

# *Southeastern Space Supporter*

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

Volume 9, Number 3 — May–June 2000

## FIRST WORD

### **U.S. Congress Zeros NASA's "Space Launch Initiative"**

(by Ronnie Lajoie, SSS Editor)

The membership of HAL5 is not very politically active, preferring (based on past membership surveys) to work on technical and educational projects. The time may soon come, however, when we will once again be called upon to stand with our fellow NSS chapters. In fact, as the strongest chapter in Region 5, HAL5 may be expected to lead such an effort for the southeastern United States.

The very future of space transportation has been recently threatened, when the U.S. House of Representatives cut the budget for NASA's new "Space Launch Initiative" program (SLI). SLI is the product of a year-long intensive study between NASA and industry called the Space Transportation Architecture Study (STAS). The SLI program is extremely well thought out, and its cancellation before its birth came as a major shock to NASA Marshall, the space industry, and all activists space organizations.

### **HAL5 Program Night**

Thursday, July 6, 2000  
7 to 8:30 p.m. (with social afterwards)  
Huntsville Public Library Auditorium

### **"Future Generations of Reusable Launch Vehicles"**

Guest speaker will be Mr. Daniel Davis, Deputy Program Manager, NASA MSFC 2nd Generation RLV Program.

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

So why have you not heard anyone screaming?! Good question! SLI has been chosen as the pawn in a political game between NASA Administrator Dan Goldin and the U.S. House. To address the problems cited in the recently released Mars Report, Dan Goldin told the House Committee that NASA's 2001 budget must be raised above the original requested level. Not surprisingly, the House said "Hell no!". Goldin then told the House Committee that he would have to cut a new program because the Mars problem fixes would take priority. The House obliged.



Word "on the street" is that there is a battle of wills going on, and all space activists have been told to wait to see how it plays out. In the meantime, we need to get prepared for what may be a very frantic time in September. In this issue, I will share with you information on the Space Launch Initiative. I also **strongly encourage** you to attend the HAL5 talk on Thursday. Danny Davis, Deputy Program Manager for NASA's 2nd Generation RLV Program, will provide us with the detailed background information and plans for the SLI program. Ad Astra — we hope! ☆

### **NASA Budget Passes House Panel Uncontested**

(special to SPACE.com, 7-June-2000)

NASA's budget breezed through a House spending committee Wednesday with little discussion as legislators grappled over funding for veterans and housing programs.

Despite lingering concerns that the House VA-HUD spending bill **cuts new NASA programs such as the \$290 million Space Launch Initiative** to research a replacement for the space shuttle, NASA appears to be in a strong position to get more money this year.

In a House Appropriations Committee hearing spent arguing over money for housing and veterans' health programs, the final legislation was expected to pass with \$13.7 billion set aside for the space agency. That's a \$113 million increase over last year's amount.

The only tinkering to the NASA budget came from Rep. George Nethercutt, who offered an amendment to study whether to strengthen the agency's research and analysis programs. The amendment cites concerns that NASA has overlooked research and data analysis activities aimed at providing the scientific questions that drive space-exploration missions. The measure directs NASA to conduct a study with other agencies to consider strengthening those activities. The House Appropriations Committee adopted the measure by a voice vote.

An amendment offered by Rep. Alan Mollohan to restore \$300 million to the science and technology budget fell short of passage along a 23 to 22 vote. That would have funded science and technology spending at \$5.9 billion, the president's requested level. ☆

**Huntsville Alabama L5 Society**

President — Greg Allison  
 Day: 544-4440, Eve: 859-5538  
 Vice-President — Gladys Young  
 Day: 852-0561, Eve: 852-0561  
 Treasurer — Ronnie Lajoie  
 Day: 971-3055, Eve: 721-1083  
 Secretary — Wade Dorland  
 Day: 551-0008, Eve: 534-2566  
 Membership — Philomena Grodzka  
 Day: 536-8638, Eve: 536-8638  
 Communications — Ellen Cozelos  
 Day: 726-6387, Eve: 883-4873

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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://hiwaay.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 35757  
 Day phone/message: 256-461-5934  
 Night/Weekend phone: 256-721-1083  
 FAX number: 256-461-3045  
 Electronic mail address: hal5@hiwaay.net

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

Preferred format for plain text is ASCII (text with graphics is *MS Word* or *WordPerfect*) either sent by E-mail or on a PC 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.

**Clay Sawyer Chosen HAL5 2000 Professional of the Year**

On June 1, HAL5 members celebrated the selection of Clay Sawyer, Jr. as its 2000 Professional of the Year. The Professional of the Year Awards is an annual event at TABES sponsored by the Huntsville Association of Technical Societies (HATS).



