

VOL. XXXIII NO. 3

Our 33rd Year

May/June 2021

Join Us for a Virtual Event with Dale Hoffman and Jack Trost

TRA is pleased to announce that we have arranged for a Zoom virtual event with Dale Hoffman and Jack Trost, who will talk about and answer questions on the Western Museum of Flight.

The Western Museum of Flight is an aviation museum located at Zamperini Field, the municipal airport in Torrance, CA. It houses not only historic aircraft, but also has an extensive collection of historic photographs and blueprints.

The Northrop Corporation established The Southern California Historical Aerospace Foundation in 1979 to operate the museum to demonstrate, preserve, and promote the proud heritage of the aerospace community in Southern California. As members of TRA, you have been instrumental in the growth and contributions to the aerospace community for over a century.

The museum has several rare aircraft among its collection, including the second Northrop YF-23 Advanced Tactical Fighter (ATF) 5th-generation stealth fighter demonstrator. Also on display is the first Northrop YF-17 Cobra, a lightweight fighter which was the basis for the Boeing (originally McDonnell-Douglas) F/A-18 Hornet currently used by the United States Navy and Marine Corps. In addition, the collection includes a Grumman F-14 Tomcat and a Douglas A-4A, plus numerous other notable jet and propeller-driven airplanes.

Dale and Jack's program to the TRA membership will describe the heritage of the foundation and how the museum carries out its charter through community outreach. Jack will give a virtual tour of the many aircraft, spacecraft exhibits, artifacts, and displays housed in the museum.

The on line event will be on June 28th, 2021, at 1:00 to 2:30 PM Pacific Daylight Time. Please plan to join us for what will be an interesting talk. Online registration for this event is required and is available at our website, www.tra-spacepark.org. The Zoom meeting details will be provided by email upon your registration. You will be able to submit questions in advance and ask questions at the end of the talk. If you can't join us in real time, we plan to record the event and the recording will be available on our web site.

Jack received a B.S. in Engineering from UCLA and an M.S. in Aerospace Engineering from USC. He joined Space Technology Laboratories (STL) in 1961 after spending five years with North American Aviation as a wind tunnel test engineer characterizing the aerodynamic performances of the company's notable aircraft: T-39 "Saberliner" executive passenger jet, B-70 "Valkyrie" supersonic bomber and X-15 hypersonic research aircraft. His early assignments at STL were to provide systems engineering and technical direction in the field of fluid dynamics on the Titan ICBM program. He later developed the Fluid Dynamics Laboratory applied research facility. Jack was the assistant program manager on the early stages of two high energy chemical lasers: the space-based "Alpha" and the airborne laser "COIL". He retired from TRW in 1995 and is a past president of TRA. Jack serves on the board of the Peninsula Symphony Association and is also a docent at the Western Museum of Flight.

Dale holds a B.S. in Aerospace Engineering from Iowa State University and an M.S. in E.E. from UCLA. He came to California in 1958 as an aerodynamicist with the L.A. Division of North American Aviation (NAA/LAD) where he participated in the design and operations of the X-15 and preliminary designs of the Supersonic Transport (SST) and Apollo programs. The lure of spacecraft attitude control systems design and analyses took him to Space Technology Labs in 1968. With STL/TRW, he participated in the Minuteman III ICBM, Space Shuttle Avionics, HEAO design and operations as an analyst as well as other national space systems programs as functional and program management. He retired from TRW in 2001.

To keep his interests active in the aerospace field, Dale became a member of the Western Museum of Flight after retirement while also doing consulting to Northrop Grumman and JPL.



Board Members Wanted

TRA is identifying candidates for 2022 Officers and Board of Directors. If interested, contact TRA at **tra@tra-spacepark.org**.

New TRA Members

Marianne Lee Michael Martin Manlius, NY Hermosa Beach, CA

We hope these new members will send a note to us at **mailpouch@tra-spacepark.org** telling us a little about themselves and where they worked at Northrop Grumman/TRW.

TRA'S NN GAZETTE

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TRA for Northrop Grumman Retirees

The Retirees Association (TRA) welcomes the retirees and the spouses of retirees of Northrop Grumman and TRW.

2021 Officers

Mary Ann Chory Michael Narigon Charles Clendening Pam Overton Dena Bouskos President Vice President Treasurer Secretary Past President

2021 Directors-at-Large Joyce Komatsu, Jim Nelson, Carol Schamp,

Stephanie Sundius, Jack Trost

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310-813-7745 for voice mail.

