

Innovation Day Showcases Groundbreaking Technologies

by Nancy Profera

March 22, 2017

The Aerospace Corporation transformed into a lively incubator of start-up pitches, technology demonstrations, and a panel discussion, where members of the Air Force engaged with tech start-ups to discuss how each might better work together, at the company's first Innovation Day.

Aerospace teamed with [Starburst](#) to co-host the accelerator event on March 21, where 11 startups were invited to come in and discuss their technologies through quick, ten-minute presentations. These companies are hoping to break into the traditionally tough-to-enter market of government-funded military work. It is a ripe time for each to pursue such work as the pace of technology continues to accelerate, the government looks for ways to reduce costs, and the number of companies entering the market with potentially viable solutions grows and expands.

While Aerospace maintains its traditional role of providing expertise and technical support to the government for space and satellite systems, it is also exploring ventures into new markets, and many of the technologies pitched at the event might work for military, civil, or commercial sector customers.

The startups also showcased technologies for the next generation of how people might live, with some examples being flying cars, close-encounter helicopters, and remote and virtual augmentation/reality for manufacturing and maintenance work. They were all looking for funding to turn their ideas from concepts into operational systems, and came from California, Israel, Brazil, and France. The startups were eager to show how their products might solve problems better, faster, and more cost-effectively than in the past.

The Air Force and other government customers, representatives of industry, investors, local politicians, and members of the media attended the event.

EPIC

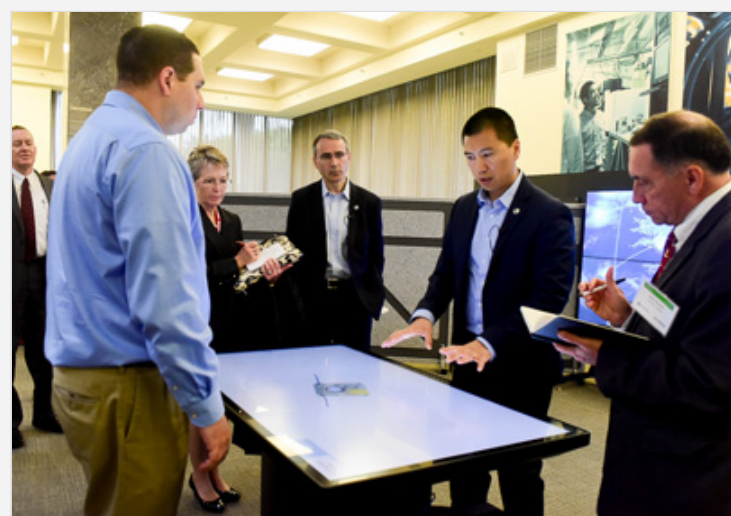
Meanwhile, across campus, and timed to coincide with the Starburst event, Aerospace's Exploration, Prototyping, and Innovation Center (EPIC) was unveiled. President and CEO Steve Isakowitz and acting Innovation Laboratory (iLab) Executive Director Dr. Randy Villahermosa led members of the media on a tour of Aerospace's own breakthrough technologies, with employees demonstrating their prowess at stations set up throughout the center.

Isakowitz said, "This is the place to try new things, and is the first phase of this experiment. We are close to our customer, and it's perfect for cross-fertilization efforts. It is for embracing and adopting technologies that we can share with our customers." Villahermosa said, "iLab is for exploring, prototyping, and collaborating."

Approximately 350 employees explored EPIC throughout the day, as a variety of staff members showcased the company's own incubation efforts. Located in the Lauritsen Library, EPIC is on the top floor, which has been transformed into a highly engaging



*Brig. Gen. Mark Baird provides remarks to attendees prior to industry startup pitches.
(Photo: Eric Hamburg)*



Michael Tanzillo and Dr. Randy Villahermosa use the interactive visualization table to demo technology. (Photo: Elisa Haber)

and modern space. Employees are welcome to stop by the Library and visit EPIC for inspiration.

To learn more, check out the list of startups below who attended the event and pitched their concepts, or read about [some of the Aerospace technologies](#) on display during the day.

Startups:

[Firmamentum](#)
[Akash Systems](#)
[Tri-D Dynamics](#)
[Apium, Inc.](#)
[Scope AR](#)
[Department 13](#)
[Gamma Alloys](#)
[Urban Aeronautics](#)
[Intelectron Robotics](#)
[ZingBox](#)
[Delair-Tech](#)

Center for Space Policy and Strategy Hosts Inaugural Event

by **Gabriel A Spera**
March 31, 2017

The Center for Space Policy and Strategy held an inaugural breakfast meeting on Thursday, March 30, at the Capitol Hill Club in Washington, DC.

