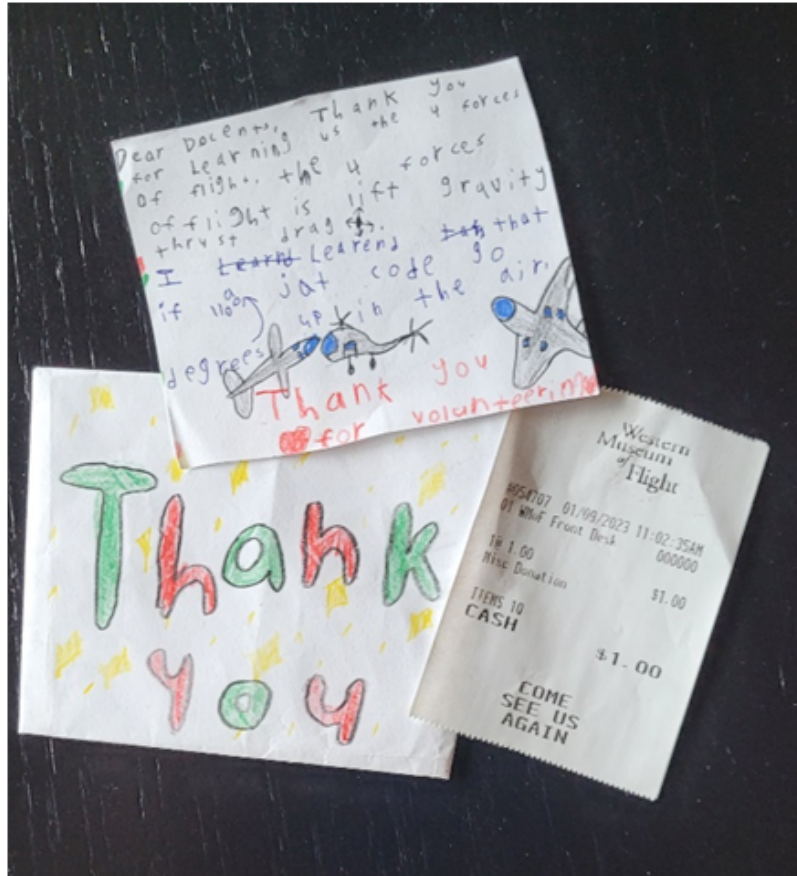


Director's Message *Cindy Macha*

When a third grade visiting student takes the time to write a note of gratitude to the museum staff and include a \$1 donation carefully wrapped inside of a handmade folded envelope, it says so very much about the team of docents that share their knowledge with young school children. This was a very special gift indeed. And I believe that our KLAS (Kids Love Aviation Science) program is a gift to our community as well. We offer our KLAS program free to all schools. And we would like to expand our outreach within the South Bay. In order to do so, we need to build our cadre of docents. If you worked in the aerospace industry or if you enjoy sharing history and demonstrating rudimentary scientific principles, please contact the museum at info@wmof.com.

And, of course, I offer my personal gratitude to our loyal members. Your continuing membership means a great deal to us and is the major source of motivation to our loyal volunteers.

I thank you all,
 Cindy



Donor Spotlight on Torrance Refining Company

Susan Swinburne, Development Advisor

The Torrance Refining Company has been supporting and supplying the aviation community in our region for the past nine decades, starting in its earliest days in 1929 as one of the South Bay's first major 20th century industrial businesses. In the 1940s, the refinery pioneered a new process to produce super 100-octane aviation fuel to supply the U.S. Armed Forces during WWII. After the war, jet fuel for airplanes refueling at LAX grew in importance and has since been a constant service to the millions who fly in and out of our regional hub, which receives 30% of its fuel from Torrance.

Clearly, Torrance Refining Company is indivisibly linked to our aviation and aerospace community, so it should come as no surprise that the refinery has become a charter member of the new Corporate Council of the Western Museum of Flight with a generous underwriting gift of \$15,000 to the museum.

We are delighted to recognize Torrance Refining Company as Lead Sponsor of the 2024 Celebrity Lecture Series. And, this is not the first time the refinery has been generous to the museum. In December 2022, Torrance Refining Company sponsored the Opening Weekend of our popular Women in Aerospace exhibit, allowing the museum to welcome guests for the entire weekend from Friday through Sunday free of admission fees.