By Email:

TRA@tra-spacepark.org - Your emails will be routed to the appropriate source. And, if we have your e-mail address on file, we send out special alerts to TRA members as the need arises. To get on the TRA email list, just send us a brief email requesting to be added to it.

By Web:

Our website is at www.tra-spacepark.org. It is an excellent source for the latest news, lists of the new retirees, travel details, party photos (more than get into the NNG), forms of all sorts, personal photographs, and much more. Register, log on, and browse.

For Membership:

TRA Membership is open to Northrop Grumman and TRW-legacy retirees at \$10 per calendar year. The application is available on the website.

TRW/NG Retirees Meetings Around the U.S.

As everyone knows by now, Covid-19 protection protocols have affected in-person meetings. E-mail or call the contact to make sure the event is occurring before you go. Changes from last issue are marked in **bold**.

If you have a group that you would like to have listed here, please contact us by email at tra@tra-spacepark.org.

GROUP	MEETING LOCATION	DATE & TIME	OTHER INFO	CONTACT
TRA Board Meeting	Zoom	3rd Wednesday, 9:30 AM, Monthly except December	Decisions, planning and actions on archives, events, NNG, coordination with NG	All members welcome. Contact TRA to receive meeting link
ATD Friends & Colleagues	Send ideas for meeting location	2 November 2021, 11:00 AM	Social, Nostalgia, Lunch	Jack Trost, Dena Bouskos, Cindy McCully 310-377-2194 cschamp@aol.com
Beach Cities Get-together	Grunions Restaurant, 1501 N Sepulveda Blvd, MB, CA	Last Monday, Even months, 11 AM to 2 PM	Social	Allen Parker 310-780-0712 777allendsp@gmail.com
Brevard Retirees	On hold due to Covid-19		Social	Tom and Vicki Moore 828-808-0457 seneca75@verizon.net, thistle33@verizon.net
Central Coast Chapter	Various Locations in the Central Coast Area	Various days: contact Zaiser for details	Social	George Zaiser 805-473-2105 gzais34@icloud.com
Houston Chapter	Baybrook Denny's, 19212 Gulf Fwy, Friendswood, TX	3rd Tuesday, 8:30 AM	Social	Gary Dinsmore 281-461-6270 samngary@att.net
Huntsville Chapter	Red Lobster	2nd Tuesday, 11:30 AM	Lunch and Social	Jim Troy 850-797-0044 jtroy28x@gmail.com
Northern Virginia	Zoom	3rd Friday, 11:30 AM	Social	Jim Miller 703-483-5448 jmiller158@gmail.com
Utah	Layton Cracker Barrel Zoom	1st Thursday, 8:30 AM 2nd Thursday, 9:00 AM	Breakfast Social	Charles Vono 801-745-5879 charlesvono@comcast.net
San Diego Chapter	Event Dependent	3rd Tuesday, Alternate Months	Social or Board Meeting	http://sandiego.tra-spacepark.org Jim Denton 858-385-0150 JWDenton@san.rr.com
Temecula Valley	On hold due to Covid-19		Social	Maureen Locken 951-818-6811 Maureen_Locken@yahoo.com
The Mountain Folks	On hold due to Covid-19		"We do have fun!"	Carl Winkelman 303-693-0034 winkelman@att.net
TRIN	Zoom	2nd Thursday, 1:00 PM, Optional lunch at 12:30	Investment info based on monthly newsletter reviews	Bob Eshbaugh 310-376-5880 eshonnet@yahoo.com
Ventura Romeos	Mimi's Cafe Thousand Oaks	1st Tuesday, Lunch	Social	Frank Yunger 805-444-1541, Harry Stroud 805-653-5117

TRA'S NN **GAZETTE**

Arnie Streland Virtual Event

by Stephanie Sundius

TRA is continuing to provide opportunities for TRA members to convene on line and to hear from interesting speakers. On Friday, April 30, 2021, TRA sponsored an on line Zoom event with Arnie Streland. Arnie is the Northrop Grumman Corporate Lead Executive – Los Angeles, who focuses on the Northrop Grumman relationship with the U.S. Space Force's Space and Missile Systems Center (SMC). The event was recorded and is available on our website. If you haven't registered for a website account, this is an opportunity to do so.



