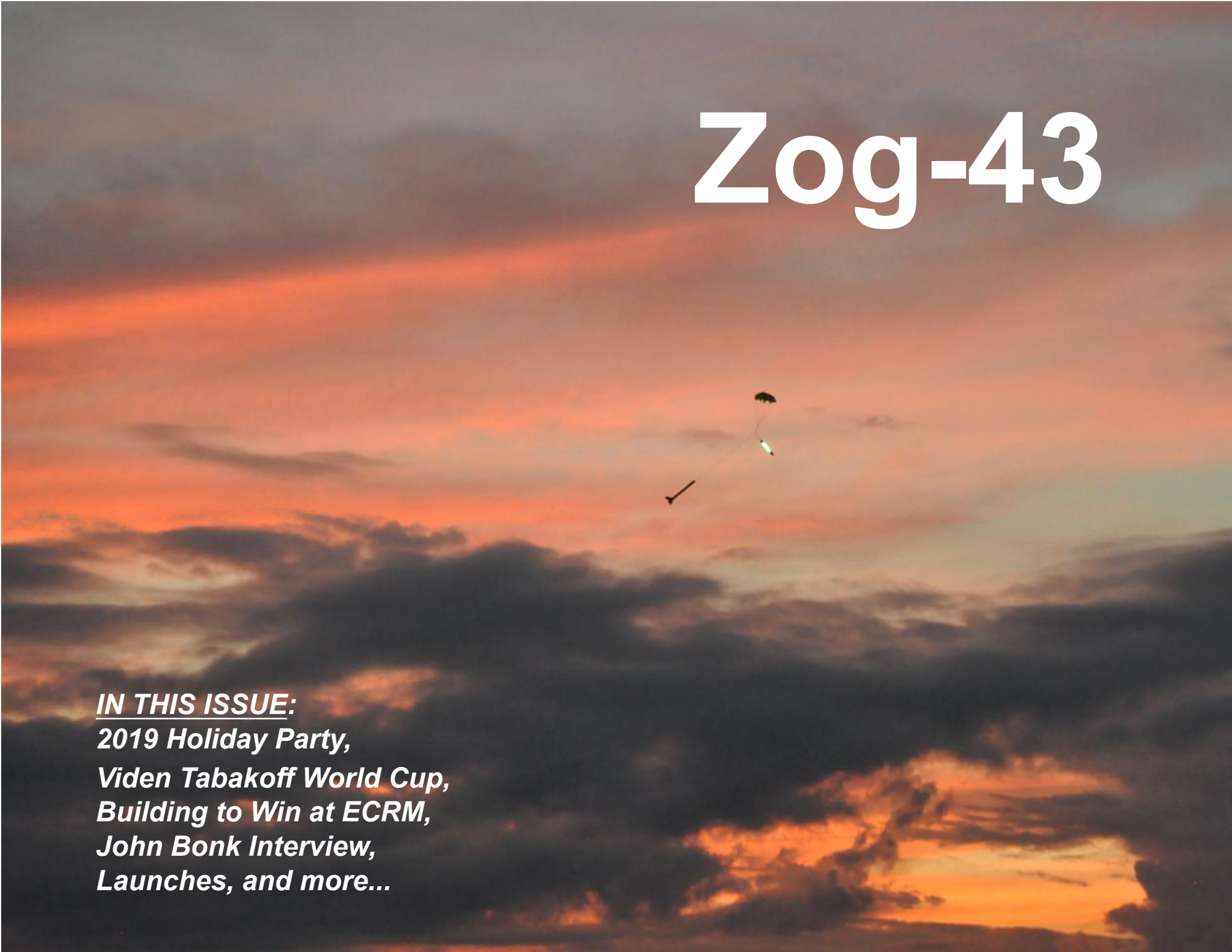

Zog-43

IN THIS ISSUE:

2019 Holiday Party,
Viden Tabakoff World Cup,
Building to Win at ECRM,
John Bonk Interview,
Launches, and more...

Zog-43
Volume 42 Number 1
January/February 2020
Official NARHAMS Newsletter
Editor: Don Carson

ZOG-43 is dedicated to model rocketeers of all ages, abilities, and interest. We are committed to providing the most current, up-to-date information on model and real world rocketry, and to provide educational material, as well as, entertaining information.

ZOG-43 is published bi-monthly and is available to all paid up members of NARHAMS. Club membership is open to all, dues are 10 cent per week.

If you have any questions about ZOG-43, NARHAMS, subscriptions, or if you have any comment(s), correspondence, or if you'd like to submit an article, send them to:

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About NARHAMS

The National Association of Rocketry Headquarters Astro Modeling Section, or NARHAMS, serves Baltimore, the state of Maryland., Washington, DC and the surrounding Metropolitan areas. The club is a section (#139) of the National Association of Rocketry (NAR).

We are the oldest continuously active model rocket club in the United States, first established as a high school club in 1963, changing our name to NARHAMS when chartered as a NAR section in 1965. NARHAMS is the only seven time winner of the NAR "Section of the Year" award (1997, 1998, 1999, 2001, 2004, 2006, and 2007).

NARHAMS members regularly fly their model rockets at NASA's Goddard Space Flight Center in Greenbelt Md and at Old National Pike Regional park near Mt. Airy, Md.

NARHAMS welcomes all to our monthly meetings and launches.

For details, dates and directions to our club, meetings and launches, go to: http://narhams.org

From the Editor - It Is A New Year and Changes Are Being Made!

Don Carson, NAR #11069

Welcome to 2020!

The Club has migrated from the old Yahho Groups(which basically shut down, although you can still do group emailing with it) to a similar Groups.io. Created by the originators of the old Yahoo groups, it is modernized and well maintained. All the old email traffic, files and photos can now be found there. It is free participate, so check it out.

I have changed up the organization of the Zog-43 a bit. In the past, I attempted to mix and balance article types and event coverage throughout the issue.

I decided to try organizing article types roughly together along the lines of:

Features
Club Business/News
Launches
Competition

It won't be a hard and fast rule, sometimes page layouts dictate some variation and things like competition coverage can become a feature, for instance. Hopefully this will improve the "reader experience." Please let me know, one way or another.

This newsletter truly runs on the efforts of a great group of modelers. My thanks go out to everyone who contributes to make this a such an outstanding newsletter.

I hope you enjoy this issue.

As always,

Fly 'em high, bring 'em back, and be safe...

For questions, answers, opinions, files, photos, and more NARHAMS, join the NARHAMS Groups.io group. It is free, painless, no ads, and may just be the cure for the common cold. Also: Facebook if you are not parnoid about that sort of thing.

