On April 17th, 2010 the Aerospace Legacy Foundation hosted over 120 people in Building 290 at the former Boeing plant in Downey. Now Downey Studios, Downey Landing, and the Columbia Memorial Space Center, the former NASA site is also the home of our foundation. Our offices, in Building 11, are about 100 yards from Bldg.290 where the event was held. Former NASA official and North American Aviation executive Dale Myers (below left) was the guest of honor. Many retirees and former mission support employees attended a “box lunch” meet and greet that was entertained by a group from the Urban Science Corps led by Dr. Richard Shope, Loyola Marymount University, Department of Natural Science. The day was filled with smiles of former Apollo team members reminiscing about the mission to the moon which led to the phrase, “Houston, we’ve had a problem here…” Some of the same materials used by NASA to fix the problem were on display including extensive Apollo mission images, books, models, and data.

Did you know?

Though Ken Mattingly was originally supposed to pilot the command module, he succumbed to rubella or German measles exposure. Mattingly was replaced by John L. Swigert just 48 hours prior to the launch. Laboratory tests later revealed that Mattingly had not contracted rubella.

ALF thanks all the attendees for a great luncheon! Special thanks to our Crew, Mayor Anne Bayer, the Columbia Space Center Crew, and everyone who helped out!
Apollo XIII 40th Anniversary event in Building 290

Jerry Blackburn, ALF President
These are the words that are still reverberating in the minds of all space fans today. April 11, 2010 was the 40 anniversary of the ill-fated Apollo 13 Mission launch from Kennedy Space Center. The crew of Commander Captain Jim Lovell, Command Module Pilot Jack Swigert (upgraded the last minute from back-up to full flight status replacing Ken Mattingly who had been exposed to measles) and Lunar Module Pilot Fred Haise could not have imagined what was in store for them.

By the time the day of the launch of Mission Apollo 13 arrived this historical voyage no longer demanded newspaper headlines. It is amazing to note that the landing of men on the moon had become “routine” following the spectacular and well-publicized first landing of Apollo 11 on July 20, 1969 and the subsequent Apollo 12 landing on November 19, 1969. The NASA televised broadcast of the crew on-board the Command Module Odyssey, a couple of days into the mission, was not even picked up by the major networks, NBC, CBS and ABC, much to NASA’s chagrin. Broadcast of the progress of the Vietnam War, an I Love Lucy re-run and a baseball game continued uninterrupted. Things changed dramatically after the explosion of oxygen tank #2 that provided the cryogenic oxygen supply for the fuel cells and breathing air for the crew. The world’s news services immediately focused all their attention to the crews’ perilous predicament.

At ~56 hours into the mission and ~200,000 miles from earth, a bang was felt by the crew and simultaneous Caution and Warning alarms sounded indicating something very wrong just happened on board. Commander Lovell’s ominous words to the ground “Houston, we’ve had a problem” were later slightly revised by Ron Howard in his Apollo 13 movie to say “Houston, we have a problem” to give it more currency. It didn’t take long for the crew and the ground to realize that the astronauts were in a life and death situation that needed an immediate response. The Command Module was rapidly losing power and the life support system would be inoperable very soon so the crew powered up the Aquarius Lunar Module to use as a temporary lifeboat. Also, there was some concern that the Service Module Service Propulsion System engine might have been damaged in the explosion. It was decided to use the Lunar Module Descent Engine for course corrections that would orient the spacecraft to an earth re-entry.

Since the Lunar Module was only designed to bring a crew of 2 to the moon’s surface, and only for 2 days, Captain Lovell’s crew knew they needed to conserve power and their life-giving consumables to survive with 3 people for 4 days. The power reduction resulted in dropping temperatures to a meat locker level of ~38 deg. F making it difficult to sleep and their food supply inedible. To add to their numerous problems, the scrubber system that removed the poisonous CO2 from the atmosphere was becoming saturated and the crew faced asphyxiation. The ground crew came up with a brilliant plan to combine the square-shaped filter in the Command Module with its circular counterpart in the Lunar Module. It seems no one had envisioned beforehand that the two systems needed to be compatible. The crew created a makeshift adapter using on-board supplies that allowed the scrubbers to work together.

