



NAL-JSC NEWS

*NASA Alumni League
JSC Chapter
Renee Lance, Editor*

NASA Administrator Visit to JSC **By Wayne Hale, President**

On Wednesday October 5, the JSC Chapter of the NASA Alumni League was pleased to host NASA Administrator General Charles Bolden, Deputy Administrator Dr. Dava Newman, and Associate Administrator Mr. Robert Lightfoot. These are the top three officials at NASA HQ. We were pleased that they spent over an hour with the NAL-JSC giving presentations and answering many questions.

General Bolden started off with a presentation of all the activities the Agency is undertaking. New for this year are three X-planes to be designed and built: a low boom supersonic demonstrator which may lead to supersonic passenger aircraft which can fly over populated areas, an all-electric aircraft, and an ultra-efficient blended body/wing aircraft. Dava Newman took over the presentation and gave a great talk on the science missions including recent successes at Jupiter and Pluto and continuing robotic explorations on Mars. After Dr. Newman finished with a description of the Mars 2020 rover under development, Robert Lightfoot took over and talked about the human exploration plans on the Journey to Mars. He gave a status of the vehicles under construction at Michoud Assembly Facility in Louisiana and an overview of the first four exploration missions: EM-1 which is an uncrewed shakedown flight, and EM-2, 3, 4 being cis-lunar flights. Also discussed was the Asteroid Redirect/Retrieval mission which will be a technology test bed for high performance solar electric deep space propulsion, large mass handling, and human interaction with material retrieved from an asteroid. The Next Step program to develop a cis-lunar habitat was described as a multi-stage process which will culminate in a one year cis-lunar mission.

Among the questions was whether or not a lunar

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NAL JSC Organization Officers

President, Wayne Hale – turquoiseflight@gmail.com
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Directors

Larry Bell
Greg Blackburn
Susan Creasy
Gordon Ducote
Phil Engelauf
Robert Galvez
Estella Gillette

Rob Kelso

Senior Advisor

Norm Chaffee

BOARD MEETINGS - Our Officers and Board of Directors meet on the second Thursday of the month at 3:00 p.m. at Tietronix, 1331 Gemini, Suite 300

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landing was contemplated. The answer briefly was that if there is a reason to go there, or our international partners want to go there, NASA will assist in providing launch and transportation and would certainly send an astronaut on the landing crew. But the NASA focus is on Mars and the steps that will bring humans to at least the vicinity of the

red planet in the 2030's with landing shortly to follow.

This special meeting was made possible by the interest that senior NASA leadership has in keeping the alumni informed on current events and plans in the Agency. We can expect that we will get additional opportunities to speak with senior NASA leadership in the future.

NAL-JSC Biennial Election Results

By Cyndi Draughon, Secretary

Voting for the biennial election of Officers and Directors was completed on August 1, 2016. Thanks to all who submitted their names to run for office and to all those who voted in this election.

The following were elected to serve for the two-year period from August 11, 2016 to August 11, 2018:

President	Wayne Hale
Vice President	Denny Holt
Secretary	Cyndi Draughon
Treasurer	Susan Braymer
Directors (8)	Larry Bell
	Greg Blackburn
	Susan Creasy
	Gordon Ducote
	Phil Engelauf
	Robert Galvez
	Estella Gillette
	Rob Kelso

Also, two changes to the Chapter By-Laws were approved.

1. Requirements for membership
2. Number of Directors

1. Requirements for membership

Written:

III. MEMBERSHIP

The membership of the NAL-JSC consists of former employees of NASA or the Jet Propulsion Lab who are current members of the national organization, being current in their dues. The amount of dues is determined by the national organization, which allocates a portion

of those dues to the NAL-JSC for its purposes.

Approved Revision:**III. MEMBERSHIP**

The membership of the NAL-JSC consists of former employees of NASA or the Jet Propulsion Lab who are current members of the national organization, being current in their dues. Any former employee of another federal government agency who served an extended detail assignment at JSC for one year or longer is also eligible for membership in our Chapter. Any other person who was employed by NASA as a "Special Employee" for the purpose of accomplishing a special focused assignment at JSC lasting one year or more is also eligible for membership in our Chapter.

