

MASA
Minnesota Amateur Spacemodeler Association
 Established January 1998
 NAR Section 576

2006 NAR Medium Section of the Year
 2007 NAR Medium Section of the Year
 Host of NARCON 2007
 Host of NARCON 2008
 2008 LAC Newsletter Award Recipient

Pay Forward From Your Own Home... Donate a Rocket to NARAM 51

Do you want to help pay forward to the next generation of rocketeers? Do you want to get rid of one or two rocket kits to get your build pile to a more manageable level? Do you want to be a part of a national event without even having to leave your house? Then consider building and donating a rocket to NARAM 51's Fly-It/Take-It Program.

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Fly-It/Take-It is an event where children and other first time flyers attending NARAM get to pick out an already-built rocket (donated by members of NAR Sections), fly it at NARAM and take it home to keep. The only restrictions are that the rocket must fly on a single 18mm black powder motor, it must contain an appropriate recovery device, and complex rockets are not recommended.

MASA VP Carol Marple will collect the rockets donated by MASA members in April and get them to NARAM 51 in Pennsylvania. Please let Carol know if you're interested in participating. You can email her directly at carol.marple@atk.com.

Time is Running Out... Design MASA's 2009 Badge

Design MASA's club badge for 2009! Anyone can enter. Submit your entry to rick@vatsaas.org. Entry must consist of badge front and badge back, and be 2" x 3.5".

Voting will start SOON. In the event of a tie, the winning design will be selected by the club officers. The winner shall receive no tangible prize but the honor having many rocketeers wearing their artwork for the next year.

For more information, visit MASA's web site and click on the "2009 Badge Design Contest" link on the right side of the page.



The NARAM organizers and MASA leaders thank you!



Last year's MASA donations to NARAM 50 from left to right: Estes Alpha (Andy Heren), two Semroc Boids (Alan Estenson), Semroc Squire (Jeff Taylor), Estes Alpha, Quest Aries and Estes Alpha (Andy), Estes Patriot and Semroc Rawhide (Carol Marple) and Estes Patriot (Jeff).

IMPORTANT REMINDER

All 2008 MASA Club Memberships expired at the end of the year on December 31, 2008. Don't forget to renew your membership for 2009 now!



MASA PLANET

Road Trip Anyone?

2009 NAR National Events

The National Association of Rocketry (NAR) National Events schedule for 2009 include:

NARCON 2009

March 20-22, 2009
Wethersfield, CT
(Just south of Hartford, CT)
NARCON (National Association of Rocketry CONvention) is an annual convention that typically includes rocketry related Seminars, Workshops, Forums, Vendor Displays and Special Guest Speakers. NARCON 2009 is hosted by CATO Rocketry Club NAR Section 581. For more information, visit www.narcon2009.org or email narcon2009@catorockets.org



NARAM 51

August 8-14, 2009
Johnstown, PA
NARAM (National Association of Rocketry Annual Meet) is the ultimate week-long celebration of rocketry. Since this year's NARAM is the 51st annual meet, the theme will center around "Area 51". The launch site has been designated as "Area 51 East", and will support up to an M impulse class motor with a waiver up to 10,000 feet AGL. Competitions include selection of the the FIA Spacemodeling US Team, Imagination Celebration, 1/8A HD, A SD, 1/2A PD, Random Altitude, B R/G, B Altitude, D Dual Egg Loft Duration, Peanut Scale, SciFi, Future Scale and R&D. NARAM 51 is hosted by the Pittsburgh Space Command NAR Section 473. For more information visit www.naram.org



NSL2009

May 23-25, 2009
Kansasville, WI
NSL (National Sport Launch) is an annual sport launch that will be held this year during Memorial Day Weekend at the Richard Bong State Recreation Area, just west of Racine, WI. NSL2009 is hosted by WOOSH (Wisconsin Organization Of Spacemodeling Hobbyists NAR Section 558). The theme for NSL2009 is centered around the 40th anniversary of the Apollo 11 moon landing, and will feature a mass Saturn launch held on Saturday. Other special events include the "L1 Certified Scramble", where you can compete to be on the fastest team of four to build and successfully fly a rocket built from parts donated by LOC Precision, the "Secret Payload Duration Contest" and (weather permitting) Vern Hoag's Saturn V rocket will be on display. The launch site will support up to a single M impulse class motor with a waiver to 9,000 feet AGL, and will have support for Monotube U/C type Hybrid flights. Level 1,2 and 3 certification tests and flights will also be available. This should be an easy 5 1/2 - 6 hour) drive from Minneapolis, so get together with your fellow MASA members and consider a carpool or caravan out to NSL2009 for 3 days of fun flying. For more information about NSL2009, visit www.nsl2009.org



