

Climate Change Engineering, Science & Public Policy

AIAA Houston Section Dinner Meeting

Tuesday, November 3, 2015, NASA/JSC Gilruth Center Alamo Ballroom

Douglas Yazell, Councilor

AIAA Houston Section

The American Institute of Aeronautics and Astronautics

Dinner Meeting Guests of Honor

- Krystal McLane, Programs Chair, 2015-2016
- Ian Mills, NASA JSC ISS Robotics Operations
- Bruce McCarl, PhD, Texas A&M University at College Station, 2007 Nobel Peace Prize laureate

Thanks:

- Tesla Motors, the loan of a Tesla Model S for inspection after the meeting, thanks to Jesi Hoolihan
- Norman Chaffee, NASA/JSC retired, Saturn V visit at NASA/JSC Rocket Park
- Steve Bundrick, professional audio and Information Technology (IT) support, thanks to Angela Beck

<https://www.eventbrite.com/e/climate-change-engineering-science-public-policy-dinner-meeting-tickets-18919181782>

<http://www.aiaahouston.org/event/dr-bruce-mccarl-climate-change-science-public-policy/#rsvp>

Krystal McLane

James C. McLane II, James C. McLane, Jr.

Horizons, newsletter since 1971 of AIAA Houston Section
 Special reprint issue, 2015, the articles of James C. McLane III
 57 pages, slideshow during our dinner meal


Page 19


International Space Activities Committee (ISAC)

The current membership list for AIAA Houston Section ISAC (please look us up and join us: www.aiaa-houston.org/isac/):

1. ~~Isabella Dominguez-Ofiler~~, United Space Alliance, Chair
2. George Abbey, Jr., United Space Alliance
3. Linda ~~Adams~~, NASA/KSC
4. Dr. Albert Jackson, Jacobs, FBIS (Fellow, British ~~Interplanetary~~ Society), Visiting Scientist, Lunar Planetary Institute - <http://www.lpi.usra.edu/lpi/jackson>
5. David Jib, NASA/JSC
6. Michael Kezirian, Engineer - The Boeing Company, Adjunct Professor - University of Southern California
7. James McLane III
8. ~~Patrick~~ Moloney, NASA/JSC
9. Dr. Zafir ~~Qasbi~~, Barrios
10. Chris Taylor
11. Dr. Gary Turner, Odyssey Space Research
12. Douglas Yazell, Honeywell

Section News





Left to right: Retired Colonel Richard (Dick) Cole of the Doolittle Raiders with ISAC and Chinese sister section member James McLane III

Above: After enjoying our section's lunch-and-learn by Dr. Albert A. Jackson a few months ago (attendance 130 in a NASA auditorium), James McLane III looked for and found some of his photos which he took more than 40 years ago when von Braun visited Texas A&M University at College Station. The year was probably 1966. This was taken at a reception following a speech about Apollo plans. The teenage girl in the background is von Braun's daughter Iris. Jim took this with available light using 35 mm Kodak tri-X pan and printed it himself on high-contrast enlarging paper.

AIAA Houston Horizons Winter 2007/2008 Page 19

James C. McLane, Jr. Address to AIAA Houston Section about the late James C. McLane, Jr., Part 6 of 6

James C. McLane III, from the Presentation of June 13, 2013

The Chamber A Disaster

The first time the air was pumped out of Chamber A, its huge 40-foot diameter door bent and buckled off its mountings. The structure had failed due to bad design. Fortunately, the damage was minimized by halting the test before there was a more dramatic collapse of the entire facility. Chamber A was unique and it was needed for testing of the Apollo Command and Service Module. The door was hurriedly repaired and beefed up with extra braces. Finally, the facility was ready for manned tests. By this time my dad was the Chief in charge of the Space Simulation Division, one of the largest parts of the Manned Spacecraft Center.

The repairs to the chamber had cost a lot of money and the failure resulted in lawsuits. The chamber had been built by ~~Chicago Bridge and Iron Company (CB&I)~~ and the design engineering firm was Bechtel. CB&I had just begun to market

those now-familiar water tanks shaped like giant golf balls on tees. Bechtel engineers had used a CB&I computer program to analyze stresses on the giant dish door and its frame, and it was those parts that had failed. NASA had overseen all the engineering and approved of the design approach. ~~So was it then their responsibility?~~

Finally a visiting federal judge came out to my dad's office in Building 32 and convened a sort of portable court. ~~Representatives from all companies~~ were present. Evidence and arguments were presented, the portable court rendered a judgment, and the government recovered some of the cost of repairs.