2. Number of Directors:

Written:

V. OFFICERS AND DIRECTORS

Section 1. Officers of the NAL-JSC shall be President, Vice-President, Secretary, and Treasurer. No person may hold more than one office.

Section 2. There shall be a minimum of three Directors and a maximum of eight Directors who shall serve with the Officers in the conduct of NAL-JSC business and activities. One Director shall be the immediate past President of the Chapter, who shall serve for at least one term as Director, unless he/she specifically declines the position.

Approved Revision:**V. OFFICERS AND DIRECTORS**

Section 1. (no change proposed)

Section 2. There shall be a minimum of six Directors and a maximum of ten Directors .

35th Anniversary STS-1 & STS-2 Lessons & Legacies Panel September 16, 2016

By Denny Holt, Vice-President

Has it really been 35 years since the first Space Shuttle flights? NAL Members were honored guests of JSC at an entertaining and informative panel discussion of the challenges and major achievements of the first two STS orbital test flights. The distinguished panels were Bob Crippen, STS-1 pilot; Joe Engle, STS-

2 commander; Chuck Lewis, Orbit Team Flight Director; and Tom Moser, Subsystem Manager for Structural/Thermal Verification. There was opportunity to mix and mingle and some members took the tour of JSC. Of course, there was the obligatory NAL group picture. See, we haven't changed a bit...



NAL Members at the STS 1 and 2 Lessons Learned Panel Discussion



L-R Bob Crippen, Tom Moser, Joe Engle, and Chuck Lewis

NAL-JSC Programs

By Phil Engelauf, Programs Chair

Recent Programs

1st Thursday Series

August 4, 2016

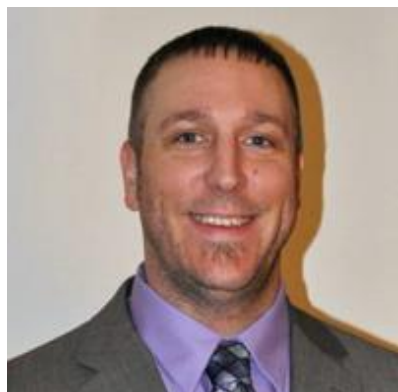


Dr. Paul Spudis

Dr. Paul Spudis, Senior Staff Scientist for the Lunar and Planetary Institute, gave a number of thought-provoking perspectives entitled "The Value of the Moon". The discussion included some historical perspectives about the past lunar initiatives, and discussed what has changed (and what has not) in the engineering, scientific, cultural and political factors that have influenced the debate over returning to the moon. The discussion included a number of proposals and recommendations, based on what we have learned from the past 50 years of human space flight, which could constitute a viable architecture for a reasonable and sustainable approach to returning to the moon as a national space objective.

1st Thursday Series

September 1, 2016



Dr. Aaron Burton

At our September meeting, Dr. Aaron Burton, Principal Investigator for the Biomolecule Sequencer being tested onboard the ISS, gave us an overview of this innovative project. Dr. Burton and his associates are using essentially off-the-shelf hardware to analyze known samples onboard the ISS, and comparing the results with identical testing on the ground. This proof of concept testing has shown excellent correlation in its first tests, validating the feasibility of the technology in the microgravity environment. The use of DNA sequencing in space holds the potential to allow identification of microbes onboard spacecraft, diagnose diseases and understand crew member health, and potentially help detect DNA-based life elsewhere in the solar system.

1st Thursday Series

October 6, 2016



*L-R John Uri, Jennifer Ross-Nazzal
and Sandra Johnson*

Recently the JSC History Office was consolidated into the S&MA Knowledge Capture function. John Uri has accepted the position of JSC History Office Manager. John, Jennifer Ross-Nazzal, and Sandra Johnson gave an informative overview of the new organization as well as the mission of their office. In addition to some entertaining anecdotes of the kinds of requests they receive and some of the projects they have supported, they gave a very informative overview of the JSC History Portal (accessible from outside the firewall), the resources at their disposal, and the process and methods they employ. The mission of preserving our space history and assuring access to the lessons of 50 years of human spaceflight is especially important to the NAL membership, and we look forward to a productive relationship in support of the JSC History Office's efforts.