TARC Finals

May 16, 2009
The Plains, VA
TARC (Team America Rocketry Challenge) is the largest rocket contest in the world. The top 100 teams (based on local qualifying scores) from across the nation will meet to see who will take a share of the over \$60,000 in prize money and scholarships. This year's contest is to design and build a rocket that reaches an altitude of 750 feet, stays aloft for 45 seconds, and safely returns a payload of 1 raw egg. For more information on TARC, visit www.nar.org



May 23-25 NSL 2009

Kansasville, WI
www.nsl2009.org

March 20-22

NARCON 2009
Wethersfield, CT
www.narcon2009.org

August 8 - 14

NARAM-51
Johnstown, PA
www.naram.org

May 16

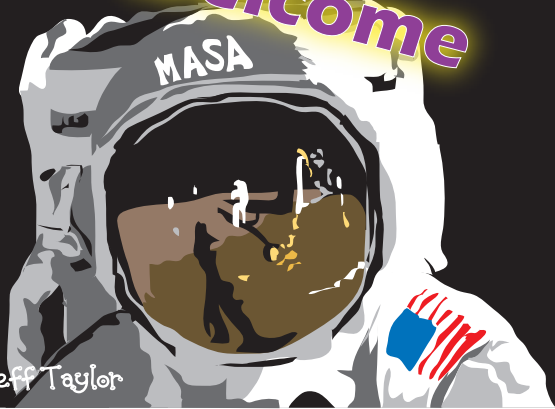
TARC Finals
The Plains, VA
www.nar.org



MASA Welcomes the Following New Member:

 **Lyle Merdan**

Welcome



MASA Directory

Established January 1998

Founding President: Russ Durkee

2009 President and Webmaster

Alan Estenson - estenson@mn-rocketry.net

2009 Vice President

Carol Marple - cjmarple@peoplepc.com

2009 Secretary/Treasurer

Rick Vatsaas - rick@vatsaas.org

MASA Planet Newsletter Editor

Jeff Taylor - jeff.taylor@mn-rocketry.net

Club Website

www.masa-rocketry.org

Club Yahoo Group

<http://groups.yahoo.com/group/masarocketry/>



2009 Meeting Schedule

Subject to Change

Check MASA Website or Yahoo Group for updates

MASA January Meeting

Thursday, January 8 - 7:00 pm to 9:00 pm

Location: Aero Systems Engineering, 13825 Schmidt Lake Road, Plymouth

Topic: 2009 Events Planning, Winter Project Show-n-Tell

MASA February Meeting

TBD

MASA PLANET

2009 Launch Windows

Subject to Change

Check MASA Website or Yahoo Group for updates

All MASA Launches are "Misfire Alley"
(bring your own launch pad and controller)

MASA January Launch

Saturday, January 24 - 10:00 am to 1:00 pm

Location: White Bear Lake

Notes: Model Rockets (max 1 lb and max "E" motor) only.

MASA February Launch

Saturday, February 28 - 10:00 am to 1:00 pm

Location: White Bear Lake

Notes: Model Rockets (max 1 lb and max "E" motor) only.

MASA March Launch

Saturday, March 28 - 9:00 am to 1:00 pm

Location: Apple Valley High School (to be confirmed)

Notes: TARC Qualification flight opportunity.

MASA April Launch

Saturday, April 25 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

NSL 2009

May 23-25

Location: Kansasville, WI

NAR National Event



MASA May Launch

Saturday, May 30 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

Notes: One week later than normal

Solstice Evening Launch

Saturday, June 20 - 5:00 pm to 10:00 pm

Location: Elk River VFW

Notes: Model Rockets (max 1 lb and max "E" motor) only

MASA June Launch

Saturday, June 27 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

MASA Summer Picnic

Saturday, July 18 - 2:00 pm to 9:00 pm

Location: Elk River VFW

Notes: Model Rockets (max 1 lb and max "E" motor) only

MASA July Launch

Saturday, July 25 - 9:00 am to 4:00 pm

Location: Nowthen sod fields

NARAM 51

August 8-14

Location: Johnstown, PA

NAR National Event



Continued from the Last MASA Planet

FlisKits Rose-A-Roc Part 2

By Ken Jarosch 

Photo #3 is a close up of the Main Rubber Actuators. The 1/16" balsa scrap (5/8" square) is glued to the top of the blade mounting tab for added strength.