Clay Sawyer receives his Professional of the Year Award at TABES 2000

Clay joined HAL5 in 1996 and served as Secretary (1998-9). He has led much of the electronics work for HAL5's Project HALO. In 1996, he developed the rocket avionics module for the first ground launch (GL-1). In 1997, Clay developed the rocket avionics module for the historic Sky Launch 1 rocket. In 1998, he (along with Gene Young) developed the rocket avionics module for the current Sky Launch 2 rocket. Clay is also an advocate for space education, and in 1999, he gave a HALO slide presentation and led a one-day HALO Achievement class.

Clay has been a great asset to our society and is considering serving again as HAL5 Secretary for the 2000-1 time frame. Please consider voting for him in the upcoming elections on July 6. ☆

**HAL5 Elections on July 6**

Due to a conflict with the Professional of the Year Awards night (see previous article), no HAL5 Program Night was held on June 1, thus forcing a delay in our elections. The HAL5 Elections and Program Night will be held on July 6. You must be present to vote — voting by proxy is not allowed (yet) in HAL5. Please attend. Refreshments will be provided. ☆

**NSS Publishes Roadmap**

(by Ronnie Lajoie, NSS Roadmap Chair)

At the 2000 ISDC, NSS presented its "NSS Statement of Philosophy" and its "Roadmap to the Stars". These two products were the result of the NSS Policy Summit held in September 1999, followed by many review cycles to get feedback from every member of the NSS leadership.

The "NSS Statement of Philosophy" is included as a 4-page insert in this newsletter. Please pull it out and use it to remind yourself and to tell others what the NSS is all about. You can see the NSS Roadmap at this URL:

<http://www.nss.org/future/NSS%Roadmap.html>

## 2nd Generation RLV Program Will Prepare Roadbed for 'Highway to Space'

(from Web site: <http://stp.msfc.nasa.gov/>)

NASA's Marshall Space Flight Center in Huntsville, Alabama, is leading an effort to help NASA get into space more safely and for less money in the future than it does today using the Space Shuttle.

"We are preparing the roadbed for the 'highway' on which the next generation space vehicle will travel into orbit," says Dan Dumbacher, manager of the Second Generation Reusable Launch Vehicle Program at Marshall.

"The roadbed consists of the space transportation foundation technologies (propulsion, airframes, advanced sensors and the like) that will give industry and us the confidence we need before we begin development of the next full-scale launch system," Dumbacher said.

### Space Shuttle to Fly until 2012

NASA is also upgrading the Space Shuttle to keep it flying safely and efficiently until at least 2012. These upgrades are designed to extend the life of the Space Shuttle, a first generation reusable launch vehicle, until a second-generation vehicle is ready to fly.

"Our goal is to substantially reduce the technical and business risks associated with developing safe, reliable and affordable RLV's. "Full-scale development of any new RLV systems would begin after 2005," Dumbacher said.

### More X-vehicles to Come

Through the second generation program, NASA and its industry partners will build on the success and progress of the ongoing development of the X-33, X-34 and X-37 technology demonstrators to reduce the technical risk while creating increased competition.

"The second generation program is in the early phases of formation. It is

based on what's been going over the previous six years or so in the RLV program. We learned in some cases how to do things and in other cases how not to do things. Now, we need to take the next step, the second generation program," Dumbacher said.

### 2nd Generation RLV Competition

Dumbacher believes the second generation program will bring expanded knowledge to industry and government when NASA conducts a second-generation RLV competition in 2005. Industry will know more about investing in the space program. Government will know more about investing in a launch system that will meet NASA's safety and cost goals, he said.



Program Manager Dan Dumbacher

"We want to get a hundred times safer than Shuttle in the second generation, more in line with the odds of losing a jet fighter," said Dumbacher, "and we want to get the cost of lofting a pound of payload into orbit down from \$10,000 to \$1,000."

Plans to upgrade the Shuttle are directly in line with NASA's second generation program, according to Dumbacher. "Shuttle engineers are doing things like advanced health monitoring on Space Shuttle Main Engines and other elements. Engineers working on the second generation program will build on

the knowledge gained from Shuttle upgrades," he explains.

### The Space Launch Initiative

The second generation RLV program, the centerpiece of NASA and the Administration's "Space Launch Initiative," is a result of NASA's industry-led Space Transportation Architecture Studies in 1998 and 1999 and NASA's Integrated Space Transportation Plan developed in the fall of 1999. In addition to the second generation program, the integrated plan also includes the Shuttle upgrades, alternate means of access to International Space Station, and a third-generation element that looks 25 years into the future. The latter aims toward a one-in-a-million loss-of-crew safety goal and a hundred-dollars-per-pound price-to-orbit goal.