The refinery takes its role as a community partner seriously. For decades, it has been a major supporter of educational causes in Torrance, sponsoring learning opportunities for Torrance Unified teachers and administrators, internships and scholarships for students, and partnering with dozens of other Torrance and South Bay nonprofits organizations.

Thank you, Torrance Refining Company!



Barbara Graham (left), TRC Community Relations Manager, Cindy Macha, WMoF Executive Director
Photo by Don Stouder

Kids Love Aviation Science (KLAS)

Photo by Don Stouder

Walteria Third Graders enjoy the museum's Kids Love Aviation Science program.



Sling Pilot Academy

Photo provided to WMoF



The Western Museum of Flight is grateful to Sling Pilot Academy for providing an enthusiastic flight instructor along with their Sling LSA aircraft for our Kids Love Aviation Science Program students to explore.

Experiencing the Aeronautical to Aerospace Engineering Evolution - Part 4

Dale Hoffman, Article and Photos

In the months that preceded retirement from TRW in February 2001, I had spent some time thinking about what I wanted to do to fill the hours of leisure that were in my future. I identified several things I felt I would enjoy pursuing:

- 1) Spending more time with family and friends
- 2) Continuing my role at TRW on several of the active Deployment Review Teams (DRTs) in which I had been involved over my last few years
- 3) Giving back to the community in which we had enjoyed living for over 30 years by serving in volunteer positions which matched my interests and skills
- 4) Pursuing added responsibilities in the management of the parochial schools (Pre-school and TK thru 8th grade) that were part of the Lutheran congregation we had been members for many years
- 5) Traveling to locations that had been on our joint “bucket lists” for some years
- 6) Devoting time to my interest of Civil War history through reading and visiting battle sites.

Upon retirement, our social calendar was adapted to allow more time for socializing and trips to visit our children (and evolving grandchildren) who were living in Salt Lake City, Utah; Albany, Oregon; Venice Beach and Torrance, California. We also marked off longer and more frequent trips to our vacation condo in Cathedral City, CA while inviting a number of our friends (new and old) to join us.

I decided to pursue a community volunteer position on the Palos Verdes Estates (PVE) Planning Commission several months before I actually retired. To my good fortune, an opening came up in 1999 and I was fortunate enough to be selected to fill the Commission vacancy. For several months prior to retirement and for 7-8 years following, I volunteered with the PVE City Government in this capacity which I thoroughly enjoyed. It involved getting out into the different community neighborhoods and interacting with a wide variety of fellow homeowners.

In the months immediately following retirement, I decided that there were still some incomplete activities within TRW that were of interest to me. To implement this, I coordinated a purchased labor agreement with Northrop Grumman Corporation (TRW having been acquired by NGC in late 2001 after my retirement). I cut a deal with NGC to become a consultant covering several duties on programs then active within the company. My main focus was participation in Deployment Review Teams for a number of on-going satellite programs whose designs featured multiple on-orbit deployables. The James Webb Space Telescope (JWST) was one of these programs. Over the years 2002 through 2021, I worked a few hours a week for NGC in a consulting capacity. This allowed me to retain many of the friendships/working relationships with former coworkers. It also helped keep my brain working constructively.

The most rewarding experience I had in this arena was to spend Christmas Day 2021 watching the NASA coverage of the JWST launch and booster separation and then following the activation of the deployable elements of the design. After spending almost 20 years evolving and qualifying the system, it was really satisfying to see the fruits of the collective team efforts come into reality. It was a great extension of my earlier experiences on the design, build and launch of the three HEAO birds I worked on during the ‘70s (see Part 3 of this series).

Within my larger community of Palos Verdes Estates, I followed my stint on the PVE Planning Commission by taking a position on the Board of Directors of the PV Homes Association for another 10 years while also serving on the Board of the PV Historical Society for four of those years. The Homes Association experience proved to provide interaction with folks out in the community and provided kind of the “other side” of the Planning Commission stint.

