



Volume 42, Issue 1
January 2026

MARS STAR



MARS STAR has gone digital!!

Contact Jayne Brown at 303-905-9822 or via email at jaynebrown@comcast.net with questions.

MARS Membership Renewal form, page 33

Annual Meeting Flyer, March 11, page 35

MARS Associates: A Social Club for Retirees of LM & United Launch Alliance

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Colo Springs	Doug Tomerlin	719-594-6392
Vandenberg	Eunice Souder	805-218-7605

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Golf	Sandy Mossman	303-730-8378
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REMINDER:

If you move, please give the membership VP a change of address. Also, if you are a snowbird, let us know when you are leaving and when you plan to return so your MARS STAR can be sent to you. It costs us 70 cents for each STAR package returned.

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MARS Associates
P. O. Box 1128
Littleton, CO 80160-1128

MARS Website: <https://www.marsretirees.org>

MARS Facebook:
<https://www.facebook.com/groups/MARSAssociates>

MARS welcomes your submissions. Submissions must be relevant to **MARS**, informative, and **appropriate for this newsletter**. No personal dialogues or opinion pieces will be accepted.

Please submit your article for approval **in advance** to the V. P. of Communications. Articles will be included as time / space allows.

MARS Benefits and Retiree Resources

(MARS Insurance Benefits Plans are only available to MARS Associates Active Members!)

Dental Insurance Plans

MARS Delta Dental of Colorado

Individual Administrative Team – Coverage, Payment/Billing, Enrollment and Changes (changes to bank account information, address changes, etc.).
Ron Rueger 877-516-6512 or rueger@ddpco.com
Jose Rodarte 720-925-4309

Customer Experience Team - Claims and Benefit questions.
800-610-0201 or customer_service@ddpco.com

Vision Insurance Plans

VSP 844-641-6718 or www.vspdirect.com

DeltaVision

800-877-7195 or [DeltaVision](http://DeltaVision.com)
(www.deltadentalco.com/deltavision)

Assured Partners of Colorado – Contact for additional information regarding Delta Dental of Colorado or Vision Service Plan (VSP)
Jon Elmore 303-228-2206

Hearing Aid Discounts

TruHearing (offered by VSP)
877-396-7194 or www.truhearing.com/vsp

Amplifon Hearing Health Care

888-486-4405 or www.amplifonusa.com/lockheed

Pre-Medicare Retiree Information

LM Medical Benefits Open Enrollment
Destination Wellbeing-Employee Service Center Online.
866-562-2363 or lmc.lifeatworkportal.com

VIA Benefits (LM Retiree Medicare Exchanges)

VIA Benefits (Administrator) 844-596-0460 or
my.viabenefits.com/LockheedMartin

LM Retiree Resources – lockheedmartin.com

The following links provide information about LM retiree health plan benefits, pension payroll, and savings plan information:

[Lockheed Martin Service Center](http://LockheedMartinServiceCenter)

[LM HealthWorks Plan](http://LMHealthWorksPlan) – for retirees under age 65

VIABenefits – a new approach to post-65 retiree health care*

[My Pension Payments](http://MyPensionPayments)

[Pension Management Update](http://PensionManagementUpdate) – 06/27/2022

[My Savings Plan](http://MySavingsPlan) (Empower)

[Lockheed Martin Employee Disaster Relief Fund](http://LockheedMartinEmployeeDisasterReliefFund)

*most non-represented, post-65 retirees and their spouses/same-sex domestic partners are eligible. Visit VIABenefits to learn more.

OR HR benefits mailbox, benefits.hr@lmco.com

Cover:

Left – Lockheed Martin's Pre-Apprenticeship Program Earns Statewide Recognition, -- See LM News pg. 26 (Photo by Lockheed Martin)

Right – Holiday Luncheon: Roger Rieger, SGT Diana Ortega, SSGT Travis Williams, USMC, Ken Marts (Photo by Carol Lovelace.)

From the Editor's Desk

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For comments or corrections, contact Debbie or Linda (issue editors) or Dan.



President's Corner

By Jim Pennington

jpennington101.jp@gmail.com

Well, this is my first write-up as the new President of MARS. Before I even start about what we are doing in the future, I wanted to personally thank Ken Marts for the excellent and outstanding job that he has done over the past three years as the MARS President. He elected to stay on board for one additional year to allow me to be better prepared and mentored to take on this new role. I also must thank Roger Reiger, the other board members, and each of the officers as well in this process. If you go back and look at who has answered the call and who is serving in one of the positions, you will notice that many of them have been heavily involved with the organization for a long time. Each of them takes pride in serving the MARS membership and passing their knowledge to the new officers and directors that have come on board. Several of them have also elected to remain as officers going into this new year (Dan Ellerhorst, Charlie Haupt, and Al Nemes). So, thank you!

I step into this role very humbled and look forward to serving every member. So, starting out I wanted to share my key objectives for this term as President:

- Provide a positive experience for all MARS members at our events.
- Be sure that our MARS Leadership team supports our officers and volunteers to make these events successful. (Plan, Execute, Repeat)
- Enhance the MARS organizational outreach to recruit new members. A Must! (Let us help Jayne Brown here.)
- Continue to provide and improve the benefits of membership.

Clearly these objectives will improve the value statement of your MARS membership. I realize that we cannot take our eye off the ball here, so if we are slipping or not meeting your expectations, please let me know.

No job comes without some compromise or making changes. I do not plan to make any wholesale changes, but I do think that we may need to change a couple of things to increase overall participation of our existing members, while also investigating new ways to bring in new members. So, I ask for your help. If you have any ideas, comments, or suggestions, please reach out to me or any of our great officers going into 2026.

Now, I am not the only new officer starting in 2026. Sandy Mossman will be taking over the wonderful job that Linda Duby has been doing for years as our new VP of

Activities. She will have Kathy Hetzel and Terry Lilly supporting this area. Kathy stepped in last year to manage the Special Activities area, while Terry Lilly had oversight of our Happy Hour Events. Both did an excellent job in planning and executing in these areas. Hopefully, you took advantage during 2025 to attend one or more of these events. The year-end Happy Hour event was special because Terry, working with her volunteers and along with Pete Munoz, made the Operation Santa Claus event a huge success! Both ladies have already started their 2026 event planning and have lined up a notable set of events for us. We will continue to develop new events as the year goes on, but we do need some help. Each of the Special Activities events needs an event leader or organizer. If you have some free time or would like to step up and help, please let Kathy know.

Also, with the activities and events, look for Gina Curet to continue to schedule and conduct Informational Sessions in the areas of Retirement, Estate and Medicare Planning. These subjects have been a key interest for our membership. These sessions provide our members with possible paths to consider for their future. Late last year, Gina also conducted our "first" Open House for the numerous benefits offerings that we all have as MARS members. We will repeat this session again in 2026. With these informational meetings, we hope that we will help you get through these complicated matters in an informed way.

Finally, look for us to continue to improve our communication with the membership. Last year, we kicked off the "Satellite," a brief outlook of events and things that are coming up in the next 60 days or so. Dan Ellerhorst and his communications team will also be making slight changes to the website to improve access for everyone.

Looking forward to having an outstanding year and thank you for your support!



Director's Notepad

By Roger Rieger

Chairperson, BoD

rrieger10731@gmail.com

What a great 2025 our Club has had! There were lots of fun MARS functions and activities for our members to enjoy and stay in touch with fellow MARS members. I want to thank everyone who participated in 2025, and especially those who volunteered their time and talents to organize an event. It takes a village! As I look forward

to 2026, your MARS BoD will resume active succession management. With Jim assuming the President position January 1st, the search for a new President-elect will kick off in earnest. We are also seeking two new members to serve on the Board of Directors. These positions are an opportunity to see and have a voice in the internal operations of your MARS club, support an existing officer in their MARS duties and be a part of the succession plan. If you are interested in more actively supporting the club and being a part of the 'sausage making" process please reach out to either myself, Jim, or any of the Board members or officers. Without volunteers the club will cease to exist! As always, the Officers and BoD Meetings, held the first Wednesday of every month at the Red Rocks FCU headquarters building in Southpark, are open to all MARS members. Meetings start at 9:30 and wrap up around 11am. Please join us!



Activities Updates

By Linda Duby
(lindaduby@comcast.net)

The last happy hour of 2025 was held on November 17 at the Lazy Dog Restaurant & Bar. A silent auction for Operation Santa Claus, organized by Terry Lilly, Judy Nielsen and Karen Paulson, was held at the happy hour. The auction was a great success and raised approximately \$6,000 for Operation Santa Claus. Thank you to everyone who organized the auction and to all the members who supported the auction. It was a great way to support Operation Santa Claus.

The Holiday Celebration was on December 3 at the Lone Tree Golf Club and Hotel. We had a great turn-out for the luncheon despite the snowstorm. There were a few cancellations and no-shows due to the weather but we still had 141 members and guests attend. The Lone Tree did a good job with the food and the service. Marine SGT Diana Ortega and SSGT Travis Williams, attended to support Toys for Tots and members were very generous with both toys and monetary donations this year.

This is my last article for the STAR as my term as Vice President of Activities comes to an end. As of January 1, 2026, Sandy Mossman will be taking on the role. It has been a pleasure to organize these events for MARS members during the last nine years. I will be moving into a director position and will continue to support MARS so I am not going away entirely. I look forward to now attending events in a different capacity and hope to see

many of you at the various events during the coming years.



Activities Updates
By Sandy Mossman
(smoss5592@gmail.com)

Sandy here now... I know I have some very big shoes to fill following Linda who has done a wonderful job planning the Annual, Holiday, and Senior Luncheons and Picnic. I want to express our deep and sincere thanks for all she has done and is continuing to do by remaining on the board. I look forward to working with the MARS team and you to help in planning these major activities. Now for some upcoming activities:

The Annual Meeting and Spring Event is scheduled for Wednesday, March 11th, at Heritage Eagle Bend Golf Club located at 23155 E. Heritage Pkwy, Aurora, CO 80016. The speaker has yet to be scheduled but will be from Lockheed Martin. The event also includes the MARS Annual Meeting Agenda for an overview of the past year and a look ahead to 2026. There are three menu selections for lunch to choose from including Chicken Parmesan, Salmon Teriyaki and Grilled Petite Shoulder Tender (beef). Salad, dessert, and coffee are included in the price. A cash bar is available for those who prefer an adult beverage. Total cost is \$30 per member plus one guest and \$65 for each additional guest. Visit the MARS website or Facebook group or see the flyer on page 35 to register and pay for this event.

Also, Save the Date for the first MARS Happy Hour of the year which is scheduled for March 3rd at the Sportsbook Bar and Grill in Highlands Ranch. More information on the event and how to attend will be available on the MARS website and Facebook group shortly.



Business
By Gina Curet
(orion43@comcast.net)

Finally! I think we are going to have a winter in Colorado...and those of us who ski are very happy!

I trust that everyone selected their dental and/or vision benefits by the deadline; however, if you missed it due to

unforeseen circumstances, please reach out to me. It appears like many members took advantage of the new \$2,500 high annual max plan with Delta Dental and I am pleased that we were able to provide this option.

We've got another great lineup this year for Informational Sessions as follows:

Understanding Medicare (2 sessions) - for those who are getting close to 65 years old and need to know the ins and outs of Medicare. Location: Red Rocks Credit Union (RRCU), 8195 Southpark Lane, Littleton from 9:30-10:30 AM MST.

- Tuesday, 3/31
- Tuesday, 9/8

Informational Sessions (online; dates are TBD)

- Taxes in Retirement: New Tax Law Changes and How They Affect Your Retirement
- Pinching Pennies in Retirement: 7 Common Ways Retirees Run out of Money in Retirement (and How to Avoid Them Now)
- Life After the Paycheck: What Changes When Work Ends
- The AI Gold Rush: What the Future of Jobs, Money, and Retirement Really Looks Like

Estate Planning (2 sessions) (RRCU; dates are TBD)

2027 Open Enrollment Online Session and Open House – back by popular demand

- Tuesday, November 10th Open Enrollment Info Online – 9-10 AM MST
- Tuesday, November 17th Open House – 10-12 MST at RRCU

All benefits and related information are on our MARS website under "Benefits", with 12 tabs that include specific topics such as: Dental, Vision, Hearing, VIA Benefits, Informational Session presentations and many others. These pages are updated frequently, so please check them out and sign up for one or more of the informational sessions. We can always learn more.

As always, if you have any questions, please do not hesitate to reach out to me at orion43@comcast.net. The benefits vendors and I are looking forward to seeing you at our Annual Meeting!



Communications
By Dan Ellerhorst
(marsretirees.org)

We are headed into a new year, and I and my merry elves on the Website Team have decided that things were getting a little too boring on the web software products front. So, we ordered up a new batch of software for Christmas and are hammering and sawing away in the workshop to re-build our MARS Associates website, into a new and improved version.

In all seriousness, although we felt that great steps towards our goals of a more up-to-date look, improved maintainability, and shared web support workload were made when we re-tooled the website two years ago, we have learned a lot, found some areas that definitely need improvement, and identified new products to explore. And when volunteers approach you and offer to spend a lot of their own time to make things better – it is hard to refuse them.

Our goal is to provide a new version of the MARS Associates website with the same functionality and as much as possible, the same layout and navigation paths as the existing website. A draft of the new homepage (with menu bar) looks like this:

The screenshot shows the top navigation bar with links for Home, About, Benefits, Events, Membership, Clubs, and MARS Now & Then. Logos for Lockheed Martin, MARS ASSOCIATES, and ULA are displayed. The main content area features a welcome message: "MARS ASSOCIATES WELCOMES YOU!" Below this is a news item: "News - 12/4/25 SIP & PAINT WITH MARS: FEBRUARY 19". A small image of a hand-painted wooden sign is shown. At the bottom, there is a search bar and social media links for MARS ASSOCIATES.

We are deep into the process of porting our website based on DreamHost, WordPress (and a handful of other loosely integrated products) to an equivalent one based primarily on the Squarespace integrated product set. We were motivated to undertake this effort for a number of reasons. First, it will improve website responsiveness both for users (it is faster) and developers (it is MUCH faster). Second, managing licenses, updates, and

integration of separate products from separate vendors can get complicated and labor-intensive. A single, simpler, integrated product that meets our simpler requirements is desirable. Finally, it does seem to provide more direct and intuitive ways for us to generate content for the web pages. This means less training (and frustration) for the website maintainers. In particular, Squarespace pages integrate smoothly with certain products stored on a Google drive and any changes to those underlying data files are automatically reflected in the linked pages.

