



ISDC 2007

By Mark Fulmer



Member - National Association of Rocketry ("NAR").

Special points of interest:

- Space rides, rocket buddies and Buzz Aldrin. Wow! The ISDC event was fantastic! Besides Mark's front page article, there's more to come on Page 2.
- I put him in the Center of Pressure last month, and he shows up with an article this month. George Sprague provides another handy rocket tip. Thanks, George! Find out what it is on Page 4.
- The new Frisco field has already generated new interest in DARS. Lots of photos on Page 5.
- Be sure to check out DARS Events. It isn't what you think. Page 6.
- Did You Know has some very exciting news! You'd better check it out, or you'll be sorry! Page 7.

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DARS became an affiliate member of the National Space Society (NSS) earlier this year and was invited to host an exhibit at the 26th annual International Space Development Conference (ISDC '07). The ISDC over the past 25 years has been hosted around the country, but this year we had it right in our "back yard" at the Hotel Intercontinental in Addison, TX on May 24 – 27.

NSS is a non-profit organization dedicated to serve as a collaborative network for national and international space agencies, aerospace firms, research & development groups, and numerous astrophysical societies all with a common platform: the development and promotion of space exploration. The ISDC '07 featured a vast collection of workshops, symposiums, and presentations as well as a venue from VIP's such as Buzz Aldrin, Pete Worden, Rusty Schweickart, John Carmack, Alex Tai, and Steve Squyers.

DARS hosted two display areas (photos above by James Gartrell): one in the main exhibit hall (right photo) next to Armadillo's Quad Lander (Pixel) and X Prize and a second table (left photo) in the ballroom vestibule. I may be biased, but I'm proud to say that DARS had one of the finest looking exhibits at ISDC '07!

And of course it was all made possible by our volunteers: Sam Barone, John Bittner, Gary Briggs, Jason Brown, Scott Cook, Dave Schultz, John Dyer, Rags Fehrenbach, James Gartrell, Hiram Patterson, George Sprague, and Jack and Suzy Sprague. I would like to express thanks to all who helped out as well as those who brought their rockets out for display!

The best part of it all was being able to represent DARS and talk about what we love: **ROCKETRY!** Those who visited and talked with us were from all walks of life: engineers, educators, students, space enthusiasts, and business people. We also were able to meet up with a couple of the folks from Launch Magazine, Mark Mayfield and Deb Martin. John Dyer made available some of his display rockets from Red River Rocketry to complement the Launch display table.

A final word of thanks goes to Bill Ledbetter, Ken Murphy, and Mitchell James with the NSS local chapter who gave us the invite and did a great job of hosting ISDC '07. Well that's enough from me. The rest of articles and photos in this month's Shroudlines will tell the rest of the story about ISDC '07. As the motto for NSS goes: Ad Astra (To the Stars!).

ISDC 2007—Continuing Coverage

By James Gartrell

I certainly want to thank Mark Fulmer for taking the lead on our involvement with the ISDC '07. Give him a big hug next time you see him. Ha Ha!! You'll understand that comment a little later in this article, or if you attended the June club meeting.

Working the conference and manning the booth resulted in some long days. Most days started about 7:15am and ended about 6:30pm in the evening. Nevertheless, I was still able to attend the last part of the opening session of the conference and all of the Virgin Galactic presentation, both on Friday, and the Saturday luncheon featuring Buzz Aldrin as the speaker. There were several other sessions I would have liked to attend, but at least I was able to attend my A-list. It was a great conference.

Michael Coats was the speaker for the NASA Q&A during the opening session. Some of you may recognize him as the pilot for the maiden flight of Space Shuttle Discovery launched in 1984. He was also the commander of two later Discovery launches before retiring to work in the private

arena. He then returned to work for NASA as Director of the Johnson Space Center in 2005. Although I missed the majority of his presentation, I at least managed to get a couple of photos.