Experiencing the Aeronautical to Aerospace Engineering Evolution - Part 4

(cont'd)

Our family had joined our local church in Redondo Beach several years after we were married. As our family grew and went to the local schools, we got involved in the life of this congregation while taking on various areas/levels of responsibility. One of the church roles I had the pleasure of pursuing after I retired was to be on the Board of the Christian School and Preschool. Over the years of retirement, the educational program established a reputation as a well-respected educational institution. When COVID hit in March 2020, the school faculty, staff and school board were called upon to develop and execute a whole new method of operation. Participating during these challenging times in the delivery of a quality educational experience was a real test, and one that I had not anticipated in my post-retirement life planning. The experience demonstrated how quickly the world can change due to circumstances outside of your control.

In 2009, I made a visit to the Western Museum of Flight (WMOF) located on the grounds of Torrance Airport. I had heard of the museum and decided to pay a visit since airplanes had always been a personal interest. **It was a real find for me** as it blended my interests in aerospace with that of historical preservation. Over the years, I worked with the museum staff to create original exhibits. The first was related to documentation of the evolution of the airport as part of the 100th-year anniversary of the City of Torrance. Earlier, the airfield had been renamed Zamperini Field in recognition of the heroic World War II aviator and his subsequent exploits. Louis Zamperini had grown up in the South Bay and was a Torrance native. I worked closely with the Torrance Historical Society in carrying out this project which still resides in the Museum display collection; see attached photo of this display.

A couple years later, a group of three of the museum members and I suggested that the aircraft-centric displays of the Museum needed to be enhanced to capture the aerospace aspects of the industry evolution. A trigger for this initiative was the passing of an Air Force officer Colonel Richard E. Wolfsberger who had been active in several of the early space age projects. Col. Wolfsberger's family were interested in donating his personal model and photo collection which included several high-quality models of IRBM/ICBM rockets and early satellites that were part of the evolution of the aeronautical age into the aerospace era. Several WMOF members formed a team dedicated to creating a Wolfsberger display for the museum.



Experiencing the Aeronautical to Aerospace Engineering Evolution - Part 4

(cont'd)

The “Herc Smith Exhibit” (see satellites photo) still forms a major piece of the overall aerospace exhibit area of the museum. A few years after this effort, I was invited to join the Board of Trustees of the Museum where I still participate in supporting the Museum’s evolution to its own facility in the years to come.



On the personal interest scene, I collected an array of books on American history and joined several historic preservation organizations well before I retired. My wife and I travelled to historic sites spread throughout the country but mostly on the East coast and Midwest. Surprisingly, I found there were also several Civil War related activities in the Southern California area which have proven to be very interesting and much more easily accessed.

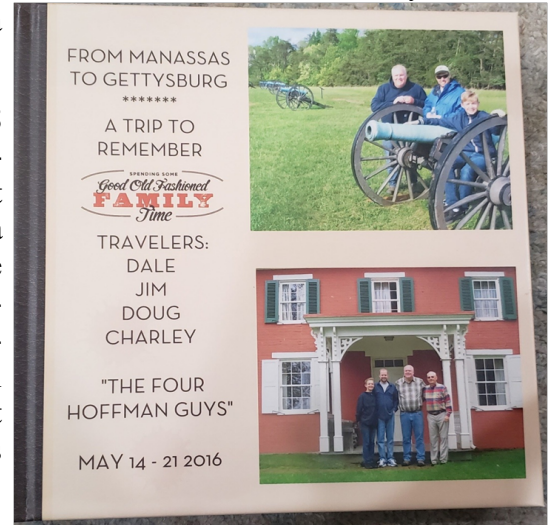
The travel bug response to our collective bucket lists, coupled with my Civil War interests, has provided an interesting combination of journeys in the 22 years since retirement. I had visited some foreign venues as part of my various job assignments and enjoyed them all. Expanding the scope of foreign travel in retirement opened opportunities that resulted in many new experiences and friendships. In addition, the new variable of experiencing the activities of grand/and great-grandchildren as well as travel planning added new adventures in group outings. In the Fall of 2015 during a family Thanksgiving dinner celebration, my then 12-year-old grandson looked across the dinner table to me and asked, “could you take me on a trip to see some of the historical sites on the East Coast??” I, of course, said yes and we talked a little more about what such a junket might entail. All of a sudden my two sons entered into the conversation and said –“Hey, what about us?” By the end of dinner we had agreed that the 4 of us would go on such an adventure. After some detailed planning

Experiencing the Aeronautical to Aerospace Engineering Evolution - Part 4

(cont'd)

to accommodate the 3 adult schedules and making the necessary travel/sleeping arrangements, the four of us flew to the East Coast for a week's touring in May 2016. When we returned, I decided I would try to write a personal book about the adventure; see book cover photo. I gave a copy of the book to each of them as a remembrance.

