MODEL ROCKET NEWS

FALL 1991

DEDICATED TO AND PUBLISHED FOR ESTES ROCKETEERS, AMERICA'S FUTURE IN SPACE

This Issue:

Inset photo of Jay Apt as youth - Courtesy of G. Harry Stine; Inset photo of Jay as astronaut and Space Shuttle launch - Courtesy of NASA

MODEL ROCKETEERS LAUNCHED ON SHUTTLE

By Vern Estes, founder of Estes Industries, NAR #380, Member of the NAR Board of Trustees, Canon City, CO

Most model rocketeers only dream of going into space, but two model rocketeers, Jay Apt and Jerry Ross, recently did the real thing. Both were mission specialists on the Atlantis shuttle flight STS-37, launched on April 5, 1991. Their mission, to deploy the Gamma Ray Observatory (GRO), was the first flight for Jay and the third for his fellow model rocketeer, Jerry Ross.

Incidentally, Jerry has logged more hours walking in space than any other astronaut.

More about the launch later but, lest a model rocketeer needs to be reminded, not everything in rocketry goes as planned. Thus it was with the Gamma Ray Observatory when the Shuttle bay doors were swung wide and an attempt was made to deploy the GRO. One of its antennas stuck. This brought Jay and Jerry to the rescue.

After donning their space suits, they went out into the shuttle bay for an unplanned walk (work session) in space. After shaking the antenna with a few hard tugs, Jerry had the antenna released, and the GRO was ready to be placed in orbit for its two year scientific mission.

The next day they again exited the safety of the Shuttle cabin and went for a second (planned) walk in space. Their mission this time was to try various means of maneuvering in a space work-environment so engineers can better plan for the day we start constructing a permanent space station in near-Earth orbit.

The news media, watching these two adept model rocketeers at work, dubbed their activities "The Jay and Jerry Show."

This was the first shuttle trip for Jay Apt (Dr. Jerome Apt, PhD) whom I've known since his early teens. Jay's interest in model rocketry goes back to the early 60's when the hobby was still in its infancy.

As a teenager, Jay wanted to do more than just fly his rockets.

He joined the National Association of Rocketry (NAR) and engaged in activities to encourage others. He organized the Steel City Section of the NAR and through it, set up and managed the first national model rocket convention known as the Pittsburgh Spring Convention (PSC). The PSC was a big success with veteran model rocketeers such as G. Harry Stine and myself in attendance. The first convention was in March of 1965 when Jay was only 16.

With his keen interest in rocketry and leadership abilities, Jay was well on his way toward his journey into space.

The first model rocket Jay built was the Astron Mark. He went on to win awards and trophies at the National Association of Rocketry Annual Meet (NARAM) and became a leader in the Association.

He spent several years on the Leader Administrative Council and later served for several years as a trustee of the Association until his acceptance into the astronaut program.

Daren Childers (Vern's grandson), Vern Estes, Jay Apt, and Gleda Estes at NARAM-31 at Manassas, VA in 1989

After earning his degree in physics at Harvard and his PhD at Massachusetts Institute of Technology (MIT), in 1980, Jay joined NASA's Jet Propulsion Laboratory. He worked in the Pioneer Venus Orbiter program. Then in 1984 he continued his climb toward the stars by applying for the astronaut program. He was subsequently selected to be a mission specialist for the Gamma Ray Observatory.

It had been a long time since I'd been to a launch at the Kennedy Spaceport (Apollo 11 in 1969), but with Jay on board nothing was going to keep me away from this flight. To make things even better, Jay had sent invitations for Gleda and me to ride out to the close-in viewing area in the special VIP buses which NASA operates for "family and friends" for the astronauts. Also, Jay's wife (Ebe Emmons-Apt) sent us an invitation to a reception held the day before the launch, again for his family and friends.

Then later on launch day minus one (L-1), the Space Coast Rocketry section of the NAR hosted a party for all model rocketeers living in the area and those attending the launch. This event was called the APTLofting party and featured movies and pictures of Jay back in his young days when he was in the heyday of his model rocket activities. Needless to say, we attended and enjoyed all of these events. (If you ever get to be an astronaut, please send me an invitation to your first launch.)

On the scheduled launch date, we awoke at 4:00 A.M. and found it raining hard. We were sure the Shuttle would be in for more delays, but the NASA experts were reporting a 60% chance for launch at the 9:28 A.M. opening of the launch window and a 90% chance of launching before the close of the four hour window. As we left our motel and traveled toward the Spaceport, the radio announcer said the astronauts had been awakened and were preparing for the flight.

Later, from the launch viewing area, we were kept informed of the progress of the countdown. The astronauts were on board Atlantis and the worrisome rain had

Judy Nathenson (Jay's sister), Jerry and Joan Apt (Jay's parents), Vern and Gleda Estes at the reception

APTLofting Team members and guests.

stopped. Soon the blue sky was predominant, but many patches of clouds remained. At nine minutes before the launch, a weather hold was announced. There were clouds at 7500 feet which might interfere with a safe return to the Spaceport in the event the flight had to be aborted. Then, with a delay of less than five minutes, the countdown continued.

Five - Four - Three - Two - One - Ignition - Liftoff, came the announcement. The big rocket came to life with huge clouds of smoke (and steam) billowing to each side! The bright orange flame from the rockets' exhaust seemed almost blinding, and the roar from the engines so loud you could actually feel the vibrations.

As the launch vehicle cleared the tower, then ascended atop its long trail of smoke and flame, a large group of Jay's model rocket friends stood up in the stands and began chanting, "Go, Jay, GO!", "Go, Jay, GO!" - - There was hardly a dry eye in the group as we stood in awe and wished our fellow model rocketeers a safe flight and a successful mission.

On April 11, 1991, the Space Shuttle Atlantis returned to Edwards Air Force Base for a perfect landing. (I stayed at Kennewdy hoping it would land there, but ground fog prevented it.)

With his accomplishments during this mission, Jay made all model rocketeers feel extremely proud. Will Jay make another flight into space, or perhaps some day manage our space program? We don't know, but we do know Jay has the ability to plot out his life's career and go where he chooses. We all wish him well for the future, and I'm sure we will be hearing much more.

(Go, Jay, GO!)

MODEL ROCKETRY AND YOUR FUTURE

By Vern Estes, Canon City, CO

While writing about Jay and Jerry and their trip into space, my thoughts are about the many young model rocketeers I've dealt with over the years. My greatest joy and satisfaction comes from hearing how model rocketry led them to their careers or other accomplishments. Only a select few will get to fly in space, but it makes me proud to hear how model rocketry encourages others to become engineers, computer programmers, airplane mechanics, etc. If I ever meet you at a rocket meet, on an airplane, or even at a ball game, please tell me your story. You'll make this aging rocketeer (61) very happy.

For the youngster of today, my advice to those of you who want to become astronauts is to stay involved in a worthwhile technical hobby such as model rocketry, study hard in school while taking challenging subjects such as math and science. Take every opportunity to learn leadership skills (organize a model rocket club, etc.) and always strive to do your best. Even if you don't become an astronaut, your accomplishments will lead to a productive and rewarding career.

Walt Disney once said, "OUR GREATEST NATURAL RESOURCE IS THE MINDS OF OUR CHILDREN." Perhaps he was talking about you (or the young people who play an important part in your life.)

MODEL ROCKETS IN SPACE

By Vern Estes, Canon City, CO

After Jay Apt was assigned to the astronaut program, he asked if I was interested in having him take a model rocket into orbit and return it to me. Well, it didn't take long to think that one over! Deciding which of the Estes models to send up was more difficult. Jay built his first rocket, an Estes Astron Mark, in 1962. This was a good candidate.

Another choice was the Astron Scout rocket I designed to teach the principles of balance and flight stability. This was the first kit sold by Estes Industries.

The third choice was the Big Bertha, my all time favorite rocket, because of its slow lift off and its dependability. (I'll tell you later which one made the trip.)

Jay also wanted to take a model rocket of his own with him. I talked him into letting me build it. He decided to take an Astron Mark because this was the first rocket he had built, but not just any Mark!

This was one he bought a few years back at a NAR auction, when I offered most of my stock of some early day kits to raise money for the Internats Team. I believe this kit, which originally sold for $1.25, went for $15.00 at the auction. It was a kit which had been manufactured in 1962 shortly after the first Marks were introduced. (Jay was even the auctioneer at this event. Believe me, this guy can do almost anything.)

Jay kept his prize Mark until a few months before the launch, then sent it to me to build. While I'm not known for being the best and neatest model builder, I did my best on this one. I even let my wife and grandkids help sand the fins and daughter Betty design and put on the decals. Everyone wanted in on the action. After the paint had dried, the rocket was returned to Jay in Houston to be included in personal items he would take with him on the Shuttle.

Well, that pretty well tells the story about how the first model rockets got launched into space. Which model did Jay take up for me? It was the Astron Scout because of its historic significance for myself (and Estes Industries). Also, the Astron Scout was the first model built and flown by millions of early day model rocketeers.

A big "Thank You" to Jay for finally getting some model rockets into orbit!

Vern Estes

MESSAGES FROM LAUNCH CONTROL

High Flying Model Rocketeers

In early April 1991, two model rocketeers experienced the ultimate rocket launch. Jay Apt and Jerry Ross, both model rocketeers of long standing, were Mission Specialists on STS-37. Jim Banke, another model rocketeer, had the pleasure of interviewing them before the mission. His report appears on page 11.