Alex Tai, the chief operating officer of Virgin Galactic, was the next presenter. His presentation was about the future of personal space flight. Virgin Galactic anticipates being able to begin routine commercial space flights beginning 2009-2010, unless some redesign is required or some safety issue arises. The plan is to have about 500 passengers a year traveling on SpaceShipTwo. SpaceShipTwo is a larger version of SpaceShipOne and is capable of carrying six passengers along with the pilot and co-pilot. They anticipate being able to provide "cabin" comfort similar to that on a commercial flight. Passengers will receive "royal" treatment both before during and after the flight. During the weightless period, passengers will be able to remove their seat belts and experience free-floating in space. Obviously, the experience will be

somewhat choreographed in advance so passengers aren't bouncing off one another. A video was shown at the end of the presentation that simulated the experience from takeoff to re-entry. I would consider it "Hollywood" caliber. It was a great sales tool, as I felt I was actually taking the trip into space! Awesome!

Of course, the opportunity to see Buzz Aldrin was the highlight of the entire conference for me and resulted in a very special memory. I always expected to one day meet the Apollo 11 astronauts since their touchdown on the moon, but other priorities have always taken precedent. When I found out that he was going to be speaking at the Saturday luncheon I thought it was going to be another missed opportunity, as I was scheduled to man the DARS exhibit during that time. Mark Fulmer knew it was one of the events I wanted to attend and offered to cover for me during that time. I really didn't want him to lose out on the opportunity either, but as it turned out, due to the cancellation of the DARS launch over the Memorial

Left—Michael Coats, former astronaut and current Johnson Space Center Director, speaks with one of the attendees.

Right—Alex Tai, chief operating officer for Virgin Galactic, explains their vision of personal space flight in the very near future.

Photos by James Gartrell



Day weekend, plenty of volunteers were available and willing to attend the booth. Before leaving for the day on Friday, John Dyer and I were talking about attending the luncheon and possibly getting to meet Buzz. We were both pretty excited about the opportunity. Tired, and with a 70 mile drive home, I didn't think much more about it though.

I got up early the next morning to make the drive in to arrive by 7:15am to work the registration desk. To my surprise, John had also been scheduled to work registration. He arrived right after I got there and got us both a cup of coffee. Next, he pulls out a copy of one of Buzz Aldrin's recent books, Reaching For the Moon, and gives it to me. He had stopped the night before on his way home and picked up the books. Wow! What a nice thing to do! I gave him a big hug! The two other NSS folks working registration with us started laughing. John was a little startled by the show of emotion, but it was a very nice thing to do. I know John was as

