

Featured Stories



Uncovering a Lost JPL Artist

By Vincent Robbins

In 2016, a thick, black binder full of old papers, photographs, and artwork mysteriously appeared in The Studio at JPL. But it wasn't until 2021 that Visual Strategist Joby Harris — in the midst of a research project on artists at JPL and NASA — picked up the binder and began to leaf through its contents. Inside were memos, articles, and artwork that told the story of a forgotten artist and his quest for professional respect.

Art Beeman's binder preserved only the most important of his papers and artifacts from 27 years on Lab. Among them: A memo from Dec. 29, 1964, thanking Beeman and his team for rushed support of the Voyager program — a planned series of automated Mars landers to be launched in 1974–75. While the mission would never come to pass, the planning and development for the mission was repurposed by the Viking program in the mid-1970s.

Beeman supplied NASA Headquarters with “air-brush renditions of three Voyager concepts” that were “better than could have reasonably been expected on this time scale, and certainly [assisted] in gaining Voyager Project support.”

1964. Only two years after America put an astronaut in orbit. Five years before the Moon landing. JPL was already planning a journey to Mars. Beeman was there to help NASA picture a starship that would not launch for over a decade, but would ultimately pave the way for half a century (and counting) of exploration of the Red Planet.



Visual Strategist Joby Harris discovered Art Beeman's binder in the Studio while researching past artists of NASA and JPL.

As Harris leafed through the binder, he discovered a forerunner who established a culture of artistic expression on Lab and advocated for the role of visual arts in space exploration.

“[Artists] are the means by which information is taken from one source and visually explained to many,” Beeman wrote in an undated internal JPL memo. “We, the technical artists, are the ones whose talents take a complicated technical mix, translate it, simplify it, color it, sweeten it – and make it as best we can, into a palatable dish.”

“I felt like I was having a conversation with a peer in my industry,” Harris said. “We are communicators, we help build bridges between PhD-level individuals and the general public.”

Art Comes to JPL

A native Angeleno, Arthur “Art” Beeman cut his teeth as an artist drawing cartoons for newspapers like the San Diego Union and comic books throughout the 1930s and '40s. He also dabbled in technical illustration for Hughes Aircraft Co. and served as a staff artist for advertising agencies in the L.A. area, before joining the Laboratory in 1952 as a staff artist/illustrator. He was soon promoted to art director, and then in 1960 to supervisor of the Graphics group (now the Graphic Design and Production group, part of JPL’s DesignLab along with the Studio).

Besides mission proposal support, much of the group’s work consisted of graphs and charts that were published in formal reports, or as Beeman breathlessly put it, “preparing in an artistic drafting style, the never-ending flow of graphs furnished by 25 editors.”



Art Beeman and other JPL artists at work at their drafting tables.

In addition to these reports, Beeman's team produced maps, folders, brochures, slides, slip charts, plaques, covers and art for the Lab-oratory newsletter, "and anything else you can think of."

Due to the analog nature of the work, the pace of output for Beeman's group could be grueling. Each edit meant going back to the drawing board — literally — and turning around a new piece of art on a tight deadline. But Beeman said the greatest challenge for his team was getting a simple "yes" or "no" answer to a question.

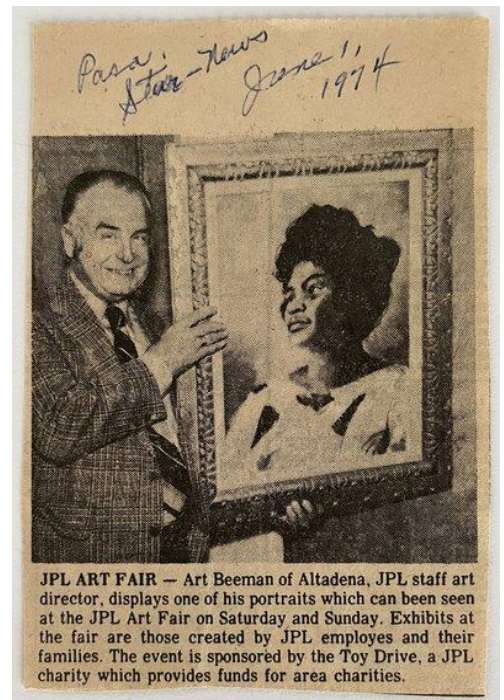
"For some reason, many scientists seem to think that you know as much about their subject as they do," Beeman wrote. "It's quite a challenge."

The Graphics Group also outsourced to five vendors and employed a "vendor art crew" of eight people on a full-time basis. Beeman describes another type of artist they occasionally employed: the "job shopper."

"He is available and free to travel at any time and anywhere. He has his personal art material and his suitcase with him at all times," Beeman writes. "He, or she, is a gypsy nomad and lives a life apart. It is surprising to us how good the work is."

Beeman prided himself on running an egalitarian group.

"We have a very unilateral shop — 7 men and 14 women, all on the same equal basis," Beeman wrote in a 1968 article, "Technical Art for the Space Age," in A.D. Assistant. "The best and the fastest illustrators make the most money."



JPL ART FAIR — Art Beeman of Altadena, JPL staff art director, displays one of his portraits which can be seen at the JPL Art Fair on Saturday and Sunday. Exhibits at the fair are those created by JPL employes and their families. The event is sponsored by the Toy Drive, a JPL charity which provides funds for area charities.

