



**Project Mercury**



**SpaceX Falcon 9**



**Falcon 9 Landing**

## **Long Island Early Fliers Education Foundation**

**Long Island Early Fliers Club**

**July, August 2020 Newsletter**

**Editor: Fred Coste      Volume 5, Issue 4**

### **Editor's Note:**

**On May 5, 1961 I was sitting in our living room watching TV a little before 4 in the morning. It was the third time I had waited for this historic moment to unfold. Broadcast TV normally started at about 6:00 a.m., but today was special. I kept the volume very low so no one else in the house would hear the low whirring tone while the test pattern filled the TV screen. At 04:00, the tone suddenly stopped and the screen rolled up a few times until the national anthem started playing and the picture stabilized on Old Glory.**

**I stayed within a few feet of the TV; a definite No-No because my parents always told me I'd ruin my eyes if I sat too closely. We didn't have remote controls back then, so there I sat with my pillow and blanket, a box of Kellogg's Sugar Smacks and a glass of Tang that I could share vicariously with Alan Shepard.**

**Channels 2, 4, and 7 all had "News Correspondents" broadcasting live from Cape Canaveral. Walter Cronkite, Frank McGee and Jules Berman were on hand; to report about the baby steps the United States of America was about to take with the first**

sub-orbital space flight. It would take 8 more years of experimentation with projects Mercury, Gemini and Apollo to land the first man on the moon.



*Alan Shepard in Freedom 7  
Mercury capsule*

In the weeks leading up to the launch the news showed many failures of Redstone rockets; from spectacular explosions to ending the countdown with nothing happening but a sudden popping out of a small drogue chute from the nosecone of the rocket. Someone even added in the sound effect that we used to do as kids: of placing the index finger into your mouth and making a hollow popping sound as it snapped from the lips.

Yet here we are again, 59 years later, seemingly back to square one. A tall skinny rocket, the tension and anticipation of a new launch vehicle.

This time there are two brave Americans in sleek new spacesuits, using touch screen computers instead of switches, dials, gauges and blinking lights, and a rocket that would return to earth, landing autonomously on a barge in the ocean.



*Inside the Crew Dragon capsule*

The body of the Redstone was developed in-house at the Army's Guided Missile Development Division with Chrysler Corporation serving as prime contractor. All of the early rockets, both American and Soviet were based on captured Nazi research after WWII.

Werner von Braun and Peenemunde veteran William A. Mrazek were given leadership positions for the purpose of developing Intercontinental Ballistic Missiles. (ICBMs)



*Shepard being hoisted to a Marine helicopter after splashdown.*

The Mercury-Redstone launch vehicle was the first crewed launch vehicle in the United States space program. While it provided NASA with an opportunity to understand performance aspects of the Mercury spacecraft and the effect of a weightless environment on astronauts, the fact remained that it was an adaptation of a destructive weapon system. It was meant to crash and burn, not land gently.

Having a human being atop that missile upped the ante considerably. Between August 1953 and November 1958, 37 Redstone missiles were fired, about one third of them malfunctioned.



*The Mercury abort system*



*The Crew Dragon abort system*

However, the game was afoot between the US and the Soviet Union. The

Russians took an early lead with Sputnik and then by placing Yuri Gagarin in orbit, prompting von Braun to exclaim: “Damn, I picked the wrong side again!”

The US soon caught up and surpassed the Russian space program by actually landing on the moon. As time went on, the two sides started cooperating and eventually collaborated on the International Space Station (ISS). With the end of the Space Shuttle program, the US foolishly allowed itself to become dependent on the Russians for a means of access to the ISS.

It was time to regain our technological edge in space travel. What better way than putting an end to the expensive one use, Kamikaze style rocket. It was also time for the private sector to enter the competition.



*Elon Musk in his “Occupy Mars” shirt!*

In 2001, Elon Musk imagined the development of a project to land a

miniature experimental greenhouse containing seeds with dehydrated gel on Mars to grow plants on Martian soil. However, Musk also realized that travel to Mars would be prohibitively expensive without a fundamental breakthrough in rocket technology. In October 2001, Musk travelled to Moscow with Jim Cantrell (an aerospace supplies fixer), and Adeo Ressi (his best friend from college), to buy refurbished ICBMs.

Musk was seen as a novice and was ignored by the Russian chief designers. The group returned to the US empty-handed. They tried again in 2002, and were finally offered one rocket for the price of \$8 million. Musk thought it too expensive and left the meeting. At this point he realized he could design and build a better rocket from scratch. As a result, he figured that about 85% of the entire Falcon/Dragon vehicle could be produced in-house.