Arnie gave a brief background on the history that led to stand up of the Space Force in 2019. He told how U.S. government space programs evolved from the days of Sputnik and the Cold War, to the new geo-political realities after the Berlin Wall came down, and the use of space assets to support the warfighter in Desert Storm. Space Force was stood up by the Trump administration, and the Biden administration re-committed to it. Arnie re-

Arnie Streland

viewed the organization and provided insight into how the organizations we know now fit in the new construct. TRA was fortunate to have such a seasoned veteran share at this event, as his career has spanned both the public and private sectors on programs meaningful to TRW/NG careerists.

Arnie then provided updates on what's happening with the burgeoning space business at Northrop Grumman. In 2020, Northrop Grumman had \$36.8B sales with \$81B backlog. With approximately 97,000 employees, it has leading capabilities in space, missiles, advanced weapons, aeronautics, and mission systems. There are four operating sectors, which includes the Space Systems sector. This sector has approximately 25,000 employees, with \$8B in revenues, and is headquartered in Dulles, VA.

Most of what we associate with TRW legacy space (not including what was known as Mission Systems or Systems Integration) is now in the Strategic Space Systems operating business unit, headquartered in Redondo Beach, CA.

All of us from TRA want to thank Arnie for his talk. If you have topics for an on line event, email us at tra@tra-spacepark.org and let us know.

HAPPENINGS AT NORTHROP GRUMMAN

Edna Sugihara to be Honored at Space and Missiles Center

Edna Sugihara, a long-time Azusa engineer, will be enshrined on the Schriever Wall of Honor at SMC on September 24th in recognition of her years of outstanding work on DSP. It is planned to be a hybrid virtual/in-person event so people should be able to join on line. More details to follow.

Northrop Grumman Marks Five Years of B-21 Progress with Two Aircraft in Flow

In just over two years since completing Critical Design Review, Northrop Grumman has brought its digital design of the B-21 Raider to life, with two test aircraft in production.

Northrop Grumman initiated design and build work for the B-21 in February 2016, and the program has progressed rapidly

in the years following. Within three years, the B-21's design was proven stable and mature through a successful CDR completed in November 2018 at Northrop Grumman's Manned Aircraft Design Center of Excellence in Melbourne, Florida.

Today, the first B-21 test article is "really starting to look like a bomber", said Randall Walden, director of the Air Force Rapid Capabilities Office. Walden also confirmed the production of two B-21 aircraft at Northrop Grumman's Aircraft Integration Center of Excellence in Palmdale, California.

"Our early and continued investment in infrastructure, design maturation, risk reduction and our workforce has been a significant driver of progress on our first two aircraft on the production line in Palmdale," said Steve Sullivan, vice president and general manager, strike division, Northrop Grumman. "As a result, we are well-positioned for low-rate initial production following key milestones in 2022 and beyond."

An example of the impact of these infrastructure and employee investments was a recent systems integration demonstration that further matured B-21 hardware and software integration, recently praised by the Air Force. These efforts are instrumental to the Raider's rapid development.

"We're not getting something experimental," said Dr. Will Roper, the former Assistant Secretary of the Air Force for Acquisition, Technology and Logistics. "We expect to get a representation of the full production [aircraft] to first flight. It is being designed for production innovation, for maintainability and sustainability, up front and back."

"The B-21 Raider is the product of a proud partnership between Northrop Grumman and the U.S. Air Force," Sullivan said. "We are committed to delivering the world's most capable, technologically advanced bomber that will equip our warfighters with every strategic advantage against our adversaries."

Northrop Grumman Space Sales Jump 29% in Q1

Northrop Grumman's Space segment saw sales increase 29% in the first quarter of 2021, the company reported Thursday. Sales were \$2.5 billion in Q1 of 2021, up from \$1.9 billion in the same quarter last year.

According to the company, Launch & Strategic Missiles sales increased due to ramp-up on Ground Based Strategic Deterrent and higher volume on hypersonics programs. Space sales were driven by higher volume on restricted programs, NASA Artemis programs, and the Next Generation Overhead Persistent Infrared program.

Operating income for the Space segment also increased \$74 million, or 37 percent, due to higher sales volume and a higher operating margin rate.

The Space segment's success in Q1 helped the company overall reach 6% growth in sales in Q1. Sales of \$9.2 billion in the quarter grew from \$8.6 billion in the first quarter of 2020. Space sales helped offset lower sales at Defense Systems, which were mainly caused by the divestiture of IT services.

