Granddaughters, the Stinson Voyager, and Space Launches ©
by
Matthew A. Nelson

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Subject: *Special anniversary of launch of Soyuz TM-15, July 27, 2006*

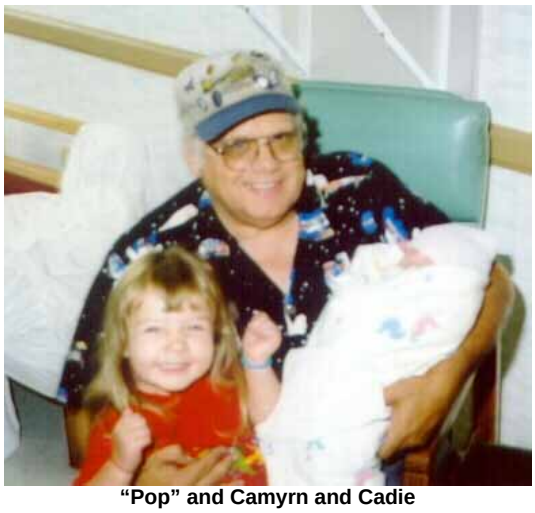
Hi there my friends and family,

Today is the 14th anniversary of the launch of Soyuz TM-15 that I saw in Russia. As you probably know, last week was the 37th anniversary of Apollo 11 landing on the moon on July 20th [Houston, Tranquility Base here, the Eagle has landed!" and "That's one small step for a man, one giant leap for mankind."]. The Apollo 11th anniversary came and went without the fanfare that I was hoping for. But in keeping with the space spirit of schedule changes and contingency plans, I figure today's anniversary calls for a special celebration. Therefore, I want to inform you that a new space cadet joined the occupants of Planet Earth. Cadie Lynn Larson, my second grandbaby and granddaughter, was launched and/or deployed from the mothership at 1:16 AM this morning. She is now doing an extended EVA, and is on external life support. All systems nominal and operating well. Payload is 9 lb, 13 oz., and 19 inches in length.

Matthew A. Nelson, STS-144, part of TM-15 watch-it-launch gang, and Cadie and Camyrn's plane crazy grandpa

Cadie Lynn Larson on the day of her birth, July 27, 2006

Left: Cheri, Cadie Lynn, and John
Upper: Cadie (3 weeks) and Camyrn
Photo by Heather Bowie



“Pop” and Camyrn and Cadie

Grandma Karoline

Cadie (2 months) & Grandma Bev

Cadie (2 months) & Michelle

Hey congratulations Matt! Someday when Cadie is old enough you'll have to tell her how 14 years to the day before she was born you were with a bunch of space loons from all over the world, in the middle of the desert in central Asia, in what had been until just 8 months earlier a closed, secretive, "enemy" nation for the previous 75 years, to watch 3 men launched to an orbiting space station. She will then simultaneously know that the world is nuts, and that anything is possible.

Cheers,
Ken

Ken Harman is one of the guys that I met during that launch trip. Later on in this story there will be photos of him and some of the other members of the Soyuz TM-15 Watch-It-Launch-Gang. And for good measure, I just might have to throw in some more airplane stuff, more stuff about my 1947 Stinson 108-1 Voyager, and maybe even some more space stuff. You might have already figured that out because you know how I have a tendency to do that, or because you saw that when I signed my name on the email I wrote about Cadie's birth that I threw in things about space missions and being Cadie and Camyrn's plane crazy grandpa. At any rate, it is time for me to proceed with this story on space missions and Stinson flying machines (well, sometimes it really does fly) and other airplanes. Sometimes I write in chronological order, other times I go off on a tangent about one particular subject, and other times I just ramble. When I write stories, it is with the idea of writing for my grandchildren, for them to know about their plane crazy grandpa, so often, the words are more of a personal nature, although most of you know that I like to share these stories. *"Know that the world is nuts, and that anything is possible".* I like that line, Ken.

My friends, Joe Tanner and Bill Readdy, sent very similar emails after my email to them about the birth of Cadie: *"Congratulations, Gramps! How appropriate."* Both men are astronauts. Kinda neat to have astronauts sending me congratulations about my granddaughters!

July 27th was also the 75th anniversary of the beginning of the flight that Anne Morrow Lindbergh and her husband Charlie took from New York to China in 1931. Anne very poetically captured the essence of this flight in a seaplane named *Sirius*, built by Lockheed, my former company, in the book she wrote, North to the Orient. New York, Washington D. C., New York, Baker Lake, Nome, Japan, and the Yangtze River. Places where I have travelled. I flew to Nome in the Russian An-2, and to Baker Lake in a floatplane. Very good book, well worth reading. Makes me want to fly around the world. Maybe I will some day.

When I finished writing the last section about personal flying in "My Life Around Airplanes", it was in the Spring of 2003. In that story I wrote about my granddaughter Camyrn Dawn Larson being born on March 21st. I also wrote

about flying the Stinson on that same day to celebrate. In other stories written during the past three years I wrote about flying in the Antonov An-2 and acquiring my floatplane rating, but I didn't include these photos of Camyrn taking her first airplane ride on Southwest Airlines. I wish I could say that I flew her around in the Stinson for her first flight, but that didn't happen. Oh, well, at least she flew in an airplane when she was only four months old!

Cheri, John, and Camyrn Larson on Camyrn's first airplane ride on Southwest Airlines. Camyrn was four months old when this photo was taken in August 2003.

Camyrn at two years old

Camyrn and Karoline

From March 10, 2003, the date I first soloed the Stinson that I own with Tom Jenkins, until we took it to Galveston in April of 2004 for its annual inspection, I flew it solo for 96 hours. During the 13-month period that I flew those hours, sometimes Tom and I, or my son-in-law John Larson and I would go to Brazoria County Airport (LBX) near Angleton, Texas and eat lunch at the Windsock Café, located right on the airport grounds. We would taxi up to the café and sit back and enjoy the looks that the restaurant patrons gave the Stinson. I also flew on several trips to towns that are one or two hours away from my home base of Pearland Regional Airport, such as Beaumont to the East, and Burnet, Pleasanton, and Fredericksburg to the West. There is a Commemorative (old

name was Confederate, which I liked better) Air Force museum at Burnet, which is a town near Lake Buchanan, where I have received a couple hours floatplane training in a Cessna 172.

When I flew to Fredericksburg in September 2003, I left the plane overnight at the airport and drove to a ranch near Johnson City, where The Explorers Club was having a meeting. On the evening I arrived, we went out to a cave and watched bats emerge. One of the attendees was Astronaut Charles Duke, who walked on the moon during the Apollo 16 mission. In my mind I will always remember one photograph I wish I had taken but it would have been inappropriate. As the bats flew out of the cave near twilight, Mr. Duke stood silently and watched, with a bright crescent-moon softly illuminating his face. Here is this guy that has walked on the moon and the moon hangs over his head sort of like a halo. The next day we were given a tour of the ranch, where some African antelope reside, and a dinosaur footprint remains. Our guest speaker that day was Dr. Jane Goodall. Naturally, the photo I had taken with me standing next to her didn't come out. While flying the Stinson home the next day I couldn't help but marvel about the accomplishments of General Duke and Dr. Goodall.

Joe Tanner took me flying with him in a Stearman in November 2003. It's a bright yellow one that he has access to, and is kept in a hangar at the old Ellington Air Force Base. We flew for an hour, and he let me fly it for much of the time. In years past Joe instructed other astronauts in the Shuttle Training Aircraft and the T-38s before he became an astronaut himself, and has 80 hours flying the Guppy. During this same year I had also flown with Bob Kraemer in his Stearman at St. Charles, Mo., flying over the Mississippi River, wondering about the barge pilots and the things they had seen over the years and wondering about the kind of cargo and the destination of the cargo. There's nothing like stick and rudder flying in an open cockpit airplane and grinning ear-to-ear with a big bugs-in-the-teeth smile!

For Thanksgiving of 2003, I took off in the Stinson to go see my mother and my sister Karen and her family who all live in Aledo, Illinois. My first fuel stop was in Longview, Texas. Last February and March, during the search for the debris from the space shuttle Columbia burn up, many search crews operated from this airport. Inside the lobby were several items such as patches from the STS-107 mission that were given by NASA to these great Americans. Because I hadn't taken off until about noon from the Pearland Airport, it was nearly dark when I arrived in Ft. Smith, Arkansas. I found a motel and settled in for the night, wondering if the weather would ground me the next morning. It did. If I had my instrument rating, or if I had had more experience, I might have given it a try, but I decided against flying in low visibility and ended up renting a car and driving to Illinois. On the way I passed through Lebanon, Missouri, and decided to go see the house where Mom and Dad lived for sixteen years until his death in 1996. I'm glad that I stopped; his name was still on the mailbox. Either nobody was home, or nobody lived there anymore, but the house seemed like it was in better shape

than when my folks lived there. Mixed emotions! In 1995 I had bought airline tickets a couple months prior to Thanksgiving while I was living and working in Wallops Island, Virginia in preparation for my trip to Antarctica in 1996, the year I Wintered-over. My boss and I had had a disagreement prior to me visiting my folks, and he had threatened to fire me over a misunderstanding, but I am glad that I insisted that I would be going to Missouri before my trip to the ice because it was at this house in Lebanon that I last saw my dad alive, just prior to my departure to the ice on the day after Thanksgiving, 1995. The ironic part about it all is that I was driving to this same house on December 23, 1996 to take my folks to the St. Louis airport so they could spend Christmas with us. I had bought my new F-250 after coming home from the ice, and had planned on starting back working with Lockheed Martin before Christmas, but they told me to wait until January 1997. So my plan was to drive to Missouri, take my folks to St. Louis, fly with them to Houston, spend Christmas at home, then go back with my folks to Lebanon, and continue driving around the country for a week or so. My folks had taken their dogs to a kennel and were driving home on I-44 when the fan belt broke. My dad was walking to Wal-Mart about a mile away to buy another fan belt and collapsed as he was nearing the exit ramp. He was probably dead by the time he hit the road; if not, he perished within a few minutes. At that time I was only four hours away, and I have to admit, even as strong as my faith is in God, when I die I hope to ask God why couldn't He wait to take Dad a few hours later, because it had been over a year since I had seen him and I was so close. I'm sure God has His reasons, but I sure don't understand them now. What breaks my heart even further is that the night before I had talked to Mom on the phone but I didn't talk to Dad. Time to move on to the rest of the story.

Bruce Bohannon and his "Flyin Tiger"


Nice looking Stinson 108

In May 2004, the Experimenters Aircraft Association (EAA) held a fly-in at New Braunfels, Texas. My son-in-law John and I drove there to see it. Bruce Bohannon had his Exxon-sponsored "Flyin Tiger" on the ramp. He is still trying to fly his plane to 50,000 feet. He has come close, but hasn't made it yet. One of these days he will. Once or twice he had to dead-stick the plane onto the runway at Brazoria County Airport. But he is a superb pilot, and managed to do that unnerving task very skillfully. My main flight instructor, Carl Nepute, taught Bruce

to fly gliders many years ago; while giving me training in the Stinson, we landed once and did a fly-by at Bruce's Flyin Tiger grass strip.

So why did John and I drive to New Braunfels when I own a Stinson and the weather was good? Well, the Stinson was in its annual inspection at Galveston. As I previously mentioned, I had flown it there on April 28, 2004. And with the exception of two weeks in February of 2005, it stayed in Galveston for almost an entire year. I finally flew it back to its home airport of Pearland, Texas on April 20, 2005 (that day would have been my dad's 85th birthday). It's a long story why it had been down for so long, but part of the time the cylinders were being rebuilt. They had been rebuilt a year earlier, but the workmanship from another mechanic was poor, so when I took the plane to Bill Wynn, a top-notch mechanic with a sterling reputation for craftsmanship and integrity, he performed a compression check and gave me the bad news. Five of the six cylinders on the World War II Lycoming O-435-C engine were salvageable; but we had to scrounge the country to find the sixth one. Jim Gardner flew with me in January to break in the engine, but then I did a hard landing and had to have the shock absorbers replaced in the plane. In February the magnetos had to be reworked due to an excessive drop of RPM in the right one, and the air speed indicator and altimeter weren't reading right. We figured out later that the air speed indicator probably gave me an erroneous reading of 80 MPH, when it was probably much less, causing me to stall about 20 feet above the runway, giving me the hard landing in January. In February, when I took the plane back to Galveston to have the magnetos repaired, while crossing over the threshold during landing, my altimeter read 500-feet, when in actuality I was only about 30-feet above the runway. Bill purged the pitot lines and hooked up the static line to the instruments, which he found disconnected.

With good compressions, the engine just barked, sounding almost like a Harley-Davidson. Between April 20th and May 14th, I flew the plane eight times. One of those times Tom went with me to grab a hamburger at the Windsock Café at the Brazoria County Airport. On that particular day the local EAA chapter was hosting a fly-in and serving bar-b-que, so Tom and I changed our minds about having a hamburger at the Windsock. But any other time, if you want a good hamburger, go to the Windsock.

Around the end of April there was another air show in Galveston. This time I drove because I took Quincy Bush to see it. He is the young man I work with in the Big Brothers Big Sisters organization. We were lucky to see world-class aerobatic pilot Debbie Rihn-Harvey fly. She has won the Woman's National Aerobatic Championship seven times in a row, and just recently won the 2006 Championship title, over both men and women. She has also been selected to be on the U. S. National Team to go to the World Championship next year. Congratulations, Debbie!

World-class aerobatic pilot Debbie Rihn-Harvey at Galveston, May 2005

Beech Staggerwing, Galveston April 2006. Note Stearman on right.

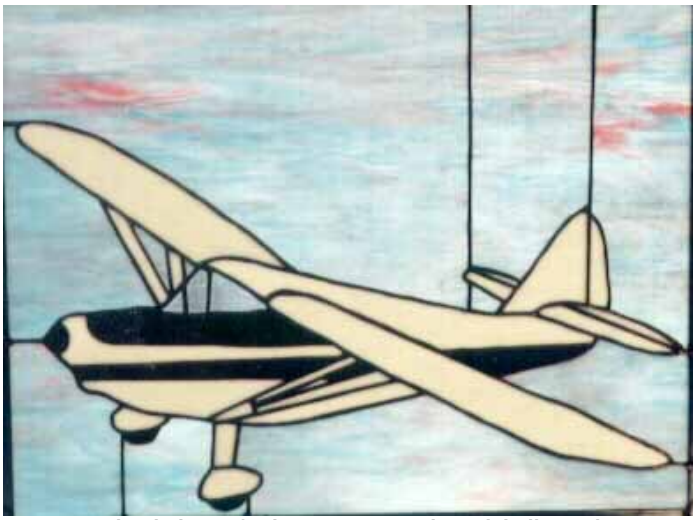
Warbirds on display at Galveston, April 2006

Stinson Voyager at Galveston, April 2006

On May 1, 2005, I took Michelle's fiancé Keith Nettles flying. On the next page there is a photo of the two of them. Karoline's parents were here from Wyoming and I wanted them and Camyrn, my two year old granddaughter, to see the Stinson, "Pop's airplane". After Keith and I landed, we taxied to the area where everyone was parked and Michelle took some photos. Well, I would be doing Camyrn an injustice if I failed to include the photo of me holding her, and I don't want that to happen. She sat quietly in her dad's lap while we taxied to the hangar. In the later printouts of my story, "My Life Around Airplanes", I inserted this photo on the last page, so I realize some of you have already seen it.

Two-year old Camyrn and Pop, in front of the Stinson, May 2005

Keith Nettles and Michelle Nelson - their wedding date is set for March 11, 2007. Nothing to do with the Stinson, just a good place to insert the photo!



Stained glass of Stinson Voyager that Michelle made

Broken Crankshaft

Typical day in May in South East Texas. Light ocean breeze, somewhat muggy, but not as bad as those dreaded July and August hot humid days. Not quite like flying in an open cockpit Stearman, but those sliding windows on the Stinson gives the breeze a place to hang out while passing through the cockpit, to rest for a few minutes before embarking on its journey around the world, its mission to take Diane's air back to Mongolia.[1] *Grateful for the brief chance of hitchhiking in the cockpit, the wind normally gracefully cools the pilot momentary,*

[1] Kazakh Eagle Hunters (in Mongolia), by Matthew Nelson in 2000

before it too is funneled back into the sky, guided by forces even stronger than itself. Today something is different with the pilot, who watches the lazily windmilling prop with a look of horror and intense concentration on his face, oblivious to the wind's effort to cool him. And something is different with the plane. No longer does the neighing of 190 horses drown out the wind's soothing sound. So the wind listens, because there is a change in the plane and in the pilot, and the wind goes silent and hears the pilot praying out loud to God, and the wind lingers long enough in the cockpit to say, "Godspeed, Matthew!" and God speeds up and directs the new guardian angel, Jack Clodfelter, to take care of Matthew. Upon exiting the window, the wind looks back and says, "Good luck, Kid", and God gives the kid good luck and the wind slacks off and God and Matthew safely land the plane together, although the engine has stopped completely. Saying that Matthew lands the plane without power is not quite accurate, because he lands under God's Power. Matthew steps out of the plane and gives many thanks to God, and tells the wind, "Via con Dios, adios amigo!"