As a result of a NASA Research Announcement released earlier this year, NASA selected nine companies as participants in the first round of second generation work, requirements definition. Preceding even concept drawings, requirements are the starting point for systems engineering. The advance work by these companies will put the second generation program on a path leading to accomplishment of the goals of improvement by a factor of 100 in launch safety, and a factor of 10 in launch cost.

According to Dumbacher, there is a fundamental difference regarding the way the second generation program approaches full-scale launch vehicle development and the way the United States previously addressed similar challenges. "We call second generation a technology advanced development program," he says. "The second generation program is something we need before we start a full-scale launch vehicle development program. It will help us make sure that the technologies we plan to incorporate in a full-scale vehicle can actually be achieved within the time-frame and cost required for full-scale development and for making a viable business case."

He says NASA — through the second generation program — will do increased preparation work prior to starting a full-scale development program where the major costs are incurred. “We are doing work up front that will demonstrate the technologies needed in order to make a full-scale development program happen according to plan.”

To illustrate his point, Dumbacher recalls the development approach used in the 1970s to build the Space Shuttle. “The Space Shuttle Main Engine was the first major element started in the Shuttle program. It was a completely new engine although somewhat based on Apollo technology. It was built and tested in parallel with all of the other activities that were required for the complete Shuttle system. As a result, technical challenges arose which meant schedule and cost growth for the rest of the program,” he said.

“We are doing something different with the second generation program. Before we ever start a full-scale launch vehicle development program we want to make sure we have built and tested the right kinds of rocket engines. When we start another full-scale launch vehicle development program we won’t be looking at a blank sheet of paper when it comes to the engines or other technologies.”

### **Technology Investments Required**

He said the goal of the program is make the technology investments ahead of the development program. “We need to make initial investments in engine technologies, thermal protection system technologies and propellant tank technologies. We need to test out prototypes of these pieces and make sure we understand how well they perform. This will make us more confident that we can meet the budget and schedule that is set for developing the actual flight vehicle system.”

“Our work will also further systems requirements definition work necessary for the second generation program and let us begin technical risk reduction activities in fiscal year 2001. “We want to reduce the business and technical risk

associated with closing a commercial business case — that is, projecting a profitable balance of cost and revenue. We also want to reduce the risk the government will face in investing tax dollars in development of the next launch system.”

### **Paving the “Highway to Space”**

According to Dumbacher, NASA is taking the next step beyond Shuttle and beyond the X-vehicles to open the highway to space. “We have to do this kind of work to develop the transportation infrastructure to get to space so that the market opportunities open up. The business market for payloads and other activities in space represents the next frontier for economic growth,” he said.

“The first ‘gold’ from that frontier, mined with the help of communications satellites and the microelectronics they required, is information,” said Dumbacher. “Second Generation RLV Program represents a National reinvestment in our early success in space, and can pay dividends for many years to come.”

Dumbacher pointed out that “the big cost of doing anything in space is how much it costs to get you there. The costs associated with what you do once you get there are relatively minor compared to launch cost. “

He said the priority is “to find out what it will take to meet our safety and cost goals.” As an example he points to life-cycle costs such as those associated with propellant tanks. “Commercial business cases are calling for future vehicles that are good for 500 missions.” The Space Shuttle uses one External Tank for each flight.

“There are a lot of challenges ahead. What we want to do is use the second-generation program to make access to space less expensive and safer and thus expand the commercial development and civil exploration of space,” Dumbacher said. ☆

## **MSFC Director Art Stephenson ‘disappointed’ by budget action on Space Launch Initiative**

(MSFC Press Release, 24 May 2000)

Art Stephenson, director of NASA’s Marshall Space Flight Center in Huntsville, Alabama, has reacted to Tuesday’s markup of the NASA FY 2001 budget by the VA, HUD and Independent Agencies subcommittee of the House Appropriations Committee.

“It came as a great disappointment to learn yesterday that a congressional subcommittee, in marking up the NASA budget for fiscal 2001, has zeroed all but a small part of next year’s funding for the Agency’s Space Launch Initiative,” Stephenson remarked. “That initiative is absolutely essential to achieving one of NASA’s most critical assignments, which is to cut the cost of access to space by orders of magnitude — within 10 years to one-tenth of today’s cost, then to one-hundredth within 25 years. We at the Marshall Space Flight Center have been given the lead to accomplish those ambitious goals, and we take it extremely seriously. It is the right thing to do.