The Art of Space Exploration

Long before spacecraft left the Earth's atmosphere, visual art played a role in stretching our collective imagination and piquing our curiosity about the possibilities of space travel. As early as the 1830s, artists imagined visions of space landscapes and technology that were, at the time, pure science fiction. The explosion of colorful pulp sci-fi in the 1920s and '30s took the space craze to a different level, culminating in artists like Chesley Bonestell, whose astronomical landscapes of the early 1950s captivated the nation with their hyper-realistic fidelity.

NASA, recognizing the importance of art as a means to convey its accomplishments and also to craft its identity as a leader in space exploration — in direct opposition to the Soviet Union — created the Artists' Cooperation Program in the early 1960s. The program employed fine artists around the country to illustrate and paint conceptual, promotional, and retrospective art that would convey NASA's inspired vision of technology and space exploration to the world — especially to those who thought the Soviets might be doing a better job.

But inspiring support from the public was not the artists' only job; it quickly became clear that art was crucial within the administration itself. In an era before PowerPoint slides, CAD models, and sophisticated flight modeling software, technical artists became a crucial cog in the wheel of translating complex engineering and science ideas into real-life possibilities.



Art Beeman consulting in 1964 on what JPL Historian Erik Conway tentatively identified as an optical calibration sphere.

This wasn't science fiction. It was science. These technical artists came from different backgrounds — fine arts, comic books, newspapers, typography — to put their skills to use and help push the frontiers of human exploration.

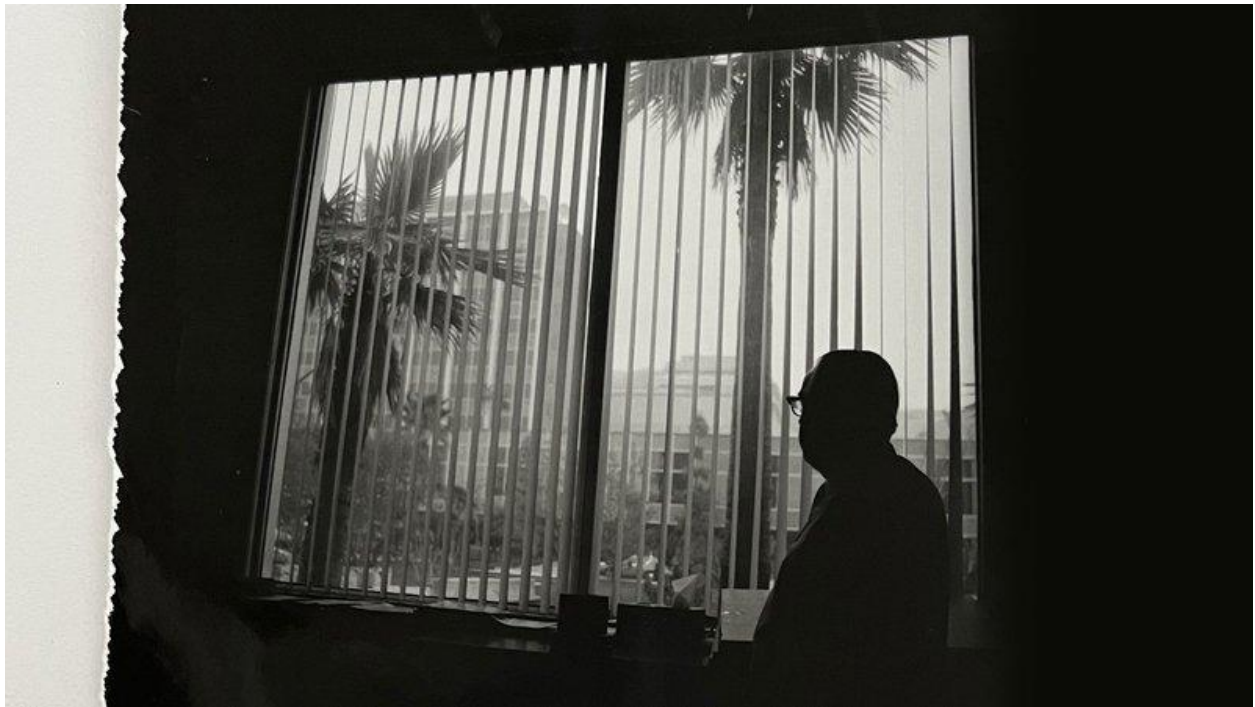
Beeman was just one of them, but he fought for many.

A Legacy of Advocacy

Later in his career, Beeman became a vocal advocate for technical artists at JPL and in the industry at large.

He argued — presumably to budget-wielding superiors — for the value of his team in project ideation.

“The most difficult part of your project is the beforehand thinking. This, on the other hand — is what makes our job fun,” Beeman wrote. “Give [the artists] leeway to come up with something new — maybe something based on an idea that has been used in other fields in which this artist has experience. Discuss troublesome projects and be open to suggestions and ideas.”



Art Beeman looks out at Building 180 in 1969.

Beeman’s passionate, and sometimes humorous, writings never make specific calls for funds or staffing but rather are peppered with sincere appeals for respect and recognition.