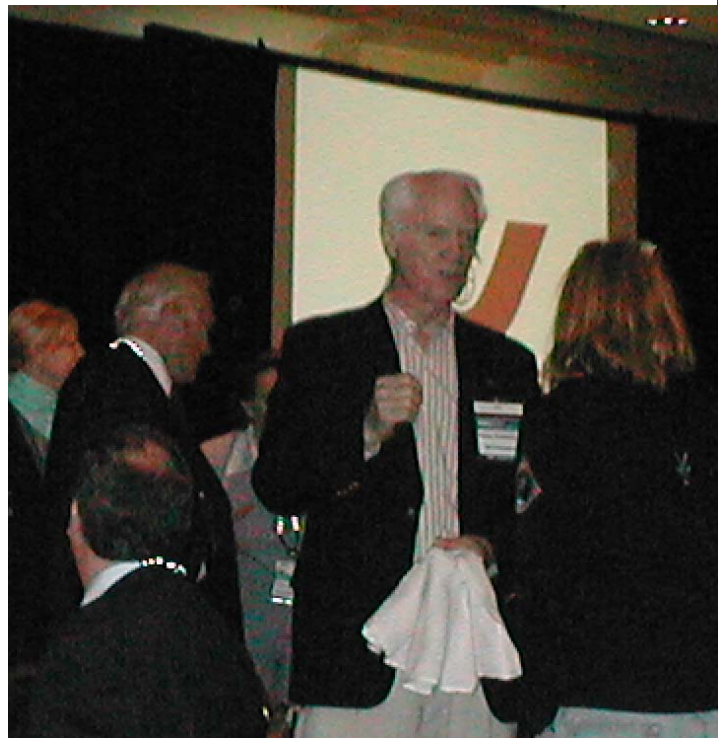
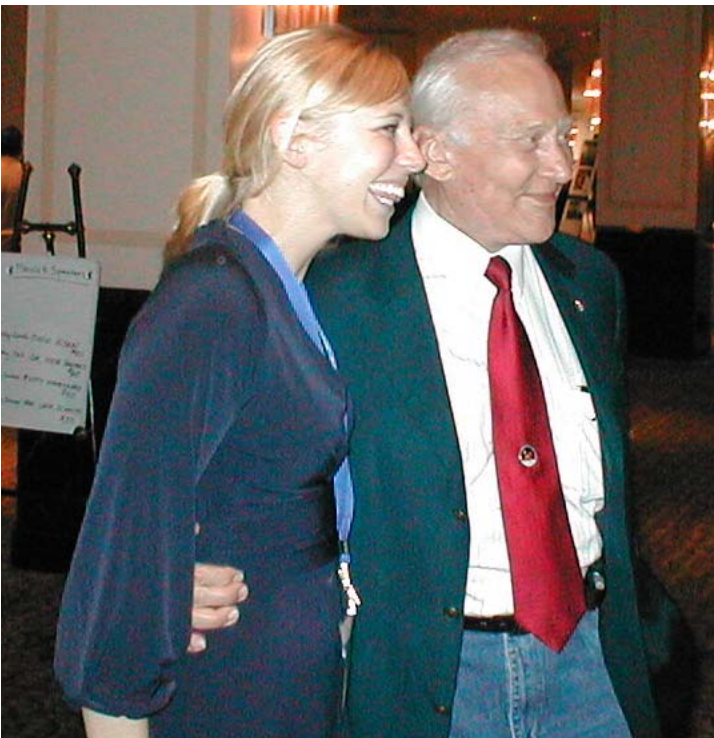
tired as I was when he left the night before, but he still managed to stop and pick up the books. Not just one book, but one for both of us. Heck, if that isn't deserving of a hug, nothing is!

With a busy day ahead of us, we set aside our books and began to train for handling the expected crowd. Good thing, too, as it was pretty hectic during the beginning of the morning. Anyone that hadn't already gotten them wanted to buy tickets to the luncheon. Over 240 tickets were sold. We had just settled back from a rush of attendees and were chatting with the NSS folks when Buzz Aldrin and a host of NSS dignitaries came around the corner of the registration desk. They were bringing Buzz by to introduce him to the NSS folks. One of the women ran out from behind the registration desk to get her picture taken with him. In her haste, she forgot to get her camera and asked me if I would get it for her. As I gave it to her I quietly asked that she let Buzz know we wanted to have him sign our

books. She agreed. Before the NSS dignitaries could rush away with him, we managed to get his attention and sign our books. Woohoo!! He was talking to us as he signed our books, but I was so flabbergasted I can't tell you anything he said. After he left, we all just stood around grinning at one another. It was surreal. I turned to John and exclaimed, "I love you man!" We all laughed. "No hugs," John said. We laughed even harder.

Lunch was great, too. Listening to Buzz speak, it was easy to tell that he loved being in space and would still like to go there. In talking about what it was like in the early days of space, he said, "We didn't know where we were until we got there!" I think that quote, more than any other, sums up what it must have been like as an early space pioneer. I wish I had told him thanks for taking the risk to show us the way. At least I managed to thank John for making it a very special day!

Left—Apollo 11 astronaut Buzz Aldrin graciously takes time from his schedule to have his picture taken with an NSS volunteer.
Right—At the luncheon: Apollo 9 astronaut Rusty Schweickart in the foreground, with Buzz Aldrin behind and to the left.
Photos by James Gartrell



The Shock Cord

By George “The Other” Sprague

Ah yes, just a little length of elastic holding the body and nosecone of the model rocket together, and hopefully some sort of recovery device, like a parachute or streamer attached to it.