Front Cover: Mother Naure provided a dramatic backdrop for the beginning of the September 2018 Night Launch!
Photo: D. Carson

Back cover: Iranian Qadr H long-range ballistic surface-to-surface missile.
Photo: Aviation Week and Space Technology

ZOG ROYAL COURT
(NARHAMS OFFICERS)

ZOG (President) Alex Mankevich

VICE ZOG (Vice-President) Alan Williams

COLLECTOR OF THE ROYAL TAXES
(Treasurer) Ed Jackson

KEEPER OF THE HOLY WORDS (Secretary)
Sarah Jackson

COURT JESTER (Section Advisor) Jim Miers

NARHAMS 2019 Holiday Party A Hit!

A great evening of friends, food, and fun.
Photo: D. Carson

The gathering (Greenbelt Volunteer Fire Department, December 7, 2019).
Photo: E. Pearson

Bruce Camino got first pick of the prizes and choose a wonderful Estes Saturn V.
Photo: E. Pearson

The traditional space and rocket homemade cookies from the Shaffers.
Photo: M. Cochran

Companionship, food and drink (DJ Emmanuel).
Photo: E. Pearson

Continued next page

Ole Ed, making the rounds.
Photo: M. Cochran

Jimmy Filler, Dimitre and Stoil Avramov.
Photo: M. Cochran

Continued next page

For Rocketeers Of Greatness

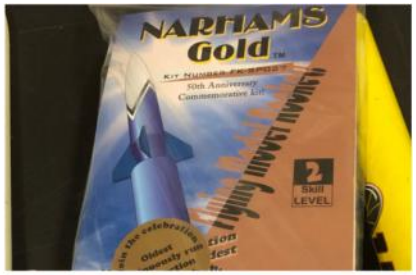
The club's formal recognition of individuals whose accomplishments are clearly singular.

Bill Boublitz joins the ranks of FROG recipients.
Photo: D. Carson

Stoil Avramov accepts his FROG award from last year.
Photo: M. Cochran

Mary McCoy accepts a FROG award from a grateful club for the many years of support by her and the late John McCoy.
Photos: D. Carson

Holiday Party, Continued



Hobby convention? No, prizes for attendees. At only $1 a ticket, everyone who bought tickets got mutlitple trips to the prize table to make a selection.
Photo: E. Pearson

A couple of party animals ready to bust loose.
Photo: D. Carson

Pau about to make is next move.
Photo: D. Carson

(R) He's fast, but he didn't get away.
Photo: M. Cochran

For Rocketeers Of Greatness (FROG) 2019 Award Citations

John and Mary McCoy

For decades, John's exacting and intricate model construction was admired by all who witnessed it. In shaping matters of policy and procedure his thoughts were often those that turned out to work best. Perhaps his most visible contribution was his continuing upgrade and repair to the club's launcher systems. John's dedication to the use of only quality, rugged hardware insured our ability to reliably support our hobby and education rocketry events. Finally, John served two terms as Section Senior Adviser.

Mary McCoy is the co-recipient of this award. Though not an official club member, Mary has always been a vital part of our meetings' social order. She regularly injected exactly the right observation to focus our efforts. Her devastating sly flashes of humor would sneak up at the most unexpected moments. In addition, her culinary skills have often turned meetings into memorable feasts. Together, John and Mary McCoy have been powerful drivers behind the club's success.

We lost John February 2, 2019.
His memory will be deeply cherished.

Presented 2019 by the grateful members of
NARHAMS, NAR Section 139

Bill Boublitz

Bill has channeled his appreciation of model rocketry and the nation's spacefaring efforts into outstanding commemorations hosted by NARHAMS to celebrate the 50th anniversary of America's spaceflight programs' historic events.

Starting with the Apollo 8 mission, Bill has devoted countless hours of research and collection of images to provide the background and insight necessary to enable the public to appreciate these anniversaries. He has constructed well-crafted scale models of the Apollo program's launch vehicles. Bill was instrumental in constructing the 1/48 scale Tranquility Base diorama which was a centerpiece display at the Apollo Contest held to celebrate the Apollo 11 mission's 50th anniversary in July 2019.

Bill has regularly served at the Safety Check station at the monthly model rocket launches at the NASA Goddard Visitor Center. Bill's success in modeling, research and writing has enhanced NARHAMS' reputation as a leader in model rocketry display and historical commemoration activities.

Presented 2019 by the grateful members of
NARHAMS, NAR Section 139

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For Rocketeers Of Greatness (FROG) Award Citations

Stoil Avramov

Stoil began flying free-flight_gliders and R/C models at age of 8 and has quickly achieved international renown as a medalist in the World Space Modeling Championships. He has competed in the Capital Cup FAI World Cup events. Stoil's skill at S8 RC rocket glider (F3, S3 and S4) is impressive and he has shared his glider insights at the 2017 NARCON. He has remained humble and modest despite his success in model rocketry competition as a US Junior National Champion RC Glider pilot.

Stoil has regularly served as range crew member for the TARC finals and at the annual Apollo Contest. He and his family have hosted Bulgarian guests at the Goddard Visitor Center. Stoil's success in competition and willingness serve has enhanced NARHAMS' reputation as a leader in model rocketry competition and outreach activities.

Presented 2019 by the grateful members of NARHAMS, NAR Section 139

Get Ready For The April Meeting:

Flexwing Build Session

Jennifer Ash NAR 61415

The last time flex wing build session was held was in April 2004, led by me. I think Jim Filler may have discussed flex wings since then, but I know we actually made the gliders.

The following supplies will be needed for the flex swing build session.

For flexie:
- 6 inch piece music wire 22 gauge - per spring
- 1/4 inch by 1/4 inch balsa or basswood 36 inch long stick (cut into 12 inch pieces)
- Flexible material - can be mylar, plastic, Home Depot Red Flags thread

For rocket:
- 14 inch BT-5 body tube
- Balsa for fins
- Launch lug
- Streamer material
- Engine hook (if you want)
- Engine block
- Shock cord material, preferably kevlar

Building supplies:
- If you have it - Contact cement, otherwise, we can all use my bottle
- Brush
- CA
- Exacto knife (new blade)
- Film canisters
- Baby powder
- Wood glue

A Flexie in flight.
Photo: NAR

The Flex Wing Spring jig was featured in the Sept 2004 Zog-43:
https://narhams.org/zog-43/v26/zog43_v26n09_200409.pdf
I made a duplicate of the original, and will bring it.