Falcon 1 was the starting point, having one Merlin engine and became the module on which to build. The Falcon 9 uses 9 of the Merlin engines, which were tested on the single engine Falcon 1. Falcon Heavy uses three Falcon 9 booster stages. Using this modular approach, SpaceX realized it could cut the launch price by a factor of ten and

still enjoy a 70 percent profit. Musk believed that reusable rockets could not be built with components from existing aerospace suppliers. To that end, SpaceX designed a machine that could friction stir weld aluminum-lithium alloy for the airframe of the Falcon 9 because such a machine did not exist.



*Falcon 1*

Musk named the first SpaceX rocket Falcon 1, after the Millennium Falcon of Star Wars fame. The first launch of Falcon 1 was planned to take place in

November 2003, just 15 months after the company started.

SpaceX announced the opening of its Astronaut Safety and Mission Assurance Department in June of 2009. By 2012 SpaceX advertised a launch price of \$57 million, while the French company, Arianespace was advertising a launch price of \$137 million per launch.

On May 30, 2020, SpaceX successfully launched NASA astronauts Douglas Hurley and Robert Behnken into orbit on a Crew Dragon spacecraft during SpaceX Demo-2, making SpaceX the first private company to send astronauts to the International Space Station and marking the first crewed launch from American soil in 9 years.

SpaceX released a story about Elon Musk's comment after the successful delivery of NASA astronauts to the International Space Station: "The trampoline is working!" Musk exclaimed!

Musk was referring to an April 2014 barb by Dmitry Rogozin, who at the time was Russia's deputy prime minister. Today, Rogozin is the chief of Russia's space agency, Roscosmos.

Rogozin was irked back then by sanctions imposed by the United States in response to Russia's invasion of Ukraine. Some of those sanctions targeted the Russian space industry (as well as individuals, including Rogozin), and Rogozin argued that the measures would end up hurting NASA and the global space effort in general. After all, the American space agency had relied completely on Russian Soyuz rockets and spacecraft to get their astronauts to the ISS since the space shuttles retired in 2011.

"After analyzing the sanctions against our space industry, I suggest to the USA to bring their astronauts to the International Space Station using a trampoline," Rogozin said via Twitter, at the time.

*First Star to the right and on toward morning.....*

Elon Musk has told his SpaceX staff to shift its focus onto the company's next spacecraft, *Starship*, just a week after it successfully launched humans to space on Crew Dragon.

In a company-wide email on Saturday, June 6, Musk said to staff: "Please consider the top SpaceX priority (apart

from anything that could reduce Dragon return risk) to be Starship."

He added that progress on Starship needed to progress "dramatically and immediately; We need to accelerate Starship," he said.



Starship is SpaceX's next human spaceflight endeavor after Crew Dragon. The spacecraft, which is being built and tested at one of the company's sites in Boca Chica, Texas, is designed to carry more than 100 people per flight to destinations such as the Moon and Mars.

First unveiled in 2016 as the Interplanetary Transport System (ITS), the spacecraft is intended to be launched on a giant rocket, called Super Heavy. Together the two vehicles will tower 120 meters above the ground, bigger than any rocket in history. Both are designed to be reusable.

SpaceX began development of Starship while it was already under contract with NASA for the Crew Dragon spacecraft. Beginning in 2011, SpaceX has been funded to develop the smaller crew capsule, which can take up to seven people into space.

While Starship is much more complex and ambitious in its design, Musk believes it is crucial to taking humans to other worlds. “Starship is the key to making life multiplanetary and protecting the light of consciousness,” he wrote on Twitter in early June.

SpaceX is under contract with NASA to launch multiple Crew Dragon missions to the International Space Station (ISS). The company’s next mission, Crew-1, may come as soon as August of 2020, carrying four astronauts to the ISS.

Several agreements have also been announced to take space tourists into orbit, including possibly Tom Cruise on a trip to the ISS. Widespread space tourism is often seen as a stepping

stone to making space travel more affordable – currently a seat on Crew Dragon costs upwards of \$20 million.

Musk has previously stated, however, that Starship and Super Heavy are designed to eventually replace both Falcon and Dragon. When that might happen isn’t clear, but a recent company-wide email seems to suggest he wants it to happen sooner rather than later.

That’s not to say things have gone entirely smoothly. Multiple Starship prototypes, which SpaceX is building in rapid succession to test its innovative features such as its steel exterior, have exploded or been destroyed at Boca Chica – most recently just a day before the Crew Dragon launch.

But if the company can make Starship work, the methane-fueled rocket could revolutionize space travel – allowing the company to launch huge amounts of both people and cargo into space. NASA has already sounded out the spacecraft as a potential way to land on the Moon.

