

Southeastern Space Supporter

Newsletter of HAL5 – the Huntsville Alabama L5 Society chapter of the National Space Society

Volume 6, Number 4 — July–August 1997

FIRST WORD

HAL5 Record Membership! The Sweet Taste of Success!

(by Greg Allison, HAL5 President)

HAL5 membership has now soared to a record high of 69 members. It is still roughly midyear and we have already beat last years record membership level of 65 members. This year we accomplished this feat without running our display at TABES (due to a conflict with our historic rockoon SL-1 mission). Also, our STEDTRAIN display was mostly unmanned due to the fact that we conducted a 680 pound thrust motor firing that weekend! Our hard work and persistence in pursuing our goals is paying off tremendously!

Visionaries, Pioneers, and Doers

You members of HAL5 are an elite set of visionaries, pioneers, and doers. You represent both the foundation and future of space exploration and development.

HAL5 Program Night

Wednesday, September 24, 1997

7 to 9 p.m. (with social afterwards)

Huntsville Public Library Auditorium

“X-33 and the Aerospike Engine: Lockheed’s Big Space Gamble”

Guest speakers will be Mr. Steve Cook and Mr. Jan Monk of the Reusable Launch Vehicle Program Office at the NASA Marshall Space Flight Center.

All HAL5 and NSS members are encouraged to attend, and to bring interested friends and co-workers. Open to the public. Free admission.

HAL5 was co-founded in 1983 by Konrad K. Dannenberg and included the membership of Dr. Ernst Stuhlinger, both key members of Dr. Wernher Von Braun’s pioneering rocket team that initiated our age of space exploration. Members George McKay and Ron Creel were instrumental in developing the Saturn V moon rocket.

Our membership includes Charlie Walker, President of the National Space Society and the world’s first commercial astronaut to fly into space. Quite a number of you are supporting laser propulsion research. HAL5 membership includes cutting edge pioneers developing low cost hybrid rocket motor and rockoon technologies. HAL5 member, and last President of the L5 Society, Gordon Woodcock is now supporting Space America, a corporation developing a low cost 125,000 pound thrust LOX kerosene motor.

We explore the applications of micro-gravity and ultimately antigravity itself. One of our latest members, Dr. Ning Li of UAH is pushing the far fringes of the future by warping space-time itself with her gravity modification experiments. If it can be done, you are the guys who can and will do it!

The good news is that HAL5 has only begun to show the world what it can do! One of the greatest honors I’ve known is to share membership with all of you.

Together we make a tremendous difference!

(see First Word on page 7)

NSS Campaign for the Future Membership Drive Ends Soon

(by Ronnie Lajoie, HAL5 Campaign Chair)

If you are not yet a member of the National Space Society, NOW is the time to join. The NSS “Campaign for the Future” membership drive is about to end. Until Labor Day, September 1, NSS has lowered the cost of a one-year NSS membership from \$35 to only \$25. The \$5 rebate/discount that HAL5 also offers is still in effect, bring the cost of NSS membership down to \$20 — the lowest in the entire nation!

15 NSS Members Recruited to Date

13 HAL5 members have already taken advantage of this offer. They are Wade Dorland, Stephen Beach, Robert Powell, Tim Pickens, Bill Brown, John Dodd, Gene Young, John Corda, Clay Sawyer, Herman Pickens, Chris Pickens, Todd Cayton, and Steve Mustaikis. Rodney Bradford, last month’s speaker, and Janis Tirey have also joined the NSS.

(see Campaign on page 7)

HALO SL-2 hybrid rocket motor fires on August 2 with 680 pounds of thrust. See page 3 for details.

Huntsville Alabama L5 Society

- President — Greg Allison
Day: 895-2415, Eve: 859-5538
- Vice-President — Larry Scarborough
Day: 881-1944, Eve: 881-4363
- Treasurer — Ronnie Lajoie
Day: 461-3064, Eve: 721-1083
- Secretary — Peter Ewing
Day: 876-5151, Eve: 876-5151
- Membership — Philomena Grodzka
Day: 837-4287, Eve: 536-8638
- Communications — Bill Brown
Day: 876-5151, Eve: 536-9334
- Special Projects — Alfred Wright
Day: 876-8037, Eve: 420-6273
- Programming — Wade Dorland
Day: 534-2566, Eve: 534-2566

Southeastern Space Supporter

Volume 6, Number 4
July / August 1997

The *Southeastern Space Supporter* is a bimonthly publication of the Huntsville Alabama L5 Society (HAL5), a not-for-profit 501(c)(3) organization devoted to the goal of seeing everyday people living in thriving communities beyond the Earth.

Any opinions expressed in this newsletter are those of the authors or of the Editor, and, unless expressly so stated, are not necessarily those of HAL5 or the NSS.

Visit the HAL5 Web Page on Internet via:

<http://advicom.net/~hal5/>

HAL5 encourages its members to speak out on space-related issues, and welcome submissions of both fact and opinion articles of interest to HAL5 members.

