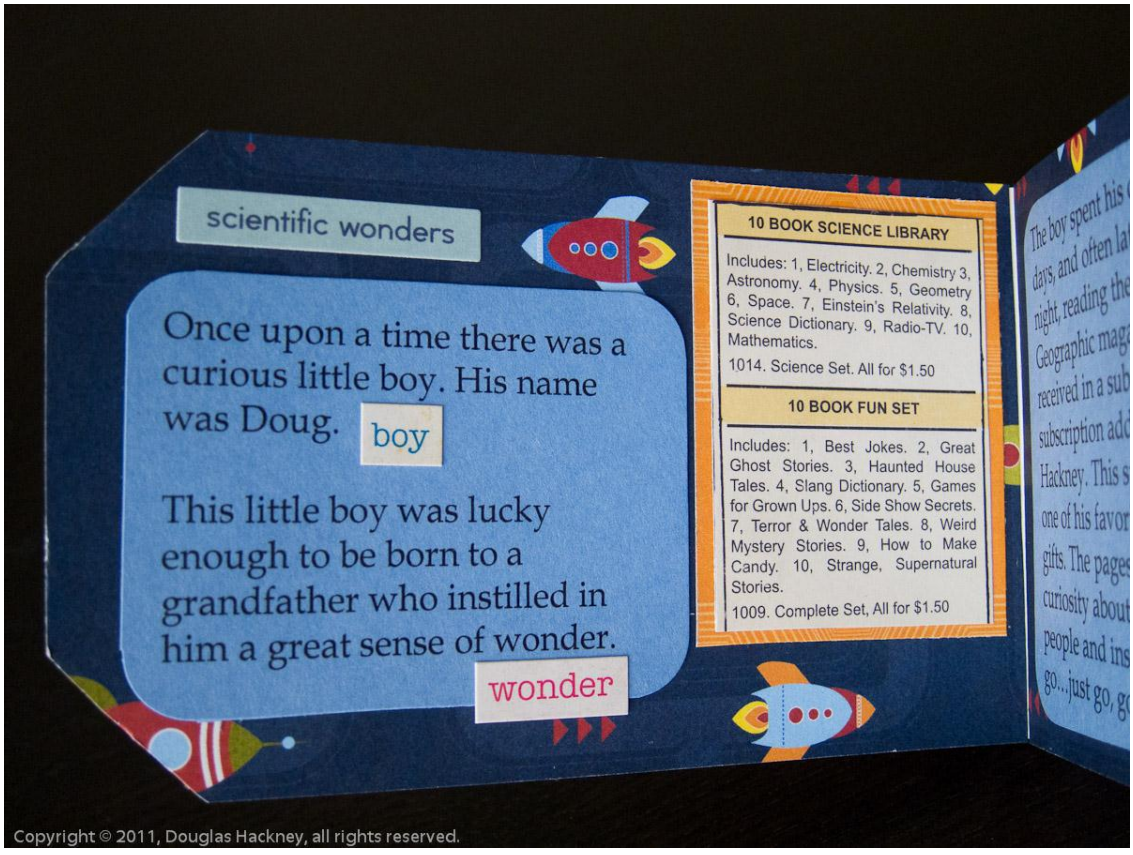
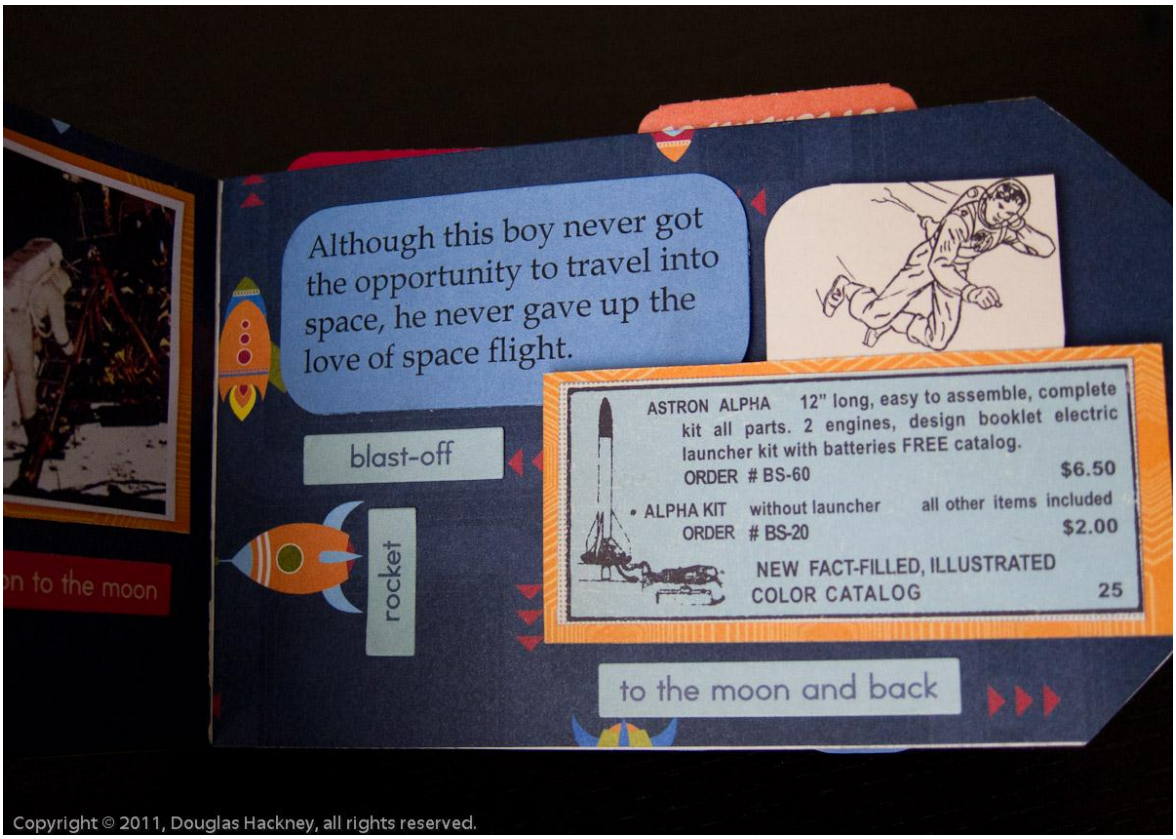
On Saturday, 2 July, 2011 Steph decided to surprise me with a trip to witness the final space shuttle launch.