> *Psa 18:10 And he rode upon a cherub, and did fly: yea, he did fly upon the wings of the wind.*
>
> *Ecc 1:6 The wind goeth toward the south, and turneth about unto the north; it whirleth about continually, and the wind returneth again according to his circuits.*
>
> *Joh 3:8 The wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh, and whither it goeth: so is every one that is born of the Spirit.*

Although the "Float Plane Trip to the Arctic Circle" story I wrote in 2005 starts off with the same event in this paragraph, I will repeat it here for clarity. On May 14, 2005, I encountered sudden and unusual vibrations about 5 minutes and 1500 feet after take-off from Brazoria County Airport and then my engine sputtered once. Even though I knew I had plenty of fuel, I switched tanks and turned back towards the airport, but the plane was flying well enough to enter the traffic pattern. Just as I entered downwind the engine just died – boy, that deafening roar of silence opened the adrenaline floodgates! Immediately, I banked towards the runway, and surprisingly was calm when I announced I had an engine out and was coming in on runway 35 (traffic was using 17). A helo pilot nearby asked me my position, I told him, rolled out onto final about 30 feet above the runway, landed on the centerline, did a slight bounce, rolled about 300 feet to a turnoff, and stopped between the runway and taxiway, shook up but OK. My hands started shaking when I stepped out of the plane. I figure I had about 12 seconds from the time the engine stopped until I landed. Now, on future astronaut applications, I can now apply to be a shuttle pilot in addition to being a mission specialist, since I now have experience with dead-stick landings. A power-off landing doesn't sound quite as ominous as using the words "dead-stick landing". The guys at the airport said I was now in the same league as Bruce Bohannon, but somehow I can't help but think that he is a much better pilot than I

am. When I called Karoline to tell her I needed a ride home, I told her that I was OK and the plane was OK, but I had just done an emergency landing when the engine quit. It took a second or so before the words sunk in – "You had to land with no power?" she exclaimed! One of the commercials on TV at the time of this incident had a guy pushing his motorcycle and his wife drives up, "Daddy just had to have a motorcycle, didn't he?" After she picked me up, Karoline said, "Daddy just had to have an airplane, didn't he?" My friend Joe Cavazos celebrated his 40th birthday that evening – I went to his party, but Brian Collier recalls that my hands were still shaking. While this definitely shook me up, in no way does it compares to what happens often to Alaska bush pilots. Charles M. Thomas Jr. wrote a book called "Wings over Wilderness" about his friend Paul Shanahan. Paul had at least three crankshafts break on him while flying in Alaska, and on one occasion the prop went spinning off into the Brooks Range, with no paved runway within 1000 feet of him!

When the engine sputtered, I thought the cause might have been water in the fuel, but I had checked the fuel when I departed my home field 30 flight minutes earlier. Post landing revealed no water in the fuel, but Bill Wynn found both mags had sheared at their hard rubber couplers, and the starter drive shaft had broken. Without going into all the bolt-by-bolt details, eventually, the six cylinder Lycoming O-435-C engine was shipped to Omaha for repair by Central Cylinder Service, Inc. After they received the engine I had a call from Dan, who works there, telling me that the engine had a broken crankshaft. I guess a crankshaft snapping into two pieces is a good enough reason to experience those sudden and unusual vibrations. Look Mom, I now have a twin-engine airplane, one with four cylinders and one with two cylinders! SFC Jack Clodfelter, my old army sergeant, who died in early 2005, had his first chance to become my guardian angel that day. I wasn't figuring on breaking him in for his new role as guardian angel until July when I had planned on flying the Stinson to Alaska.

Broken crankshaft from the Stinson's Lycoming O-435 engine. Photos by Bob Canup

> bravo! aviate, navigate, communicate (if you get at chance.) glad you were proficient and took immediate action, had you hesitated you might have a re-build on your hands. well done, sir. too bad about Alaska, but worrying about a sick engine up there doesn't offer quite the same recovery options... Reads (Bill Readdy)

One unique thing about the Stinson story is that while the airplane was at the Brazoria County Airport, it was kept in the same hangar with the Sikorsky S-43, previously owned by Howard Hughes, which he used as a test plane in preparation for his anticipated flight around the world in the Spruce Goose. Phillip Zwahr, my mechanic there, had the office manager of Tri-City Aviation take the next two photos.

Howard Hughes S-43 and my Stinson

Close-up of nose S-43 owned by Howard Hughes

Lorraine Garcia, the Customer Service Representative for Brazoria County Airport, designed a brochure for the S-43. Quoting directly from the brochure, here are a few facts about the S-43 Sikorsky:

CHRONOLOGY

1935 – The S-43 had its first flight.
1937 – Howard Hughes purchased the Sikorsky for the purpose of a record setting flight around the world. He began flying at the tender age of 14.

World War II – There is strong evidence that the S-43 was used for secret missions – This information is classified to date.

May 17, 1943 – With Hughes at the controls, the plane crashed at Lake Mead, Nevada, with two casualties and three survivors.

1947 – After an expensive and lengthy restoration from the 1943 crash, Hughes used the Sikorsky for extensive design testing and to sharpen his flying skills. Hughes made over 200 take-offs and landing from water to prepare for this one time flight. [His flight around the world]

1952 – For reasons known only to him, Hughes orders his favorite plane – the Sikorsky, to be kept under 24-hour guard in a hangar at Hobby Airport in Houston, Texas.

April 5, 1976 – Howard R. Hughes died. Howard Robard Hughes, Jr. (1905 – 1976), aviator, movie producer, and billionaire was born in Houston, Texas.

1977 – The Sikorsky was purchased by a collector named Ronald Van Kregten, and Restoration of the Sikorsky aircraft began.

October 6, 1990 – The first flight of the Sikorsky since 1952 was ferried from a maintenance base in Manvel, Texas to Ellington Airport with Captain Jesse E. Bootenhoff at the controls.

Just a few days after writing about the S-43, I came across A Salty Piece of Land, by Jimmy Buffett. In this novel, Tully Mars, a cowboy from my home state of Wyoming, longed for the ocean, and followed the wind and his dreams. Now I live near the ocean and dream of living back in Wyoming, but wouldn't pass up a trip to go to Mars. One of Tully's friends, Willie Singer, ends up flying this exact plane around the world. I too have the dream of someday flying around the world, but I doubt it will be in that plane. But who knows, the way things have happened in my life, this could be the very plane I fly! Quoting from this work of fiction, there is a slightly different version of what happens to the Sikorsky S-43 than what is written in the brochure:

"Willie had bought a new plane. Actually, it was quite an old one and, like all old planes, came with quite a story…A huge, rusty fisherman's

anchor was planted at the head of the lighthouse driveway. The sign on the chain read EQUATOR AIRLINES – KEEP OUT. Willie slipped under the barricade. In a deserted boatyard, he came face-to-face with an airplane.

At a table next to the plane, an old man was busy working on what appeared to be a model plane. Willie saw that the model was made of bamboo and matchsticks, and it was a replica of the antique seaplane that sat in the field. It turned out that the old man, Burt Brown, was the owner of the plane and the property, which he had turned into a flight museum. He told Willie his story, how he had flown for Pan Am across the Pacific in the Clippers and had retired after the war…He had no idea what he wanted to do with this newfound money, but the first thing he did was fly to Hawaii. While there, he read in the paper that a local island-hopping seaplane service was ending its flying boat operation and switching to land planes. The retiring seaplane was a civilian S-43, smaller that the four-engine S-42 flying boats the old man had flown across the Pacific. He said they called them Baby Clippers.

He then went on to say that Howard Hughes had originally bought the plane for a proposed flight around the world. He had modified it for the trip, installing larger engines and more fuel tanks and a luxury interior; but then the seaplane nearly crashed during a test at Lake Mead in Nevada, and Hughes sold to the airline in Honolulu. Eventually the plane would be auctioned off. Burt Brown bought her for 'chump change,' then hired the crew to fly him home to Sausalito. His dream had been to complete the trip Howard Hughes had built her for.

A few beers later, Willie offered to buy the plane. Burt said he would sell it to him only if he would do the trip around the world. They shook hands. That was a year ago, and now the trip was going to happen. He was heading to San Francisco for the final test flight and to wait for a weather window for the return flight of Equator Airlines Flight One to Honolulu. He had named her The Flying Pearl. He was going to fly and surf his way around the world."[2]

Tuesday, March 14th

Finally, ten months to the day when the crankshaft broke, I finally flew the Stinson. Carl and I flew a Cessna 172 to Brazoria County Airport, and then flew around the local area in my own (and Tom's) airplane. What a great feeling! To top it off, I absolutely greased the two-point landing. Carl brought the Stinson back and I flew the 172. A week or so later my friend Ron Caswell came in from Florida to support the upcoming STS-121 mission. He wanted to see the plane, so after work we went out to the hangar and I started it up. The plane, not the

[2] Buffett, Jimmy. A Salty Piece of Land. Back Bay Books/Little, Brown, and Company. 2004. pp 96-99

hangar! But if the image below was really enlarged, one could tell by my grin that the noise of that 190-hp engine really didn't bother me. As I write this paragraph in August, I can't remember why we didn't fly that night. Dave Hess, the man whom I wintered-over in Antarctica in 1996, also dropped by that same week and had a chance to see my flying machine.

Running up the Stinson. Photo by Ron Caswell

Saturday and Sunday, June 10 – 11th

Well, flying the Stinson 40% of the time and having it in maintenance the other 60% of the time is still about right. Well, it ain't right, but that's how it has been over the four years Tom and I have owned the plane. Generator problems and prop problems were the latest reasons. Oh well, the mechanics have families to feed and bills to pay, too. I just wish they would generate their income from somebody else's generator!

But today, on June 10th, I filed a flight plan, topped off the fuel tanks, borrowed Bob Simle's external antenna for my handheld GPS receiver, waved to him while he videotaped me pre-flighting the Stinson, and took off to San Antonio's Stinson Field. Yep, Stinson Field, named after the same Stinson family that designed and built my Stinson. The Explorer's Club was having a dinner in San Antonio. Actually, going there was out of the way for my planned flight to Kentucky, Illinois, Minnesota, Nebraska and places in-between, but it just gave me an excuse to fly longer. Westward we headed, me and my Stinson flying machine, first at 4500 feet, then at 2500 feet, because I wanted to be able to see the ground and blue sky between the clouds, instead of maybe having to illegally fly through the inside of gray clouds with no visibility. The GPS receivers did their thing, my thumb on the chart kept me honest, the plane, and newly rebuilt engine with a single piece crankshaft from my Alaskan friend Shane Horton and my recently overhauled prop all did their thing, and between sips of water my grin did

its thing of tickling my ears. There is Eagle Lake, home of my very first cross-country destination; over there is Shiner, home of a Texan beer and one of those old grandeur 19th century downtowns; look, there is the Gonzales water tower that Tom Jenkins and I remember very well from a flight several years ago that gave us the name of the town when we had drifted off course. Actually we had already passed the Gonzales water tower on that previous attempt to go to Stinson Field to fly in a Stearman, but five miles west of the town a wall of clouds that looked like Moses parting the Red Sea in the movie *The Ten Commandments* encouraged us to turn around. San Antonio approach asks my destination; they tell me to contact Stinson Tower and the man in the tower clears me in for the landing. One more time I ask God's help on the landing; one more time He gives it. Taxi to the parking area in front of the tower, tie down the plane, and go into Check-Six Aviation. Good people there, and they operate like they know pilots generally don't fly the kind of combination vehicles that are planes in the air and convert to cars on the ground. Seems like their 1980s vintage loaner car was free or cost only around $10.

So I use it to drive to the luncheon hosted by Catherine Nixon Cooke, a former director of The Explorers Club. One of the people I met there is Dan Bennett, the newly elected president of the club. Recently Catherine came out with a book about her uncle called Tom Slick, Mystery Hunter. He was interested in flying, Yeti hunting, and other things that make all my travels look like I have been staying home in a rocking chair. He also founded the Southwest Research Institute, where high-speed photography was performed by NASA photographers during the investigation of the high-energy impacts of the foam that came off three years ago causing the STS-107 Columbia disastrous breakup. This evening (June 10th) the dinner was held in the remodeled livery stables of the old Pearl Brewery. George Jackson Jr. was the guest speaker and his talk was called "*Magic in Mexico".* His gave a slide presentation showing the handmade jaguar masks the people make for an annual fiesta in Guerrero. Two contestants wearing the colorful masks fight each other brutally, then drink beer afterwards. In the past they often fought until one person died, but that has changed. It was an interesting evening, as all The Explorers Club dinners have been.

By 7:30 or so the next morning, I'm back at the airport, and can't pass up the photo-op of my Stinson parked in front of Stinson Tower. Using my portable radio, I called them up and asked permission to take the photo, which they pleasantly gave, and now that photo is on the cover of this story. No matter how well my friend the Stinson flies, we have a an agreement – as long as I keep fuel in the tanks it will fly; but if I forget to give my friend some liquid nourishment, it will stubbornly stop, and it doesn't care whether or not I am safe on the ground or whether or not we are in the air. The guys in the tower give me permission to taxi to the fuel pumps, the pump eagerly extorts money out of my credit card, the Stinson is happy, and I am cleared for take-off. Once airborne, the tower guy gives me a heading and cheerfully hands me off to a lady with a pleasant sounding voice who gives me flight-following all the way to Georgetown.

Parked at Stinson Field in San Antonio

Georgetown – didn't I just write about that place last March after I was stuck there for two days with Douglas and Neal when we stopped while flying the An-2 on our way to Phoenix? Sure enough, I land and taxi to the pumps located near the terminal, and take another photo of the Stinson parked in front of the Georgetown Terminal building to send to Douglas.

Georgetown, Texas Airport

Pump gas, chit-chat with Scott, the guy in the terminal whom I met in March, give former An-2 pilot Simon Diver a call, and it's time to jump into the plane, hit the starter button a couple of times and head on out to Jonesboro, Arkansas (the same town that Roger Tresler and I had the 1960 Volkswagen

engine replaced on our trip after high school graduation in 1964). Wrong! That poor Stinson hadn't fully recovered from major surgery. It wanted to start again and go airborne, but the starter was covered with oil and maybe the generator wasn't feeling well. Scott gave me the phone number of Don Dison, owner of Aim Aviation Services, and Don just happened to be at the airport with his son (whose name I forgot, sorry) working on a motorcycle. From the moment I first met Don I liked him. When he drove up with his son in a golf-cart, chomping on an unlit cigar, the first words out of his mouth were, "That's a beautiful looking bird", or words to that effect. Within an hour of being towed to his hangar, I once again hit the starter button, and the prop turned many thousands of revolutions as it gave the Stinson enough lift to fly all the way back to Pearland Airport. Don charged me a fair price and did excellent work. It was tempting and would have been easy for me to try to continue my journey to Minnesota, but I couldn't go on a trip like that with a questionable starter and/or generator. During the next couple of weeks I made three or four more local flights in the Stinson, but it was queen of the hangar all during the month of July and much of August waiting for the generator to be repaired and a couple of oil leaks to be stopped. A piece of the generator had to be hand-made because nobody seems to have the proper seals available for the generator. Once more, quoting from Jimmy Buffett, "I have a collection of used parts that appear to be a plane."[3] Dean and Ryan of Hall Aviation, and John Fischer of Manvel have all done good work.

If I had made the flight to Minnesota, I would have stopped off in Manhattan, Kansas to see this 1928 In-land Sport, with its five-cylinder radial engine. The grandfather of Lance Borden, one of my friends for many years, designed this airplane. Lance had his grandfather's original plans, and managed to track down a man who lives near Manhattan and owns two of these planes. Hopefully, one of these days when I fly the Stinson or some other airplane to Omaha to see my friend Hawks Abbott, I can stop in Manhattan and maybe even have a chance of flying the In-Land Sport.

1928 In-land Sport, designed by Lance Borden's grandfather. Lance supplied the photo.

[3] Buffett, Jimmy. A Salty Piece of Land. Back Bay Books/Little, Brown, and Company. 2004.

B-25 flight on April 2nd, my 60th birthday present to myself

SPURGE! After all, how many times does a guy turn 60? That's the age where commercial airline pilots are forced to retire. But I ain't ready to retire, and besides, I won't be 60 for two more days – I just have to celebrate early. So here it is April 2, 2006, and there is an airplane here in Houston that helped win the war. You know, the big war, the one that was fought and won before I was even born, with airplanes with round engines, the type that huff and puff and resonate and make a lot of deep noise, noise that kids and old men automatically look up to see where it is coming from – the kids are excited and the old men are nostalgic.

My friend Steve Schadelbauer called me a couple days earlier and asked if I wanted to go on a ride on a B-17 that the Collings Foundation owned and was selling rides at Ellington Field, here in Houston. The $400 plus was more than I cared to shell out, but Steve was kind enough and agreed to go along with a ride in a B-25 for $325. Each! Maybe next year we can fly in the B-17. But for today, I have to admit that it was OK to go for a ride in the same type of airplane that General Jimmy Doolittle used when he lead the raid over Tokyo in a squadron of aircraft carrier launched B-25s just a few months after the war started. In fact, my short flight was great! Steve and I and two other guys flew in the back section of the plane, but that was still good. We sat near windows as big as a 24" TV, designed not for our viewing but for the men who sat on both sides of the plane whose job were to man the .50 caliber machine guns.

Previous Page:
Upper Left: Waiting to board the B-25
Upper Right: Nose Art on the B-25
Center Left: B-25 in flight, photo by Bob Burns
Center Right: Steve Schadelbauer

Left: Fred Hartman Bridge, Baytown, TX
Right: San Jacinto Monument

Each of us took turns crawling into the tail gunner's area, and it was from here that I managed to have a good view of the Fred Hartman Bridge that spans across the Houston Ship Channel between the towns of La Porte and Baytown. Two or three miles West of the bridge is the San Jacinto monument, standing higher than the Washington Monument by a few feet and made of limestone, in which fossilized sea shells are clearly visible. Reminiscent of another battle fought over a hundred years before the B-25s flew, this is where the Texan/ American armies led by Sammy Houston yelling real loud uttered those famous words, "Remember the Alamo!" as he defeated the Mexican army led by Santa Anna on April 21, 1836. I must admit that does sound better than "Remember the Hertz!" or "Remember the Budget!"