“Our complaint is not about the money we make but about the lack of professional recognition for our arts,” Beeman wrote. “When the payment says ‘ARTIST,’ he immediately thinks of a way-out beatnik, complete with beard and sunglasses, living somewhere in the attic... I’d like to elevate our general standing to the stature it truly deserves.”

The binder does not contain a response from management — if one was ever received. But generations later, Beeman’s appeal echoes from a fellow artist.

“This was this man’s journey — bureaucratically, logistically, and politically — to come alongside these missions and supply art,” Harris says. “And at the same time, fight for ‘you need us, you need this’ — it’s the same conversations that we’re having today.”



The International Geophysical Year, I: Losing Project Orbiter

By Erik Conway

In previous columns, I've outlined JPL's transformation from a small research enterprise into a developer of weapons for the U. S. Army. But only three years after the first Sergeant flight, it was out of the Army and rapidly ending its involvement in weaponeering. That exit grew out of what was intended to be a small role in the Jupiter medium-range ballistic missile system being developed by the Army Ballistic Missile Agency, and a scientific proposal to orbit an Earth satellite during a new International Geophysical Year.

JPL's role in the Jupiter program was a legacy of its Sergeant missile proposal. JPL had developed a secure communications system called CODORAC (coded doppler, ranging, and command) for Sergeant that would allow use of a ground-commanded guidance system for the missile, much like the Corporal's. It was un-jammable, encryptable, and could operate with extremely low signal levels.

But the Army didn't want it. At least, it didn't want CODORAC for Sergeant, and had JPL develop an inertial guidance system instead. JPL leaders convinced the Army Ballistic Missile Agency to use parts of the CODORAC system in their Jupiter ballistic missile, which was to have a range of around 1,500 miles. Jupiter was being developed by Werner von Braun's crew in Huntsville, Alabama, so that decision kept JPLers involved with them.

The International Geophysical Year and its satellite program came out of an effort to promote geophysics, and international collaboration in the Earth sciences more generally, that had started in 1950. It took until May 1952 to gain the endorsement of the International Council of Scientific Unions, which also established the period from July 1, 1957 to Dec. 31, 1958 as the International Geophysical Year.

The initial IGY plans did not include an Earth satellite. The satellite add-on came out of proposals offered in 1953 by several scientific organizations. The International Council of Scientific Unions endorsed one in 1954. This proposal was really a challenge to member states to provide a satellite. Both the U.S. and the USSR announced intents to orbit satellites in 1955.

The slow grinding of wheels in these international scientific channels were paralleled within the U.S. national security apparatus, which had its own promoters of satellites. All three of the armed services were developing missiles that could reach space, and technical proposals for satellites for the IGY percolated in all three, too, though the Air Force's was quickly sidelined by the Eisenhower administration so that its Atlas ICBM development was not impacted.

An officer from the Office of Naval Research, Lt. Commander George Hoover, initiated a study that led, somewhat indirectly, to the U.S. IGY satellite. He sought a "minimal orbital satellite." In response, Von Braun's team at the Army Ballistic Missile Agency built a proposal on top of the Redstone booster. Clusters of JPL's Loki solid fuel motors made up its 2nd, 3rd, and 4th stage in a 21-6-1 configuration. Loki was the result of a program to develop an anti-aircraft missile for the Army that hadn't gotten past the research stage.

The resulting launch vehicle could put a 5-pound payload into orbit. It would have had no scientific instruments or even a radio – Von Braun's people didn't think a radio transmitter could be stuffed into their tiny satellite – but could be optically tracked for gravity research. It was truly minimal, and informally they called it Project SLUG.[1] It was prepared without JPL's input, and JPL Director William Pickering found out about the proposal in October 1954, when the Army Ballistic Agency's commander, General John B. Medaris, sent it to Pasadena for review. This proposal became known as Project Orbiter.

At JPL, Homer Stewart recommended replacing the Loki motors with fewer, more powerful solid motors derived from the Sergeant program. JPL also added a lightweight radio beacon to Von Braun's inert satellite so that it could be more easily located in space.

Because the Orbiter proposal originated at the initiative of the Navy, Project Orbiter was also reviewed at the Naval Research Laboratory. There, engineer Milton Rosen led a small group to make a counter-proposal. It was based on a higher-thrust version of the Viking rocket, which NRL had developed with the Glenn L. Martin Company and Reaction Motors, Inc., with a second stage derived from the Aerobee sounding rocket. Proposed in April 1955, their Project Vanguard would orbit a satellite containing several scientific instruments, which were to be chosen by a committee of the National Academy of Science.

Faced with competing proposals, Assistant Secretary of Defense Donald Quarles established a committee to recommend the superior proposal. It was chaired by Homer Stewart, who had been involved with JPL's rocket development since the late 1930s. His panel met several times in July 1955, visiting both the Redstone Arsenal and Martin's plant.