I checked the dihedral by inverting the rocket over a flat surface. In the wire-bending step I set the dihedral to the nose cone top or about 2.9". After the installation of the Main Rubber Actuators I rechecked the dihedral. Now it was about 1" above the nose cone for a dihedral of 3.9". The application of the main rubber actuators deflected the wire hinges enough to change the dihedral a total of 1" more at the tip.

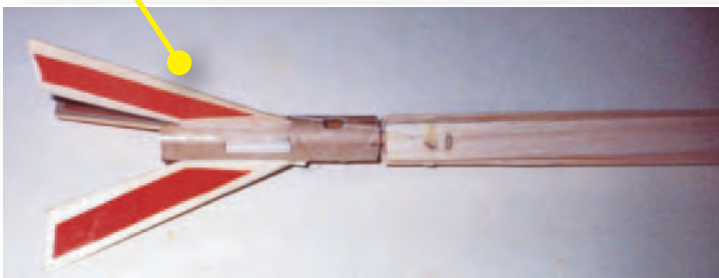
Photo #4 reveals how the blades are deflected the addition 1" to a total of 3.9" by the flexing of the wire hinges after the Main actuators are installed.



Flight Prep (Motor and Thread)

The motor is friction fit with tape and secured with an outside wrapping of tape. You tape one end of a piece of thread and run it through the both vent holes and wrap it around the blades in the launch position one and a half times. The thread is then routed through the vent holes again and taped to the other side. The ejection charge burns the thread and the blades open to normal flight position and the rocket begins to spin.

Photo #5 shows the folded blades held in place by the thread running through the vent holes and around the blade ends.



Flight Profile (Motor selection, Flights and Recovery)

Note that Rose-A-Roc is so light and streamlined that a 1/2A motor is on the motor list. The bare finished weight of my Rose-A-Roc is a mere 0.7 oz. or 22 grams. The kit offers a small fin pattern for those committed to just flying 1/2A's or A motors.

If the heavier and wider Roto-Roc could be lost on B's and C's, I would guess an equally tuned, sleeker and lighter Rose-A-Roc could do more. If it is a successful build I probably will lose it too.

Photo #6 has the almost stock Rose-A-Roc on a launch pad. Note the thin frontal and side profile to this competition rocket.



In Summary (Kit Assembly and Parts Modifications)

What I did to modify the kit or what I would do to the next kit is: First, I would make sure the wood for the blades and fins are what I want, or I'd replace it. Check the dowel for straightness. They give you enough rubber to make 11 blade actuators. I would make them longer so the 3/4" stretch is not so hard. I'd test one length first and then make them all the best length. I'd install them with the straight T-pin and make the stretch in one fast attempt. If I didn't quite get there, ok. Yes, I would make the channel formed hinge support out of 3/32" hard balsa again. (See Important Future Changes above for using a flat "U" hinge and building in the negative incidence.) I would chamfer the edges and make a recess slot for the main rubber. Then again, I might just use "S" hooks and regular rubber bands for storage and travel instead of the stock actuators. The Main Hub Assembly would be as I finally assembled it. I would do it one blade and one pair at a time. I would hand-twist each pair of 22 AWG holding wires. I would cut them to a 1/4" length and then just snug them up with pliers. Using the CA nozzle over the twisted pair, I would apply CA to both the wires and the access holes, and do this to each of the following 5 twisted pairs. The twisted pairs would then be cut prior to gluing the Cap Disk, and would be cut to a height less than the Cap Disk thickness. Finally, I would glue on the Cap Disk and pot fill the square holes. If I had to repair the unit I'd drill out the 22 AWG wires with a small bit and enlarge the access holes. The 22 AWG wire would be replaced with heavier wire that would allow for better tightening. (Maybe that should be done from the start.)