Model Rockets in Orbit!

Jay Apt now holds the world's record for altitude reached by a model rocket! In early April 1991, he carried two model rockets into orbit! One was an Estes Scout™ and the other was an Estes Mark™. You can read more about them in an article by Vern Estes on page 3.

There are other articles about Jay Apt and the STS-37 mission on pages 2, 3, 6, 11, and 15. Vern Estes contributed several of the articles. He has known Jay for quite a few years.

Most of us will never have the pleasure of witnessing a manned space launch "close up and in person." I never expected to, either. But I did, and I wrote two articles attempting to share with you some of the excitement experienced in my visit to the launch. The first article concerns itself with receiving the invitation to the launch and getting there. The second article will appear in the next issue and reports on the launch itself. I hope you enjoy vicariously sharing the pilgrimage to "Rocketeer's Mecca" and the launch with me.

I hope that someday you, too, will have the pleasure of attending a launch of the Space Shuttle. And maybe you will have one of those very, very special seats reserved for the very few who have the very best of "The Right Stuff"!

Clubs

Why don't you start a model rocket club? Or lend your expertise to an existing club that wants to get into model rocketry? There are literally hundreds of school clubs, 4-H clubs, Scout troops, Cub packs, church youth groups, and others which would love to get into model rocketry, if they just had someone to guide them. And thousands more who would take very kindly to the idea, if someone would just suggest it to them!

Clubs provide a lot of fun in many different ways. One major benefit is getting to share model rocketry with new and old friends.

And having a club provides access to several launch pads and launch control systems in case you haven't purchased your own yet.

And club members have a lot of fun swapping rocket stories, watching each other's flights, providing help on making your rockets better, and in providing a group within which you can find people of similar interests. And if you live in an urban area with launch sites few and far between, having a club provides a natural "car pool" for getting out to the range on a regular basis.

Clubs can order their model rockets and supplies at the school discount if they are sponsored by a recognized group (Boy Scouts, 4-H, a school, a church, a civic club, a recreation district, etc.). Clubs ordering as an official group will also go on our Educator Mailing List to receive Estes Educator News free four times a year plus the new Estes catalog each year. This is in addition to the free issues of Model Rocket News which individual members receive when they order on their own.

Join a club. If you can't find a good model rocket club nearby, form your own club! If you aren't sure how, The Estes publication Guide for Aerospace Clubs #2817 selling for $1.10 provides lots of good ideas. In fact, it has more ideas than you will have time to use in one year's meetings.

And the basic guide for teachers and adult leaders of youth groups titled Model Rocketry--The Space Age Teaching Guide #2840 for $1.15 provides some excellent ideas, information on where to secure NASA films, and much practical advice.

Mailing List Cull

This winter, our computer will remove from the rocketeer mailing list the names of those who have not purchased at least $30 worth of supplies from us by direct mail within the past 12 months. Send in your order now to avoid being dropped from our mailing list!

You will definitely want to receive the 1992 Estes catalog! More about that in the next issue.

New Service Charge Policy

In case you haven't yet read the New Service Charge policy on the order form, please do so now. This new policy replaces our previous Handling Charge policy. The increase in charges, especially for smaller orders, has been necessitated by a number of causes, not the least of which is the significant increase in postal charges which occurred this winter. Don't forget that your orders are shipped surface parcel post, postage prepaid.

HELP!

We need articles, stories, photos, anecdotes, cartoons, and much more. This magazine is made up mostly of things which you, our readers, send in. And that is the way we want to keep it!

To improve the chances of your contribution being published, please submit it typed, double-spaced if possible. Even better, submit both typed copy and the article on MS-DOS format as a Word® or ASCII file. This lets me directly edit your copy if necessary without having to retype it first. Incidentally, it will be much appreciated if you put your name, address, and phone number on each item.

"TRIP" BARBER'S RG FLIGHT AT NARAM-32

The following is reprinted from the March 1991 issue of Launch Rack, the official publication of the Garden State Spacemodeling Society. Tom Whymark of Belvidere, NJ is the editor.

Editor's Note: One of the most impressive RG flights at this year's (1990) NARAM was by Trip Barber. The model seemed to have some anti-gravity force as it floated in the Texas sky. While the timers lost sight of it after a few minutes, Trip didn't. He ran approximately four miles during the glider's 23 minute flight, and caught the model in mid-air. Sounds incredible, but it is true.

When school began, Matt had to write a TALL TALE. You know--Paul Bunyon, etc. Matt chose to write about Trip's flight. All he had to do was stretch a few details.

THE ADVENTURE OF TRIP

By Matthew Whymark (age 11)

At NARAM-32, Trip Barber had an amazing B R/G flight. While the timers lost sight of the model after four minutes, it was up for three days, and traveled 1253 miles. Trip caught the model on the fly. When he returned his model, he told us about his little jog. He said he ran into a bulldog who wouldn't let him pass. So he sprinkled magical tracking powder on the bulldog. The magic worked. The bulldog joined him, and helped him track his model.

The End

MODEL ROCKET NEWS

Bob Cannon ..... Editor
Karen Oelschlager ..... Graphic Design and Typesetting

Unless otherwise stated, all the model rocketry kits advertised in this magazine are hobby kits requiring assembly. Launch system, engines, glue, and finishing supplies are not included. Recommended for ages 10 through adult. Adult supervision suggested for those under 12 years of age. Prices subject to change without notice.

THOMAS BEACH

The information in this article is derived from the Rocketeer Information Sheet returned by Thomas Beach of Los Alamos, NM and subsequent correspondence from the editor requesting information on Mr. Beach and the programs in which he is involved. He and his wife are doing outstanding work in promoting the educational uses of model rocketry.

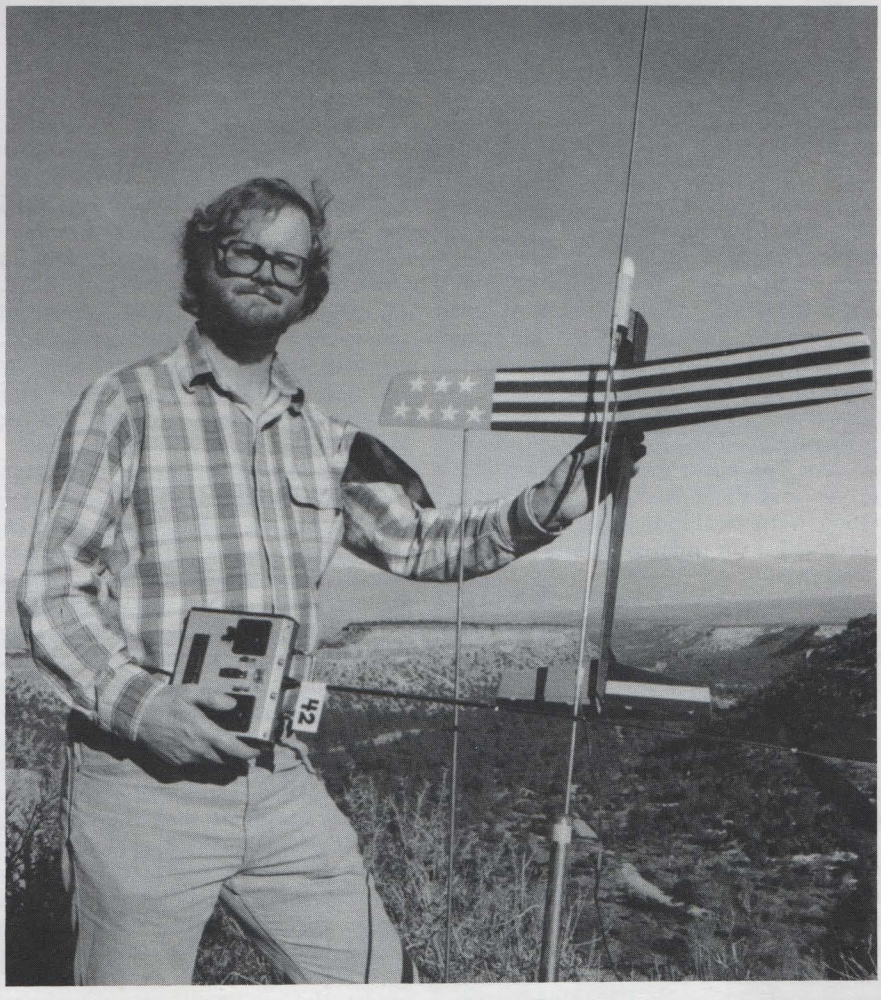
Thomas Beach teaches astronomy at the Los Alamos campus of the University of New Mexico. He has a PhD in Astrophysics. His wife, Joyce Guzik, works at the Los Alamos National Lab Outreach Office. They have become involved in teaching a model rocketry class as part of the Los Alamos Science Student Program sponsored by the Lab Outreach Office.

An excerpt from the Outreach Office report states:

"*The Los Alamos Science Student Program* is a program created for motivated high school juniors and seniors to take courses at the Laboratory, taught by Laboratory employees, who volunteer their time to teach state-of-the-art technology. Supported by the Department of Energy as part of the Laboratory's Science Education Center, the program is designed to encourage northern New Mexico youth to consider careers in science and technology, to prepare students for the transition between school and work, to augment the regular curriculum of local high schools, and to encourage integration of academic training and hands-on experience. The program augments the regular school curriculum by providing technology, equipment, and instruction not available in the local schools."