St. Louis photo Mississippi River

St. Louis Arch from Southwest Airlines B-737

Once in a while you manage to take a good photograph from an airplane, like the one I caught of the St. Louis Arch in April. Just another Southwest Airlines flight, hoping to fly with Bob Kraemer in his Stearman again, but Bob was out of town. So I rented a Cessna 172 to fly to see my friends Gary and Estella and Louise in Eastern Illinois, but ran short on time and didn't make it. Estella baked a cake for me and Gary ate it! But I did fly over the Mississippi River again, and once again wondered where all the barges came from and where they were going.

Dream Flights – Florida in May

Maybe Thomas Edison dreamed of being able to look down from space upon cities lit by his electric lights as he circles the globe at night in a spaceship designed by Jules Verne. Maybe Icarus dreamed of seeing the world as he flew towards the sun on his wings made of feathers. Maybe Orville and Wilbur dreamed about flying around the world in an airplane. Maybe the Man in the Moon dreams about circling some other planet. Maybe we are all dreamers. Some dreams become realities. Some are just Goofy! Sometimes, Goofy dreams turn into reality.

N600FY, commonly called "Goofy"

Steve plans on flying "Goofy" around the world in 2006.


Above: Polly Vacher and Steve Wood


Right: Steve and Polly

Steve Wood, an Englishman whom maintains a home at Spruce Creek, near Daytona Beach, Florida, has Goofy dreams. He wants to fly his homebuilt GlaStar airplane that he affectionately calls "Goofy" around the world beginning in August 2006. "Goofy" is what his tail number, N600FY, resembles. When he does embark upon his flight, my name will be one of many painted on the side of the fuselage. You can keep up with Steve's flight by following his web site: www.adventureofflight.org. "*The world flight airplane is to be named Spirit of Endeavour as a tribute to Capt James Cook RN, the world's greatest explorer and a Yorkshireman like pilot Steve Wood, and to the astronauts of the space shuttle Endeavour.*"[4]

To raise money for his trip, Steve is offering people to have their names painted on his plane. He is also trying to raise money for "Flying Scholarships for the Disabled", a charitable organization. In May, I had the chance to meet Steve, because I went to Spruce Creek Fly-In residential community near Daytona Beach, Florida, to meet him, and to meet Polly Vacher. Polly was giving a speech at the Embry-Riddle Aeronautical University about her two flights solo around the world. Wow! Not content just to go one-time around the world in the relatively ho-hum route of heading East from England until she returned home, she then tried flying her Piper Saratoga over both the North and the South Poles. Although strong head winds prevented her from achieving her goal of flying over the South Pole, she did manage to fly around the world and fly over the North Pole in the process. Her web page is www.wingsaroundtheworld.org and is well worth reading. It was by looking at her web page that I learned she was going to be in Florida, so I sent her an email asking the dates. That was one of the best emails I ever sent. She is a marvelous woman and an excellent and charming speaker. Her husband Peter found an old English Hurricane in India and has restored it. He wrote a book called HURRICANE R4118 The Extraordinary Story of the Discovery and Restoration of a Great Battle of Britain Survivor that I am still wanting to read when I find the time. Both Vachers are friends of Dr. Charles Swithinbank, whom I met at the South Pole in 1988. Charles gave Polly expert advice about the Polar Regions. In September, 2006, her book Wings Around the World was published, and it is definitely on my shopping list.

Earlier in this story, when I first mentioned that I had the dream of flying around the world, I was quoting Jimmy Buffett of Margaritaville fame. In real life, two young pilots, Dan Dominguez and Chris Wall, met him. In 2000, they flew their own Twin Commander that they called Dreamcatcher around the world. They were both in their early 20s at the time. Although their book DREAMCATCHER Tales From A Flight Around the World is small, it has some very good photography in it.

People like Polly, Steve, Dan, and Chris inspire me to follow my own dreams of hopefully going around the world three different ways: Drive my Ford F-250 4X4 – obviously, there are places where the water is too deep and wide for

[4] http://www.adventureofflight.org/index.htm

it to be driven under its own power. Garth Brooks' song that has the words "Going around the world in a pick-up truck" would be my theme song. And I think I have already hinted that another way I want to go is with "The wind beneath my wings". Ultimately, of course, my goal is fly in space, circling our planet where "You fly sixteen orbits, what do you get? Another day older and deeper in space!" Thanks for singing the words, Bette Mettler and Tennessee Ernie Ford that also inspire me. It's best that I don't plan on paying expenses by winning any singing contests.

By September, I realized I hadn't heard anything about Steve Wood's flight around the world, so I sent him an email, and this is his response – but I have no doubt that he will complete his epic flight:

> Hi Matt
>
> I had two engine failures in the space of 7.5 hrs flight time, and this was with a brand new engine!
>
> The first was on shut-down on the ground at Fond du Lac - I thought I was lucky for this top happen on the ground! But the second was a catastrophic in-flight failure over inhospitable terrain in southern Ohio which resulted in an off-airport landing. Apart from the engine being wrecked the airplane and I were undamaged.
>
> This second failure was on 1 August after I had been timed out from Oshkosh on the start of the world flight. I'm still trying to sort out the aftermath of these events, and indeed I am going back up to Ohio next week to put a new engine in the airplane.
>
> So the world flight is postponed for this year as the weather window has now been lost for a flight across the Atlantic.
>
> Regards,
> Steve

But wait! Here I wrote about going to Florida in May and hadn't yet mentioned anything about flying seaplanes. That's about to change. In January of 2006, when I went to Florida I was hoping to see Eric Weaver and Kirk Spangler, two of the pilots that I flew with on the Arctic Floatplane trip last year. Kirk wasn't around, but I managed to talk to Eric a couple of times, although I didn't see him. Last summer we talked about flying around in his Cessna 180, but it was having either a paint job or its annual inspection. But that didn't keep this seaplane pilot away from the water. Not this kid. The Seaplane Pilot's Association web page (http://www.seaplanes.org) lists state-by-state names of the seaplane-training instructors. Just as a spider spins her web to catch flies, the Internet spins a web to catch flyers like myself. It not only spins the web, but

baits it as well. And the bait that caught me is the Grumman Widgeon (G-44) that Chester Lawson owns at Spruce Creek. Check it out: http://members.aol.com/h2oflight/

Chester Lawson's Grumman Widgeon – great airplane to fly

Hear those mighty engines roar! Not hear that mighty engine roar. Hear those mighty engines roar! Plural. Multi-engine. Lock the tail wheel. Hold the yoke with your left hand, reach up with your right hand and advance the throttles and adjust the pitch of the props for the climb position. Keep it steady down the runway. Push the nose forward. Accelerate and rotate. Lift off. We have lift off. And the pilot sitting in the left seat is as excited as the astronauts who lift off in the space shuttle fifty miles to the south, our sort of direction, but not quite. Climb to 1000 feet to the nearby lake. Fly lower and look over the lake for obstacles. Go through the checklist. Splash down. Not once, but six times. Before you can splash again you have to take off. Hold the yoke back, give it full throttle, push the nose forward, now we're on the step, then we're airborne. Could talk about things like 25 square, power and rpm settings, but we're flying, setting up to do another splash-and-dash, step taxi, rough water demonstration, a glassy water approach, stay on the step and take off, or pull back on the yoke after touching down, reduce power, and feel the water sloshing against the hull. Poetry. Poetry in motion. Poetry in the air. Poetry on the water. Flying for fun. Be safe, but have fun. Have fun, but be safe. Don't worry about chasing the Multi-engine Seaplane rating today. Maybe someday. Now just enjoy the hour. Already an hour! Guess we have to switch seats and head back to Spruce Creek so Chester can do the landing on the runway near his house.

That was last January. When I flew with Chester again in May, we landed on four different lakes. The flight in the Widgeon was every bit as exhilarating as the first time, but I probably won't be able to express my feelings any better, so I will let the previous paragraph speak for both flights. Rich Hensch, owner of Florida Seaplanes, www.floridaseaplanes.com, also flies this Widgeon, but uses his own Maule 7-235 to teach the Single Engine Seaplane (SES) rating. That plane just pops off the water. Now he has a newer one than in the photo below. Of the sixteen different seaplanes that I have flown, the Widgeon, the DCH-2 Beaver, and the Maule 7-235 are in the top three. Look for logs on the rivers; watch out for crocs, step taxi on the river, wow, look at the size of that croc!

Rich Hensch's M7-235. It just pops off the water!

All my seaplane instructors have excellent flying skills and most are fun to fly with. Chester and Rich rate up there with the best. It has been my good fortune to have had the opportunity to fly with them, as well as the other seaplane instructors I have met all over the country. After returning home in May, I posted the following words on the Seaplane Pilots Association web page (www.seaplanes.org):

> I would like to thank all the people and companies that I have flown seaplanes with in the last 4 years. I have received topnotch instruction in six states and in Canada, all at beautiful places. Out of the 16 seaplanes I have flown, I found 14 listed on the SPA website.
>
> I have flown two PA-18s, two Taylorcrafts, two C-170s, two C-172s, a DCH-2 Beaver, a Stinson-108, an Aeronica, and a Maule 7, a C-180 and a C-185, a J-3, and a Widgeon. I have flown individually with Chester Lawson, Mike Vivion, Alan Crawford, Danny Duggan, Eric Weaver, Rich

Hensch, Mike Kincaid, Jim Chrysler, Brian Schanche, Heidi Ruess, Vern Kingsford and two pilots that worked for him by the name of Norm and Will. Several of the people listed own one of the following companies: Adventure Seaplanes, Florida Seaplanes, Mountain Lake Seaplanes, Kenmore Air, Alaska Floats & Skis, Seattle Seaplanes, Arctic Flyers, and Alaska Float Ratings.

So I have had a very good time thanks to all of you.

Phyllis Jansen

Phyllis Jansen, Karoline's older sister, passed away today, January 10, 2006. Once more, that rotten cancer took the life of one of Karoline's family members. She had been in the hospital the entire month of November, and when we talked to her on Christmas day she was tired, but had just come back to Casper after visiting her son Mike and his children in Gillette, Wyoming. By January 2nd or 3rd, she was back in the hospital. On Saturday, the 7th, Karoline and my daughter Cheri talked to Phyllis's daughter Stacy right after they received the news that Phyllis didn't have long to live. Karoline, Michelle, Cheri, Camyrn, and I all flew to Denver and then drove to Casper the next day. When I went to the hospital on Sunday night, Phyllis was talking and joking with me, but I didn't ask her when she would go flying with me, which had been our standing joke for years. Always, her answer was something like "Never", or when the weather clears up, or after she counts all the lost socks her clothes dryer ate. Many years ago I bought a license plate holder that said "I'd rather be flying" and Marge put it on her car. Stacy noticed it first. Marge died in 1993 from cancer, and Karoline's mother died in 1960 from it. When we visited Phyllis on Monday morning, she talked, but then the nurse asked us to step outside. When we went back into the room, Phyllis was sleeping. As far as I know, she didn't wake up again. She might have lingered on for a month; that was an issue that only God knew when He would take her. Today, Karoline and I went to the hospital and tears welled up in my eyes when Karoline kissed Phyllis on the forehead. This afternoon we drove to Cheyenne and received the news on our way to dinner, about thirty minutes after we arrived and called Karoline's parents.

I'm glad we went to Casper to see Phyllis before she died. As I write this paragraph in April, I can't do it tearless. On Christmas night, 1970, I met Phyllis and Marge and Karoline and their cousin Ann when they came out to KTWO-TV, where I worked as a cameraman. Phyllis took care of Michelle and Cheri when we lived in Casper before we moved to Texas. So, we go back a long time. I'm going to miss her.

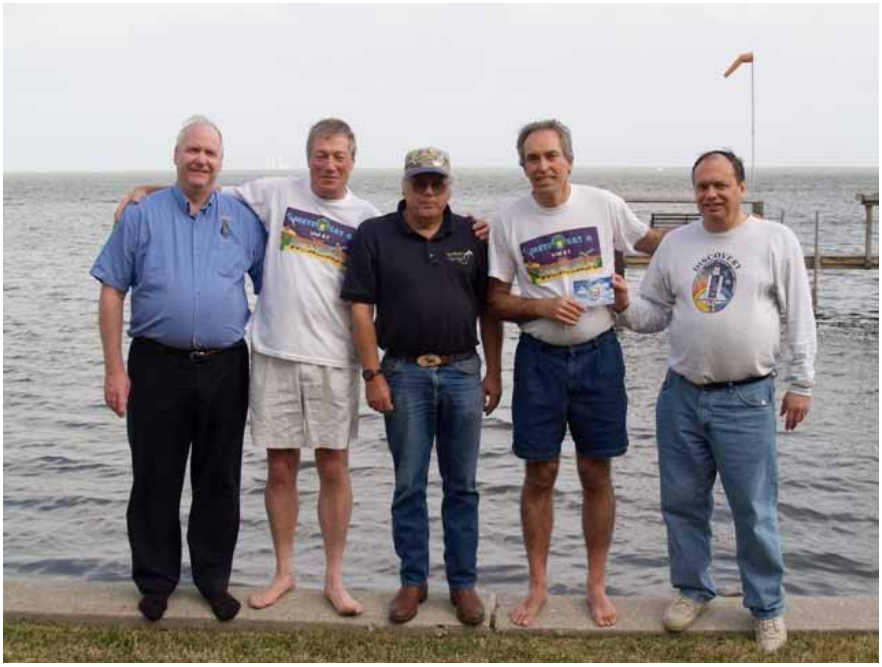
New Horizons Launch and the Soyuz TM-15 Watch-It-Launch-Gang

Flying on Southwest to Orlando on January 17th was for a much happier reason than the last flight to Casper. Ron Caswell was hosting a party at his

place in Titusville, Florida for the New Horizons launch to Pluto. He pours the first glass of Florida orange juice and then you are on your own. Only he still owes me the first glass, because I poured my own glass of orange juice and he hasn't poured one for me yet. Guess I will just have to go back. Several people were waiting for the launch at Ron's place, including Polly Hall who is a friend of Dawn and Bill Caswell, the parents of Ron who live in Alaska. Seems like when I write a story I just have to find a way to include the names of my friends Dawn and Bill. Special people! Polly is writing a book about her 24 years in Alaska, and I definitely want a copy. Marianne, a friend of Ron's, told me that she liked my stories that he has shared with her, which made me feel good. Last July 13th (2005), I had gone to Florida to see the launch of STS-114, the first space shuttle mission after the loss of the Columbia, but it was delayed for a couple of weeks. Watching the countdown clock on Ron's TV and looking out with binoculars across the Indian River to the launch pads and seeing the excitement of Ron's guests is an exhilarating experience and sharing their disappointment as launch delays and scrubs occur just goes with the territory when one has that contagious infection called Launch Fever Disease (LFD). There is no known cure; none of us who have LFD would exchange a single moment traveling to and waiting for a launch to be some other place, unless of course that other place was inside the capsule going to space.

Besides Ron, three other members of the Soyuz TM-15 Watch-it Launch Gang greeted me at his place. Ken Harman, from Vancouver, British Columbia, Richard Tonkin, from Melbourne, Australia, and Bob McCullough, from Big Rapids, Michigan all just happened to be in the neighborhood. Although I have seen Ron and Bob a few times after we were in Kazakhstan in 1992 to watch the launch, I hadn't seen Richard or Ken since then. Our very good friend, Butch Head, was with us in spirit. Real Spirit! All of us grieved his death from a car accident last August. Ken made this photograph with Butch's face in the clouds, which we all signed so Ken could send it to Butch's wife Donna.

Butch Head, our good friend. You are missed.



L-R: Bob McCullough, Richard Tonkin, Matt Nelson, Ron Caswell, and Ken Harman

By 3 PM, we knew that the launch to Pluto would not happen today. Sure, we were all disappointed. But there's always tomorrow. Those guys that do the trajectory flight plans are smarter than me. We have about 10 days to launch in order to reach Pluto in 9 years; otherwise, a delay of a few days longer extends the flight to 13 years. All this talk about using the gravity of Jupiter to slingshot the New Horizons spacecraft on to Pluto requires a lot more math than I was ever able to comprehend. Bob McCullough teaches math at Ferris State College in Big Rapids. He would be one of those guys that could do the calculations to using Jupiter's gravity for a cosmic slingshot. Not only that, he had our names added to many others that were written on a CD and packed aboard the New Horizons spacecraft to Pluto. Kinda neat to know that your name will be travelling to that distant plant Pluto! Someday perhaps somebody from our planet, or from another one, may play that CD. When my name pops up, perhaps there will be some association with that crazy guy with all the hatpins.

Infected by the Launch Fever Disease, no known cure.
I found the patch at the gift store in the Space Station Processing Facility (SSPF), where Ron works.
Unofficially, I call the Soyuz TM-15 Watch-It-Launch Gang "Rocket Hobos".

L-R: Richard Tonkin, Ken Harman, Ron Caswell, Matt Nelson, Bob McCullough, Carolynn Conley eating at the Dixie Crossroads restaurant

But what do you do when you go to a launch party and there is no launch? Well, you just gotta eat. So we did, at the Dixie Crossroads restaurant in Titusville. Richard had been there in 1994, and had taken home to Australia a menu, which he had signed by the wait staff. And he brought it back. So we all compared the menu from the last Millennium to the current menu. Believe it or not, the prices had increased! And Richard went home with another one, signed by the current staff. Carolynn Conley, a friend of Ron's who works in Houston, joined us for dinner. When you have a half of a dozen space nuts gathered together under one roof on the night of a schedule launch to Pluto, and three of the six people actually work on the shuttle and/or space station programs, it may not surprise you too much to learn that one of our topics of discussion was that the International Space Station would be making a fly-over in about 45 minutes, obviously timed for our benefit, and nothing to do with the fact that it is trapped in its own orbital odyssey. When we told the young waiter that we wanted to leave the food on the table and go outside to watch the ISS, he eagerly joined us. By that time he had caught the SFD (Space Fever Disease), and I don't think he went out to make sure that we didn't skip out without paying but because he genuinely wanted to see the ISS. When we went back inside, there were "Do Not Disturb" signs on our table and this kid was asking us questions about what to study in school so he could work at the Kennedy Space Center. While outside waiting for the station to blaze across the night sky, other people started looking up, and our own public relations guy Ron Caswell gave a running narrative to two beautiful blondes when the space station did appear, telling them stuff about how

two people were actually living on it, and how exciting it is to live in this age of space exploration.