In Conclusion (Recommendations)

I liked the looks of the kit from the start. It is lightweight (mine is 0.7 oz. or 22 grams), streamline, and delicate with a unique design. It's a complex but good kit.

Photo #7 The Rose-A-Roc full up in flight position. Note how delicate a model this kit produces.



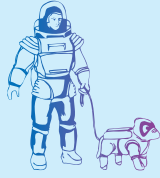
Good Luck and happy sailing!

Ken Jarosch
NAR 56442 SR
TRA 10290
MASA 148



Reporting Malfunctioning Rocket Engines

Another Fine MESS



Commercially-made sport rocket engines are designed to be safe and reliable. Before they can be sold they have to pass rigorous performance and reliability testing specified by the National Fire Protection Association and conducted by the NAR Standards & Testing Committee.

When one of these engines fails, the NAR needs to know about it so that if it happens repeatedly they can ensure that the manufacturer is doing something about the problem.

Malfunctions can include nozzle blown out, ejection end blown out, casing split, burning propellant ejected, casing burned through, no ejection, ejection delay inaccurate, or other failures.

If you have a model or commercial high power rocket engine operate abnormally at a launch, please report it through the NAR's "Malfunctioning Engine Statistical Survey", using the online form (MESS Report) on the NAR website <http://www.nar.org/NARmessform.html>. If you can't access the on-line form, the following information can be emailed to messform@nar.org or mailed to MESS Survey, c/o NAR Headquarters, PO Box 407, Marion, IA 52302:

Engine Data:

Manufacturer, Engine Type (e.g., C6-3, D12-7), whether the engine is reloadable or single use, Date or other code on casing (e.g., 10X6) (On some engines this code may be located on an endcap that is destroyed during operation. Check other engines from that same package, if any.)

Failure Data:

Date of Failure, Geographic Location, Approximate Temperature, type of failure (e.g., Nozzle blown out, Ejection end blown out, Casing split, Burning propellant ejected, Casing burned through (describe where), No ejection charge (cap retained), Delay inaccurate (estimate actual delay), or describe other failure. Also state whether or not the failure was reported to the manufacturer and whether or not you may still have this engine or other engines from the same pack.

Be sure to include any additional comments such as how long the engine burned before failure, etc.

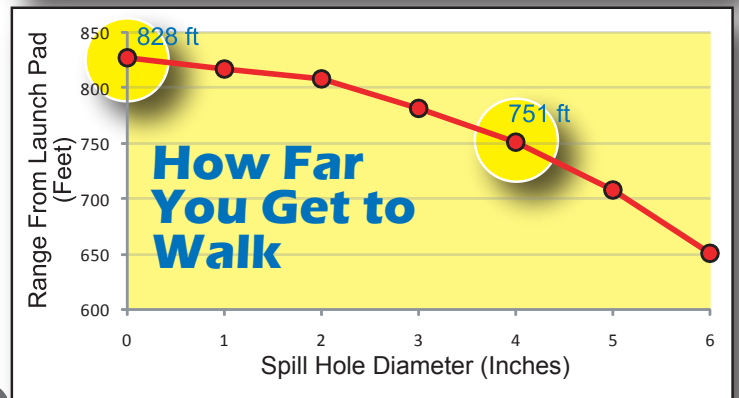
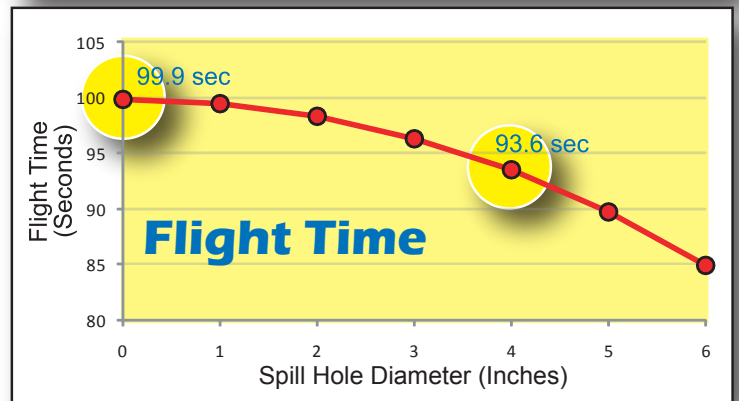
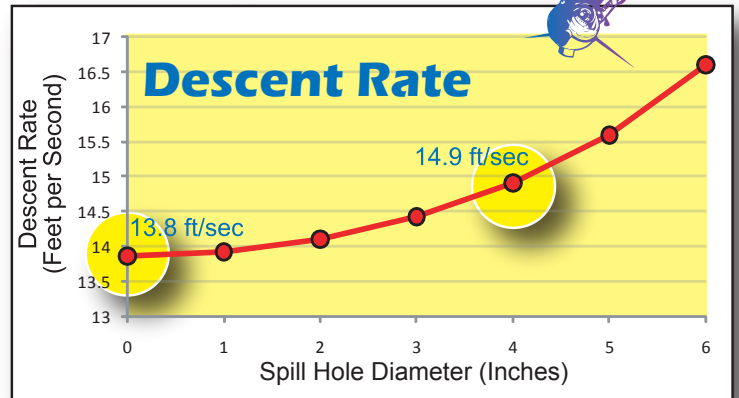
Also, be sure to include your name, address, telephone number, email and your NAR number (if you are a member).