Submit letters or articles to: Ronnie Lajoie
162 Kirby Lane, Madison, AL 35758
Day phone/message: 205-461-3064
Night/Weekend phone: 205-721-1083
Electronic mail address: hal5@advicom.net

Deadline for submittal is the last day of the following months: February, April, June, August, October, and December.

Preferred format for text is ASCII on a diskette or sent by E-Mail. Preferred format for text with graphics is Word on a diskette. Also acceptable are letters and articles sent by mail or faxed; however, the more retyping required, the less likely the acceptance. HAL5 is not responsible for receipt of mailed submissions; none will be returned unless sent with a SASE. Hand-delivered diskettes will be hand-returned. No compensation is paid for submissions.

1997 HAL5 Election Results

(by Ronnie Lajoie, SSS Editor)

At the June HAL5 Program Night on Wednesday, June 25, the membership of HAL5 (10 were present) voted to elect most of the slate of officers as selected by the HAL5 Elections Committee. The Committee consisted of members Philomena Grodzka and Bill Axenroth. Ron Lajoie nominated the slate; Philomena seconded. Greg Allison requested nominations from the floor. Peter Ewing nominated Bill Brown for the position of Communications Chair; which was seconded. No other floor nominations were made.

After a motion to close nominations was passed, the elections were held by silent ballot. Bill Adams counted the votes. The only contested position went to Bill Brown, who received 6 of the 10 votes. The following HAL5 officers and committee chairs were elected and will serve from July 1, 1997 to June 30, 1998:

- President.....Greg Allison
- Vice-President.....Larry Scarborough
- Treasurer Ronnie Lajoie
- Secretary Peter Ewing
- Membership Philomena Grodzka
- Communications.....Bill Brown
- Special Projects Alfred Wright
- Programming..... Wade Dorland

All HAL5 members should feel free to contact any of your elected officials (see sidebar at left for their phone numbers), as they are here to service you.

Solar Thermal Talk a Success

Following the HAL5 elections, a joint program was held, co-sponsored by HAL5, HATS, and the World Future Society. The guest speaker was Mr. Rodney Bradford, President of United Applied Technologies. He spoke on "Solar Thermal Propulsion Utilizing Polymid Fresnel Lenses". He brought some Fresnel lenses his company made, which were a big hit. A total of 21 adults and children attended the talk. ☆

HAL5 Enhances its Motto

For many years, the motto of the Huntsville Alabama L5 Society has been "Promoting the development of a space faring civilization". The motto appears at the top of our stationary and at the bottom of our forms. A highly visible phrase like this therefore needs to accurately reflect its organization.

Recent developments by HAL5, namely Project HALO, go way beyond mere "promoting" space development. We are DOING something! Our history-making rockoon mission on May 11 proves that. "Promoting" gives the reader a sense that we are waiting for others to do something, while we stand on sidelines with banners and signs.

In July, Ron Lajoie made a motion to revise our motto to change the word "Promoting" to "Accelerating", which would accurately reflect that we are doing something to speed space development. The motion unanimously passed. The new motto will appear on our new HAL5 forms and stationary. ☆

HAL5 Votes to Disband at L5

Prior to the merger in 1986, what is now the National Space Society was two very different grassroots organizations: the L5 Society and the National Space Institute. One of the fun things about the L5 Society was that its goal was to disband the organization in a meeting of the membership in a space city at the L5 Earth-moon Langrange point.

HAL5 has been so serious as of late, with the pressures of getting ready for the next Project HALO rockoon mission, that President Greg Allison felt it was time to interject some fun back in the organization. In July, he asked the new Executive Committee meeting to renew the spirit of the old L5 Society. Ron Lajoie made a motion to revise our bylaws to state that we will disband HAL5 during a meeting of the membership in a space city/station at the L5 Earth-moon Langrange point. The motion passed unanimously. ☆

HALO NEWS

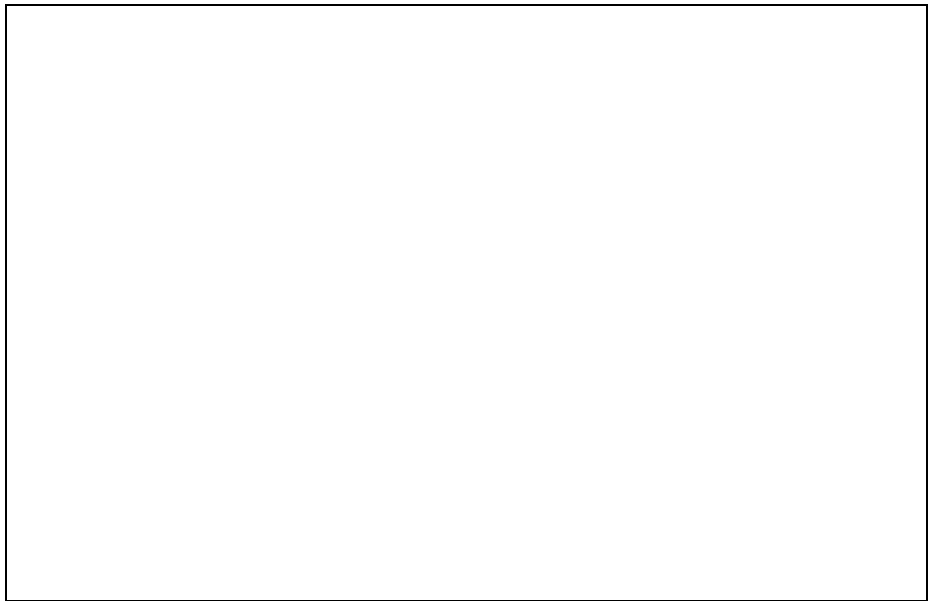
HALO SL-2 Motor Fires!

