



# **SOUTHWEST OHIO ROCKETRY ASSOCIATION (SORA)**

## **LAUNCH REPORT NOVEMBER 23, 2025**

### **11:00PM TO 5:00PM NAR SECTION #624**

**Launch Conditions:** clear skies, temps in mid 50s, wind 0-5mph

**Total Number of Launches:** 29      **Rockets Recovered:** 29      **Lost:** 0      **Found Rocket (not launched):** 0

**Total Number of 100% Fully Successful Flights:** 24      **Success Rate:** 82.8%

**Number of Individuals Who Launched Their Rockets:** 7      **Number of Family/Friends/Observers:** 15

**Number of First-Time flyers:** 0

**Teams and Competitions:** 0      **NARTREK:** 0      **Scouts/Home School/4-H:** 0

**Types and Number of Motors:** 34 total

Micro	1/4A	1/2A	A	B	C	D	E	F	G
0	0	0	1	5	22	5	0	1	0

2-motor clustered rocket	0		Two-stage rocket	5
3-motor clustered rocket	0		Three-stage rocket	0

**Total Newtons:** 427.5 for low/mid power    703 for high power at Cedarville (J270-8 motor)

**Failures:** 5 total: 3 bad motors (2 CATOs), 1 ejection charge failed to rupture seal, 1 chute did not unfurl, 1 chute tangle

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

#### **FINANCES:**

ITEM	COST EACH	# PURCHASED	TOTAL INCOME
Straight out donations	NA	(\$21)	\$21
t-shirts	\$20	0	0
Polo shirts	\$30	1	\$30
Baseball Caps	\$14	1	\$14
Food and Drinks	\$1	11	\$11
Stickers	\$0.25	0	0
Mugs	\$10	0	0
New Memberships	\$5	3	\$15
<b>TOTAL</b>			<b>\$91</b>

Thanks to Dave B. Jon D. and Bob. M. for renewing their membership for 2026!

## **Rocket Topics and Issues:**

1. This was an off-scheduled launch due to several weeks of rain delays. The weather was great and we had 15 visitors or family members watch the launches.
2. A HUGE congratulations to Bob. M. for completing his Level 2 High Powered Rocket certification up in Cedarville at the Cedarville HPR site on Sunday at the same time SORA was having our low/mid power launch. Because of an airport within five miles, the Hisey Field cannot be used for HPR per regulations. He flew an IRoc 5.5" diameter rocket on a J270W-8 motor. The altitude reached was 2847 feet with a 73.2 second duration. With a maximum MPH was 470 and a thrust duration of 1.8 seconds, the rocket really scooted off the pad! Descent speed was 28MPH and peak acceleration of 15.5Gs. The coast to apogee was 10 seconds with an apogee to eject of 1.1 seconds. Avg acceleration was 11.9 Gs. Well done!
3. Harold launched his Diphda Dragon which used a unique baffle system where the ejection gas passed through three separate body tube and then back into the main tube. Great flight and good chute ejection.
4. Robb 's Space Shuttle suffered a loss due to a bad C6-5 motor. The ejection charge did not rupture the ceramic plug. Engine code 6210921
5. One of our younger members, Nikodem, won closest to the pad with his Quest Astra III. He is now the proud owner of a free rocket kit. Well done!
6. We had the largest number of two stage rockets launched this year. Glad to see we are getting more sophisticated with our rockets.
7. Harold launched his 100<sup>th</sup> flight. Well done!
8. Thanks to Robb and Rick for running Launch Control and Range Safety.

## **NOTE!!!!!!!**

**Next business/lecture meeting:** Because the Lebanon Library is going through a remodel, the next meeting will be at the Loveland Library. 6:00PM **Tuesday December 2nd**. 649 Loveland Madeira Road, Loveland Ohio 45140.