Many new rocketeers, both young and old, simply follow the model rocket kit manufacturers’ instructions on how to attach the shock cord, and often use the cord included in the kit without giving some extra thought as to why it is attached the way it is, and what other purposes it may have.

Most kits have instructions that tell you to create a mount for the cord from a template, usually paper or thin cardboard, and glue it inside the body tube. Fine and dandy, but what happens when its time to replace the shock cord? You risk tearing the body tube while removing the old mount! There is a better way. One that will allow you to replace the shock cord in a jiffy, without tearing up the body tube and, as a bonus, will help reduce

zippers (that’s when the cord slices down the body tube from the forward opening).

You’ll still need to use the paper mount, but this time you make a loop of thin Kevlar cord (10 lb strength works well, even 5) and glue that to the mount. Follow the procedure of folding the mount over the loop. The Kevlar loop needs to be long enough to protrude about an inch from the forward opening. Strengthen the knot on the Kevlar loop with CA (cyanoacrylate) or superglue. Careful with this stuff!

The loop will hit against the inside of the body tube and out through the opening in two places, thereby spreading the load and tension against the body tube in two points - less chance of a zipper happening that way.

All you have to do next is attach a proper length of shock cord to the

loop and you are in business. What’s the proper length? I like to use at least two times the body tube length. This way the cord doesn’t snap back violently against the body tube, crimping the forward opening.

And when it comes time to replace the cord, which I do after every two to three flights (cheap insurance against the cord ripping, causing a separation), it is much easier to cut the cord off the loop and replace it rather than having to tear the mount off the body. By the way, any sewing supply place or department store carries shock cord material. They call it elastic – we know better. Usually you can purchase 3 – 4 yards for less than two dollars.

So there it is: a simple, easy way to make your model rocket last longer, and minimize the chance of suffering a zipper and separation because of a torn cord. Happy flying!

Left—My method of shock cord attachment is very similar to the method George is discussing, so I decided to include some of my pictures for illustrative purposes. Note the CA soaked into the top of the tube to minimize the abrasiveness of the Kevlar shock cord, and to strengthen the tube so that little dings aren’t pulled into the tube by the shock cord. (Editor)

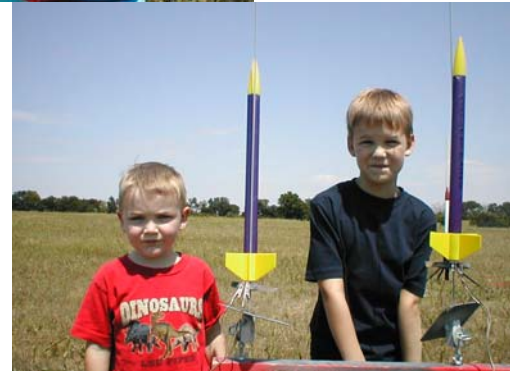
Right—A shot of the paper attachment inside the tube, exactly as George describes. Epoxy over the mount for heavier duty purposes. (Editor)

Photos by James Gartrell.



Flying Frisco By James Gartrell

I hope you've heard of the new field DARS has secured, especially since we've already held several launches from the site. It is located in Frisco east of Preston Road off of Panther Creek Parkway and is only capable of handling up to G motors if the rocket is heavy enough, but that's still pretty fantastic. Having a close-in field will be really helpful for attracting new members, handling outreach events, and for regular monthly launches without having to travel a great distance. If you're like me and don't fly anything bigger than a G motor, it is perfect! To celebrate the field, I have included some of my pictures taken there from the last couple of launches I attended. Oh, and thank Tim Sapp and Don Magness for securing the field. At least I think they are the responsible parties. Enjoy!



Top left—A young boy decided to have his birthday party at the field in May so he and his friends could fly rockets. Two of his friends here are having fun flying, perhaps, their first rocket. And below that, the birthday boy!!



Top right—The Oracle records a snapshot in time!

Above left—Doug and Haley Sams get ready to fly on the field's first day.



Below left—Dad and daughter are ready to fly! No, Dad's rocket isn't the little pink one on the left!

Above right—More of the birthday boy's friends are ready to fly.