NASA honchos would be wise if they selected Ron to head up the agency. As much as I want to fly in space, I could not compete with Ron when it comes to exuberance. He is very passionate about it, and can pop off the benefits of space better than a baseball fanatic can spit out stats. Ron spits out stars. There is no doubt in my mind that if Ron had to appear in front of Congress requesting funding for space exploration, they would double the amount Ron sought. He is currently preparing to support the STS-121 shuttle mission in Houston, which is scheduled to launch in July. One of Ron's good friends is Konrad Dannenberg, who is now 93 and had worked with Dr. Werner von Braun during World War II in Germany. Konrad came to the United States after the war and was part of Dr. Werner von Braun's team that eventually led to the Apollo missions and Neil Armstrong's famous words, "Houston, Tranquility Base here. The Eagle has landed", followed by him saying a few hours later, "That's one small step for a man, one giant leap for mankind"! On February 17, 1958, Dr. von Braun said, "Everything in space obeys the laws of physics. If you know these laws, and obey them, space will treat you kindly. And don't tell me people don't belong out there. Mankind belongs wherever they want to go – and they will do plenty when they get there." A few years ago Ron and Konrad travelled together to Peenemunde, Germany, where Konrad had worked with Dr. von Braun on the V1 and V2 rockets. For a souvenir, Ron brought home a very well made glazed brick from Peenemunde. Burt Rutan invited Konrad out to Mojave, California when Mike Melvill flew SpaceShip One in 2004. Since I previously wrote a story about seeing one of the launches of SpaceShip One, I thought that this was a good place to add this photo that Ron sent me of Konrad and Mike. Space pioneers, both of them. Mike Melvill spoke at the Southwest Regional Fly-in at Hondo, Texas in April 2006. He speaks as well as he flies, and to listen to him tell about his flight was well worth the trip over there.

Konrad Dannenberg and Mike Melvill. Photo courtesy of Ron Caswell

SpaceShipOne attached to the White Knight. Photo by Bob Burns.

One of the most-mild mannered men on Earth, Bob McCullough is the least likely person to be on the TSA Do Not Fly list. When he tried to board the plane in Michigan, he was held up for about fifteen minutes. Eventually, he was allowed to board his flight, but still encountered a two-minute delay on the return flight. Later, I saw where a radical from the Sixties had died. His name was Robert McCullough. As I mentioned earlier, Bob teaches college math courses, and he always makes them fun. Probably, not too many students attending Ferris University in Big Rapids, Michigan expected to encounter orbital mechanics as part of the homework. Over the years, Bob has sent several photos taken at different space museums, and he has given several space talks. Additionally, he presented a paper about the mathematics of Orville and Wilbur's famous flight. If I had kept all the emails I have received from the members of the Soyuz TM-15 Watch-It-Launch Gang, I would have enough to fill a book. I thought this one was appropriate since we had watched the space station go overhead at the Dixie Crossroads.

> "You can't very easily travel to Egypt to see the Great Pyramid, but anyone can step outside in their front yard and watch the greatest engineering achievement in history pass overhead - the International Space Station." New Horizons Bob in a talk to the faculty, April, 2006.
>
> Guess what I did tonight? I stepped out into my front yard with my wife and we watched the ISS pass almost straight overhead in a clear sky.
>
> Take care. New Horizons Bob.

While these guys were in Florida, they visited local space museums. Here is a photo of Bob sitting in the Corvette that belonged to Alan Shepherd, the first Mercury astronaut to launch into space on Freedom 7, on May 5, 1961.

Bob McCullough in Alan Shepherd's Corvette

Bob McCullough and Ron Caswell at the KSC Rocket Park

If Ron could be the leader of the American space program, Richard Tonkin would qualify as the leader of the Australian space program. A lawyer by profession – don't hold it against him, because he is a good guy – his interest in space goes back to October 4, 1957, when the Russians launched Sputnik 1. Of course Bob and I can claim the same thing! He has watched launches in Australia, Kazakhstan, China, French Guiana, the United States, and Japan. It is because of Richard that we all met at Ron's place to see the launch to Pluto. Now he has planted the idea of the Rocket Hobos going to India to see a launch in 2007 or 2008. We both share April 4th as our birthdays, but he is a year or two older than me. (I know, a lot of you didn't think that it is possible that someone actually could be older than me!). First there was Granite, then there was Richard, then Matt tagged along, followed by dirt. Actually, in my case, it is not so much that I'm followed by dirt, but clutter has a tendency to shadow me. So does procrastination. In fact, I tell people that I was scheduled to be born on April 1st, but I was three days late, and have been a procrastinating fool ever since!

Richard Tonkin

Ken works as a medical administrator in Vancouver. One of his hobbies is building excellent models of spacecraft. Apollo 14 astronaut Edgar Mitchell gave a speech in Vancouver and Ken managed to have this guy come to his house to see his collection.

Apollo 14 Astronaut Edgar Mitchell and Ken Harman at "The Shrine". Photo courtesy of Ken

After I arrived home I sent out an email to the Rocket Hobos requesting they give me a list of the launches that they had seen. Ain't too shabby of a list! Bob was the first to reply, and sort of set the tempo:

> Thanks for the email, Matt. Launches I have seen (I'm glad you didn't ask for launches I would have liked to have seen!):
>
> Apollo 11 (July, 1969)
> Apollo-Soyuz from the VAB (July 15, 1975)
> Geos-2 (July, 1978)
> Soyuz TM-15 (July, 1992)
> Ariane V-61 (November, 1993)
> Wind (November, 1994)
> STS-66 (November, 1994)
> TDRS-8 (June, 2000)
> New Horizons (January, 2006)
>
> I wish the list could be longer, but maybe in 2007 it will include an Indian launch. Take care.
>
> New Horizons Bob.
> **********
> My list is but a small subset of New Horizons Bob's:
>
> Soyuz TM-15 (July, 1992)
> Ariane V-61 (November, 1993)
> New Horizons (January, 2006)
> India Ken
> **********

Guys,
I can't beat Bob for numbers, but perhaps for variety :-

Wresat - Redstone/Sparta - Woomera, November, 1967
Soyuz TM-15 - Kazakhstan, July 1992 (a long time between launches !)
Optus B-2 - Long March 2A, Xichang, December, 1992
Ariane V-61 - Kourou - November, 1993
STS-65 - The Cape – July 1994
H-II - Tanegashima - March 1995
Black Brant (Hi Ken !) - Woomera - 1999
New Horizons - The Cape (with me mates) - January, 2006.

I met a chap the other day who witnessed a British atomic bomb test at Christmas Island in the Pacific in 1952 - now there was a launch!
Cheers,
Richard.
****

Hey, this is not fair. I can't list the rockets I've seen, can't remember. Think I've seen 107 Space Shuttle launches, hundreds of Delta's, probably 100 Atlas, Titans, Polaris, Soyuz Tm 15, Arianne V61, and a launch in India in 2007! Think I'm leaving a few out too... Still have a lot more to go too!

Ron!
****

Hi Matt
I saw STS-5 in November 11, 1982 from the Press Site and STS-62 on March 4, 1994 from the Causeway with Ron. I saw a Delta launch a few days after that too from Jetty Park with Ron. And you know what Russian launch I saw.

cheers
Chris

Note: Chris Gainor could not be with us in Florida for the New Horizons launch. He is another Canadian and is currently working on a PhD in the History of Space Technology. He received a Master's of Science degree in Space Studies from the University of North Dakota, just a few years after I graduated with the same degree from the same university. Chris is the author of Arrows to the Moon, and he even mentions my name in the book. Just another one of those Rocket Hobos!
****

My own list consists of :

STS-1	April 12, 1981	Columbia
STS-2	November 12, 1981	Columbia
STS-8,	August 30, 1983	Challenger
STS-26	September 29, 1988	Discovery
Soyuz TM-15	July 27, 1992	Baikonur, Kazakhstan
STS-51	September 12, 1993	Discovery
STS-66	November 3, 1994	Atlantis
Conestoga	November, 1995	Wallops Island, VA, command destructed by Range Safety Officer
STS-82	February 11, 1997	Discovery
STS-87	November 19, 1997	Columbia
STS-88	December, 4, 1998	Endeavour
STS-97	November 30, 2000	Endeavour
STS-115	September 9, 2006	Atlantis

While I have seen all the space qualified shuttles launch, I can't quite match Story Musgrave's record of flying on each of them.

After my exhilarating flight in the Widgeon in January, I drove back to Ron's place in time to watch the launch scrub again. I wasn't able to see it, because I had to be back at work the next day to install the Space Station's antenna that we have in the Electronic Systems Test Lab (ESTL). This is called the Space-to-Ground Antenna (SGANT), and we have a test using High Definition Television (HDTV) and involving several people, including the Japanese, scheduled in March.

The next day, the New Horizons spacecraft did launch to Pluto, using a Lockheed Martin Atlas rocket, and Cold-war technology to send a spaceship to a cold planet, carrying a CD with the names of my friends. I was installing the SGANT when it launched. Much later, in the Summer of 2006, scientists claimed Pluto is no longer a planet. After fifty years of hearing that it is a planet, I feel like it still is.

New Horizons launch, January 19, 2006
Photo by Ken Harman

Description of Cassini launch

From: Charles A Wood
Cocoa Beach, FL - 5:25 AM 15 October 1997

I am just back from the best fireworks display I have ever seen! At 4:43 AM this morning the sky at the distant Cassini launch site abruptly turned yellow, as if someone had just turned on a stove's gas burner. The bright yellow glow lasted long enough to cause worries (a few seconds?) amid the "ohhs", and then the brilliant white nib of the rocket glare appeared over the low dike between us and the launch site. There was no glimpse of the rocket as the short whitish-yellow glare rose relatively slowly into the sky. It began to arch over towards the east, passing behind some clouds (that almost blocked our view of the whole launch) and kept rising with a grey exhaust trailing behind. By now it had passed its peak height and was arcing toward the horizon, going due east. It was now fainter than the brightest stars, but then it split into two spots that began to separate. Something looked wrong! And some seconds later another star split off - the second solid booster was visible (it had apparently been in the same line of sight as the main engine glow). The boosters fell away in spent arcs with their own grey plumes. Cassini gradually faded and became one with the stars, and finally, in a cosmic impossibility, set in the east.

The nearly full Moon flirted with clouds in the western sky, but Saturn was demurely hidden from view. Orion witnessed it all, and Sirius, which was temporarily outshown, regained it stature as the brightest star in the heavens. A good sea breeze, an exhilarating launch...wow!
Chuck

Chuck Wood was the head of the Space Studies Department at the University of North Dakota when I was working on my Master's Degree. In September of this year (2006), scientists using data from the instruments onboard the Cassini spacecraft detected another ring around Saturn.

OK, Airplane time again. Only this time maybe I should say soaring planes and/or gliders and ski planes.

If Hurricane Rita hadn't hit the Texas coast last September, photos of Jim Gardner's 1946 Cessna 120 probably wouldn't be appearing in this section, but the hurricane came, the Stinson was on loan to the Brazoria County Airport Museum, and Tom and I had an empty hangar, so we let Jim store his C-120 in it to keep it out of harm's way, and Jim and I worked out a flying deal. It had been over a year since I had flown the 120, and when I asked Carl for instruction in it in January 2006, he suggested we fly to the glider base near Wallis, Texas, located about fifty miles West of the Pearland Airport. Carl wanted to make

current his glider's instructor rating, and also was willing to fly the tow planes. Next thing I know I find myself joining the Greater Houston Soaring Association and taking glider lessons. Carl and I flew Jim's plane there a few times, and started taking the Stinson after it decided that it is more fun flying than collecting hangar dust.

Jim Gardner's Cessna 120 at the Greater Houston Soaring Association glider base

Carl Nepute (back seat)

Matt in a Blanik L-23, wearing his Adventure Seaplanes hat, naturally with a bunch of pins

As I write this paragraph, it is August 31st, and I still haven't soloed in a glider yet, that is, if you don't count the time I landed the Stinson under God's Power, the day the engine stopped, the day the Stinson turned into a glider. But that doesn't mean I haven't flown gliders. One of these days I'll probably go solo and chase my glider rating, but I'm in no hurry, and I enjoy flying with the different instructors. Pat Brown owns his own plane, so he understands what it takes to transition from powered flight to gliders. Once when I was flying with Dave Larson and he was sitting in back, he asked me if I knew Brian Schanche. The hat that Brian gave me when I flew with him last year to the Arctic Circle has the name of Brian's company, "*Adventure Seaplanes*", embroidered on the back. Brian taught Dave how to fly floatplanes.

Flying a glider when you are supposed to have an engine sort of grabs your complete attention, but flying a glider designed to fly without an engine is much more enjoyable. Strap in, close canopy, verify the link from the tow chain jingles clearly and not thudingly – hey, how's that for a new word? Thumbs up to ground crewperson, waggle rudders, speeding up, push stick forward slightly, airborne, lower the nose a little until the tow plane picks up altitude, call out 200-feet above ground level, which is where you have a better chance of being able to return to airport if the tow cable breaks, keep the string centered, keep nose of glider on outside wing of tow plane, make shallow bank angles, don't go higher or much lower that tow plane, keep slack out of tow rope, release at 2000-feet or 3000-feet and turn right 90^{o} while tow plane turns left. Find thermals, and try to ride the elevator. Listen to sound of wind, push stick forward to build up speed and hold it back to slow down. Soar to 5000-feet, or perhaps 25,000-feet. (So far, 5000-feet is my top ceiling.) Smile. Pick out landing spot on runway, follow similar landing patterns for powered airplanes. Don't flare to early or you will stall, but don't nose dive either. Land and roll until you can't roll anymore. Smile some more. Do everything again.

Inside the trailer that is used for the clubhouse, there is a poster with photos taken in space during the STS-51 space shuttle mission, and the poster is signed by Jim Newman. Jim used to fly gliders with the Greater Houston Soaring Association. My friend Bill Readdy was pilot on this same mission. Last January he emailed me these two photos taken up in Alaska when he flying around in a Cub equipped with skis. At the time I received these photos, I already had plans to go to Minnesota or Michigan and do some ski flying myself, but an ear block prevented me from taking the commercial airline flight. Maybe next year.

Bill Readdy flying a Cub on skies up in Alaska

While Jim Newman was preparing for STS-88, also on the Endeavour, I had the chance to work with him. He and Jerry Ross installed the Early Communications (ECOMM) antenna during the very first International Space Station assembly mission. We tested each ECOMM antenna and radio that flew to the space station in the ESTL, and I had the responsibility of installing this equipment in the Satellite Interface Test Area (SITA). After the mission, Jerry Ross and Linda Bromley, my NASA Division Chief, presented me with an ECOMM award that has an ECOMM patch that flew on STS-88. My co-worker Fred Shetz and I went to Florida to see that launch. Although the photo shows an astronaut holding an ECOMM antenna, it is of Jim Voss taken during STS-102, and not Jim Newman during STS-88. This photo was chosen because it is a good shot of the ECOMM antenna. Once again, this guy Matt Nelson finds ways to incorporate airplanes and space shuttles into the story. Maybe NASA really stands for Nelson's Aviation and Space Adventures!

Astronaut Jim Voss installing the ECOMM antenna during the STS-102 mission. NASA photo.

Astronaut Jerry Ross presented me an ECOMM award. Linda Bromley is standing next to me. NASA photo.

JAPANESE

In March, the Japanese came to ESTL to test their High Definition TV system. While their part was but a small part of the overall test, I think of them when somebody mentions the big test – a High Definition Video Test called the Space Video Gateway, in which the HD video from the space station will be downlinked, and the Discovery TV Channel will participate. [NOTE: On October 18th, a successful downlink SVG video occurred, and many people watched in the ESTL.] In the Satellite Interface Test Area (SITA), the area of ESTL where I work, the space shuttle and space station antennas are raised on hydraulic lifts from ground level up into radomes that are nineteen feet above the floor. While test activity is going on, we raise the antennas in the morning and lower them in the evening. One evening my co-worker Fred Shetz brought out Tanaka Yoichiro, Kazunori Enokido, and Keiji Murakami, the three Japanese, to see the operation, but for some reason Fred and I decided the next morning would be better. Since I had spent a couple of years in Japan, I told the 3 men in Japanese that it would cost them 10 Yen (about 8¢). "Ju Yen!" I said. It took a moment for it to dawn on them what I said, but once they understood, they all broke out in laughter. The next morning, each of them gave me a ten Yen coin, and we all had a good laugh. Later in the day I gave them each Florida and Ohio state quarters, since there is a space shuttle on the Florida quarter and an astronaut (Neil Armstrong) is depicted on the Ohio quarter. On the last day of the test, Tanaka Yoichiro gave me a five Yen and a fifty Yen coin. He lives in Sapporo, which is near where I lived when I was stationed in Chitose in the 1960s. Later that night, Fred and I took them to T-Bone Toms for dinner. We all enjoyed each other's company. A few days later I received a letter from Enokido, and then after that, I received this email from Tanaka:

> Dear Matthew-san,
> Thank you very much for your kindness.
> It was my fun to talk with you.
> I watched Columbia's landing on TV in childhood,
> so it is exciting to see the antenna which send data to the Space
> Shuttle. thank you.
> I am reading your stories.
> I will send you the impression of it in my next mail.
> Finally, thank you for my last dinner in Houston. It was very good beef.
> I remember it.
> I want to see you again. Thank you.
> Yoichiro Tanaka

STS-121

As I write these words, it is the evening of July 4th, and STS-121 had a successful launch today. This is the first time in the history of the American space program that people blasted off on the Fourth of July. However, I do remember

watching the Pathfinder bop around the surface of Mars on July 4, 1997. John Larson and Carl Nepute went with me to ESTL to watch the launch of STS-121.