There’s still a long way to go of course, and whether it will actually be successful is anyone’s guess. For the time being at least, Musk is putting SpaceX’s full might behind it.

**\*\*\*\*\*LIEFC News\*\*\*\*\***

---

LIEF members were saddened to learn that Bob DeLalio has gone west.....

Robert P. DeLalio of Dix Hills passed peacefully on June 20, 2020 at 88. Bob grew up on his parents' farm in Farmingdale, the son of immigrants from Parma, Italy. He attended a one-room schoolhouse in Melville as a child and remembered vividly watching fighter planes leave the nearby Grumman plant during World War II which inspired his lifelong love of aviation.

During his childhood, he and his brothers would often fly off their farm on New Highway, strafing the area in Waco, Piper, and Stearman aircraft. After graduation from Farmingdale High School in 1949, he enlisted in the US Army and was stationed in Heidelberg, Germany during the Korean War. Bob was extremely proud of his Army service. In Heidelberg he served as an Air Trainer for new pilots and when off-duty he was an avid glider pilot.

After his service he obtained a Bachelor's degree in Physics from Hofstra College, where he met his wife, the late June (Lange) DeLalio. They settled in Dix Hills and raised five

children. He worked as an engineer at Grumman, and later operated his own commercial real estate brokerage in Farmingdale for many years.



Bob's joy was flying over Long Island in his Cessna 172 Skyhawk out of Republic Airport.

Active in civic and charitable organizations throughout his life, Bob served as president of the MacArthur Airport Kiwanis Club, Board Chair of Madonna Heights, member of the Bayport Aerodrome Society, Long Island Early Fliers Club, the Knights of Columbus and the Long Island Hangar of Quiet Birdmen.

**Our next meeting:**

God willing and the creek (as well as the Covid-19 numbers) don't rise, we are planning to hold our first meeting of the year on Sunday, August 23 at 1:00 p.m. We are planning to make this a bar-be-que, rain or shine since we

have room to accommodate either with social distancing, if it is still necessary. More details to follow.....

**Welcome new member:**

James Mundy

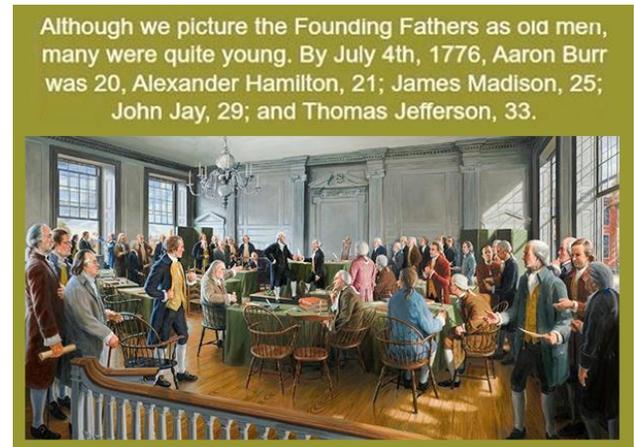
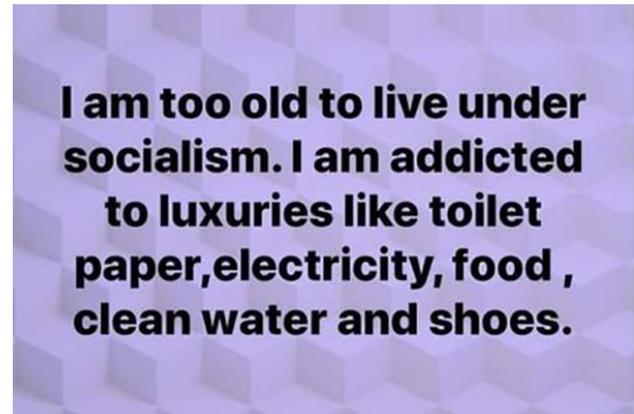
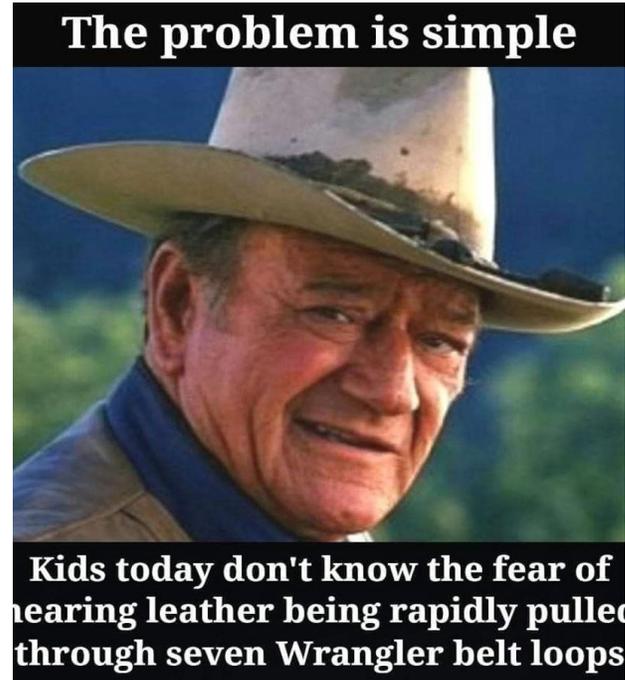
**Under Construction:**