On Tuesday, 5 July, she told me about the trip by way of a hand-made book.




Although this boy never got the opportunity to travel into space, he never gave up the love of space flight.
blast-off
rocket
ASTRON ALPHA 12" long, easy to assemble, complete kit all parts. 2 engines, design booklet electric launcher kit with batteries FREE catalog.
ORDER # BS-60
$6.50
• ALPHA KIT without launcher all other items included
ORDER # BS-20
$2.00
NEW FACT-FILLED, ILLUSTRATED COLOR CATALOG
25
to the moon and back
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...8...7...6...5...4...3...2...1...LIFT OFF!
Final Space Shuttle Mission
STS-135/Atlantis
Launch Date: July 8
Launch Time: 11:26:46 a.m. EDT
Landing Date: July 20
Landing Time: 7:06 a.m. EDT
› Shuttle Section
› Space Shuttle Era
› Where the Shuttles are Going
› Orbiter Status Updates
...his first, and the last, U.S. Space shuttle launch...
all systems go...
JOURNEY
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By Wednesday, 6 July, I had researched the available viewing options and we decided to forego the cost of buying scalper tickets for the official areas. Instead, we would strike out on our own adventure to the nearest public viewing areas in Titusville, Florida. The public viewing sites were across the Indian River from the launch complex and about 12 miles from launch pad 39A.

Wednesday evening we spent a few hours with our neighbor, Jeff Cherry, a veteran of three shuttle launches and two scrubs. Jeff gave us firsthand accounts of the views and experiences from the available spots. He confirmed our thinking on several key aspects of the experience and filled in many gaps for us. We owed much of our eventual success to his guidance.

On Thursday, 7 July, we got up at 3AM and headed for the airport. After connecting in Dallas, we arrived in Orlando about 12:30PM.

By the time we got to baggage claim, Steph had already stocked up on event memorabilia.

On the way to Titusville we stopped at a local Wal-Mart to provision for what we anticipated to be a three day wait for the launch. Although the mission was scheduled to launch the next morning, there was only a 30% chance for launch due to bad weather. A very heavy thunderstorm came through while we were in the store, which only reinforced our anticipation of a lengthy stay in the area.