STS-121 External Tank. Photo by Ron Caswell

STS-121 heading towards pad. Photo by Ron Caswell

Ron Caswell in STS-121 firing room, July 4, 2006

Once more, Ron Caswell pops into the scene. Maybe I ought to title the story something like *"A Year in the Life of Space Cadet Ron Caswell"*! During the launch, he was in the firing room at the Kennedy Space Center. Then, the following day, he flew to Houston to work the mission, and sent this email the next day:

"Good afternoon (July 6, 2006),

What an exciting night last night was, my first real night working in Mission Control Center (MCC) Houston.

I'm keeping track of the changes in the plan of things that we are leaving on Space Station and the things that we are bring back on the Space Shuttle. Some things the astronauts could not find on Space Station and they told the crew to not spend any more time looking for them so we took these items off the transfer list. Fun to have a part to help keep track of these things. There is more detail to my work but that is the drift of the job.

During my shift I heard the International Space Station (ISS) crew say "We see the Space Shuttle"! Fresh food and friends were in sight! Then when my shift was over my project manager was there and he took me to the Space Shuttle Control Room viewing gallery. This is the room you see on TV where Cap COM sits. We saw the Space Shuttle dock with the ISS! I've worked this mission for 2 _ years and I got to see the docking from the control room! Watched the lady giving the commentary looking at her computer and displays while she explained to the world what was happening was interesting. An exciting day for space exploration and for our nation!"

Landing of STS-121. Photo by Ron Caswell

On August 17th, the public debriefing by the STS-121 crew occurred at Space Center Houston, in the IMAX theater. Last January, I wrote about Phyllis Jansen's death. Well, her daughter Stacy came to visit us for a couple of weeks, so I took her with me when I went to see the crew. Being from Wyoming, and not having the opportunity of listening to shuttle astronauts, I think she was quite impressed. I am always quite impressed at astronaut debriefings. The crews always give good presentations and video and slides of the missions. After the debriefings are over, I always leave with more determination and inspiration to go into space. Man, do I ever want to go! For three or four years, Bill Readdy, NASA's former Associate Administrator for Human Space Flight, came from Washington D. C. to help make the presentations. Once, he gave one of the most eloquent speeches I have ever heard. We first met on Halloween Day, 1991, when he was training for his first flight, STS-42, and I was interviewing to join the Houston Detachment of the Naval Space Command Reserve Unit Det 0166. He always has treated me well and with respect. Quite often we have talked for a couple of minutes at these presentations about the Stinson or my floatplane flying. For the past year, I have left the crew debriefings with a twinge of sadness, because CAPT Readdy is no longer with NASA.

STS-1

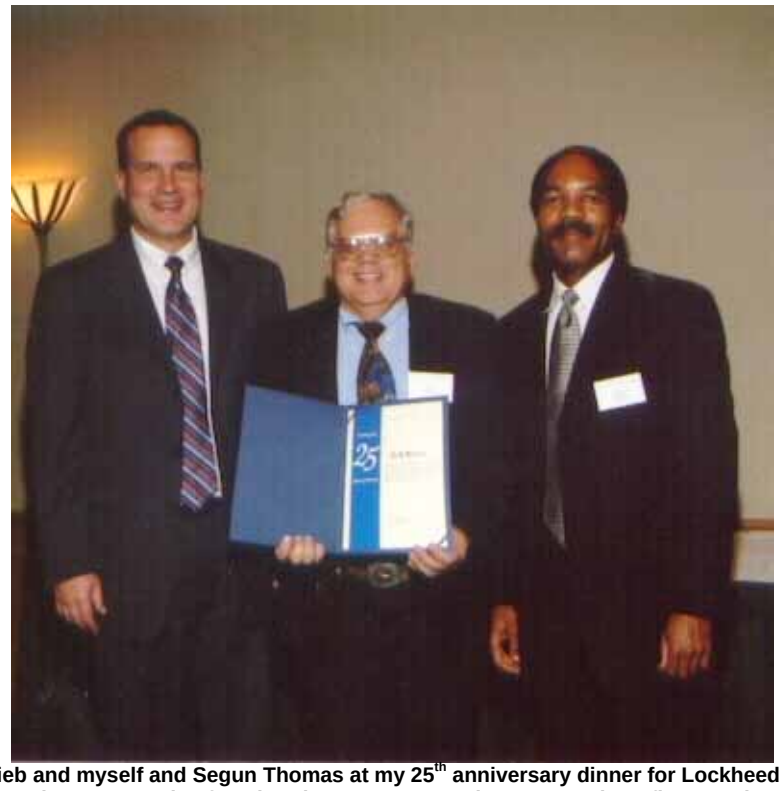
The first space shuttle launch occurred on April 12, 1981, twenty years to the day after the Russians launched Yuri Gagarin into space. For the 25th anniversary of the STS-1 launch, the JSC/NASA *Roundup* requested employees who were around in 1981 write about their experiences relative to the launch of STS-1. Here is what I wrote:

> When STS-1 launched, I was at Kennedy Space Center watching it lift off. I had travelled to the cape to see the scheduled April 10 launch, and stayed for the actual launch on April 12. Fortunately, I picked up a JSC bus pass, so I was with the group from JSC that obtained VIP launch passes. I still vividly remember watching in awe as *Columbia*'s three main engines and the SRBs lit up the sky, giving birth to two new suns, hearing "We have liftoff!" and being engulfed with the body-shaking, heart-pounding roar of the launch shortly afterwards. Oh, what a memorable day! The next day I flew to LAX, drove to Edwards Air Force Base, spent the night on the lake bed, claimed my territory for my camera tri-pod on the flat top of a trash dumpster, heard and felt the two sonic booms and watched the Space Shuttle *Columbia* gloriously land.
>
> Matthew Nelson
>
> To see what other people wrote, go to:
> http://www1.jsc.nasa.gov/jscfeatures/articles/000000502.html

On April 12, 2006, STS-1 astronauts John Young and Robert Crippen spoke at JSC. They looked somewhat older, told several interesting and funny

stories, and showed videos of the flight, none of which I can remember as I write these words many months later on September 24th. John Young flew around the moon on Apollo 10 and walked on it during the Apollo 16 mission.

Lockheed Martin and back to the moon



Rick Hieb and myself and Segun Thomas at my 25th anniversary dinner for Lockheed Martin. I don't wear a tie often, but the one I wore on has a J-3 Cub on floats on it.

Someday I hope to write about all the years I worked for Lockheed at the Electronic Systems Test Lab (ESTL) at the Johnson Space Center in Houston. In May, 1978 I hired on with Lockheed Electronics company as a technician, and then progressed up to an engineering position. Over the years there were name changes, and during the year-and-a-half that I worked for Allied Signal when I went to Antarctica, the name changed to Lockheed Martin Space Operations Company. Still, I managed to have a good twenty-fives years with the company, and I stayed with them (and came back to them) by choice. It was not my choice – nor theirs – that they lost the contract I worked under to Jacobs Sverdrup, effective February 1, 2005. While I can't complain too much about working for Jacobs, I would still rather be working for Lockheed Martin. Ten days before the start of the new contract Karoline and I attended my 25th anniversary dinner, and was given the 25th anniversary award by Rick Hieb, head of the Lockheed Martin Space Operations Co. and former shuttle astronaut whom I had the chance to work with on the Electronic Still Camera on STS-49. Like Steve Wood's GlaStar, the shuttle used on STS-49 is also named *Endeavour*. Now, there is a possibility that I can return to Lockheed Martin and America can return to the moon because of the following announcement:

From: KSC News Center
Sent: Thursday, August 31, 2006 4:30 PM

NASA SELECTS ORION CREW EXPLORATION VEHICLE PRIME CONTRACTOR

NASA selected Thursday Lockheed Martin Corp., based in Bethesda, Md., as the prime contractor to design, develop, and build Orion, America's spacecraft for a new generation of explorers.

Orion will be capable of transporting four crewmembers for lunar missions and later supporting crew transfers for Mars missions. Orion could also carry up to six crewmembers to and from the International Space Station.

The first Orion launch with humans onboard is planned for no later than 2014, and for a human moon landing no later than 2020. Orion will form a key element of extending a sustained human presence beyond low-Earth orbit to advance commerce, science and national leadership.

The contract with Lockheed Martin is the conclusion of a two-phase selection process. NASA began working with the two contractor teams, Northrop Grumman/Boeing and Lockheed Martin, in July 2005 to perform concept refinement, trade studies, analysis of requirements and preliminary design options. Lockheed Martin will be responsible for the design, development, testing, and evaluation (DDT&E) of the new spacecraft.

Manufacturing and integration of the vehicle components will take place at contractor facilities across the country. Lockheed Martin will perform the majority of the Orion vehicle engineering work at NASA's Johnson Space Center, Houston, and complete final assembly of the vehicle at the Kennedy Space Center, Fla. All 10 NASA centers will provide technical and engineering support to the Orion project.

The contract is structured into separate schedules for DDT&E with options for production of additional spacecraft and sustaining engineering. During DDT&E, NASA will use an end-item cost-plus-award-fee incentive contract. This makes the award fee subject to final determination after the contractor has demonstrated that it meets the technical, cost, and schedule requirements of the contract.

DDT&E work is estimated to occur from Sept. 8, 2006, through Sept. 7, 2013. The estimated value is $3.9 billion.

Production and sustaining engineering activities are contract options that will allow NASA to obtain additional vehicles as needed. Delivery orders over and above those in the DDT&E portion will specify the number of spacecraft to be produced and the schedule on which they should be delivered.

> Post-development spacecraft delivery orders may begin as early as Sept. 8, 2009, through Sept. 7, 2019, if all options are exercised. The estimated value of these orders is negotiated based on future manifest requirements and knowledge gained through the DDT&E process and is estimated not to exceed $3.5 billion.
>
> Sustaining engineering work will be assigned through task orders. The work is expected to occur from Sept. 8, 2009, through Sept. 7, 2019, with an estimated value of $750 million, if all options are exercised.
>
> For information about Orion, visit: http://www.nasa.gov/orion

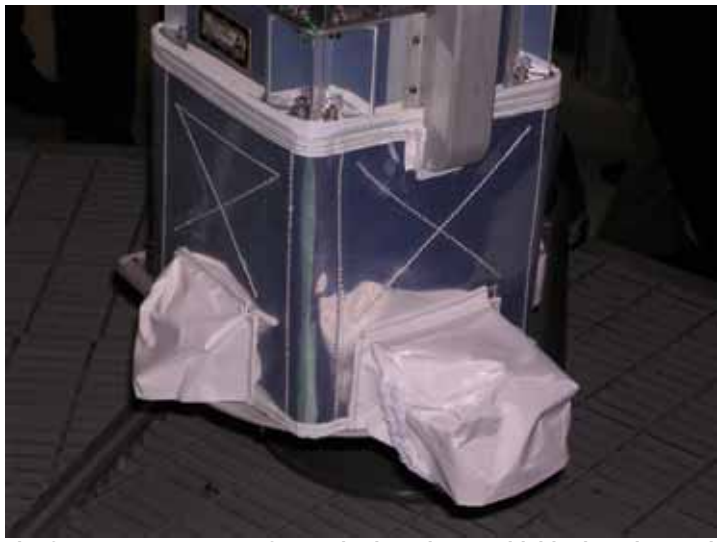
October 29, 2006 – Tonight Camyrn looked up at the moon and asked, "Did you know that men stood on the moon?" That was without my prompting her, and I answered her, "In about twelve years they just might do it again!"

STS-115

A few days after the SGANT installation last January [2006], the ESTL started having visits by Joe Tanner. Engineers had determined that the actual SGANT on-board the Space Station required a heat shield that had to be designed, fabricated, and manifested for STS-115. Joe is scheduled to fly on that mission, and will be the astronaut performing the EVA to install the heat shield on the Space Station's own SGANT. The SGANT we have in ESTL was built as the flight spare, so the fabrication team made several visits as several iterations of the heat shield mockup was made. The actual flight heat shield is based upon a mockup that Joe first made taping four pieces of cardboard together. Joe invited Karoline and me to go down to the Kennedy Space Center and see the launch. If at all possible, I would not miss this launch, especially since I had seen each of his previous three launches.

Joe Tanner and me in front of ESTL's Shuttle Ku-Band antenna

ISS Space-to-Ground Antenna (SGANT), the Station's Ku-Band antenna



Flight Unit of Antenna Group Interface Tube (AGIT) Heat Shield. Photo by Justin Kratts

Joe Tanner performing AGIT Heat Shield fit check while wearing EVA gloves. Photo by Justin Kratts

STS-115 marks the 116th space shuttle flight, the 27th mission for the orbiter *Atlantis*, the 19th visit to the International Space Station (ISS), and the return to the station assembly sequence. The crew of *Atlantis* will deliver and install the integrated P3 truss and P4 electrical power system module on the ISS. Weighing in at approximately 35,000 pounds, P3/P4 is the heaviest payload (to date) the space shuttle fleet will deliver to the ISS. P3/P4 includes a pair of solar arrays, which will span nearly the length of a football field and generate over 60,000 watts of power once deployed. The electrical power, generated by 65,600 solar cells in the arrays, is stored in batteries (for power at night) and used to run the ISS systems and science payloads.

Atlantis will rendezvous and dock with the ISS on flight-day three (FD 3). P3/P4 will then be attached to the existing ISS truss using both the space shuttle and the ISS robotic arms. After two 6½-hour spacewalks are conducted to prepare the P3/4 solar arrays and rotary joint, the solar arrays will be deployed on FD 6. The third spacewalk on FD 7 will prepare P3/4 for its extended on-orbit operations. *Atlantis* will undock and perform a flyaround of the station on FD 10 with landing scheduled at KSC on FD 12.

Like all station assembly flights, this is an ambitious and complicated mission, involving intricate operations conducted jointly by the flight control team in Houston, TX, and the crews on orbit. Fortunately, STS-115/ISS 12A has a world-class team of engineers, flight controllers, and trainers to prepare for and carry out this mission.

The crew of STS-115
cordially invites you to the launch
of the Space Shuttle *Atlantis*.

CAPT Brent W. Jett, USN
STS-115 COMMANDER

CAPT Christopher J. Ferguson, USN
STS-115 PILOT

Mr. Joseph R. Tanner
MISSION SPECIALIST 1, EV 1

CDR Daniel C. Burbank, USCG
MISSION SPECIALIST 2, EV 3

CAPT Heidemarie M. Stefanyshyn-Piper, USN
MISSION SPECIALIST 3, EV 2

Dr. Steven G. MacLean, Ph.D, CSA
MISSION SPECIALIST 4, EV 4

8/6/2006
Dear Matt, Hawks (other names deleted for this story)

First, let me tell you about night viewing. The night before the launch they roll the servicing structure away from the orbiter before they do the final preps for launch. Prior to this time, except for the tank and SRBs, it is barely visible. They then turn on four banks of incredibly bright Xenon lights to illuminate it for the work. It is an unbelievable sight. Each crew member is allowed to invite 20 guests to view the vehicle up close and personal, just outside the perimeter fence, no more than 400 yards from the pad. The guests get to hang around and view for 30 minutes or so. It can be quite a spiritual event. Some might say night viewing is more impressive than the actual launch.

Martha and I want to do something special for you and eleven more of our local friends. Martha will not be on the tour but our two sons will as well as bother David. As I said, this is a very limited viewing, for only 20 of our guests. Unfortunately, your families or friends are not included. Martha will give you a card at or before her party at the Wakulla the evening before launch. The card contains instructions on where to board a bus in Cocoa Beach. The show time is 8:30 p.m. The Orbiter under lights is not a sight you will soon forget. I know you will enjoy it. Please let us know if this does not fit in your plans so we can provide the opportunity to someone else.

I think you know the latest update. Management has settled on the late afternoon of the 27th as our first launch attempt. That could always change to a later date but at least we know now that it won't be earlier than that. The official date will be set on August 16.

Glad you can come to enjoy the show,
Joe

8/9/2006
Hello Everyone,

Attached is the invitation to the L-1 Party. RSVP regrets only. Hope everyone can make it. Everything is moving along toward the 27th as the first launch attempt. NASA will make it official on the 16th.

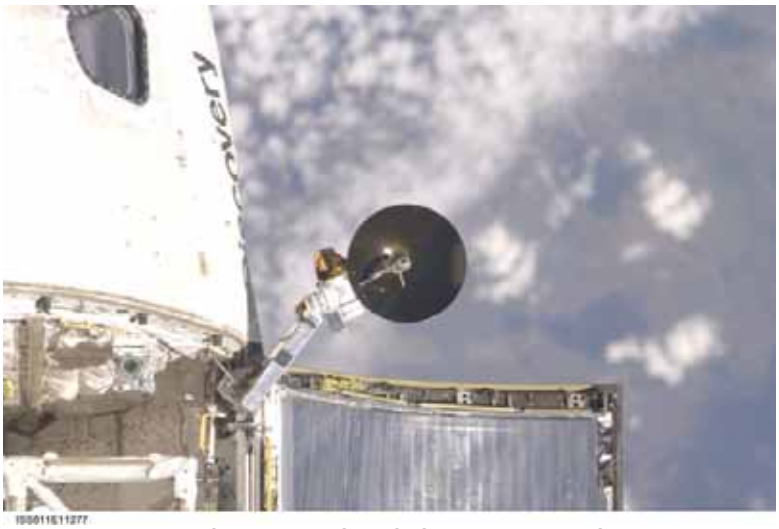
The crew is in Florida this week for TCDT (terminal countdown demonstration test), which is one of the last big training hurdles to get past. All is going well and as planned for them.

Thanks, Martha

8/17/2006
Hello All,

NASA completed the Flight Readiness Review (FRR) yesterday and settled on a **launch date of Sunday, August 27, at 4:30 p.m.**

See you all soon.
Martha



Ku-Band antenna on board Discovery. NASA photo.

