercial and non-U.S. Government Satellites launched today are insured to cover third party liability and to cover all or a major part of the cost of the spacecraft and launch vehicle. Increasingly, insurance is being provided to cover satellite failures during on-orbit operations including contingencies of business interruption.

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**FOR RECEPTION RESERVATIONS, CALL:**

PAT  
333-4150  
(Martin  
Marietta)

JOANNE  
333-2030  
EXT. 242  
(Rockwell)

PATTY  
488-5660  
EXT.211  
(MDTSCO)

SANDRA  
483-3995  
(NASA)

SYLVIA  
845-7541  
(College Station)

**HOT & COLD HORS D' OEUVRES**  
MEMBERS & SPOUSES \$6.00  
NON-MEMBERS \$7.00  
STUDENT DISCOUNT \$2.00

**RESERVATIONS DEADLINE IS TUESDAY - JAN. 25 at 12:00 NOON**

**CANCELLATIONS ARE REQUIRED**

**ALL ARE WELCOME**

AIAA HOUSTON SECTION 1982-1983 MEETINGS  
HELD AT JOHNSON SPACE CENTER  
ROBERT R. GILRUTH RECREATION CENTER

**RECEPTION**

Registration: 4:30 to 5:00  
Social & Program: 4:30 to 6:30

**THURSDAY - FEB. 10, 1983**



AMERICAN  
INSTITUTE OF  
AERONAUTICS AND  
ASTRONAUTICS

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



# STS-5 CREW REPORT

## "WE DELIVER"

THIS AFTER WORK RECEPTION IS BEING HELD TO HONOR ALL THE STS TEAM AND CELEBRATE THE OUTSTANDING SUCCESS OF THE FIRST STS OPERATIONAL FLIGHT.

CREW MEMBERS FOR STS-5 WERE VANCE D. BRAND, COMMANDER; ROBERT F. OVERMYER, PILOT; AND JOSEPH P. ALLEN AND WILLIAM B. LENOIR, MISSION SPECIALISTS.

TWO COMMERCIAL SATELLITES WERE SUCCESSFULLY DEPLOYED AND ACHIEVED THEIR DESIRED GEOSTATIONARY ORBIT POSITION USING A PAYLOAD ASSIST MODULE (PAM-D). THE SATELLITES WERE THE SATELLITE BUSINESS SYSTEMS (SBS-C) AND THE TELESAT E.

FOR RECEPTION RESERVATIONS, CALL:

PAT  
333-4150  
(Martin  
Marietta)

JOANNE  
333-2030  
EXT. 242  
(Rockwell)

PATTY  
488-5660  
EXT.211  
(MDTSCO)

NANCY  
483-3995  
(NASA)

SYLVIA  
845-7541  
(College Station)

HOT & COLD HORS D' OEUVRES  
MEMBERS & SPOUSES \$6.00  
NON-MEMBERS \$7.00  
STUDENT DISCOUNT \$2.00

RESERVATIONS DEADLINE IS TUESDAY - FEB. 8 at 12:00 NOON

CANCELLATIONS ARE REQUIRED

ALL ARE WELCOME