Before meeting with our neighbor, I had been managing Steph's expectations that we would need to pull into the first available parking spot once we reached Titusville. Jeff reinforced my fears. The crowds were expected to number about one million people, and I was fully anticipating a completely packed town by the time we got there.

As it happened, we pulled into Titusville about 4:15PM, about 19 hours before the scheduled launch, and found it relatively empty. We had time to drive by all of the available public viewing areas and scout out the upsides and downsides of each one.

By the time we were making our second pass through the viewing and parking areas, traffic was picking up and one private viewing area had sold out. That gave us a strong sense of urgency to get somewhere and get parked.

It was raining lightly but steadily under low, gray skies as we made our way down to Rotary Riverfront Park. We had seen tents there on our first pass, and we expected fewer crowds there than the masses we knew would pack the area around Spaceview Park.

We squeezed into one of the few remaining places to put a car and I got out to reconnoiter the area. There were still a few places we could put up our tent, but the viewing areas were very limited, essentially only one long pier. I did not relish the prospect of being stuck out on the end of a narrow pier for hours trying to manage a tripod and two camera bags with almost certainly no room for chairs.

After a lengthy discussion of the pros and cons of the site we had in hand and the risks of leaving a sure thing for the unknowns of a rapidly filling town, we pulled out to seek a better location.

We headed back north, to a restaurant we had passed twice in our scouting trip. The parking lot offered a direct view of the launch pad and the sign promised parking for $10.

We pulled into the restaurant parking lot and found a spot along the water. We parked and admired the direct view of the launch complex across the river. Our next step was to negotiate for overnight parking or camping. We have a process for this. We've perfected it by repeated use at hundreds of locations all over the world. The process is: Send in Steph.

After a few minutes she returned with the news - No overnight parking in the lot. Not even for more money. Not even for the $500 a guy was offering. For shuttle launches, the restaurant staff clears the lot when they close the restaurant at 9PM and they re-open the lot at 6AM for the launch. No exceptions.

This meant no tent. No tent meant sleeping in the car.

We looked around and decided this was by far our best option for viewing, so we pulled our car out of the lot and parked it on the road shoulder at the south end of the parking lot. There was only one car in front of us and they had just arrived a few minutes earlier after making the same assessment of the available options.