One surprise came about a week before the August 27th scheduled launch of STGS-115. Two of the four bolts that secure the Ku-Band antenna were found to have too short of screw threads, so they had to be changed out while the orbiter sat on the launch pad. What is surprising is that the Ku-Band antenna has been flying on space shuttles since 1983. It is strange that such an item of importance could go undetected for such a long period of time.

So off we go, on Saturday August 26th, Karoline and me, to Orlando to see the launch of STS-115, scheduled for the next day at the Kennedy Space Center (KSC). My Southwest Airlines ticket cost me $5.00, for taxes or administration fees or whatever, since I had earned a “free” ticket, and we managed to buy a discounted ticket for Karoline. The plane was full, and it was fairly easy to spot other people going to the launch of Atlantis, those infected with Launch Fever. Symptoms include starry eyes, tripods held in death grips and camera bags stuffed with long lenses, conversations fragmented with NASA acronyms by upbeat people wearing the STS-115 mission shirts and hats and pins.

Torrential rain! It didn’t last long, but right after we checked into our hotel in Titusville, it started. Some guy in the elevator said he had heard the launch had been scrubbed. We thought it might be due to the weather, and the fact that Tropical Storm Ernesto was thinking about heading up the Eastern U. S. coast. Well, it was a weather related issue why the launch scrubbed, but it wasn’t due to

an impinging storm. The day before, the shuttle had been struck by lightning while it was sitting on the launch pad, and although initial telemetry checks showed the vehicle was in pretty good shape, the mission management team decided to postpone the launch until Monday.

After the rain stopped, Karoline and I stopped by Ron's place for about an hour, and then drove to Cocoa Beach to the STS-115 L-1 Pre-launch party hosted by Martha Tanner. The rain had drenched an outdoor deck area, so the party was held in the motel's parking lot. Just as we arrived, somebody was saying a prayer. Joe and Martha are strong Christians, and many members of their church were at the party. Later, Martha took me aside and told me that the night viewing had been cancelled, since it is only held the night before the launch. But she told me to be at a NASA contractor's building at 8 PM sharp the next night to catch the bus to see the viewing.

Joe made arrangements for Karoline and me to watch the launch from the VIP area, next to the Saturn V museum. On Sunday morning Karoline and I went to the KSC Visitor's Complex to receive our official tickets and bus passes. Then we drove into Cocoa Beach and visited Ron Jon's Surf Shop, which is one of the things to do there, even if you aren't a surfer. Pretty neat shop! After that, we just kept on driving down highway A1A, way past Melbourne Beach, commenting upon the various economic lifestyles along the beach – most of which are a lot higher than ours! Somewhere along the way we heard that the launch had been postponed until Tuesday, so we went back to our hotel to watch the NASA press conference.

At that time, even though the launch was scheduled for Tuesday, we still had our doubts. Karoline wanted to see Jimmy Buffett's Margaritaville at Universal City in Orlando, so we drove there, encountering another drenching rain. Her main reason for going there was to eat a pile of nachos that they serve at the restaurant. That pile was our supper for the night! And we still didn't eat all of the nachos.

After accessing the round-about words given at the next NASA press briefing, and hearing that unless Ernesto changed course, the shuttle was going to be rolled back to the Vertical Assembly Building (VAB), we made the decision to leave the next day. It turns out that this was the right decision for us, because the shuttle did begin its roll back to the VAB. But midway on the eight-hour crawler ride, the mission management team decided to reverse direction and go back to launch pad 39A. By that time, Karoline and I were back in Houston. However, it takes about a week to ready the shuttle for launch again once it is back at the pad.

8/29/2006
Hello All,

This is Martha. Atlantis is being rolled back into the Vehicle Assembly Building as we speak. Seems Ernesto has decided to blow right up the east coast of Florida and right over the top of Pad 39B. He will probably be only a tropical storm, but he could spawn some tornados and heavy rains.

What this means to STS-115 is a delay in launch. There are still discussions about launch attempt dates and we will keep you posted.

I want to thank everyone for your support and prayers during the past few weeks. It was really great getting to see all of you that were able to get down to the Cape. Sorry we did not get to witness the big show, but we will try again.

Thanks again.

Love,
Martha

8/29/2006
Hold Everything!!

NASA has decided this afternoon to return Atlantis to the pad. The crawler has reversed its path and is headed back. Because Ernesto is weakening the shuttle will now ride out the storm at the pad. Projected attempts at launch are September 6, 7 or 8.

Joe is at home this evening but the crew will probably go back into quarantine sometime tomorrow or Thursday. The families will probably fly down one day prior to launch since all of the prelaunch things have already happened.

I just told Joe the list is growing and payback is going to be rough!!
Martha

8/31/2006
Hello,

Latest news - No damage at all to the area or the shuttle from Ernesto. Now we need to pray for our friends and family in the Carolinas.

> Launch workup started this am with the first shift and will continue on target for a 12:30 pm EST launch on September 6. NASA has also been cleared to attempt on the 7th and the 8th if necessary.
>
> Joe is already back in quarantine and the crew will leave for the Cape this weekend. We will be flying down on Monday, late afternoon. Hopefully, we can get Atlantis on her way.
> Martha

Back in Houston for the Labor Day weekend. Karoline can't go back to Florida again because of her work schedule. But things were slow for me at work; I have enough vacation hours to go again, and an unused Continental Airlines ticket. I thought about flying the Stinson, but didn't have the $1000 it would have cost me in fuel, not counting any other expenses. So I paid the $100 change fee that Continental steals from its customers when they make changes, plus some more money, and rescheduled for a flight on the afternoon of September 5th – hopefully I would have plenty of time to make the night viewing, but Martha told me that the time had been moved up to 6 PM. When the plane was landing at Orlando, there was a full rainbow racing the airplane – good omen for launch, I thought! It was 6:30 PM when I drove into Cocoa Beach, and the bus had already left. This time I stayed at a cheaper place, and definitely, I don't plan on staying there again.

Wednesday morning I left phone messages for Rich Hensch and Eric Weaver to see about flying with them in their floatplanes, but we never made contact. I wanted to fly with Chester Lawson in his Grumman Widgeon, but didn't quite feel right about calling him, because I didn't have enough money to pay for a full hour. Last May he cut me a good deal but I didn't want to take advantage of him and his kindness. Next trip to Florida I hope to fly with him again.

I drove back to Cocoa Beach to the contractor's office where I was supposed to meet the bus for the night viewing the previous night. The launch had slipped, past the previously announced September 7th end of launch window, and so I was hoping I could still make the viewing, but I couldn't find anyone at this contractor's office that knew anything about the viewing. Later, I realized that I should have tried calling Martha, but by then it was too late.

There was a problem with one of the fuel cells on-board Atlantis. It has a three-phase AC motor that only worked on two-phases. Launch was rescheduled for Friday, September 8th. My airline ticket was to fly back on the 7th. I wasn't sure whether on not to extend my stay, pay an additional $100 for the airline change fee, plus extra days of motels and rental car.

Thursday I realized that if I took the NASA space center tour, there would be a good chance to see Atlantis uncovered on the pad. Normally, when a shuttle is on the pad, it is covered by the Retractable Service Structure (RSS), and all

you can see is the top of the external tank. The space cadet that lives inside Matt Nelson was so excited about seeing the shuttle on the bus tour that he forgot how to be a good photographer. Over fifty years of taking photographs and I left the camera in auto mode, not smart enough to set it for Shutter Priority to avoid the blurriness the moving bus naturally gave most of my pictures – not the photographs that I normally try to take. We couldn't step off the bus, and the bus driver didn't stop where there was a good view, so I snapped my fuzzy pictures. You would think I would know better.

After the tour, I went back into Titusville, waiting for a press conference to give me an update, torn between leaving and staying. If I stayed, I figured the launch would slip again, and sure enough, if I left the shuttle would go the next day. But every now and then, despite all my wild and crazy ideas, there is this rational guy matt nelson that sneaks up and demands attention – can I really afford to stay extra nights? And the airline change fee? And this will eat into my vacation pay when Karoline and I leave at the end of September to go to British Columbia. Because of the problem with fuel cell on Atlantis, the launch will probably slip, etc. So the wild and crazy and irrational Matt Nelson bowed down to the logical, rational matt nelson and drove back to Orlando in another torrential downpour and just barely made the flight to go back to Houston, head down in shame. And when I arrived home I found that the shuttle was scheduled for the next morning. When I woke up on Friday, Karoline asked me, "So, are you going to go to work to watch the space shuttle launch?" And I kept thinking that at this time I should be boarding the bus to go to the viewing area.

So I go to work, people say, "Well, we know that the shuttle is going to launch today because Matt is back", and I feel sorry for myself, glad Joe is going to launch, but I'm sorry that I'm not there to wave at him. And then the launch scheduled for 10:40 AM CDT scrubs again, this time due to a problem with one of the fuel sensors on the orange external tank, but the talk on the NASA TV channel is that they will try again on Saturday at 11:15 AM EDT. Wow, the irrational Matt Nelson has been given another chance to leave today and see the launch tomorrow. When I first checked the Southwest Airlines schedule at 11 AM, there were several fights available. But I wanted to hear what the NASA officials would say at the noon press conference, and I had a pick up truck that I needed to pick up from the shop – yes Murray, even my nearly 200,000 mile Ford F-250 truck has an occasional problem – so it was 2 PM when I rechecked the Southwest schedule and found that there was only one flight with seats available and it left at 7 PM. Right then and there I made my decision to "Go for Launch" and my old credit card went chunk-a-chunk and the credit card company was happier and the American economy was happier and I was happier and sooner or later the credit card balance will be paid off. Karoline didn't share my chunk-a-chunk enthusiasm!

> Jer 51:16 when he uttereth *[his]* voice, *[there is]* a multitude of waters in the heavens; and he causeth the vapours to ascend from the ends of the

> earth: he maketh lightnings with rain, and bringeth forth the wind out of his treasures.

Watch the distant lightning from the right side of the plane. Arrive Orlando at 10:15 PM. Drive the Bee-Line Expressway. Third motel in two weeks. Buy fresh batteries for my camera. Motel morning coffee. Cheese Danish from 7-11, cheaper than rip-off prices at NASA Visitor's Center. Don't sleep well because don't want to miss launch. Leave motel by 6:30 AM, expect a lot of launch traffic, but it is light. Buy another STS-115 shirt and change in restroom. Check film in camera, install batteries. Met Laura and Carrie while waiting in line to board the bus to the VIP viewing area. They are educators and Laura called her husband on her cell phone to give updates. We board the very first bus, one that left at 8 AM. Enroute, the lady talking on the bus points out the big eagle nest, and then we see two bald eagles sitting atop light posts. Another good omen! Laura Blasi took some photos of me by the countdown clock. When she emailed me the photos I found out she is a PhD. I'm impressed. Met an elderly couple from Vero Beach, Florida who are seeing their first launch. So were Laura and Carrie. Everybody is excited. Helen and George and Laura and Carrie and other people I met are nice and everyone is excited about the launch. Guess I already said that. Most people were there the day before. Only twenty per cent chance of rain. Warm and humid, nobody cared too much. Saw swarms of boy scouts when I was having my photo taken. Wish I had requested Laura take my photo a few minutes earlier, when the clock said 01:44:00. There is no way I would have been in front of the clock at 00:01:44. I was in the upper corner of the grandstand then, rechecking my camera one more time. Saw Canadian guests of Canadian astronaut Steve MacLean. One young man parked his wheel chair in the front row, next to a table that held a TV. One middle-aged couple came with their dog. A Seeing Eye dog, for the lady with the smile on her face carried a white cane, as her husband held her arm with his right hand, and held the dog with his left hand. Next door, the Saturn V is lying horizontally in a museum. It should not be there, but should have been used to launch another Apollo capsule to the moon. But today is not a day for touring a museum. Three miles across the water stands the space shuttle Atlantis, waiting for its return mission to space. In 1985 I saw this space ship roll out of the factory in Palmdale, California. Now it is waiting for its 27th mission into space. I'm still waiting for my first, which I have called STS-144 for years.

But today is not my mission, but that of STS-115, commanded by Brent Jett, with pilot Chris Fergerson, and mission specialists Joe Tanner, Heidimarie Piper, Dan Burbank, and Steve MacLean anxiously waiting the count down too, after training for four years, because their mission had been delayed by the loss of the Columbia on STS-107. They don't forget their friends who died. But there have been two Return-to-Flight missions since that disastrous day of February 1, 2003, when the whole world mourned. STS-114 and STS-121. Now it is to return to the space station to continue construction. My mission will come, but first I have to convince NASA to select me. But again, that won't be today, and we have a shuttle ready for launch.

Standing in front of countdown clock. Atlantis is on pad above my left shoulder. Photo by Dr. Laura Blasi

You hear the shuttle training aircraft (STA) take off to inspect weather conditions. A T-38 takes off. A news helo flies in front of the crowd, and I waved at the cameraman hanging out the right side. Sometimes I clearly hear the announcer, other times I don't. I worry when I hear things like the weather at the shuttle landing strip is of concern right after the STA goes airborne, or a backup generator is not on line at a remote landing site in Europe. Ten or fifteen minutes before launch, the launch director polls the major players for go/no go comments. Everyone is go. I should be able to remember all their functions, but I don't. RSO – Range Safety Officer – go, Houston Flight – go, weather – go, Launch team – go, Atlantis – go. C D R - (commander of Atlantis) – GO! He and his crew are ready to go, after four year of intense training. We hear from the Launch Director that Atlantis is "Cleared to Launch"! Everyone cheers. At this time we are at the T minus nine minutes and holding part of the countdown. The count is picked up at nine minutes and everyone cheers. At T-7 minutes and 30 seconds, or close to it, the beanie is retracted off the top of the external tank, and everyone cheers. About four minutes left in the countdown we are asked to stand for the National Anthem. Over the speakers comes "Stars and Stripes Forever". And there is silence when somebody realizes that the wrong music is being played, and during that silence somebody else starts singing *"The Star-Spangled Banner"* and everyone starts singing and then the actual music starts and we all start over. I shiver on this day of September 9th that is two days from the 5th

anniversary of what everyone calls Nine-Eleven when I hear the words of the National Anthem *"…And the rocket's red glare, the bombs bursting in air, Gave proof through the night that our flag was still there."* Hopefully, there won't be any bombs, but that there will be a glare from the rocket in a couple of minutes.

About two hours or so before the launch time I called Bob McCullough to let him know that the irrational Matt was alive and well waiting for the launch of STS-115. He was with me when Bob Gaylord and Dana Van Burgh (who is my friend and former 9th grade science teacher) watched the launch of STS-66, Joe's first launch. Hawks Abbott was with me when Joe launched on STS-82 to repair the Hubble Space Telescope, and had been invited down for this launch but could not make it. After I talked to Bob I called Hawks, but only had the answering machine to tell about me being at the Cape. At T-45 seconds I hit the "Send" button on my cell phone and called Hawks again, only this time I sat the phone down and concentrated on the countdown. When I talked to Hawks later he said that he watched the launch on TV, but had better audio coming from my cell phone than he did from the TV. He answered his phone right about when the shuttle launched, and I didn't pick up the phone again until after the solid rocket boosters (SRBs) had separated, two minutes later. And of course, after the launch I talked to Bob again.

When the count reaches the T-10 most people start counting down the final seconds, but I don't, because I am concentrating on keeping my camera with the 300 mm lens centered on the shuttle. The main engines ignite, and at T-0 the solid boosters join and explode their energy into a total thrust of 7.5 million pounds and everyone cheers and I see bright flame coming out of the bottom of the RSS, which blocked the view of the shuttle, and "We have lift-off of the space shuttle Atlantis…" and the three main engines are burning the Hydrogen and Oxygen fuel mixture and the fire from the solids is bright as the sun and the shuttle is no longer blocked by the RSS and I can see it clearly and I am as happy as the STS-115 crew, happy for me and happy for them. The roar of the engines reach us a few seconds later, engulfing us like a cocoon, shaking our hearts, making us laugh, and the crackling of the solid booster engines reverberate and pop and reverberate some more and the shuttle is in the clouds and the shuttle is out of the clouds and the brilliant light is dazzling as the shuttle crosses over patches of clear blue sky, and very bright as it passes through the clouds and there is no second chance if you or your camera mess up your photos. Seven seconds after lift-off the shuttle rolls to the right, and 73 seconds after launch you hear, "Atlantis, Go at throttle up", and you shudder one more time, because those were the last words heard when the Challenger exploded in 1986, but this is 2006 and everything is working well and soon it's two minutes into flight and the SRBs separate and the shuttle continues on it's flight to orbit and Main Engine Cutoff (MECO) eight-and-a-half minutes after launch, at which time separation from the external tank occurs and the tank ends up in the Indian Ocean. Everyone is grinning, especially the flight crew, and we wait more than eight-and-a-half minutes for the bus to be fully boarded.

Joe 2:30 And I will shew wonders in the heavens and in the earth, blood, and fire, and pillars of smoke.

Launch of STS-115, September 9, 2006

Two views taken from the water. Forwarded to me by Joan Zucha

09/09/2006 [NASA News Release]

NASA'S SHUTTLE ATLANTIS BEGINS MISSION TO THE SPACE STATION

The Space Shuttle Atlantis and its six-member crew are on their way to the International Space Station after lifting-off from NASA's Kennedy Space Center, Fla., at 11:14:55 a.m. EDT Saturday.

"It's been almost four years, two Return to Flight missions, a tremendous amount of work by thousands of individuals to get the shuttle program back to where we are right now and that's on the verge of restarting the station assembly sequence," said Atlantis' Commander Brent Jett. "We're confident over the next few weeks, and few years for that matter, that NASA's going to prove to our nation, to our partners and our friends around the world that it was worth the wait and the sacrifice. We're ready to get to work."