The last problem was the need to make one last mid-course correction but, without the automatic guidance system operating. This required very accurate vehicle positioning and engine firing time to make the necessary manual adjustment in their flight path. Captain Lovell and his crew executed the maneuver brilliantly and they were on the correct path for entry. After separating from the Lunar Module and then the Service Module the crew had their first look at their damaged spacecraft. It was hard to believe the entire panel that housed the cryogenic tank had been blown away; the damage was considerable.

The whole world breathed a sigh of relief when the Command Module finally responded to calls from the ground, greater than 1 min later than expected, and the parachutes were in full view on TV screens everywhere. Later this mission was dubbed the “most successful failure” in the history of manned spaceflight since the crew was recovered intact after a horrendous in-flight accident. It is sad that this was not the fate of the Apollo 1, Challenger and Columbia astronaut heroes.

The Aerospace Legacy Foundation (ALF), working together with the American Institute of Aeronautics and Astronautics (AIAA), commemorated this successful rescue of the Apollo 13 astronauts in 5 different venues during the week of the mission that took place 40 years ago. The AIAA screened Ron Howard’s Apollo 13 movie at the Laemmle 4-plex theater in Santa Monica on April 11. The AIAA also held a dinner at the Marriott hotel on April 15 featuring as keynote speaker Jerry Elverum the Program Director and Chief Engineer responsible for the Lunar Module Descent Engine that played a major role in the Apollo 13 crew’s recovery. At the LA County Science and Engineering Fair held in Pasadena on April 16, the Urban Science Corp. presented a cleverly done pantomime dramatization of the Apollo 13 mission narrated by Dr. Richard Shope.
The On Saturday, April 17, The ALF sponsored a gathering of Apollo veterans at the old North American Aviation/Rockwell/Boeing site in Bldg. 290, the birthplace of all the Apollo Command and Service Modules. This event attracted many retirees who contributed to the Apollo Program. These included Dale Myers, North American/Rockwell past Vice-President and NASA’s Deputy Administrator in 1986, Bill Edson, Director of Rockwell’s Kennedy Space Center launch team, Tom Barrera, Manager Extended Duration Orbiter Program, Wendell Emde, Larry Korb, Shelby Jacobs, Joe Campbell, Ann Tack, Vern Johnson, Irene Chase, Gary Moir and numerous others.

Dale Myers welcomed the group and thanked all those in attendance who directly participated in the Apollo 13 crew rescue. Border’s Express book store representatives were on hand to offer Jerry Blackburn’s book “Downey’s Aerospace History” and Larry Latimer’s historical book “Downey” for sale. Dr. Richard Shope directed a reprise of his pantomime group’s Apollo 13 re-creation to the delight of all the attendees. A box lunch was offered and then the group was invited to spend some time visiting the Columbia Memorial Space Center just a short walk from building 290. The event was also sponsored by the BALT and the Financial Partner’s Credit Union (Vice-President Lori Reeves also participated in the commemoration).

The last of the series of events surrounding the Apollo 13 remembrance was a case study of the Apollo 13 Mission presented by the student chapter of the AIAA at Cal Poly University on April 23. The Cal State Long Beach AIAA student chapter also joined their counterparts at Cal Poly. Apollo veterans Tom Barrera, Gary Moir and I were invited to speak to this group at their event.

I apologize for the delay in getting this newsletter out to you. I have been holding it because there have been so many changes and things going on I have kept waiting to make sure we could include everything. So let’s start at the most significant change. The city decided to make a change at the CMSC and has removed the director and placed the management under Scott Pomrhen, the assistant deputy to the city manager. The new management at the CMSC have created quite a few changes beginning with the hours are now Tuesday thru Sat 10am-5pm. You will notice many new projects and a new theater in lab2. The Community room downstairs is being prepared as a resource library and computer training facility. ALF hopes to offer some internet classes this coming fall. The main display case has been given a major makeover to show the entire history of the Downey site. We are also working with Scott to bring the Apollo boilerplates to the CMSC for public display.

This past month ALF has collaborated with the center to host an AIAA event, “August is for Aerospace” which was a panel discussion on current space policy with Buzz Aldrin as one of the panelists. We were also at the dedication of the Challenger Center on August 30th.