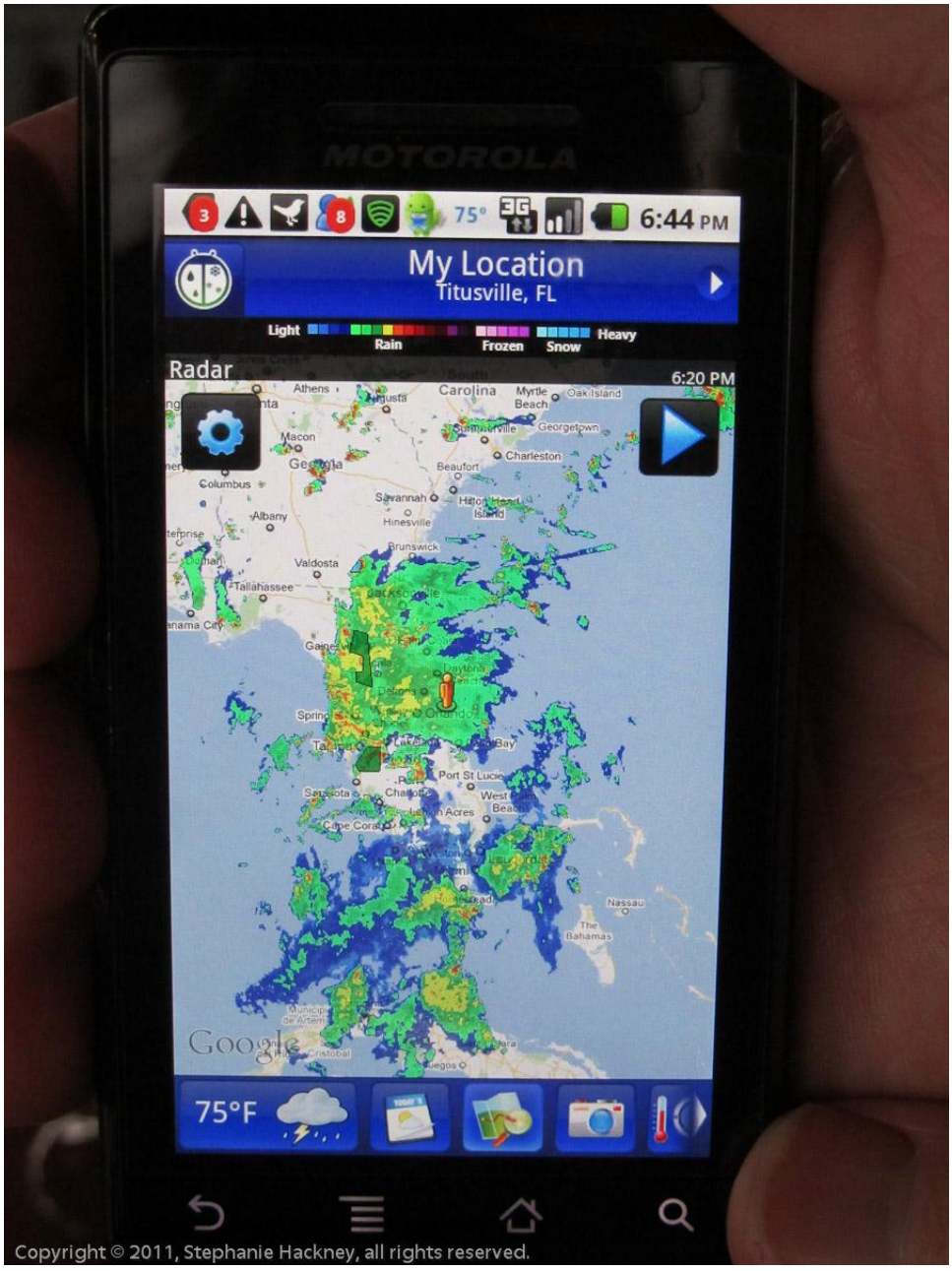
Resigned to our fate, we went inside and enjoyed a nice dinner. The surrounding tables were a mix of launch-watchers and locals. The table next to us was locals, a few of whom worked at the launch complex, and they kept us entertained with anecdotes of daily life in the space program. My favorite was the day the shuttle payload bay doors were stuck and they used a broom handle to get them open.

It was a bittersweet time for the local community. The end of the NASA shuttle program meant the loss of 7,000 high-paying jobs. Local companies, stores, schools, churches, communities and charities were all being massively disrupted, not just by the economic impacts, but also by the loss of lifelong relationships.

While planning the trip, Steph had been in contact with women in Houston who worked at the NASA Manned Spaceflight Center there. The impact was the same, with careers, lives, families and communities being permanently changed.

The end of manned spaceflight in the U.S. is the end of an industry. It is an industry that is being willfully dismantled, with its uniquely skilled and experienced work-force being scattered to the winds. Once you do that, once you erase the corporate memory of an organization, you can't just decide to crank it back up again. What you lose when you take apart an industry—a strategic capability, a national asset—is a permanent loss. It is gone, irreplaceable, and lost for all time. Not many Americans are thinking about that, especially the lost for all time part.

While the tactical, “Who will be the little league coach?” aspects of that reality were on the minds of the locals, the launch-watchers were mostly concerned with weather. It had rained steadily for most of the previous five days. Thunderstorms were marching through the area with depressing regularity. Lightning struck the launch pad that day. It was raining outside. The weather radar was grim and the forecast not any better. The launch probability for Friday remained at 30% and just about everybody thought that was an optimistic view.



We finished dinner, moved out to the car and began the vigil for the emptying of the dinner crowd from the parking lot, the closing of the lot and moving up the road to position ourselves for entry in the morning. We made the move about 9:30PM, with only one car cutting into the front of the line. By morning there were over 100 cars in the line, with a few dozen double parked alongside us, waiting to cut into the line at the first opportunity.

The Buddhists teach that we should thank those who make us angry, for they illuminate our remaining attchments. That night I learned I am still attached to people following the rules, especially the rule about cutting in line.

We settled in for the night. We had reorganized the car so that Steph had the entire back seat and I could recline in the passenger seat. It was fine, much better than many places we'd slept in our world travels, and even offered air conditioned relief from the 100% humidity of the steady, light rain and warm temperatures.

While we waited, I ventured out in the rain a couple of times to shoot the shuttle on launch pad 39A under low-hanging, ominous clouds.