The fuel cut-off sensor system, which malfunctioned and delayed Atlantis' scheduled Friday launch, performed normally Saturday. The engine cut-off, or ECO, sensor is one of four inside the liquid hydrogen section of the shuttle's external fuel tank.

Atlantis' flight, STS-115, will resume construction of the International Space Station. The shuttle and station crews will work with ground teams to install a girder-like structure, known as the P3/P4 truss aboard the station. The 35,000 pound piece includes a set of giant solar arrays, batteries and associated electronics. The arrays eventually will double the station's power capability.

Atlantis' crew includes Pilot Chris Ferguson and Mission Specialists Dan Burbank, Heide Stefanyshyn-Piper, Joe Tanner and Steve MacLean, a Canadian Space Agency astronaut. The shuttle is scheduled to dock with the station on Monday. Once Atlantis arrives, a day could be added to the 11-day mission for a focused inspection of the shuttle's heat shield.

An hour-an-a-half after launch, Atlantis has completed its first orbit and is flying over Houston. For the last several years, The ESTL has been tasked with tracking the shuttle during the first orbit with a sixteen-foot S-Band antenna to capture the video downlink of the opening of the payload bay doors. Sometimes wrong state vectors are sent, as what happened during STS-121, so no usable video is obtained, and other times the crew's busy work schedule after achieving orbit is a little out of sync so the actual opening of the payload bay doors occurs right after the shuttle passes out of view. Other times a good track gives good results. When STS-115 came into view of the antenna and was transmitting the video signal, the starboard door was already open, showing the Ku-Band antenna. A few minutes later the port door was clearly seen opening up all the way. The photo on the next page shows a close up view of the Ku-Band antenna,

but the shuttle is at a low elevation tracking angle, and the signal is weak, so there are a lot of noise speckles in the photograph. The entire Ku-Band assembly is only about 6-feet long, but the wide angle lens makes it looks like it is as long as the cargo bay. The black dish is just to the right of the gold box in the center, but it is hard to see. Still, it gave me a thrill to see it when I came back to work on Monday. On Saturday, by the time I arrived home at 7:30 PM CST, the shuttle had already made six complete orbits around the world. I saw another rainbow while driving home!

Atlantis' Ku-Band Antenna, as seen on video downlink during first orbit at ESTL

9/10/2006
Hello Everyone,

PHEW!!! Finally got Atlantis off. The Mission is going extremely well.

This is a very short note of thanks and appreciation to each and everyone of you who came to support Joe and the crew and the launch of STS-115. My only regret is that some of you were unable to witness the spectacular lift-off. Saturday was a beautiful day.

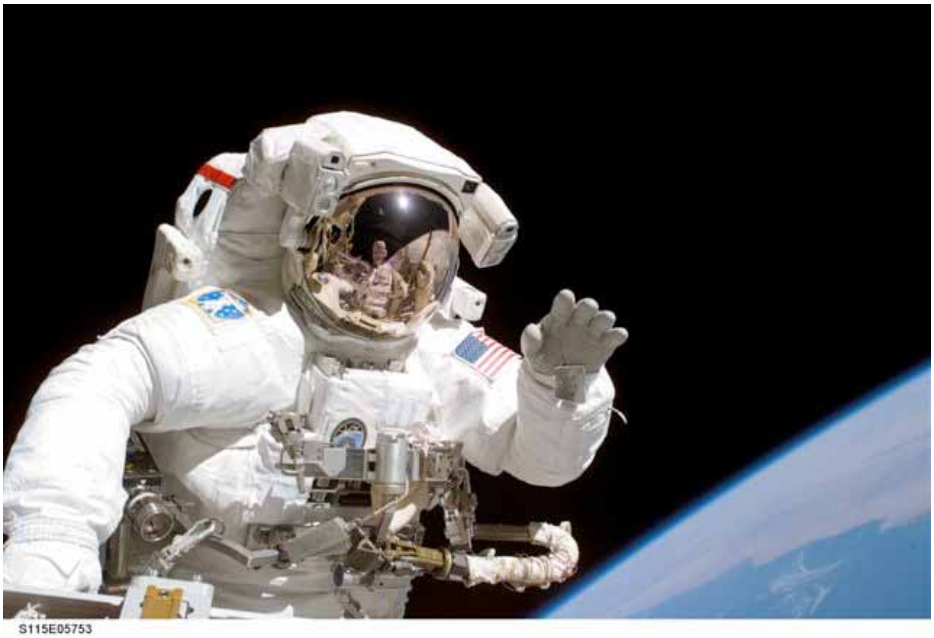
I am sure that some of you had no idea that you would be enjoying an extended stay at the beautiful and tropical Wakulla Suites in downtown Cocoa Beach. What a wonderful time of visiting and sharing stories and eating we had. Thank you so much! Some of you need a special, personal thanks and I will see you later!!

Again, thank you to each and every one of you for your love and support during the recent weeks. We love you all, ya'll.

Martha

On Monday, September 11th, Atlantis docked with the space station, and then on Tuesday, Joe and Heidi performed the first of three EVAs scheduled during the mission, to install the P3/P4 truss assemblies onto the ISS. These assemblies contain new solar arrays for the station. Martha forwarded me the top photo of Joe. Post-mission, Joe sent an email, saying, *"Check out the headline. Bet you didn't know Heide and I had so much power. Hey, the solar system needed a few finishing touches."* The headline read: *"Astronauts put final touches on solar system".*

Joe T. during EVA 1. NASA Photo



Here is my favorite EVA picture from the flight. Heide took it during EVA 1. Hope you enjoy it. Joe

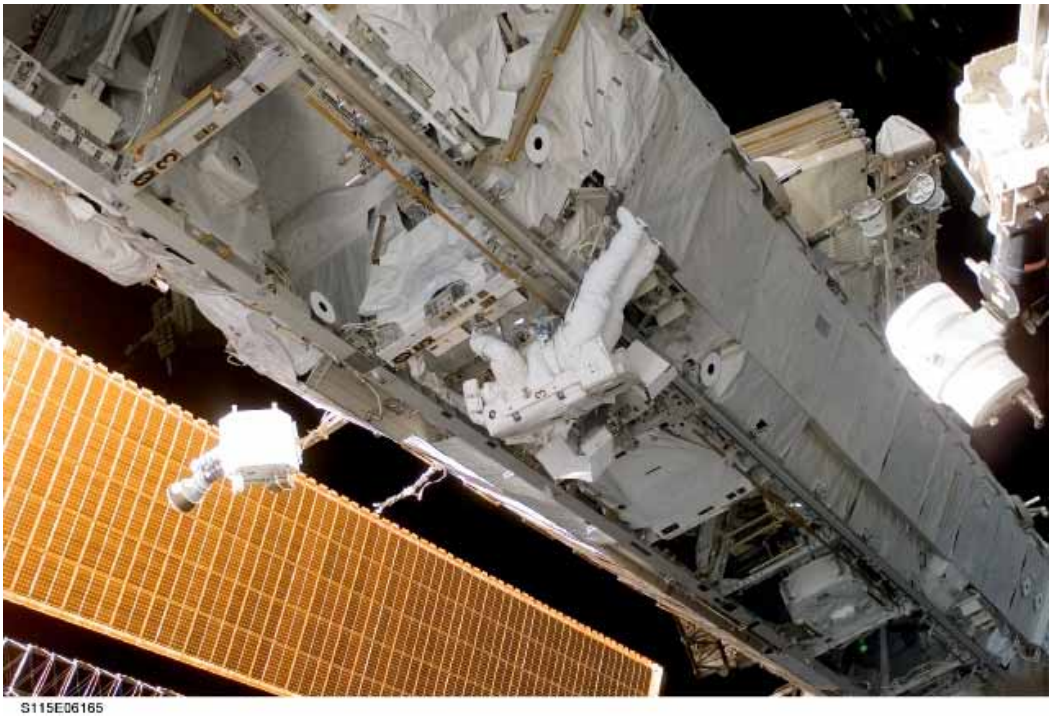
On Flight Day 5, which was Wednesday, September 13th, Dan Burbank and Steve MacLean performed the second EVA, completing complicated tasks involving the deployment of the solar arrays. Their space walks were every bit as spectacular and important as the ones performed by Joe and Heidi, but due to the length of this story, I'm not going to write much about their EVAs. The mission highlights have been well documented by the media. What is not well documented is the elation I felt on Flight Day 7, Friday, September 15th. Joe and Heidi opened the outside hatch again and did more work related to the deployment of the P3/P4 truss, and then they proceeded to change out the S-Band Support Assembly (SASA), that holds the Assembly Contingency Radio Frequency Group (ACRFG), which is the actual S-Band antenna. On STS-97, Joe and Carlos Noriega had installed the spare SASA, and now, Heidi and Joe were replacing a failed ACRFG/SASA with this same spare unit. We had tested the spare ACRFG in the ESTL, and its installation and operation were my responsibility. There was a little confusion in the Mission Control Center (MCC) and the Mission Evaluation Room (MER) that supports the MCC about how to tell Joe to move the ACRFG high gain antenna to its stow position. Jacque Myrann called Fred Shetz in the ESTL regarding this problem, Fred and I worked together and gathered data based upon previous ESTL tests and experience, and then Fred sent this data to Jacque. Later that day, Penny Saunders, one of the station managers sent this email to Linda Bromley:

> *Linda,*
> *Once again your ESTL team was invaluable to the ISS Program. Without their experience, knowledge, ready availability, and quick response, we would not have been able to resolve in a timely manner some real-time issues we were having with the removal and replacement of the ACRFG.*
>
> *Jacque's support and expertise was also invaluable. She knew instantly to call ESTL and did so - minimizing EVA delays associated with the R&R. She was very thorough in handling all of the S-band EVA activities while still maintaining awareness and oversight of the WVS hardware.*
> *Thank you very much,*
> *Penny*

Buck Buchanan recorded some of the NASA video while this EVA was being performed, and Mark Bullard digitized the video and extracted several frames for individual photos. Some of the images were taken from the Wireless Video System (WVS) camera mounted on each astronaut's helmet. Jacque had been one of the NASA engineers on this project, and that is what the previous email referred to. [My friend Bob Simle also had worked on the WVS project!] Seeing Joe and Heidi work on the two S-Band antennas gave me a thrill, but I became very excited when I saw Joe install the AGIT Heat Shield on the SGANT. Here is an astronaut and personal friend whom I have know for many years, a man for whom I have the greatest respect, installing a thermal blanket on an antenna in space exactly like the one for which I am responsible, and I had the

good luck of being able to participate in the project and being there each time he came to the ESTL. To top it off, he had invited Karoline me to see the launch, and I had actually seen it, as well each of his three previous launches. Definitely, I will remember this day as one of complete job satisfaction!

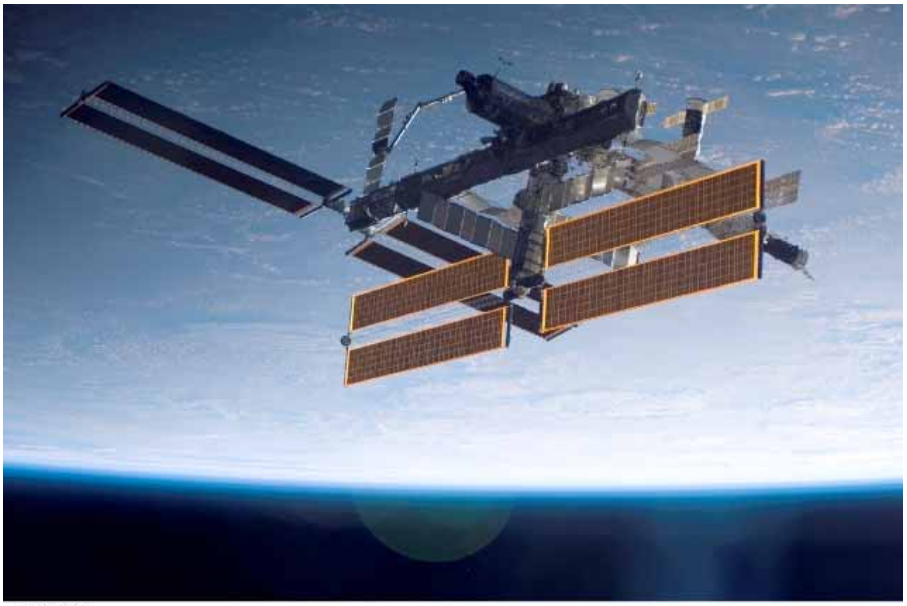
ACRFG on the Space Station. Mark Bullard extracted this frame from the NASA recorded by Buck Buchanan



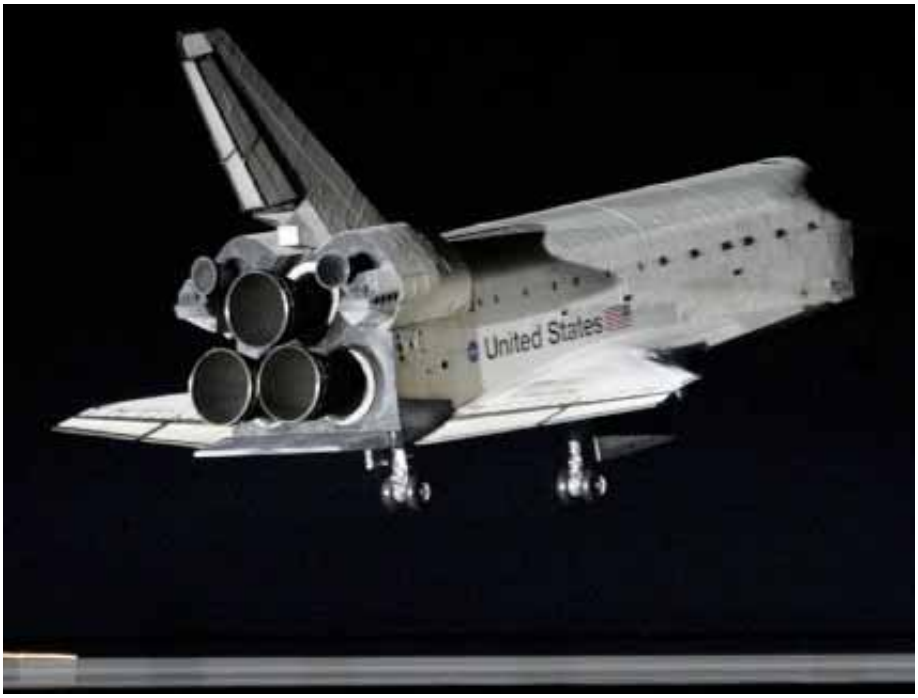
Heide Stefanyshyn-Piper during EVA 3. Notice the ACRFG above the solar array. NASA photo.

Astronauts Dan Burbank and Dr. Steven MacLean during EVA-2. NASA photo.

SGANT during installation of AGITY Heat Shield by Joe Tanner. Mark Bullard extracted this frame from the NASA video from Joe's helmet camera recorded by Buck Buchanan



International Space Station as viewed from departing Atlantis. NASA photo



Early morning landing of Atlantis, completing the STS-115 mission. NASA photo.

Two or three days later, Atlantis undocked from the space station, the crew started their final days on orbit and making landing preparations, and then they were given an extra day to spend in space due to debris of uncertain origin. Nobody wanted a repeat of the end of the Columbia mission, and NASA exercised as much caution as possible and had the crew inspect the shuttle again. Maybe the Columbia crew of STS-107 flew another mission, this time in the role of guardian angel astronauts. Or God just answered a bunch of prayers

for the 115 crew as they landed safely at KSC at 6:21 AM on Thursday, September 21st. On Friday, they came into Houston's Ellington Field to be greeted by about 250 people. Once more, the picture taker matt nelson snuck out and embarrassed Matt Nelson the sort-of-decent photographer – my flash died, and here I am trying to hand hold a foot-long 200 MM lens at a shutter speed of 1/60th of a second, because that was all the faster I could shoot due to the light conditions. Naturally, most of my shots were blurry, although the lighting was good. I should have gone to at least 1/125th of a second and had clearer shots, although they would have been slightly underexposed. But this isn't about a photography lesson. It's about the crew return.

These crew returns are always exciting, and when I know any of the astronauts it makes the event even more special. Naturally, everyone who knows me also knows I wouldn't miss this one. When it's time for the crewmembers to speak, the commander always speaks first. CAPT Brent Jett, USN led the tempo of thanking the families and ground training people, the pilot, CAPT Christopher Ferguson, USN was next, sharing the excitement that CAPT Jett could not hide. Mission Specialist 1, Joe Tanner's turn was next. He is listed as Mr. Joe Tanner, but when I met him in the Naval Reserves, he was CDR Tanner. I don't remember the words of CAPT Jett and CAPT Ferguson much, but do recall many of Joe's comments. He thanked God, his family, and the trainers. When he first spoke, he said that the crew had trained together for four-and-a-half years, spent three weeks in quarantine, and two weeks on-orbit, and they still liked each other! Before they launched Martha had told me that they didn't want the mission to end, because they were all such good friends. It showed. Joe talked about trying to extend EVA 3 as long as he could, taking his time transversing the length of the space station and admiring a very beautiful sunset, wanting to break Jerry Ross's record for EVA hours, lamenting that he hadn't. [Jerry has seven shuttle flights and I think he performed an EVA each time]. Then, Joe told of the crew celebrating the promotion of Mission Specialist 2 Dan Burbank to CAPT, USCG. His eagles were flown on this mission. Each crewmember gave high praise to the others. Next, Dan spoke of his EVA. This guy is a helicopter pilot from the Coast Guard, and participated in the rescue of people trapped in the storm from which the movie *The Perfect Storm* was made. Mission Specialist 3 CAPT Heidemarie Stefanyshyn-Piper spoke next. While the other crewmembers were elated, her exuberance shined throughout the entire hangar where the ceremony was held. Nothing but a solid ear-to-ear grin! She talked a little bit about the continuous launch delays, but when she started describing the launch experience and then going out on EVA, she spoke as though she was still launching and spacewalking. When she is eighty years old she will still want to share her wonderful adventures with her grandchildren, and will probably talk about her experiences as if she had just finished the STS-115 mission. A man whom I don't know that works in our building said he went on a NASA trip with her once, and found she had been a Navy diver (which I knew), an underwater demolition expert, and an underwater welder. NASA did the right thing when they selected someone of her ability and qualifications. Dr. Steven MacLean, Mission

Specialist 4, of the Canadian Space Agency was the last one to speak. He is the first Canadian astronaut to have operated the Canadian-built arm (RMS – remote manipulator system). He spoke that even though people may experience the same event, each person experiences it a little differently. A few years ago he spent seven days climbing Mt. Everest, and his feet were cold. When he was doing his EVA, his feet were cold. I think that he may be the only astronaut to have climbed Mt. Everest, but I may be wrong. These fine people of the STS-115 mission formed quite a diversified crew – graduates of military academies and test pilot schools, a Hubble Space Telescope fix-it guy and Stearman pilot, a helicopter rescue pilot, a Navy diver, and a climber of Mt. Everest. It was my privilege to have participated in a very small way with the fantastic crew of STS-115 on their fantastic mission. Before I left, I heard somebody say that STS-1 astronaut and Apollo 16 moon-walker John Young was in the audience. That evening, there was another rainbow over the Johnson Space Center and the right side of the rainbow lit up the steeple of a nearby church.