In summary, we are convinced that Squarespace offers us all the capability we need with a big reduction in complexity and maintenance effort. And if you don't believe me, here is what ChatGPT says:

Quick Recommendations

Choose DreamHost + WordPress if:

- You want full design and functional control
- You plan to scale or add complex features later
- You want deep SEO control
- You want powerful eCommerce

Choose Squarespace if:

- You want the simplest, most polished experience
- You don't want to manage updates and security
- You want a beautiful site fast
- You want predictable pricing

Bottom Line

Criterion	Best Choice
Ease of use	Squarespace
Flexibility	WordPress
eCommerce	WordPress
Templates & design	Squarespace (easier), WordPress (more variety)
Maintenance	Squarespace
Scalability	WordPress
SEO	WordPress
Support	Squarespace

We will keep you posted and provide ample warning when a switchover is imminent.



VP-Membership

By Jayne Brown
(Jaynebrown@comcast.net)

MEMBERSHIP RENEWAL

The new year brings us to the time for membership renewal. The renewal form is contained in this issue of the STAR on page 33. In addition, the online renewal form can be accessed from our website, www.marsretirees.org. Just click on the Membership tab, and then Membership Renewal. This will allow you to pay via credit card and save the hassle of mailing your renewal form and payment via USPS. Alternatively, a pdf version of the renewal form can be accessed from the same page. You can type directly into this form from your web browser and print it out or print the blank form and fill it in. Either approach should work. Since so many of our communications are presently via email, please include your current email address even if you haven't changed it recently. This will help ensure we have the correct address on file. Remember that your membership dues include a spouse or significant other if you have one, so please make sure to add their name to the form so that we have an accurate count of our members.

Make sure to check the correct membership type at the bottom of the form and pay the correct membership dues for your situation.

If you have any questions, contact Jayne Brown at Jaynebrown@comcast.net.

MEMBERSHIP STATISTICS

As of December 31, 2025 there are 2,078 total members including spouses and significant others. That number represents 1,209 MARS Associates active memberships and includes 434 senior memberships and 83 "Super" senior memberships. Super Seniors are those members that are 90 years old or more. Starting with the 2026 membership year those super members will receive their membership for free.

We have a total of 93 new memberships for the 2025 Calendar year.

Please welcome the following new members who joined in the 4th quarter of 2025:

Colorado

Aurora	Susan Sonnemaker Kurt & Jennifer Giesaking Jill Walker
Brighton	John & Kerry Olin
Castle Rock	David Markham
Centennial	Ken Romer David & Amy Padgett

Colorado Springs

Robert Johnson
George German
Richard Kasuda

Denver Joseph & Paula Suhr
 Donald Speranzini

Golden Scott & Jennifer Hovarter

Highlands Ranch
Michael & Patricia Kritz
Paul & Yolanda Brennan
Thomas & Carol Rau
Kevin & Cynthia Remaley
Carolyn Adamo
Joe & Helen Lenda

Lakewood Alan Hovland
 Gary & Tammy Parham

Littleton Whittak & Mercedes Huang
Nancy Jack
Susan Vuksic-Medina
Michael Ritchie
Guy & Tami Conrad
Wayne Langley

Other States

Florida

Naples Eric & Laurie Brunner
Punta Gorda Rebecca Bramlage & Pam Gussio
Seminole Roxanne Segredo

Maryland

Olney Lisa & Damon Ehrlich

New Hampshire

Sandwich Derek & Denise Meredith

New Jersey

Maple Shade Karen & Jeffrey Hoch

New York

Vestal David & Susan Bailey

Pennsylvania

Collegeville Diane & Robbie Moll

Virginia

Reston Lois & Steve Crawford

Wyoming

Thermopolis Les Mikkelson

NEW MEMBERS

Do you know someone who recently retired from LM or ULA? First year membership in MARS is free for 2026. Direct them to the website for more information or have them contact one of the Officers or Directors.

MARS Associates is charged for forwarded mail!!

Please contact us with any info on changes of address. When USPS provides us with a new address for mail they have forwarded the USPS charges MARS Associates. Please remember to include the MARS membership team in your list of people to notify when you have a new mailing address, phone number or email. We want to make sure all communications are timely.

Special Activities

By Kathy Hetzel
(hetzelkathy23@gmail.com)

Special Events for MARS Members

It's the start of a brand-new year and that suggests great new things to come! Special Activities have many unique things in store for 2026! Our team has been busy planning and organizing a fresh new slate of events. We are very excited to bring them to the MARS membership and hope you will join us on several of these outings. Sign-ups will be through the secure MARS payment portal on the club website and as always, it is first-come, first-served. Don't wait until the last minute to sign up!

I want to highlight the events that are coming in the next few months and give everyone a chance to participate. Sign up details for future activities will be communicated via the club website at www.marsretirees.org, Facebook page and the monthly Satellite email.

1) **February 19** brings us to **Board and Brush Creative Studio** in Highlands Ranch. This is NOT your typical "sip and splash paint on canvas" activity. This is a wood workshop where you will create a unique project with real tools and supplies – drills, hammers, sanding, staining and painting. You will leave with a one-of-a-kind project you made with your own hands. Beverages are available for purchase at the studio. Check out Board and Brush's website for the projects they offer -

[Wine and Paint - Wood Sign Studio Workshops | Board & Brush](#) Sign up here - <https://marsretirees.org/2025/12/21/sip-paint-with-mars/>

2) **Munch and Mingle** is back! Our social time and lunch event will be at Black+Haus Tavern in downtown Littleton on March 23. We will gather at 11:30 am for a delightful lunch where you will order off a limited, set menu. Come join in the good food and the marvelous company of your fellow MARS members.

Month	Event	Lead
February 19	Board and Brush Studio	Janet Adamo
March 23	Munch and Mingle Black+Haus Tavern	Heidi Urie
April 18	Leopold Brothers Distillery	Terry Lilly
May 4	Center for Colorado Women's History	Laurie O'Shea
July	Family Day at the Rockies	Jim Pennington
July	Central City Opera "Ballad of Baby Doe"	Sue Janssen
August	Skyline Hunting and Fishing Event	Mitch Arnold
September	Celebrate Colorado's 150 th Birthday State Capitol and History Colorado	Need Leader
October	The Wild Animal Sanctuary	Carolyn Malaby
November	Hammond Candy tour	Bridgid O'Brien

3) **Leopold Distillery Tour** on Saturday afternoon, **April 18**. We will embark on a fun, educational private tour of this local Colorado distillery. The tour will cover floor malting, fermentation, distillation and aging of the various products. Samples and light snacks will be offered. The afternoon will finish with an optional dinner at a nearby restaurant, at your own expense.

4) Our **May 4th** event will be at the **Center for Colorado Women's History**, located in a spacious historic home in the heart of Denver, and is part of History Colorado. The museum is the first state museum focused on the past, present and future achievements of Colorado women. The docent-led tour is an hour long and an optional lunch will follow at a nearby restaurant, at your own expense.

Special activities can always use a helping hand. We plan events several months in advance and ask event leaders to lead just one event per year. The time is minimal and your fellow MARS members will appreciate your planning efforts. We are now looking to start planning for 2027, so if you have an idea of what to do or where you like to go, we'd love to hear from you!! Contact Kathy Hetzel at hetzelg@msn.com.

MARS VOLUNTEER ACTIVITIES — 2025

Judy Nielsen,
Volunteer Coordinator
(jniel129@gmail.com)

Below is a recap of the activities our MARS members volunteered for in 2025:

The Havern School Science Fair (Judging) -
March 07

Denver Public Schools Community Resources Science Fairs (Judging) – April 7, April 11, April 25 & May 03

Young Minds at Work – April 24

Bike-to-Work Day – June 25

The Waterton Auto Show – August 21

Rocky Mountain & Front Range BEST Robotics Competition (Judging) at STEM Highlands Ranch & Rangeview High Schools – September 08

Waterton Campus Tour – September 18

The LM Space Fun Run – October 3

As you can see, there are many opportunities you, our MARS members, can become involved in.

We look forward to the opportunity to support many of these activities again in 2026.

If you are interested in volunteering for upcoming events, please send your name, cell phone and email address to Judy Nielsen at jniel129@gmail.com. Volunteering helps keep us physically healthy and mentally fit, and we believe it provides joy and comradeship with former colleagues.

A sincere thank you to all MARS volunteers!

Pacesetters Club

By Bill Wise

wisewj@aol.com

As we wrap up 2025, a big thanks goes to all that made 2025 a wonderful year of camaraderie and senior information sharing. We were treated to relevant topics that you requested presented by subject matter experts. The 2026 agenda has been carefully crafted to provide you with informative presentations tailored for you seniors. The presenters are awesome with many being our associates from our Lockheed Martin careers.

We will continue to be hosted by the Lansdowne Grill in Highlands Ranch. They made us feel at home at every meeting in 2025.

For more details on our club and extensive details for planned events, please go to the MARS website pulldown tab: [<https://marsretirees.org>](https://marsretirees.org) > Clubs > PACESETTERS. Please provide your feedback or questions to Bill Wise, president, 720-636-5823, wisewj@aol.com.

PACESETTER SCHEDULE FOR 2026

The 2026 agenda for your planning.

- **January 14th, 2026 – Subject: Advancing our Understanding of Earth, our Solar System and Beyond** Presenter: Tonya Ladwig, Vice President & Deputy for the Commercial Civil Space line of business for Lockheed Martin.

She is a strong advocate of NASA's ARTEMIS mission. She will speak to the current Space Systems Organization, the business unit products and goals.

- **February 18th, 2026 – Subject: ORION AVIONICS** Presenter: Mr. Paul Anderson, Sr. Director, Orion Program, reporting to Tonya Ladwig.

In this position, Paul is the Deputy Program Manager on the highly visible Orion/Artemis Programs, programs across LM Space. Paul will also describe some of the advanced aspects of the ORION Avionics

- **March 18th, 2026 – Subject: Orthopedic Joint Replacement Considerations** Presenter: Dr. Jason Jennings MD, DPT.

Dr. Jennings is a board-certified orthopedic surgeon passionate about helping his patients achieve their activity goals. Dr. Jennings is a volunteer surgeon for Operation Walk Denver, a charitable organization which provides free surgical treatment for patients in developing countries. He is also a member of Operation Walk USA,

a nationwide charitable program that provides qualified patients with free hip and knee replacement surgery.

- **April 15th, 2026 – Subject: New U.S. Driving License Rule for Seniors Started October 2025 – What Over-70 Drivers Must Know** Presenter: Colorado Department of Transportation: Presenter: *TBD*

By the numbers, the math is impossible to ignore. Nearly half of Americans over 65 have active licenses, according to the Federal Highway Administration. This new framework wasn't designed to strip away freedom. Rather, it mirrors preventive medicine: catch issues early, adjust where needed, and keep people driving safely for as long as possible. This session will interactively present the New Senior Driver Requirements (Age 70+).

- **May 20th, 2026 – Subject: Colorado Air Force National Guard** Presenter: Colonel *TBD* of Space Base Delta 2 at Buckley Space Force Base, Aurora, Colorado.

The presentation will include the mission of the Colorado Air National Guard (ANG). It is the Air Force component of the U.S. National Guard, a reserve military force with both state and federal missions, and its members train part-time to serve their states and the nation.

- **June 17, 2026 – Subject: Estate Planning Strategies** Presenter: Mercer Advisors, Susan Travis, CFP, AEP, CTFA

All phases of estate planning for seniors will be explained interactively.

- **July 15, 2026 – Subject: Exploration and Beyond"** Presenter: James Crocker, Vice President and General Manager, Retired, Lockheed Martin Space Systems Company. Mr. Crocker will discuss the question of why it's been over half a century since we left the moon and what might need to change to keep history from repeating!

Mr. Crocker played a major role in the design and construction of the largest astronomical observatory in the world, the Very Large Telescope (VLT) in Northern Chile and served as project manager for the construction of Sloan Digital Sky Survey (SDSS), considered one of the most scientifically important projects in astrophysics.

- **August 12, 2026 – Subject: How do Drones Work?** Presenter: UTUBE lecture video. A drone is a remotely piloted or autonomous flying robot, formally known as an Unmanned Aerial Vehicle (UAV) or Unmanned Aerial System (UAS).

This is an excellent UTUBE video with a subject matter expert giving a lecture on Drones. He covers all

engineering design aspects and tradeoffs. Drones have a wide range of applications, from military surveillance and combat to civilian uses such as aerial photography, crop monitoring, package delivery, search and rescue, and recreation. They rely on advanced technology like GPS, sensors, cameras, and AI for flight control, with smaller models often using battery-powered propellers and larger models using jet or combustion motors.

• September 2026 – no presentation "MARS Picnic"

Don't miss the MARS event of the year with amazing prizes.

• October 14 2026 – Subject: Healthcare Research

at Anschutz Research Presenter *TBD* Anschutz is a major medical research organization in Denver, Colorado. Artificial intelligence (AI) is a powerful and disruptive area of computer science, with the potential to fundamentally transform the practice of medicine and the delivery of healthcare.

In this presentation, recent breakthroughs in the application of AI in healthcare provide a roadmap to building effective, reliable and safe AI systems, and discuss the possible future direction of AI augmented healthcare systems.

• November 18, 2026 – Subject: What you need to know regarding Colorado "Health Directives" – Do you need them? Presenter Chris Scholari

There are several Colorado directives relating to incapacity and end of your life. They are titled Medical Durable Power of Attorney, Medical Treatment Living Will, General Durable Power of Attorney and Authorization for Use and Disclosure of Protected Health Information. This presentation will explain each document and its purpose. Chris is a member of the Colorado Bar Association's Trusts and Estates Section and Tax Section and is currently pursuing a Master of Laws (LLM) degree in Taxation from the University of Denver, Sturm College of Law

• December 2026 – No Presentation "Holiday" MERRY CHRISTMAS!

The next quarter, we are scheduled to play on 16 January, 20 February, and 20 March 2026.

You'll need to pack a lunch, as we stop midday to eat, and then resume playing. The club provides the cards and required items for the games. The fee for the Buck Center is \$2.00 for South Suburban In-District and \$3.00 for out-of-District. There is also a small fee to the club (which helps with supplies and the year-end Holiday party).

We have couples, as well as singles, playing. If you're a single, invite a friend to be your partner. Your partner does not need to be a member of MARS to play. This quarter we welcomed a new member to the club, Bob Knickerbocker.

Each month, an email is sent to Bridge Club participants about the play that month. Contact us to be added to the email list. A response email is required to reserve a place at the tables or to inform us you're unavailable. There's always room for more players, as the room will accommodate up to 6 tables of bridge.

Check out the MARS website under "Clubs/Bridge Club" for more details.