The invitation-only event brought together Aerospace policy analysts with senior staff from numerous government agencies, including the General Accounting Office, the National Oceanic and Atmospheric Administration, the Air Force, and the Department of Energy as well as launch providers, prime contractors, and congressional representatives and staffers. The theme for the convocation was "Space Policy for the Next Generation." Nearly 140 people attended. The event was held in partnership with the Mitchell Institute for Aerospace Studies, an independent, nonpartisan policy research group based in Arlington, Va.

Aerospace President and CEO Steve Isakowitz delivered opening remarks and moderated a panel discussion on major challenges and opportunities in the space policy domain. Topics ranged from expansion of public-private partnerships to the prospects for a new National Space Council at the White House. The panelists were Maj. Gen. Roger Teague, director of space programs in the Office of the Assistant Secretary for Acquisition for the U.S. Air Force; Dr. Scott Pace, director of the Space Policy Institute at George Washington University's Elliott School of International Affairs; and Dr. Jamie Morin, the new executive director of the Center for Space Policy and Strategy. Before joining Aerospace, Morin served as director of Cost Assessment and Program Evaluation for the Department of Defense, responsible for analyzing and evaluating the department's plans, programs, and budgets.



Steve Isakowitz, Aerospace president and CEO, speaks at the Center for Space Policy and Strategy breakfast. (Photo: Clifton Jones)

In conjunction with the breakfast, the center unveiled its new [website](#) and released several policy papers on subjects including commercial spaceflight, orbital debris, commercial remote sensing, and national space policy. These papers are available for download from the site.

The Center for Space Policy and Strategy is an interdisciplinary research branch within The Aerospace Corporation. It is chartered to provide timely, independent, well-informed thought leadership, policy context, and strategy information to U.S. government and private-sector decisionmakers. The center examines issues at the intersection of technology and policy and provides objective analysis and data to support policy development.

Van Allen Probes Reveal Hidden Radiation Belt

by **Nancy Profera**
March 15, 2017

The state-of-the-art instruments flying on NASA's Van Allen Probes were designed by Aerospace researchers and engineers, and the data they are sending back have now transformed the classic textbook picture of the radiation belts surrounding Earth.

It was previously believed that there was a dynamic outer electron belt surrounding Earth, with an inner belt dominated by protons with a lower energy, yet stable, electron component. These belts are separated by a slot region that is devoid of particles. While scientists have known for some time that the slot region can fill with electrons, the true nature of inner belt electrons has a strikingly different character than what was previously believed. The findings now show that at times, the inner belt is devoid of high energy electrons, such that there is only an outer electron belt at high energy.

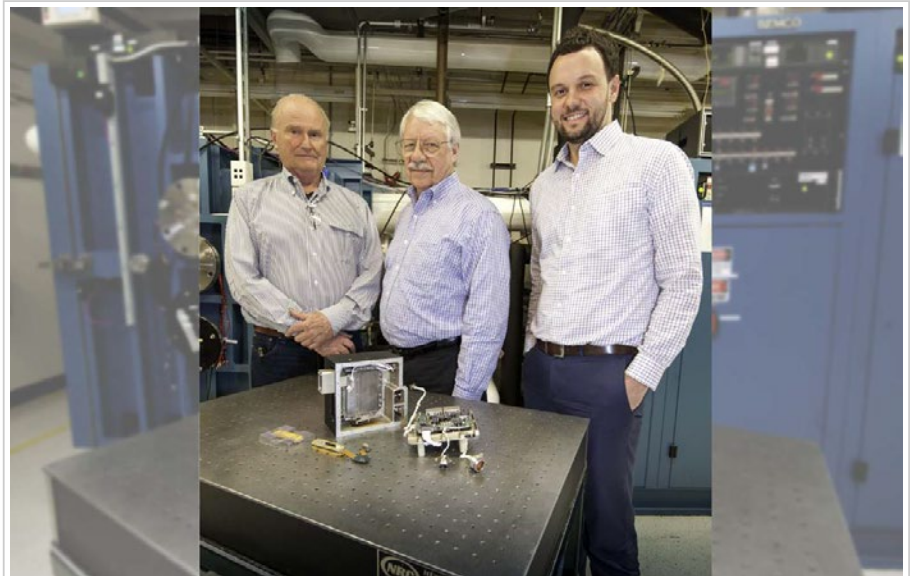
However, following strong geomagnetic storms, a new, transient population of high-energy electrons can form in the inner belt. It can take months, or even years, for this new belt to die away. Until now, these inner belt dynamics had been hidden from view due to the inner belt protons causing misleading sensor readings.