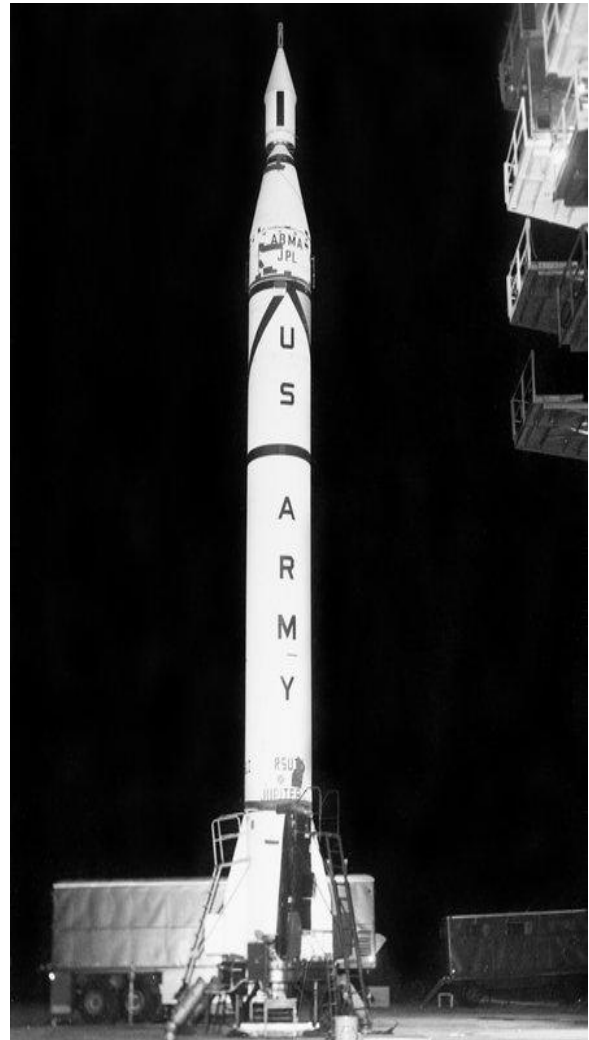
Before they finished their report, President Eisenhower decided to announce that the U.S. would accept the challenge of launching a scientific satellite before the end of the IGY. He was motivated by intelligence that suggested the USSR would be announcing its own satellite program shortly. The U.S. announcement came at a press conference on July 29. The Soviet announcement came four days later.

Stewart's committee ultimately chose Project Vanguard, though Stewart himself worked hard to convince them that this was a mistake. "I remember staying up 'til three o'clock in the morning at home writing the most purple prose that I have probably ever written, trying to write the minority report as to why I thought that was the wrong way to go," he commented in a 1972 interview.[2] Redstone had already undergone years of development, as had the Sergeant motors in the upper stages. Vanguard's Viking-derived rocket was essentially a new development. It was much less likely to be ready before the end of the IGY. But Vanguard offered a greater payload, and the IGY's purpose was science.[3] Because it was not a derivative of a military missile, it would also interfere less with the nation's missile programs. That it was also less mature wasn't as important to the committee. Vanguard became the national champion.

Project Orbiter goes Suborbital

The Stewart Committee's decision was reached in early August, but the three Service Secretaries were not formally notified until Sept. 9. Some of the delay came from efforts to overturn the result that came to naught. In the interim, Pickering and Von Braun had already begun working on an alternative use for their notional Orbiter vehicle.

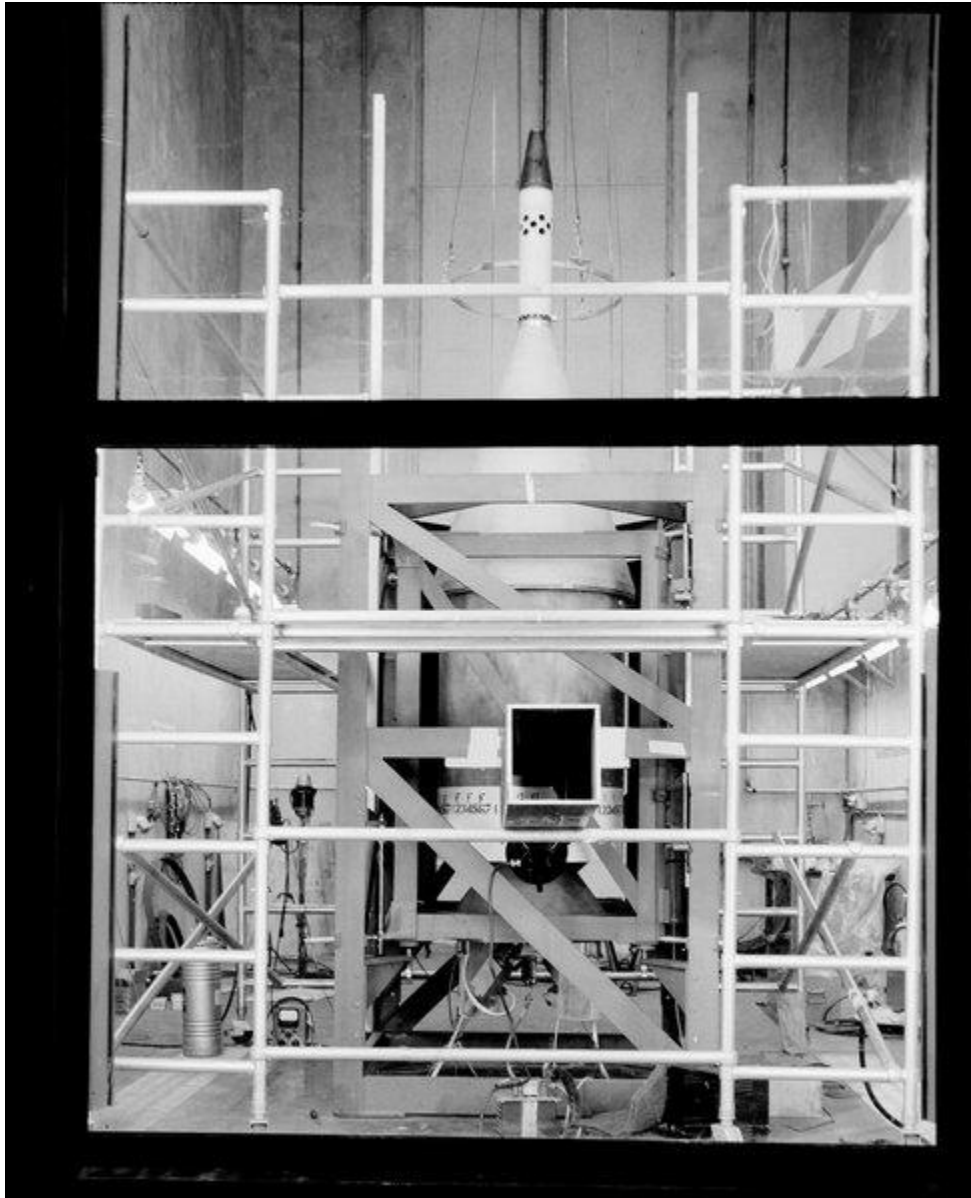
In April 1955, the Army had authorized development of a Redstone-based intermediate range ballistic missile named Jupiter. The Jupiter warhead would face re-entry heating, and Von Braun needed a way to prove the warhead would survive it. To save weight—or, put another way, gain increased range—he wanted to use an invention of the National Advisory Committee on Aeronautics' Ames Aeronautical Laboratory (now NASA's Ames Research Center), an ablative heat shield. It would protect the warhead by burning away, carrying much of the heat with it. This was much lighter than the alternative, simply making the re-entry vehicle massive enough to absorb the heat without damage the way a heat sink does.



