



# THE OFFICIAL JOURNAL OF THE KANSAS ORGANIZATION FOR SPACEMODELING



## the **KOSMONAUT**

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### NIGHTFLIGHT FALL VICTIM TO KANSAS WEATHER

by Duane Lanterman

With north winds in the 30mph range Nightflight was canceled Saturday Nov. 10<sup>th</sup>, but 12 members and wives gathered in Hutchinson at Ken's Pizza for shop talk and food. We then moved to the lobby of the local Holiday Inn Express for some additional discussion. It was great to see John Palmer who made the trip from Joplin, Mo., Bill Lindsay who made his first KOSMO meeting since his stroke (and who received some advise on his Level 2 project) and Kirk Zonger joined the gang as he deals with continuing health issues. With such a great turnout it was unfortunate the weather didn't cooperate but this year has been a strange weather year even by Kansas standards.

Bill Lindsay has been in contact with the Kansas Cosmosphere and Space Center in regard to the 50<sup>th</sup> anniversary of the moon landing and we will definitely have a display table and perhaps an opportunity to incorporate a launch also. I'm sure we will have more on this at the annual meeting which will be in Wichita this year at the EAA building on January 12, 2019. More info on the annual meeting on the back page of this newsletter.



*Illustration 1: K. Zonger with his recently completed Mad Cow model.*



*Illustration 1: J. Palmer talks about an upcoming Cosmosphere event in December.*



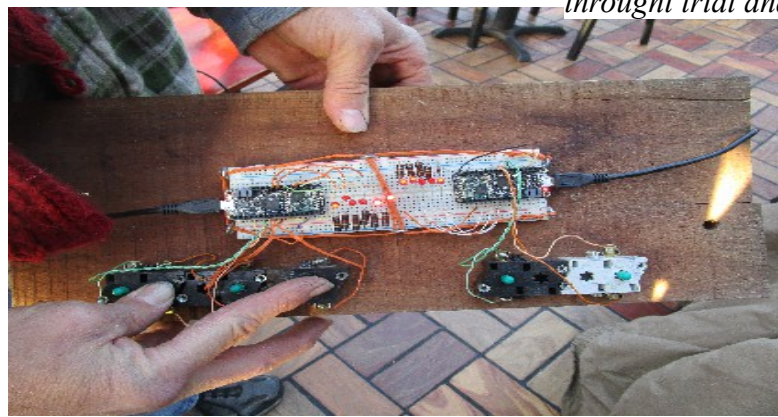
*Illustration 3: B. Lindsay brought his Level 2 model for some advise on the build.*



*Illustration 4: F. Smith talks about many of the upgrades he's made to his model through trial and error.*

**CELEBRATING  
60 YEARS NAR**

Photo right: K. Ravenstein shows a prototype of a wireless high power launcher he is working on.



# Our Visit to Mecca (er, Estes Industries) – One More Checkoff from the Bucket List

*Mark & Bonnie Johnson  
Photos by Lee Reep and Estes Industries staff*

As we usually do, Bonnie and I had planned and scheduled to go to NARAM in Colorado this past summer. About 2 weeks before the event, we got an email from Tina McGovern at Estes Industries inviting us to one of two group tours at Penrose on Monday of NARAM week. I dashed upstairs with the news, and a big light went off in Bonnie's eyes...I didn't have to hear what came next: "We're On It!"



After a great weekend of rocket flying and 'bench flying' under the tents at Hudson Ranch, we set out for the short (by Kansas standards, anyway) run from Pueblo over to Penrose – about 45 minutes to the west on US 50. We arrived in plenty of time, and were surrounded by rocketeers we had either known or heard of for many years...including Fred Schechter, Bob Parks, Bob Sanford, Steve Lubliner, and NAR HQ Manager Marie Stumpe, among many others. I figured out later that the tour represented several centuries of model rocket experience. We were signed in by the Estes office team of Linda Shaw and Chandra Searfoss (who happens to be longtime Estes employee Mary Roberts' daughter), and the group of 40 or so crowded into the lobby for the introduction by new Estes President Ellis Langford, and 'Son of the Old Rocketeer' Bill Stine, Estes General Manager.

**1 - At the Front Door (Lee Reep photo). You can see Mark in the red shirt at the door, with Bob Parks, George Rachor, and Steve Lubliner right behind.**

The artwork on the walls, and the models in the display cases were nothing short of amazing! There were several paintings or color prints of 1980's Estes catalog front covers, as well as a Saturn V model autographed by Al Shepard and Buzz Aldrin. Mary Roberts' office was in one corner off the lobby, and Bill and Ellis' offices were on the balcony above. Camera shutters were clicking feverishly for several minutes as we all looked around, and worked our way through the conference room, which held the photo models of the Interceptor, Super Big Bertha, and a whole lot of other classic kits – as well as the prototype of the (shipping now, in October) Mercury Little Joe I, which was 'on the boat from China' as we waited.