These findings are exciting because scientists can now observe and measure the inner belt with confidence, which was not possible before the Van Allen Probes. "Scientists have been waiting nearly a quarter century to fly this specially designed sensor in this orbit. We are now seeing these hidden inner zone electrons, and it's very exciting," said Dr. Seth Claudepierre, Space Sciences Department. He has led this effort with Aerospace colleagues Drs. Bernard Blake, Joseph Fennell, and Paul O'Brien. Results of the team's research are scheduled for publication March 15 in the [Journal of Geophysical Research — Space Physics](#).

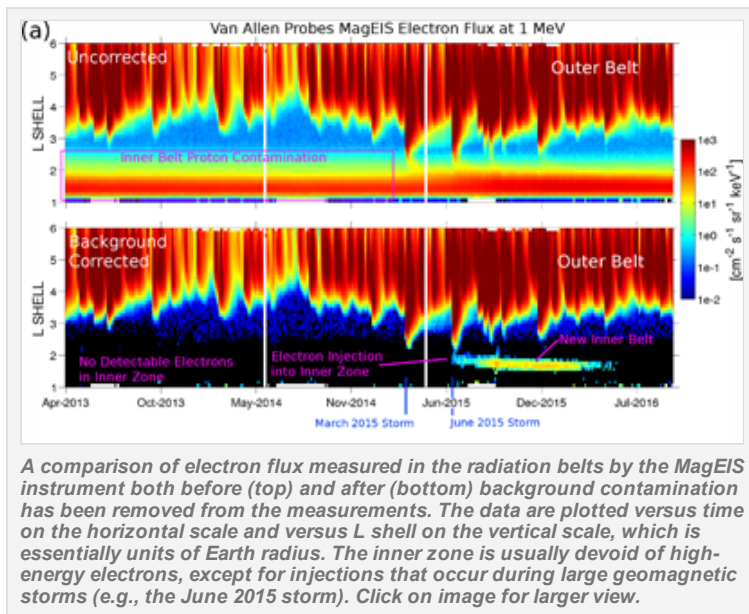
The results are important for spacecraft engineering and design going forward because they suggest that current design models may be overestimating the intensity of high-energy electrons in the inner belt, thus overestimating the deleterious electron radiation that spacecraft must contend with in low and medium altitude orbits. This has resulted in heavier and more expensive spacecraft than may have been necessary.

Advent of New Models

In addition to advancing scientific knowledge, Aerospace scientists will use data from the Van Allen Probes to develop new space radiation environment models for satellite design and studies. While the AE and AP models — which were originally designed by Aerospace and have been the industry benchmarks for several decades — output an estimate of the average energetic-particle flux, they do not provide information on the natural variability of the environment. The current practice is to apply arbitrary rules-of-thumb to account for uncertainties in environmental models and system impacts.



From left, Dr. Bernard Blake, Dr. Joseph Fennell, and Dr. Seth Claudepierre with a replica of the Magnetic Electron Ion Spectrometer they developed for NASA's Van Allen Probes mission. (Photo: Eric Hamburg)



For example, the total dose specification is often chosen to be the AE8/AP8 prediction of the average environment multiplied by a factor of two. The more recent AE9 and AP9 models output a detailed statistical estimate, eliminating the need for the arbitrary factor of two, but additional radiation measurements are needed for the models to achieve their full capability and give spacecraft designers the accuracy they need to design long-lived space assets without unnecessary and costly overdesign.

Project Background

Building on decades of experience in the design and construction of spaceborne instruments, Aerospace scientists conceived, designed, and built two unique instrument packages for the Van Allen Probes mission, which launched in August 2012. These are the Magnetic Electron Ion Spectrometer (MagEIS) and the Relativistic Proton Spectrometer (RPS).

Aerospace applied innovative particle measurement methods in both MagEIS and RPS to minimize unwanted

backgrounds in the presence of intense radiation fields. For example, MagEIS uses a magnetic analysis technique that produces accurate and reliable measurements of the energetic electron environment in the inner radiation belt where a harsh, penetrating background of highly energetic protons dominates.

Similar considerations drove the design of the RPS instrument, where a stack of twelve silicon solid-state detectors followed by a Cherenkov radiator system allows for an unambiguous determination of the inner belt proton spectrum.

MagEIS addresses the electron environments responsible for the vehicle charging hazard and the total dose on surfaces and inside vehicle shielding. RPS addresses the total dose hazard behind thick shielding and the single-event effect hazard from inner belt protons and transient solar energetic particles.

The Van Allen Probes' instruments have enabled new measurement capabilities that have detected the presence of transient regions of increased radiation surrounding Earth, revealing the existence of important structures and processes within these hazardous regions of space. Data of this type are essential for the next version of the new AP9/AE9 environment models.