In their class, they are using model rocketry as a vehicle to introduce their students to several areas of science and engineering. They started with the physics of motion, leading to the Malewicki equations that describe model rocket altitude performance. They covered the causes of aerodynamic drag and the practical methods of reducing drag (basically using Estes TR-11, Aerodynamics Drag of Model Rockets - #2843) as the source. They have covered rocket stability, including how to calculate the Center of Pressure of a model rocket. At the time of his letter (March 2, 1991), their students were soon to start construction of their models (either a Recruiter™, Eggspress™, or SuperNova™). They planned to cover the physics of model rocket motor function, the basic electrical theory of launch control systems, the trigonometry of multiple-station model rocket altitude tracking, additional topics in advanced rocketry, and some discussion of the U.S. and USSR space programs. They planned to finish up by flying and tracking their models and comparing the results to their calculated predictions. A full schedule, but their class was made up of ten bright students from six northern New Mexico high schools.

"I have enclosed some photos taken during a recent class session, as you requested. We are covering rocket motion equations at the time, so they are mostly shots of Joyce explaining the equations, helping the students with calculations, and teaching them things they never knew about their fancy calculators ("Oh! So that's what that button does..."). We always try to bring in a couple of new models for each class (as props, to make certain points, or just to spark interest), and these are the models seen lying around in the photos..."



Tom Beach with his version of the radio-controlled Flagship boost-glider

Joyce Guzik helps Daniel Valdez from Pojoaque High School work through an altitude calculation.

He also sent several photos of the demos that Joyce and he gave to the El Dorado Elementary School. El Dorado is a suburb of Santa Fe. They gave two presentations/launches, one for the third and fourth grade classes and one for the fifth and sixth grade classes. The third and fourth graders were very inquisitive and asked many questions. "The fifth and sixth graders asked fewer questions (the girls, in particular, seemed less interested, which I have always found disappointing)."

"You also requested some background on my model rocket activities over the years. Here goes:"

"I started model rocketry in 1972 (the summer after my seventh grade year). Our local club (primarily my brothers and sisters, myself, and a few friends) flew our one-thousandth model rocket flight six years later. Not too bad."

"Starting activities at Mankato State University put a bit of a damper on my rocketry activities for a couple years, but in 1978, we (myself, some other MSU students, and my hometown bunch) reactivated the Zenith Section of the NAR in Mankato. (I had been a NAR member since 1973, but was never involved in any NAR activities before then.) I got involved in regional NAR competitions and attended my first NAR Annual Meet in 1979. (I managed to take

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A Personal Odyssey: Chapter One

Heading for Rocketeer's Mecca

By Bob Cannon, Teacher, Model Rocketeer, NAR #11651, and Firm Believer in Man's Future in Space

I was extremely lucky. On June 18, 1990, I received at home an envelope from the Lyndon B. Johnson Space Center in Houston, TX. Upon opening the envelope, I found a printed letter dated June 15. I was invited to the launch of Space Shuttle Atlantis on November 1, 1990 from Kennedy Space Center, FL and the landing on November 6 at Edwards Air Force Base, CA. Talk about happy surprises!

Jay Apt had put my name on the invitation list. The letter was addressed "Dear Relatives and Friends...". The RSVP card was soon in the mail indicating that I might be prevailed upon to force myself to attend the festivities.

For many years I had wanted to observe a manned space launch. I thought that I probably would never make it. Now I had my chance! And the best part was seeing Jay Apt launched on his first NASA space mission.

Shortly after I went to work for Estes Industries over twenty years ago, Vern Estes sent me to Pittsburgh, PA to represent Estes Industries at a model rocketeer's convention called the Pittsburgh Spring Convention. The convention was held at Shadyside Academy. I had fun. I learned a lot about model rocketeers and model rocketry at that convention. My short presentation was about our newly released Little Joe II scale model. I shared the stage that morning with G. Harry Stine who made a presentation about Centuri's new Little Joe I scale model. The young man who organized and ran the convention was a high school student and model rocketeer named Jay Apt. Little did I realize then how successfully Jay would pursue his interests in science, rocketry, and space and that our paths would cross again several times.

At the NARAM at Wallops Island in 1971, I again met and talked with Jay. I kept up with Jay's activities somewhat as he graduated with honors from MIT. At NARAM-31 at Manassas, VA in 1989, Jay and I again met. By this time, Jay had been accepted into the astronaut corps and was in training. He had to leave NARAM-31 early to fly himself back to Johnson Space Center.

On September 4, 1990, I received another printed letter dated August 23. The launch of STS-37 was being delayed due to hydrogen leaks in the Shuttle's main engine systems. The new schedule was for late March 91 "and, as always, will be subject to further changes."

The next update was dated December 5 and arrived December 8. The first paragraph of the letter read, "The Space Shuttles are flying again! The STS-37 crew is anticipating with great excitement our launch on the Space Shuttle Atlantis. There is currently only one more flight scheduled prior to ours, and the current target date for our launch from Kennedy Space Center, Florida, is April 8, 1991; the landing is scheduled for April 13, 1991, at Edwards Air Force Base, California." Again I sent in the enclosed RSVP card confirming that I did plan to attend the launch and landing. (Just try to keep me away now!)

A January 17, 1991 letter contained some very helpful information for arranging my own transportation and lodging. Also enclosed was information about how I could go about securing souvenir T-shirts, etc. More money spent on a good cause!

On March 16, I received a letter dated March 12 stating that the current launch date was April 4, but was subject to being moved back a few days. NASA having a launch ahead to schedule! (Let's not quibble about the November 1990 schedule.)

Having observed a certain degree of fickleness regarding actual launch dates, I decided to go ahead and try to secure airline and motel reservations. I spoke with Jay's secretary, Beth Turner, to learn that the latest was that the launch date was moved up to April 5. Based on that information and the reminder that the date might be April 6, I made my travel arrangements. The help NASA provided in information about airlines and motels was quite useful. I paid the extra amount to make certain that I had airline tickets which could be changed without penalty. The motel also agreed to let me change the reservations, if necessary, based on possible changes in the launch schedule. A good friend with NASA at Kennedy was very helpful in getting my motel reservation. It appears that the motels were heavily booked bacause of spring break from college.

Another friend from NASA in Houston offered some excellent advice on things to take to make viewing the launch more enjoyable. He suggested sunscreen, mosquito repellent, water, cookies, and a raincoat. I followed his advice except that I took an umbrella rather than a raincoat. The mosquito repellent must have worked as I did not notice a single mosquito.

Finally, the day scheduled for the launch came close. On Sunday, March 31, I flew back from Houston where I had been manning the Estes Industries booth at the national convention of the National Science Teachers Association and leading a workshop on the educational uses of model rocketry for some of the teachers attending the convention. For well over a week, I had been fighting a bad cold with cough and extreme fatigue. My voice sounded very odd and daily appeared in danger of being lost. Even with cough medicine, sometimes I felt that I sounded as if I had a terminal case of emphysema. Judging from the looks I occasionally received, several other people must have shared that opinion! However, my voice survived, and so did I.

Monday and Tuesday were spent frantically doing what I could to catch up on things that had come into the office during the four days I had missed there. Wednesday brought an abrupt change of pace.

While I didn't feel any better, and I didn't sound any better, not even walking pneumonia could have kept me at home. I made it to the airport an hour early. You might say that I was a bit eager. Sitting in the airport waiting for the plane, it was still hard to realize that I was on my way to Florida to see a sharp young man I had met over twenty years ago take off on a space mission.

While I had tried to keep the readers of Model Rocket News and Estes Educator News up-to-date about Jay's career as an astronaut and his forthcoming flight, there was still a sense of unreality. This individual had been warming classroom seats in elementary, junior high, and high school just a few short years ago. His early interest in model rocketry helped get him started in science. He obviously enjoyed model rocketry, and he still takes part in the hobby.

Jay had done the right things, studied hard, taken the math and science, and kept on working hard, even when he didn't want to. Who knows the millions of individual decisions he made, day by day, as he grew up that aimed him at a career as an astronaut, and that helped him achieve it? He had finally earned his dream. And now he was about to join the ranks of the explorers opening the next frontier for mankind.

And a little bit of my thinking was spent in wondering what it means when one of your heroes is a lot younger than you are!

The flights to Denver and then to Orlando was uneventful. At least I think that they were, I slept part of the way. At first I wasn't even feeling tired, and my mind was active. But my body seemed to need rest, and I felt that it couldn't hurt my efforts to shake the cold, so I dozed off.

My bag arrived OK, but the rental car company had some problems. Finally they straightened out their paperwork. Then I drove to Cocoa Beach. After a late dinner, I went to bed.

The next morning, Thursday, I drove to Spaceport USA, the visitor's center at Kennedy Space Center. After picking up the special envelope in Room 2001, I checked the contents. The gate pass to get onto the facility Friday morning and the pass to board the VIP bus were there! Not believing in leaving things to chance, I immediately put both into a special pocket in the one thing that I knew I was sure to keep with me, my camera bag.

Next stop was the mandatory photo session at the Rocket Garden. Don't ask me why I took more photos of these relics of our first efforts to voyage into the vast sea of space. I have quite a few photos of them from earlier visits. Oh, well, such a strong compulsion can't be all bad.

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WINNER OF ESTES 1990 SPACE CAMP SWEEPSTAKES REPORTS ON TRIP TO SPACE CAMP

By Ronald J. Jacobs, Fort Lauderdale, FL

I won the Estes 1990 Space Camp Sweepstakes. The people at Estes agreed to send both my son, Ryan, and me to a Parents and Children Together Program. The management at U.S. Space Camp permitted my five year old son to attend even though the recommended ages are six to twelve years old.

