



# NATIONAL ASSOCIATION Of ROCKETRY

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## Letter from the NAR President

by John Hochheimer

The NAR had a banner year in 2016. Our membership set a record with 6762 members. We had 173 sections, and almost 60% of our members associated with a section. High power flying continues to be a significant interest of our members; 3431 HPR certified members, including 208 Junior HPR certified fliers. Note, while your president was certified as a Level 1 HPR flier several years ago, 2016 also celebrated his L2 certification flight with little pressure from his certification committee of past NAR presidents.

The NAR is strong financially, our annual receipts are over \$400,000 and we are providing numerous benefits for members, sections, and at our national events. The NAR insurance offers \$5 million in individual, section, and landowner coverage. We offer numerous grants, scholarships, and support for activities that are important to our members.

The NAR's commitment to education continues to be a major part of our mission. We have over 400 NAR Teacher Certifications and gave out \$35,000 in scholarships and teacher grants. Team America Rocketry Challenge had near record numbers of schools applying and was again successful with Odle Middle School winning at Great Meadow and Farnborough to be the 2014 TARC champions and International Rocketry Competition champions.

Speaking of champions, the U.S. team earned six individual event medals (three gold, two silver, and one bronze), five team event medals (one gold, two silver, and two bronze) and placed third as an entire team at the 2016 FAI World Championship for Space Models held in Lviv, Ukraine.

Our members are getting younger. The median age of our members is 51 years. About 5-6 years ago, the trend in our median age was keeping pace with my age, so if that trend would have continued, the median age would be considerably greater than 51 years. Our collective efforts to recruit and retain new members is resulting in a much younger group of members, many of whom continue their memberships after their initial year.

Now, as 2017 is passing its first quarter, the trends and accomplishments we realized in 2016 appear to be continuing. The NAR membership continues to maintain and grow. NARCON, held in Northern Virginia, was the most attended convention since the pioneer days of the hobby. We have a National Sport Launch that is shaping up to be a must-attend event for flying and local attractions. NARAM will be the last of the old competition format and the organizers promise a fun event for all—sport, HPR, and competition fliers. NARAM will also host the team selection for the 2018 FAI World Championship.

As I write this column, TARC qualification flights are being competed on this next to last day of qualification flights. This is TARC's 15th year and it will be the best. The partnership between NAR and AIA remains strong with both organizations continuing to be committed to a program that has proven to be the model for engaging our middle and high school students in Science, Technology, Engineering, and Math. The International Rocketry Competition, which is flown at the Paris Airshow this year, will provide our U.S. TARC winners the opportunity to fly against their peers from France, the United Kingdom, and Japan.

*Sport Rocketry* remains the premier hobby rocketry magazine. The editor, Tom Beach, and publisher, Todd Schweim, have consistently put out an awesome magazine for our members. We can always use your help with content. We continue to offer authors up to \$350 for high quality technical, building, and how-to articles. Contact Tom Beach if you would like to submit content for the magazine.

As many of you know, the NAR and the Museum of Flight partnered several years ago to leverage our collective interest in preserving the history and historical artifacts of model rocketry. We worked hard together to secure important and significant collections of G. Harry Stine, Vern and Gleda Estes, and Lee and Betty Piester as an example of the commitment the two organizations have made to preserve our history. Today, the Museum of Flight continues to work with the NAR to secure additional collections. We are exploring the idea of a traveling exhibit to provide the means to show off additional important historical artifacts and information to an audience much greater than those who visit the Museum of Flight. At the February Board of Trustees meeting, the NAR Board voted to continue to support the activities of the Museum of Flight, to strengthen the partnership by asking the NAR historian to join the Joint Special Committee to Support the Museum of Flight that provides the linkage between the organizations, and to start a fund for preserving and maintaining rocketry artifacts in the future. This fund will be the NAR's resource to enable additional rocketry materials and artifacts to be obtained. We also see a fund like this to enable us to work with organizations, like the Museum of Flight, to create new and exciting ways to make these historical artifacts accessible. The joint committee has some great ideas that are being explored. In the next issue of *Sport Rocketry* we will provide information about the fund and the activities planned to kick it off.

Over the course of this year, I will reach out to our members with more information about the NAR and our current activities. Until then, Fly Safely and Pay it Forward!



## The National Collection of Model and Sport Rocketry

Every journey to space begins with a spark. This is true whether you are talking about the literal spark that starts the combustion process in a rocket, or the metaphorical spark of inspiration that kindles a lifelong passion for science and spaceflight. This spark is the central theme behind the exhibit Inspiring Rockets, which opened in February of 2015 during the National Association of Rocketry's Annual Convention (NARCON) at The Museum of Flight in Seattle.