"First quarter results are a strong start to the year and a continuation of the positive performance we delivered in 2020," said Kathy Warden, chairman, CEO, and president. "Our team booked competitive new awards and generated higher sales, earnings and cash."

Strong Q1 results led Northrop Grumman to raise its 2021 guidance. The company forecasts sales between \$35.3 billion to \$35.7 billion. This is up from earlier guidance forecasting sales between \$35.1 billion to \$35.5 billion.

TRA's NN**G**AZETTE

Space Force Selects Boeing, Northrop Grumman to Develop Jam-Resistant Communications Satellite Payloads

Boeing and Northrop Grumman have been selected to develop jam-resistant communications payloads for the U.S. Space Force's Protected Tactical Satcom program.

The Space and Missile Systems Center in February 2020 and March 2020 awarded Boeing, Lockheed Martin and Northrop Grumman contracts for \$191 million, \$240 million and \$253 million, respectively, to design prototype payloads for the Protected Tactical Satcom (PTS) program.

The Space and Missile Systems Center announced on April 22 that only Boeing and Northrop Grumman got the approval to advance into the next phase of the program.

Boeing's and Northrop Grumman's payloads will be launched to space in 2024 on a military or commercial satellite for an on-orbit demonstration.

The PTS prototypes will be evaluated by the Space Force as possible solutions for its next-generation secure communications satellites that over the next decade could supplement or replace existing systems like the Advanced Extremely High Frequency satellites that are used for classified-level communications.

SMC said each contractor's design was "deliberately evaluated on payload performance, extensibility to full production, modularity, hostability, cost, schedule and risk."

The assessments were completed in March, said SMC. "In accordance with the approved acquisition strategy and completion of the preliminary design phase, the program office selected Boeing and Northrop Grumman to complete design, build, test, and ultimately launch two payloads for on-orbit demonstrations and residual operations."

SMC said a "full and open competition" is planned for the next phase of PTS, the details of which have not yet been decided.

Northrop Grumman said the company has demonstrated the interoperability of its prototype with the government's PTS test terminal, and has validated the anti-jam waveform that protects communications signals from disruptions.

Northrop Grumman Celebrates 50 Years of Defense Support Program Operations

The DSP system of satellites has been in operation since 1970 and helps protect the United States and its allies by detecting missile launches, space launches and nuclear detonations. Continuous spacecraft upgrades have allowed DSP to provide accurate, reliable warning data in the face of changing requirements with no interruption in service. DSP is the legacy program that invented the missile warning capabilities that the Next Generation Overhead Persistent Infrared (OPIR) program builds upon, along with the resilient and nuclear survivable systems the U.S. and its allies depend on today.

A video that was produced as part of the celebration event is on the TRA web site at tra-spacepark.org.

Northrop Grumman continues to leverage the expertise gained from DSP by providing critical capabilities to its customers. The company was selected by the Space Force to design and develop two polar-orbiting space vehicles under the Next-Gen OPIR system. The company is also tasked with developing a payload design for the Next-Gen OPIR Geosynchronous program. The 50th anniversary of DSP also follows the 10th year of space operations for the company's Space Tracking and Surveillance System satellites that work with DSP to provide critical support for missile and national defense.

Northrop Grumman Secures Contract for Minuteman III Intercontinental Ballistic Missile Sustainment

The U.S. Air Force has awarded the contract for sustaining engineering support and program management support services for the Intercontinental Ballistic Missile propulsion subsystem, according to the U.S. Department of Defense contract announcements.

The contract, from Air Force Nuclear Weapons Center, is valued at more than \$2.3 billion.

The deal, with an ordering period of 18.5 years, provides for assistance to the government to maintain the Minuteman III weapon system.

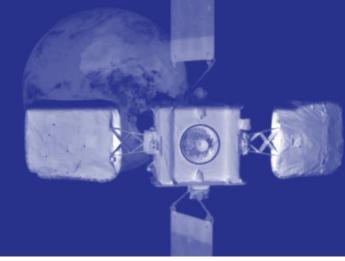
The primary focus is to identify aging mechanisms, anomalous behavior, and ensure any modifications or changes to the system maintain and/or improve system-level performance.

Northrop Grumman Successfully Docks Second Mission Extension Vehicle with Operational Intelsat Satellite

Northrop Grumman and its SpaceLogistics, LLC subsidiary hit another milestone in in-orbit satellite servicing as the second Mission Extension Vehicle (MEV-2) successfully docked with Intelsat 10-02 (IS-10-02). This demonstration follows after the first Mission Extension Vehicle (MEV-1) made history docking with Intelsat 9-01 last year.