### **Half the Cost is Just Getting it There**

“To understand why, just consider this: Currently, when we launch something into space, roughly half the total cost is tied up with just getting it there. People would never put up with that in their everyday lives. For instance, if a car cost \$50,000 because it took \$25,000 to get it from the factory to the buyer, it would be a major issue on the national agenda!

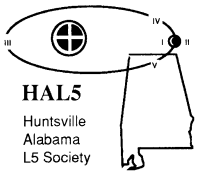
“Likewise, sharply reducing the cost of getting payloads into orbit is the key to our future in space, and the Space Launch Initiative is the foundation for achieving that objective,” Stephenson continued. “I realize that the budget process is a long road with many steps along the way and I remain hopeful that yesterday’s cut to the Initiative will be restored before the budget becomes final.” ☆

# Huntsville Alabama L5 Society (HAL5)

your local chapter of the

## National Space Society

presents



a free public presentation by

**Mr. Daniel J. Davis, Deputy Program Manager  
NASA Second Generation RLV Program**

**Thursday, July 6, 2000**

**7:00 pm to 8:30 pm at the**

**Huntsville/Madison County Public Library**

The public is invited. Admission is **FREE**. A social at Shoney's will follow the meeting.  
For more information: call Ronnie Lajoie at 256-461-5934 or email: [hal5@hiwaay.net](mailto:hal5@hiwaay.net)

# HAL5 CALENDAR OF MEETINGS AND EVENTS

## June 2000

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29 <b>HAL5 &amp; Project HALO Meeting</b> 12p at Piccadilly	30 Tunguska asteroid impact 1908	

## July 2000

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>July HAL5 Elections and Program Night</b> <b>"Future Generations of Reusable Launch Vehicles"</b> by Mr. Daniel J. Davis, Deputy Program Manager, NASA Marshall Second Generation RLV Program 7-9 PM, Thursday, July 6, at Huntsville Public Library Auditorium, 915 Monroe Street, Huntsville, AL						1 Canada Day ●
2	3	4 Independence Day	5	6 <b>HAL5 Program "Future RLVs"</b> 7-9 pm, Library	7	8 ●
9 Voyager 1 flybys Jupiter 1979	10	11	12	13 <b>HAL5 &amp; Project HALO Meeting</b> 12p at Piccadilly	14	15 <b>NASFA Meeting</b> 6-8 pm Madison City Hall
16	17 <b>AIAA Joint Propul. Conf.</b> VBC Halls	18 <b>AIAA Joint Propul. Conf.</b> VBC Halls	19 <b>AIAA Joint Propul. Conf.</b> VBC Halls	20 <b>Moondreams The Musical</b> 7:30 p.m. at VBC	21 <b>Moondreams The Musical</b> 7:30 p.m. at VBC	22 <b>Moondreams The Musical</b> 7:30 p.m. at VBC
23	24 ●	25	26	27 <b>HAL5 &amp; Project HALO Meeting</b> 12p at Piccadilly	28 Ranger 7 impacts Moon 1964	29 Delta Aquarid meteors (15 per hour)

## August 2000

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
July 30 ●	July 31 Apollo 15 lands on Moon 1971	1	2	3 <b>HAL5 Program "TBD"</b> 7-9 pm, Library	4	5 <b>VBAS hosts Astronomy Day</b> Von Braun Obs.
6 ●	7	8	9	10 <b>HAL5 &amp; Project HALO Meeting</b> 12p at Piccadilly	11	12 <b>NASFA Meeting</b> 6-8 pm Madison City Hall
13	14	15	16	17 <b>HAL5 &amp; Project HALO Meeting</b> 12p at Piccadilly	18	19
20 Viking 2 lands on Mars 1976	21	22 ●	23	24 <b>HAL5 &amp; Project HALO Meeting</b> 12p at Piccadilly	25 Voyager 2 flybys Saturn 1981	26
27	28	29 ●	30	31 <b>HAL5 &amp; Project HALO Meeting</b> 12p at Piccadilly		

## Space Activists at ISDC 2000 Demand Better Space Program

(by Leonard David for Yahoo! News)

America's space program is going no place fast. As shuttle astronauts fiddle with pieces of a mega-billion dollar International Space Station built for six, exactly where the U.S. space enterprise is taking the ground-bound, tax-paying public-at-large remains unknown.

Disgruntled space activists met here May 25-29 at the 19th annual International Space Development Conference. They contend no shortage exists of sky-high projects worth doing: from taking personal treks into Earth's orbit to building lunar cities and planting settlements on Mars. But such visionary quests appear to be "lost in space."