In August, just as the decision against Orbiter was gradually working its way through the Pentagon, JPL and ABMA established a program to test the new technology using the combination of modified Redstone booster and downsized Sergeant motors. Pickering explained it this way in an interview: "The idea was to take a Redstone rocket, stick some of these Sergeants on top of it, and throw a re-entry test nose cone about two or three thousand miles out into the Atlantic and instrument it to see how it worked."^[4]

JPL also supplied the telemetry system for this Re-Entry Test Vehicle program. It was based on part of the radio command system developed for the Sergeant program that the Army had rejected. It enabled reception of milliwatt-level signals from thousands of miles away. The RTV team intended to recover the test warheads from the ocean so that they could inspect the heat shield, so accurate tracking was essential.

The first flight in the RTV program was 20 September 1956. For this flight, ABMA prepared two identical missiles, numbered 27 and 29 – a total of 12 sets of hardware were built for the program. But this first flight didn't use the warhead configuration. Instead, it flew the cylindrical Project Orbiter configuration. This was entirely successful, proving the functionality of the vehicle, tracking and telemetry systems. It flew a little more than 3,000 miles downrange and achieved an altitude of 600 miles.



Another view of the "Project Orbiter" configured upper stages, August 29, 1956.

Image Credit: JPL/Caltech

In his memoir, Gen. Medaris commented: "If we had put a solid propellant into the fourth stage instead of the inert material we were using to get it to the right weight, we could have fired that particular missile into orbit as a satellite. . . .[W]e put sand aboard the fourth stage instead of powder."[5]

Missile 29 was put into storage after Missile 27's success.

The second flight was in May 1957, using Missile 34. This flew the first of the ablative re-entry test nose cones, which contained a tracking beacon, a pair of underwater bombs to help sonar equipped ships locate the cone, a parachute that was to open around 11000 feet, and airbags which would inflate to ensure the cone remained afloat for recovery. But this flight was only partly successful. A few seconds before burnout of the Redstone booster, a guidance failure caused the vehicle to pitch up and the high-speed stages had fired at the wrong angle. Nonetheless, the motors had performed as expected, but the nose cone did not separate from the 3rd stage. They tracked it to impact, and detected the underwater bomb's explosion. While they didn't recover the nose cone, they knew from the explosion that it had survived re-entry.



The Missile #34 high-speed stages and experimental re-entry vehicle, May 24, 1957.

Image Credit: JPL/Caltech

The third flight, Missile 40, occurred on Aug. 8, 1957. This flight met all of the program's goals, though only because the team was lucky. The guidance system and all rockets and tracking systems worked properly, but the nose cone's separation system failed. Yet the re-entry heat apparently caused the cone's magnesium mount to melt, and it fell free anyway. USS *Escape* recovered it 1160 miles downrange of the launch point. It showed little damage from its hypersonic flight – although one of its float bags was bitten by a shark.

Satisfied with the mock warhead's performance, Medaris ended the program after Missile 40. The remaining 9 sets of rocket hardware were put in storage at Redstone Arsenal and at JPL, with a justification that they were undergoing a "life test."

