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The sky's the limit for new rocketry group

Posted March 23, 2013



New River Valley Rocketry Club members (front row, from left) Jason Duane and Adam Weisz and (back row, from left) Thomas Weeks, Jimmy Desposito, Bob Schoner, Kevin Shinpaugh and Cliff Reynolds. Photo by Mike Shaw, The Burgs

BLACKSBURG — Dry erase boards covered in mathematical equations, not for the faint of heart, lined the walls of the Center for Space Science and Engineering Research building Tuesday on the campus of Virginia Tech.

Tech aerospace and engineering students spread out through the building, studying and learning about the world beyond Earth and its effect on mankind, among other space-related subjects.

Working alongside them was a much older group of students — not enrolled at Tech — just as enthusiastic about outer space.

They're members of the newly formed New River Valley Rocketry group, which launches high-powered rockets in a safe, controlled environment governed by the nonprofit Tripoli Rocketry Association.

Many of the New River Rocketry members, such as the group's founder, Bob Schoner, have been captivated by outer space and rocketry for most of their lives, while others are just discovering their passion.

Schoner, of Christiansburg, said he grew up watching the Apollo missions during the 1960s and '70s. He was hooked, but like many his age, he eventually lost touch with his passion and went on with life.

Years later, Schoner would rediscover the "fire in the sky" while out shopping one day.

"I discovered a magazine at the store with a rocket that was 10 feet tall," Schoner said. "I remember saying out loud, 'Nobody ever told me they were doing this.' "

As Schoner became reacquainted with his old interest, he would travel to Charlotte, N.C., once a month to launch rockets. The three-hour drive was worth it, he said, as it was the closest place to launch his rockets safely.

Eventually, a group formed in Staunton that Schoner was able to launch rockets with, but the group soon lost its launching field after controversy with a disgruntled neighbor, Schoner said.

Schoner was encouraged to form a group in the New River Valley years later when a Texan and rocketry enthusiast named Thomas Weeks — otherwise known as "Tweeks" — moved to the valley.

"He's a fellow flyer and wanted to know where we fly around here," Schoner said. "He said he's never driven more than 30 minutes for a launch. He's spoiled because I've driven hours for years for a launch."

Weeks encouraged Schoner to build a relationship with an interested landowner, search for potential members and begin the process of becoming an

official prefecture, similar to a chapter, of Tripoli Rocketry Association.

In September, the New River Rocketry prefecture was formed, and the group has held three weekend launches at Sinkland Farms, two launches at Kentland Farms and hopes for more in the near future.

To ensure safety, Schoner's group has a list of steps they must take before a launch.

"To fly any rocket over 3.3 pounds, or one containing over 125 grams of propellant, requires a waiver from the FAA," Schoner said. "Then, depending on the launch location and air traffic, they assign a waiver for the airspace to a specific altitude above the ground."

After obtaining permission of the landowner where the launch is to take place, the group contacts the owners of neighboring properties to let them know what they'll be doing and what the group should do in the event that a rocket drifts onto their property.

The group also has insurance of up to \$2 million provided by the Tripoli Rocketry Association in the event that something unexpected happens, such as damage incurred to the property.

Even though the group is considered amateur, Schoner is certified at the highest training level possible.

He was a member of Tripoli's board of directors for nine years before he decided to walk away and focus more on launching the rockets and the newly formed group. He earned his Level 3 certification from the association, the highest level most rocketry enthusiasts can attain.

"When I got my Level 3, I remember thinking hard about what I wanted to do now," Schoner said. "I've always been interested in science, so I decided to pay it forward."

That's why Schoner is sharing his knowledge with local school children and Tech students alike.

He has been working with a local middle-school teacher and has met with students to teach them about rocketry as a part of the Science, Technology, Engineering and Math curriculum.

"The thing that keeps me going is the one or two kids in every class that have that spark of interest," Schoner said. "I like to tell kids that they're going to be the generation that might go to Mars."

Weeks, who also teaches students about rocketry in his spare time, said Schoner's love for teaching kids about rocketry is evident and that it could change their lives.

"I feel like a kid again when I watch him teach Cub Scouts or kids at school," Weeks said. "It's awesome both to see it rekindle our love for rocketry and watch the kids have that spark."

As if he weren't already busy enough, Schoner is also working with the University Student Launch Initiative team at Tech, which has entered a national rocket-launch competition through NASA in April.

Senior aerospace and engineering major Rehan Syed said Schoner and New River Rocketry have played a huge role in the team's rocket build and that his team wouldn't be where it is now without them.

"Bob and his organization has helped us in all steps through the process from writing the paper for NASA, designing and building the rocket," Syed said. "We value his input greatly."

While the five-member USLI team has been building its competition rocket, Schoner noticed there's a greater interest in rocketry on Tech's campus beyond the five slots available on the USLI team.

Schoner hopes to form a club for students soon.

"I think there's a great opportunity at Tech, where Homer Hickam graduated from," Schoner said. "It makes perfect sense to help contribute my knowledge. I can tell them things to avoid, and I learn new things from these guys every day."

Senior aerospace major Jacob Bean said a club on campus would start the rocket-building process earlier for students.