After editing and posting photos, I eventually fell asleep sometime after 1AM.

About 3AM Steph woke up and noticed some people filtering into the viewing area grass between the restaurant parking lot and the river. By the time I walked over to check things out there were about 30 people setting up chairs. I asked around and not a single one of them was from our line of cars waiting to get into the lot.

Suddenly it was clear to me. We were in line for a parking spot, not a viewing area.

I hustled back over to the car and grabbed our tarp and chairs. Steph tried to wake up Chuck and his kids, asleep in the van in front of us, who were the original first car in line, but had no luck. She was able to roust the people behind us. By a little after 3AM, we had our tarp staked down, our chairs set up and our cooler on the grass to hold a place for Chuck, still snoozing in the car line, blissfully unaware of the Oklahoma Land Rush taking place along the waterfront.

We moved the car into the restaurant parking lot when they opened it at about 5:30AM. The lot had an official capacity of 120 cars and they fit about 130 into it. The owner of the restaurant could easily charge $50 to $100 per car for this location, which is probably the best public viewing available. The owner has turned down requests from NASA to lease the restaurant and lot for VIP viewing and numerous offers of thousands of dollars for overnight RV parking and camping. The $10 charge was nominal, and probably didn't cover his costs for keeping his people on the clock overnight to watch the lot. It was a great example of a small business owner doing the right thing, even if it meant a loss of short-term profits.

By dawn, the viewing area had filled in with chairs, easy-ups, blankets and bleary-eyed launch-watchers.

The restaurant opened soon after and offered much appreciated coffee and even more appreciated restrooms.

By 6:30AM, people had staked out their claims, set up their gear and prepared for the launch.

Lots of people had radios, just about everyone had cameras and many had binoculars.

Some brought telescopes.

The Flightline Films team was there with their JLAIR truck occupying the end of the parking lot. They provide imaging support for aerospace and aviation. We took their presence as an implicit endorsement of this viewing location.

By 7AM the area had filled in completely, although most still considered a launch unlikely due to the weather.

We all watched and waited as intermittent rain showers and clouds caused the launch to vacillate between Go and No-Go status.

Chuck, our car-line neighbor who had finally joined the party, was one of many parents who brought their kids to witness the event.

One family next to us had been there six times previously to see a launch and all six times the launch had scrubbed. Six times they had come and six times they had been disappointed. This was their final chance to see a launch, and they were determined to make it happen.

As the morning wore on and small patches of blue appeared in the clouds, the crowd began to hope against hope that the launch might actually happen. Each passing moment with no rain, each small decrease in cloud cover and each longer Weather-Go versus Weather-No-Go status period fanned the flames of hope.

Slowly, surely and inexorably anticipation began to grow.

But, all we could do was wait, watch and wonder.

Would the shuttle launch? Would this be the day? Would we be among those who saw the last time, the last launch, the last men and women blasted into space from American soil?

There were no answers.

So, we all did what we could.

The kids killed time.

The vendors worked the crowd.

The choppers patrolled.

The shooters fiddled with their gear.

The women waited for the bathroom.

And, everyone monitored the internet stream for updates.

As milestone after milestone in the countdown passed, each time with the NASA team pushing forward, a sense of inevitability began to take hold. When a rain squall that could kill the launch popped up within the 20 mile No-Go radius of the pad, the crowd reacted not with fear or trepidation but with confidence. At that point, after passing over so many hurdles, it did not seem possible the launch could be scrubbed.

Eventually, the timeline ran out of milestones and we all ended up a few minutes from the scheduled launch time.

Nobody could believe our good fortune. Not one in ten started the day believing it would happen. But it was.

With only three minutes prior to launch, people swarmed into the viewing area, filling in every possible gap, right down to the water's edge.

As the seconds ticked down, the crowd tightened with collective tension. Everyone gripped their cameras, binoculars and telescopes. Those without them squinted across the water, through the 12 miles of haze, peering at the dark gray launch pad barely discernible from the lighter gray skies.

Three minutes. All green, all go.

Could it be?

Two minutes. All systems go.

Would this shot happen?

One minute. Sixty seconds.

Could anything stop it now?

We are go for launch.

Then, just 31 seconds before blastoff, the automated Ground Launch Sequencer stopped the clock.

Due to orbital mechanics, the launch window was only ten minutes long. If the clock was stopped much longer, the window would close and the launch would be scrubbed.