If you want to join us, or have any questions, please contact any of the following Bridge Club Officers:

Presidents:

Dave & Kathy Martz, 303-229-1331

Vice-President:

Bill Kacena, 303-973-2685

The 4th Quarter 2025 winners are as follows:

14 October (3 1/2 tables)

1st – Betty Hirst & Sandy Mossman

2nd – Leo Johnson & Joni Rosenberg

3rd – Bob Knickerbocker & Carol Enslow

4th – Ernie & Cecile Berliner

21 September (4 tables)

1st – Bill & Mavis Kacena

2nd – Ed & Laurie Bock

3rd Tied – Betty Hirst & Wayne Jackson
and Dave & Kathy Martz

19 December (4 1/2 tables)

N/S 1st – Bob Knickerbocker & Carol Enslow

N/S 2nd – Ed & Laurie Bock

E/W 1st - Dave & Kathy Martz

E/W 2nd – Mark & Jan Ugale

Bridge Club

By Dave & Kathy Martz
martz20@comcast.net

The Bridge Club is open to all MARS members and their guests. We play social, not tournament bridge, with light conversation and laughter during play. We play at the **Buck Community Recreation Center in Littleton, on the 3rd Friday of each month, from 10 AM to 2 PM.**

Car Club

By Roger Rieger
(rieger10731@gmail.com)
303-912-6217
Dave Ernst
(Dave.Ernst.157@gmail.com)
(303)-588-2747

Winter is supposedly here – although as I look outside it is currently 68 degrees F, the sun is shining and there's not a hint of snow on the ground or in the immediate forecast! The "half full" side of this weather is that it has allowed for an extended driving season, hope you have been able to enjoy it! I finally got my Dad's 1965 Chevy truck on the road and have been able to take it to a couple Lonetree Cars & Coffee's. I hope to finish the camper refurbishment in time for the MARS Car show in September.

Keep an eye open for this year's Club "kick off" meeting. Exact time and place is TBD but expected to be end of April, and will be communicated in the April MARS STAR, on the MARS Facebook page as well as on the MARS website. Stay tuned!

For those in town, the Car Club continues to get together at the Lonetree Cars and Coffee, held the first Saturday of every month at the Rio parking lot in Park Meadows. This is always weather dependent this time of year. You don't need to be a club member to come out and show off your ride, just have an interest in cars and like-minded car nuts!

Stay in touch with the Car Club through our MARS Car Club Facebook page, MARS Associates website link, or by contacting either Dave or myself to get added to our email distribution. There is nothing special you need to do to join the MARS Car Club, all it takes is to be a MARS member in good standing, and a desire to have fun! If you are interested in joining the club, please drop either Dave or myself an email, we'd love to have you



Golf League

Sandy Mossman
(smoss5592@gmail.com)

encouraging MARS Associates members — both men and women members — to join. In the past few years, we have added several new men and women members and want to continue the trend in 2026.

Our golf league invites you to participate in our spring/summer/fall 18-hole golf league which plays on Thursday mornings, April through October. Our league play is exclusively at Englewood's Broken Tee Golf Course with first tee time between 7:30 and 9:00, depending on the time of the year. Our primary purpose as a club is to realize a pleasurable golfing experience by promoting social interaction and friendly competition using the certified USGA handicap system.

Tentatively, this year's kick-off meeting is March 5th, 10:30 AM, at Wyatt's at Broken Tee (2101 W. Oxford Ave). Check the MARS calendar in the next few weeks to verify the date. We encourage you to attend this meeting as we will review our league's order of business, and basically how the league 'works'. However, if you cannot attend the kickoff meeting, please, contact Lisa Cox or myself for more information and/or to sign up.

Lisa Cox - lisajcox@earthlink.net

Sandy Mossman - smoss5592@gmail.com

Broken Tee Golf Course is an 18-hole championship course with some tight fairways and some small lakes to challenge the average golfer. It offers affordable golf rates (for 18 holes: golfers age 62+ \$34 green fee, under 62 \$42 green fee), which is hard to beat in the region. If you choose to ride, golf carts are \$23 per player. The great thing about our league is that there aren't any up-front green fees; you only pay when you play. There is a one-time yearly league fee of \$80, though. Come join us this season for fun and exercise!

If you have any questions regarding our golf league, please feel free to view our MARS website: www.marsretirees.org and click on "Golf" under the "Clubs" tab, or contact me at (303)730-8378.

Hiking Club

By Beth King
bethking80111@hotmail.com

It was a gorgeous fall day for a great group of hikers on the Platte River on November 13. The hike was an easy 3.5-mile loop including a visit to the Hudson Gardens. We followed it with a yummy lunch at the Platte River Bar and Grill. This was the last hike for 2025 and we plan to resume in April 2026.

We continue to need volunteers to organize hikes in 2026. It's very easy to do and we have a great "how to" guide

available. If you wish to join the MARS Hiking Club, contact Beth King at bethking8011@hotmail.com who will add you to the club distribution list. Please provide your email address, home phone and cell phone for the roster. The schedule of hikes is posted on the MARS website (<https://www.marsretirees.org>). See all you hikers in 2026!



Left to Right – Neal King, Dan & Becky Tennessen, Beth King, Gina Curet, Donna O’Neill, Vicky Ellis, Jill Demchak, Andy Ellis, Debbie Mues, Heidi Urie, Ruth Brown, Lenny Demchak, Don Sanchez



Left to Right – Gina Curet, Donna O’Neill, Heidi Urie, Dan & Becky Tennessen, Lenny & Jill Demchak, Vicky Ellis, Andy Ellis, Pat & Ellen Albery, Ruth Brown, Debbie Mues, Beth & Neal King, Don Sanchez

have a presentation and competition, along with discussions.

We meet September through May on ZOOM. We do not meet in June, July and August, as most members travel. That provides for some wonderful travel presentations. December we get together for a festive holiday luncheon at a local restaurant.



MARS Photo Club Enjoys Holiday Luncheon at Cafe Jordano

Meetings are at 1 o’clock, the second Thursday of each month. At the meeting we have a presentation, often given by one of the members. Following the presentation, we have a friendly competition of photos submitted by the members. Members take turns acting as judge for the competition. The results of each month’s competition are posted on the club’s section of the MARS website, www.marsretirees.org, as are the club’s schedule and competition rules.

Interested MARS members are encouraged to visit the club’s webpage and consider attending the meetings. The ZOOM attendance can be accomplished via cellphone, tablet or desktop computer, with or without attached video camera.

For more information, you may contact the club president, Jim Kummer, via email at jkummer@comcast.net.

Colorado Springs LM Retiree Group News

By Doug Tomerlin
dougincs@aol.com

The Colorado Springs Lockheed Martin Retiree Group is an organization for retirees from Lockheed Martin and from heritage companies Philco, Philco-Ford, Ford Aerospace, and Loral. A large percentage of the members

Photography Club

By Jim Kummer and
 BJ Anthony
jkummer@comcast.net

The MARS photo club welcomes photographers of all skill levels – beginner to expert. At each monthly meeting we

live in the Colorado Springs area and have retired from divisions located in Colorado Springs. However, retirees from other divisions are welcome to join. There are no fees to belong to the group.

Luncheons are typically held twice a year with other activities to allow retirees to stay in contact with each other. The Colorado Springs Lockheed Martin Retiree Group will be planning a luncheon for early 2026 in Colorado Springs.

If you would like more information about the Colorado Springs Lockheed Martin Retiree Group, luncheons and other activities, please contact Doug Tomerlin at dougincs@aol.com.

Cape Canaveral News

By Dan & Kelly DeFazio
(defazio321@yahoo.com)

Luncheons

November, 2025 - Our brunch at Whisk and Grind was a hit with our regulars as well as some new timers who joined us. We enjoyed stories from all: Dick Olson, Abe Smith, Edna and Frank Krueger, George Avis, Jim Houston, Rick1 Anderson (Owner, Launch Site Solutions Consulting), Jerry Close (Northrop Grumman), Cathy Klein, Lynn Smith, Roger Wright, Laverne Jones, Kelly and me.



The sharing included how several team members give back either through consulting with ULA and other contractors but also helping and coaching young engineers just starting out on their adventures. Seems Space "generation-next" can use a little help! 😊

It was great to have Jerry Close drop in, who splits his time between Virginia and the Cape, proving you don't

have to be retired to join in our fun. Additionally, home renovations, car restorations and motorcycle rallies are keeping several of us busy.

George Avis won the survivor award living thru the coldest Air Force Base, Elmendorf AFB in Anchorage, Alaska, at 30 below. Speaking of military life, we are sending a "shout out" to all our veterans who shared their experiences to Titan and the space industry as we celebrate this Veterans Day and also wish everyone a Happy Thanksgiving just around the corner.

Hope to see you in December and hear your stories, too.
Dan DeFazio

December 2025 – Hello all and Happy Holidays to you!

Our Whisk and Grind Luncheon last week was a huge success – we had a record turnout. Even welcomed a new retiree (2 months) to the ranks - Gail Melberg. Congratulations Gail!



Among the crowd was Dick Olson, Ken Webb and (Ken Webb "the son"), Bob Matschner, Abe Smith, Gail Melberg, Jim Summa, Frank and Edna Kreuger, Laverne Jones, Sean Ryan, Roger Wright, Cathy Klein, Lynn Smith, George and Cathy Avis, along with Kelly and myself. I had to take two pics to fit everyone in.



We had a great time reminiscing on all the traveling everyone has done: Japan, Italy, Minnesota, Wyoming, Scotland and more. With all the talk of early snow around the country, it left us glad we were in the warm climate of FLA but also, got a big laugh about all the clever uses for snow shovels we've seen here in the deep south. They are used in the keys for sand and used in the Bahamas for shoveling lobsters. ☺ Maybe the Denver folks need to come down and show us all how it's done!

Adventures closer to home included home renovations and car restoration....

See the picture of Dick's latest endeavor the red Cadillac convertible - appropriate for Santa's sleigh on its way.



"Heads up" for January. **We are headed North to Titusville - Cafe Paradiso** (downtown Titusville) - still 11a.m.

Except, we will be gathering on JANUARY 8th . This is a one-time change only, to the second Thursday in January as the first is New Year's Day - figured New Year's Day was likely not good for our lunch gathering. Side note - your significant other is welcome to join us too.

Watch for another email on this topic as we get closer to our January event.

Take care and enjoy the holiday season - see you in 2026!
Dan DeFazio

Vandenberg News

A special request from your MARS STAR editors: In the past we have had reports from the Vandenberg Retirees Club, but we have not heard from them in quite awhile. If you have any information about the club—a new contact for the club or whether it is still active—please let one of the MARS STAR editors know. Our email addresses are on page 2 of this issue, bottom right column. Thank you!

A suggestion came out of an Officers Meeting: Based on feedback from some members, the suggestion is to move the *In Memoriam* writeup to near the end of the newsletter and move the remaining club write-ups forward. That way all current club topics are contiguous. Although no vote was taken, there was wide agreement from the officers present.

In Memoriam

By Roy Duszynski

rkduszynski@msn.com

Please contact Roy Duszynski at rkduszynski@msn.com, Facebook, or LinkedIn with information about the passing of a member the spouse of a member or other MM/LM/ULA retirees so, they can be acknowledged in the In Memoriam section.

MARS Associates expresses our deepest sympathy in the loss of your loved one and a donation will be made to a charity chosen by the Officers and Board of Directors in their memory.

Members

Oliver, Davis (D: 07-Dec-2025)

Littleton, CO

<https://tinyurl.com/y5ejcu5v>

Non-Members

Alligood, Mark (D: 12-Oct-2025)

Brevard County, FL

<https://tinyurl.com/2cpf8w94>

Austin, Randall (D: 19-Sep-2025)

Colorado Springs, CO

<https://tinyurl.com/4uszdcac>

Baker, Robert 'Bob' (D: 27-Nov-2025)

Chelmsford, MA

<https://tinyurl.com/2mfe32sn>

Bell, Robert 'Bob' (D: 11-Dec-2025)

Windsor, CO

<https://tinyurl.com/y739m5n3>

Brewster, Marvin (D: 12-Sep-2025)

Grand Junction, CO

<https://tinyurl.com/33ne4mfb>

Brown, Barbara (D: 22-Dec-2025)

Limon, CO

<https://tinyurl.com/mvy9rue7>

Brungardt, James 'Jim' (D: 21-Nov-2025)

Arvada, CO

<https://tinyurl.com/368489ew>

Callan, James (D: 29-Oct-2025)

Fort Collins, CO

<https://tinyurl.com/5dmvbdpa>

Carlson, Robert (D: 18-Nov-2025)

Parker, CO

<https://tinyurl.com/k5sse76>

Cole, James 'Jim' (D: 11-Nov-2020)

Littleton, CO

<https://tinyurl.com/edpbprmp>

Coulter, Timothy (D: 21-Dec-2025)

Apex, NC

Obituary is n/a

Cunningham, Steve (D: 30-Oct-2025)

Santa Maria, CA

<https://tinyurl.com/2s3uejd8>

De Fellippie, John (D: 31-Jul-2025)

Littleton, CO

<https://tinyurl.com/3ddmxwmm>

Dorroh Jr, Will (D: 15-Dec-2025)

Austin, TX

<https://tinyurl.com/3wnfrv3a>

Evanoff, Joseph (D: 24-Sep-2025)

Parker, CO

<https://tinyurl.com/y3nfueje>

Ewing, Wylie (D: 02-Oct-2025)

Salida, CO

<https://tinyurl.com/c6rswtr6>

Feist, Steven (D: 27-Oct-2025)

Elizabeth, CO

<https://tinyurl.com/yxtjsam2>

Kohen, Roy (D: 26-Oct-2025)

Colorado Springs, CO

<https://tinyurl.com/ydwmvdvw>

Kolehmainen, Dennis (D: 08-Sep-2025)

Madison, WI

<https://tinyurl.com/mu7dwvxv>

Kraft, Virgil (D: 15-Nov-2025)

Greeley, CO

<https://tinyurl.com/xtnd6bca>

Lovato, Frank (D: 23-Oct-2025)

Florence, CO

<https://tinyurl.com/5amu4xmp>

Mayfield, Kirk (D: 21-Nov-2025)

Denver, CO

<https://tinyurl.com/5n85rmwc>

Miles, Sue (D: 30-Sep-2025)

Spouse: Jim Miles

Littleton, CO

Obituary is n/a

Morley, John (D: 19-Nov-2025)

Ocala, FL

<https://tinyurl.com/36p4ms49>

Pearcy, Luther (D: 26-Dec-2025)

Wheat Ridge, CO

<https://tinyurl.com/2taf5fts>

Perez, Jerome 'Jerry' (D: 07-Jul-2025)

Broadwater, NE

<https://tinyurl.com/yc3m2yhr>

Polutchko, Robert 'Bob' (D: 17-Nov-2025)

Potomac, MD

<https://tinyurl.com/bs8sx59y>

Ritz, James (D: 19-Nov-2025)

Denver, CO

<https://tinyurl.com/55c7umde>

Ryan, Jim (D: 11-Oct-2025)

Littleton, CO

<https://tinyurl.com/d3ubtnyz>

Schmitzer Jr, Martin (D: 30-Sep-2025)

Littleton, CO

<https://tinyurl.com/yfrje9pp>

Skoglund, Louis 'Lou' (D: 20-Oct-2025)

Lakewood, CO

<https://tinyurl.com/y8psp4t7>

Stofan, Andrew 'Andy' (D: 26-Oct-2025)

Fair Oaks, VA

<https://tinyurl.com/54m4vupr>

Toney, Arthur (D: 02-Jun-2025)

Denver, CO

<https://tinyurl.com/5b4jay5b>

Trammell, Jackson 'Jack' (D: 09-Jan-2025)

Stanwood, WA

<https://tinyurl.com/4xzdzbjw>

Vairin, Charles 'Charlie' (D: 16-Nov-2025)

Colorado Springs, CO

<https://tinyurl.com/2s78733j>

Von Metzger, Mary (D: 15-Nov-2025)

Tucson, AZ

<https://tinyurl.com/y5jkjt29>



Roy Duszynski, SSGT Travis Williams, Gina Curet, Bill Hershenow

Historian Corner

By Barb Sande

barbsande@me.com

REPEAT ANNOUNCEMENT: I am looking for short (less than 1000 words) written stories about personal experiences on the Viking program! No oral histories or phone calls, please. The stories should be interesting anecdotes about the design, testing, launches (on Titan IIIE/Centaur) and operations. I also would like stories from spouses if you recall any good anecdotes! These stories will support a multipart series about Viking 1 & 2 later in 2026 for its 50th anniversary. Please submit the stories to me at the email address noted; don't worry about formatting (I'll take care of that). If you have a picture or two that would be even better. The NEW deadline for submittal is **September 1, 2026!!** Send to barbsande@me.com (note: This is also a new email address).