Middle right—A couple of folks come by to fly a rocket, only to run into you know who with a camera!

Bottom right—Shea and Taylor flying low power!!!!



DARS Events

By James Gartrell

I removed the schedules for the launch and other events. Well, since meetings have been routinely scheduled on the first Saturday of the month and we now have our launches regularly scheduled at the Frisco field on the 3rd Saturday of every month and either McGregor or Windom (depending upon the season) on the 4th weekend, it only made sense. Plus, the DARS Calendar has all you want to know!

Look for something new here next month! Maybe it'll be just about the latest and greatest events, whomever the sponsor is. Want to see something particular? Let me know. Guess I'll make it sort of a manufacturer's "Whassup!" for some of DARS recent sponsors for now.

There are a lot of new kits out there. Have you been checking them out? Squirrel-Works latest release is the 24mm Metropolitan Police Call Box. It is very cool! Not your average rocket, not by a long shot! Two big 24-inch red mylar parachutes bring the rocket gently down after a very amazing flight. Red River Rocketry's latest, the P-Chuter Xtreme is a hit, too! This 29mm kit flies like a bat out of, well it's just awesome and features some of the latest technology in fin-mounting. A super nice 18" ripstop nylon parachute brings it down gently from those lofty altitudes. You'll want to get both of these rockets, and you'll be glad you did!

Oh, Hawks Hobby's blog indicates they are working on a Super Solar Sailer and a Super Orbital Transport. I can't wait until those are released. Rumor has it that the Super Solar Sailer might not be too far away. Also, a birdie told me they were flying a Super BOMARC at NSL 2007. Ooohh!!

Semroc, of course, has a couple of new kits out that were released at NSL 2007: the OSO and a really nice looking rocket called VF-261. The OSO was an old FSI rocket, but I don't know the story on the VF-261. Guess I'll have to email Carl and get the scoop. With these kits right on the heels of their not too long ago released SPEV, Centurion and Defender, I'm sure they're plenty busy filling orders.

Below, and on the next page, are ads from some of the club's most recent sponsors. Of course, Red River and Squirrel-Works contribute in some way to almost every launch, and Hobbytown provides a routine 10% discount to DARS members. Our vendors are supporting us, so please don't forget to support our vendors with your rocketry dollars.

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DID YOU KNOW?

Estes has announced the re-release of the Interceptor!! What could beat that? How about an E-Interceptor. Yep! With the earlier announcement of the also pending re-release of the Red Max, there's some cool happenings at Estes.

Want to know the latest and greatest about the most recent rockets. Visit EMMR to find out. Nick regularly posts rocketry reviews written by folks who are willing to share the good, the bad and the ugly about the latest rocketry products. Plus, you have the opportunity to win some of those recent products by joining in on the latest contest; he usually has at least one going on at any time. That's only the tip of the iceberg, though. Visit to find out what else is there and I guarantee you will be adding it to your Favorites!

Have you seen the Launch magazine? It's a relatively new magazine that features some very cool articles. There were some fantastic articles about Vern Estes and Centuri's Lee Piester in the first couple of issues, and they promise to include additional articles of rocketry's historic past in future issues. Plus, articles about today's events in rocketry and related events.

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DARS

The Dallas Area Rocket Society is a non-profit chartered section of the National Association of Rocketry ("NAR"). Its purpose is to promote the hobby of consumer rocketry in the Dallas/Ft. Worth metropolitan area.

Membership in DARS is open to all interested persons. Membership in NAR is encouraged, but not required. Annual dues are \$10.00 for individuals and \$15.00 for families. The entire family, including children, are welcomed to the meetings. Go to the website and fill out and send an application to join or renew your membership.

The club normally meets on the first Saturday of each month at 1:00 p.m.

Meetings are held in Plano, TX at:

Plano Late Night Bingo
 1805 Ave K (18th and K St.)
 Plano, TX 75074

Exit off Hwy 75 to East Plano Parkway (just north of George Bush Turnpike—Hwy 190) and go east, turn left on K St., and turn right into the shopping center just north of 18th St.



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