Viden Tabakoff World Cup For Space Models

By Stuart Lodge
September 20-22, 2019
Dupnitsa, Bulgaria

FOLLOWING IN THE WAKE of the European Championships for Space Models, in Romania, no one was quite sure how well this Bulgarian World Cup would turn out. Your scribe invited to judge the S7-Scale Models on this famous boosting site…back in the day, when Dupnitca was called Stanke Dimitrov, it would surely be a challenge. Famous organizing club, SAM ICAR Dupnica , plus SK Modelist Gorna Oriahovitsa would surely have serious work to do throughout. Fellow S7-Scale judges, Marin Georgiev & Yuliya Lazarkova (both BUL) would surely need to ensure very professional skills were in play throughout. So how did S7-Scale go?

Bozidor Iliev (BUL) pushes the button on his (mini..) Ariane L-01. Super 3-staged boost and a great winning score. Awesome scenery.
Photo: S. Lodge

Staging…not too sure of the rocket/entrant.
Photo: S. Lodge

Weather ~ Forecasts were positive for the World Cup weekend. What was challenging was that overnight temperatures were routinely sub-zero – illustrated in your scribe's cable ride up Mount Rila, the biggest mountain in the Balkans, in summer clothing…freezing! But the daytime climate was sunny, even hot, with almost no wind, meaning that duration events S3A-Parachute Duration, S4A-Boost Glider Duration and S6A-Streamer Duration took place with virtually no DQs and few losses of models.

FAI Jury Chair, Janka Kajanova on the cable ride up Mount Rila. Janka is on the coldest chair ever, temeperatures below 0 degrees C!
Photo: S. Lodge

(L) Pavel Tilev (BUL) boosts his Eridan 007. Tidy 2-staged flight with good realism…did well.
Photo: S. Lodge

Continued next page

Viden Tabakoff World Cup, Continued

S7-Scale Open international ~ No scale models arrived on Friday 20th – and none appeared on Saturday, meaning that I was co-opted into the FAI Jury for the day and probably 'unemployed' for the scale event. However, Sunday saw 'carloads' of Scale rockets arrive on site…a dozen in total! At this stage, we set up a judging table and got down to work, running the rule over mainly sounding rockets, rather than the usual Arianes, Saturns and Soyuz. A first for your author was judging scale al fresco, in sub-zero temperatures – literally, with frost on the grass. What was amazing was that, without interaction, Marin Georgiev and my goodself ranked the array of entries identically, with Yulia Lazarkova acting as secretary, crunching the numbers and posting the scores.

Static Judging ~ So, what was on show? Actually, there were two Ariane L-01s, by Bozidor & Ilko Iliev (BUL), but 'miniatures', 15" (40cm) long, but still impressive, featuring much of the detailing of their bigger brothers. Former-Czechoslovak Meteor-1A rockets by Petr Hristov & Iveta Velcheva (both BUL) were on the table, well made, but low on Degree of Difficulty, in the minds of the judges. There was a (slight..) issue regarding the 'Builder of the Model' rule; three MMR-06M rockets entered by Stefan Vasilev, Konstantin Denchev & Viktorie Tsankova (all BUL) …problem? I had judged these at August's European Champs in Romania, when they featured Ukrainian entrants… seemed a 'swap-over' had taken place! However, this was overlooked, as there were only Bulgarian S7-Scale entrants at Viden Tabakoff, nobody seemed to care. To define, this should have been a World Cup event, but you must have three nations in the start list to qualify. Pavel Tilev (BUL) tabled an Eridan-007 sounding rocket – likely to feature -

Continued next page

Beautiful Dupnitsa Bulgaria

(R) A building in Dupnitsa dating back to Roman times. The town centre just magical.
Photo: S. Lodge

Another historical structure.
Photo: S. Lodge

Al fresco judging on the field, with Marin Georgiev checking out the Brazilian VS-40 sounding rockets. An unusual judging table with only Arianes L-01 typical.
Photo: S. Lodge

Those Brazilian VS-40 PT1 and PT2 birds by Andon Georgiev & Konstantin Krastakov (both BUL) were pretty good. The Meteor 2, by Yordan Dzhenin (BUL), right of frame, did pretty well too.
Photo: S. Lodge

Viden Tabakoff World Cup, Continued
following the flights. Debatably, the most 'interesting' entries were Brazilian sounding rockets, VS-40 PT1 & VS-40 PT2, by Andon Georgiev & Kostandin Krastonov (both BUL) respectively; both chunky, colourful birds. Top scorers following (the cold..) static judging were Arianes L-01 – 1st + 2nd – and a Meteor 2H, by Bulgarian Yordan Dzhinin 3rd, with plenty more in the chase. As ever, it would all come down to the flying.

Flight scores ~ All the entries were Bulgarian, most of the rockets were single-stagers, offering little in the way of bonus points for Special Effects (SFX), or multi-staging and capsule launching. Exceptions included the Ariane L-01s by Ilko & Bozhidar Iliev, with the latter – son of Ilko - delivering a near-perfect 3-stage boost, making up for becoming second best in the static scoring. Father Ilko didn't manage to come up with anything close…so, 1st and 2nd respectively. Andon Georgiev, brilliant Junior, with Konstantin Krastanov boosted their near-identical VS-40 PT1 & PT2 competently, nailing identical scores in quite spectacular flights. Stefan Vasilev entered a 'controversial' MMR-06M, together with his brilliant juniors, Konstanton Denchev and Viktorie Tsankova, doing OK but not enough for the top-3. The podium was still undecided, when Pavel Tilev launched his Eridan-007, nailing a good 2-staged boost and a good score, for 3rd place. Final rankings were as shown below:

Viktorie Tsankova (BUL) launches her MMR-006M into an azure sky. Spectacular!
Photos: S. Lodge

Brazilian VS-40 PT1 ejects its recovery system. Good boost and realism ensured good points for Andon Georgiev (BUL).
Photo: S. Lodge

All chutes deployed!
Photo: S. Lodge

1 ILIEV, Bozhidor jnr	*Ariane L-01*	Static	469pts	Flight 178pts = 647 points
2 ILIEV, Ilko	*Ariane L-01*	Static	477pts	Flight 108pts = 585 points
3 TILEV, Pavel	*Eridan 007*	Static	413pts	Flight 134pts = 547 points