A special oral history project interviewing 10 veterans of the Space Shuttle program who worked at the site was hosted at the CMSC by ALF. NASA/JSC flew in two historians to conduct the interviews as part of special project. We also supported the AIAA Space 2010 Conference in Anaheim with a panel presentation that I gave on the history of aerospace in Downey and a crew of volunteers who helped in the Challenger Center booth in the exhibit hall.

The ALF has been as busy also with new collections and tours at the site. I want to thank the wonderful volunteers who continue the support of our projects and activities. There is a strong interest in the work we do and I am constantly amazed at how much we accomplish with our limited resources. We can do so much more. ALF still needs your help and support. We need volunteers for work at the CMSC, we need office and special project help and we need financial help. We survive because of individuals who believe in what we are doing. Your membership dues and donations keep us going.

I want to conclude this message with some enticing previews of what the future holds. We’re exploring an “end of program” event to celebrate the builders of the shuttle orbiters at Downey. We are recruiting docents and technical panelists (retirees) for the CMSC. We are working with Downey on the new building at Discovery Sports Complex Park and the display of the SS Orbiter mockup.

Thank you again for your support – Jerry
Panelists:
John Rose of Boeing/AIAA Orange County Orange County
Dean Davis of Boeing/AIAA Los Angeles
Dr. Robert Zubrin of Mars Society & Pioneer Astronautics
Jeff Greason of XCOR Aerospace
Mark Hopkins of Rand Corporation/National Space Society
Dr. Buzz Aldrin, second human being to set foot on the Moon

“Buzz” Aldrin:
“As the second man to ever walk on the moon (he stepped out of the lunar module about 15 minutes after Neil Armstrong), Buzz Aldrin knows a little something about space exploration, about bold ambitions and great risks. Now, Aldrin is speaking out about NASA, and declaring loudly that the space agency has lost its boldness. The next step in humanity’s exploration of space must be a boot print on Mars, he says.” Discover Magazine

Says Aldrin: “As I approach my 80th birthday, I’m in no mood to keep my mouth shut any longer when I see NASA heading down the wrong path. And that’s exactly what I see today. The agency’s current Vision for Space Exploration will waste decades and hundreds of billions of dollars trying to reach the moon by 2020—a glorified rehash of what we did 40 years ago. Instead of a steppingstone to Mars, NASA’s current lunar plan is a detour” Popular Mechanics

DOWNEY – Monday’s gathering at the Columbia Space Learning Center of American Institute for Aeronautics and Astronautics (AIAA) panelists representing different professional engineering/science-oriented groups but which have somehow cast their lot in a common cause—U.S. human space exploration—was anything but dull.

The National Space Society’s Mark Hopkins, at one time ostensibly with the Rand Corporation, and Boeing’s Dean Davis, who acted as panel chairman, both spoke of the huge resource potential of space (“potentially very rich for humans”), exploration as a prelude to economic development, the technological innovation this will demand, and the likely stance Congress usually takes when weighing such weighty matters: how to maximize their chances for re-election (“A program involving such things should be politically saleable”).

In the panel also were Jeff Greason, member of the Augustine Commission and president and co-founder of XCOR Aerospace, and Robert Zubrin, president and founder of the Mars Society and Pioneer Astronautics, and an author as well. Completing the high-caliber panel of doctorate-degreed speakers was Buzz Aldrin, who was the featured panelist and practically needs no introduction. Also slated to talk but unable to make it were Rep. Jane Harman and other elected officials, as well as representatives from Scaled Composites and SpaceX.

The audience included professors, executives, engineers and scientists, sundry officials and interested students.

Colin McCaughey, programs co-chair of AIAA’s Los Angeles Section and hence of the panel discussion, provides this synopsis: All panelists agreed that NASA should not be used as a vehicle to preserve jobs (Space Coast—Florida as well as a few Alabama congressional representatives are the natural advocates of this). Greason made the point, concurred in by his colleagues, that there is not a business case for exploration/research, thus the onus will be on the government (NASA) to do this.