Missile 40's nose cone made one famous public appearance. On Nov. 7, 1957, President Eisenhower made a televised address on the importance of science and technology in national security. With the nose cone displayed in the Oval Office as a prop, he explained:

“One difficult obstacle on the way to producing a useful long-range weapon is that of bringing a missile back from outer space without its burning up like a meteor, because of friction with the earth's atmosphere.

Our scientists and engineers have solved that problem. This object here in my office is an experimental missile — a nose cone. It has been hundreds of miles to outer space and back. Here it is, completely intact.”[6]



President Eisenhower with Missile 40's re-entry vehicle, November 7, 1957. Image Credit: Smithsonian Institution

Eisenhower's speech was motivated by the USSR's launch of Sputnik 2 on November 3rd, carrying the dog Laika. To the surprise of many Americans, and the frustration of Medaris, von Braun, Pickering and many other American rocketeers, the Soviets had launched the first IGY satellite in October. We'll look at the Soviet and U.S. satellite programs in future columns.

[1] Michael Neufeld, "Orbiter, Overflight, and the First Satellite: New Light on Vanguard," *Reconsidering Sputnik: Forty Years Since Sputnik*, eds. Launius, Logsdon and Smith, 234.

[2] Homer J. Stewart Oral History with James H. Wilson, 1972.

[3] More detail from Neufeld, 240-247. He also emphasizes service loyalties; the scientists on Stewart's committee had strong ties to the Navy.

[4] William Pickering Oral History with Michael Q. Hooks, 1989.

[5] John B. Medaris, "Countdown for Decision," NY: Putnam, 1960, p. 120.

[6] Eisenhower address, November 7, 1957, <http://www.presidency.ucsb.edu/ws/?pid=10946>.



Image Credit: PhotoLab

Birthday Fun, Costume Chaos, Carved Pumpkins, and the Giving Spirit

By Christian Hill

Getting older has never looked so fun. The Lab celebrated its 87th birthday on Tuesday, Oct. 31 — marking the date a group of “semi-crazy Caltech folks” (as Director Laurie Leshin quipped in her opening remarks) ventured up the Arroyo Seco to test experimental rockets back in 1936 — with a kickoff of the Lab’s United Way Giving Campaign, a Halloween costume contest, and an engineering-centric pumpkin carving contest.

On the steps of Building 180, Leshin addressed the hundreds of JPLers who could be seen enjoying live music, kettle corn, and giveaways from United Way and the JPL Public Services Office that included free stickers, coasters, and lanyards emblazoned with JPL’s new values.

“I’m thrilled we get to come together as a community to celebrate, and it’s such an important thing to do. It’s how we build community, it’s how we bring our great minds together,” Leshin said. “How many organizations can say that they have continued to push the boundaries of innovation for almost nine decades? It’s incredible and we aren’t stopping.”

Deputy Director Larry James followed Leshin by announcing the start of JPL’s annual giving campaign with United Way Greater Los Angeles, reminding the Lab the importance of giving back to the community heading into the upcoming holiday season.

“There’s a lot going on in our local community and our local county, in terms of people in great need, and we at JPL are in the fortunate position of having a lot,” James said. “And so we call upon each of our JPLers to think about that, and think about how we can give back to the community. This community gives us so much in terms of support and in terms of the incredible things we get to do here, but there are many people who are not so fortunate.”

Last year, more than 1,000 JPLers raised more than \$500,000 for United Way. This year, inspired again by a theme of “Giving Together,” the Lab aims to surpass last year’s total.

The campaign runs through Dec. 1 and direct one-time contributions can also be made through <https://www.unitedwayla.org/en/give/jpl/>.

Costume Contest Conjures Creativity and Laughs

Following the giving campaign kickoff, JPLers lined up near the B180 steps to watch, or participate, in one of the Lab’s most beloved annual traditions: the Halloween costume contest. This year’s contest featured 47 entries – some individuals and many teams – and included floating Webex heads soon to rest in peace; an Enceladus moon complete with plume; a lone, lost badge; JPL critters made famous on Slack; and many more.

Adorned in gold face paint for his costume as Voyager’s Golden Record, Greg Smith in the Public Services Office emceed the event, introducing each costume entry and wrangling them across the stage. Judges for this year’s contest included Associate Director for Strategic Integration Dave Gallagher, Director for Communications and Education Michael Greene, and Director for Human Resources Becky Macko.

Halloween costume contest winners and honorable mentions:

1st Place: Asad Aboobaker

Costume: Fashion meets the Force—it’s Barbie-Wan Kenobi!

2nd Place: James Ray, Alicia Cermak, Lindsay Tran, Ryan Smernoff, Michael Gorospe, Stephanie Smith, Steven Fimbres, Scott Cranfill, John Mancusco, Luis Espinoza, Addison Hardy, Kyle Mansfield, Charles Mattei

Costume: Rest in peace, Webex.