The Wednesday work crew is back to work after a long Covid-19 lay-off. Despite the occasional visit and a bit of “puttering around,” progress still seems to be being made on the various projects that were started last fall. Our thanks go out to:

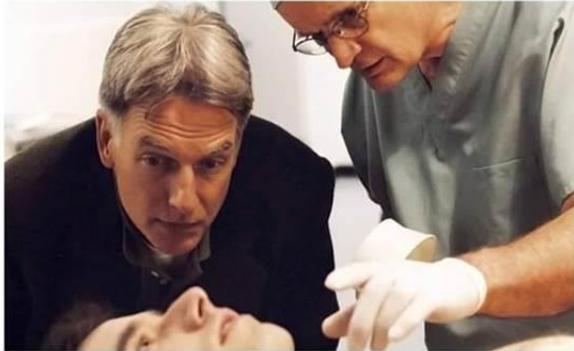
- John Hancock
- Tom Hancock
- Mark Loiacono
- Sal Urciuoli
- Eric Sandberg
- Tom Alferman
- Ed McDermott

Without the dedication of our core group of workers, we would be cleaning up cobwebs instead of finishing up several long-term projects at our museum.

**Time to smile.....**



23 stab wounds, 6 bullet holes, a rattlesnake bite and a missing torso... what do ya think Ducky?



It's obviously COVID19 Jethro.

How long is this social distancing supposed to last? My husband keeps trying to get into the house.

Stepped on my scale this morning and it said: Please use social distancing, one person at a time. 😭😭



Thumper's Memes

**BONNIE & CLYDE**

Were shot 130 times by The Texas Rangers.

Cause of death: covid-19



**Please support our sponsors:**



**ISLIP AVIONICS INC**  
*L.I.'s Full Service Avionics Shop*  
FAA CERTIFIED REPAIR STATION FJ1R141K  
L.I. MACARTHUR AIRPORT • 135 SCHAEFFER DRIVE  
RONKONKOMA, N.Y. 11779

FRED A. KATTERMANN (631) 588-3543  
President – FAA DER email: fred@islipavionics.com FAX (631) 588-1313



**THE COSTE AGENCY, Inc.**  
*Auto • Home • Business  
Aviation & Marine  
Insurance*

(631) 588-2116  
FAX: (631) 588-2147  
www.costeagency.com

1000 MAIN STREET • P.O. BOX 70  
HOLBROOK, NY 11741

**November Romeo, L.L.C. ----**  
P.O. Box 43, Holbrook, New York, 11741

**Hangar Space at Islip**  
**Private \*\*\*Corporate\*\*\*Jet**  
**(631) 523-5407**



**CENTERLINE AVIATION**  
www.CenterlineISP.com

**JOHN GREENBERG** LI Macarthur Airport  
President 1640 Lincoln Avenue  
Email: john@centerlineisp.com Holbrook, NY 11741  
631-981-5118

**The LONG ISLAND**  
*Early Fliers Club*

Long Island Early Fliers Club, Inc. is a non-profit organization founded in 1956 and Chartered by the New York State Education Department. We are dedicated to aviation education and preserving Long Island's aviation heritage. Volunteers who want to help educate and preserve our history are always welcome. Annual Membership in our organization is \$35.00 for individuals; \$50.00 for families.

Donations of aviation memorabilia, aircraft and aircraft parts, aviation clothing, display quality models and items of historic significance are always welcome and greatly appreciated. Cash donations, as well as artifact donations are tax deductible. You may visit our facility at Bayport Aerodrome, Vitamin Drive, Bayport New York most Wednesdays between the hours of 9:00 a.m. and 1:00 p.m. Appointments are necessary as airports are secure locations and can also be arranged at other times for your convenience. Contact us at: L.I.E.F.C., P.O. Box 43, Holbrook, NY, 11741 or call (631)-523-5407 (Fred Coste) or fax: 631-588-2147

Sal Vitale  
*President*

Pat Gallagher  
*Vice President*

Fred Coste  
*Treasurer*

Joan Vitale  
*Secretary*