(by Ron Lajoie, HALO team member)

On Saturday, August 2, for the first time since November of last year, 14 members of the Project HALO team, plus 13 other HAL5 members, family members, friends, and guests, met at the HALO Rocket Motor Test Facility at the home of Herman and Chris Pickens. Their goal was to successfully test fire the new, larger, and more powerful asphalt and nitrous-oxide hybrid rocket motor for the upcoming HALO Sky Launch 2 rocket mission.

The test firing was initially scheduled for the following Sunday, but a conflict arose and Herman requested Saturday. The Data Acquisition Team of Gene Young, Clay Sawyer, and Steve Mustaikis had planned to spend all-day Saturday installing and checking out the new electronics without keeping a lot of rocket guys waiting. Well, they got half their wish! We broke for lunch while waiting to fire the first motor.

Following lunch, a now famous hot dog and hamburger barbecue, the team



HALO SL-2 hybrid rocket motor fires, generating 680 pounds of thrust!

prepared to load the nitrous oxide. This time we brought two new bottles. Readers of this newsletter can guess what happened next. Yes, of course, the HALO curse struck again. Both bottles were empty! Just enough liquid to fool us when we checked them previously.

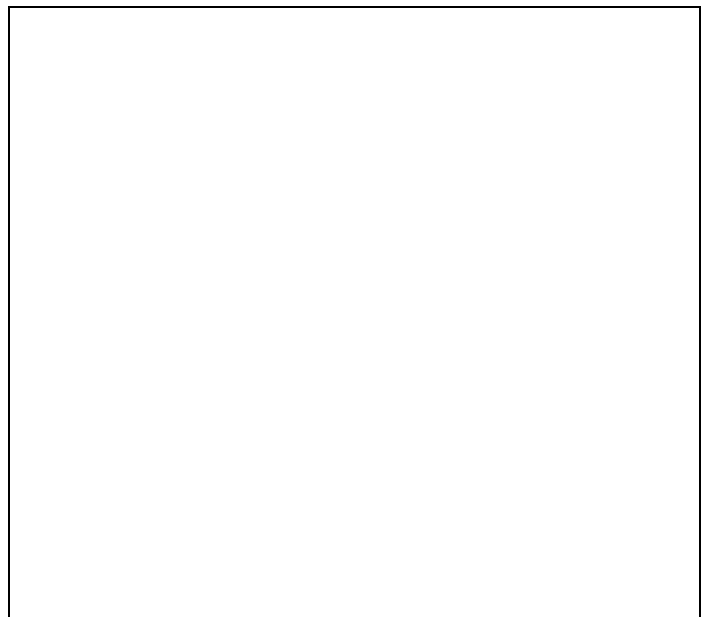
It was Saturday, so of course the vendor would not be open. After a failed attempt to contact the owner, we found a car shop who had a bottle we could borrow. A mad dash by car back to

Huntsville resulted in a nearly full bottle of nitrous. Thanks, Speed Shop!

It was getting close to sunset before the first firing attempt was made. Upon ignition, the motor went "BANG!", and then quit. A second attempt resulted in the same strange short "BANG!". It turns out the ignition squib wires were crossing as they got shot out of the motor and shorted out the nitrous flow valve. Once fixed, the motor fired for the planned 3.5 seconds, generating 680 pounds of thrust. It was awesome! ☆



Bill inspects the SL-2 hybrid motor prior to its first firing.



Steve Mustaikis and Tim Pickens discuss the results of the first SL-2 motor firing, while Greg examines motor.

**HALO Team Members/Guests
Enjoy Appreciation Night**

(by Ron Lajoie, HALO team member)

On Thursday night, August 7, HALO team members and their spouses came together at the Research Park Holiday Inn to celebrate the history-making first mission of Project HALO.

50 invitations were sent out to HAL5 members who could feasibly attend. 17 members brought 8 guests, for a total of 25 attendees, including guest speaker Konrad Dannenberg. Gene Hornbuckle had planned to attend — but forgot (shame on you!).