Mary, Margaret, Ron, and Ryan Jacobs and the family rockets

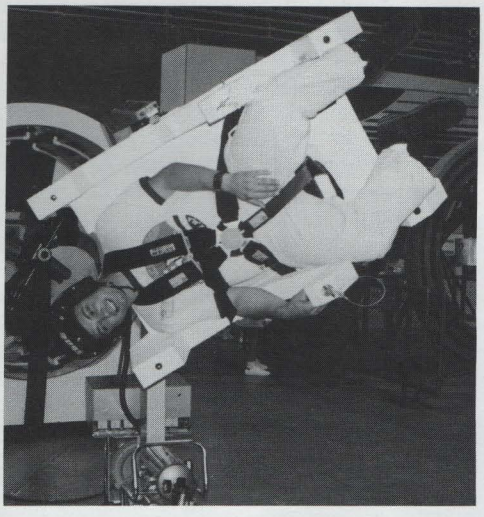
The idea of this new special program is to have a parent and child team spend a weekend at Space Camp training for a shuttle mission. It provides the opportunity for a parent and child to *really* spend valuable time together.

From the moment we arrived at Huntsville Airport on Friday morning to Sunday afternoon, we were always busy. The schedule was rigorous, requiring us to go from one activity to another. We slept in the "habitat", a dormitory constructed to look and feel like an orbiting space station.

Each parent/child attendee was assigned to one of five teams. Each team had about ten people. Ryan and I were assigned to the United Technologies (UTC) Team. Our team leader was Delisa Neece. For our first shuttle mission, half of the UTC team manned mission control and the other half manned the shuttle. Ryan and I were assigned to the mission scientist and public affairs positions in mission control during that first mission. On the second mission, Ryan was the pilot, and I handled mission specialist.

Ryan and Ron at Mission Control

Using the training equipment on the training center floor was probably the most fun. Our favorite trainer was the manned manuevering unit (MMU).



Ron on the MMU

In addition to our shuttle missions, we had a trip to Mars. To get to Mars, we had to first travel to a distant space station. There, we transferred to a Mars shuttle. On Mars, we stayed in a small outpost. Everything on Mars was colored red, and we could pick up large boulders effortlessly. The round trip took only three years, seven months, sixteen days, and two hours!

On Friday evening, we began assembling our model rocket, an Estes Nova Payloader. Launch time was Saturday afternoon. When we launched our rocket, it ascended without a problem. But at apogee, the parachute did not deploy. (I must have wrapped it too tightly.) The Payloader tumbled back to earth. Fortunately, there was no damage. I thought to myself, "how ironic that we were here at Space Camp launching this rocket because of our love of rocketeering, and our flight ended in embarrassment."

At graduation on Sunday, everyone was awarded a diploma. In addition, our team received an award for best shuttle mission. The entire weekend was delightful, being not only fun but very educational. Ryan and I want to send a very special thank you to the people at Estes Industries and the staff at U.S. Space Camp for the wonderful memories that will last us a lifetime.

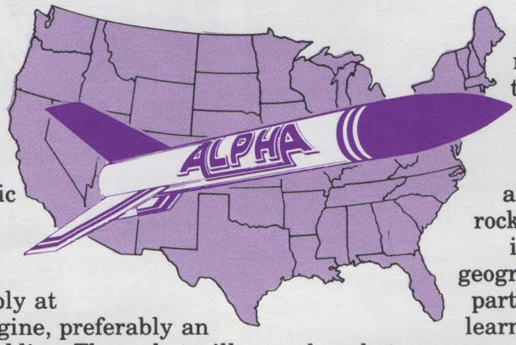
Ryan piloting the Shuttle Simulator

THE ALL-AMERICAN ALPHA

By Art Nestor, Zelienople, PA, NAR #29623

I have this daydream of building a model rocket and flying it in all 50 states of the U.S.A. It's a project I call the All American Alpha. Since I don't have the resources to travel, I need the help of fellow Estes Space Program™ members to accomplish my goal by flying my rocket in their home state. Here's how we can do it.

The initial flight was made on July 4, 1991 in one of the original 13 colonies, my home state of Pennsylvania. The rocket will then be mailed from state to state and launched by ESP members who want to be part of this project. Periodic updates and photos will appear in Estes' Model Rocket News. Participants will supply at their own cost one engine, preferably an A8-3, and recovery wadding. The rocket will be shipped in a reusable container. I'll reimburse you for shipping costs by sending you a $10 merchandise certificate from Estes Industries. And I'll send you a special certificate of participation. Your name will be included in a special drawing to win one of two Estes Saturn V rocket kits. Also, I'll compile a list of participants and your personal comments about your All American Alpha flight. How about it? Will you help me in my project? If you will, please read the rules as follows:



If you join the project, you will be expected to complete your vital link within one week of the day you receive the All American Alpha. Only one flight per state will be made. From each state, one designated rocketeer and one backup rocketeer will be selected. You must be an ESP member to participate. ESP members under 16 need their parents' approval. Unfortunately, rocketeers in Pennsyvlania cannot join as I made the first launch. I'd like to complete the project in 18 months or less.

Rocketeers in Alaska, Hawaii, the northern states, and the original thirteen states--don't delay! The reasons behind this project are to promote model rocketry as fun, stir the imagination, include geography and history as part of the model rocket learning experience, and teach rocketeers responsibility and methods of working as part of a larger project.

Be a part of the record-breaking All American Alpha Team. Fill out the application and return it to me. Due to the volume of replies expected, only those selected for the All American Alpha Team will be notified.

Individuals selected to be members of the All American Alpha Team are expected to write a short article and take a few photos of their preparations and the launch.

Mail to: Art Nestor
230 Arthur Street
Zelienople, PA 16063
****

ALL AMERICAN ALPHA APPLICATION

Date ________ State ________

Name ____________________

Address ____________________

____

____

Phone (_____)________________

Age __________

Parent's Signature (If under 16) ____________________

Do you have a large field easily accessible? ☐ Yes ☐ No

Why would you like to participate?

____

____

Attach ESP validation seal to back of this application and mail to the address at the top of this application.

☆ ☆

DAD'S HOBBY

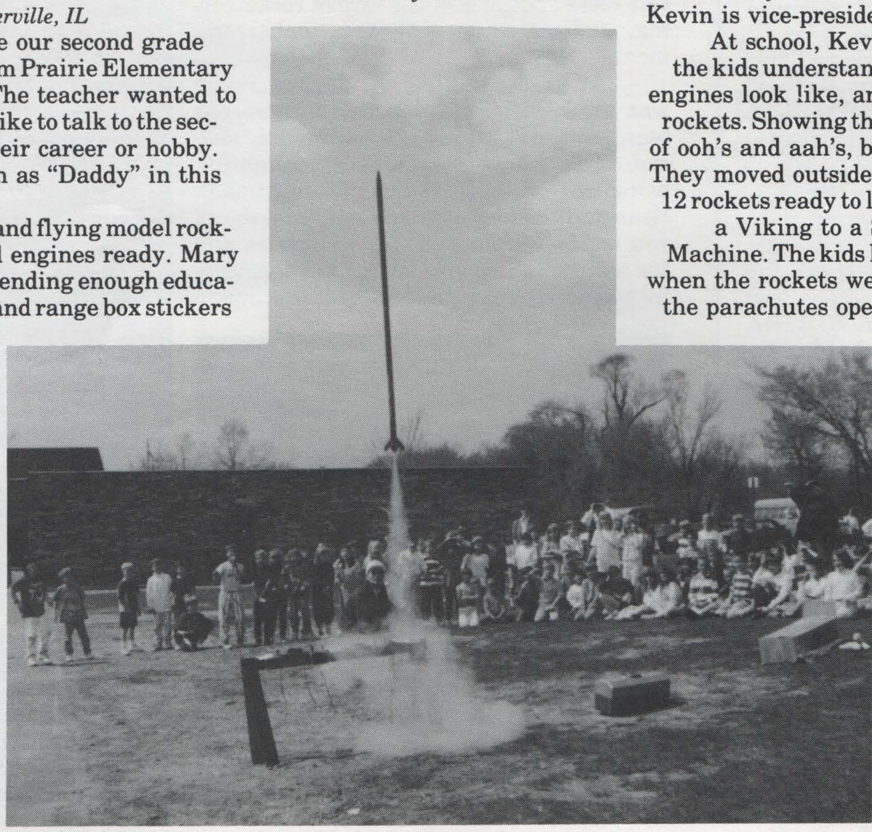
By Kim "Mom" McKiou, Naperville, IL

It started with a note our second grade daughter brought home from Prairie Elementary School in Naperville, IL. The teacher wanted to know if any parents would like to talk to the second grade classes about their career or hobby. Kevin McKiou, also known as "Daddy" in this family, would love to!

His hobby is making and flying model rockets. He got his rockets and engines ready. Mary Roberts of Estes helped by sending enough educational materials, catalogs, and range box stickers for the second graders and teachers my husband would be talking to, over 100 of them. The scheduled day, April 22, arrived, and our prayers for flying weather were answered in the affirmative. It was sunny, 60, with a low and a trifle gusty winds.

