



SOUTHWEST OHIO ROCKETRY ASSOCIATION (SORA)

LAUNCH REPORT JUNE 09, 2024

1:00PM TO 5:00PM NAR SECTION #624

Launch Conditions: Wispy clouds, temperatures low 70's, gusts to 5MPH

Total Number of Launches: 22 **Rockets Recovered:** 20 **Lost:** 2 **Found Rocket (not launched):** 0

Total Number of 100% Fully Successful Flights (excluding simple fin breaks on landing, etc.): 15

Success Rate: 68% **Failure modes:** low impulse, no ejection charge, igniter cord not release from motor, overpowered/lost, motor ejection delay malfunction, lost in weeds. Note: several modes were due to the manufacture of the motors and not the fault of the rocketeer.

Number of Individuals Who Launched Their Rockets: 7 **Number of Family/Friends/Observers:** 6

Teams and Competitions: 0 **Scouts/Home School/4-H:** 1 4-H group, 1 home school family

Types and Number of Motors: 23 total

A: 4 B: 4 C: 3 D: 3 E: 3 F: 5 G: 1 H: 0 I: 0 Higher: 0

Ground Fires: 0 **Medical Incidents:** 0 **Damage to vehicles/facilities:** 0

Donations and drink/food sale, sale of merchandise:

straight out donations: \$40

t-shirts: 0 at \$20 = \$0

mugs: 0 at \$10 = \$0

stickers: 0 at \$0.25 = \$0.0

food and drinks: 8 at \$1 = \$8

Total: \$ 48.00

Rocket Topics and Issues:

1. Well, the rocket gods were having fun with us today! It was a day of the weirdest and wildest launches in a long time!
2. Bob worked on his L1 certification skills doing a beta test of his L1 Precision T-Roc. Unfortunately, the recommended F20-4W motor used was defective with very limited thrust. Discussions with several rocketeers concerning the sound, visual appearance of the exhaust flames, and low altitude concluded that the motor was not manufactured properly. The rocket impacted the ground before the chute could deploy. Luckily, one a simple fin break occurred which was easily repaired. Bob then used a F67-4T which performed much better. Now on to G motor tests and then the certification test with an H or I motor!

3. Jon won "closest-to-the-pad" contest with an Estes Orbital Transport that flew and glided perfectly. In fact, it flew so well, it almost landed in Bob's lap while he was working on his rocket! He is now the proud owner of a free rocket kit.
4. Josie, one of our youngest rocketeers, flew multiple times although one rocket was held on the rod due to the igniter cord/clips not releasing from the motor after ignition. No damage to the rocket.
5. Two rockets were lost with one drifting a half mile away into the woods and another being lost in the high weeds east of the pad. A third rocket, Rick's Mad Cow V-2 on a F42-4T was initially lost in the same high weed area but was found undamaged the next day snagged on the backside of a tree about 15 feet up.
6. Dave was the most prolific rocketeer of the day with five launches. One motor (G78-4G) was defective with the ejection charge having little or no delay. Luckily, there was no damage to the rocket. All his other launches were perfect.
7. Rick made an attempt to launch a 4 inch high Luna Bug with an experimental motor retention tether. With rockets this small, the motors are usually ejected as they are tumble recovery with the nosecone glued in place. Using Kevlar cord attached to one fin and wrapped around and glued to the motor on the other end, the motor ejected, but the Kevlar cord broke off the motor and the motor was still lost. Better luck next time.
8. Klaus had three perfect flights even after having multiple igniter issues.
9. Elijah flew a Rocketarium Daedelus two-stage rocket on an E12-0 going to an E12-6 for a perfect flight. Well done!
10. It was a great day as we have never flown as many D, E, F, and G motors in one day. Nice job everyone!

So, it was a great day of excitement, experimentation, and progress on high level work.