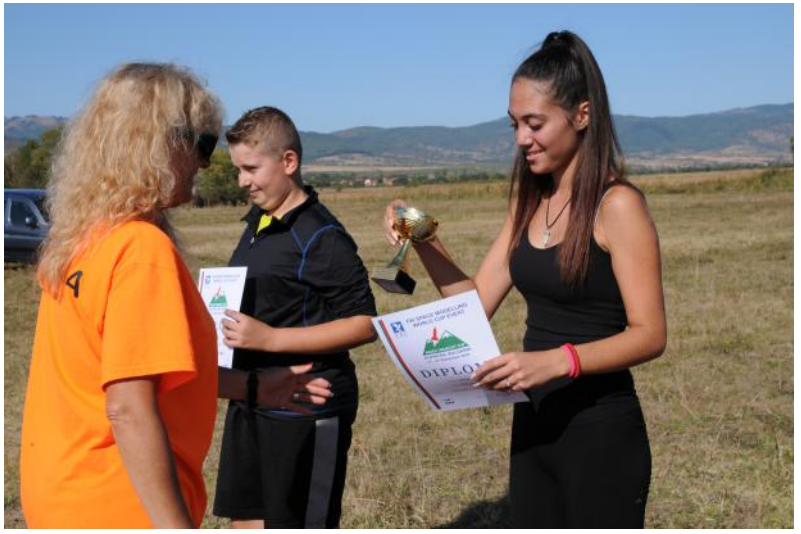
Continued next page

Viden Tabakoff World Cup, Continued

Round up ~ S7-Scale, although not qualifying for World Cup status, proved to be very entertaining to watch for the spectators; the quality of flying was really good with only 2 DQs over the two rounds: challenging for the judges too. Contest Director, Lubomir Bakalov, RSO Sotir Lazarkov and the rest of the team were responsible for what turned out to be a super international event, following a slow start. Other good aspects of the event were that S3A-Parachute Duration and S12/P-Triathlon were flown in perfect conditions, featuring great scoring and almost no losses. But the most positive aspect was the number of Junior entrants, of both genders…Young people are the future of everything. Oh yes, Viden Tabakoff…who's that?!? The U.S. Army invited him to join the Rocket Research Group led by Wernher von Braun, world's leading rocket pioneer, in Huntsville AL. After this assignment, he joined the University of Cincinnati as professor of Aerospace Engineering. The Aerospace program at the University of Cincinnati soared under the leadership of Dr. Tabakoff: Rocket Scientist then.

It's all about the 'Gold Standard'. Amazing selection of trophies for both Seniors and Juniors.
Photo: S. Lodge

Stefan Vasilev (BUL) fronts up his magical club of rocket flyers, who are struggling to hold onto all their trophies and diplomas! Ivota Velcheva and Viky Tsankova truly star players.
Photo: S. Lodge



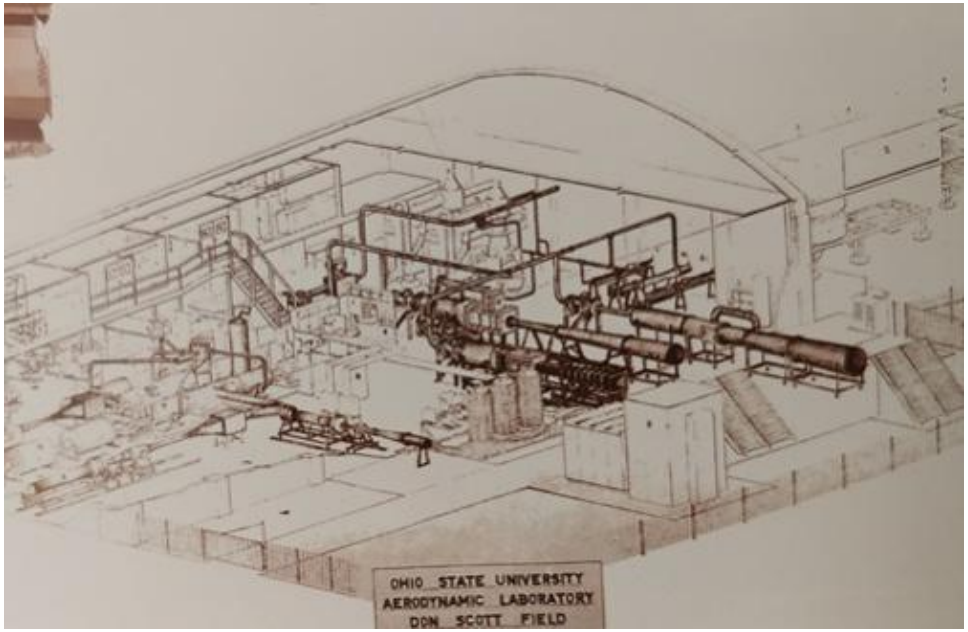
FAI Jury Chair, Janka Kajanova, presents Viktorie Tsankova (BUL) with another trophy. Viky did really well in every class she flew. Tabakoff was a super event with lots of Juniors of both genders.
Photo: S. Lodge

NARHAMS Notes The Passing of Rocketry Great, Jerry Gregorek

In October, via The Electronic Rocketeer, NAR president John Hochheimer announced the death of Dr. Gerald "Jerry" M. Gregorek. (Jerry passed on October 3, 2019 at the age of 88).

Jerry was the real deal—a model rocketeer AND aero-engineer. Expanding that a bit, he was a U.S. spacemodeling team manager and, for more than six decades, an Ohio State University (OSU) aero-astro department faculty member. To see an obituary provided by his wife, Carol, click here: https://www.shaw-davis.com/obituary/Gerald-Gregorek

It is noteworthy that OSU held a "Tailgate Celebration of Life Open House" honoring Jerry on Saturday, November 16. This was at OSU's airport in Columbus, Ohio.



A 1960 blueprint rendering by Jerry Gregorek of what would become OSU's Aerodynamic Laboratory. (From OSU's Web site on the Don Scott Airport).

November 16 was also the club's monthly launch at Mt. Airy, Maryland. There NARHAMS remembered Jerry with a few spoken words (Alan Williams —"He was a genuinely nice guy"; another read his obit) and a model was launched in his memory.

Since Jerry stood out amongst rocketeers, the model chosen was a beautiful (Jim Filler-made) red, white and blue Alpha 1.

NAR president Hochheimer noted in his announcement that Jerry's cremains will be launched into orbit at a later date.

Big Announcement: Rocket Run 2020! At the April Sport Launch

Description: At the April club launch, a number of small, featherweight, tumble recovery models will be flown, and the club will provide these rockets.