Why Cut A Hole in a Perfectly Good Parachute?

Cutting a spill hole in a parachute will increase the descent rate, which in turn, reduces the overall flight time from launch to touch down. When flying in breezy conditions, shorter flight times could mean the difference between recovering your rocket and losing it to the Corn Gods.

The examples below (using simulations run on RockSim 9) assume you are flying a typical Estes Alpha on a C6-5. With an 8 mile per hour wind and a 12 inch parachute, you can expect that the rocket will land 828 feet from the launch pad. If you were to cut a 4" diameter spill hole in your parachute, you can cut down your walk to about 751 feet. In an open field that shouldn't be a big deal, but in a smaller launch site, that could keep your rocket out of trees, a corn field or off somebody's roof top.



MASA's 2008 Holiday Party Report

By Alan Estenson

On Friday evening, December 19, more than 30 MASA-ites gathered at the Chaska Community Center in the Sun Room for the annual club holiday party. There were all sorts of potluck goodies to eat. Plus, rockets and mementos to look at. The party started around 6pm and ended around 9pm.

A big thanks to Lyle Merdan for arranging the use of the room! Thanks to everyone who attended!

The annual MASA gift exchange game was once again a fun time with more than 20 people participating.

Following MASA tradition, club president Alan Estenson presented a few 2008 MASSY Awards and thank-yous.

A thank-you to Rick Vatsaas for his work as Secretary/Treasurer. Rick was presented with a framed art print of a vintage-style rocket.

A thank-you to Jeff Taylor for his work as MASA Planet editor. Jeff was presented with a framed enlargement lift-off photo of his 2008 kitbash rocket.

A thank-you to Carol Marple for her work as Vice President and her stupendous job as NARCON 2008 Director. Carol was presented with a framed photo of her with Vern & Gleda Estes and a certificate of appreciation.

Rocketeer of the Year - presented to Caleb Boe. Simply put, Caleb had quite the year. He was at pretty much every MASA event. He was an active TARC team member. He went to his first-ever NARAM and brought home some impressive medals - including a 1st in B-division R&D. Plus, he was part of the exclusive group who built Saturn 1b's for the Apollo 7 40th Anniversary, and the even more exclusive group who got their rockets back! Caleb was presented with a framed certificate of appreciation, and an Apollo launch vehicles poster. Congratulations!

Two Prang Awards were presented to the unlucky winners: Honorary Prang Award: Mark Thell, for his CATO of a vintage Estes 2-stage Omega / Cineroc at NARAM 50, right in front of Vern Estes (and everyone else)!

Prang of the Year Award: Lyle Merdan's FlisKits "Frick -n- Frack" on C6-0 to C6-0 at the August launch. Lyle launched this 2-stage saucer as part of the annual Great UFO Drag Race. It ignited, boosted, turned horizontally into the 10mph wind, staged, and powered itself into the ground right at the flight line (suffering minor damage). In honor of this recognition, Lyle received the traveling Prang Trophy (a copy of the William Shatner Estes video and the rocket sand pile set) to hold for 2009.



Holiday Party Door Prize Winners

(The following prizes were donated by Hub Hobby Center.)