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Upcoming Programs

First Thursday Series

Date: **Thursday, November 3, 2016**
Where: NBL, Space Center Blvd
Time: 2:30-4:00 pm

Speaker: Dan Sedej, NAL Communications Committee
Topic: NBL Tour

Date: **Thursday, December 1, 2016**
Where: Gilruth Upstairs
Time: 2:30-4:00 pm

Speaker: John Curry, Sierra Nevada Corp Senior Director/ Dream Chaser Co-Program Manager
Topic: Dream Chaser Development Progress and Flight Test Program

Date: **Thursday, January 5, 2017**
Where: Gilruth Upstairs
Time: 2:30-4:00 pm

Speaker: Gordon Andrews, NASA/JSC Strategic Communications Group
Topic: Hope 1 Space Suit Project

Date: **Thursday, February 2, 2017**
Where: Gilruth Upstairs
Time: 2:30-4:00 pm

Speaker: Doug Archer (Tentative)
Topic: Curiosity: The Mars Science Laboratory and Mars Exploration

NAL Dinner/Social Programs

Date: **Tuesday, November 15, 2016**
Where: Gilruth Alamo Ballroom
Time: 5:30 - 9:00 pm

Speaker: John B. Charles, Ph.D, Chief Scientist, NASA Human Research Program
Topic: Preliminary Findings from the ISS One Year Expedition and Kelley Twins Study

NAL-JSC Supports the KIPP Private School System in the Houston Area

By Norman Chaffee

The KIPP private school system (Knowledge is Power Program) has invited Senior Advisor, Norm Chaffee, to serve as a member of its STEM (Science/Technology/Engineering/Math) Advisory Board for the four KIPP high

schools in the Houston area. Norm will be recommending some ideas for NAL-JSC support to KIPP and will let us know about opportunities for volunteers to make school visits and support other activities.

Membership Committee Report

By Estella H. Gillette, Ed.D., Membership Chair

Membership Status: Please welcome our newest members! Since our report in our July 2016 newsletter, we have welcomed 11 new members, including Barry Boswell (Lifetime), Brian Butcher, Scott Curtis, Robert Ess, Harold Getzelman, Aja Harris, Philip Harris, Kirk Hummel, Cindy Kochan, Charles Layton, and Laurie Peterson. And, one member changed his status to “Lifetime,” Denny Holt, which means he also made a generous contribution to our Education Fund.

We have members whose membership expired between July-September so they will be moved to the “yellow”/inactive list. For those members whose 1-year anniversary since their membership expired, Communications will inform them that the 1-year grace period has expired and that they will go off the NAL-JSC distribution list. We welcome anyone whose membership has expired to renew at any time.

Thanks, again! We are always impressed by the generosity of our NAL-JSC members. Once again, we had many members who made donations to our NAL-JSC Education Fund between the months of July-September 2016. Thanks again to: Floyd Bennett, Barry Boswell, Wilber Boykin, Brian Butcher, Robert Castle, Gerald Chapman, Everett Coleman, Bert Davila, Larry Davis, Ray Dell’Osso, Ted Dyson, Glen Ecord, Judy Ernull, Royce Forman, Roberto Galvez, Steve Gaylor, Gary Gutkowski, Wayne Hale, Milt Heflin, Mike Hernandez, Mac Himel, Denny Holt, Jim Jaax, Debra Johnson, Cindy Kochan, Linda LaPradd, Lubert Leger, Chin Lin, Steve Martin, Steve Nesbitt, Don Noah, Doug Perrenod, Don Peterson, Jim Romig, Billy Sevier, Ernest Smith, Chet Vaughan, Leo Waltz, and Barry Wolfer

Sad farewell: It is sad that we must say a final good-bye to friends and colleagues. This period, we had three members who joined our “Afterlife” list. Dr. Liz Bains, who retired from Engineering’s Robotics Division and joined NAL-JSC in 2013, died in July; Jack Garman, who retired as Chief

Information Officer at JSC and became an NAL-JSC Lifetime member in 2014 and had become involved in our mentoring program, died in September; and Lyle Jenkins, who worked in Engineering’s Advanced Development Office and was a long-time member of NAL-JSC, also died in September. We will miss our friends and colleagues and thank them for their contributions to our NASA and NAL successes!