A lot has surely gone on in the technical world since my 1958 graduation from college. I've had the honor of being part of several of these, a witness to other parts and an amazed spectator to it all. *And it ain't over yet.* A return to the moon, establishment of a lunar colony, and missions to Mars are on the horizon. Planes are in the testing phases that will allow commercial supersonic operation with much-reduced sonic boom ground effects and carbon-neutral commercial operations of low-drag airliners. Astrophysical discoveries by new orbital observatories are producing data that both challenge and confirm our understandings of how things evolved following the "Big Bang".



Thanks for letting me share parts my story with you and I wish that each of you may have as much fun in your evolving aerospace careers as I did!!

Celebrity Lecture Series



November Celebrity Lecture featured John Whittenbury on **The X-47 Story: Navy Unmanned Combat Aircraft**. *Photo by Bruce Guberman*



Many Northrop Grumman X-47 team members attended the lecture. *Photo by Don Stouder*

Celebrity Lectures and Events

January 20, 2024 - **The Northrop F-20 Tiger Shark** with *Paul Metz*, author and former Northrop Grumman Test Pilot

February 17, 2024 - **Airborne Window on the Universe – SOFIA** with *Craig O'Mara*, LtCol USAF (ret) NASA Astronomical Research Pilot

March 16, 2024 - **First Flight Anomalies of First Article Aircraft** with *Mike Rabens*, Northrop Grumman Flight Test & Evaluation and *Roy Martin*, former Northrop Grumman Test Pilot

Expanded Museum—Admission Donation Changes

We hope you have all had a chance to visit the museum since we have expanded into the hangars directly across from our original museum hangars and now have the ability to display a couple of our airplanes in the open space between. We're excited to be able to do that and for the space to have new and updated displays. We're also very happy for the new lecture/event space.

With this expansion, and the increased expenses that come with it, we have increased our adult admission donation to \$8. Kids under 12 are still free. This is still lower than most museums as we really want to encourage everyone to be able to visit. The admission for our Celebrity Lectures also increased to \$15. Our basic membership level of \$60 will not change until January 1, 2024. We encourage everyone to take advantage of that rate to become a member or renew/extend their membership before the new rate takes effect.

Become A Contributor

We know that many of you reading this are former members of Southern California's aerospace industry and may have some interesting stories and experiences from your careers. We ask you to consider sharing some of these stories with us, whether about a particular company's aircraft project/program or during the course of military service associated with one of the many aircraft types built in Southern California. We look to preserve these stories before they are lost to time.

Our mission is to preserve the histories of the aircraft built here in Southern California, primarily airframes in earlier times, for the defense of our nation, experimental research air vehicles, spacecraft and commercial airliners. **Lockheed** (Burbank, Palmdale); **Douglas/McDonnell Douglas** (Santa Monica, El Segundo, Long Beach), **Hughes** (Culver City, El Segundo), **North American Aviation/Rockwell/Boeing** (LAX, Downey, Palmdale), **Boeing** (El Segundo, Long Beach, Seal Beach), **Northrop Grumman** (Hawthorne, El Segundo, Palmdale), **Vultee** (Downey), **Consolidated/Convair/General Dynamics** (San Diego), **TRW/Northrop Grumman** (Redondo Beach), **SpaceX** (Hawthorne), **Robinson Helicopters** (Torrance), these amongst all the larger companies.

We look to the future as well, as history continues to be written with new initiatives and opportunities for further space exploration. We'll help to polish up the words if you are not a professional writer. Or it may simply be an interesting photo(s) with a caption added to tell the story. Please contact us directly via email: info@wmof.com, with your thoughts and comments.

The Western Museum of Flight honors and champions the Aerospace Industry Heritage of Southern California and inspires, motivates, and educates the dreamers and creators of today and tomorrow.

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