### Call For Fresh Space Effort

Apollo 11 moonwalker, Buzz Aldrin, called for a rejuvenated space effort, one that is steeped in market economics. Care must be taken in selecting future Earth-to-orbit space transportation, he said. Aldrin said he is concerned that current NASA studies in next-generation launch vehicles fail to adequately address the high volume markets that offer the greatest potential to drive down space access costs. One such market is space tourism, he said.

"Taking people into space may be a nuisance to a bureaucracy that is running the astronaut office and the present shuttle system. It just doesn't fit in," Aldrin said. But John Glenn's return to orbit aboard a space shuttle, he said, stirred up a public sentiment that "if he can do it, why can't I do it?"

### Some Seeing Red

"We either are going to open up orbital flight to people or not. That decision could be influenced a significant amount by steps we take in defining the next generation shuttle," Aldrin said.

Congressman Jim Kolbe (R-Arizona) decried the bureaucracies that exist both in the space program, as well as in the

U.S. Congress. Recent attempts to slash NASA's space science budget has put America's future as a spacefaring nation "at mortal risk," he said.

"We don't have the kind of budgets for NASA that we would like. We don't have the kind of fervor and passion that existed in the 1960s," Kolbe said. NASA is searching for a mission that would grab the public attention, he said. "Somehow, we have to find that mission," Kolbe said. "We've got some real opportunities, but we've got some real challenges that are ahead of us."

### Colonizing Mars

Seeing red is Robert Zubrin, President of the Mars Society. Not only is the red planet Mars an ideal spot for a new branch of civilization, Zubrin said, a human mission to that neighboring world speaks to what the human venture in space is about. The issue at hand is getting the space program to go the distance, he said.

"The American people by and large do want there to be a next step. They do want a space program that goes somewhere. In fact that's the only reason why they tolerate the space program because they expect the space program, eventually, to go somewhere. They are kind of waiting for that to happen," Zubrin said.

"As long as we are spending \$14 billion a year on NASA we ought to have a space program that goes somewhere," Zubrin said. "Right now there is a crystal sphere walling us in, below low Earth orbit. And we have to break it."

### Mir — The Unwelcome Mat is Out

Now undergoing a commercialized makeover is the Russian Mir space station. Operating since 1986, the orbiting outpost recently got an infusion of private monies to keep it afloat. A lease arrangement between the Amsterdam-based MirCorp and the station's Russian operator, Energia, is transforming the aging complex into the first private building in space.

Rick Tumlinson, president of the Space Frontier Foundation, said that NASA has put out the unwelcome mat for MirCorp, attempting to torpedo the privately funded renovation project. He is also an advisor to MirCorp, working on the early phases of commercializing the Russian Mir.

Characterizing NASA as a "socialist institution," Tumlinson said that the newly established MirCorp is a product of free enterprise Americans working with free enterprise Russians. "It's unfortunate that NASA is still trying to kill the project. NASA is still behind and in front of the scenes offering money to bring the station down. This is pure, free enterprise, and it's our own government and our own NASA trying to stop us. That makes me very sad."

"NASA has sterilized space. They've taken this exciting frontier and have turned it into a bureaucratic playground. And no wonder that it's turned people off," Tumlinson said. "Most of what NASA talks about now is safety, safety, safety, safety. Well I'm sorry, it's a frontier and frontiers are about risk and taking chances," he said.

### Time for a Station Break

Demanding that the U.S. Congress and NASA make a little down-payment on the future is at the heart of a new proposal and public campaign proposed at the conference by the National Space Society of Washington, D.C.

"We are proposing a very modest one percent for the future program. We need to get away from the ambiguity that we've seen in the last year to do some technology work towards what humans might do in the future in space," said Pat Dasch, Executive Director of the National Space Society.

"The public is disinterested in space. What we're calling for is roughly \$140 million a year to start developing the technologies and plans to enable the human exploration of the moon and Mars. For the public, humans in space captures their imagination," she said.

### Space Station a Work-In-Progress

Dasch said that the International Space Station has become a stale and a long-term work-in-progress. "It has grown old as its technology has grown old. The public sees NASA bogged down in this enormous project. They see NASA weighed down with the project, with morale also dragged down by it. They see an agency struggling even now to get it done," Dasch said.