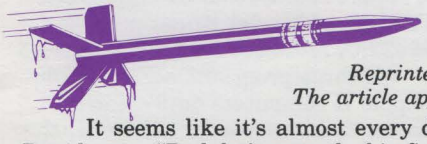
Kevin had a helper, Mike Jungclas, who works with him at the AT&T Bell Laboratories. They are both members of NIRA (Northern Illinois Rocketry Association). Mike is president, and Kevin is vice-president.

Photo by Kim McKiou

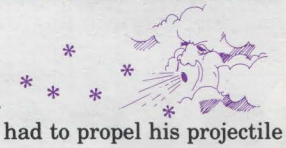


At school, Kevin began with a talk to help the kids understand how rockets work, what the engines look like, and some of the reasons to fly rockets. Showing them some rockets brought lots of ooh's and aah's, but the best was yet to come! They moved outside where Kevin and Mike had 12 rockets ready to launch. The sizes ranged from a Viking to a Super Big Bertha and Mean Machine. The kids loudly counted down, cheered when the rockets went up, and cheered again as the parachutes opened, and clapped with gusto when they landed. They decided it was "definitely awesome!" One teacher commented, "The kids will be talking about this for years."

Our daughter was so proud of her daddy. I'm glad it went well because we have two younger sons who will also have a hobby/career week in school. Also, several second graders told me they would definitely be building some rockets! I'm glad rockets are the hobby of this family.



COMPETITION FOR NASA?



Reprinted from the pages of the Reporter/Progress newspaper, Downer's Grove, IL.
The article appeared in the January 28, 1987 column, "It happens every day" by David Mack.

It seems like it's almost every day now that my 11-year-old, David, says, "Dad, let's go to the big field behind the high school and fire a few of my rockets."

I'm all in favor of my son's scientific interests and curiosity. At any other time of year, I'd be hustling out there with him to help set up his small-scale Cape Canaveral launch operation. However, when the Arctic opens its bomb bay doors and drops its winter bombs on us, all blast-off countdowns can be put on hold until more temperate weather arrives as far as I'm concerned.

I have about as much desire to stand out in a cold open field in January, shivering from my locks to my socks, as I have to arm-wrestle King Kong or watch a "This Is Your Life" episode on Pee Wee Herman.

"David," I tell him, "NASA sends up its rockets in Florida because it's too cold up here. Cold weather can cause glitches even there. Look at Challenger."

He gave me his usual response when confronted with logical reasons for not doing something.

"I don't care, Dad."

Two months earlier, he had joined the science club at this junior high school. The group's first undertaking was to build scale-model rockets and launching system at the expense of their parents (or at least this one's) peace of mind, I might add.

He showed me the instructions and a diagram, which were about as clear as Sanskrit would be to a seventh-grader.

We were able to get the components with a little help from the helpful hardware man down at Ace. And visitors to our humble hacienda now have a harder time announcing their presence since we appropriated the door bell as the firing button.

But that was the easy part. Putting them together into a functioning system proved about as tough as building a three-bedroom colonial from Lego blocks.

Repeatedly, in testing the system, we failed to get a little bulb to light up which would have indicated all systems were launch ready.

"How come it won't work?," David asked, expecting an answer from a man who knows as much about electrical systems as he does about Coca Cola's secret formula...

Surprisingly patient for a kid, he finally got Thomas Edison's incandescent invention to glow on his own, but when the club's budding Werner Von Brauns met to unleash their group assault on the heavens, the system again failed, and he had to propel his projectile from the teacher's launch pad.

It was on the Friday after Thanksgiving that David and I, imbued with the determination of hot-coal walkers, his two younger brothers and two of their friends in tow, went out to the school field, intent on getting his system to work.

The four little spectators watched quietly at first, in suspense, as the junior space prober tried, unsuccessfully, several times to send his rocket into its suborbital flight.

Then their silence shifted to shouts of encouragement to get the job done such as, "David, if you can't get that thing working, we're going home."

Just about at the point where our reservoir of positive thinking was tapped dry, David fiddled with the missile one last time and then pressed the button. "Phfft!," the rocket fired and shot upward rapidly, straining to detach itself from earth's loving gravitational caress.

We watched in stunned silence as the projectile vanished from view, its trail of smoke quickly dissipating.

According to the manufacturer, the rocket was supposed to climb 1,000 feet. Of course, who could tell since it was only as long as a couple of cigars laid end to end, more than a little shy of Space Shuttle size. Perhaps if humans were endowed with the sight apparatus of hawks, we would have visually tracked the missile to its apogee, but a guy like me, who has trouble reading Goodyear on the blimp, stood no chance.

And I don't think the five sets of more efficient, pre-adolescent eyes, squinting skyward, did any better either.

The rocket had a second stage, which was supposed to separate from the main body, in another firing, to permit a small parachute to open and facilitate a soft landing. No chute appeared, but a moment later the rocket did...

It had barely a scratch on it. No physics fancier am I, but I think it was Galileo who discovered that falling objects, regardless of mass, accelerate at the rate of 32 feet per second every second.

I figured at that rate we should have been picking up numerous small pieces. The big birds should be made as well.

It was that one success that prompted David's persistent nagging to return to the now frozen tundra-like scene of his victory.

Maybe I should give in. That would be his reward for building his own launch system and making it work. In spite of me.

Second Model Rocket Launch at White Sands Missile Range

By Robert Turner, Assistant Curator, The Space Center, Alamogordo, NM, and co-founder and president of the Spaceport Model Rocket Association (NAR Section 4880), sponsored by The Space Center

At 0900 hours on July 27, 1989, Rocket Launch Mission Foxtrot Lima (FL) occurred on the White Sands Missile Range near Alamorgordo, NM. This was only the second known model rocket launch from WSMR. The prior launch was a single model rocket launched during the WSMR 40th anniversary celebration in 1985.

The launch was set up and handled by representatives of The Space Center in Alamogordo, NM as Range Control Officer and Launch Control Officer. WSMR cooperated in providing a launch window and official schedule. The launch was entered in the official National Range Schedule, and roadblocks were set up. The mission was officially designated Foxtrot Lima (FL).

Eighty children from the WSMR Child Development Center performed the countdown and recovered all the rockets. An Estes Sentinel™ model was the first rocket launched. Among the model rockets launched were an Estes Titan IIIE™, a GeoSat LV™, a Saturn V™, and a special payload model. The payload was "Yuri G. Bear," a stuffed type bear wearing a NASA hat. An American flag was attached to the parachute shroud lines. Yuri landed unhurt and with the flag flying! Today, Yuri is enshrined in the Gift Shop of the International Space Hall of Fame in Alamogordo.

Of the children present, some undoubtedly have parents who work with larger rocket launches with military and/or research projects. Many of the children asked questions. Many plan to build and launch their own model rockets. A WSMR Model Rocket Club is also possible.

Of interest is the fact that G. Harry Stine, founder of the National Association of Rocketry (NAR) and one of the inventors of model rocketry was a rocket engineer at WSMR, then known as White Sands Proving Grounds, in the early 1950s.

NASA

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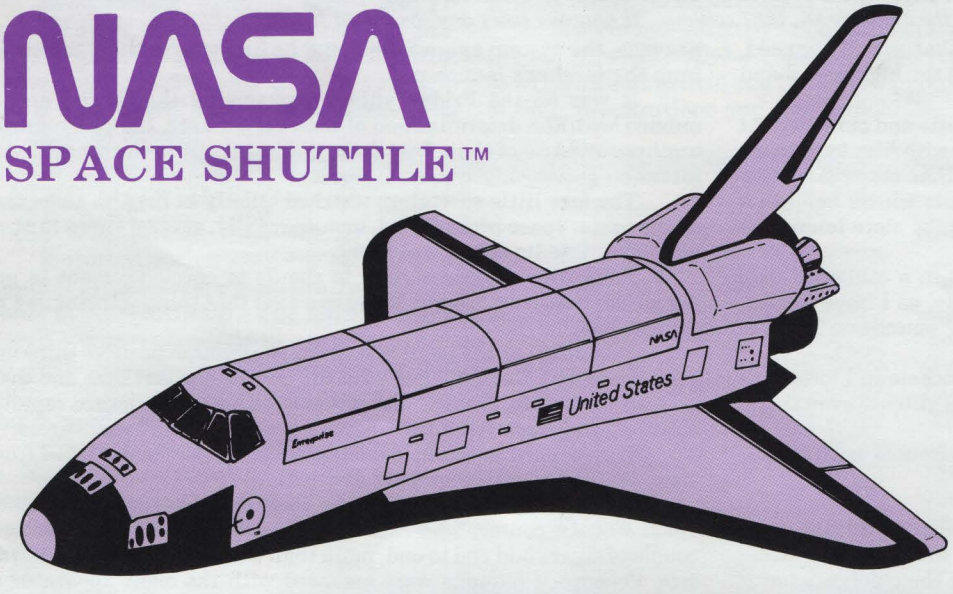

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Fly your own Shuttle in support of the next Space Shuttle Launch. And Estes Space Program™ members can earn your Shuttle Support Mission Achievement Award at the same time. (Consult your ESP membership information sheet for details on how to earn this award. The award is now available for only $1 instead of the usual $2.)

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COMPUTER SOFTWARE

--TO MAKE YOU MORE EXPERT --AND TO IMPROVE YOUR ROCKETS!

Estes produces seven computer software products which have proven very effective in helping individuals learn about model rocketry. And they are fun to use. Painless learning!

Become an expert on model rocketry!

Design and build better rockets!