"From a customer point of view it is a totally different ballgame," said Jean-Luc Froeliger, Intelsat's vice president of Space Systems Engineering and Operations. "We have customers carrying live traffic, we don't want to disrupt them. So you have to be extremely careful in every approach that you do that you don't put your services in danger. Docking on a satellite carrying live traffic is a different level of complexity. You have to be extremely prudent with your approach and Northrop Grumman did a great job."

Both spacecraft are operational and healthy. MEV-2 will now provide five years of service to the Intelsat satellite before undocking and moving on to provide services for a new mission. Tom Wilson, vice president of Northrop Grumman and president of



View from MEV-2 prior to docking

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SpaceLogistics, said that MEV-1 and MEV-2 are not yet contracted beyond the primary five-year periods because the company wanted to prove the technology before signing other customers.

Froeliger said this mission extends the lifetime of IS-10-02, which is 17 years old and in "pristine health," except for the fact that it was running out of fuel. The satellite offers broadband and media distribution services for customers across Europe, Middle East, Africa and the Americas.

"In-orbit servicing is a win-win for us at Intelsat," Froeliger said. "It helps us realize greater value for our otherwise healthy and high-performing satellite, while at the same time, focusing our capital expenditure on next generation technology like the software-defined satellites procured earlier this year."

Northrop Grumman is also in production of second generation systems to introduce in-orbit, robotic servicing capabilities, which are scheduled for launch in 2024. The Mission Robotic Vehicle (MRV) can install a Mission Extension Pod (MEP) onto a client vehicle. The Mission Extension Pod is a propulsion-augmentation device that can provide six years of station keeping propulsion to a typical GEO satellite. One MRV can install five to six of these extension pods each year, Anderson said.

Videos describing the MEV mission and showing the operation of the MRV and MEP are on the TRA web site.

THE MAIL POUCH

★★★ From Roma Johnson – The City of Henderson (310,000+) blessed me with a badge and certificate making me their only Honorary Firefighter. They call me their "Station Mom." The last time I took them homemade cake and treats was 3/14/2020. They gave me an N95 mask and advised me to go home and remain there until Covid-19 is over or it is safe. I have been home bound since then. Had a huge surprise for my 90th birthday on 5/6/20 – a drive-by parade. Seven vehicles from the Fire Department and 32 decorated cars of friends and church family. My driveway was covered with flowers, plants, balloons, gifts, and 42 cards. Zoom meeting later with many family members. God has blessed me greatly with good health and I am still very active. Wishing all of you a blessed and healthy 2021. ★★★



Roma Johnson receiving her "Honorary Firefighter" certificate.

IN MEMORIAM

Leonard Baker, January 20, 2021. Rudolph N. Bowman, 85, March 5, 2021. Nancy Busteed, April 9, 2021.

Ann Catherine Dickson, 91, March 12, 2021 in Mission Viejo California. Ann began her long career in the aerospace industry in the early 1950's. She was at TRW for years beginning when the company was called Ramo-Wooldridge. She worked her way up from configuration management to division manager for contracts administration. She excelled at contract negotiation with the government and military customers. In the 1960's, she was President of the LA chapter of the AIAA. Many esteemed scientists, engineers, pilots and aviators, including Werner von Braun and Buzz Aldrin, would attend and speak at the meetings. Through hard work, skill, and ambition, she worked her way up to become one of the highest level females in the industry at the time, breaking many glass ceilings along the way. She was very passionate about encouraging and supporting girls and young women to enter science, engineering and tech industries.

Robert Helt, November 29, 2019.

Carl Johnson, 69, March 10, 2021. Carl was a Material Acquisition Manager at TRW/NG.

Pete Jungerson, April 4, 2021.

Joy Mainwaring, March 22, 2021. Floyd Sadler, March 10, 2021.

David Saneharu Yogi, 92, March 18, 2021. For 38 years, Dave worked for aerospace companies, including Northrop, TRW and McDonnell Douglas.

Ray Siebert, February 5, 2020.

Robert R. Smith, 91, March 25, 2021. Robert joined TRW in 1967 and remained there until his retirement in 1993. He was a Systems Analyst/Computer Programmer who worked on the first and many other space missions along with other Top Secret projects. He was there in the beginning when one server took up an entire block and had to be kept very cold. **Robert Lewis Vann**, 82, March 16, 2021 at age 82. Robert worked at TRW Space Park from 1971 to 1997 for the Cable and Harness Engineering section.