3rd Place: Elise Rimsa, Madeline Lambert, Diego Garay, Dillon Dalton, Matthew Graber, Jessica Fisher, Devin Johnson, Serena Tramm, Sarah Rees, and Ryan Hunter

Costume: The JPL Pin Collection

Honorable Mentions:

Cat Pavlov

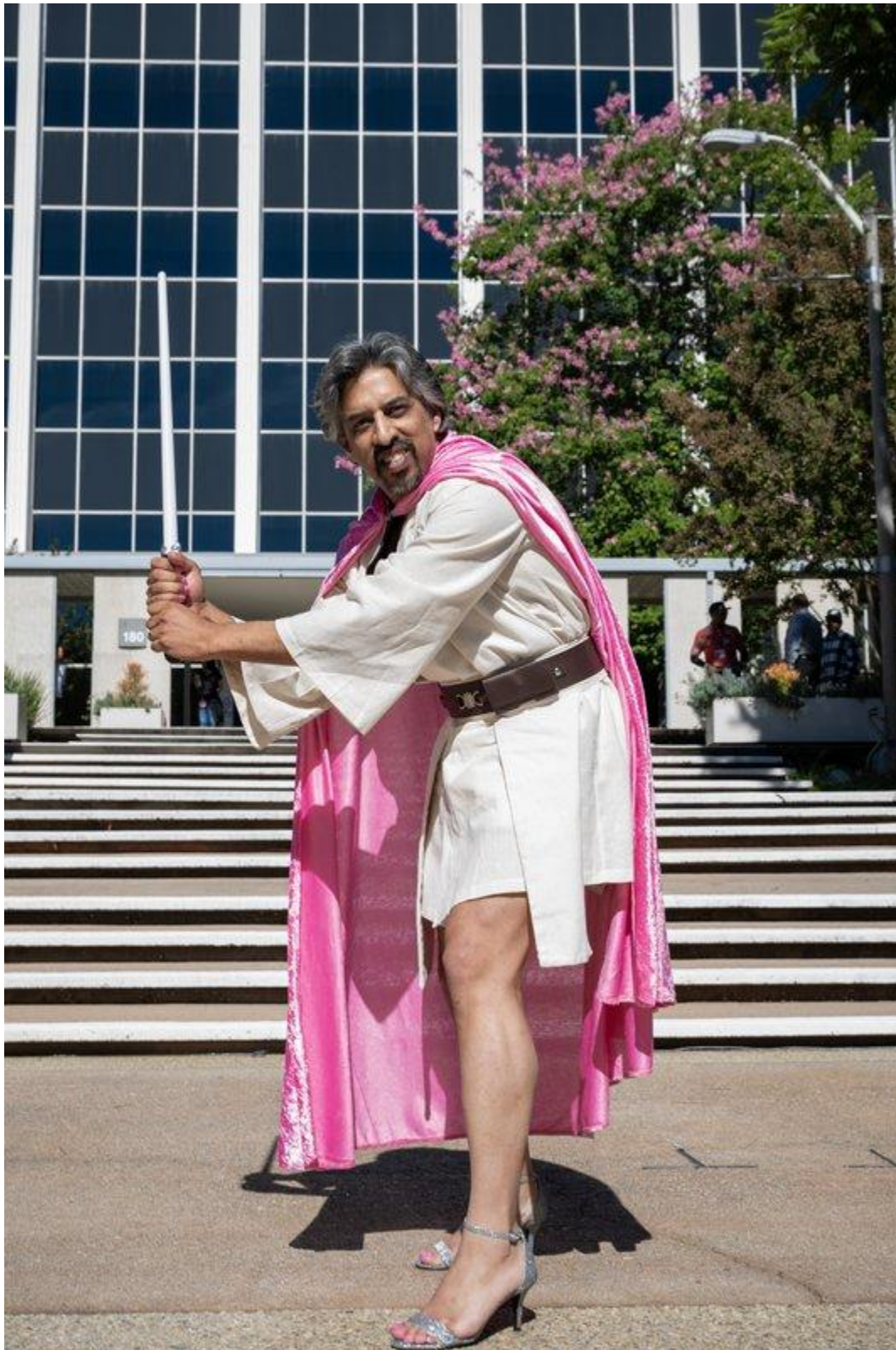
Costume: JPL’s Secret Sauce

Jennifer Corbilla, Nikki Wyrick, Amanda Corbyn, Curtis Montano, Marc Razze, Greg Smith

Costume: The Von Karman Auditorium

Lauren Mc Keown

Costume: Enceladus moon with water plume



1st Place: "Fashion meets the Force—it's Barbie-Wan Kenobi!" Entrant: Asad Aboobaker Image Credit: PhotoLab

Engineering Fun at Pumpkin Carving Contest

On the east side of Lab, the patio of Cafe 303 once again became a graveyard for a plethora of pumpkins as 22 JPL teams carved, scooped, drilled, spray painted, and even bedazzled their creations for the annual pumpkin carving contest for sections 355 and 352.

At 9 a.m. sharp, Spacecraft Mechanical Engineering Section Manager Pete Waydo wielded his bullhorn, wrangled the pumpkin carving contestants to their starting points, gave the countdown to begin, and one hour later, sounded the final horn.

“There are very few rules, really,” Waydo said. “It’s about being creative and having a good time. The pumpkins for the teams competing are quarantined: we hold them beforehand. And then these teams have exactly one hour to do the carving on their official pumpkin.”

Of course, that’s only a small part of the preparation and work that goes into the contest. Pre-constructed backdrops, LED displays, electronics, mechanical lifts, solar arrays, and more are added onto and around the pumpkin, allowing the engineers to craft some truly innovative displays.