Membership Committee “other” activities

- **Reminder:** Please remember that even though you may have mailed your renewal and check or renewed on-line, JSC Security will not have your updated information until Membership (Estella) has processed the renewal. Once Estella processes your renewal, she will send you an acknowledgement to tell you that JSC Security has your updated information and she also includes your new NAL-JSC membership card. Please do not proceed to JSC Security until you have that acknowledgement note from Estella. JSC Security is very customer friendly and accommodating, but because they have their own process within which to operate, they do rely on our NAL-JSC membership process to keep us all within the requirements for the privilege of continued JSC badging.
- **JSC Badging policy update:** To clarify the difference between the NAL-JSC badge and the JSC retiree badge, Estella asked Linda Dreisbach, JSC Security (Chenega Security and Support Solutions) about the retiree badge. These were her comments.
 - The Retiree Identification (ID) Card is just that – an ID card. On its own it does not allow site access.
 - The retiree comes into the badging office (with his/her driver’s license and ID card) and JSC Security issues a Visitor badge for 1-5 days.
 - The Retiree ID Card *does not have an*

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expiration date on it. The only retiree badge Linda is aware of that expires is the NAL badge.

- M. D. Anderson Blood Drive for Bill Bates on August 31.** NAL-JSC was invited to collaborate with JSC, M.D. Anderson, and University Baptist Church (UBC) as volunteers for a blood drive for our friend and NAL-JSC member Bill Bates. We had a great turnout of donors and volunteers for the August 31 MDA blood drive for our friend Bill. MDA representative Sheryl Dickerson was most generous with MDA giveaways and made us comfortable with water and a fan, since we were outside at UBC. The UBC staff was very accommodating with tables and chairs and lending us their facility for whatever we needed. So, the job was easy and fun! JSC HR and Bill did a great job in working with MDA to make this happen. Although everyone who had agreed to donate was not able to donate for different reasons (MDA is strict about who can donate!), we truly appreciated that folks came out to the blood drive. Some had pre-registered and some just walked in. MDA was very cooperative in processing anyone who participated and “gently” let down those who couldn’t donate. It was interesting that the MDA van looked so “inactive” until we walked into the van—it was like a village of people in there, lots of activity going on all of the time!



Left to right: Sheryl Dickerson (MDA), NAL members Robert Galvez, Norm Chafee, Estella Gillette, and Kathie Abotteen at the University Baptist Church in Clear Lake.

The following are either donors or volunteers who participated in the blood drive. Some were JSC folks (some still working, i.e., non-NAL members) and others were either from Bill’s church or family: Kathie Abotteen, Jack Bacon, Martha Bishop, Susan Brand, Bryan Campbell, Sandra Campbell, Norm Chafee, Dennis Cunningham, Zita Cunningham, Cyndi Draughon, Harold Draughon, Dana Dressel, Chiold Epp, Robert Galvez, Estella Gillette, Max Haddock, Michael Haney, Charlie Harlan, Patricia Johnson, John Jurgensen, Rob Kelso, Bill Killingsworth, John Langston, Linda LaPradd, Bruce Luna, Charlie Lunquist, Jimmy McLendon, Stokes McMillan, Larry Moon, Eugene Nitsch, Don Pallesen, Gary Priest, Ernest Smith, Sylvia Stottlemeyer, Davis Thelen, Chet Vaughan, Shannon Walker, Jeff Williams, and Peggy Wooten. Thanks again to everyone who participated.

- Astronaut Scholarship Foundation (ASF) event:** Membership Committee worked with representatives from the ASF to coordinate the purchase of 50 discounted tickets, specifically for NAL-JSC members, for the September 17 STS-1 and 2 dinner and panel discussion at Space Center Houston. Members who attended the event were treated to a great evening of mingling with former STS program colleagues and then the panel discussion moderated by ASF President (and NAL-JSC member) Dan Brandenstein and participated in by Joe Henry Engle, Dick Truly, and Bob Crippen. The ASF was founded more than 30 years ago by Mercury 7 astronauts with a goal to encourage students to pursue scientific endeavors to keep America on the leading edge of technology. The ASF has continued with the same mission, jointly with other astronauts from Gemini, Apollo, Skylab, and Space Shuttle programs, and provides the Astronaut Scholarship to undergraduate STEM students.

