

2013 HUNTSVILLE ALABAMA L5 SOCIETY (HAL5) ANNUAL REPORT TO THE MEMBERSHIP

Founded in 1983, the Huntsville Alabama L5 Society (HAL5) is a not-for-profit 501(c)(3) organization. HAL5 is affiliated with the National Space Society (NSS), a grassroots, educational organization that advocates exploration and settlement of space. We are a mix of enthusiasts of all walks of life who share the belief that space development will improve our world with immeasurable benefits in the areas of education, energy, environment, new resources, and ultimately room for humanity to grow. We believe that by educating and working with the public, government and industry, we can speed up the day when routine, safe, and affordable space travel is a reality.

As we celebrated our 30th birthday in 2013, we continued our long running monthly public lectures, co-sponsored the 2nd Tennessee Valley Interstellar Workshop (TVIW), participated in the annual Von Braun Astronomy Society (VBAS) Astronomy Day, supported education outreach at local schools, continued with our High Altitude Lift-Off (HALO) educational amateur rocketry project, conducted a membership survey, created two types of HAL5 lapel pins, and held an amazing 30th/ISDC 2011 staff appreciation/annual Christmas party. To top it off, HAL5 was again awarded the NSS Chapter Excellence Award for Education Outreach for 2012! You can find a listing of awards and recognitions received at our *About HAL5* website.

Administrative Activities

The HAL5 Executive Committee met every month. Our website and Facebook pages were used to announce HAL5 news. We also used e-mail, local media, and event calendar outlets to announce monthly programs to members and guests who sign up at our monthly programs and outreach events. Event flyers are posted in key areas around town, and sent to members without email. In December we introduced our blog *Endless Horizon* at blog.HAL5.org. Look for it to include information about upcoming programs, past program summaries, educational tidbits and much more. Our deep appreciation goes to all our members who completed the 2013 membership survey. The responses were very positive and the results will help guide us in serving our members and the general public. The HAL5 2013 Membership Survey report can be found at www.HAL5.org under *About HAL5*.

Regular membership dues are \$16 per year, and \$8 for students, seniors, and the unemployed. New member dues are prorated based on the month of joining. We established a Square account that will allow us to take membership dues via credit card in person and online. We ended 2013 with 65 members – our second best ever! A great way to celebrate our 30th anniversary!

Monthly Programs, Outreach, and Special Events

HAL5 typically holds public lectures or membership meetings on the first Thursday of every month at the Huntsville–Madison County Main Public Library Auditorium, followed by socials at local restaurants. As a thank you to our guest speakers, their meals at the post-program social are paid for by HAL5.



HAL5 2013 Monthly Program Flyers. Please Visit Our Website at www.HAL5.org for Larger Sizes and Past Flyers.

We started off 2013 with our annual membership meeting. This was a great opportunity for the HAL5 leadership to talk with those interested about the state of HAL5 and NSS, upcoming events, and to solicit feedback on 2013 programming topics and activities. As co-sponsor of the 2nd TVIW, HAL5 had the honor of hosting a panel discussion featuring top interstellar travel visionaries, Paul Gilster of Tau Zero Foundation, Bill Cress and Richard Obousy of Icarus Interstellar, Kelvin Long of the British Interplanetary Society and Institute for Interstellar Studies, Gordon Woodcock of HAL5 and L5 Society; and Les Johnson of NASA MSFC and Chair of TVIW 2013. The event took place at Calhoun Community College – Huntsville campus to an exceptional turn out of about 125 people! Special thanks to Calhoun Community College for this great opportunity.

In March local engineer Dr. Raymond C. Watson, P.E., took us down the history lane about *Lesser-Known History of Huntsville's Technological Evolution*. In April, we welcomed, Greg Laue, Aerospace Products Director of ManTech International, to describe to us “*Fire, Sunshield and Ice,*” the *Making of the Sunshield for the James Webb Space Telescope*, which is made locally in Huntsville!

In May, Dr. Wes Colley, Sr. Research Scientist, Center for Modeling, Simulation, and Analysis, UAH, discussed various physical phenomena in the *Interstellar Medium*, “the stuff between the stars”. At the 2013 ISDC in San Diego, HAL5 received the 2012 NSS Chapter Excellence Award for Education Outreach. To celebrate the summer solstice, HAL5 held a joint program on *Chandra X-Ray Observatory* with our friends at VBAS at its historical Monte Sano Observatory featuring Dr. Martin Weisskopf, Chief Scientist for X-Ray Astronomy and Chandra Project Scientist at NASA MSFC. This meeting was very well attended. HAL5 held its annual summer potluck picnic at our Vice President, Robert Bijvoet’s residence. In August, following the annual election of HAL5 officers, long time HAL5 member and resident science fiction author, Amy Herring, gave us an insight into *Writing and Selling Science Fiction, Fantasy, and Other Speculative Fiction*. A membership meeting was held in September to discuss the upcoming Astronomy Day activities.