**Next Launch:** Sunday, December 07<sup>th</sup>, 2025. Meet at Hisey Park. Setup 11:00, launch 1:00PM

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



**Launch Control and Merchandise Table. Think Christmas presents!**





Dave's AMRAM on the HPR pad



Rick's Boyce Aerospace Falcon 9 on a D12-5



Robb's Red Diamond

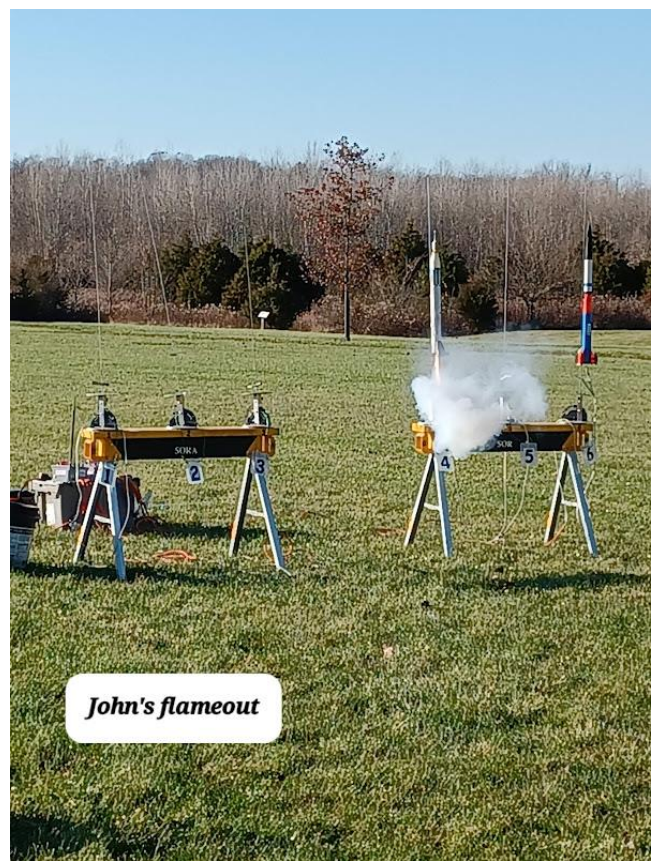


Robb's Space Shuttle





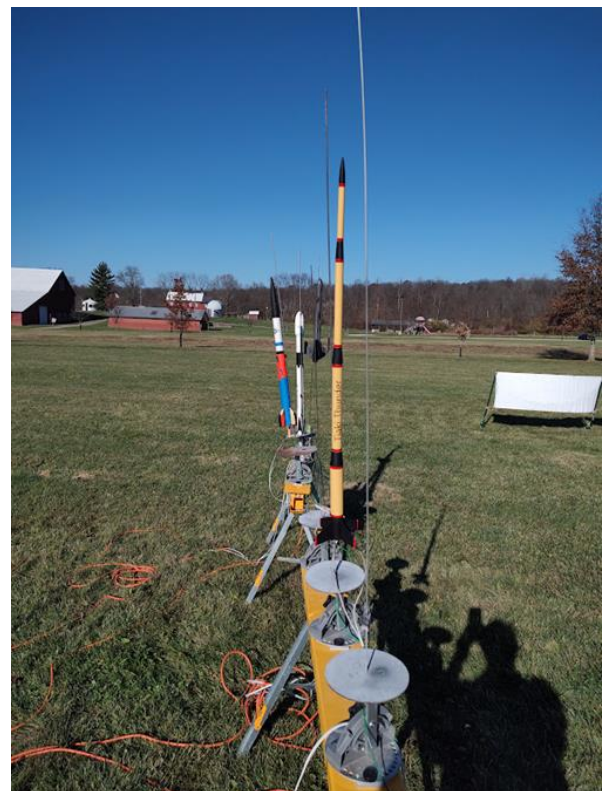
Angles!



Jon's Mercury CATO, known bad motor being disposed of by launching disposable rocket



Straight as an arrow.



A full rack ready to go!





Bob's Level 2 High Power certification – Completed!





Tiaki Thunder prior to a great first flight



Harold's Diphda Dragon



How do you calculate the coefficient of drag on these fins?????



Rick's X-15 flew horizontal during last part of the flight just like the plane!

## FUN FACT:

The National Association of Rocketry Training Rocketeers for Experience and Knowledge (NARTREK) courses seeks to build your rocketry skills while having fun. The process has changed from years past and is now coordinated on-line. Junior Level certifications are for aspiring rocketeers less than 18 years old. The Senior level is for those 18 and over. Below are the adult requirements from the NAR website. Don't forget to submit the forms on-line!

<b>Bronze NS1</b>	<p><b>Part 1</b>—Read the <a href="#">Model Rocket Safety code</a> and the <a href="#">Building and Finishing</a> your model rocket article. When you register, you are sent an email. Follow the link within the email to take the test, your score must be 80% or better.</p> <p><b>Part 2</b>—Purchase a skill level beginner rocket kit. The kit should have balsa fins.(for example: Estes Alpha and Estes U.S. Army Patriot) Read the instructions and build the model rocket. "Finish" the model rocket with paint and decals. Take a picture of the model and submit it on the Level 2 form.</p> <p><b>Part 3</b>—Fly and successfully recover the model. The model should be flown and recovered 2 times. Use motors of no more than a "C" total impulse.</p> <p>Once you have completed the requirements and taken the test, please <a href="#">follow this link to complete your certification.</a></p>
<b>Silver NS2</b>	<p><b>Part 1</b>—Read over the <a href="#">Recovery Systems and Altimeters</a> articles. When you register, you are sent an email. Follow the link within the email to take the test, your score must be 80% or better.</p> <p><b>Part 2</b>—Purchase a model rocket of any skill level (for example: Estes Big Bertha or an Estes Cosmic Cargo) and an altimeter. A <a href="#">video</a> is available to help understand how to switch the recovery system on the model rocket. Please see the <a href="#">resource page</a> for more rocket suggestions and information for this level. Build the model and take a picture to submit.</p> <p><b>Part 3</b>—Fly and successfully recover the rocket you built in part 2. The rocket will be flown twice. One flight should be flown using a parachute and the other using a streamer. Both launches should use the altimeter to record the altitude. Use motors of no more than a "C" total impulse. Record your altimeter launch data and picture of rocket.</p> <p>Once you have completed the requirements and taken the test, please <a href="#">follow this link to complete your certification.</a></p>
<b>Gold NS3</b>	<p><b>Part 1</b>—Read the <a href="#">Model Rocket motors article</a> and watch the <a href="#">video</a>. <a href="#">Click here</a> to learn more about rocketry design/flight software. When you register, you are sent an email. Follow the link within the email to take the test, your score must be 80% or better.</p> <p><b>Part 2</b>—Purchase a scale or skill level intermediate model rocket kit. Build and finish the kit. Purchase a black powder motor and a composite motor. Create the model you just purchased using the rocket design program of your choice. Be sure to include the basic parts of a rocket (nose cone, body, launch lug/rail buttons, motor, motor mount, fins, recovery system). Please see the <a href="#">resource page</a> for more rocket suggestions and information for this level. Take a picture of your model and download an image of your software created rocket to submit.</p>



	<p><b>Part 3</b>—Fly and successfully recover your model on two different motors. Use motors of no more than a “D” total impulse.</p>
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	<p>Once you have completed the requirements and taken the test, please <a href="#">follow this link to complete your certification.</a></p>
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**Please remember to renew your SORA membership for 2026. It’s a great club!**