Given a small wedge of money and mandate, NASA must begin to plan for the future and the human settlement of space, on the moon, Mars, asteroids, within space habitats, and eventually the stars, Dasch said. "We want action. This is what we want and we want it now." ☆

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### HAL5 Awarded at ISDC

(by Ronnie Lajoie, HAL5 Officer)

HAL5 was recognized twice at the 2000 ISDC. The first time was for being one of the top two chapters to recruit new members into the National Space Society. Our efforts, even though small, were more than all but one NSS chapter. While we should feel proud of our accomplishment, there is much more we can do, including to continue sharing knowledge with other chapters on the best (and worst) ways to recruit new members.

NSS Resources Committee Chair Larry Ahearn has spoken with NSS Treasurer Joe Redfield about a new direction (or approach) for the "Campaign for the Future" membership recruitment drive. He received approval to move forward, and more details will be provided in the near future. In the meantime, the 2000 "Campaign for the Future" is underway, and anyone recruited between last April and next April will be counted towards next years recruitment rewards.

### Award for Southeast Space Summit

HAL5 was also recognized for our hosting of the Southeast Space Summit, as a "chapters helping chapters" event.

Our event made such a good impression on the NSS Vice President for Chapters that he created a new award category for "Service to Chapters". Congratulations to all members of HAL5 who helped organize this event, and a second nod of appreciation to the members of HAL5, NSS Atlanta, and the Middle Tennessee Space Society (MTSS) who participated to make this a great event.

I have asked the MTSS officers to consider hosting another Southeast Space Summit this October or November, either just before or just after the next NSS Board of Directors meeting. This summit would be held near Nashville, and part of the activities will be to help MTSS recruit more members. They do a lot of work (see next article) for a chapter of just three members — just think what they could accomplish if they had more! ☆

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### Middle Tennessee Chapter Promotes Space at Events

(by Chuck Schlemm, MTSS President)

On Saturday, June 3, the Middle Tennessee Space Society (MTSS) setup a display at the Davis-Kidd Bookstore in Nashville during a visit by Buzz Aldrin to autograph copies of his new book, "The Return". We were viewed by 200-400 people, spoke to many of them, spoke to a children's book reading group, and spoke with Buzz about his Starbird concepts.

I heard about his nationwide tour through a non-NSS connected website: <http://www.collectspace.com/sightings/home.html>. It seemed reasonable to expect space interested people to be there, so I called the bookstore manager to get permission. After an initial OK, then a NO, then a maybe, I called Buzz's publicist to get the final OK. You must be persistent and not accept just anybody's answer. Some people will say "NO" just because its easier. If it seems unreasonable, go above them.

About two hours before Buzz's appearance, Mike Holmes and I setup our display table with our Space Station and

Shuttle scale models, an Apollo 11 Lunar Module, a Mars Sojourner Rover and a Soyuz/Mir/ Kvant. We were tight on space, but still had many people stop by and discuss the state of our space program. We also handed out NSS and MTSS flyers. I used the same models to speak with a separate group of children during a regularly scheduled book reading session.

After his speech and autograph session, Buzz came to our display for photos and a discussion with us of how his Starbird reusable launch system could be used for crew transport and rescue capabilities. He said that he hoped to have models of his launch system components commercially available in the future.

I feel we had a successful display and an enjoyable stay. We promoted the development of space for about 5 hours — 2 hours before, 2 hours during, and 1 hour after Buzz's appearance. We shared a lot of good info and hope we may have picked up some NSS/MTSS members. The bookstore management was pleased and accepted our invitation to call us if they had any future guests that are space related and wanted us to come again.

### MTSS at "The Mars Show"

On June 9, Mike Holmes, Bob Tonini and I setup the MTSS display at the premier of "The Mars Show" at the Dickson Renaissance Center (DRC) Planetarium. This show describes Mars and the history of how we have learned about the planet and speculation of what it might take to go there and colonize. We spoke with many people who were attending this show along with a "Three Dog Night" concert and 2 other laser shows the same night.

Our ISS model brought the most attention. We answered many questions about the station construction status, how long till crews stay on board, how long will they stay, how long will it last, and will it be used as a staging post for going to Mars? We expect to change our monthly meeting site to the DRC to increase our public exposure. ☆



## UPCOMING EVENTS

### **July 17 to 19, Huntsville, AL AIAA/ASME Joint Propulsion Conference Comes to Town**

(by Ronnie Lajoie, Aerospace Engineer)

Now that NASA Marshall Space Flight Center has been designated the lead center for space transportation research, it makes perfect sense why the AIAA chose Huntsville, Alabama as its site for its 36th AIAA/ASME/SAE/ASEE Joint Propulsion Conference (JPC) & Exhibit. Exhibit hours are 10 AM to 4 PM on Monday and Tuesday only, and may be open to the public (I am not sure).