Our three **graphic, full-color, interactive** programs are **double-sided** disks filled with useful programs.

IN SEARCH OF SPACE: Introduction to Model Rocketry #9025 ..... $24.95

FLIGHT: Aerodynamics of Model Rockets #9026 ..... $44.95 (A two disk set)

PHYSICS of Model Rockets #9027 ..... $24.95

All three programs are available for Apple II computers on 5½ inch diameter disks with both sides of each disk packed with graphics an interaction. Programs were written by Bob Cannon and Mike Dorffler.

Graphics created with BLAZING PADDLES by Baudville. Animation created with TAKE 1 by Baudville. Apple is a registered trademark of Apple Computer, Inc.

Our two performance analysis software products are:

AEROTREK: Model Rocket Altitude Prediction Toolkit $19.95
#9033 for the Apple II version
#9034 for the IBM compatible version

Aerotrek was written by our own Mike Dorffler. The programs on this disk are very powerful, fast, and very easy to use.

ASTROCAD: Performance Analysis for Model Rocketry $19.95
#9028 for the Apple II version
#9037 for the IBM compatible version

Astrocad was written by Michael Gasperi. The programs on this disk are not as user-friendly, but are capable of quite sophisticated analysis of model rocket performance parameters.

See Page 26 of the 1991 Estes Flying Model Rocket Catalog for more information including a listing of the programs on each product. For even more information, send a SASE (self-addressed, stamped envelope) to:

Estes Industries
Computer Software Information
1295 H Street
Penrose, CO 81240

INTERVIEWS WITH JAY APT AND JERRY ROSS

Jay Apt

Jerry Ross

By Jim Banke, Melbourne, FL

Model rocketry could be the ticket for today's young students who dream of flying in space.

"The most important thing is to get involved early on in some technical hobbies, like model rocketry or amateur radio, that involve building things with your hands," said NASA astronaut Jay Apt who flew aboard Space Shuttle Atlantis on a five day mission in early April 1991.

Apt, 42, credits his love of the space modeling hobby for giving him some early direction, which eventually led to a seat on a Space Shuttle.

But putting together a few kits and smelling up the range box with a few burnt-out engines won't guarantee a thing. It takes a lot more, said Apt, who holds a doctorate degree from the Massachusetts Institute of Technology.

"Work hard, and, of course, take as much science and math as they offer in high schools and colleges. Educate yourself as much as you can in astronomy, mathematics, and physics," said Apt.

At times, while growing up in Pittsburgh, Jay wouldn't even wait for class to begin. "I can remember watching the 6 A.M. courses that used to come on the TV back when I was in high school. They were community television education programs. I used to read everything I could get my hands on about space, and it was the hard stuff about space. I read a lot of science fiction, too, but I also read about the math involved and about what the problems of flying in space were."

Apt always wanted to fly among the stars. "That's where the future is. I remember going out to the back yard with my Dad and watching the Echo balloon go overhead. That must have been when I was 11 or 12 and think, gee, I want to be a part of that," he said.

Launched in 1961, Echo was a 100-foot diameter balloon made of a bright silver material. Easily visible from the ground, the gas bag was designed to bounce radio signals from one location on the ground to another. It was the world's first communications satellite. The experience had a lasting impression on Apt.

Before NASA accepted him as an astronaut, the space agency invited him to be a part of the team exploring Earth's sister planet with the Pioneer Venus probe. Apt also studied Mars.

The April mission to deploy the Gamma Ray Observatory also featured the first American space walks in over five years. Luckily, Apt got to make the planned six hour stroll along with crewmate Jerry Ross, who is also a model rocketeer of note. They also had to make an unscheduled space walk to free an antenna on the GRO so that it could be successfully deployed.

"When I was a little kid, my best friend and I would lay out on bales of hay at night in the country and look up at the stars and fascinate about that," said Ross, 43, an Air Force Lieutenant Colonel.

In a close parallel to Apt's experience, Ross constructed and launched model rockets as a young man growing up in Crown Point, Indiana. If you ever get a chance to meet him, ask about the Big Bertha with three engines clustered together that went awry.

With the safe conclusion of the Atlantis mission in April, Ross now has three Shuttle missions under his belt, including 23 hours of time space-walking. When he is flying in space, Ross is exactly where he wants to be.

"My entire education and career has been based around trying to get me to what I'm doing now. I decided in the fourth grade that I was going to Purdue University in Indiana and be an engineer and get into the space business," Ross said.

Very early in the space program, Purdue became known for graduating engineers who went on to play important roles within NASA. Ross, with his master's degree in Mechanical Engineering, now adds his name to the list of Purdue astronauts which includes Neil Armstrong and Gus Grissom.

Like Apt, Ross worked at NASA's Johnson Space Center as a payload officer before his selection as an astronaut in 1980. "The good Lord has taken care of me," Ross said. "He has opened a lot of doors for me, and I think He gave me a very special set of talents that allows me to operate in this arena pretty well."

Both Ross and Apt think so highly of model rocketry as an important hobby, they flew two small rockets--a Scout and a Mark--aboard Atlantis. A National Association of Rocketry flag was also on board, to be awarded each year as a traveling trophy to the top NAR section at each NARAM.

Apt hopes to be able to present the award himself.

(Editor's note--Jim Banke is a member of the Space Coast Rocketry Association and the U.S. APTLofting Team-KSC.)

Some Thoughts from a Rocketeer who has Returned to Model Rocketry

This article is based on two letters from John Mayes of St. Albans, WV in October and November 1990.

I am sending this in regard to your request for ideas in the Fall 1990 issue of Model Rocket News. I first started building and flying model rockets back in 1965 (using Estes products) when I was in junior high school. While I was in high school, I put away my model rocket supplies.

While on vacation this past July, I was cleaning out some closets and came across that old Estes mailing box with several body tubes, nose cones, etc. Well, having an eight year old nephew who is handicapped and was bored gave me a good excuse to build a rocket. (First, though, I happily learned from the local hobby shop that Estes was still going strong.) After that first flight in over 22 years, I got hooked on model rockets again.

Since then, I have built ten models (just finished them) and have 60 engines. I am looking forward to a day of flying. I have about ten more models on the drawing board--wintertime projects. I would like to share with you some experiences, thoughts, and ideas I have had in becoming reacquainted with the joys of model rocketry. Some of my ideas may be old news since the Fall 1990 MRN is the first issue I have received in over 20 years. It was nice finding that very little has changed in your model rocket supplies.

All of the models I just finished were either built from scratch or from plans in the old MRN issues I had saved. I have purchased three Estes kits for construction this winter. Why not publish plans for rockets and gliders like in the old MRN? *(We do publish plans occasionally in the MRN. We have an on-going Free Plan Contest. However, judging by the few entries, it appears that there is less interest in Free Plans than there used to be. It is hard to justify the space for Free Plans in the MRN with such low apparent interest.--Editor.)*

When I was in the finishing process for these models, I searched and searched for decals locally, to no avail. It was only after a call to Estes and talking with a pleasant and patient lady named Peggy Apple, that I discovered you would sell decals from your kits. Maybe you could make available some standard-type decals in your catalog (stars, roll bars, flags, USAF, etc.) *(We have offered quite a few decals. At one time, we even developed a lot of decals and a special display called "Decal City" offering them at hobby shops. Unfortunately, the interest rate was a lot higher than the purchase rate, so the effort was abandoned.--Editor.)*

...OK, on to some useful ideas that I have tried... *(He submitted a half dozen ideas for consideration for the "Idea Box." You will find several of them in this and/or future issues of this magazine.--Editor.)*

(His second letter talked mostly about his problems in finding a good launch area. Those of you from mountainous or urban areas can feel empathy with his problem.--Editor.)

...In West Virginia, as you may imagine, there isn't a lot of flat land, but an abundance of beautiful hills and mountains. One exception is a stretch of about 35 miles along U.S. Route 35, starting about 12 miles west of my home. It parallels the Kanawha River, is mostly farmland, and varies from 100 yards to a half mile or so in width. My job takes me along this route on Thursdays. After exhausting the local possibilities for a launch field larger than a football field, I decided to check this area out.

About the start of this "flattest land in WV" is an R/C model airplane club flying field. They really didn't want to be bothered with "rockets." On down about eight miles, I tried a farmer's market and got the same response. About 26 miles from home, I tried another farmer's market. I asked the fellow there, who was about my age, if he knew of any farmers around who might let me fly model rockets in their fields. He hesitated a moment and asked me to be more specific. I explained that some family members and I wanted to get together for a few hours soon, because of the shorter, cold days coming, and fly these safe, recoverable model rockets I had just completed. He replied, "Sure, come on down. You can use that field over there. I just recently cut it." The field he pointed to was his family's hay field and was the size of four football fields.

He then revealed that he used to fly model rockets in that field years ago and that his neighbor used to fly model rockets, too. Needless to say, we talked Estes model rockets for quite a while. Although he was unable to attend our flying session that late October Saturday, he did come by as we were packing up. He said we could come back for a spring session. A few days later, I sent him a thank you note and the Mars Snooper plans I had from years ago.

My family really enjoyed the outing. The apple cider and Amish cheese from the farmer's market were nice, also...Does Betty Ford have a clinic for addicted model rocketeers?

Continued from page 5--

overall second place in the C division at the meet.) Our section newsletter, the *View From ZENITH*, which I edited, won the NAR's LAC Newsletter Trophy that year."