"Having kids get that hands-on experience earlier in their college careers would make Tech look great in the eyes of NASA," Bean said.

For Schoner, the sky's the limit when it comes to educating the future generation of rocket scientists.

"I tell them they can start building something today that will get them into space," Schoner said. "It's not glue and wood — it's their brain. If you want to go to Mars, you can do it."

For more information about New River Valley Rocketry and future launches, visit www.nrvr.org.



Let's see...firing off rockets just outside the boundary of a major ammunition plant manufacturing explosive components every day. Remnants of rocket fuel falling out of the air at the blast site means perchlorate may dust the agricultural fields at Kentland Farms. Who reviewed this decision from a health, safety and environmental perspective? Did anyone in government inform or ask the nearby community for unput? Was anyone in emergency planning consulted, or is it assumed these rockets work perfectly 100% of the time?

Comment by Devawn Oberlender — March 24, 2013 @ [10:51 am](#)



Devawn,

At the time I first launched rockets from Kentland Farm property I worked at the RAAP. I proactively contacted the safety manager who asked me how I was going to prevent rockets from landing on RAAP property. I documented a multi step risk reduction document that I sent to him along with my contact information.

From your comment it does not seem like you have been to any of our launches or have any idea how important safety is to us. I would never claim that rockets work perfectly 100% of the time and be suspicious of anyone who would.

I have covered this with plant safety officer and we have risk mitigation plans from reducing flight altitudes, moving the launch site to shutting down the launch to prevent any rockets landing across the river from where we launch.

Bob Schoner

Comment by Bob Schoner — March 24, 2013 @ [1:56 pm](#)



this guy has no clue what he's talking about.

Comment by jim — March 24, 2013 @ [3:06 pm](#)



this comment was directed to devawn.

Comment by jim — March 24, 2013 @ [3:08 pm](#)



Hey Devawn,

I hadn't looked into this hobby in a while either. Surprised in this day of the TSA and 9/11 and all! But now after looking more into it today, the seriousness of this hobby, the safety measures around it all seems to be quite extensive.

Since seeing this article, I've been looking into it, and these rocket groups seem to have one of two parent organizations, the NAR and TRA. This NRV group seems to be under the TRA. But both organizations appear to be bonded & insured. Plus it looks like all of these "clubs" across the country (under the NAR and TRA) work and comply with FAA and ATF regulations, as well as other .govs and safety .orgs.

Here's a link I found to one of the parent rocket group's standards, the TRAs launch guidelines:

<http://www.tripoli.org/LinkClick.aspx?fileticket=vF%2f34Qq57zg%3d&tabid=185>

Seems pretty tight. Especially since they base it on the much acclaimed NFPA safety standards (which I personally know of, being a contractor). Says in the link above that they adhere to the "NFPA 1127 safety Code for High Power Rocketry", which seems to include safe distances, drift ranges, minimum crowd distance, structure and highway distances and the like. With all that, plus the coordination with the FAA plus it seems the insurance covers the landowners plus the participants AND the onlookers. All seems pretty tight (and safe).

As for APC, that's one of the main ingredients in the Armory's munitions plant that they produce in bulk, right across from the farms. I'm sure the levels these little rockets put off (once every month or so) pale in comparison.

Personally, I'm glad to hear about this. I've been looking for something sciencey like this to help get my kid interested in smart stuff outside the classroom other than just legos and robots.

I know this country's Science and Technology studies are in the crapper. Sounds like just what we need. Especially right here in the Blacksburg/Roanoke area!

Just my 2 cents

Hey! Is that the Bob from the article? and the NRV group? Hey Bob, how do I check out one of your launches? Can I bring my son and I to one? More info please!

Mike

Comment by Mike — March 24, 2013 @ 10:20 pm



Great article about your great club guys! Thanks for your business support and help with helping new model "rocketeers"!

Stacy at Adventure Hobbies & Toys
Christiansburg, VA

Comment by Stacy Martin — March 25, 2013 @ 1:44 pm



Reply to Mike:

Mike, Appreciate you doing some research before posting a comment. It seems to me that you and your son are exactly the kind of folks we would love to have join us at a launch.

Note that all our launches are on private property so they are not purely a 'public' event. However we are here to help folks new to rocketry and coming back after being occupied with 'life events' for a while. Flying with a club exposes you to many things you won't find on your own and provides ideas, experience, equipment, structure and guidelines, and education.

Folks who won't abide by an enforced safety code should stay home.

Best way to find out more about us is to go to our website nrvr.org and sign up to our email list to find out about upcoming launches.

Bob Schoner

Comment by Bob Schoner — March 25, 2013 @ 3:15 pm



Hey all, Tweaks here from NRV. Here are some really great pictures and videos one of our most fun two day launches. Tons of great stuff, including on-board videos. :)

http://nrvr.org/photos/2011-09-10-11_NRV-VAST-Launch-WEB/

As you see.. out launches are a healthy mix of families, VT Aerospace students, and Rocketeers from all over VA. All are welcome.

Tweeks
NRVR Founder

p.s. Thanks a ton to Mike Shaw for coming down to the Blacksburg VT CRC to talk to us and check us out!

Comment by Tweeks — March 27, 2013 @ [11:43 pm](#)

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