Program Profile

Overview: This history profile continues a multi-part series about the manned Gemini program. The current plan has been revised, again, to have the following parts to the series (this has been modified from earlier versions):

- Creation of Project Gemini, Program Obstacles and Issues, Overview of Major Program Elements - First Quarter 2025 - COMPLETE
- LC-19, Unmanned Gemini 1 & 2, Crew Selection and Training (overview) - Second Quarter 2025 - COMPLETE
- Gemini 3 (first manned mission), Gemini IV, Gemini V - Third Quarter 2025 (the missions were formally changed to the use of Roman numerals for the mission designator starting with Gemini IV) - COMPLETE
- Gemini VI Stand-down, VII, VI-A - Fourth Quarter 2025 COMPLETE
- Agena Investigation, Gemini VIII - IN THIS ISSUE (First Quarter 2026 - NOTE change from last write-up)
- Gemini IX/IX-A, Gemini X - Second Quarter 2026
- Gemini XI, Gemini XII - Third Quarter 2026

This revised plan will hopefully accommodate some depth of detail for each mission and still keep me on track for the first write-up commemorating the 50th anniversary of the Viking program in the fourth quarter of 2026. As I was writing this profile, I realized that the story of Gemini IX/IX-A is far too lengthy to include along with the Agena investigation and Gemini VIII, so I am moving it to the next write-up with Gemini X, then will have one more Gemini profile for the last two missions. I am also dealing with an eyesight problem that makes writing and reading

more difficult (this is a permanent situation even after surgery in December) so that change will help me make the deadlines easier to achieve with shorter articles.

Introduction

In this history profile I provide an overview of the investigations of the Agena upper stage failure and the truncated Gemini VIII mission. I do not include detailed crew biographies in these write-ups but provide links to their Wikipedia biographies at the end. Other resources and references that have been used are also listed at the end of the article.

Agena Investigation

The Gemini program ended 1965 with some spectacular successes, capped off by the remarkable Gemini VII longevity mission and the close rendezvous with Gemini VI-A. However, the primary goals of docking, rendezvous, rendezvous with two separate targets during the same mission, and high altitude flight desperately needed a targeting vehicle that would work. These goals were essential to the Apollo program and the mission profiles that it intended to fly. Agena, after its failure on the Gemini VI mission, became the pacing item for the program. There were also concerns about Extravehicular Activities becoming more sophisticated with the tight timelines and qualification of the Astronaut Maneuvering Unit (AMU), which was intended to be demonstrated on Gemini VIII (the usage of the AMU was deferred to Gemini IX). Work was also underway on a contingency replacement for the Agena targeting vehicle (more on that later).

Discussions were also had at NASA about canceling the remaining Gemini missions and allocating the remaining unmet requirements to the Apollo program. However, concerns for keeping technical staff in place and having more experienced flight crews to cull from for early Apollo missions led to the decision to continue through the flight manifest for Gemini.

An hour after the failure of the Gemini Agena Targeting Vehicle (GATV) for the Gemini VI mission on October 25, 1965, the SSD (Space Systems Director) Deputy Director John Hudson directed that a subpanel of the Agena Flight Safety Review Board at Cape Canaveral be convened on October 26. The full Agena Flight Safety Review Board was led by Major General Ben Funk. The subpanel included members from the Test Wing and Test Operations, NASA program and launch directors, and a representative from the Aerospace Corporation by the name of Ernst R. Letsch [personal note: I remember working with Ernie Letsch for a few years on the Titan program after I joined Martin Marietta in 1981 – he was a very difficult but absolutely brilliant individual]. The

subpanel laid out a plan to determine the causes of the failure, create a list of appropriate corrective actions, assess whether or not the test article GATV 5001 could be used for flight, and cut red tape in the processes for a more rapid recovery and return-to-flight.

At Lockheed, the telemetry data was already undergoing analysis and W.R. Abbott took charge of the failure investigation team. The most likely failure mechanisms that were quickly identified were a "hard start" backfire of the Agena engine or an electrical short. The electrical short scenario was eliminated and the subpanel reported to the Flight Safety Review Board that a hard start had been the most likely failure mechanism and was the result of fuel being injected into the combustion chamber before oxidizer.

This sequence of events could be traced back to the original Gemini specification for Agena targeting vehicle performance that required the main engine to be capable of starting and stopping five times during a mission. The Standard Agena D had a two-start capability. This 150% increase in the demands on the engine for Gemini raised concerns for the problem of fuel and oxidizer economy. For the two-start engine, oxidizer began flowing first, with a restrictor valve in place for fuel flow until a certain amount of oxidizer was present in the chamber. This was wasteful because the oxidizer would run out well before fuel. Bell Aerospace Corporation, the engine subcontractor to Lockheed, proposed a change that removed the restrictor and allowed fuel to enter the chamber first. This proposal was accepted at the beginning of the Gemini program and was incorporated on the modified Agena D engines.

As is usually the case with a mission failure (speaking from personal experience) all sorts of other technical expert groups are convened to drive to their own explanations of mechanisms and causes for the failure. In the case of the Gemini VI Agena failure, NASA headquarters hand-selected their own group of technical experts and a small group was also created at Cape Canaveral. It was suggested by the Marshall Space Flight Center propulsion expert at the Cape (Horace Whitacre) to a Lockheed site engineer (Wulfgang Noeggerath) that it might be wise to convene all of these experts in a propulsion conference to look at the results so far. This suggestion was agreed upon by the various teams and a two-day propulsion seminar convened on November 12, 1965 with 19 engineers and scientists representing different agencies and contractors.

Noeggerath and Whitacre told the seminar attendees their theory about a premature engine shutdown leading to the catastrophic failure. The engine firing had produced severe oscillations and mechanical damage and there were indications of fuel spillage. Electrical circuitry

failed, but a valve that controlled tank pressure remained open. As fuel stopped flowing, pressure built up in the tanks and they ruptured, destroying the vehicle. This was actually a planned flight safety precaution. The two engineers also informed the group that the engines had never been tested at simulated altitudes higher than 111,548 feet (34,000 meters).

The backfire theory accounted for the oscillations that triggered the explosion, but not everyone was convinced that this single failure mechanism was sufficient to explain what happened. However, the team agreed to recommend to SSD that the engines be modified so that oxidizer would enter the chamber first and the engines would be tested at various simulated altitudes (this testing was known as Project Surefire). As is typical of a failure investigation of this magnitude, General Funk deployed a "super tiger" team composed of three senior individuals to review all of the findings to date. This team included Bernard A. Hohman (Group Director, Gemini Launch Systems Directorate, Aerospace Corporation), Colonel John Hudson, and L. Eugene Root (President of Lockheed Missiles and Space Company). These three agreed with the recommendations and also asked for additional ground ignition tests at Bell Aerospace. Reports and recommendations continued to come in from various NASA Centers until March 9, 1966, one week before the Gemini VIII mission.



Gemini Agena Targeting Vehicle (Gemini VIII)
Photo Credit: NASA

A PERSONAL NOTE: In retrospect, it would be interesting to evaluate how many "recommendations" later became problems. I did a paper for the Aerospace Testing Seminar before my retirement on the unintended consequences of "corrective actions" that occurred after major mission failures (some of these corrective actions were not necessary to fix the primary mechanisms and

causes of the mission failure but were the pet projects from high-level Tiger Teams who wanted to "do something"). The paper was well-received and many audience members took to heart the theories that we can create the conditions for the next failure by piling on unnecessary changes.

ATDA Development, Agena Testing

While work continued on ensuring Agena performance for the upcoming Gemini VIII mission, McDonnell engineers had been evaluating other ways to perform rendezvous and docking. McDonnell Gemini Program Director John Yardley pitched the idea of a "poor man's" docking vehicle, using a docking adapter bolted to the recovery and rendezvous section of a spacecraft and fitting it to the Atlas booster. Simply called the ATDA (Augmented Target Docking Adapter), this concept used already qualified hardware. General Dynamics confirmed that they could fly this lighter-weight object and by December, 1965, a statement of work was approved to proceed with development. The development of this alternative became an "incentive" to Lockheed to put the highest priority on Agena improvements and testing.



Arnold Engineering Complex
Photo Credit: Arnold.AF.Mil

Project Surefire (the altitude testing of the Agena) was behind schedule almost immediately. The only facility that could perform this testing was the USAF Arnold Engineering Center (now Complex) in Tennessee and it was booked solid. General Bernard Schriever, Air Force Systems Commander, was persuaded by NASA top management to move the Agena to the head of the line. By December 17, 1965, GATV-5003 (intended for the Gemini VIII mission) was accepted by the Air Force while Project Surefire continued at Arnold on the test Bell engine assembly. However, George Mueller (head of the NASA Office of Manned Space Flight) was also insisting on a static firing of the Gemini VIII Agena (GATV-5003) after delivery to the Cape.

As the calendar slipped into 1966, the looming Gemini VIII mission led to a race between the ATDA and the Agena engine requalification testing. An acceptance review was held for the ATDA on February 1; George Mueller was also talked out of the Agena static firing at the launch site during that timeframe. The Project Surefire tests ran into several difficulties, with a test on February 12, 1966 resulting in a badly damaged engine (hard start) due to fuel and water contamination in the feed lines. Lockheed and Bell worked around the clock and another engine was provided for the high altitude tests. Meanwhile, the ATDA was delivered to the Cape. On March 1 the high-altitude tests began at Arnold and by March 4, the modified Agena engine proved its capabilities with 22 successful high-altitude tests up to an altitude of 469,100 feet (143,000 meters). The ATDA also completed its test program by March 4. NASA elected to proceed with the assigned Agena for Gemini VIII and the ATDA was put in storage at the Cape. A photo of the ATDA in action will be part of the next profile on Gemini IX/IX-A.

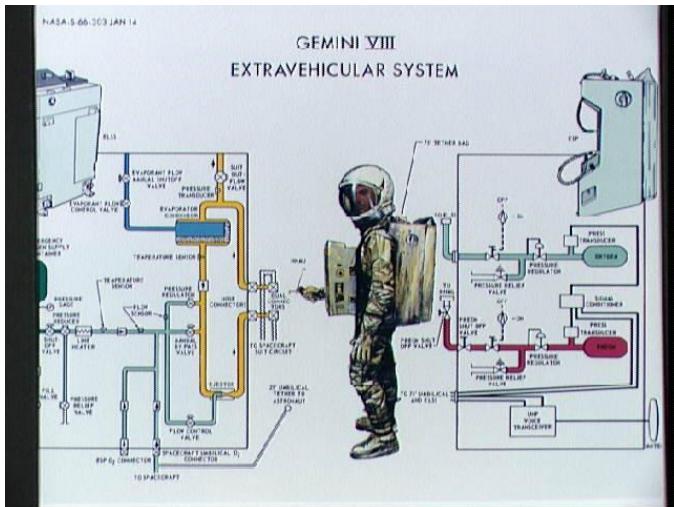
Gemini VIII

On September 25, 1965, the crews assigned to the Gemini VIII mission were announced. A civilian test pilot with many X-15 flights, Neil Armstrong, was designated the mission commander (he was on the backup crew for Gemini V). He was joined by David Scott as mission pilot, a newcomer to the Gemini program. Armstrong had been selected in the elite Astronaut Group 2 in 1962 and Scott was part of Astronaut Group 3. The backup crew was also named: Charles "Pete" Conrad (commander of the Gemini V mission) and another newcomer Richard F. Gordon, Jr shadowed the commander and pilot roles, respectively.



Primary Crew of Gemini VIII: David Scott, Neil Armstrong
Photo Credit: NASA

Just before the crew announcement, McDonnell held a briefing to talk about the new EVA (Extravehicular Activity) equipment that would be carried on the Gemini VIII mission. The new gear was comprised of two major units: the Extravehicular Life Support System (ELSS) and the Extravehicular Support Package (ESP). A diagram was found in a NASA archive (see below) showing how the two units would be used in flight. A detailed report about the ELSS was also found in the NASA archives (see references). A proposed Astronaut Maneuvering Unit (AMU) was moved to the Gemini IX mission.



EVA Systems for Gemini VIII Diagram Credit: NASA

Dave Scott began training immediately for the EVA planned on the Gemini VIII mission. He did over 300 zero-g parabolic flights and more than 20 hours on an air table practicing maneuvers with the new zip gun that was powered by Freon instead of oxygen. He found that low temperatures caused the zip gun firing mechanism to freeze open, which could lead to a disastrous situation on-orbit. Armstrong and Scott also found a number of other hazards and design issues with the equipment that were hastily mitigated by design changes.

Mission planning for Gemini VIII came up with the following elements that were finalized in February, 1966:

- Gemini VIII was planned to be a three-day mission. After being launched into an 87-by-146-nautical-mile orbit, on the fourth revolution it was to rendezvous and dock with the Agena target vehicle. This was to be the first space docking in history and four separate dockings were planned.
- During the first docking, Pilot David Scott planned to perform an ambitious, two-hour-and-10-minute EVA, the first one since Gemini IV. On a 25-foot (7.6 m) tether for one and a half revolutions around the Earth, Scott was planning to retrieve a nuclear emulsion radiation experiment from the front of the Gemini's

spacecraft adapter, then activate a micrometeoroid experiment on the Agena. Then he was to move back to the Gemini and test a minimum-reaction power tool by loosening and tightening bolts on a work panel.

- During the EVA, after Armstrong undocked from the Agena, Scott was to don and test an Extravehicular Support Pack (ESP) stored at the back of the spacecraft adapter. This was a backpack with a self-contained oxygen supply, extra Freon propellant for the Hand Held Maneuvering Unit, and a 75-foot (23 m) extension to the tether. He would practice several maneuvers in formation with the Gemini and Agena vehicles (separated at distances up to 60 feet, in concert with Armstrong in the Gemini).