**2 - Trophy case with Titan 3E and Saturn V autographed by Buzz Aldrin. (Lee Reep photo.)**

After an introduction to the facility, and a warning not to take any pictures other than in the lobby area, we walked through the office area, down the hallway past the R&D shop – better known as John Boren's office. We could look inside, but not go in the door or take



photos. John's office held a lot of 'interesting' things, including a 5-foot-tall, 1/70 scale Saturn V right by the door. I'm not sure what the story was there, and John was over at NARAM flying in the competition so I couldn't ask – but it was a gorgeously detailed model. Maybe something we will see in the future?

We then headed out to the back door, leading past a room that was fitted out rather like a post office – which, as it turned out, it was! In the heyday of mail-order, Estes accounted for so much of the mail in and out of Penrose that the US Post Office was actually in the Estes plant. Today, it's a freestanding building again, but the company still gets mail at "PO Box 227" as well as at the street address of 1295 H Street. The back door led us onto the parking lot, a short walk from the heavily fenced rocket engine plant. Because propellant powder is a highly regulated material, access inside the gate of the engine plant is restricted to those holding both Federal and Colorado manufacturing permits. As we stood outside the plant, machine #3 was 'chucking away' about every 3 seconds, and Bill Stine informed us that each time it cycled, two A8-3's were coming off the machine. That's about 2400 motors per hour! They still test 1 of every 100 motors that is made, right off Mabel, and so we heard the sound of a static firing every few minutes. If there's a failure, that batch of 100 is discarded. I got the impression that didn't happen very often. After the initial test, the motors are placed in weather protected air-drying racks, where they remain for days or weeks, depending on the motor type and the local humidity conditions. At that point, another 1 of every (now 99) motors is tested again, and if there is a failure or the motor is out of tolerances, the batch is discarded. The remaining motors head across the road to the packaging plant.

Interestingly, because the path from the motor production & drying facility to the packaging plant crosses a public street, the drivers who move the motors between those points are required to hold Class A Commercial Drivers Licenses (CDL) with a hazmat endorsement, just for a 100-yard trip between buildings. Such is our legal system. They didn't say, but I suspected that there has never been a transport 'incident' on that short trip from Point A to Point B.

Bill Stine also said that the amount of time that is devoted to production of each motor type is highly variable. He stated that "We make about a million A8-3's a year, but we can produce all the A8-5's we need for a year in one day." I remarked from my place in the group that those of us who use A8-5's were grateful for that one day, and to please keep it up! There are several motor machines in the production area. Most of them can make more than one type of motor – though not all of them can make everything from 1/4A to F. They usually set up to produce only one motor type on one machine on any particular day, just to make quality control more straightforward. Everything in the motor plant is air-operated, with the only electricity in the motor buildings being used for safety lighting. The propellant powder for the machines is fed from a hopper on the roof of each building – only a relatively small amount of 'loose' powder is present in the machine at any one time, to reduce the risk involved.

We headed across the road to the igniter (now "starter") production room and the motor packaging plant. The igniter machine spot-welds the nichrome bridge wires onto the stainless steel connection wires at a rate of one every few seconds, after which the coating is applied and the igniters cut into short strips – the paper that we see holding the igniters together in a package is a continuous strip that carries the devices through the production machine, which is air-operated and about the size of a kitchen table. Around the corner from there, we found the packaging line, where 2 or 3 motors, the igniters, and the plugs are placed in the 'hang cards' we see at the store. This system is operated by 4 folks who stand at a conveyor-like system that sets up the cardboard and plastic. The operators insert the motors, ignition components, and instructions, and the machine seals the packs, which are then packed into cases. The finished motors are quite safe to handle, and we could walk right up to the cartons of bulk engines from which the packing crew pulled them.

Another fun highlight was the wadding machine – which used to handle “bathroom tissue” – which we mostly call toilet paper – through a process where rolls were unrolled, soaked in a fire-retardant solution, then run through a drying tunnel. Today, the process is different – whole rolls of Scott’s TP are soaked in the solution, dried, and then packaged in sections – but the room still has a huge stack of cases of the “raw” paper.

Next to that was the specialty kit packaging area – while most of the kits are now mass produced in China, specialty boxed kits like the soon-to-be-rereleased Saturn V are hand packaged in this area. Look for the Saturn V release during the winter or early spring, hopefully in time for Christmas but definitely in time for us to build 50<sup>th</sup> Anniversary Apollo 11 models for next July.

Some things that stood out – all the Estes folks in production were very friendly, and there was a lot of enthusiasm and energy around the place with the new ownership and management. During the week of NARAM, the plan was for about 70% of the folks who worked in the plant to spend at least a half day or a full day over at the NARAM field under the Estes Hospitality tent – which was well stocked with water, salty snacks, shade, and great conversation from the folks who make our “rocket stuff.” I hope every rocketeer appreciates the lengths that the “Estes Family” goes to, in providing the supplies for a safe, repeatable, enjoyable activity for us all.