"I taught Physics at MSU the year after I graduated, and then went on to grad school at Iowa State University--which put a damper on most model rocket activities for a few years. I met Joyce at ISU (She was also working on a PhD in Astrophysics.), and I got her involved in rocketry. We went to NAR regional contests and NARAMS together. We did miss NARAM-30, but we had a good excuse, since we got married that summer."

Joyce Guzik and Tom Beach at NARAM-31. The model is an Estes Space Shuttle kit that has been heavily modified into a Soviet Buran Space Shuttle.

"Joyce and I are currently involved in the *Zia Spacemodelers* section of the NAR, based here in Los Alamos and the surrounding area. In addition to the LASSP class we are teaching, we have also put on model rocket demos for middle school students last year through another Lab Outreach Program..."

"I have always liked sports designs with a unique look and challenging construction. Estes (and Centuri) often did well in this area. My favorites have included the Orbital Transport™, Mars Lander™, the original Interceptor™, and the original Trident™. And from Centuri, the Skylab, Orion, and Space Shuttle. I also liked some Estes-supplied free plans of this type, such as the Starship Excalibur and the Ganymede 274."

"Even more interesting to me has been designing my own sports models of this type. Some of these are based on vehicles described in science fiction stories, where I first visualize what the author describes, then "engineer" any features not specifically described, and then design it in such a way as to actually fly. Other models are based on vehicles from movies or TV, especially the more obscure (but fondly remembered) TV shows of my childhood, such as Fireball X-5 and the Thunderbirds."

"Along these lines, I would like to mention that I have been particularly disappointed over the years to see the space in the Estes catalog devoted to parts dwindle to a meager three pages. I pity the young rocketeers of today who have such a tiny selection of parts to choose from. The Estes Parts Catalog (circa 1974, I think) inspired me to build many designs." *(I, too, regret the death of the Parts Catalog and the reduced number of parts offered in the current catalog. The sad truth is that too few people purchased the parts and decals offered to make the catalog and wide variety of parts profitable. If you can't sell something, it just won't stay on the market.--Editor.)*

(He also laments the lack of technical information included in the current Estes catalog compared to earlier Estes catalogs. I also regret the loss of most of this information. However, Estes still offers a wide variety of technical information in our various publications. Many very useful publications are listed at the bottom of page 63 of the 1991 Estes Catalog. Unfortunately, many of today's new model rocketeers just aren't interested in the technology of model rocketry as were rocketeers in years past. This interest is not, however, dead. We continue to offer the publciations and to encourage the educational use of model rocketry, both in the formal classroom environment, through club activities, and by individuals. Besides being editor of this magazine, I also wear the hat of Manager of Educational Services. Estes does quite a bit to encourage the educational applications of model rocketry, both directly and indirectly through several organizations. While we continue to offer nearly all of the publications we have ever made available about the technology of model rocketry, we also offer very useful computer software for both the Apple II series of computers and for the MS-DOS (IBM-compatible) computers. I am always interested in encouraging the educational uses of model rocketry, to learn science, math, following directions, and other subjects and to learn to love learning, not just to learn about model rocketry.--Editor.)

SMITHSONIAN RESUMES MODEL ROCKETRY WORKSHOP

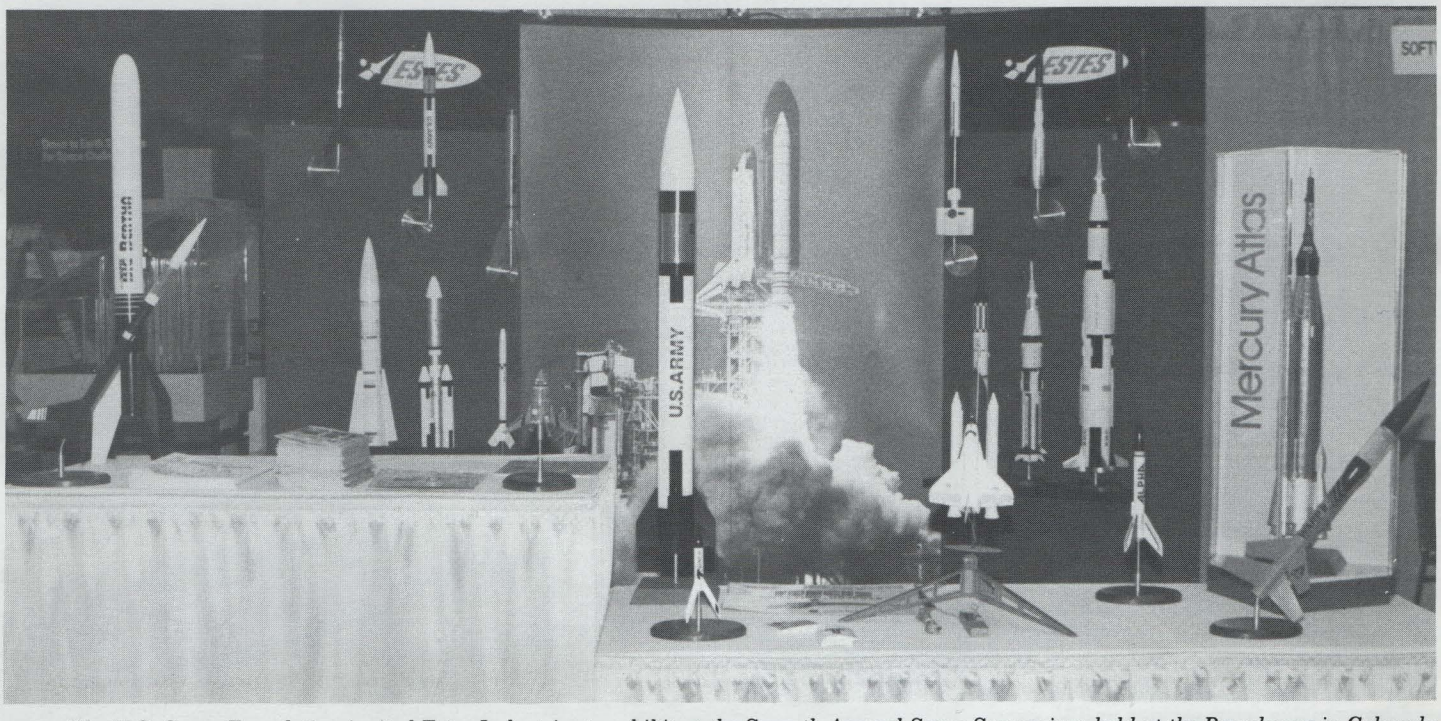
By Ed Pearson, Seabrook, MD

Background: In the early 1970s, the Smithsonian Associates, an adjunct of the Smithsonian Institution, held model rocket instruction classes near the Mall in Washington, D.C. Former NAR President James Barrowman led the program for its first two years, I ran it for the next four years, and ex-NARHAMS club members Don Carson, Roger Allen, and Greg Kennedy the following years. Often we taught in the Arts and Industry Building, and for two years, I taught in the same workshop early aviator and former Smithsonian Secretary S.P. Langley used. We launched on the Mall flanked by the Smithsonian museums with the Capital Building and the Washington Monument in the distance. After a decade of classes, the Associates decided upon other instructional workshops, and the model rocket classes were discontinued.

Last summer, I was called by the Associates and asked to teach again. After nearly a decade of inactivity, the Smithsonian wanted to resume the model rocket class. What resulted was a six week program attended by 15 children from fourth to seventh grade. The course was held on consecutive Saturday mornings for one and one half hours per session last October.

Approximately half the time was devoted to such subjects as the history of aerospace, physics of rocketry, principles of altitude tracking, stability determination, and rocket payloads. The remainder of the time, we built two models, the reliable Alpha™ and the Estes Javelin™.

Two career aerospace professionals came and delivered talks to the class. Marilyn Kirkpatrick, a Goddard Spacecraft Tracking Data Network Mission Manager, talked about tracking the Space Shuttle in orbit. Longtime model rocketeer and aerospace engineer, Pat Stakem gave a presentation on the space station. Pat was easy to land as a speaker--his son was in the class, but it gave me pause as I recalled Pat and I flying our own Alphas back in the 1960s! Our class was also joined on our last building session by noted mod-roc photographer Alan Williams. Alan joined us again on the concluding week when we flew our models. Some things have changed over the years - the police were wary of having a launch on the mall anymore. We used a local high school's athletic field instead, after first gaining the principal's permission. But it was great that the Smithsonian Associates restarted a fun and rewarding class in model rocketry. And, (Beware: A pun is lurking ahead.) the kids had a blast!



The U.S. Space Foundation invited Estes Industries to exhibit at the Seventh Annual Space Symposium held at the Broadmoor in Colorado Springs. Through fast action by Bob Buroker, Kent Jodrie, Rudl Mergelman, Ron McClaren, Keith Niskern, Mike Dorffler, Dennis Poole, Margaret Swope, Mary Roberts, Bob Cannon and others, we assembled and put up a very attractive display. Margaret Swope, Keith Niskern, Dennis Poole, Ron McClaren, and Bob Cannon did yeoman duties for manning the booth for thousands of participants at the conference and the thousands of students and adults who visited the booth during the four days the exhibits were open. Many of the participants and many of the other exhibitors were "old" rocketeers. We received many favorable comments on the exhibit and heard quite a few stories about model rocketry.

Continued from page 6

A few minutes were spent finding the room in which the briefing would be held. I was early for my session, as planned, so over to the gift shop. Quite a mob scene. After checking around all areas of it, I took a couple of minutes to take some photos of the "rockets for everyone," the Estes model rockets display.