Unfortunately, this plan and the other planned experiments were mostly overcome by dramatic actual flight events.

The actual milestone dates for the Gemini VIII Titan II launch vehicle (GLV-8, S/N 62-12563) are listed below, from the "Project Gemini: A Chronology" resource:

Milestone	Date
Major welding of propellant tanks in Denver begins	09/1964
Shipment of Tanks to Baltimore	04/15/1965
Vehicle Assembly completed	Date not recorded
Horizontal tests completed	09/15/1965
Erected in Vertical Test Facility	09/28/1965
Power applied	10/15/1965
Subsystem Functional Verification Tests	11/04/1965
Combined Systems Test (CST)	11/08/1965
Vehicle Acceptance Team inspection	11/16/1965
DD-250 complete (customer acceptance)	12/23/1965
Delivered to ETR	01/06/1966
Erected at LC-19	01/13/1966
Subsystem and CST complete	02/01/1966
Spacecraft mated to GLV-6	03/06/1966
Countdown exercises / Wet Mock Simulated Launch	03/09/1966
Final Status Simulated Flight Test	03/10/1966
Launch	03/16/1966

The actual milestone dates for the Gemini VIII manned Gemini spacecraft (S/C 8) are listed below, from the same resource at the Titan II milestones:

Milestone	Date
Equipment Installation Complete	09/17/1965
Reentry/Adapter Mate	09/22/1965
Systems Assurance Test	10/22/1965
Environmental Control System Validation (new for S/C 8 & up)	10/22/1965
Simulated Flight Test	11/04/1965
Altitude Chamber Test	12/13/1965
Shipped to ETR	01/08/1966
Complex 19 Electrical Integrity and G&C Tests	02/11/1966
Mechanical Mate to GLV-8 at LC-19	02/25/1966 (soft mate; 03/06/1966)
Joint Combined Systems Test	02/16/1966
Wet Mock Simulated Launch/Simultaneous Launch Demonstration Test	03/09/1966
Final Systems Test (Range Communications)	Date not noted
Final Simulated Flight Test	03/10/1966
Launch	03/16/1966
Recovery of Crew and S/C 8	03/17/1966

The actual milestone dates for the Gemini Agena Target Vehicle (GATV) 5003 are noted below, from the same reference as the other chronologies:

Milestone	Date
Basic Build Complete	07/20/1965
Modifications and Final Assembly	10/14/1965
Combined Systems Acceptance Test	01/08/1966
Vehicle Acceptance Team inspection	01/18/1966
Shipped to ETR	01/21/1966
Preliminary Systems Test at Hangar E	01/26/1966
Interface Test Plan X	01/28/1966
Systems Tests at Hangar E	02/28/1966
GATV and Atlas Launch Vehicle Mate at LC-14	03/01/1966
Systems Test Complete at LC-14	03/09/1966
Launch	03/16/1966

The actual milestone dates for the Atlas Target Launch vehicle (TLV-5302) are noted below; the source documentation has limited information about the processing of this "off-the-shelf" Atlas vehicle, although this vehicle has more milestones noted:

Milestone	Date
Base vehicle available	04/02/1965
Final assembly of booster and sustainer sections	05/25/1965
Install flight equipment and Gemini-peculiar kits	06/03/1965
Systems Test completed	07/13/1965
Composite test	07/22/1965
Data Review and Final Acceptance	07/29/1965
Delivered to ETR	08/11/1965
Vehicle erected at LC-14	01/05/1966
Subsystem Tests	02/23/1966
TLV/GATV mate at LC-14	03/01/1966
Joint Flight Acceptance Composite Test	03/07/1966
Simultaneous Launch Checkout	03/09/1966
Launch	03/16/1966

Five months after the loss of the Agena Target Vehicle for Gemini VI, teams were in place once more for two launches on the same day. A one-day delay occurred when there were problems during Atlas propellant load on March 15, but all systems were nominal on the morning of March 16, 1966. At 10:00 am Eastern time, liftoff of the Atlas-Agena from LC-14 occurred. The Atlas flight was mostly nominal, with the sustainer engine correcting for a minor deviation from the planned trajectory. Everyone at Mission Control then breathed a sigh of relief when the Agena Target Vehicle (GATV) engine roared to life following a short coast period after separation from the Atlas. The GATV settled into an 160.9 nautical mile (298 kilometer) circular orbit.



Launch of GATV-5003 on Atlas for the Gemini VIII Mission
Photo Credit: NASA



Launch of Gemini VIII on Titan II/GLV-8

Photo Credit: NASA

Over at LC-19, Armstrong and Scott were settled into their couches in the Gemini VIII spacecraft when they heard about the successful Atlas/Agena launch. At 10:41:02 Eastern time, the Stage I engines roared to life on the Titan II GLV and Gemini VIII was on its way to orbit. After a nominal ascent, the spacecraft was placed in an elliptical orbit of 86.4 nautical miles by 146.5 nautical miles (160 by 272 kilometers). The crew began the chase to catch up with the GATV, which was 1060 nautical miles (1963 kilometers) ahead of them.

The crew also had a little bit of time to sightsee on their first orbit, observing the Hawaiian Islands and the west coast of the United States and they took the time to prepare a meal. Armstrong performed a 5-second thruster burn at 1:34 hours mission elapsed time to lower the apogee of their orbit slightly. He noted that there was a problem cutting off residual thrust, resulting in variable readouts on the total deceleration. This occurred again on a second apogee thruster firing. The next maneuver was intended to place the spacecraft in the orbital plane of the GATV. At the last second before the maneuver, the ground CAPCOM (Jim Lovell) advised Armstrong to add more velocity to the burn, which was done manually.

The rendezvous radar acquired the Agena Target Vehicle at a distance of 179 nautical miles (332 km). At 3 hours, 48 minutes and 10 seconds into the mission they performed another burn that put them in a circular orbit 15 nautical miles (28 km) below the Agena. They first sighted it visually when they were 76 nautical miles (141 km) away, and at 55 nautical miles (102 km) they gave the S/C computer automatic control. After several small burns they were 151 feet (46 m) away and with no

relative velocity between spacecraft. The second rendezvous in space had been achieved!

After 30 minutes of visually inspecting the GATV to make sure that it had not been damaged by the launch, they were given the "go" for docking. Armstrong started to move towards the Agena at 3.15 inches (8 centimeters) per second. In a matter of minutes, the Agena's docking latches clicked and a green light indicated that the docking had been successfully completed. "Flight, we are docked! Yes, it's really a smoothie," Scott radioed to the ground. The crew began their first docked vehicle tasks.

Because there had been difficulty verifying the uplink of the stored program commands for the GATV for the planned docked yaw maneuver, mission controllers were concerned that the Agena flight controls might misbehave (these flight controls could also be commanded from the ground and from the Gemini spacecraft). Before Gemini VIII passed out of communications range, CAPCOM Jim Lovell told them to take control of the situation with the spacecraft if anything went awry with the Agena.



Moving in for the first docking in space, Gemini VIII
Photo Credit: NASA

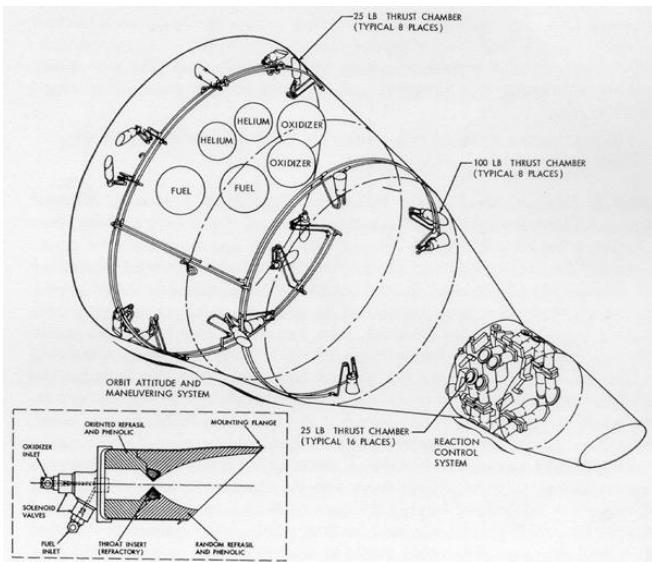
These precautions were ringing in their ears as the crew commanded the GATV to turn the docked vehicle combination 90 degrees to the right. This took about 5 seconds less than the anticipated time. Scott then turned on a recorder and happened to notice that the horizon "ball" indicator showed them in a 30-degree roll.

Armstrong's indicator showed the same bank. He was able to control the roll with short bursts from the OAMS (Orbital Attitude and Maneuvering System) but then the roll began again. Scott and Armstrong blamed the attitude control system on the GATV and Scott commanded that system to turn off, controlling attitude with the Gemini S/C. Things appeared to settle down for

about four minutes and Armstrong began thruster firings to get the docked spacecraft completely horizontal. Suddenly, the roll started yet again.

Armstrong reported that the OAMS fuel had dropped to 30%, indicating that the problem could be on their own spacecraft. With a concern that the high rate of rotation might damage one or both spacecraft or even cause the propellant-heavy Agena to rupture or explode, the crew decided to undock from the Agena so they could analyze the situation. Scott then hit the undock button, and Armstrong fired a long burst of translation thrusters to back away from the Agena. Without the added mass of the Agena, Gemini started rotating more rapidly. The astronauts realized that the problem was definitely on the Gemini S/C.

By now the tumble rate had reached 296 degrees per second and Armstrong decided to shut down the OAMS and use the Reentry Control System (RCS) thrusters, located on the Gemini's nose, to stop the tumble. From start to finish the incident lasted nearly 30 minutes. Meanwhile, NASA turned off the VOX (Voice communications) squawk box feed at Armstrong's home, alarming his wife, Janet.



Gemini Spacecraft Diagram of the OAMS/RCS
Diagram Credit: McDonnell Douglas, NASA Program Archives

Scott later praised Armstrong's actions as their spacecraft spun: "The guy was brilliant. He knew the system so well. He found the solution, he activated the solution, under extreme circumstances ... it was my lucky day to be flying with him." The spacecraft finally came in range of the communications ship USNS *Coastal Sentry Quebec*. After steadyng the spacecraft and describing the problem to the ground crews, the crew tested each OAMS thruster in turn and found that Number 8 had stuck on. Almost 75% of the reentry maneuvering fuel had been used to stop the tumble and mission rules dictated that the flight be

aborted once the Reentry Control System was fired for any reason. Gemini VIII immediately prepared for an emergency landing.

It was decided to let the spacecraft reenter one orbit later so that it could land in a place that could be reached by secondary recovery forces. The original plan was for Gemini VIII to land in the Atlantic, but that was supposed to be three days later. The USS *Leonard F. Mason* started to steam towards the new landing site 430 nmi (800 km) east of Okinawa and 540 nmi (1,000 km) south of Yokosuka, Japan. Reentry took place over China, out of range of NASA tracking stations.

Planes were also dispatched and they spotted the spacecraft as it descended precisely on time and on target. Three para-rescuers jumped from their C-54 and attached a flotation collar to the capsule. In the rough seas, the two crew members and the three para-rescuers all experienced seasickness.



Recovery of Gemini VIII
Photo Credit: NASA

Three hours after splashdown, the USS *Leonard F. Mason* had both men and the spacecraft on board. The astronauts were exhausted but had otherwise come through the flight and their time on the rough seas in good condition. They were briefly checked and slept for nine hours. The next morning, the ship docked at the port of Naha, Japan. After extensive medical tests and visits with NASA officials who had flown in, Armstrong and Scott were released and flown back to the States. Upon their return, the spacecraft was covered with a tarp and securely stored and the crew addressed the press at the Manned Spacecraft Center. As part of the investigation into the mishap, ground controllers tested the Agena

stage on-orbit for the next several days by ordering it to perform various maneuvers until exhausting its propellant and electrical power. It performed flawlessly. Four months later, the crew of Gemini X rendezvoused with the inert Agena and astronaut Mike Collins retrieved its micrometeorite collector (see my next Gemini write-up).

The most probable mechanism of the thruster anomaly was determined to be an electrical short, most likely due to a static electricity discharge. Power still flowed to the thruster, even when it was switched off, which was a safety design flaw. To prevent recurrence of this problem, spacecraft designs were changed so each thruster would have an isolated circuit.

Here is a quote (found on Wikipedia) from *Flight: My Life in Mission Control* by Chris Kraft, page 256:

Engineers tore into the OAMS system when the spacecraft got home and found a short circuit that made one thruster fire continuously. We learned an important lesson - never put electrical power to any system unless it's supposed to be on. The OAMS was rewired so that a short circuit would always give us a dead thruster, not one that kept firing until a circuit breaker was opened by an astronaut.

The Gemini VIII mission was a mixed bag: The first successful docking in space was followed by a few hours of extreme tension and fear for the lives of the crew. The fact that ground communications were not available during the peak crisis also was blamed for the early abort of the mission (ground controllers might have seen the stuck thruster in telemetry and advised the crew on mitigation). The additional tests performed on the GATV gave confidence that the target vehicle was finally functioning as a sophisticated target for rendezvous and docking. NASA proposed pressing on with the next mission, Gemini IX.

The incident inspired Deputy NASA Administrator Dr. Robert Seamans to review NASA's problem investigation procedures, modeled after military crash investigations, and on April 14, 1966, to formalize a new procedure in *Management Instruction 8621.1, Mission Failure Investigation Policy And Procedures*. This gave the Deputy Administrator the option of performing independent investigations of major failures, beyond those failure investigations for which the various Program Office officials were normally responsible. It declared: "It is NASA policy to investigate and document the causes of all major mission failures which occur in the conduct of its space and aeronautical activities and to take appropriate corrective actions as a result of the findings and recommendations." Seamans first invoked this new procedure immediately following the fatal Apollo 1 spacecraft fire on January 27, 1967. It was also invoked

after the next critical in-flight failure, which occurred on the Apollo 13 mission in April 1970.

The Gemini VIII spacecraft is currently on display at the Armstrong Air and Space Museum in Wapakoneta, Ohio. Armstrong went on to command the first lunar landing, the Apollo 11 mission, and Scott flew on the Apollo 9 mission, testing the lunar module in earth orbit and then commanded the Apollo 15 lunar landing mission in 1971. Links to biographies of both astronauts are in the references. As of the publication of this history profile, Dave Scott is still alive (one of only four moonwalkers still with us).

My next history profile for the MARS STAR looks at the challenging Gemini IX/IX-A mission and the Gemini X mission.