The panel’s most notable point of disagreement [among many] was on destination. Zubrin wants NASA to aggressively pursue a strategy to send humans to Mars; Greason thinks that, given the budget NASA is likely to get, it should focus on more realistic targets, perhaps landing on asteroids in early stages; Aldrin, stressing looking at the “big picture,” argued for a specialized destination aircraft redesign by NASA rather than what is purportedly on its drawing boards right now.

The discussion also noted that if the government were to fund a new heavy lift (HL) vehicle, private industry is on record as ready to provide them for a fixed price (“There is no need for NASA Huntsville to have a ‘bunch of engineers funded for x number of years’ to procure this hardware”).

Bottom line: for all the sometimes esoteric technical talk, the Center was complimented as a superb venue for such exchanges, and that other groups have expressed interest in holding their future conferences there.

The Center’s Kaili Rowland said Monday’s panel discussion was a proud moment for the Center. *ALF Co-Sponsored Event
The flight simulator was purchased several years ago for about $800,000 from the Challenger Center for Space Science Education, a nationwide, nonprofit group composed of friends and family of the Challenger crew who want to “continue the mission” of space flight.

Divided into two rooms, the two-hour simulator program depicts a trip to the moon, and is aimed at student groups. One group performs duties in the control room on Earth while the other group is in the simulated shuttle. They communicate by radio and computer and combine to solve various problems which are programmed. The groups then switch to experience both aspects of the flight.

“The new center is one of 50 in the United States. More than 400 students a year visit them,” said Dan Barstow, president of the Space Science Education group.

“My husband believed in ‘the mission,’” said June Scobee Rodgers, founding chairman of the group and widow of the Challenger Commander, Francis “Dick” Scobee.

“A group of us got together and decided to continue the mission, but through education to encourage future astronauts,” said Rodgers, who was the main speaker at the ceremony. “June lost a husband and shouldered the burden of the whole nation. We decided we must move on,” said Keith Cowing, a board member of the Challenger group.

“We could not take part in actual space flight but we could teach young students,” said Rodgers, noting that one of the lost crew members was school teacher Christa McAuliffe, who served as a payload specialist.

Other crew members were Michael Smith, pilot; Ellison Onizuka, mission specialist; Judith Resnik, mission specialist; Ronald McNair, mission specialist; and Gregory Jarvis, payload specialist.

Recalling that she and Commander Scobee married as teenagers, Rodgers said her first husband was a test pilot and flew supersonic planes over Edwards Air Force Base.

Always interested in space flight, he applied for an astronaut job after seeing an ad in the Los Angeles Times in 1981. “He got the job,” Rodgers noted. Relating an incident when the Challenger crew (after a previous successful flight) was honored by then-president Ronald Reagan, who forgot Scobee’s name, the astronaut said “names were not important, but the mission was.” Editor note: ALF relates to this. “After 50 years of space flight, we are at a crossroad,” Barstow said. “The next generation is our hope for the future. Downey is still at the center of the space movement,” Barstow said. Calling for continued space exploration and flights, Cowing said “we did it before and we can do it again. We can do it better.” Downey Mayor Anne Bayer welcomed the several hundred people in attendance. **Article by Arnold Adler, Long Beach Press Telegram**
MEMBERSHIP RENEWAL 2011

Once again, it is time to renew membership in the ALF for the year January 2011 to December 2011. Included in this Newsletter is your 2011 Membership Envelope. Those members who are on the yearly membership cycle, your dues are due in January 2011. Your dues primarily cover the operating expenses of the ALF throughout the year and provide the Board with the tools needed to keep our cause before the public.

This year was a very busy and memorable for our organization. With your help, the ALF presented programs in April to commemorate the Apollo 13 successful rescue, supported the dedication of the Downey Facility as an Aerospace Historical Site by the AIAA, conducted interviews for NASA’s Space Shuttle Program Oral History Project, participated in the AIAA-sponsored panel discussion on the future of human space flight with Astronaut Buzz Aldrin as one of the panel members, joined City of Downey officials in the grand opening of the Challenger Learning Center at the Columbia Memorial Space Center, and provided support in the Education Alley booth at the AIAA Space 2010 Symposium at the Anaheim Convention Center. The year 2011 also promises to be a very memorable one. ALF will be participating in the LA County Science Fair in April, the International Science Fair in May, the Summer Science Fair in July, a celebration of the end of the Space Shuttle Program in the summer of 2011 and other events. Of course there will be semi-monthly meetings at the Columbia Memorial Space Center with the next one scheduled for Saturday, November 20 at 1:30 pm. Previous meetings have been held on Sunday but beginning in November they will all be on Saturday. This is primarily due to the change in the Space Center’s open times to Tuesday through Saturday, 10 am to 5 pm. The general membership annual renewal cost is still $10 but other levels of membership are also available.