Imagery Identification Project

By Jon Hall, Mentoring Committee

JSC's External Relations Office (ERO) asked for volunteer help from retirees that worked at JSC in the 1970s – 1990s to assist with identifying archived imagery of all programs from Mercury thru Shuttle, JSC workforce and the Institution - and the members responded!

The Imagery Identification Pilot Project got off to a great start on the first day, Thursday, September 15, 2016, starting at 1pm in Building 57 with approximately 15 NAL-JSC members participating. JSC's ERO also sent support with civil servants, contractor, and interns. Since this was a pilot study of the process, the group got off to a slow start. Quick suggestions from NAL-JSC members for process improvements were heeded, and the effort became far more productive. Some NAL-JSC members performed multiple tasks throughout the process by reviewing hardcopies as well as projected images. Some were also taking notes during the activity. JSC's ERO had set up two rooms in B57: one for pre-Shuttle, and the other for the Shuttle Program imagery. NAL members were encouraged to move between the two rooms to assist in the effort. There was very positive feedback from some about the opportunity to reminisce as well as assist. Day two was even more productive! On Friday,

9/16/16, in concert with the STS 1 / STS 2 Anniversary event in the Teague Auditorium, JSC's ERO set up Studio B in B2(S) for NAL-JSC members to continue identifying imagery. This effort started at 8:30am, broke for the panel discussion at 10:30, and then resumed after lunch for several hours. Progress during the second day was very good, and here, again, NAL-JSC volunteers were continuously multi-tasking to help the ERO.

Lessons learned from these sessions will influence the approach used in future sessions. NAL-JSC members in B57 who signed the roster on 09/15/16 and 9/16/16 included:

Rick Nygren, Jon Hall, Hubert Brasseaux, Cyndi Draughon, Teresa Sullivan, Kitty Rogers, Bernie Rosenbaum, Frank Hughes, Norm Chaffee, Jim Oberg, Maryanne Dyson, Wayne Hale, Rob Kelso, Stokes McMillan, and Ken Young.

JSC's ERO Workforce supporting the effort:

Kylie Clem, David Youngman, Mike Gentry, and Interns Morgan, Matt, Chloe, Rose, and Noah.

NAL members will be notified of future opportunities to participate in the project. For more information, contact Jon Hall (jwhall001@gmail.com).



l-r David Youngman, Rick Nygren, Teresa Sullivan, Frank Hughes, David Kelldorf, ERO intern-Morgan McAllister and Norm Chaffee.



l-r Rick Nygren (standing), Hugh Brasseaux, Rob Kelso, Maryanne Dyson, ERO interns (foreground), Cyndi Draughon, Kitty Rogers (standing), Bernie Rosenbaum and Wayne Hale.

Treasurer's Report

By Susan Braymer, Treasurer

- Thanks to our generous members our treasury is holding its own totaling \$72,857.05 on October 1, 2016. This includes the \$8,008.41 remaining in the Lance Scholarship Fund after the first scholarships were given in May (or \$64,848.64 of unreserved NAL-JSC funds).
- During the first three quarters of 2016, NAL took in \$10,733.54 in dues. Some of our members joined or renewed at the Supporting (\$100) level and 7 members contributed at the Lifetime (\$500) level which further enhanced our bottom line.
- Our members donated a total of \$3,842.04 during the first three quarters of 2016 in addition to their annual dues.
- The use of PayPal to pay for dues, dinners, donations, etc., continues to increase. NAL-JSC pays a small fee for this convenience. During the first two quarters we paid a total of \$162.51 in PayPal costs.
- We have invested more money in the

Schwab Fund this year and have appointed an Investment Committee, chaired by Gordon Ducote, to manage these funds. Other committee members are Bill Bates, Rick Nygren, Jack Knight and Gary Johnson. The Committee hopes to increase the return on our investments through lower risk choices and more predictable dividend income.