The exhibit celebrates the sport of hobby rocketry and features historical rockets and associated artifacts from the collections of G. Harry Stine, Vern Estes, Lee Piester, and the National Association of Rocketry (NAR). It also includes prize-winning rockets and boost gliders that flew in recent Team America Rocketry Chal-

lenge events and at the World Spacemodeling Championships in both recent years and dating back to the 1970s.

The location chosen for the exhibit just off the nose of NASA's Full Fuselage Trainer (FFT) is very deliberate. The FFT is a full-scale mockup of a Space Shuttle orbiter that was used by all Shuttle astronauts to train for their missions. For many, it was their first experience getting up close and personal with a Shuttle before their eventual journey(s) to space.

For many astronauts, however, their journey began years before, often launched as some will attest by flying model rockets. Shuttle Astronaut and long-time NAR rocketeer, Jay Apt, offered up his own personal story to illustrate the journey from model rocketry to a career in space. The first artifact encountered in the exhibit is

by Geoff Nunn NAR 99220,  
Adjunct Curator for Space History  
at The Museum of Flight



an Estes Astron Scout hand built by Vern and Gleda Estes, and carried by Jay on STS-37, his first of four eventual shuttle flights. The Scout is backed by the National Association of Rocketry Championship Banner, which also accompanied Jay into orbit. The title of the new exhibit, Inspiring Rockets, evokes the formative influence of rocketry in the lives of Jay Apt and other astronauts to-be. It is an experience that has lit a spark not just in astronauts, but also in aerospace engineers, scientists, and in museum curators like me.

The exhibit is part of a growing partnership between The Museum of Flight and the National Association of Rocketry, which has been years in the making. Discussions on the topic began as far back as 1998 when museum volunteer Pat Fitzpatrick began talking with G. Harry Stine's son Bill about finding a home for his father's collection. At the time, Bill Stine was considering the possibility of building a stand-alone museum dedicated to model rocketry. Almost a decade later, in 2007, Pat and representatives from The Museum of Flight worked with Bill to include a selection of his father's artifacts in the exhibit Space: Exploring the New Frontier.

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In 2011, discussions expanded from Bill's efforts to find a home for his father's collection to the broader subject of telling the story of model rocketry through a partnership between the NAR and The Museum of Flight. Trip Barber, then NAR president, and Vern Estes joined the con-

versation as the outlines of a more official partnership began to come together. The Museum of Flight and the National Association of Rocketry formalized their agreement in 2012 with a memorandum of understanding.

With the framework in place, several

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things started to happen. Nine pallets of G. Harry Stine's artifacts, archival documents, and library materials detailing the early days of model rocketry were accessioned by the Museum on September 17, 2013. Vern Estes also agreed to add his personal artifacts to the Museum's growing collection, and offered up some leading items for use in a new model rocketry exhibit. Lee and Betty Piester joined the group when they committed to donating their Centuri Engineering collection in May of 2016.

I got involved with this whole process shortly after the partnership was finalized, and took point on the Museum side for researching and drafting the content for Inspiring Rockets. The Museum's exhibits and collections teams worked closely with Bill Stine, Vern Estes, and representatives from the National Association of Rocketry throughout the exhibit process. The NAR provided wonderful support in the form of subject matter expertise, fascinating stories and artifacts, video and image content, and even financial backing to help craft an exhibit designed to light a spark in future rocketeers.

The exhibit consists of three cases arranged around several themes. The first holds the Shuttle-flown Astron Scout and NAR championship banner mentioned above. The second case offers a snapshot of the evolution of model rocket technology: Rock-a-chute motors, Camrocs, and an Altiscope sit beside digital altimeters, reloadable engine cartridges and miniaturized video broadcasting systems. The final case focuses on competition rocketry and showcases prizewinning vehicles from Team America Rocketry Challenges and the World Space Modelling Championships.

Beyond the cases, the visual anchor-point for the exhibit is a floor-to-ceiling sculptural element called "the Fusillade." The piece is made up of rockets built by modelers selected as part of a contest held during NARAM in 2014. These rockets are supplemented by iconic kits supplied by various model rocket manufacturers. At the base of the sculpture sit the first high-powered sport rocket to reach 100,000 feet, and a local high-power vehicle built by a team from the Northwest Indian College. The exhibit, and the fusillade in particular, tell the story of model rocketry in the voices of the enthusiasts who have made the hobby part of their lives, and who have felt its influence in their careers.

The partnership between the Museum of Flight and the National Association of Rocketry is now evolving into the world's



premier collection dedicated to hobby rocketry. The NAR Board assigned the collection as the National Collection of Model and Sport Rocketry. Staff and volunteers at the Museum have now processed over half of the artifacts donated as part of the Stine collection, and continue to work with Vern and Gleda Estes and Lee and Betty Piester

to help them organize their important contributions to this story. These efforts only represent what has been achieved so far. The vision for both the NAR and the museum is to continue to find new ways to tell this important story and to light the spark that inspires rocketeers for generations to come.



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