Resources and Links:

On the Shoulders of Titans: A History of Project Gemini

<https://ntrs.nasa.gov/citations/19780012208>

Project Gemini: A Chronology

<https://www.nasa.gov/history/SP-4002/contents.htm>

Project Gemini (NASA Overview)

<https://www.nasa.gov/gemini/>

Wikipedia Article about Project Gemini

https://en.wikipedia.org/wiki/Project_Gemini

Wikipedia Article about Titan II GLV

https://en.wikipedia.org/wiki/Titan_II_GLV

Wikipedia Article about Gemini VIII

https://en.wikipedia.org/wiki/Gemini_8

Wikipedia Article about Gemini VIII

https://en.wikipedia.org/wiki/Gemini_7

SCRIBD, Flight Crew Training Plan Document:

<https://www.scribd.com/document/49445020/Flight-Crew-Training-Plan>

Project Gemini Extravehicular Life Support System

<https://ntrs.nasa.gov/api/citations/19680014867/downloads/19680014867.pdf>

Wikipedia Biography of Neil A. Armstrong

https://en.wikipedia.org/wiki/Neil_Armstrong

Wikipedia Biography of David R. Scott

https://en.wikipedia.org/wiki/David_R._Scott

From Barb Sande, MARS STAR and MARS Facebook Page Historian. Contact me at barbsande@me.com

LM (LM) News



F-35 (Photo Credit LM)

F-35 Breaks Delivery Record, Continues Combat Success in 2025

FORT WORTH, Texas, Jan. 7, 2026 /PRNewswire/ -- In a record-breaking year for the F-35 Lightning II program, delivered 191 F-35s in 2025, surpassing the previous delivery record of 142 jets. *Lockheed Martin (NYSE: LMT)*

Annual F-35 production is now running at a pace five times faster than any other allied fighter currently in production, underscoring the program's scale and maturity.

The milestone comes on the heels of the program reaching one million flight hours earlier in the year. In 2025, the program team also delivered the most advanced software to date with the completion of TR-3, as they sustained the global fleet of almost 1,300 aircraft and growing.

Most importantly, the F-35 continued to prove its performance in real-world combat operations, including:

- Playing a key role in suppressing Iran's air defenses during Operation Midnight Hammer;
- Recording nearly 5,000 mishap-free flight hours during a U.S. Marine Corps F-35B deployment;
- Eliminating Russian drones over Poland, marking the first time NATO F-35s have engaged threats in allied airspace.

Growing global demand

Customers displayed continued confidence in the F-35 as they expanded their fleet size, with Italy and Denmark increasing their programs of record by adding 25 and 16 aircraft to their fleets, respectively. And across the

program, international customers met major program milestones:

- Finland celebrated the rollout of its first F-35.
- Belgium welcomed its first in-country aircraft.
- Norway completed deliveries of its F-35 fleet.

In September, the F-35 Joint Program Office (JPO) and Lockheed Martin reached final agreement of Lots 18-19 for the production and delivery of up to 296 F-35s for \$24 billion, marking the finalization of the largest production contracts in program history. The JPO and Lockheed Martin also agreed to an Air Vehicle Sustainment Contract award this year, which supports annualized sustainment activities across the F-35 enterprise for 2025 and beyond.

"I'm immensely proud of the F-35 enterprise for delivering on our production commitments, performing with excellence and growing our global partnerships in 2025," said Chauncey McIntosh, Vice President and General Manager of the F-35 Lightning II Program. "As our warfighters continue to employ the F-35 to protect the interests of America and our allies around the world, we're committed to continuing to push the latest technology into the hands of the warfighter to defeat any threat."

About the F-35

With 12 nations operating the F-35 across the global fleet, and almost 1,300 aircraft in service, the F-35 is delivering on its promise of unmatched reliability and lethality. Lockheed Martin is positioned to keep the fleet at the cutting edge of technology and support our allies as they expand their capabilities worldwide to ensure the F-35 remains an indispensable contributor to global security for decades to come.

Learn more at F35.com.

Lockheed Martin's Pre-Apprenticeship Program Earns Statewide Recognition

COURTLAND, Ala., DEC. 16, 2025 – Lockheed Martin's (NYSE:LMT) Manufacturing Basic Skills (MBS) pre-apprenticeship program was recently named a Regional Work-Based Learning Best Practice by the Alabama Office of Apprenticeship, recognizing its success in connecting students with high-tech careers in aerospace manufacturing.

The MBS program is a precursor to Lockheed Martin's successful Advanced Manufacturing Technician Apprenticeship Program (AMTAP), which trains participants in the specialized skills required to build space electronics, including cable harness assembly, soldering and quality inspection, while earning industry-recognized certifications. Graduates are often offered full-time positions at Lockheed Martin's Courtland facility, where

they help produce systems supporting critical space and defense missions.

"These programs give students technical training as well as a career pathway," said Reshondra McInnis, Production Operations Director & Courtland Site Executive. "Our graduates leave with skills, certifications and opportunities that will sustain them for a lifetime."

Since its start, AMTAP has forged nine formal partnerships with North Alabama high schools, career technical centers and community colleges, reaching more than 36,000 students. The company has received more than \$2.2 million in state and federal reimbursements to help offset training costs. To date, over 150 graduates from the Alabama program have received full-time employment offers.

"When education and industry align, great things happen," McInnis said. "The proven success of our MBS and AMTAP programs are proof that Alabama can grow its own world-class aerospace workforce."

Nationally, apprenticeship programs are on the rise. According to the U.S. Department of Labor, there were nearly 600,000 active registered apprenticeships in 2021, with participation growing 66% over the past decade. About 94% of apprentices retain employment after completing their programs, a statistic AMTAP is proud to match.

With its combination of classroom learning, hands-on training and strong educational partnerships, Lockheed Martin's training programs serve as a model for work-based learning, preparing the next generation of advanced manufacturing talent and strengthening the state's position in the space economy.



2025 SUPPLIER OF THE YEAR
Maverick Aerospace, LLC



ULA Names Maverick Aerospace, LLC, as 2025 Supplier of the Year

"We are honored to recognize our outstanding suppliers each year that work tirelessly every day to make our critical missions for this country successful," ULA's President and CEO Tory Bruno said. "This amazing extended ULA team is key to our overall success, and we are grateful for their continued expertise and partnership."

- ULA Supplier of the Year + Extra Mile Supplier of the Year – Maverick Aerospace, LLC

Located in City of Industry, Calif., Maverick Aerospace, LLC is a small business recognized for its tremendous impact and technical excellence in support of complex launch site upgrades including the fabrication of components used in the transportation, integration and launch of Vulcan from Space Launch Complex-41 (SLC-41) at Cape Canaveral Space Force Station in Florida, and Space Launch Complex-3 (SLC-3) at Vandenberg Space Force Base in California.

- Enterprise Operations Supplier of the Year – Systima, Division of Karman Space and Defense Located in Mukilteo, Wa., Systima was recognized for the outstanding job supporting ULA's reuse development program and consistently looking for ways to improve quality, schedule and cost while proactively finding solutions.

- Complex Components Supplier of the Year – Major Tool and Machine Inc.

Located in Indianapolis, In., Major Tool and Machine (MT&M) is recognized for continually improving their delivery schedule to support increased production rates. Additionally, they proactively identify and resolve any issues that might arise to ensure they can meet ULA demand.

- Small Business Supplier of the Year – KAP Manufacturing, Inc.

KAP Manufacturing Inc., is located in San Dimas, Calif., and is a small business. They are recognized for their profound dedication to ULA by achieving on-time delivery of critical flight hardware to support ULA launch success and their exceptional commitment to customer and engineering support.

United Launch Alliance (ULA) News

ULA Honors Seven Key Suppliers with Supplier of the Year Awards at Annual Supplier Summit

October 9, 2025

Orlando, Fla., Oct. 9, 2025 – United Launch Alliance (ULA) recently honored seven suppliers with 2025 Supplier of the Year Awards for their dedicated support across ULA's product lines. Strategic supplier partnerships remain paramount as ULA continues to increase its launch rate for the innovative new Vulcan rocket to support Amazon's Kuiper missions as well as our critical missions for the Space Force, NRO and NASA.

- Production Operations Supplier of the Year – M&J Precision

M&J Precision is located in Decatur, Ala., and is a small business that provides machined parts for all ULA sites. M&J is the only supplier across the ULA supply base to receive four consecutive Supplier of the Year Awards in multiple categories. They are consistently recognized for taking on every challenge with creativity and collaboration and going above and beyond to meet critical deadlines.

- Launch Operations Supplier of the Year – Diani Building Corporation

Located in Santa Maria, Calif., Diani Building Corporation is a small business that has worked diligently on value engineering to significantly reduce overall costs for the complete replacement of the existing environmental control systems at the Vulcan launch pad at Space Launch Complex-3 in Vandenberg Space Force Base, California. They consistently demonstrate focus on communication and flexibility to support West Coast launch operations.

- Government Operations Supplier of the Year – AMI Metals Inc.

AMI Metals Inc. is located in Brentwood, Tenn., and is recognized for consistently demonstrating exceptional leadership and commitment in their Government Affairs engagement, and for effectively building and maintaining meaningful relationships with both state-elected officials and members of Congress.

With more than 1,800 suppliers in 48 states, ULA's supplier partners and industrial base supporting the launch vehicle programs are a vital element to ULA's success.

For two decades, ULA has served as the custodian of America's national security space mission. Our rockets fly to the most challenging and exotic orbits the nation requires, while delivering the most accurate payload insertions in the world. ULA continues to carry this unique capability forward with the new Vulcan rocket, the latest and most advanced vehicle of this type. Utilizing an innovative, modular architectural approach, Vulcan has expanded into the commercial LEO marketplace, providing efficient access to all orbits into the foreseeable future. With even more innovative technology on our horizon, the sky is definitely not the limit.

United Launch Alliance Atlas V Launches the ViaSat-3 F2 Satellite, Enhancing the Future of Global Connectivity

November 13, 2025

- ***ULA Atlas V rocket delivered the ViaSat-3 Flight 2 (F2) spacecraft with pinpoint precision to the desired geosynchronous transfer orbit (GTO) on Nov. 13, at 10:04 p.m. EST.***
- ***ULA specializes in the most demanding missions, where precision, flexibility and performance are critical.***
- ***ULA's Atlas V and Vulcan rockets are catalysts to connecting the world, one launch at a time.***

Cape Canaveral Space Force Station, Fla., (Nov. 14, 2025)

A United Launch Alliance (ULA) Atlas V rocket carrying the ViaSat-3 Flight 2 (F2) mission for Viasat, Inc., a global leader in satellite communications, lifted off on Nov. 13 at 10:04 p.m. EST from Space Launch Complex-41 at Cape Canaveral Space Force Station. This mission reflects on ULA's goals of collaborating with customers to enable the future of global connectivity.

"At ULA, we pride ourselves in delivering our customer's spacecraft precisely to orbit and serving as the catalyst for our customers to enable global connectivity," said Gary Wentz, ULA vice president of Government and Commercial Programs. "We partner in the shared goals of connecting the world and this successful launch aligns with this core mission. Thank you Viasat for your trust in our shared visions and successful partnership."

The Atlas V 551 rocket launched the ViaSat-3 F2 ultra-high-capacity broadband spacecraft to a geosynchronous transfer orbit (GTO). This spacecraft is expected to add significant capacity and flexibility to Viasat's global, multi-orbit network that supports consumer, commercial and government customers. Designed to add 1Tbps capacity to Viasat's global network, ViaSat-3 F2 will help address the increasing demand for secure, reliable and high-bandwidth services over the Americas.

IN THE NEWS

Compiled by Pete Harrigan

The following news headlines are drawn from open-source publications, as noted parenthetically. Click on the hyperlink to access the full article. Please note that some links may not work for all readers. Some sites may require a paid subscription or a login for free access. Other paywall sites may limit the number of free articles you are able to access each month.

CORPORATE NEWS

Trump orders defense companies to [stop stock buybacks, dividends](#) (Politico)

Lockheed Martin (LM), other defense firms seek legal advice over Trump's [clampdown on payouts](#) (Maryland Daily Record)

Hegseth presses defense execs to move faster in speech laying out [sweeping acquisition changes](#) (Breaking Defense)

Hegseth vows to put U.S. weapons production on [wartime footing](#) (The Wall Street Journal)

Trump proposes [massive increase in 2027 defense spending](#) to \$1.5 trillion (The Associated Press)

[Defense stocks surge](#) on Trump's \$500 billion budget hike push (Investor's Business Daily)

LM expects "unprecedented" [defense demand](#) to grow (Baltimore Banner)

LM [lifts 2025 forecasts](#) on robust defense demand (Reuters)

LM scores an [earnings beat](#); it wasn't enough for the stock (Barron's)

LM basks in [F-35 delivery win](#) (Defense One)

Sikorsky [production issues](#) impact LM's sales forecast (Hartford Business Journal)

LM [increases dividend](#), expands share repurchase program (Cobb Courier)

LM transfers \$900 million in [pension obligations](#) to insurers (Investing.com)

Department of Labor eyes amicus filing while states, industry back LM in [pension risk transfer case](#) (Plan Sponsor)

Pentagon's new acquisition strategy to [prioritize nontraditional contractors](#) (National Defense)

Defense [contractors fight back](#) against NDAA repair language (Roll Call)

[America doesn't have enough weapons](#) for a major conflict. These workers know why. (Politico Magazine)

Opinion / How the defense [industry is being redefined](#) (Aviation Week Network)

World's biggest arms producers increased revenue last year to [record level](#), report says (Associated Press via Politico)

The [most valuable military contractor](#) doesn't make bombs or guns (The New York Times)

[China sanctions 20 U.S. defense companies](#) over arms sales to Taiwan (Defense News)

Zelensky meets with Energy secretary, [U.S. companies](#) ahead of visit with Trump (The Hill)

Ukraine, U.S. finalizing deal for [25 Patriot systems](#), Zelensky says (The Hill)

Ambassador Vinay Kwatra meets LM CEO, discusses [India-U.S. industrial cooperation](#) (The Economic Times)

LM extends [industrial cooperation with Israel](#) through 2029, aiming to boost trade (The Jerusalem Post)

LM's CIO on [digital transformation](#) and culture of purpose (Forbes.com)

LM rolls out [new tool to "connect the dots"](#) across military AI systems (The Defense Post)

LM, Google team up on [generative AI](#) (Army Technology)

LM, Microsoft launch Sanctum [C-UAS](#) leveraging cloud tech (The Defense Post)

X-Bow Systems first to implement [LM's secure AI platform](#) for rocket manufacturing (Defence Industry Europe)

NioCorp, LM partner on Pentagon-funded [scandium alloy work](#) (Reuters)

LM to [invest \\$50 million](#) into Saildrone, plans to equip USVs with missile launchers (Breaking Defense)

HavocAI ramps up military drone boat production with [\\$85 million boost](#) (The Defense Post)

Venus Aerospace secures [LM Venture's backing](#) (Washington Technology)

LM Ventures joins \$150 million Series B for [auto sensor startup](#) Teradar (CityBiz)

New coalition forms to keep Colorado an [aerospace, defense leader](#) (Denver Post)