Rocket Run 2020 participants will endeavor to recover these models and may keep retrieved models as prizes.

Rule: Participants must yield to the person closest to a model being recovered, i.e., no fighting over a model.

Why Rocket Run 2020: This is a fun club activity.

Participation: This activity is open to any student. A student is defined here as a full-time pupil of a home school, elementary school, middle school, junior high, high school or college.

When: 1 p.m., April 18. Backup date—1 p.m., May 16, 2020.

Where: Old National Pike District Park, Mt. Airy, Maryland.

Day-of Situational Decisions: Judges will decide on the number of Rocket Run models to be flown and base their decision on the participants present.

Judges will decide if, optionally, the activity is to be flown in age/school divisions or if an individual/group is to be given a head start retrieving models.

Decisions by the designated judges will be final.

Registration and Cost: There is no advance registration or cost to participate.

NARHAMS Club Merchandise

New Online Store for NARHAMS Merchandise:

https://www.cafepress.com/narhams

NARHAMS now has an online store for club mechandise. No more waiting for a group buy. Lots more choices of colors and styles. Plus, a huge variety of items, much more than we have ever had in the past.

Shirts, Hoodies, Hats, Mugs and more!

End your loved ones' gift shopping dilemma - leave this page open and circle this announcement.

Contact your editor before buying. He gets regular discounts or free shipping codes from Cafepress. Save your dollars for rocket motors.

Keeping Up With: John Bonk

By: Alex Mankevich

John Bonk and his Halloween Mosquito.
Photo: A. Mankevich

There are benefits to conducting a regularly scheduled monthly model rocket launch. You get recognize some familiar faces returning again and again, and that allows you to develop a relationship with the modeler and her/his fleet of rockets. For instance, you get excited when you notice that they've brought out something new to launch. Over time, you get to develop insights into the person, and that person can rekindle the passion that motivates you to conduct the launches in the first place.
John Bonk has established himself as a regular at the Goddard First Sunday launches. What's notable about John is that he unfailingly brings out a Mosquito model. The ZOG-43 has delved into the mind of Mr. Bonk to learn more of what motivates his unique Goddard approach.

ZOG-43: So, what do you find appealing about coming out to the Goddard launches?

JOHN: Being around young folks who are at the age I was when I built and launched my first rocket, reminds me of some of the better moments of my childhood; plus, there's the sheer joy of watching rockets leap into the sky.

ZOG-43: Who are some of the people you've brought as guests to the Goddard launches?

JOHN: I am almost always accompanied by my long-time friend Robin; often her grandson Gianluca comes with us. Leila, Melody, and Bianca, young friends of the family, come with us, sometimes with rockets I help them build. I think one of the pleasant surprises I've had returning to the hobby after the many years is seeing young female future engineers launching their rockets.

ZOG-43: What has factored into you concentrating on the Mosquito model?

JOHN: I wanted nothing to do with dinky little rockets, like the Mosquito, when I was a kid. I thought they were beneath my skill level, but when I launched one at Goddard, I was hooked.

The challenge of working with something so small appeals to scientist and engineer in me. Watching something I built disappear into the sky like a wish or a prayer appeals my inner poet. And, of course, letting go of something that took hours to build is great therapy.

Continued next page

Frozen Mosquito.
Photo: J. Bonk

A Ladybug Mosquito.
Photo: J. Bonk

Autumn Leaf Mosquito.
Photo: J. Bonk

John Bonk, Continued

I always hope that someone will find the rocket, maybe keep it or perhaps launch it again. That hope also keeps me building Mosquitoes. It's a little like dropping a message in a bottle into the sea.

ZOG-43: We've noticed some themed Mosquito model through the years. Do you make any particular effort to bring out holiday-inspired Mosquito models?

JOHN: My December rockets have a holiday theme, July rockets are always red, white, and blue. I try to make something that resembles an autumn leaf in the fall. I made a bumble bee and a ladybug for May launches, so an insect, or some living creature, may become a tradition for May rockets. Sometimes I just want to experiment, so most months have no theme which leaves me free to try new construction and painting techniques.

ZOG-43: How long does it take you from the time you think of a Mosquito theme to completing its construction?

JOHN: I'm guessing about two hours for a simple design. It's hard to say because you always have to put things aside as you wait for sealer, glue or paint to dry. I spend, the most time on the December and July rockets —maybe as much as six hours, but that is often because I made a mess painting the rocket or discovered a design just didn't work. I'm sure the December and July rockets weigh the most due to frequent re-paintings.

ZOG-43: Please share a few of your favorite memories from the Goddard launches.

JOHN: I have a series of six photos taken over maybe a two second interval on my screensaver. The photos show Leila who was eight at the time and Melody who was six. I photographed them at the launch rack as they watch the first rockets they ever built being readied for launch. In the photos, Leila is staring at her rocket in rapt fascination; Melody, in stark contrast to her sister, leaps into the air and does an exuberant pirouette. I very much enjoy being around folks at their first launch.

The range support crew - young eyes.
Photo: J. Bonk

The range support crew - young eyes.
Photo: J. Bonk

The range support crew - young eyes.
Photo: J. Bonk

ZOG-43: Do you have an interest in space apart from model rocketry?

JOHN: I watched Alan Shepherd, Gus Grissom, and John Glenn, and maybe all the Mercury, Gemini, and Apollo astronauts launch into space. I have two telescopes, and it is not unusual for me to go outside and watch an ISS pass or an Iridium flare. I love just about everything to do with astronomy and space exploration.

ZOG-43: Do you keep a photo album of your Goddard launches?

JOHN: Yes, I have a Flickr page and I have gathered my rocket pics into an album: https://www.flickr.com/photos/156498617@N06/albums/72157711329214073

ZOG-43: How about some parting thoughts to wrap up with?

JOHN: In case anyone is counting, I have built and launched a total of 28 Mosquito sized rockets as of this moment. There has been a total of eight recoveries involving 5 rockets (the May 2018 rocket was launched and recovered a total of three times in one day). One launch, December 2016, was recovered by dumb luck—it landed about ten feet from where I was standing when it was launched, all the other rockets with the exception of one, were recovered by either Leila or Melody. I guess the inference one can draw from this is that the best way to recover a Mosquito is to bring young friends, with good eyesight and hearing, to a launch.

January Meeting Highlights
By Ed Pearson

Last year we initiated a maintain the club's equipment night, and that's what we did —cleaned our racks—this past January. For the business portion we discussed setting an a priori go-no/go time for the Goddard monthly launches and having an 'Rocket Run' activity (retrieve Mosquito-type rockets) for the Mt Airy April launch. WebEx permitted others, e.g., Sally Cook and Bradley Grant, to remotely participate.