Out of state HALO team members were not invited solely due to a lack of invitations (I thought I would have plenty). These individuals certainly were appreciated, and their Appreciation Certificates were mailed to them.

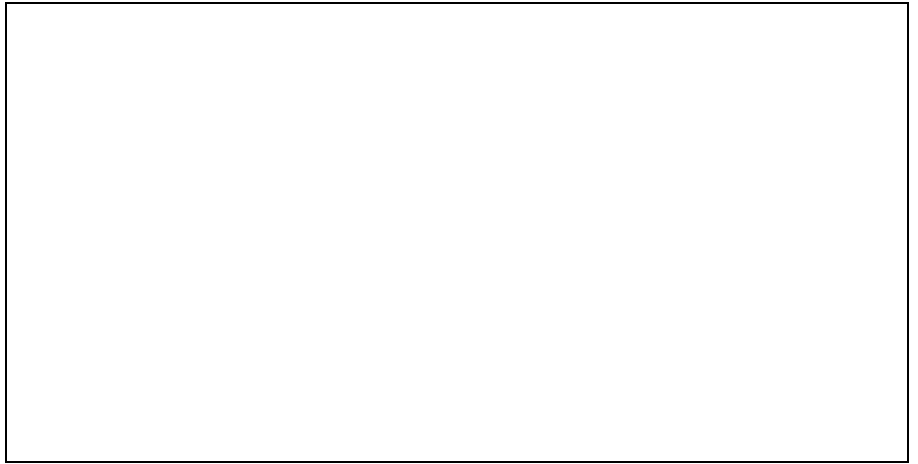
The event began with a Social Half Hour, followed by a dinner with either a chicken or roast beef entree. Many people commented on the quality of the meal. Thank you, Holiday Inn!

Following the dinner, HAL5 co-founder Konrad Dannenberg gave a presentation on the early developments of amateur rocketry in pre-war Germany. With the help of a video made from 8mm movie film, Konrad narrated the history of early rocketry; the successes and failures encountered by the early pioneers of rocketry. Watching rockets fall over and go “BOOM!” made a lot of us HALO members feel pretty good about our first mostly successful flight.

HALO Awards Presented

Following Konrad’s presentation, Greg Allison led an awards ceremony. Each HALO team member received an Appreciation Certificate in a blue folder. The certificates were grouped by level of effort, with the highest honor stating:

“For extraordinary contributions leading to the successful historic flight of the Project HALO Space Launch 1 rockoon mission on May 11, 1997. Your



HALO team members gather together for a group photograph.

outstanding work and effort is making a tremendous difference for the space movement for today and tomorrow.”

HALO members receiving the top honor were also presented with an award, crafted with care by co-member Larry Scarborough. Peter Ewing, Ron Creel, and Larry Scarborough received “HALO Above and Beyond” wooden plaques. Gene Young and Ronnie Lajoie received “Brilliant Asteroid” awards. Alfred Wright and Clay Sawyer received “Golden Astronaut” awards. Steve Mustaikis, Bill Brown, and Tim Pickens received “Radiant Rocket” awards. Greg Allison received a special gift framed SL-1 photograph from the team.

Tim Gets HALO Balloonatic Award

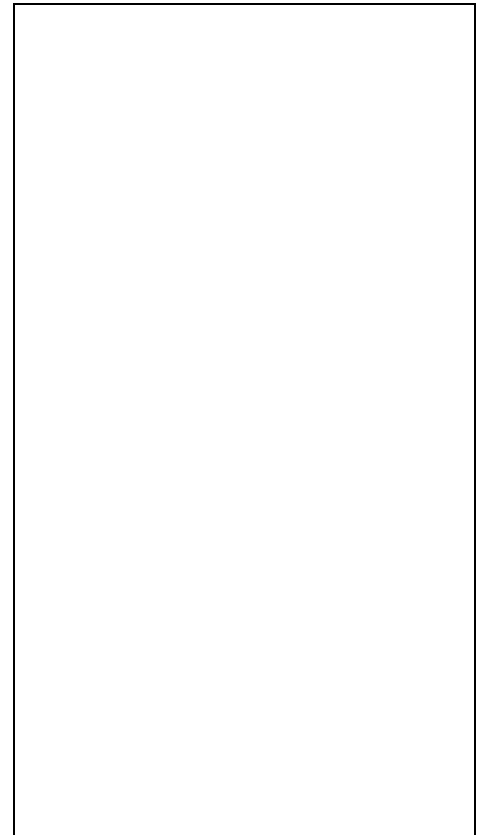
Following the main award ceremony, Greg Allison made a special presentation of a “Balloonatic Award” to Tim Pickens, the rocket man who launched the SL-1 balloon and missed the launch of his own rocket (sorry to keep mentioning this Tim). Tim took it all in stride and even sang the accompanying song written by Larry Scarborough to the tune of “If I Only Had a Brain” titled “The B’loontic”:

I’d like to be in motion
Over land or even ocean.
I’d signal as I passed.
I’ve already got my lawn chair
And balloons and I could go there
If I only had some gas.