Winners of Judged Pumpkin Contest

352:

1st Place: 352M - 352Museum

2nd Place: 352E - DSN - Deep Squash Network

3rd Place: 352L - "Eye <3 Vegas

355:

1st Place: 3550/3515 - Indy Idol Snatch

2nd Place: Spice Retrieval Helicopter

3rd Place: Barbenheimer

People’s Choice Awards

352:

1st Place: 352E - DSN - Deep Squash Network

2nd Place: 352M - 352Museum

3rd Place: 352A - Barbie’s House of Nightmares

355:

1st Place: 355K - Spice Retrieval Helicopter

2nd Place: 355S - Barbenheimer

3rd Place: 3550/3515 - Indy Idol Snatch



Section 352 1st Place: 352M - 352M Museum **Image Credit: PhotoLab**

“There’s no limit to the amount of time, preparation, or pre-work these teams are putting in on their own time before the contest, but for your regulation pumpkin, you’ve got one hour,” he said.

This year’s contest was full of pink and doom: JPLers dressed as Barbie and Ken spray-painted pumpkins pink – a getaway Barbie car took shape on one table, and Oppenheimer fans fashioned a mushroom cloud atop a pumpkin nearby.

Mechanical Engineers Tatiana Jaimes, Sarah Yearicks and a team of 20 fellow “Kens and Barbies” in the Planetary Sample Acquisition And Handling group (352A) joined forces to craft a Barbie nightmarescape born out of their love for the movie’s message.

“We collectively love the idea of Barbie, and the positivity of it,” Yearicks said. “We have badass women on our team, and men who are allies, and badass people who are non-binary who are allies, and we wanted to come together to make a concept that we thought would be fun and positive. We all really love Halloween, pumpkin carving, and JPL gives us a space to really have fun with it.”

Some non-Barbenheimer-influenced pumpkin displays included a functionally foldable James Webb Space Telescope model with pumpkin hexagons in place of the telescope’s mirror segments, and a pun-laden “Critical Lift” display from Mechanical Integration and Test group 355H.

“We’re the group that develops mechanical ground support equipment during testing, so we stuck with the theme of our charter, and developed a setup for a critical lift for a pumpkin,” said 355H Group Supervisor Paul Lytal. “Just doing what we do, but for a pumpkin.”

Of course, this particular pumpkin lift includes a cleanroom filled with toxic chemical spills, actual (pink-colored) bunny suits, and a weight limit capacity sign on the pumpkin lift that read, “ 2.5×10^{-3} Ton Capacity” ... a very JPL way of saying five pounds.

“For us, it’s a nice way to get together, get to know each other better, and work on something that’s outside our typical workloads and fires we’re putting out, and having some fun with engineering,” Lytal said.



Events



Von Karman Lecture Series – NASA's Deep Space Network Turns 60: What's Next?

Thursday, Nov. 16

7 to 8 p.m.

[Watch live on YouTube](#)

The heart of deep space communications at NASA is the Deep Space Network, or DSN, which is managed by JPL. This international array of antennas located at three complexes in California, Spain, and Australia allow NASA to communicate with their missions in “deep space,” which JPL defines as from the Moon and beyond.

Come celebrate the DSN’s inspiring 60-year legacy and learn how advancements in communications and aerospace engineering will pave the way for the network’s incredible future.

Speakers:

Brad Arnold, Deputy Director for the Interplanetary Network Directorate, NASA/JPL

Amy Smith, Deputy Project Manager Deep Space Network, NASA/JPL

Host:

Nikki Wyrick, Office of Communications and Education, NASA/JPL

Co-host:

Sandy Marshall, Solar System Public Engagement Specialist, NASA/JPL

JPL Family News

Retirees

The following JPL employees recently announced their retirements:

30+ Years:

Jennie R. Johannesen, Section 392M, 38 years

Michael Gunson, Section 8000, 36 years

Fernando Peralta, Section 397R, 32 years

20+ Years:

Cheryl Asbury, Section 5141, 23 years

Letters

Thank you so much for the plant that JPL sent following my wife's death in August. Viann was always excited about the work we do here and was proud that we could be involved with it for many years. -

Courtney Duncan

Passings

In March 2023, we bid farewell to Tom Runge after a brief illness. Tom had been a dedicated member of JPL since January 1981. Serving diligently in the Ionospheric and Atmospheric Remote Sensing group within Section 335, Tom contributed significantly to refining ionospheric and tropospheric calibration products and processes for the Deep Space Network (DSN).

With a Ph.D. in Computer Science, Tom utilized his skills to continually enhance and develop new products for the DSN. His consistent efforts were recognized, earning him four NASA Honor Team Awards. In 2020, his dedication was further acknowledged when he received the NASA Exceptional Public Service Medal for his sustained contributions to tropospheric and ionospheric calibrations in support of NASA's DSN operations and spacecraft tracking.



On a personal note, Tom was an energetic individual with a love for life. He had a wide circle of friends and was known for his sense of humor that always added a touch of lightness to many meetings. An enthusiastic pool player and a keen reader, Tom was always up for a good discussion on recent reads and contemporary events. His willingness to mentor and share his knowledge stood out, making a difference in many lives.

Tom is fondly remembered by his son Jesse and his grandsons. We honor his memory and his lasting impact on both his professional life and the lives of those whom he touched.