We were so close.

The clock was frozen: 31 seconds and holding. The launch window shrank, the window was closing.

We were about to lose the launch.

The Ground Launch Sequencer system's sensors reported the gaseous oxygen vent arm wasn't fully retracted.

But, visual inspection showed it was fully retracted.

Manual override.

We are Go!

Clock restarted! Game on!

T-minus 6.6 seconds. Main engine start. The shuttle rocked forward from the thrust, paused and settled back to vertical.

Meanwhile, the crowd counted down: 5-4-3-2-1-ZERO.

The solid rocket boosters ignited.

There was no stopping now.

This shuttle was launching, headed into space.

Even as we shot, we didn't believe it.

We could see the shuttle climb above the tower, but we still couldn't fully accept that this was happening.

The launch—despite the long odds, despite the rain, the clouds and the lightning strikes—the launch was happening.

And, we were there.

We were all watching it.

It was really happening.

The last shuttle launch. The last United States space program manned spaceflight.

As the shuttle climbed and accelerated, like a dancer who reveals only the style and none of the effort, it casually turned to display its twin solid rocket boosters.

And then, with the nonchalant grace of a champion diver, the shuttle rolled onto its back, pointing northeast, out over the Atlantic Ocean.

It climbed and maneuvered with effortless ease, with the offhand confidence of the nation that took men to the moon.

The cheers of the crowd rose with the shuttle as it rode the stack of smoke upward.

We willed it up, every second, every foot, our voices lifting it higher, ever higher.

Until quickly, all too soon, like a morning dream, it was gone.

Then a shout! There it is!

One last fleeting glimpse, one last appearance.

And again! Once more, just to reassure us that it indeed had lived, it indeed had been there.

It indeed had—with us—made history. Indeed had not just *lived* history—*made*—history.

And then, suddenly, we were all left to search, to seek in vain, one last glimpse. One last look at what had been.

The countdown for U.S. manned spaceflight had reached zero 169 times before and never would again.

The United States had launched a shuttle into space 135 times before and never would again.

All that had been before was gone.

Forever.

All that was left was the tower of smoke, the shuttle's ladder into the sky.

And, like the space program and the people who created it, built it, sustained it and perfected it, the tower of smoke of what had been before was scattered to the wind.

Before long, you never even knew what had been before had been at all.

And so, with the passing of the shuttle and the country's manned space program, the people went on their way.

Back to traffic.

Back to the news media and partisan politicians.

While on the day of the launch many of those same politicians and bureaucrats spoke brave words of new missions and new purposes and new days dawning, most of those listening knew that they were just words.

Those who were old enough knew that for many years the space program provided a clear direction, a clear purpose and a clear reason for a nation very much in need of those goals.

In contast, those in the long lines of cars driving home from this launch live in a nation with no clear direction, no clear purpose and no clear reason for just about anything.

Is it possible to regain that palpable sense of national purpose today?

Are the bright and shining memories of an American nation united for a cause merely soft-focus, rose-colored memories that lead nowhere?

Was the space program really always all about cold-war geopolitics, the military-industrial complex and cold, hard cash?

When I look back on the shuttle program, I am always looking through it to myself, back to the glory days of the space program, when the nation was awash with the Right Stuff, Mrs. Gorsky lived in fear and just about every kid, including me, wanted to be an astronaut.

In those days, interest was off the charts and support for the space program was nearly universal. Interest and support remained strong right up until Neil Armstrong walked on the moon and then it diminished rapidly. There was a flicker of interest with Apollo 13 and their drama-filled saga of narrowly escaping death. After that, the nation descended into a collective yawn about space.

The shuttle program never came close to matching Apollo's glory or overwhelming public support, nor did it compare to the Mercury, Gemini and Apollo programs as symbols of national pride and accomplishment. The loss of the Challenger and Columbia shuttles served as solid leverage points for opponents of the space program as NASA struggled to explain probabilities, logic and risk versus reward to the general public.

It's easy to make a case the entire space program is a waste, although that line of reasoning is equally easily refuted by those who are well informed. It's also easy to make a case that the space program has brought incalculable benefits to the country and the world as a whole, although that line of argument is usually supported by erroneous examples such as Velcro and Teflon.

Even I have recently made the case to my space-program supporting friends that manned spaceflight is a lost cause when compared with other national priorities and existential threats.