I’d take along a rocket

And some matches in my pocket.
It’s really be a blast
Just to light up all the fuses,
Ride the rocket as it cruises,
If I only had some gas.

Balloons would rip right open
And prob’ly leave me hopin’
I didn’t bust my head
As I started to re-enter.
I could be an X-prize winner
If I only had some gas. ☆



Rocketman Tim Pickens accepts the HALO Balloonatic Award.

HAL5 CALENDAR OF MEETINGS AND EVENTS

August 1997

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
10	11 HALO SL-2 Work Party 6 pm at Tim's	12 Project HALO Tech. Meeting Noon at Ponds	13 HALO SL-2 Work Party 6 pm at Tim's	14 HAL5 Executive Comm. Meeting Noon at Ponds	15	16
17 Phobos discovered, 1877	18 HALO SL-2 Work Party 6 pm at Tim's	19 Project HALO Tech. Meeting Noon at Ponds	20 HALO SL-2 Work Party 6 pm at Tim's	21 HAL5 Executive Comm. Meeting Noon at Ponds	22	23 Project HALO Motor Firing 12p at H.Pickens
24 Voyager flyby of Neptune, 1989	25 HALO SL-2 Work Party 6 pm at Tim's	26 Project HALO Tech. Meeting Noon at Ponds	27 HAL5 Program Night 7pm at Library	28 HAL5 Executive Comm. Meeting Noon at Ponds	29	30
31	HAL5 August Program Night, Wednesday, August 27, 1997 "Fusion Propulsion: How to Get to Mars in Just Weeks" with guest speaker Mr. William (Bill) Emrich, Jr. of NASA Marshall Space Flight Center I APOLOGIZE TO THOSE OF YOU WHO DID NOT GET A NOTICE ABOUT THIS PROGRAM -- editor					

September 1997

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 NSS Campaign Ends	2 Project HALO Tech. Meeting Noon at Ponds	3 HALO SL-2 Work Party 6 pm at Tim's	4 HAL5 Executive Comm. Meeting Noon at Ponds	5	6
7	8 HALO SL-2 Work Party 6 pm at Tim's	9 Project HALO Tech. Meeting Noon at Ponds	10 HALO SL-2 Work Party 6 pm at Tim's	11 HAL5 Executive Comm. Meeting Noon at Ponds	12	13 Luna 2, first craft to hit the Moon, 1959
14	15 HALO SL-2 Work Party 6 pm at Tim's	16 Project HALO Tech. Meeting Noon at Ponds	17 HALO SL-2 Work Party 6 pm at Tim's	18 HAL5 Executive Comm. Meeting Noon at Ponds	19	20
21	22 HALO SL-2 Work Party 6 pm at Tim's	23 Project HALO Tech. Meeting Noon at Ponds	24 HAL5 Program Night 7pm at Library	25 HAL5 Executive Comm. Meeting Noon at Ponds	26 Hyperion discovered, 1848	27
28	29 Shelby Breakfast 6:30a at Marriot	30 Project HALO Tech. Meeting Noon at Ponds	HAL5 September Program Night, Wednesday, September 24, 1997 "X-33 and the Aerospike Engine" with guest speakers Mr. Steve Cook and Mr. Jan Monk of NASA Marshall 7:00 to 8:30 PM at the Huntsville Public Library, Monroe Street, Huntsville			

October 1997

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Shelby Breakfast, Monday, September 29, 1997 sponsored by UAH, IEEE, AIAA, and HATS \$13 per person or \$120 for Corporate table of 10 6:30 AM at the Hotel Marriott near Rocket Center			1 HALO SL-2 Work Party 6 pm at Tim's	2 HAL5 Executive Comm. Meeting Noon at Ponds	3	4 Sputnik 1, 1957, 40th anniversary space age dawn
5	6 HALO SL-2 Work Party 6 pm at Tim's	7 Project HALO Tech. Meeting Noon at Ponds	8 HALO SL-2 Work Party 6 pm at Tim's	9 HAL5 Executive Comm. Meeting Noon at Ponds	10 Triton discovered, 1846	11

Scientists Study Effects of Mortal Terror in Space

(Internet "News Release", July 28, 1997)

U.S. and Russian scientists are increasingly excited about the Mire space station project, which promises to reveal more than has ever been known about the scientific relationship between weightlessness and mortal terror.

"By stranding our scientists on a dilapidated space station with faulty wiring, loose hardware, and malfunctioning air systems," NASA head Daniel Golden said, "we have created extremely favorable conditions for learning about spaceborne panic." The two Russians and one American on board the station are reportedly terrified beyond lucidity.

Among the groundbreaking experiments conducted on board Mire: a June 25 collision with a cargo craft that depressurized the Spectre Module; last week's emergency power shortage, caused by a disconnected cable; and the periodic release of "dry ice" steam that simulates a shipboard fire. All have been deemed a huge success by agency heads.