The last stop was the warehouse and the web-order packaging area, staffed by a very nice lady named Zoe, who puts together all the online orders. Several folks on the tour picked up orders while we were there. The packing area for online and mail orders looks just like our dream hobby shop – a bunch of shelves of every Estes product in the catalog, ready to be pulled and packed in boxes on its way to us. I don’t think they normally do ‘pick up’ orders, but they had arranged to do so for NARAM week.





Our tours (one in the morning, another in the afternoon) were the first group tours allowed at the plant since 1994 – so we all felt greatly privileged to have participated. As for the future – all the model airplane stuff, the drones, and such are already gone – the Cox airplane stuff went to another model airplane company, and the RC helicopters and drones were discontinued. As of October, the Estes web site still offers the rubber-band airplanes, but I’m willing to wager that these will disappear when the stock is depleted. The Langford family and Bill Stine are going to focus on rockets exclusively in the future...starting with that improved re-release of the Saturn V.



#### **4 - Our tour group with the Estes Staff (Photo Courtesy Estes Industries)**

In my never-to-be-humble opinion, Estes Industries LLC is in the best hands we could have hoped for – GM Bill Stine has been involved in model rockets for all his life (his NAR number, 24, was allocated pre-natally by then-NAR President G. Harry Stine) as have the owners, the Langford family from Virginia. I’ve known Ellis Langford since he was about 6 years old, and have great respect for him and his father, John, who is the CEO of Aurora Flight Sciences, recently acquired by the Boeing Co. In addition, the privately held company has an advisory board that includes our own favorite “rocket grandparents” Vern and Gleda Estes. I look forward to more great products and great service from the “New Estes.”

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## MEMORIES OF 2018



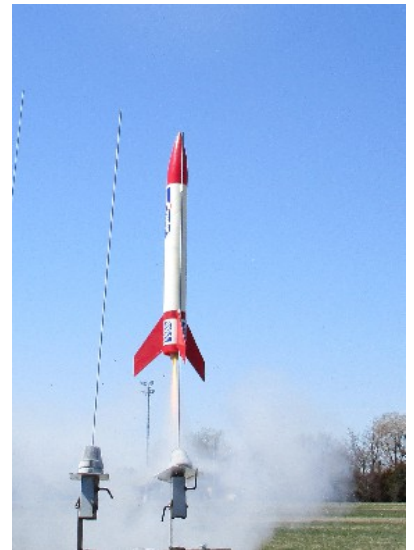
*Illustration 1: Sport Launch -Hutchinson - April*



*Illustration 2: Sport Launch – Hutchinson -May*



*Illustration 3: Launch with elementary students in Arkansas City - May*



*Illustration 4: KRAMO 38 CONTEST - Hutchinson - JUNE*



## More memories 2018



*Illustration 2: KOSMO/EMERALD CITY Level 1 Cert Launch  
Ellinwood - July*



*Illustration 1: Rush County 4H - July*



*Illustration 3: KOSMONauts at NARAM 60 - Colorado - Aug.*



*Illustration 4: Final Frontier Fun Fly -Ellinwood - Sept.*

**TIME FOR MARK YOUR CALENDAR'S FOR THE  
ANNUAL KOSMO MEETING**

**Saturday January 12 2019**

**Noon-3pm**

**EAA Chapter 88 Building**

**3612 N. Webb Road**

**Wichita , Ks.**

**(South of the Kansas Heart Hospital)**

**Lunch at noon to include Pull Pork BBQ'ed by  
Steve Hamous (KOSMO member and grill master), Baked Bean, cold slaw  
and drinks \*suggested donation of \$6 \***

**ELECTION OF OFFICERS**

**SETTING OF 2019 LAUNCH CALENDAR**

**KRAMO 39 EVENTS**

**SUBMISSION OF CANDIDATES FOR FREE NAR JR. MEMBERSHIP**

**SUBMISSION OF NEEDS ELIGIBLE FOR NAR GRANT**

**NEW IDEAS**

**OLD BUSINESS**

**SHARING OF WINTER PROJECTS ! (SHOW AND TELL)**



**EAA BUILDING AT  
35TH AND WEBB  
SITE OF 2019  
KOSMO  
ANNUAL MEETING**

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CLUB UPDATES ARE AVAILABLE AT OUR CLUB'S

WEBSITE: [www.kosmo427.org](http://www.kosmo427.org)

FACEBOOK Page: KANSAS ORGANIZATION FOR SPACEMODELING  
AND OUR INTERNAL EMAIL LIST

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*Congratulations*

*to the NAR*

*and*

*Estes Industries*

*who in 2018 celebrated 60 years of service to our hobby !*