Next meeting: Tuesday July 2nd, meet at Lebanon Library 6:30PM

Next Launch: Sunday, July 7th, Hisey Park



Bob and his L1 HPR T-Roc beta test on a F20-4W



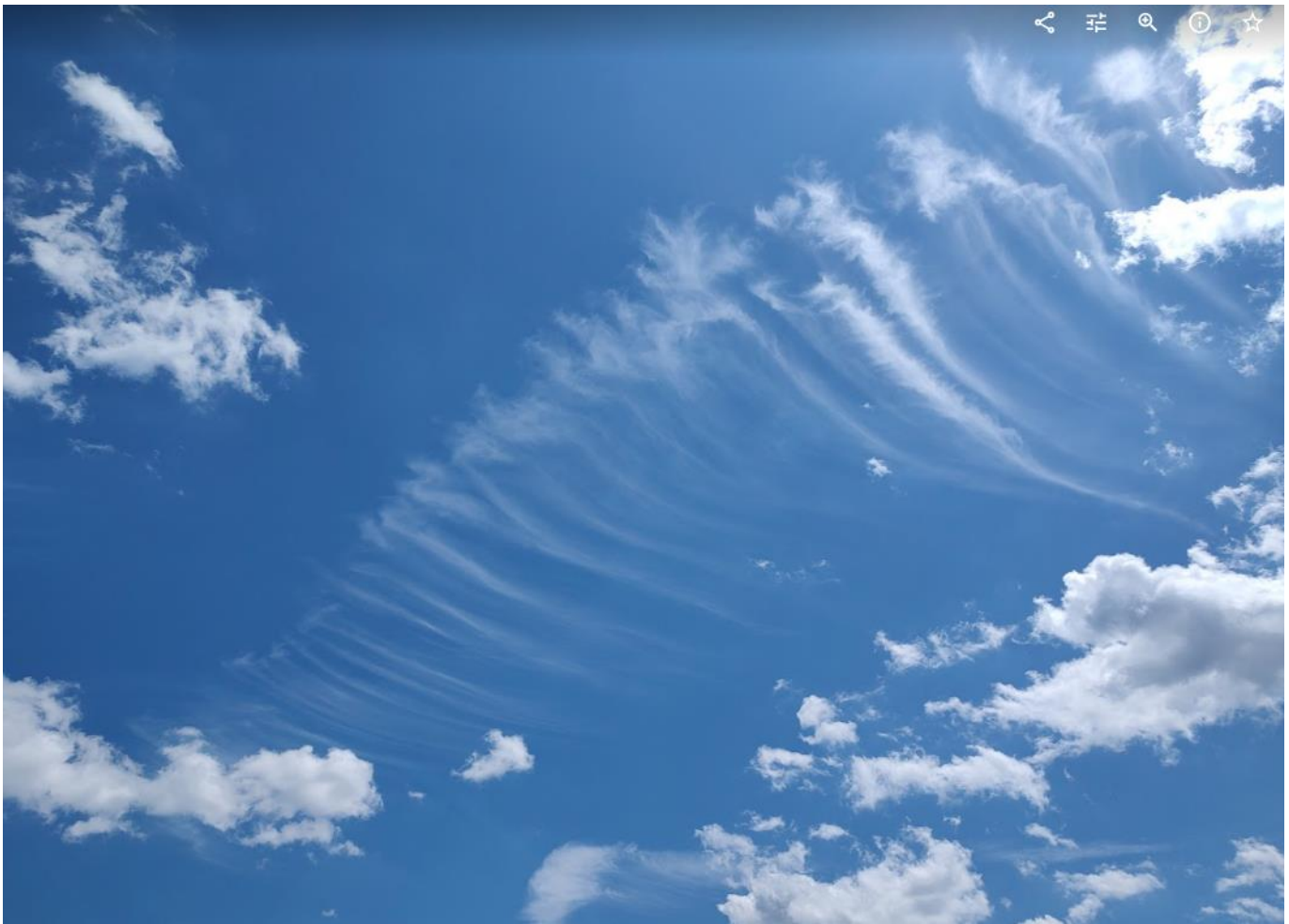
4" Luna Bug



Jon's Orbital Transport – closest to the pad contest winner, 15 feet away



Towing the new trailer out onto the field



Beautiful clouds on a near perfect launch day.



Rick's Mad Cow V-2 prior to getting lost in the weeds.
Later found!



Great day outdoors.



Packed pads...



Beautiful craftsmanship.



That's what we like to see for power!



Elijah's two-stage Daedalus on E motors, perfect flight

The Club's Motto....."Sapientia ducet ad astra" – "Wisdom leads to the stars!"

FUN FACTS: NASA logo (from Wikipedia)

The **National Aeronautics and Space Administration (NASA) insignia** has three main official designs, although the one with stylized red curved text (the "worm") was retired from official use from May 22, 1992, until April 3, 2020, when it was reinstated as a secondary logo. The three logos include the NASA insignia (also known as the "meatball"^[1]), the [NASA](#) logotype (also known as the "worm"), and the NASA [seal](#).^{[2][3][4]}

The NASA seal was approved by [President Eisenhower](#) in 1959, and slightly modified by [President Kennedy](#) in 1961.^{[5][6]}

History

The NASA logo dates from 1959, when the [National Advisory Committee for Aeronautics](#) (NACA) transformed into an agency that advanced both [astronautics](#) and [aeronautics](#)—the National Aeronautics and Space Administration.