They are:

- Yearly Sponsoring Partner --------------$50
- Gold Lifetime Partner ------------------$200
- Founders Club Lifetime Partner------ $1000

Please send in your dues as early as you can, January 2011 at the latest, so we can cover our annual operating cost and stay out of the red. We encourage you to attend our meetings and please send in any of your articles, or suggestions for articles, you would like to see printed in our newsletter.

Stan Barauskas, Director of Membership

Looking back...September 17, 1953

As North American Aviation celebrates its 25th anniversary, Miss Judy McKellar was looking forward to her 98th Birthday in November, 1953. The gentleman is Bert Prestwich, foreman of the NAA T-28 Trainer Final Assembly and Flight Test Operations. As a special honor to Miss McKellar, Mr. Prestwich attached a lapel pin of North American’s “blazing fast” F-86 Sabre jet. Early Downey pioneer, “Miss Judie”, was born on November 4, 1855 in Kemper Mississippi. The original McKellar home was built in 1872 on Firestone Blvd. near the current Downey High. She lived there until she passed at 105 in 1961. She attended the original Gallatin School in the 1875-1876 school year receiving high marks except Arithmetic, checked “wanting”. Years later, with her sister Josie, she taught at Gallatin School. Her family is a pioneering Downey family first arriving here at Gallatin Settlement via stagecoach in the 1870’s. Founded women’s club in 1898 with goal of establishing a library for the community. By 1901 known as the Saturday Afternoon Club. Attended Southern Pacific College in Downey with her sister for training as teachers.
The Downey Aviator

Calendar of Events 2010-2011

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<tr>
<th>Event</th>
<th>Date &amp; Time</th>
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<tr>
<td>NASA JPL Teacher Workshops @ Columbia Space Center</td>
<td>February 5, 2011 and April 9, 2011 10am-12pm</td>
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<tr>
<td>For more info call (562) 231-1200</td>
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<tr>
<td>Saturday teacher Open Houses @ Columbia Space Center</td>
<td>February 5, 2011 and April 9, 2011 12-4pm</td>
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<tr>
<td>ALF General Membership Meeting</td>
<td>Saturday, November 20, 2010 @ Columbia Space Center 1:30 PM</td>
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<td></td>
<td>Saturday, January 15, 2011 @ Columbia Space Center 1:30 PM</td>
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<td>For more info: Call (562) 922-8068</td>
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Attention: All ALF meetings have changed meeting days to Saturday.
Meeting place: Columbia Memorial Space Center, level 2 meeting room. Elevators, handicap parking and restrooms are available on both levels. Refreshments are served. If you would like to bring refreshments or help out just call Kathy at (562) 922-8068.

Contact Us

Aerospace Legacy Foundation
12214 Lakewood Blvd. Ste. 12
Downey CA 90242
562-922-8068
Contact Us:
alfdowney@gmail.com
blackburnkathy@yahoo.com
www.aerospacelegacyfoundation.net
www.aerospacelegacyfoundation.com
Editor: Larry Latimer alfdowney@aol.com

Challenger Center Dedication– Within the Columbia Space Center is an incredible center for all ages...

My husband believed in “the mission,” said June Scobee Rodgers, founding chairman of the group and widow of the Challenger Commander, Francis “Dick” Scobee.
“A group of us got together and decided to continue the mission, but through education to encourage future astronauts,” said Rodgers who was the main speaker at the ceremony.

Ernest, Anne Marie, Kathy, Christie and Jared deserve thanks for their efforts in making the day a success! Visitors enjoyed all of the exhibits and activities, especially the children.