Baltimore County [acquires land from LM](#) for new park (FOX 45 News, Baltimore)

Rebuilding together: Atlanta and LM join forces to [improve VFW Post](#) 2681 (Marietta Daily Journal)

Trump hosts glitzy dinner for wealthy donors to [new White House ballroom](#) (ABC News)

Report: Donors to Trump's White House ballroom have [\\$279 billion in federal contracts](#) (The Washington Post)

[Late LM exec's 150-acre ranch](#) in Big Sur, CA now asking \$39 million (Mansion Global)

GOLDEN DOME NEWS

U.S. Space Force awards [initial Golden Dome contracts](#), but details scarce (Aviation Week Network)
Pentagon taps [more than 1,000 companies](#) that could work on Golden Dome (Defense News)
Guetlein [defends Golden Dome secrecy](#), says industry is "well informed" despite criticism (Space News)
Trump's Golden Dome takes shape; LM to test [space-based missile interceptor](#) amid growing China-Russia threats (The Economic Times)
No Golden Dome requirements yet, but space firms already betting on [dual-use tech](#) (Air & Space Forces Magazine)
Video / Inside LM's [push to integrate](#) autonomy, AI and next-generation defense systems (Defense News)
Elon Musk's SpaceX set to win \$2 billion [Pentagon satellite deal](#); funding would support development of satellites for President Trump's Golden Dome project (The Wall Street Journal)

HYPERONICS NEWS

U.S. Army's [first hypersonic battery](#) to be fully equipped by December (Military Times)
LM opens [Alabama lab](#) to back U.S. hypersonic weapon initiatives (The Defense Post)

SPACE SYSTEMS NEWS

Podcast / [LM adapting](#) to a faster space race (Space News)
LM nears completion of [Next Generation Interceptor facility](#) (The Defense Post)
LM moves forward with developing next-generation geosynchronous [satellites for missile defense](#) (Military-Aerospace Electronics)
Northrop building classified payload for [future OPIR polar sats](#) (Aviation Week Network)
Eggs no longer all in one basket as [communication satellite program relaunched](#) (The Australian)
LM to build [reentry vehicle](#) for nuclear missile with inertial and celestial guidance (Military-Aerospace Electronics)
NASA stacks Artemis II moon mission's [Orion capsule atop of SLS rocket](#) ahead of 2026 launch (Space.com)
Photos / [Artemis II moon astronauts rehearse](#) for launch day (Space.com)
NASA may be [one month away](#) from historic Artemis II astronaut launch around the moon (Space.com)
LM pursues [commercial Orion](#) flight services (Aviation Week Network)
LM's [lunar inflatable habitat](#) passes key burst test (Aviation Week Network)
NASA to open SpaceX's [Artemis III contract](#) to Blue Origin, others (Aviation Week Network)
Inside NASA's scramble to find a [backup moon plan](#) – and the wild ideas companies are pitching (CNN)
Video / NASA discovers "space gum" and sugars "crucial to life" in [asteroid Bennu samples](#) brought to Earth (Space.com)
NASA's [MAVEN spacecraft](#) is still silent at Mars – and apparently is spinning, too (Space.com)
U.S. Navy [test-fires unarmed Trident](#) nuclear-capable missiles (Defense News)
LM begins construction on [new Florida facility](#) to boost U.S. strategic deterrence (Talk of Titusville)
LM marks 70 years supporting U.S. Navy's [submerged nuclear deterrent program](#) (Defence Industry Europe)
U.S. Navy wants new railroad car to transport [unarmed ballistic missiles](#) (Defense News)
Firefly plans Alpha pad return for [LM demo](#) by early 2026 (Aviation Week Network)
SpaceX launches 21 LM satellites for ["Transport Layer"](#) military network (Space News)
Hubble Telescope spies "wake" of supergiant Betelgeuse's [hidden companion star](#) (Space.com)
Hubble spies glowing "[starburst ring](#)" (Space.com)
Photo / [Hubble sees "lost galaxy"](#) in the Virgo constellation (Space.com)
Tory [Bruno resigns](#) as head of United Launch Alliance (Breaking Defense)
Former ULA CEO Tory [Bruno joins competitor Blue Origin](#) for national security projects (Space.com)
[Vulcan](#) to open 2026 with national security launch (Space News)
ULA lifts [27 Amazon satellites](#) on Atlas V rocket (United Press International)
[ULA launches](#) Viasat's second shot at a terabit-class broadband satellite (Space News)
Video / [Atlas V rocket](#) launches huge communications satellite to orbit (Space.com)
ULA transition: [World's largest rocket plant](#) is in Alabama and it's just getting started (Huntsville Times / AL.com)
Space Force [reopens NSSL](#) Phase 3 Lane 1 to new providers (Aviation Week Network)

AERONAUTICS NEWS

U.S. watchdog says [F-35s flew halt the time](#) in 2024 due to LM maintenance issues (Reuters)
LM still paid \$1.7 billion despite [poor readiness rates](#) of F-35s (Air Force Times)

Get [more F-35s in the air](#) and don't break the bank, senators beg USAF chief nominee (Defense One)
LM sets new [F-35 delivery record](#) (Aviation Week Network)
Air Force fighter roadmap projects [slow growth for F-35 fleet](#) (Air & Space Forces Magazine)
U.S. Air Force [wants 1,558 fighters](#) for low-risk wars; can it get there? (Defense News)
Air Force's [new fighter goal](#): More jets, but who's paying? (Air & Space Forces Magazine)
LM secures new U.S. deal to support [production of 198 F-35 Lightning II aircraft](#) (Defence Industry Europe)
LM holding [steady on F-35 production](#) rate, exec says (Breaking Defense)
U.S. Navy extends \$3.6 billion [F-35 sustainment](#) deal with LM (The Defense Post)
LM invests in [self-funded prototypes](#) and sixth-gen upgrades for F-35 and F-22 fighters (Defence Industry Europe)
LM says it's self-funding prototypes. Could a ["Ferrari" F-35](#) be one? (Air & Space Forces Magazine)
Podcast / Is the GCAP fighter the [international successor to F-35](#)? (Aviation Week Network)
Watch the U.S. Air Force load [inert nuclear bombs in F-35](#) for tests (Defense News)
LM and MBDA complete key [Meteor missile and F-35A ground tests](#) ahead of flight trials (Defense Industry Europe)
U.S. will sell [F-35 jets to Saudi Arabia](#), Trump says (Defense News)
Saudi Arabia out-duels rivals in [F-35 sweepstakes](#), for now (Aviation Week Network)
What to know about the [F-35 fighter jet](#) that Trump is selling to Saudi Arabia (Military.com)
[F-35 talks with Turkey](#) could see "breakthrough", U.S. ambassador says (Aviation Week Network)
[Turkey should be readmitted](#) to F-35 program, president says (Aviation Week Network)
Trump-Erdogan ties are propelling F-35 talks with [once-banned partner](#) (Defense News)
Industry minister pushing F-35 maker for [economic benefits in Canada](#) (Canadian Broadcasting Company)
Joly [presses LM for jobs](#) as crucial F-35 decision nears (Bloomberg News via The Financial Post)
Saab offering [10,000 jobs](#), Joly says, as Canada's F-35 review drags on (Canadian Broadcasting Company)
Former Canadian military officers urge Ottawa to ignore Gripen and [proceed with F-35 buy](#) (FlightGlobal)
[F-35 beat Gripen](#) fighter jet "by a mile" in 2021 Defence Department competition (Canadian Broadcasting Company)
DND [investigates leak](#) used to discredit Saab's Gripen fighter jet (Ottawa Citizen)
LM to deliver £264 million [support deal for UK F-35 fleet](#) (UK Defence Journal)
Experts warn UK faces [software, dependency risks](#) with F-35 (UK Defence Journal)
[British F-35 role shifts](#) from "Tier One" to specialist ally (UK Defence Journal)
UK revising [delayed F-35 stealth verification](#) plans to 2027 (UK Defence journal)
Switzerland [reduces F-35 buy](#) after \$610 million price hike (Breaking Defense)
[Finland's first F-35A](#) fighter makes maiden flight at LM's Fort Worth facility (Defence Industry Europe)
LM highlights milestone as [first German F-35A](#) jet moves to final assembly line (Defence Industry Europe)
Germany plans to order [15 more F-35 fighters](#) (Defence Industry Europe)
Denmark to [buy more F-35 jets](#), ships in \$13.7 billion spending plan (Defense News)
First three LM F-35A Lightning II fighter [jets arrive in Belgium](#) (Defence Industry Europe)
Boeing sweetens its [Polish F-15EX offer](#) with local deals, "Ghost Bat" (Defense News)
Italian Air Force plans [F-35 schoolhouse](#) based in Sicily (Aviation Week Network)
LM aircraft-related [contract upped by \\$10 billion](#), Pentagon says (Reuters)
LM pitches [autonomy, increased service life](#) for C-130s (Aviation Week Network)
Congress wants to know if the C-130 Hercules could be the USAF's new ["doomsday plane"](#) (The War Zone)
Eyeing IAF's transport aircraft deal, LM plans to set up [co-production facility for C-130J](#) aircraft in India (The Economic Times)
Tata-LM announce new defence [MRO facility in India](#); to service C-130J aircraft (The Times of India)
U.S. approves potential \$330 million [arms sale to Taiwan](#), first under Trump (Reuters)
Korean Air, LM [team up](#) on U.S. aircraft maintenance (The Korea Herald)
USAF: [F-22 "threshold" aircraft for CCAs](#), others in consideration (Aviation Week Network)
F-22 Raptor [pairs with Avenger drone](#) in combat flight test (Defense News)
LM completes production of initial [F-16 Block 70 aircraft for Bulgaria, Slovakia](#) (Defence Industry Europe)
LM says it is working to [accelerate delayed F-16 deliveries](#) for Taiwan (Reuters)
U.S. approves [Bahrain's F-16 sustainment](#) under \$445 million deal (The Defense Post)
USAF plan to [fly C-5s, C-17s even longer](#) elicits concern (Defense One)
U.S. Air Force outlines [next-gen airlift schedule](#) (Aviation Week Network)
Decision time nears for [next evolution of airlifters](#) (Aviation Week Network)
American [stealth drone](#) linked to Venezuela operations (UK Defence Journal)
Videos suggest [stealthy Air Force drone](#) flew recon for Maduro capture (Defense News)
Hanwha emerges as re-engine option for [LM Vectis](#) (Aviation Week Network)
USAF adds third contender for [initial robot-wingman buy](#); picks nine for next phase (Defense One)

U.S. Army opens search for [Collaborative Combat Aircraft](#) (Aviation Week Network)
LM tests [AI contingency management](#) for UAVs (Air Force Magazine)
LM, Mantech to overhaul U.S. [military aircraft upkeep with AI](#) (The Defense Post)
Royal NLR and LM advance six-year partnership to develop new [e-Pilot capability](#) (Defence Industry Europe)
NASA's [X-59 quiet supersonic research aircraft](#) makes first flight (Aviation Week Network)
Photos / NASA's X-59 "quiet" supersonic jet makes [historic first flight](#) (Space.com)
Video / [First flight](#) of NASA's X-59 "quiet" supersonic jet (Space.com)
X-59 debut could launch [new era for commercial aviation](#) (FLYING Magazine)
Supersonic-but-quiet X-59 aircraft named "[Coolest Thing Made in California](#)" (Victorville Daily Press)
LM signs Fort Worth's [largest lease](#) of the decade (WFAA TV)

MISSILES AND FIRE CONTROL NEWS

LM to [triple production](#) of interceptor missiles in Pentagon deal (Defense News)
LM CEO Jim Taiclet [outlines how](#) new U.S. Department of War framework will triple PAC-3 MSE output (Defence Industry Europe)
Opinion / The Pentagon's [Patriot missile realism](#) (The Wall Street Journal)
Pentagon's 2027 [missile drive](#) signals U.S. strategy reset (UK Defence Journal)
U.S. approves sale of [Patriot launcher upgrades](#) to Ukraine (Defense News)
LM, Germany's Diehl sign PAC-3 MSE pact to [boost supply chain resilience](#) (Breaking Defense)
LM teams with Hadrian for [faster missile output](#) (The Defense Post)
Avio's U.S. rocket motor plant to [supply Raytheon, LM](#) (Reuters)
Italy's Avio [shortlists three U.S. states](#) for new rocket motor factory (Defense News)
LM, General Dynamics expedite [solid rocket motor](#) development (Design and Development Today)
Lawmakers say [secret JATM missile](#) not delayed by shutdown after all (Air & Space Forces Magazine)
[750 HIMARS launchers delivered](#): LM expands production for U.S. and allies (Defence Industry Europe)
U.S. announces \$11 billion [arms package for Taiwan](#), largest ever (Reuters)
Estonia to proceed with [second HIMARS order](#) amid delivery delays (The Defense Post)
LM, 4iG to explore [HIMARS integration on Hungarian trucks](#) (The Defense Post)
French Thundart rocket unveiled as longer-range [alternative to HIMARS](#) (The War Zone)
[Tube artillery](#) isn't dead, but it's changing (Task & Purpose)
LM to [produce 400 PrSMs annually](#) for U.S. Army (The Defense Post)
U.S. Army expects delivery of [next PrSM variant](#) before year-end (Aviation Week Network)
Army [accelerates PrSM output](#) as ATACMS nears sunset (Defense News)
Ukraine's claimed [ATACMS strike in Russia](#) signals major shift in U.S. policy (The War Zone)
U.S. OKs sale of [JASSM-ER missiles to Italy](#) (The Defense Post)
[Uncovering the JASSM](#): Stealth, precision and autonomy (The Defense Post)
LM secures \$233 million contract to deliver full-rate [IRST Block II systems](#) (Defence Industry Europe)
U.S. awards LM \$328.5 million Taiwan [sensor pod contract](#) (Air Force Technology)
LM turns Sniper pod into [node for fourth-gen jets](#) (UK Defence Journal)
Debrief / Once self-parodic ["lightning bolt" charts](#) may already be reality (Aviation Week Network)
LM live-fires new [vertical-launch JAGM](#) for naval counter-drone role (Breaking Defense)
LM considering [modifying existing missiles](#) into lower cost designs (Breaking Defense)
LM to continue [maintenance for UAE's THAAD](#) missile defense system (The Defense Post)
LM marks 10 years of THAAD deployment and missile defense [partnership in the UAE](#) (Defence Industry Europe)
U.S., Australia [team up with LM](#) to build missiles down under (Stars & Stripes)
LM validates [extended range GMLRS warhead](#) in 112-kilometer flight test (Defence Industry Europe)
Australia to start [GMLRS manufacturing](#) (Australian Defence Magazine)
LM Australia awards Moog contract to develop [GMLRS component](#) (Breaking Defense)
New surface-to-air missile enters Army [mid-tier air defense competition](#) (The War Zone)
Anduril, Boeing team up for [new U.S. Army interceptor](#) (Aviation Week Network)
LM celebrates [three decades in Lufkin](#) (The Lufkin Daily News)