The conference will be held Monday, July 15 through Wednesday, July 17 at the Von Braun Center. The conference is designed for professional engineers and thus comes with a "professional" price of \$570 (for sessions, exhibits, meal events and 10 papers) or \$740 (above plus proceedings on CD-ROM). AIAA members get a good (about 20%) discount.

AIAA student members and retired AIAA members can attend the sessions and exhibits for only \$10, other students can attend for \$35 — still a great deal. For more details, call 703-264-7500.

Registration can be done in advance or at the door, or via the AIAA JPC Web site at: <http://www.aiaa.org/calendar/>. The on-line registration form is at link "joint00reg.html" and the program is at link "joint00prog.html".

The JPC is one of the largest (if not the largest) conference that the AIAA hosts each year. The JPC, like other AIAA conferences, moves from place to place each year. Huntsville should be proud that they were selected this year. It has been a long time coming. ☆

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### **July 20 to 22, Huntsville, AL *Moondreams* — The Musical**

(from "http://www.moondreams.org/")

*Moondreams*, a new musical by Rhett Parrish, will have its World Premiere at Huntsville's Von Braun Center on July 20, 2000 at 7:30 pm. *Moondreams* is a Broadway-style musical that explores the dreams of space exploration from 1955 to the present through the eyes of a fictional Huntsville family that interacts with the spirits of Dr. Wernher von Braun, H. G. Wells, Jules Verne, and many others. It portrays America at its best, embraces family values, and offers a dramatic and musical portrayal of historic events from the last fifty years.

The composer/author is an award-winning, Grammy-nominated music producer who lives in Huntsville. Rhett has created memorable advertising music such as ALFA's "Put Your Trust in People Who Care, Call ALFA", Kraft Philly Brand Cream Cheese's "Spread the News", Payday Candy Bar's "Totally Nuts", and many others. The production will be directed by Vivienne Atkins, assisted by Jay Tumminello as the Musical Director and Bruce Beaumont as the Technical Director.

Just as "The Music Man" put Iowa on the map, *Moondreams* can make Rocket City USA a place to fondly remember in song for many years to come. For more information, visit the *Moondreams* Web page at: <http://www.moondreams.org/>

Show times are July 20-22 at 7:30 PM, and Saturday, July 22 at 2:00 PM in the VBC Concert Hall. Tickets range from \$13.50 to \$29.50 and be purchased at the VBC Box Office. You can also phone TicketMaster at (800) 277-1700, or purchase tickets from their Web site at: <http://www.ticketmaster.com/> ☆

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### **August 25 to 26, Huntsville, AL IEEE Computer Fair 2000**

(from "http://www.ieee-computer-fair.org/")

The revamped IEEE Computer Fair will be held in the South Hall of the Von Braun Center on August 25 and 26. A new millennium is here. A new direction is needed. A new format is implemented. The new format provides

more space for the focus of technology for the new millennium. This focus showcases technology by directly introducing it to the decision maker and user. With a new millennium come new possibilities. The focus of the IEEE Computer Fair 2000 is "Open Source Systems". We encourage all businesses that provide open source systems to showcase their tools in this year's Computer Fair. For more details, please see the IEEE Computer Fair Web site at: <http://www.ieee-computer-fair.org/> ☆

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### **October 4 to 5, Huntsville, AL Simulation Conference 2000**

(from "http://www.scs.org/")

Formerly known as the Southeastern Simulation Conference, the newly titled Huntsville Simulation Conference 2000 (HSC 2000) will be held at the Holiday Inn at Research Park (near Madison Square Mall), Huntsville, Alabama on October 4 and 5, 2000.

The conference seeks technical papers, briefings, session organizers, chairs and panel discussions related to simulation areas that include: Missiles; Simulation-Based Acquisition; Visualization; VV&A; HLA; Manufacturing; Human Factors and Ergonomics; Machine Learning Methods; Test and Evaluation; Virtual Environments; Ballistic Missile Defense; Control Systems; Signal Processing and Sensors; Hardware-in-the-Loop; Battlefields; Software and Hardware Tools; Earth Systems; Law Enforcement; Biomedical. Abstracts and papers accepted only in electronic formats. Proceedings on CD-ROM.

Sponsored by the Society for Computer Simulation International (SCS). Early Registration fee before September 30, 2000 is \$125. Normal Registration fee after September 30, 2000 is \$150.