"They are in a constant state of what

aerospace scientists term 'mind-shattering terror,' frightened for their very lives," Russian mission director Vladimir Solovoy said. "And we have not even used the hull-mounted Alien puppet that taps on the window yet."

"We have also taken huge leaps in our understanding of the patterns created when one wets his pants in the weightlessness of space," Solovoy said. "The urine spreads out in an expanding sphere, something we did not expect."

Taking a break from his busy schedule, astronaut Michael Folly told news reporters: "Where is Mommy?" "Please tell me the access code to the Soyuz capsule," Russian cosmonaut Aleksandr Lazuktin said. "I would like to return to the chaotic government and widespread hunger of my homeland."

Scientists expect to gain even more useful data during an experiment at 3 a.m. tomorrow. As the astronauts sleep, whirling red siren lights will flood the cabin while an ear-splitting klaxon alarm jolts them awake. Detailed scientific data will then be collected on such variables as open weeping, defecation and hair loss. ☆

Have Breakfast with Shelby

(by Philomena Grodzka)

On the morning of September 29, UAH, IEEE, AIAA, and HATS will host a Special Breakfast Event at the Marriott Hotel. Breakfast will start at 6:30 AM, and will be followed by a program at 7:00 AM. Speakers will be the Honorable Senator Richard Shelby, and William Craig, Director U.S. Army AMCOM.

The Marriot Hotel is located next to the U.S. Space & Rocket Center. For more information, please call Brian at HATS at 837-4287 or Tom Hancock (section president of AIAA) at 461-5074.

The event will cost \$13 per person, or \$120 for a corporate table seating 10.

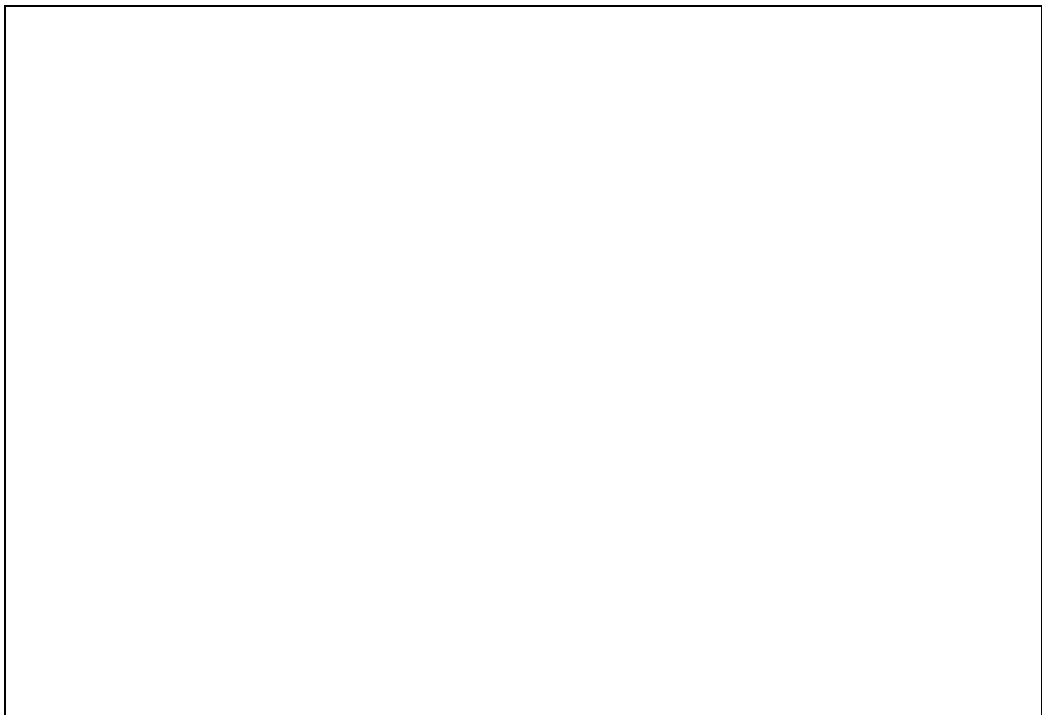
HATS is welcome other societies (such as HAL5) to be Associate Sponsors of the event. HAL5 would get to put up a banner, present Senator Shelby with a gift (if desired), be there in force, and encourage our members to come.

HAL5 is interested in becoming an Associate Sponsor, if 10 members can be found who can attend. If you are interested in attending this event, send an E-mail message to hal5@advicom.net, or call Programming Chair Wade Dorland at 922-4897 (day) or 379-3661 (eve). ☆

Galileo Finds Europa Has Atmosphere

(NASA Release, July 23, 1997)

NASA's Galileo spacecraft has found an ionosphere on Jupiter's moon Europa, an indication that the icy moon also has an atmosphere, Galileo scientists reported today. "Europa is not just some dead hunk of material," said lead investigator Dr. Arvydas Kliore of NASA JPL, Kliore reports his findings in the July 18 issue of Science magazine. ☆



HAL5 is performing its own terror experiment called Project HELL-O. Stockaded subjects Tim Pickens and Clay Sawyer cannot eat, sleep, or shave until rocket flies.