ROTARY AND MISSION SYSTEMS NEWS

German Navy to purchase C\$1 billion [combat management system](#), Canada's trade minister says (Reuters)
LM and Diehl Defence explore integrating IRIS-T family of missiles into [Aegis system](#) (Defence Industry Europe)

LM to manufacture SPY-7 [radars for Canada](#) (The Defense Post)
Denmark selects LM [air warning radars](#) for Arctic and North Atlantic defense (Army Recognition)
LM sees Gulf interest in [long-range discrimination radar](#) (Aviation Week Network)
Army's new [Sentinel A4 radar](#)'s first full deployment will be defending the nation's capital (The War Zone)
Navy's new frigate will not have a [Vertical Launch System](#) for missiles (The War Zone)
This is what the Night Stalkers' [MH-60M direct action penetrator](#) brought to the Venezuelan op (The War Zone)
U.S. Army developing Black Hawk overhaul plan to [keep UH-60Ms flying beyond 2050](#) (FlightGlobal)
County of Los Angeles acquires [two Firehawk helicopters](#) from LM (Homeland Preparedness News)
Czech Republic orders [Europe's first Firehawk helicopters](#) in new LM deal (Defence Industry Europe)
[Brazil takes delivery](#) of first UH-60M from LM (The Defense Post)
Sikorsky turns the venerable Black Hawk into a [true unmanned aircraft](#) (Defense News)
U.S. soldier commands [autonomous Black Hawk](#) for the first time (The Defense Post)
Guardsman [learns to fly](#) an autonomous Black Hawk in less than an hour (Defense News)
LM exec pushes X2 tech for [Korean UH-60P replacement](#) (Aviation Week Network)
CH-53K King Stallion: [10 years since first flight](#) (Seapower)
Fast five [interview with Sikorsky CEO](#) Rich Benton (Aviation Week Network)
Army advances Bell, M1, LM to second phase of [Flight School Next competition](#) (Breaking Defense)
LM delivers [flight training devices](#) to the RAAF (Australian Defence Magazine)
RAAF training levels up with LM's [high-fidelity flight simulator](#) (The Defense Post)
AI and global terrain converge in LM's new ["Full-Earth" simulator](#) (The Defense Post)
LM's Aussie arm makes pitch to sustain future [Australian Virginia-class submarines](#) (Breaking Defense)
Navy accepts [final Freedom-class littoral combat ship](#) as future USS Cleveland joins fleet (Stars & Stripes)

**Visit the MARS Associates Website <https://www.marsretirees.org/> > Events
for more Holiday Event Photos**



Cynthia Shultz, Vicki Ellis, Donna O'Neill, Debbie Mues



Janet & Michael Carroll, Betty & James Johnston



MARS ASSOCIATES

2026 MEMBERSHIP RENEWAL (DUES) NOTICE

It is time for MARS members to renew their membership for the year March 1, 2026 — February 28, 2027. The only exception is those members who joined in the last quarter of 2025.

Please complete the Membership Renewal Form below and mail with a check made out to "**MARS ASSOCIATES**" in the amount shown below, to be received not later than March 31, 2026.

Members whose dues are not paid as of March 31, 2026, will be notified, and will be dropped from membership if dues remain unpaid. Members who have been dropped will not be eligible for MARS clubs or member discounts for activities or benefits. Any members paying 2026 dues after May 1, 2026 will incur a **\$10 late fee**.

NEW FOR 2026: All members who turn 90 before March 1, 2026 will receive their membership for free! Even if you don't have a dues payment, please still fill out the form below so that we have all the correct info for you.

Be sure to retain your current membership card—cards are not reissued annually. If you have questions, contact the VP-Membership, Jayne Brown, at jaynebrown@comcast.net or 303-905-9822.

Please complete all the blanks — The treasurer separates checks from the form upon receipt!

----- CUT AT DASHED LINE -----

Membership Renewal Form

Mail to: **MARS ASSOCIATES, PO Box 1128, Littleton, CO 80160-1128**

(New members must complete and submit the New Members MARS Membership Application form found on the website <https://marsretirees.org/mars-associates-new-member-application/> or contact Jayne Brown at jaynebrown@comcast.net)

Membership dues for FY2026 are as follows:	(Please check appropriate box.)
Regular Member residing in Colorado all or part of the year.	\$25.00 •
Regular Member residing full-time outside Colorado.	\$15.00 •
Senior Member whether residing in Colorado or out of state, whose retiree-member birthdate is earlier than March 1, 1951.	\$15.00 •
Super-Senior Member whether residing in Colorado or out of state, whose retiree-member birthdate is earlier than March 1, 1936.	FREE •

Check # _____ Check Date _____

Name(s) _____
First _____ MI _____ Last _____ Nickname _____

Spouse (or significant other) _____
First _____ MI _____ Last _____ Nickname _____

Address _____ Apt/Unit _____

City/State _____ Zip _____ Zip ext. _____

Phone _____ Email Address _____

Spouse Email Address (Optional) _____

Do you want to receive email notifications from MARS? YES • NO •

Are you interested in volunteering in support of MARS? YES • NO •

If you volunteer for another organization, let us know where: _____

Snowbirds:

If you receive printed copies of the MARS STAR, please notify the Membership Vice President by email (preferred), telephone, or "snail mail" when you know your travel dates to your alternate address AND what that address is.

MARS STARs are mailed by Standard (Bulk) Mail to keep the cost of mailing low—every rejected or forwarded MARS STAR incurs an additional postage cost to MARS Associates.

Membership

- **Low annual membership dues** - \$25.00 in-Colorado, \$15.00 out-of-Colorado and seniors (≥ 75 years of age), FREE for members 90 and above; dues include you and your spouse or significant other
- **Dental, Vision** at very reasonable rates
- **Vendor Discounts** – visit our website (<http://www.marsretirees.org>)
- **Social Events** – annual picnic, happy hours, luncheons, etc.
- **MARS STAR Quarterly Newsletter** – information on past and current events relating to the organization as well as Corporate, LMSSC and ULA happenings
- **Informational & Educational Presentations** – periodic seminars on topics of interest (e.g. Medicare 101)
- **Connectivity with other retirement associations throughout the corporation**

Volunteer Opportunities

- **Community Service & Event Support** – help your community and/or the companies with the MARS team, for example, the Fun Run, Health Fair, Community Support Programs
- **MARS Support** – Web Committee, In Memoriam, Event Photographer
- **MARS Leadership** – Board of Directors and Officer positions of leadership, maximum of two 2-year terms (see the Bylaws and Policy Manual posted on the MARS website)

Current Club Activities

- **Bridge Club** – lively party bridge, singles welcome
- **Car Club** - Invites all car enthusiasts to become members, meet other like-minded people, and enjoy and share our love for the automobile.
- **Golf League** – a handicap league open to men and women that plays weekly games throughout the summer with a tournament in September and a banquet in the Fall
- **Hiking Club** – planned hikes for various levels of ability
- **Photography Club** – monthly meetings by Zoom (*except June, July, August*), photo-related presentations and programs – including travelogues, photo contests, help with equipment and photography; open to everyone.
- **Pacesetters** - provide a social club for MARS Associates senior members (75+) to share life experiences, camaraderie, meals, books, etc. via email interactions and periodic lunch gatherings.
- **Special Interests** – You are encouraged to start a club for your special interest. There is something for everyone to enjoy and all activities are open to all members. Come check us out on our website at <https://www.marsretirees.org> for more information.

MARS ASSOCIATES IS A REGISTERED 501(c) (7) SOCIAL AND RECREATION CLUB

2026 MARS Spring Event & Annual Meeting



**M
A
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S**

The Officers and Board of Directors of MARS Associates are pleased to invite you and your spouse/companion to the **MARS Spring Event & Annual Meeting** on **Wednesday, March 11, 2026** at Heritage Eagle Bend Golf Club located at 23155 E. Heritage Pkwy, Aurora, CO 80016.

For a map to the facility, please open this link:

[https://www.heritageeaglebend.com/directions-map/.](https://www.heritageeaglebend.com/directions-map/)

Doors to the event open at **11:00 AM** and the luncheon is served at **12:00 Noon**. At this time, we do not have the name of the featured speaker. The event also includes the MARS Annual Meeting Agenda.

Menu choices include: **Chicken Parmesan** - Panko crusted chicken breast, fresh mozzarella cheese, fettuccini pasta tossed in house made marinara sauce; **Teriyaki Salmon** – Petite glazed salmon, pistachio-coconut rice pilaf, stir fry vegetables, sweet chili sauce; and **Grilled Petite Shoulder Tender (Beef)** - Garlic herb mashed potatoes, crispy Brussels sprouts, demi-glace. Salad, dessert and coffee is included, and there is a cash bar. If you have special dietary needs, please contact Sandy Mossman at 303-730-8378 or smoss5592@gmail.com with the details. The cost for members and one guest is \$30 per person. The cost for additional guests or non-members is \$65 per person. These prices include taxes and gratuities. Make your reservation by using the link below, which points you to the MARS website for secure online signup and payment, or print out the reservation form on the bottom of this flyer and mail it with your check made payable to **MARS Associates** by **March 3, 2026**.

<https://marsretirees.org/mars-2026-spring-event-annual-meeting>

If you make a reservation and later find you cannot attend, please notify, Sandy Mossman at 303-730-8378 or smoss5592@gmail.com; Charlie Haupt at 303-725-7595 or gcrfcoach@gmail.com; or Jayne Brown at 303-905-9822 or jaynebrown@comcast.net no **later than March 3, 2026** to receive a refund.

Admission is by reservation only.

Detach Here-----

2026 MARS SPRING EVENT AND ANNUAL MEETING RESERVATION FORM PLEASE PRINT CLEARLY. MAIL TO: MARS ASSOCIATES, PO BOX 1128, LITTLETON, CO 80160-1128

Member: _____	Chicken Parmesan	_____	Teriyaki Salmon	_____	Beef Tender	_____
One Spouse/Companion/Guest: _____	Chicken Parmesan	_____	Teriyaki Salmon	_____	Beef Tender	_____
Other Guests: _____	Chicken Parmesan	_____	Teriyaki Salmon	_____	Beef Tender	_____

(Add sheet for additional guest names)

Member Phone No. _____

Member e-mail address _____

Member/Spouse/Companion/Guest: _____ @ \$30.00/person = \$ _____

Other Guest: _____ @ \$65.00/person = \$ _____

TOTAL ENCLOSED \$ _____ Check # _____

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George German, Bill Hershner



Diane & Wayne Troup



Gigi & Tom Hillyer



Jennifer & Kurt Giesaking



James & Liz Porter



Joe & Paula Suhr



Bob & Deb Shiflet



Cindy & Charlie Cannon



Bill & Debbie Edwards



Cynthia & Jack Dekker



Jane Mattson, Twila Forbes, Heidi Urie



David Hodgson & Diane Hess



Bill & Angie Matthias



Yolanda & Paul Brennan



Tammy & Gary Parham



Mercedes & Whittak Huang



Vince Conca, Debbie Bovenzi, Cherie Conca



Michael Woolfall, Deborah & Paul Rizzo

See the back page of this MARS STAR for more activities.

DATE: January 2026		MARS 2026 EVENT CALENDAR – Part 2													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Dates for Events on the MARS Website	
EVENT/MONTH		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		
MARS Informational Sessions															
Understanding Medicare				31											
Understanding Medicare												8			
Estate Planning, Mercer Advisors															
Estate Planning, Mercer Advisors															
2027 Open Enrollment - Online													10		
2027 Open Enrollment Benefits Open House													17		
MARS STAR Schedule															
Items due for MARS STAR															
STAR Input to Editor	8			9			9					8			
STAR Repro. Deadline	19			20			20					19			
STAR Mailing	28			29			29					28			

Schedule Addendum (See last page)

NOTES:

1. Board of Directors has their meetings, as required.
2. Officers/Directors meet 1st Wednesday every month at 09:30 am. Zoom meetings may be used at discretion of Officers.
3. Special Activities Committee will meet every 4th Thursday or Friday each month.
4. Bridge Club meets 3rd Friday of every month at 10:00 am at Buck Recreation Center.
5. Car Club meets 1st Saturday of every month, and as noted on their website.
6. Golf club meets every Thursday from April through Oct of each year.
7. Hiking Club: No planned Hikes at this time.
8. Pacesetters Club meets the 2nd or 3rd Wednesday of each month at 11:00 at Lansdowne Arms.
9. Photo Club meets 2nd Thursday every month (except Jun, Jul & Aug) at 1:00 pm on Zoom or meet at the Columbine Library (Bowles).
10. Special Activities Committee meets monthly and encourages interested members to call in (contact Kathy Hetzel, if interested).
11. 2026 Annual Meeting will be held on March 11, 2026 at Heritage Eagle Bend Golf Course.
12. 2026 Summer Picnic - September 9, 2025 at Clement Park 11AM (2nd Wednesday in September).
13. 2026 Holiday Celebration - December 2, 2026 (Location is TBD).

Please review dates and times and notify Jim Pennington (jpennington101@gmail.com), if you have any changes or additions.



MARS
ASSOCIATES
P.O. Box 1126
LITTLETON, CO 80160-1126

PRESORTED STANDARD
US POSTAGE
PAID
LITTLETON, CO
PERMIT NO. 245

ADDRESS SERVICE REQUESTED



See the preceding page of this MARS STAR for more activities.

DATE: January 2026		MARS 2026 EVENT CALENDAR – Part 1											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
EVENT/MONTH													
Officers/Directors Meeting at RRCU	7	4	4	1	6	3	1	5	2	7	4	2	
Bridge Club	16	20	20	17	15	19	17	21	18	16	20	18	
Car Club	3	7	7	4	2	6	4	1	5	3	7	5	
Golf Club	-	-	-	-	Thur	-							
Hiking Club	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	
Pacesetters Club	14	18	18	15	20	17	15	12	16	14	18	-	
Photo Club	8	12	12	9	14	--	--	--	10	8	12	10	
Special Activities Committee													
Website Team	as needed	as needed	as needed	as needed	as needed	as needed	as needed	as needed	as needed	as needed	as needed	as needed	
MARS Events													
2026 Happy Hour Events			2			16		25			11		
2026 Spring Event and Annual Meeting				11									
2026 Summer Luncheon						24							
2026 16th Annual Rockies Game (No Picnic)							22						
2026 Annual Summer Picnic										9			
2026 Holiday Celebration													2
MARS Special Activities													
2026 Western Stock Show Tour & Rodeo	22												
Board and Brush - Highlands Ranch		19											
Munch and Mingle - Black+Haus Tavern			23										
Leopold Brothers Distillery Tour				18									
Center for Colorado Women's Museum Tour					4								
Central City Opera Event							TBD						
The Wild Animal Sanctuary									TBD				
Hammond Candy Plant Tour										TBD			