For more details, please contact Program Chair Joseph Gauthier, of the AEGIS Technologies Group, 6703 Odyssey Drive, Suite 200, Huntsville, Phone: 256-922-0802; Fax: 883-5516; e-mail: [jgauthier@aegistg.com](mailto:jgauthier@aegistg.com). ☆

**HAL5 Membership Report**

The following is a list of additions to the current paid membership of HAL5, which includes 32 renewals and 10 new members, for a total of 42. Welcome to all our new and renewed members!

John	Barnum	(R, D)
Lorraine	Barnum	(R, D)
Ellen	Cozelos	(R, Comm.)
Bruce	Cunningham	(R)
Vincent	Dauro	(R, D)
Melanie	Hazelrig	(R, D)
Gene	Hornbuckle	(R)
Glen	May	(R)
Allen	Meece	(R, D)
Doug	Peets	(N)
Chuck	Schlemm	(R)
Matthew	Travis	(N, D)
Timothy	Weaver	(N)
Mark/Judy	Wells	(R)

- (N) - New Member
- (R) - Renewed Member
- (P) - Past Member
- (D) - Included a Donation

HAL5 welcomes back its previous members and also past members Gene Hornbuckle and Glen May. With these two rocket pioneers back, hopefully we will be reactivating Project HALO soon!

HAL5 also welcomes its new members, including Doug Peets, Matthew Travis, and Timothy Weaver. Doug and Matthew are NSS members from Chicago, Illinois. Matthew is a member of the new NSS Roadmap Committee Definition Team, and will have a big role in the creation and maintenance of the future NSS Roadmap Web site. Timothy Weaver lives in Huntsville and we hope he will be an active local member. Thank you all very much!

**Upcoming Events of Interest to HAL5 Members**

- Thu., July 6 — 7:00 - 8:30 PM **HAL5 Program on “Future Generations of Reusable Launch Vehicles”** by Mr. Daniel J. Davis, Deputy Program Manager, NASA MSFC 2nd Generation RLV Program, at Huntsville Public Library, 915 Monroe Ave.; free; questions: 256-461-5934 (afternoon/evening) or 256-721-1083 (morning)
- Mon., July 17 to Wed., July 19 **AIAA hosts the “AIAA/ASME/SAE/ASEE Joint Space Propulsion Conference”**, in North and South Halls of the Von Braun Center, Huntsville; info: call 703-264-7500
- Thu., July 20 to Fri., July 21 **“Second Annual Lunar Development Conference”** at Caesars Palace in Las Vegas, Nevada; registration fee; sponsored by the Space Frontier Foundation, FINDS, Space Studies Institute, Moon Society, and National Space Society.
- Thu., July 20 to Sat., July 22, shows 7:30 PM, plus 2 PM Sat. **“Moonbeams — The Musical”** in the Von Braun Center Concert Hall, Huntsville, Alabama. Tickets range from \$13.50 to \$29.50 and be purchased at the VBC Box Office. You can also phone TicketMaster at (800) 277-1700.
- Thu., Aug. 3 — 7:00 - 8:30 PM **HAL5 Program on “TBD”** by TBD, at Huntsville Public Library, 915 Monroe Ave.; free; questions: 256-461-5934
- Fri., Aug. 25 to Sat., Aug. 26 **2000 IEEE Computer Fair**, in in North and South Halls of the Von Braun Center, Huntsville; revised for the 21st century with new emphasis on “Open Source Systems”. For more details, see the Web site: <http://www.ieee-computer-fair.org/>
- Thu., Sep. 7 — 7:00 - 8:30 PM **HAL5 Program on “TBD”** by TBD, at Huntsville Public Library, 915 Monroe Ave.; free; questions: 256-461-5934

HAL5 gratefully thanks the many members who included a donation with their membership. Allen Meece renewed as a Supporter member with his donation going to Project HALO. John/Lorraine Barnum and Melanie Hazelrig both renewed as Contributing members with their donations also going to Project HALO. Matthew Travis did likewise but split his donation between HAL5 and HALO. Vince Dauro also donated to Project HALO. Thank you

all very much!

HAL5 also thanks members John and Lorraine Barnum for rejoining the National Space Society as well. Currently 59 percent of HAL5 members are also NSS members. I encourage those of you who have let your NSS membership slip to renew. Good things are happening at the national level, as you will find out in this issue and next issues of this newsletter. Ad Astra! ☆

**Special Announcement**

**HAL5 July Program Night**  
**“Future Generations of Reusable Launch Vehicles”**  
**Thursday, July 6, 7–9 pm**

**Huntsville Alabama L5 Society**  
 PMB 168, 1019 Old Monrovia Road  
 Huntsville, AL 35806  
 ADDRESS CORRECTION REQUESTED

Place  
 First Class  
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