(First Word, continued from page 1)

HALO Appreciation Night

On Thursday, on the 7th of August we held an appreciation banquet for the volunteers who have labored so long over the past three years in support of the HALO Program. The volunteers that have worked so hard on this project have made HAL5 the record holder for the highest flight (36-38 nautical miles) of an amateur rocket, the highest flight of any hybrid rocket motor, and the first confirmed high altitude launch of an amateur rockoon. We are the first group to fire a hybrid rocket as an upper stage motor. Our rockoon mission was the first to include liquids in the propellant. Thanks to the hard late night efforts and persistence spread over three years these volunteers have given us many things to be proud of. Once again, to all of them, a very hearty thank-you!

The one award we gave which really stands out was the Balloonatic Award. Though not perhaps the highest honor we presented, it was the most fun. Tim Pickens was the recipient of this great honor. The award, made by Larry Scarborough, consisted of a small lawn chair mounted on a plaque with balloons attached.

The award was intended to invoke the spirit of the only living recipient of the Darwin Prize to survive his exploits, who launched himself to 30,000 feet in a lawn chair with a number of sounding balloons tied to a lawn chair. Tim Pickens, rocket team lead, (who is known as saying "I hate stinking balloons") launched the HALO SL-1 balloon and missed the launch of his rocket into the edge of space. Tim took the award with great cheer.

I have to hand it to Tim. His sense of humor makes him a real champion. He happily sang a silly ditty written by Larry Scarborough to the tune of the Wizard of Oz's scarecrow song "If I Only Had a Brain!". Well, that was a lot of fun but we in HAL5 also reserve for Tim our highest honors. As rocket team lead Tim Pickens' contributions to the HALO Program are almost incalculable.

Tim Pickens has given more of himself to the HALO Program than one would think humanly possible. Thank-you very much Tim for all that you have done.

I want to extend this gratitude to the committee that pulled this event together. Dr. Larry Scarborough built all the awards himself. Wade Dorland and Peter Ewing helped develop award categories. Ronnie Lajoie made the arrangements with the Holiday Inn. Thank you guys for a job well done!

Latest SL-2 Rocket Motor Firing

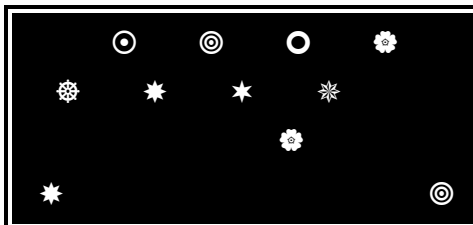
On the 23rd of August 1997 HAL5's HALO Program conducted three rocket motor firings. Our SL-2 motor was fired twice. Gene Hornbuckle also fired one of our old 200 pound thrust motors which will be flow in Tim Pickens' old steam rocket. The HALO SL-2 motor was ran for a ten second burn and also a twelve second burn. We shook the mountains north of Maysville with over 700 pounds of thrust! Two different new injector designs were tried. We need to do a little more work on injector design to optimize fuel regression. If you missed these firings — too bad! They were a real riot!

Antigravity Lab Tour

Dr. Ning Li is offering a tour of her "gravity modification" laboratory on Wednesday, August 27, at 6:00 PM, just before our "Fusion Propulsion" program at the Huntsville-Madison County Public Library. HAL5 members are investigating ways to assist her with her experiments.

HALO To The Stars!

Go outside tonight, look up at the moon and the stars. That is your destiny! Ad Astra per HALO! ☆



(Campaign, continued from page 1)

NSS Membership Helps HAL5 Too

For those who have been considering making a donation to HAL5, your **first** membership (not a renewal) to NSS also contributes to HAL5. All but \$15 of your membership dues goes to NSS, **the rest stays with HAL5**. Essentially, you are joining the NSS for only \$15 — which is just enough to cover the cost of sending you *Ad Astra*, the colorful and informative magazine of the NSS.

But you get more than a magazine with your NSS membership. You also get discounts to NSS-sponsored events and NSS-produced merchandise, as shown in the brochure you received with the January-February HAL5 newsletter.

Most importantly, the benefits of your NSS membership are those you get in the future — when space travel is made affordable to you and your children. NSS is the largest grass-roots space advocacy organization, with over 25,000 members — however, this pales in comparison to some environment groups who boasts memberships over 100,000.

HAL5 Could "Borrow" Buzz Aldrin

The NSS chapter that recruits the most members wins a free visit from Buzz Aldrin, Apollo 11 astronaut and Chairman of the NSS Board of Directors — who has agreed to speak on behalf of the chapter at a public forum or a fundraising event. HAL5 really could use him to help us raise money for Project HALO and its educational side HALO Achievement.