Dear STS 115 Launch Guests,

This is Joe this time. Thank you to all for being a part of our launch experience. Whether you were there or not for the actual event, I hope you got a flavor for how grand an adventure this is, the business of space travel, and had a good time in Florida. Sorry about the delays. It was one of those situations where we had no control. No action on our part got us into it and no actions on our part could get us out. So we just relaxed and went with the flow. I'm sure it wasn't so easy for you. We didn't set a record for number of days in quarantine but we came close.

As you probably know, the mission was a great success but not without a few trials. I have caught a lot of grief for the lost bolt but it really wasn't my fault. Honest, that's my story and I am sticking to it. I will start helping a team tomorrow to figure out how to keep it from happening on the next flight like ours in February. This design was known to be weak. The bolt that was hard to remove is another story. I will be working on that team also. We were very close to a major problem. If Dan and Steve had not been able to remove it I don't know what we would have done. It was also not our fault. We send humans to space to work these sort of problems.

My body and head are just about back to their normal boring selves. It has been quite pleasant. Guess I don't have an excuse anymore for being a slug around the house. I don't know what I will be doing at work next but it is certain that my space flying days are over. I am OK with that. It has been a great career. I need 2 more years with the government so we aren't going anywhere right away.

Thanks again for taking part in our mission. I'll be sending you a video link for you enjoyment in a few minutes. It is not our official crew video but it is a nice summary of the mission. Joe and Martha

STS-115 Crew at Houston's Ellington Field, September 22, 2006


Commander Brent Jett


Pilot Chris Ferguson


MS 1 Joe Tanner


MS 2 Dan Burbank


MS 3 Heidimarie Stefanyshyn-Piper


MS 4 Dr. Steven MacLean, CSA

Cadie Lynn Larson's Baptism

The day after the launch of STS-115, on September 10th, Cadie was Baptized by Rev. Jay Barnes. Karol's parents were also here to witness the Baptism. Cadie slept during the whole event. Now, the actual Baptism wasn't as dazzling as a space shuttle launch, but what it represents and the Heavenly home where she will eventually live in all of God's glory will make the light of the shuttle launch not seem very bright at all.

Cheri, Cadie, John, and Camyrn Larson with Rev. Jay Barnes on the day of Cadie's Baptism

Canadian Trip

For the past several years, Karoline and I have taken a trip together, just the two of us, usually in the Western part of the United States. We have seen the balloons of Albuquerque, the Grand Canyon – generally on the Northern side, the canyons of Utah, Crater Lake, the launch of SpaceShipOne in California, Mt. Rainer, Las Vegas, and of course, the mighty Tetons, which I flew over in a Cessna 172 last year. We have learned that the Fall is a good time to travel, because the students are back in school, the weather is cooler, the prices are somewhat lower, and it's a good time of year to see the changing colors on the trees. This year we decided to go to British Columbia. So, on September 27th, we flew to Seattle, and then immediately drove East to Kennewick, to see Karoline's brother Paul and his wife Carrie and daughters Megan and Rachael – Amanda is going to school in Birmingham, and as a result, we have seen more of these guys in the last two years than in the last twenty. Thursday, the 28th we were in Coeur d'Alene, Idaho, so I could fly with Mike Kincaid in his J-3 Cub on floats,

and somehow I reckon everybody will know that the Alaskan bush pilot wannabe that hides within me snuck out and thoroughly enjoyed spashin'-and-dashin' one more day, and did his best to convince me to buy a floatplane. He hasn't won yet, but if he ever does, tell Karoline I will be home for Christmas!

Mike Kincaid standing next to the J-3 that I earned my float rating in

Someday I hope to write a good story about these trips with Karoline, but for now I will just go over this year's highlights. After stopping Thursday night in Cranbrook, British Columbia, on Friday, the 29th we stayed near Lake Louise, at the Paradise Lodge and Bungalows. This is one of the best places we have ever stayed, and considering the resort area, I didn't feel we had been overcharged at the price of $130. There is a magnificent hotel that over looks Lake Louise, but I have never spent $600 for a night's stay and I'm not ready to start now. While driving up to the lake in the evening we saw five elk, and saw a moose earlier in the day. The next day we visited nearby Lake Morraine again, then rode the ski lift up to look at the overall beautiful vista. Another couple hundred miles later we stopped near Jasper, Alberta at a place that had log cabins. Our train to Prince George left on Sunday, October 1st, but while eating breakfast Karoline and I discussed driving there, and picking up the train at Prince George to Prince Rupert, which is on the Pacific Coast. Our return train wouldn't be returning to Jasper until 4 PM on Thursday, Oct. 5th, and we decided we didn't want a marathon drive to catch our return flight to Houston on Saturday the 7th. Turns out we made a good decision.

Karoline at Lake Louise

Lake Louise at sunrise

Lake Louise boathouse at sunset

Bow Lake

Mt. Robson

On Monday morning at 8 AM the train pulled out of Prince George, and we settled in for a 12-hour ride with scenes of glaciers, mountains, rivers, and Fall colors and colorful water falls. Although the scenery is great, after 12 hours we were both ready to stop for the night. Actually we spent two nights in Prince Rupert. This is a nice harbor town, but we arrived too late in the season to go on a whale-watching cruise, and there was no one at the seaplane base that gave floatplane training, although they do have a nice seaplane base, so we became quite acquainted with the town.

Prince Rupert Seaplane Base

While riding the train there, we met Dan Reece and Ted Morrison, two men of the Tsimpsean Tribe. Dan is of the Eagle clan, and Ted is of the Killer Whale clan. For over 10,000 years Tsimpseans have lived near Prince Rupert. Dan has had his own fishing boat since he turned 15, and now he is 46. Ted is a Jack-of-all trades, and plans on helping Dan build some cabins on Zuyas Island, northwest of Prince Rupert. They are hoping to open the cabins next summer, and I wouldn't mind spending a few days fishing there. Dan says that he doesn't need a rod-and-reel to catch fish, and it would be fun learning how to fish by methods used for thousands of years before the White guys came searching for real estate.

Often the train scared wildlife snacking near the tracks as our snack car with the observation car rumbled by. We saw several deer, some coyotes (pronounced similar to “ky-oat”, not “ky-oat-ee”), a few bald eagles, and three black bears. One ran, so his name is “Running Bear”, but Brian Collier calls me the “Old Goat”; I don’t ever hope to have my name changed to “Running Bare”! That’s not something you want to think about before breakfast!

Dan told Karoline and me about the sinking of the “Queen of the North”, a ferryboat that used to run between Port Hardy and Prince Rupert. Vaguely, I remember having heard about it. Later on that same day, Randy, the man who sat behind us in the observation car, loudly talked about working as a crewmember on the same ship when it sank. While his story has the 1st person element, I actually liked better the soft-spoken version by Dan. On the return trip, I paid more attention to the passengers than I had on the outbound trip. One Hispanic couple had just been traveling in Alaska, and one lady in her thirties tried to explain things in her limited Spanish. The Hispanic lady read the Bible. There was an older couple from India, and another one from Australia. One guy who wore a gold watch with a phone company emblem remarked that the guys fishing in a river should be working, since this was Wednesday. Maybe the fishermen were also retired, but none really cared what this baldheaded gold watch-wearing guy had to say. A Scottish helicopter pilot was trying to impress one old man who had been a B-17 pilot during World War II. I don’t think the B-17 pilot was impressed. He definitely wasn’t impressed when another loudmouth guy started giving his solution to all the world’s political problems. At this point, if it hadn’t been for the scenery, I would have left the observation car just so I wouldn’t have to listen to the guy. Karoline had already gone downstairs, so I turned to Leslie Williams, the lady sitting behind me, and made some comment that I didn’t care anything about this guy’s opinions. Leslie had just started her trip to go on a Mediterranean cruise. We talked for two hours about grandchildren and travel. Karoline watched an entire movie on her DVD player while she figured I had found somebody to yak with. Leslie has this dream of going across Russia on the Trans-Siberian Railroad, and I strongly encouraged her to go for it. Someday, I hope to open my mail and find a post card from her from Lake Baikal. After we went downstairs, I introduced her to Karoline.

Another person on the train is named Rick. After thirty-seven years of working on the railroad, he is being forced to retire. He kept everyone in stitches, knows every mile of the ride, and often offers tidbits of the history. From what I gathered, upper management has given him the option of moving to Vancouver, which he doesn’t want to do, or retire. Traveling with someone for twenty-four hours is a good way to learn about whom he or she is, and from what I learned about Rick, the management is making a big mistake. They cannot replace his experience with somebody at half the salary that will love his job as much as Rick loves his.

On Thursday afternoon, I had to make a tough decision whether to continue driving South to visit my cousin Tom Gremel, or go towards Whistler and Vancouver to see Ken Harman. Since I had seen Ken in January, and hadn't seen Tom in a couple of years, I ended up seeing him on Friday. During the week I had tried calling him, but found out I had the wrong number. It disappointed both Ken and me that we didn't see each other, and we both wanted for me to see his space shrine with all of his models. Sorry Ken, and next time I go to Seattle I will try and see you in Vancouver.

So on Friday we crossed back into the good old United States, drove to Ellensburg to see Tom, and I had to pay for lunch because he paid last time, then we drove to Seattle and didn't encounter rush hour traffic, although we arrived at Union Lake about 6 PM. Why Lake Union? Seattle Seaplanes, of course! Once more on Saturday morning I flew with Jim Chrysler in his Stinson 108-1. Once more, I had the fun of flying a floatplane. Even though I plan on selling my Stinson, at least I can keep flying Jim's. And I intend on doing just that.

Seattle Seaplanes Stinson 108-1

Now I am back in Texas, dreaming up schemes to fly to Alaska, or to Africa and Australia and New Zealand, and around the world, or in the An-2 again with Douglas and Neal, or with Jim Chrysler in Seattle; Mike Kincaid in Coeur d'Alene; Chester Lawson, Rich Hensch, Eric Weaver, and Kirk Spangler in Florida; Brian Schanche in Minnesota; Bob Kraemer in his Stearman at St. Charles, Missouri; Don Lee, Mike Vivion, Heidi Ruess, and Marc Paine in Alaska; and Alan Crawford in Texas. Thanks guys! And flying in the space shuttle or going to the moon are still things I dream about. Maybe my granddaughters Camyrn and Cadie will fly to Mars, or to someplace else in the Heavens.

> *Neh 9:6 Thou, [even] thou, [art] LORD alone; thou hast made heaven, the heaven of heavens, with all their host, the earth, and all [things] that [are] therein, the seas, and all that [is] therein, and thou preservest them all; and the host of heaven worshippeth thee.*

Stinson one more time, probably the last story that I will write on it.

Over the last four years, too many things have happened with the Stinson, and it has cost Tom and me way too much money. Like I said earlier, it has been a hangar queen 60% of the time, and that percentage now might even be higher. Tuition has been very high at Stinson University. On September 16th, while coming back from the glider base, I could not adjust the prop correctly, and it slung grease onto the windshield. All the way back I kept intensely looking for a place to land should the need arise, and after I parked it inside the hangar I looked closely at the prop. There were aluminum filings all over the nose cowling, so much that the grease around the prop hub glistened like silver. The man at the prop shop thinks a bearing failed. Except for a prop that costs $18000, there is no other prop that will fit this engine, parts are too difficult and too expensive to find, and the FAA has issued a mandatory Airworthiness Directive (AD) that requires an inspection of the prop every 250 flight hours. While the engine was being repaired, we had the prop inspected, and it cost $1800. On other airplanes a new prop costs about $4000. Then, a steel rod upon which the counterweights move back and forth broke, so that meant another trip to the prop shop in May. The engine and prop were built during World War II, and there was a war to be won, so probably there wasn't much concern whether or not these components would be working over sixty years later. Since March 14th, the Stinson has only been flown about 32 hours, not because we didn't want to fly it, but because often something else had broken. As a result of the reasons given, Tom and I have decided to sell the Stinson. When it is flying, it flies very well, but we spend too much time looking for expensive and obsolete parts when it can't fly. Farewell, my friend – I think! Despite the problems, when you do sell, I will miss flying you.

Cadie Lynn in the Hospital

Cadie was quite fussy over the Columbus Day weekend. Cheri took her to a doctor on Monday, October 9th, and the next thing we hear is that the doctor put her in the hospital, to find out whether or not she had Spinal Meningitis. The doctor really didn't think Cadie had it, but had rule out the possibility. Wow! Those words weren't easy to take. Other children have worse health problems, but those other kids aren't one of my granddaughters. While driving to the hospital on that Monday evening, I had a hard time keeping my composure. Nothing else in the world mattered then. I didn't care whether or not the Stinson flew, or where I would go on another trip, or whether or not I had a job; if NASA called me up while I was driving and asked me to be at the Cape to launch on the shuttle the next day, I would have declined and told them I had to go to the hospital in Webster, Texas, even if that was my only chance ever to go into

space. Karoline patted my hand and said Cadie was going to be all right. Karoline was right, the spinal tap (ouch!) came back clear, all other tests were negative except for an ear infection. Cadie's temperature went down after she was given an IV with antibiotics, and she came home on Thursday, the 12th. God put His healing hand on her, and answered a bunch of prayers that He do so. On Wednesday, Cadie gave me three small smiles, and each of those small smiles gave me bigger smiles. Thank you, God.

Adonn Slone

Hardy Adonn Slone, surrounded by family and friends, left this earth to be with his Lord and Savior, Jesus Christ on Tuesday evening, August 22, 2006, after a courageous battle with esophageal cancer.

Born January 1, 1938, in Monahans, Texas to H. A. "Lindy" Slone and Ola Mae Adams Slone, Adonn knew as a child that he wanted to be a pilot and would climb up a windmill to pretend he was flying. He graduated from La Marque High School in 1956, and Texas A&M in 1960, where he was commissioned a 2nd Lieutenant in the United States Marine Corps. He earned his private pilot's license while attending Texas A&M. A certified flight instructor, he taught both his sons to fly and shared with them his love for flying. He also had sailplane and seaplane ratings. Adonn had many rewarding experiences as a volunteer pilot for Air Life Line and Angel Flight. A fighter pilot with over 4000 hours in the F4 Phantom and other aircraft and 440 missions in Viet Nam, he served as Commanding Officer, Marine Fighter/Attack Squadron 323. He retired from the USMC in 1980 as a Lt Col. and his medals included the Air Medal with numeral 22 strike flight awards and one individual award, the Bronze Star with Combat V device, the Meritorious Service Medal and other ribbons and decorations for foreign service.

According to Adonn's wishes, he will be buried in a "pine box" crafted by Slone Lumber Employees, John Larson, Deana Gibson, and E. J. Martinez, Sr.

Adonn Slone's casket, built by John Larson

Adonn Slone was a man I never met. But I heard about him from John, and knew that he was a pilot. John is such a craftsman that it was quite an honor, although strange, for Mr. Slone to ask John to build his casket. It is probably also strange for me to include the photo of it in this story, but then again, since I started this story with the birth of Cadie Lynn, and then wrote about different things happening during people's lives, and I talked about some people who died, a casket with a cross on it might just go with the natural flow for the end of this story. Alpha, Omega. The end and the beginning, like death is the beginning of a new life. Thank you God, for my family and your gifts of Karoline, Michelle, and Cheri, John and Keith, and Camyrn and Cadie, our two Granddaughters, the Stinson Voyager, and Space Launches. And, since the name of Heaven is on Cadie's birth announcement on the cover of this story, it is fitting to close with these Bible verses:

Amo 4:13 For, lo, he that formeth the mountains, and createth the wind, and declareth unto man what [is] his thought, that maketh the morning darkness, and treadeth upon the high places of the earth, The LORD, The God of hosts, [is] his name.

Psa 8:1 O LORD our Lord, how excellent [is] thy name in all the earth! who hast set thy glory above the heavens.
Psa 8:3 When I consider thy heavens, the work of thy fingers, the moon and the stars, which thou hast ordained;
Psa 8:4 What is man, that thou art mindful of him? and the son of man, that thou visitest him?
Psa 8:5 For thou hast made him a little lower than the angels, and hast crowned him with glory and honour.
Psa 8:9 O LORD our Lord, how excellent [is] thy name in all the earth!

Left: Floatplane in moonlight painting that Hawks Abbott gave me.
Upper: Cadie and Camyrn, wearing shirts with a Teddy Bear and a Shuttle. The shirts also have their names and the words "STS-115" printed on them.