Equipment maintenance—L-R: Jim Miers, Alex Mankevich, Wade Williams, Mark Wise.
Photo: A. Williams

Club members attending the January business meeting or Goddard public launch received 2020 NASA calendars. [Former prez (Zog) Roger McBride Allen displays his at a local eatery; Roger was in the club more than 48 years ago!].
Photo: E. Pearson

Mark Wise considers the Rocket Run proposal.
Photo: E. Pearson

Bits and Pieces

The Next 3 Months

Date	Time	Event	Location
02/15/20	12 - 4 pm	**Sport Launch** Theme: Open Launch Manager: Jim Miers	Mt. Airy, MD
02/16/20	1 - 2 pm	**Goddard Public Launch**	Greenbelt, MD
02/17/20	9 am - 5 pm	**Arizona Cup**	Tucson, AZ
02/18/20	9 am - 5 pm	**NARCON 2020**	Tucson, AZ
02/19/20	5:30 - 9 pm	**Monthly Meeting** Topic: Remote Presentation Test (Don Carson) Refreshments: Jim Baird	College Park, MD
02/20/20	12 - 4 pm	**Sport Launch** Theme: Open Launch Manager: Jim Baird	Mt. Airy, MD
02/21/20	12 - 4 pm	**Krimgold Park Sport Launch**	Woodbine, MD
02/22/20	5:30 - 9 pm	**Monthly Meeting** Topic: Flex Wing Demo And Build (Jennifer Ash) Refreshments: Jim Miers	College Park, MD
02/23/20	1 - 2 pm	**Goddard Public Launch And Apollo 13 50th Anniversary Celebration**	Greenbelt, MD
02/24/20	12 - 4 pm	**Sport Launch** Theme: NRC Events Launch Managers: Jen Ash And Mark Wise	Mt. Airy, MD
02/25/20	12 - 5 pm	**30th Rockville Science Day**	Rockville, MD

Thanks Again, Scott!

Scott Branche of Hobby Works in the Laurel Shopping Center is once again sponsoring the "Special" raffle for the Holiday Party.

Welcome New/ Renewing Members

Renewals

Ellen Fineran, Jef Fineran, Mark Wise

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December 2019 Mt Airy Sport Launch Report: Closing Out The Year

By Alex Mankevich, NARHAMS President

NARHAMS wrapped up its 2019 calendar year flying season at Old National Pike Park on December 21, 2019 – the day of the winter solstice. Not only was it the final sport launch of 2019, but also the final sport launch of the decade. The shortest day of the year proved itself to be amenable for sport rocketry. There was no threat of precipitation, the temperatures climbed into the upper 30's and there was not any wind chill to speak of.

Sarah and Ed Jackson, Alex Mankevich and Mike Kelley set up a single rack and two away pads around 10:45 am. We had the whole park to ourselves. There was no athletic activity to compete with, and even the hikers and dog-walkers were few in numbers. A steady trickle of flyers descended upon the launch range to get in a few more flights this year. The Challenger 1 Civil Air Patrol (CAP) squadron out of Alexandria, Virginia was one of the early group of flyers.

Although there was no particular theme for this launch, it turned out to be a day for scale models and glider flights. Sean Ricketson flew consecutive flights of scale models that included an Honest John, Nike Apache, a Japanese K-7 (i.e. Kappa) sounding rocket and a WAC Corporal. Sean capped off his scale model series with flights of a model of the Soviet Sputnik. Mike Kelley launched scale models of the WAC Corporal, Patriot, Black Brandt 3 and D-Region Tomahawk. Boost gliders were flown by Buff Fairchild and Olin Peterson. Two-stage flights were flown by Buff and Justin Strait.

Among the crowd-pleasing flights were a Super Big Bertha flown by Sarah Jackson on a D12 motor, a SR-X space plane flown by Buff on a C12 motor, a Death Star flight by Justin Strait on a C6 motor and finally Ed Jackson thrilled us all with a flight of his spinning Quintstar. The Andersons, David and Doug, combined for a total of 11 flights.

The day was punctuated by a couple of motor catos. An E-12 motor

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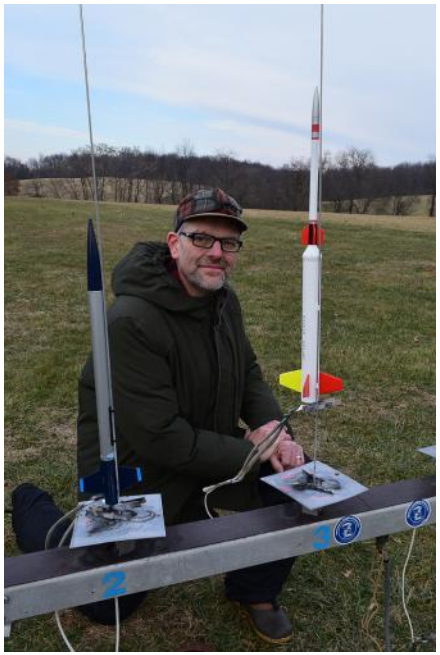
Buff Fairchild's SR-X boost glider is poised on the launch rack.
Photo: A. Mankevich



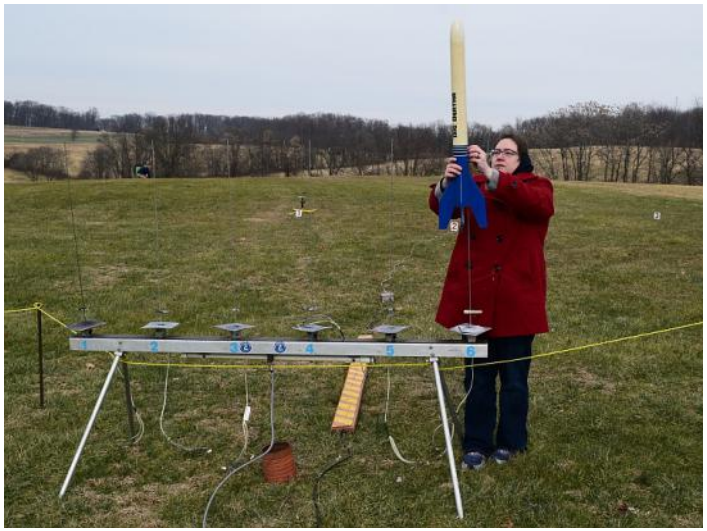
Sean Ricketson launched several scale models. Sean poses with his Nike Apache model.
Photo: A. Mankevich

(L) A bundled up Margaret Moore flew her pink Avion (with a B4-4).
Photo: E. Pearson

December Goddard Launch, Continued

launching from an away pad blew out its nozzle, causing a resounding "boom" presumably heard by Santa's elves working up at the North Pole. A glider fight on an A10 motor also decided to get into the CATO act – presumably sending Santa's flying reindeers off course during their pre-Christmas practice run.