Then another tour of the gift shop deciding what I could do without, then waiting in line at a cash register to do my share to keep Florida green. After putting the bag of souvenirs in the trunk of the rented car, I went back to wait outside the Galaxy Theater auditorium for the briefing session for which I was scheduled.

The briefing presented some facts about the GRO (Gamma Ray Observatory) which was to be launched the next day. The GRO is the heaviest payload NASA has launched. Jerry Ross was a mission specialist on this mission. Jerry, like Jay, has been a model rocketeer for many years. Steve Nagel, Missions Commander; Ken Cameron, Pilot; and Linda Godwin, Mission Specialist, were also Jay's companions on this flight.

After the well-illustrated briefing, we went over to the bus-boarding area near the Rocket Park. There I met Vern and Gleda Estes and Bryant and Elaine Thompson. After a short wait, we boarded one of the buses for a visit to the launch pad.

We made a stop near the VAB (Vehicle Assembly Building) to observe some displays about the Gamma Ray Observatory. These were set up in a large tent. With the crowd, narrow aisles, and limited signs, I did not benefit as much from this as I could have. It appears that the tent was set up for periodic briefings, and that this particular time was not one of the designated briefing times.

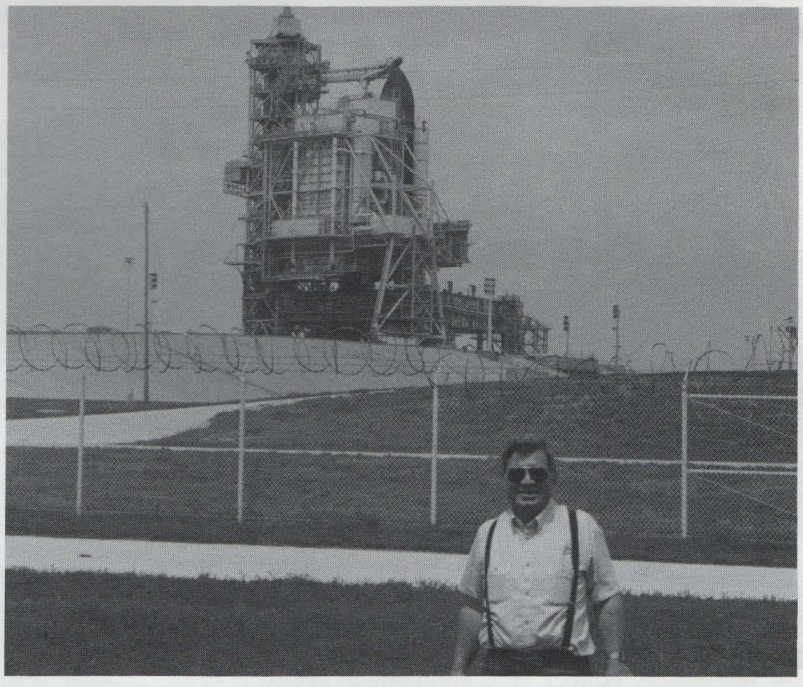
Back on the bus, we drove on to an observation point very near Launch Pad 39B. Space Shuttle Atlantis was in position on the pad. We were much closer than I had hoped. The bus emptied as we went out to look. A number of photographers, including myself, "burned some film" on the Shuttle. All we could see of the Shuttle was the tip of the ET (External Tank) rising above the gantry and shroud.

Space Shuttle Discovery sat on Launch Pad 39A a couple of miles away. It is rare to have two Shuttles on the pads at the same time. Tribute to Discovery was paid in the form of more photos. At times like these, I do not regret the money spent on the 210mm and 300mm lenses for my cameras!

Back aboard the buses. Back to the parking lot at Spaceport USA. Then back to leave the camera bag and tripod in the car's trunk. I did not use the tripod after all, but it made a convenient object to wrap some of the posters about the GRO around.

Then I made the mistake of going to the cafeteria to eat a bit before driving to the afternoon's activity. Mob and not-so-fast fast food. 'Nuff said!

Back to the car, then the drive back to Cocoa Beach. Ebe Emmons-Apt, Jay's wife, had been gracious enough to invite me, a stranger, to the pre-launch reception for Jay. It was held at the Howard Johnson's Plaza Hotel in Cocoa Beach. Of course, Jay could not be there. He and the other astronauts for tomorrow's mission were in quarantine to avoid possible medical problems with a cold or other ailment accidentally picked up just before launch.



Bob Cannon near Space Shuttle Atlantis on April 4, 1991

The reception was a pleasant experience. I had the opportunity to meet Jay's wife and his father. I was not formally introduced to Jay's attractive young daughter, but took some photos of her. The crowd was a bit much for her, but she was trying to be a good sport about it. There were a couple of albums of interesting photos and articles on display. I met a few old friends again and met a few people that I did not know. But mostly I just walked around, looked, and listened. Astronauts are real people with families and everything.

Soon I drove back to the motel. I took care of checking out. There was no way I wanted to take a chance on being delayed at checkout on launch morning. Then I rested a little while before Vern and Gleda came by to pick me up to go to the next activity.

The Florida Spacemodeling Society publishes a very interesting newsletter. We have reprinted an article from it. Patrick McCarthy, president of the club, is the APTLofting Team Coordinator. This group has been in existence for several years. Its purported purpose is to get Jay Apt off this planet!

I believe that the members of this team have always intended to have him come back, but I do not recall ever having heard or read of this intention publicly stated.

Pat invited me to the special pre-launch social of the U.S. APTLofting Team on L-1 day. The festivities were scheduled to begin 1830 hours. I told him earlier that I would make it if I could. Vern and Gleda picked me up at my motel late on the Thursday afternoon. We left a bit early to be certain that we could find the party.

The social was to be held at Chateau Moose. None of the three of us were quite sure what that was, or exactly where. Luckily, there was a map on the invitation. After turning off the state highway onto what appeared to be the correct street, we drove along. When we found the right number, there was no house there! There was a lonesome, one-lane dirt road winding among some big trees. Not having any better idea what to do, we drove down it. Sure enough, a nice distance off the road there was a house, but only one car.

Hoping that we were at the right place, we walked up to a man near a small building near the house. Yes, this was the right place. He was "Moose", otherwise known as Marc Lavigne. He gave us a brief tour of his elaborate model rocketry and electronics workshop, then we went over to the house. The liquid refreshments were on the porch. We were invited to come inside for the food. As we were talking on the porch, more people began arriving. Soon there were quite a few model rocketeers, some bearing more food.

I won't get into all the details of the several very pleasant hours spent there that evening. Many members of the club came and served as hosts along with "Moose" and his wife. Ed Pearson, Richard Fox of Foxmitter fame, Chris Tavares, and many other old friends made it to the party. I met quite a few other great people also. If space permits, you will see a story and some photos about the APTLofting Team's social in this or a future issue of this magazine.

Eventually, Vern, Gleda, and I left so that we could get some sleep before the very early getting up the next morning. I do not know when the party broke up, but it was still going strong when we left.

To be continued in the next issue...

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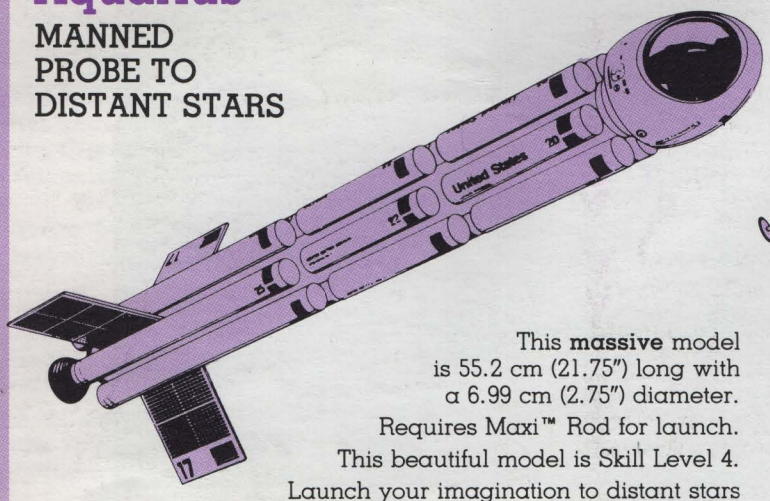

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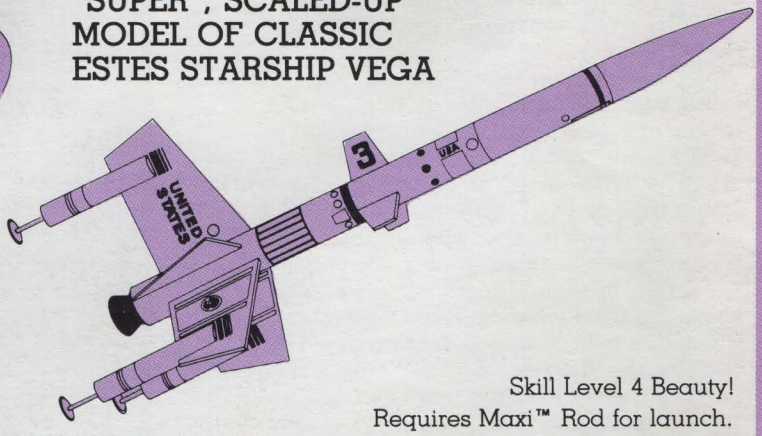

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