Glo Walton.

(**Ret. Colonel**) **Guy Franklin Welch**, 81, February 15, 2021. From one of his many co-workers in the classified area, "*I* worked with Guy in R7. He was a great person - always had a smile, always upbeat, and just a real pleasure to work with." **Joseph Eugene Woods, Sr**, 84, March 12, 2021. Joe joined TRW in 1982 and remained at TRW until he retired in 2002.

The first step in notifying Northrop Grumman of a retiree's death is to call the Northrop Grumman Benefits Center. If the deceased was a member of TRA, please notify TRA whether you want the NNG continued or you want to be removed from future mailings.

If you know of a person that should be included in the "In Memoriam" column, please inform us by either email or mail to the TRA office. As a minimum, we need the name of the deceased, date of death, and the name of the person submitting the information. If more information is available and desired, include age, position and years at NG/TRW, any notable programs, and special skills.



The next NNG will be mailed in July.

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THE MAIL POUCH

+++ From **Carol Kahler** – Hopefully everybody is staying healthy during this most difficult time. Both my husband Gene and I are retirees from TRW. Our combined service time was 75 years (Gene had 40+ and I had 35 years). Gene passed away on 12/31/2003. I sold our home and bought a new condo in Torrance in 2005. I am a grandmother of five girls and a great-grand nana of one darling baby boy. I discovered that I needed to be around people, so I went back to "work". I have been a volunteer at the Western Museum of Flight for eight years. The museum has been a life saver for me. It's located at the Torrance Airport and it's open daily except Monday. I met my fiancée (Fred) at the museum five years ago and I asked him out the first time (he's a little shy). Fred is retired from IBM and Honeywell. Fred has three sons and five grand sons and three grand daughters (and I'm not sure of the number of great grands). We love to travel (Italy, Hungary, Austria, Germany, Australia, Spain, and anywhere Viking cruises). Fred and I have been considering moving north to Gig Harbor, WA (which is where part of his family lives, and it's close to my younger son). Besides we want to be closer to family. We still have a few good years to look forward to. Wishing you all a happy and healthy 2021. ******* Jack Taylor retired after 25 years of service mostly in ESD. His last assignment was Division Facilities Manager for Space Communications Division. He and his wife Donna relocated to Coeur d'Alene, Idaho, to look for a slower pace of life. It has been a great 28 years. They had their 60th Wedding Anniversary on August 6, 2020. The celebration was postponed because of Covid-19. P.S. Enjoyed the article "Apollo 13 and TRW Rocket Power" in the July/August Gazette.

By Pam Overton

From Gail Weage – Still enjoying my retirement in the country in Paso Robles growing and selling Organic Walnuts. I'm being very optimistic renewing my membership for 4 more years when I'll be 89! ******* From **Joyce Handschumacher** – **Buzz** and I are enjoying staying home in Manhattan Beach with our daily Strand walks. ******* From **Jim Hoagland** – After sheltering in place for a year, Mary and I look forward to getting out and around - maybe all the way to San Luis Obispo!! Enjoyed the Willoughby Zoom. Would appreciate more. ******* From **Gordon Williams – Bob**bie and I are "hunkered down" in Manhattan Beach - we can see Space Park from our house. I am often attacked by fits of nostalgia for the old days. I read of the passing of my old friends, Jerry Glicksman, Art Williams, Bernie Randolf, etc., and recall the "good old days". I was always proud to be working among the technical giants, like Rubin Mettler, Andy Park, Dolf Thiel, Herb Lassen, and many others. I just turned 90 years old and often wonder at the condition of all the others. Signed, Employee #41255. ******* From **Bonnie Gill** – Well, we lived through last year – and Covid in December. Thankfully, it was a mild case. I keep busy leading Zoom bible studies, church on line, talking to friends and family out in our backyard at a safe distance. Thankful for Face-Time so we can see our 19-month old grandson in Sacramento. Our 14-year old grandson does on line school at our house every day. Keep the faith and hang in there. ******* From **George Forbes** - Since I survived the pandemic in 2020, sign me up for four more years! Looks like continuing to wear a mask in public may be the prudent thing to do to help protect one against the common cold, annual flu and the Covid-19 virus long-term. +++