We totaled 65 fights for the day. Many of the NARHAMSters departed the field while offering well wishes of Happy Holidays and Happy New Years. There was plenty of peace on earth and good will towards men and women shared among all the rocketeers.



Sarah Jackson loads her Super Big Bertha model flying on a D12 motor.
Photo: A. Mankevich

First flight of Sean Ricketson's Honest John (A8-3).
Photo: E. Pearson

(L) Buf Fairchild's Hobby Lobby exclusive Epic II (Estes). Buf used an A8-0 to an A8-3; the lower stage glided back.
Photo: E. Pearson

(R) David Anderson (L) hooks up his (B6-4) NOVA while Buf Fairchild loads his Savage (C11 to a B6-4) two-stager.
Photo: E. Pearson

The December 2019 Goddard Launch Report: No Launch, But…

By Ed Pearson

Photo: E. Pearson

No monthly public launch in December at Goddard; it rained. Instead volunteers repaired models (Alexander Mankevich-L-and Michael Cochran shown), gave talks and answered questions.

NASA Goddard Visitor Center Model Rocket Contest

WHEN: **Sunday July 19, 2020 12 noon – 4pm**
(no rain date)

FOR: All Area Model Rocketeers

WHERE: NASA/Goddard Visitor Center, Greenbelt, Maryland
(I-95 Exit 22A, Baltimore-Washington Parkway Exit for
Route 193 East; then follow signs to Visitor Center on ICE Sat Road)

EVENTS: "Lunar" Spot Landing

COST: Free

REGISTRATION: Register at the launch site on the day of the launch

SPONSORS: This contest hosted by the NASA Goddard Visitor Center and conducted by the National Association of Rocketry Headquarters Astro Modeling Section (NARHAMS). Assistance has been received from the Maryland Space Business Roundtable and model rocket companies.

AWARDS: First through fifth place trophies and model rocket kits for each event have been donated.

WHY: This event is to commemorate the 51st Anniversary of the Apollo 11 Moon Landing. This STEM event also promotes Space Sciences among area students.

Contest Rules

1. The contest is open to all model rocketeers.
2. Contestants must follow the National Association of Rocketry (NAR) Safety Code
3. Modelers must provide their own model rockets, wadding, engines, igniters, and prepping tools. The Space Center will provide the launch equipment suitable for 1/8" and 3/16" diameter straws (launch lugs).
4. In each event, contestants may fly either as an individual or as part of one team. Entry into both team and individual competition is not permitted.
5. Model rockets must use a single (NAR classification and safety certified) engine for each flight. "D" class engines or greater are prohibited.
6. Total weight of the model rocket with engine must be less than four ounces.
7. Model rockets must pass a preflight safety, engine and weight inspection at the launch site prior to launch.
8. Model rockets must land safely and must use either streamers or parachutes or gyrocopter-type devices for their recovery.
9. Model rockets must not separate into two or more unattached parts during flight.

Contest Judging and Other Important Information

1. Modelers may launch their models one time.
2. A launch is a successful ignition of the engine. A flight is when the model rocket starts to move upward on the launch pad and until the model rocket finally stops its descent.
3. The object of the event is to determine whose flight comes closest to reaching the center of a circular 125'-diameter "Moon" marked on the ground.
4. If a model rocket lands on the "Moon," contestants must leave the model rocket undisturbed until the model rocket is measured.
5. Officials will measure all model rockets that land within the "Moon's" boundaries.
6. Measurement will be from the "Moon's" center to the tip of the model rocket's nosecone. The measurement becomes the contestant's score.
7. The person with the smallest measurement (i.e., closest to the "Moon" center) will be declared the winner. The next smallest score will be second place and so on.
8. The contest will be flown in two age divisions: one is for those 15 years and younger; the other is for those 16 years and older. Teams will be classified by the age of the oldest team members.
9. Decisions of the judges are final.
10. These contest Sundays have traditionally been some of the hottest days of the year, so be prepared. Also, please be prepared to have FUN!

Time Schedule

Visitor Center Hours for This Event	12 Noon to 4:00 p.m.
Contest Registration	12:00 p.m. to 2:30 p.m.
Opening Ceremony/Demo	12:30 p.m. to 12:45 p.m.
Contest (Flying Period)	12:45 p.m. to 2:45 p.m.
Awards Ceremonies	3:30 p.m. to 4:00 p.m.

For further information, call the Goddard Visitor Center at (301) 286-8981, Tuesday through Friday, 10:00 a.m. to 4:00 p.m.

January 2020 Goddard Launch Report: Kicking Off The New Year Right!

By Ed Pearson

Wind chill brought the modelers inside to prepare their rockets.
Photo: E. Pearson

Ted Cochran retrieves a treed model.
Photo: E. Pearson

Does It All: Ed Jackson took time from RSOing/ launching/announcing to help load this (Estes starter-set Alpha-like) model. Ironically moments later he stepped around the launch panel and caught the returning model.
Photo: E. Pearson

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Anatomy of a Flight—Part 1. Top: (L) Sarah Jackson safety checks models inside the Visitor Center. (R) Jim Miers loads a model onto the rack. Bottom: (L) The modeler hooks up the clips. (R) Ed Jackson-on left in frame-launches the rocket.
Photo: E. Pearson

Anatomy of a Flight—Part 2. The model drifts to earth; it was recovered.
Photo: E. Pearson

(R) Two young rocketeers ponder how to load their models (Jim Miers came to their rescue).
Photo: E. Pearson

While we launched, an astronaut strode by.
Photo: E. Pearson

Competition Corner:

New Contest Announcement

Building for ECRM

Can Am Cup 2020 Details Announced

June 26-28, 2020
Muskegon, Michigan

Events:

S2/P (similar to TARC)
S3A (Parachute Duration)
S6A (Streamer Duration)
S7 (Scale)
S8E/P (E Rocket Glider with time and landing goals)
S9A (Helicopter Duration)

Note: Events S3A, S4A, S6A, and S9A will be flown with 1/2A motors ONLY, which will be provided by the organizers

Contact Mike Nowak (mikemnowak@gmail.com) to get on distribution for the info bulletins with more details.