With 15 recruited to date, we are definitely in the running, but there are other NSS chapters with more than 10. We need a lot more NSS memberships if we want to win the contest.

Second and third place chapters win will receive a Moonlink Internet Mission kit, an Internet tool with which up to 24 participants at a time will be able to experience the excitement of making scientific discoveries about the Moon live with the Science Investigation team for

the Lunar Prospector probe. This could be really fun — and even us hard working HAL5 members could use some fun now and then!

Also, the person who recruits the most NSS members will receive a free two-day trip to either Huntsville, Alabama for a special behind-the-scenes tour of Boeing's space station facilities, or to Washington, DC for a special visit to NSS and NASA headquarters. Plus anyone recruiting 5 or more NSS members will receive a free Fisher Space Pen (a \$50 value).

NSS Needs YOUR Membership!

Simply put, NSS needs more members. **WE NEED YOUR MEMBERSHIP** — and we need it NOW! There is LOT happening in the space movement beyond the little you see in the HAL5 newsletter. Yes, HAL5 is doing **GOOD** deeds, and because of our association with the NSS, the media and the rest of the world is taking notice.

If you would like to join NSS, please fill out and mail the **enclosed form** ASAP. If you have an questions, call me at 461-3064 (day) or 721-1083 (night), or send E-mail to: "hal5@advicom.net". ☆

HAL5 Membership Breaks New Record in August

(by Ronnie Lajoie, HAL5 Treasurer)

1997 is turning out to be an even better year for HAL5 in terms of membership. Just last week, we beat last year's record membership count of 65. As of August 24, we now stand at 69, plus 10 newsletter subscriptions. The following is a list of additions to the current paid

membership of HAL5, which includes 41 renewals (a new record) and 28 new members, for a total of 69. Also shown is a new subscriber to our newsletter. Welcome to all our new and renewed members and subscribers!

- William Axenroth (R)
- Steve Beach (N)
- Jan Bijvoet (R)
- Regan Carlile (N)
- Todd Cayton (N, C)
- John Corda (N)
- Ronald Creel (R)
- John Ed Dodd (N)
- Jory Earl (N)
- David Hewitt (R)
- John Jones (N)
- Hans Kennel (N)
- Peder Kilness (R)
- Dr. Ning Li (N)
- Glen May (N, D)
- George McKay (N)
- Allen Meece (N)
- Steve Mustaikis (R, C)
- Eugene Peresich, III (R)
- Robert Powell (N)
- Ted Rochford (N)
- Clayton Sawyer, Jr. (R, C)
- Gregory Walker (N)
- Michael Willis (N)
- Hermano Cabral (S)

- (N) - New Member
- (R) - Renewed Member
- (C) - New NSS Member via Campaign
- (S) - Newsletter Subscriber
- (D) - Included a Donation

HAL5 welcomes back its previous members including long-time members Bill Axenroth and Jan Bijvoet, and recent members Peder Kilness, Gene Peresich, Ron Creel, David Hewitt, Steve Mustaikis, and Clay Sawyer. Ron, Steve, David, and Clay have worked very hard to make Project HALO a success, and we

were very glad to have most of them with us when we made rocket history in Hampstead on May 11.

HAL5 also welcomes its new local members, including Regan Carlile, Todd Cayton, John Corda, John Dodd, Hans Kennel, Ning Li, George McKay, Robert Powell, and Ted Rochford. John Corda has already become active in Project HALO. John Dodd is editor of the Huntsville Virtual Times. Dr. Ning Li is researching gravity modification techniques at UAH (see below). George has been assisting HALO for many months and we finally roped him in!

HAL5 also welcomes its new out of state members, including Steve Beach (PA), Jory Earl (WA), John Jones (TN), Glen May (MS), Allen Meece (FL), Gregory Walker (TN), and Michael Willis (NC). 20 members of HAL5 (29 percent) reside outside of Alabama. Glen has already attended two HALO motor firings and has shared his rocketry experiences with the HALO team. ☆

HAL5 Member Fights Gravity

(excerpt from July 1997 issue of *Inside NSS*)

Dr. Ning Li of UAH in 1989 first realized the vital importance of the massive and charged lattice ion rotations for superconductivity, and predicted in her three published papers (latest in 1991) that lattice ion rotations in a superconductor provide a unique means of transfer of the applied electromagnetic energy to the gravitational energy.

UAH and NASA MSFC have been cooperating on a joint research project to validate Dr. Li's theory of gravity modification via superconductor. ☆

Special Announcement

NSS Campaign for the Future

HAL5 needs your membership to NSS NOW! NSS contest ends on Labor Day. See page 1 for details.

Huntsville Alabama L5 Society
 1019-A Old Monrovia Rd, Suite 168
 Huntsville, AL 35806
 ADDRESS CORRECTION REQUESTED

Place
First Class
Stamp
Here