- For 2016 we increased the number and amount of our donations to space related educational organizations. In 2016 to date we have contributed \$500 to the AIAA to fund scholarships for STEM students, \$500 to the NASA College Scholarship Fund, \$400 to the Space Settlement Design Competition, \$1,500 to Space Center Houston, \$1500 to the Houston Museum on Natural Science (HMNS) Expedition Center and \$3,750 to the Columbia Museum in Hemphill, TX. We are planning to donate to three additional organizations in 2016. Most of these organizations provide scholarships to students interested in pursuing studies in technical fields.

Now for the numbers:

	12/31/2015	9/30/2016
Share Account	\$5.00	\$5.00
Checking Acct (2016 includes \$8,008.41 in the Lance Scholarship Fund; 2015 includes \$8,780 in Lance Fund)	\$21,335.91	\$10,663.89
Money Market	\$22,453.64	\$22,515.38
Schwab Account	<u>\$23,229.72</u>	<u>\$39,672.78</u>
TOTAL	\$67,024.27	\$72,857.05

NAL-JSC Hosts 80 Students from Kingwood ISD

By Norman Chaffee

On Thursday, October 6, 2016, our Chapter hosted a group of 80 high school students from Kingwood High School and Kingwood Park High School on a field trip to JSC. This activity originated from a relationship between our Senior Advisor, Norm Chaffee, and the Kingwood ISD, in which Norm and other JSC retirees support the Kingwood ISD Aerosciences Program in its competitive rocket design program by conducting preliminary design reviews, as well as critical design reviews, for their rocket designs, which are launched from a coastal area near Freeport each May.

The Kingwood teachers requested that we organize a student visit to JSC focused on the techniques of successful program management, which would benefit their rocket design/build/launch programs. The day-long JSC program included

presentations by our President, Wayne Hale, as well as talks by our members Gary Johnson and Norm Chaffee. Representatives from the JSC Education Office were also recruited to tell the students about the High School Aerospace Scholars Program, as well as the NASA Intern and Co-Op Program opportunities. Retired Astronaut, Clay Anderson, attended to talk about his career as an astronaut, and the visit was topped off by a conducted visit to the Saturn V at Rocket Park, including a briefing by Norman Chaffee.

Our Chapter is considering offering a similar set of presentations during the year for other school districts, and Joyce Abbey of the TEAM NASA organization has offered to help organize and schedule those future events - so we'll need lots of volunteers!

NAL News Clips

Clear Lake Association of Senior Programs

The University of Houston Clear Lake (UHCL) operates a program for seniors called the Clear Lake Association of Senior Programs (CLASP). CLASP has periodic programs on Thursday evenings from 5:30 – 7:00 p.m. in the Forest Room (FR) or Garden Room (GR) of the large Bayou building. Parking is free in the parking lot across from the main entrance to the Bayou building (after the program they will give you a token to open the exit gate from the parking lot). The CLASP website is www.uhcl.edu/clasp and the email address is clasp@uhcl.edu or you can call UHCL Office of Development and Alumni Relations at 281-283-2021 for more information. It is all free and very worthwhile. Upcoming programs are as follows:

Nov 3 The Mysteries of Glacier National Park and the Rockies Speaker: Marvin E. Kauffman, emeritus professor of geoscience, GR

Dec 1 Exploring Pluto: A Voyage of Discovery at the Edge of Interstellar Space Speaker: Dr. Paul Schenk, staff scientist, LPI, FR

Jan 5 Apollo VII: The first of Five Giant Steps to the Moon Speaker: Col. Walter Cunningham, Apollo astronaut, GR

Feb 2 Exploring Ruins in the Honduran Jungle Speaker: Juan Carlos Fernández Díaz, senior researcher, natural physical sciences, UofH GR

Mar 3 Commercial Crew Program, Getting Ready for the Mission, Speaker: Kathy Lueders, Steve Stich, and William Amonette FR

Apr 2 Keeping the Spring in Your Step: Exercise, Physical Activity, and Nutrition at Every Age, Speaker: William Amonette, assistant professor in fitness and human performance, UHCL, FR

May 4 The Growth of Muslim and Other Religious Minorities in the US Speaker: Mike McMullen, professor of sociology, UHCL, GR