Are we truly at the end of a 50 year chapter of manned spaceflight and a presence in space?

Is there nothing that is worth the investment in the science, technology, engineering and discovery of space exploration?

Those who wonder about that, as well as those who rue the lack of Jetsons space cars, ray guns and transporters in our daily lives, should ponder this:

If you look up on a clear night and know which part of the sky to look in, you can see the International Space Station with your bare eyes.

While most of us were not really paying much attention, the United States, along with Canada, Japan, the Russian Federation, and eleven Member States of the European Space Agency: Belgium, Denmark, France, Germany, Italy, The Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom, constructed a permanent, manned presence in low earth orbit.

The world built something in space. There are people living up there right now, this very moment, advancing science.

It's a triumph of science, technology and engineering. It's a massive testimonial to sustained political will on a global scale.

It's the stuff we all dreamed about as kids, and it's there, right above our heads, streaking across the sky every single day.

On 8 July 2011, along with us, this kid saw his first and last shuttle launch. He's old enough to remember it.

He's wearing a Beatles T-shirt, a music group from an era when the U.S. space program was at its apex, in orbital terms, its apogee. It's not hard to sell the point of view that right now the U.S. space program is at its nadir, in orbital terms, its perigee.

What will the kids of this era carry forward as their memories of the U.S. space program? What will it represent to them?

Will it be an allegory for a fading nation, an analogy for a country that is past its prime and melting into irrelevance?

Or will it be the symbol of creative destruction and rebirth into a new era of invention, exploration and discovery?

One day, not so long ago, the United States took an audacious shot at a formidable goal. It was a moon shot, in the truest sense of the word. The country put its energies into a common goal, led the world and achieved the impossible.

Are there any moon shots in this kid's future?

* * * * *

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Our viewing location was here: 28.57268667,-80.79770833

Paul's Smokehouse
3665 S Washington Avenue
Titusville, FL 32780
http://www.nbbd.com/pauls/index.html

* * * * *

The Flightline Films JLAIR truck optics include: 160" focal length - 16" aperture f/10 – SCT; 154" focal length – 14" aperture f/11 – SCT; 80" focal length – 10" aperture f/8 – Ritchey Chretien; 42x 27mm – 1140mm (45") HD acquisition Zoom Lens.

The imaging includes: Panasonic HPX-500 HD P2 camera (up to 60fps); RED One 4K camera (up to 120fps in 2K mode); SUI SU640KTSX Shortwave Infrared camera; Canon EOS 40d digital still camera.

More info: http://www.flightlinefilms.com/Astro-Cinematography-Service.html

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Steph reported there were 32 women in the restroom line and it took her 16 minutes of waiting time to reach it.

* * * * *

I shot in sustained bursts of 10 frames per second and took 179 photos in the 43 seconds between ignition and when the shuttle disappeared through the clouds. I reframed and manually refocused four times during that period.

Steph took 101 shots in the same time period on one framing using autofocus.

Both cameras were in manual exposure mode and we shot JPGs to minimize buffer overflow.

* * * * *

Memory Lane with No Outlet is located here: 28.55789333,-80.83118667

* * * * *

Mrs. Gorsky is the star of an enduring urban legend involving Neil Armstrong's walk on the moon.

* * * * *

Teflon was invented in 1938 by Roy Plunkett of Kinetic Chemicals in New Jersey, USA.

Velcro was invented in 1941 by George de Mestral in Commugny, Switzerland.

* * * * *

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The first manned U.S. spaceflight was by Alan Shepard at 14:34 UTC/GMT/Zulu on May 5, 1961.

President John F. Kennedy delivered his “We choose to go to the moon” speech on May 25, 1961 before a Joint Session of Congress.

Neil Armstrong stepped foot on the moon at 2:56 UTC/GMT/Zulu on July 21, 1969.

STS-135, the last shuttle flight, launched at 15:28:33 UTC/GMT/Zulu on July 8, 2011.

50 years, two months and three days separated the first and last U.S. manned spaceflights.

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Sources:

- Spaceflight Now
- Wikipedia
- NASA
- timeanddate.com
- spaceline.org

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Douglas and Stephanie Hackney are researching the Quotidian Effects of returning to the United States after spending much of the prior eight years exploring the world.

You can learn more about them and reach them here: http://www.hackneystravel.com/

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us
no
end
to
the
adventures
2011
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