NASA seal

In the NASA insignia design, the sphere represents a planet, the stars represent space, the red chevron is a wing representing aeronautics (the latest design in [hypersonic](#) wings at the time the logo was developed), and then the orbiting spacecraft going around the wing. It is known officially as the insignia.^[7]

NASA "meatball" insignia

After a NASA [Lewis Research Center](#) illustrator's design was chosen for the new agency's official seal, the executive secretary of NASA asked James Modarelli, the head of Reports Division at Lewis Research Center, to design a logo that could be used for less formal purposes. Modarelli simplified the seal, leaving only the white stars and orbital path on a round field of blue with a red vector. He then added white N-A-S-A lettering.

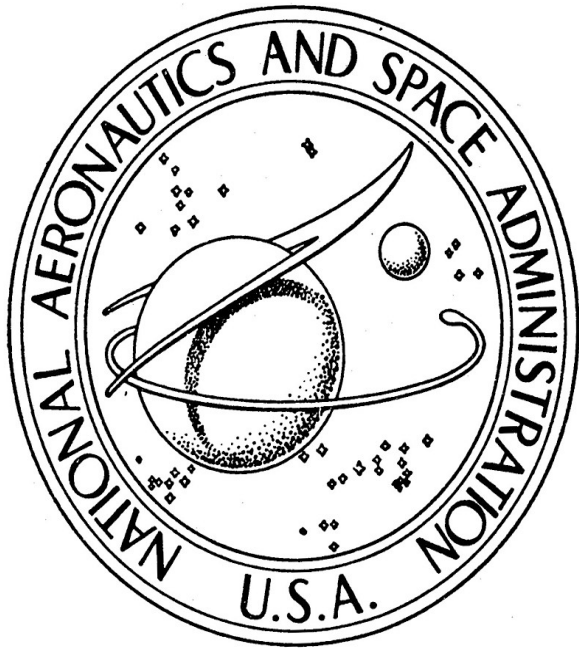
George Neago created the original NASA "Meatball" logo selected and applied by NASA from 1958–63. Working as an industrial artist for the Lockheed Corporation's Missile Division in Palo Alto, California (a US Government and NASA contractor) from the mid-1950s to the 1990s, his graphics logo was selected in a graphics competition as the winning entry. James Modarelli was the Reports Department Manager at Lockheed, who supervised George Neago when George created the NASA graphics logo. This 1958–63 silver/medium blue logo design did not include the "Red Vector" that later appeared in the 1963 when NASA and Lockheed Managers decided the logo needed an "update" (without George Neago's knowledge or permission) to promote renewed public interest in NASA.^[11]

NASA "worm" logotype

In 1974, as part of the Federal Graphics Improvement Program of the [National Endowment for the Arts](#), NASA hired Richard Danne and [Bruce Blackburn](#) to design a more modern logo.^[12] In 1975, the agency switched to the modernist NASA logotype, nicknamed "the worm", a red, stylized rendering of the letters N-A-S-A.^[8] The horizontal bars on the "A"s are removed in the worm logo, with the negative space within each of them suggesting the tip of a rocket.^{[9][10]}

The NASA logotype was retired from official use on May 22, 1992^[1] by NASA Administrator [Daniel Goldin](#). The design was used only for special occasions and commercial merchandising purposes approved by the Visual Identity Coordinator at NASA Headquarters until 2020, when it was brought out of retirement by administrator [Jim Bridenstine](#), and unveiled on the booster for SpaceX's [Crew-Demo 2](#) Mission.^{[11][12]}

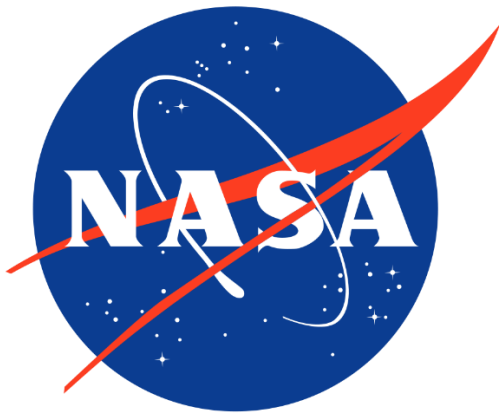
As of 2020, the "worm" logotype – in a medium blue instead of red – is part of the branding of the [NASA Federal Credit Union](#).^[13] For the [2022 Major League Baseball season](#), the [Houston Astros](#) introduced an alternate space-themed uniform as part of the league's [City Connect](#) program, with "Space City" rendered in the "worm" logotype in place of the team's name on the jersey front, and numerals and player nameplate in the same font.^[14]



1959 NASA seal, black and white



1961 Nasa seal, colored



NASA 'meatball insignia, primary logo

1959-1975, 1992-present



NASA 'worm' logotype

re-instated as secondary logo in 2020