Upcoming FAI-style Contests

Arizona Cup - March 4-5 (the Wednesday/Thursday before NARCON)

FIRE - Open International Meet - March 26-28, see https://www.nar.org/site/f-i-r-e-cup-2020/

CanAm Cup - June 26-28, 2020, Muskegon, MI *New Date!*

NARAM-associated North Coast Cup - June 24-26, 2020, Geneseo, NY

East Coast Regional Meet-47

Events:

All NRC Events can be flown
Plus
1/2A Parachute Duration*
1/2A Helicopter Duration*
1/2A Altitude w. altimeter*
1/4A Flexwing Duration**
Sport Scale***
Open Spot - Free Event

*National Rocketry Competition event
**Similar to a NARAM event
***Other NARAM event

June 20-21, 2020
Old National Pike Park
Mount Airy, MD

Rocketry Festival 2020

NARAM-62 Events:

1/2A Parachute Duration*
1/2A Streamer Duration*
1/2A Helicopter Duration*
1/2A Altitude w. altimeter*
1/2A Boost Glider*
B Payload Altitude w. altimeter*
A Flexwing
D SuperRoc Altitude w. altimeter
Sport Scale
Research & Development

July 25 - 31, 2020
National Warplane Museum
Geneseo, NY

For current info, go to
www.nar.org

Be A Winner: Build Guide for ECRM-47

By Jim Filler NAR#27862

ASP Thermal Seeker.
Photo: Aerospace Specialty Products

Photo: Apogee Component

SEMROC Heli-Roctor.
Photo: eRockets

The Forty Seventh East Coast Regional Meet is scheduled for June 20th & 21st of 2020. NARHAMS is the host section for this NAR contest. The first one I attended was in 1977 and was held at Fort AP Hill in Virginia. I have been the contest director for this event since ECRM 24 with the exception of ECRM 41. The list of events this year is; 1/2A HD, 1/2A PD, 1/4A Flex, 1/2A ALT (altimeter), OSL. What exactly does this mess of numbers and letters mean? I am going to offer you some more detail on this and what some options are for you to participate in some or even all of these events. All events must use contest certified motors. The list is located here: http://www.nar.org/standards-and-testing-committee/nar-certified-motors/ You need to read the specific rules for every event to clarify details. The link to read the sporting code events is here: http://www.nar.org/contest-flying/us-model-rocket-sporting-code/ Altimeters you can use in an NAR contest can be found here: NAR Altimeters

1/2A PD The abbreviation stands for Parachute Duration which is flown with a contest certified "1/2A" engine. You can use any kit that recovers in one piece utilizing parachute recovery. Plans and tips are available here: Parachute Duration Many sport models can be used for this event. Kits are available from several vendors. Aerospace Speciality Products offers high performance ¼ mil aluminized mylar parachutes and kits here: ASP-Competition-Model-Rocket-Kits. Apogee components also sells parts for 13mm to 40mm models and a FAI style 40mm kit Thermal-Sailor. Tips from the NAR webpage: Parachute Duration combines the challenge of building a light rocket that can carry a large enough parachute to descend slowly, yet being able to deploy reliably, to achieve a good duration score. The model has to remain in one piece throughout the flight and cannot be staged. Parachute Duration models can be flown with a piston launcher to increase altitude.

1/2A HD The abbreviation stands for Helicopter Duration which is flown with a contest certified "1/2A" engine. You can use any kit that recovers in one piece utilizing helicopter recovery. This is a very challenging event to build and fly. Plans and tips are available here: Helicopter Duration. Kits are sold by Apogee components here: Helicopter-Rockets, Estes also offers a model the Mini-"A" Heli, and eRockets offers the SEMROC Heli-Roctor. Tips from the NAR webpage: "Weight is an important issue for helicopter models, regardless of design. The lighter, the better, as long as the blades (and the rest of the model) are physically strong enough. Try to find reasonably light balsa for the rotor blades,

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Be A Winner, Continued

A Flexwing "Glider."
Photo: NAR

but without being so weak that the blades will bow outwards too easily when the blades are folded for boost." Helicopter models can be flown with a piston launcher to increase altitude. Before you launch that HD model be sure your rubber bands are hooked up to deploy those blades!

1/4A Flex The abbreviation stands for Flex-Wing Glider Duration flown with a contest certified "1/4A" engine. This is a very challenging event to build and fly. I am unaware of any kits commercially available. NARHAMS is doing a build session at the April business meeting. Plans and tips are available here: Flexwing Duration. Tips from the NAR webpage: Flexwing gliders must be light. The spars are made of very thin spruce sticks (1/16 x 1/16 is common for smaller power classes) and the wing material is the thinnest plastic you can find — dry cleaner bags or 1/4 mil Mylar — attached to the spars with a thin bead of contact cement, or thin strips of double-sided tape. Flexwing Duration models can be flown with a piston launcher to increase altitude.

Estes Baby Bertha.
Photo: Estes Rockets

1/2A Alt (altimeter) The abbreviation stand for Altitude using a contest certified "1/2A" engine, carrying an altimeter for performance measurement. From the NAR webpage: Altitude. The purpose of this event is to the highest possible altitude on a specified amount of total impulse. The model has to be returned after flight for data recording. I will have Firefly altimeters available to borrow with the stipulation you lose it you pay for it. For altimeters, the smallest lightest version contest approved altimeter is the Adrel BMP, available from NCR herre at Adrel-Altimeter. Other good choices are the Firefly by Perfectflite, and the MicroPeak by Altus Metrum.

OSL The abbreviation stands for Open Spot Landing. This event can possibly be flown with your favorite sport model. You only get one flight and your model has to come back in one piece, it cannot separate intentionally or unintentionally. Some flyers will use a saucer style model if the spot is close enough, some like to use a larger model with a minimum engine. Streamer recovery is usually the preferred method for a traditional style rocket. One of my favorites is the Estes Baby Bertha.

These events might seem overwhelming, but can be better understood by reviewing the rules for each event in the sporting code referenced earlier in this article. I would encourage you to come fly at the contest even if you think it will be tough to win. Anyone coming out to the launch will be able to fly Open Spot Landing with no contestants fee if you are an NAR member. Come out and join the contest flyers and you might just surprise yourself. If you have questions let me know, I am always happy to answer questions about flying contest events. You can reach me at zog139@yahoo.com

You can be a winner.
Photo: D. Carson