We had a busy month in October. Marvin Hilton, a NSS member from Fayetteville, Arkansas traveled here and spoke to us about

“Exploring Mars to Improve Life on Earth.” Next, HAL5 members Ronnie Lajoie, Yohon Lo and Evelyn Sabino traveled down to Cocoa Beach to attend the Missile and Space Range Pioneers Fall Dinner and NSS Southeast chapters’ first regional gathering since 2004 hosted by the Florida Space Development Council (FSDC), a fellow NSS chapter. The meeting was a way for the Southeast NSS chapters to share lessons learned and offer suggestions. Yohon gave a short talk about our history and the various accomplishments. An inspiring talk by former NASA Kennedy Space Center’s Center Director Jim Kennedy on why “We Need our Space” concluded the meeting.

On October 19, we returned to Monte Sano State Park to participate in the annual VBAS Astronomy Day. This annual event is a highlight of HAL5 annual education outreach. The daytime event was very well attended. Along with our NSS and HAL5 literatures, *Pin the Payload on the International Space Station* game, we estimated that about 100 kids partook the “make and launch paper air rockets!” To put a spin in our typical suitcase hybrid demo and to coincide with the Astronomy Day’s theme of comets, we fired the suitcase hybrid at the dry ice dirt comet made by our friends at Sci-Quest to demonstrate what could happen to an ice comet if it gets too close to the sun. Messy but fun to see!

To celebrate our 30th birthday, we hosted a panel discussion with founding HAL5 President Greg Allison, founding member Jan Bijvoet, and current HAL5 President Yohon Lo. Greg took us down memory lane on the motivations to establish HAL5, many challenges overcome in the early years, and highlights of the first 20 years, including the successful 1993 ISDC and Project HALO SL-1 mission. Yohon followed with highlights of the last 10 years, success of ISDC 2011, education outreach activities, restart of Project HALO, and shed some lights on some upcoming activities and goals. Jan Bijvoet followed up with engaging proposals to HAL5 officers and members on what HAL5 is about, and offered ideas for projects and research topics to engage the membership and public, and to make an impact on our goal of becoming a spacefaring civilization.

In December, Todd May, NASA SLS Program Manager, returned to HAL5 to give a status of the nation's new deep space exploration enabling launch vehicle, the Space Launch System. Our thanks to Greg Laue and NeXolve for allowing us to use their Research Park auditorium for this special event.



Left to Right, Ernie Gilmer, David Smitherman and Greg Allison answered questions about the early years of HAL5 at the 30th celebration.

We wrapped up 2013 with a special combined 30th celebration, ISDC 2011 staff appreciation, and annual Christmas party at the Edgewater Clubhouse. At the event, we gave our founding officers: Greg Allison (President), Ernie Gilmer (Secretary) and

David Smitherman (Treasurer), the HAL5 Flame Award *In Appreciation of Enabling 30 Great Years*.

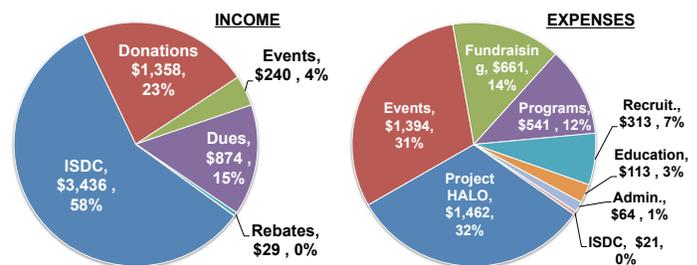
Several outreach events took place in 2013 in addition to Astronomy Day. David Hewitt spoke to 8th Graders at the Christa McAuliffe Regional Charter Public School in Framingham, Massachusetts. Yohon returned to Columbia Elementary School’s 6th grade science class as part of their Space Week, in making and launching paper air rockets, and demonstrating the HAL5 suitcase hybrid rocket.

Project HALO

Project HALO is open to HAL5 members and meets once a week. After a slow couple of years, we are beginning to ramp up to continue our work on the tube-launch (TL-1) multi-stage rocket. Initial design of the rocket has been completed, and initial parts have been purchased and/or manufactured to proceed with the next phase of the design analysis. This included designing and building a 3000 lbs hydrostatic pump to proof test our homemade carbon fiber wrapped vessels. We also used this time to improve our aluminum can recycling and recasting process. On the avionics side, we are working with a balloon group out of Knoxville Tennessee to assist in designing and building some of the avionics. Additional information regarding the status and goals of TL-1 will be made available once the team has completed the preliminary design and completed a few system level tests.

Financial

The HAL5 bank account had a net increase of \$1,368 in 2013. Total income was \$6,097 (due to ISDC 2011 profit sharing and reimbursement, dues & donations), while total expenses were \$4,728. Project HALO and Events expenses were large due to purchase of rocket components and parts, and HAL5 30th / Christmas party meals, respectively. Project Fund-Raising was higher at \$661 due to our new HAL5 lapel pins (which is free to current members) and TVIW 2013 sponsorship pens. More detail explanation can be found in the full report on our website.



2013 HAL5 Officers (August 2013 to June 2014)

President: Yohon Lo
 Treasurer: Ronnie Lajoie
 Membership: Robin Scott
 Publicity: Josh Brock

Vice President: Robert Bijvoet
 Secretary: Ed Kiker
 Education: David Hewitt

In closing, we thank you for your continued support in our endeavor to educate the public and to promote a spacefaring civilization. We could not have accomplished all we have done without your support. We welcome your inputs on how to better serve you and our community. See you at our next gathering! *Ad Astra Per Ardua!*