Secret Staff

~~Directors of the Center~~ Director's office for a special meeting. Somebody (I assume it was a government agency, but I never learned.) wanted to test something secret in JSC's giant space simulation Chamber A. Back then, a fair number of NASA employees had security clearances because military rockets had been used for Mercury and Gemini, and the upcoming Space Shuttle was being designed to carry military payloads.

However, no one at NASA Johnson Space Center (JSC), up to and including the Center Director, had a high enough security clearance to even talk to these folks about what they wanted to test in daddy's chamber.

The first order of the day was for my father to have a background check so he could get the required special security clearance to talk to these people. I know this involved interviewing our neighbors since they mentioned it to us.

My father never discussed this project with me except to mention some of the peculiar aspects of the test setup. The chamber was scheduled to be used for a week. While it took dozens of people to









AIAA Houston Section *Horizons* 18 May / June 2014

The McLane Family

www.aiaahouston.org/newsletter



2015 Texas–Oklahoma flood and tornado outbreak (Wikipedia)



These clouds formed quickly over Bull Creek park after the intense wave of Memorial Day storms in Austin. These are usually associated with tornadoes, which had occurred earlier in the day. Matt Roberts. Austin Mammatus Clouds

Taken from Climate Reality Project Miami 2015

Cities in the USA Using 100% Renewable Energy

1. Greensburg, Kansas
2. Burlington, Vermont
3. Aspen, Colorado
4. Georgetown, Texas by 2017

houstonpublicmedia.org

Lost Work Days Add To Costs From Flood Damage

Andrew Schneider, May 27th, 2015



houstonpublicmedia.org

Lost Work Days Add To Costs From Flood Damage

Andrew Schneider, May 27th, 2015



houstonpublicmedia.org

Lost Work Days Add To Costs From Flood Damage

Andrew Schneider, May 27th, 2015



houstonpublicmedia.org

Lost Work Days Add To Costs From Flood Damage

Andrew Schneider, May 27th, 2015



houstonpublicmedia.org

Lost Work Days Add To Costs From Flood Damage

Andrew Schneider, May 27th, 2015



Wimberly, Texas 2015

NPR.org

More Severe Storms Possible For Flood-Hit Texas
MAY 27, 2015



Eric Gay/AP

Blanco River

Norman Chaffee
NASA/JSC, retired
AIAA Associate Fellow, AIAA Houston Section Chair, 1981-1982

Our host for a Saturn V tour at NASA/JSC Rocket Park
for 2007 Nobel laureate Dr. Bruce McClure
& a few invited guests prior to the dinner meeting



Interview with Norman H. Chaffee: Observations from a Long NASA Career

SEAN KEEFE, ASSISTANT EDITOR, HORIZONS

NASA's 50th Anniversary

Norman Chaffee is a busy person. You wouldn't guess that he has retired from NASA because he is still involved

Chief of Robotics.

Norm studied chemical engineering at Rice University from 1955 to 1958. He holds a Bachelor's and Master's degrees from Tulsa University in Chemical Engineering, but he doesn't limit himself to that discipline. Norm's broad interests cover a wide range of subjects, including opera, philosophy, and psychology. He has been a lifelong learner, continually studying management through NASA and the University of Houston and doing continuing education courses in many subjects since the 1970s. Norm excelled in his career, earning several special awards for his engineering, management, and leadership skills—including the NASA Outstanding Leadership Medal. More recently, he has been actively involved with educational outreach, for which he was awarded the Exceptional Public Service Medal by NASA. Throughout his career at



He continued there a contractor for seven years, and since 2005, he has been an enthusi-

Above: Norm Chaffee (photo by Sean Keefe)

Tesla Motors

Tesla Model S electric luxury car on display for inspection after the dinner meeting. Given the theme of our dinner meeting, AIAA Houston Section volunteer & Tesla Motors Product Specialist Jesi Hoolihan suggested to Tesla Motors that she bring the automobile to our meeting.

“Tesla's award winning Model S, now with Autopilot features, is an evolution in automobile engineering. Our advanced electric drivetrain will propel you from 0 to 60 mph in as little as 2.8 seconds, without hesitation and without a drop of gasoline. With the highest safety rating in America and up to 270 miles range, Model S redefines performance driving.

“Experience Model S in Houston at the November AIAA Meeting.”



Jesi Hoolihan



www.climatecentral.org
climate.nasa.org

International Space Station Climate Science Instruments