Ethan Erpelding - Estes Der Red Max kit

Dwayne Shmel - Estes Rock-It kit

Cindy Whitaker - Revell Nike Hercules plastic model kit

Nancy Schaffhausen - Estes ARV Condor kit

Matthias Gibbens - Estes Sizzler kit

Ted Cochran - Estes Nova Payloader kit

Jeff Taylor - FlisKits Over Drive kit

McKenna Taylor - Semroc My Boid kit

Philip Gibbens - Semroc My Boid kit

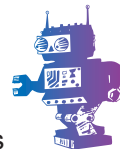
Kathy McDermott - Quest QT Glider

Carol Marple - DynaStar 36" parachute

Renee Gibbens - pack of Estes B6-4 engines

David Whitaker - pack of Quest B6-4 engines

David Schaffhausen - pack of Quest B6-4 engines



(The following prizes were donated by a mystery rocketeer.)

Art Gibbens - Quest SPEV UFO kit with C6-0 engines

Amy Whitaker - Quest D5-0 engine

Alyssa Taylor - Estes Mosquito kit



MASA's Tenth Anniversary Year

2008 Year in Review

By Alan Estenson

9 meetings plus the summer picnic and winter holiday party. Thanks to the meeting presenters: Glen Overby, David Whitaker, Todd Schweim, and Rick Vatsaas

Thanks to all the TARC mentors!

12 club launches in 2008: 903+ flights, 1005+ engines burned, 22,136 N-s of total impulse. The total number of MASA flights to date is over 9,000!

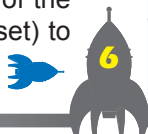
MASA donated rockets to NARAM 50 for the "Fly-It / Take-It". Thanks to Carol Marple for organizing. We'll also be donating rockets in 2009 for NARAM 51.

The LAC trophy for best NAR section newsletter was awarded to the MASA Planet. BIG thanks to editor Jeff Taylor! (Jeff brought the trophy to display at the party.)

Four MASA members - Caleb Boe, Carol Marple, Jeff Taylor, and Mark Thell built Saturn 1b's for the Apollo 7 40th Anniversary event. Caleb and Carol got theirs back because they were selected as two of the best three rockets at the event. Congratulations! (Caleb and Carol both brought their Saturn 1b's to display at the party.)

Thanks to those who organized and ran contests at club launches in 2008: Buzz McDermott, Andy Heren, and Art Gibbens.

NARCON 2008! For the second year in a row, MASA hosted the national convention. The core staff were Carol Marple, Jeff Taylor, Mark Thell, Ted Cochran, Alan Estenson, David Donovan, and Andy Heren. Thanks also to everyone who helped out at the convention!



Apollo 7 40th Anniversary Celebration Pictures

Dallas, Texas - October 17, 2008

Photo by Kate Mackley/LAUNCH Magazine



Apollo 7 Astronaut and Special Guest of Honor Walt Cunningham with Saturn 1B Model Built by Caleb Boe



This photo collection from the Apollo 7 40th Anniversary Celebration were taken by LAUNCH Magazine's Kate Mackley, and were provided for use in the MASA Planet by LAUNCH Magazine Editor-in-Chief Mark Mayfield. Subscribing to LAUNCH Magazine is as easy as logging onto: www.launchmagonline.com



MASA PLANET



Photo by Kate Mackley/LAUNCH Magazine

Apollo 11 Astronaut Neil Armstrong, Apollo 8 Astronaut Bill Anders, and Apollo 12 Astronaut Alan Bean (with his back to the camera) with Saturn 1B Model Built by Caleb Boe (Note the actual Apollo 7 Command Module in the background)



Photo by Kate Mackley/LAUNCH Magazine

Line of Saturn 1B Models

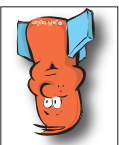




Contributors to this issue:

- Alan Estenson
- Ken Jarosch
- Kate Mackley (LAUNCH Magazine)
- Mark Mayfield (LAUNCH Magazine)
- Jeff Taylor

REMEMBER TO CHECK OUT
WWW.MASA-ROCKETRY.ORG
FOR THE LATEST LAUNCH DATES, MEETING
DATES AND OTHER IMPORTANT NEWS.



ADDRESS SERVICE REQUESTED

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