The Aerospace results will allow more rigorous analysis of the risk to planned missions from radiation hazards, such as total dose degradation of microelectronics, internal electrostatic discharges, and background noise in imaging sensors. Preliminary RPS data have already influenced the system trades and designs for future national security space missions.

Delta IV Successfully Launches WGS-9 Satellite

by **Randolph L Kendall**

March 20, 2017

It was a beautiful early spring day in Florida, and as the spring-breakers frolicked in the waves at nearby Cocoa Beach, the Delta IV WGS-9 launch team was hard at work. This was in many ways a very typical launch – and that means that the satellite and launch vehicle teams were working about a half-dozen last-minute issues over the previous 48 hours to make sure everything was ready for flight.

After a long day that had followed the long night to resolve the last-minute issues, the Delta IV rocket lifted off at 8:18 p.m. ET on March 18 from Cape Canaveral's SLC-37, and delivered the WGS-9 spacecraft to a highly-accurate orbit.

And while the postflight quick review was primarily a series of “nominal” reports (which is engineer-speak for, “everything worked fine, but I want to check a couple things to make sure they won’t cause us a problem in the future”), it was once again the result of a lot of hard work from a highly-dedicated and professional team.

This was the 35th Delta IV launch and the 118th consecutive successful ULA launch.

Be Quick, But Don't Hurry: Atlas Team Delivers

by Randolph L Kendall

March 01, 2017

On a beautiful sunny morning (a rarity lately), the Atlas V rocket lifted off from Vandenberg Air Force Base, successfully delivering another critical national security payload to orbit.

This launch on Wednesday morning was a long time coming, with the launch vehicle hardware beginning to arrive on base almost one year ago. There were multiple delays along the way, including the wildfires last fall, and ironically, another fire just a few days before launch as a result of work being done to repair damage from last fall's fires.

But by Tuesday afternoon, everything looked to be lining up just right for a clean launch attempt — the final readiness reviews had just been completed and the launch crews were heading off to get some rest, prior to coming on station at approximately 1 a.m. Wednesday. But as seems to be the case almost every launch, a classic “crossover” issue emerged to make things interesting. A crossover is an issue from testing on another vehicle or hardware component not on the current vehicle, but which nonetheless must be assessed to ensure that a similar issue does not exist on this rocket.

In this case an issue surfaced on a vehicle under test in Florida. Immediately, a joint team from United Launch Alliance, the Air Force, Aerospace, and several subcontractors sprang into action. The challenge in these situations is to avoid “launch fever” — the temptation to rush to a premature answer due to the pressure of the impending launch. In a matter of hours the team had created a detailed, rigorous “fishbone” analysis, and was able to demonstrate that the only credible explanation for the problem was in the ground system in Florida, and that there was no impact to today's launch.

The ability of the launch team to react quickly to resolve complex issues, but to do so with the necessary discipline to ensure no additional risk to the mission, is a tribute to the incredible capability and professionalism of this launch team. John Wooden, the legendary UCLA basketball coach, was famous for always telling his players: “be quick, but don't hurry.” Good advice for a winning team, whether it is the winningest team in college basketball history, or the winningest team in space launch history.

This was the 117th successful ULA launch, the 70th Atlas V launch, and the 37th national security space launch on an Atlas V rocket.

Editor's Note: Randolph Kendall is Aerospace vice president of Launch Program Operations.



An Atlas V rocket lifts off from Vandenberg AFB Wednesday morning carrying a national security payload. (Photo: United Launch Alliance, LLC)

New Appointments, Initiatives, and Transformations Highlighted in All-Hands

by Wendy O'Dea
March 23, 2017

Aerospace President and CEO Steve Isakowitz delivered the Corporate All-Hands with Executive Vice President Dr. Wayne Goodman and Chief People Officer Heather Laychak on Wednesday, March 22, in El Segundo. They shared information about the four recent successful launches, new corporate appointments, and progress on corporate initiatives. Isakowitz and Laychak also spoke in detail about the ongoing transformation within People Operations.

Appointments and Administration Updates

A number of recent appointments were announced, including new Board of Trustees member Susan Helms. Helms is a retired lieutenant general of the United States Air Force, a former NASA astronaut, and was commander, 14th Air Force and Joint Functional Component Command for Space at Vandenberg Air Force Base. She was a crew member on five space shuttle missions and also lived aboard the International Space Station for more than five months in 2001. Helms also holds the world record—along with astronaut Jim Voss—for the longest spacewalk, at eight hours and 56 minutes.



Heather Laychak joined Steve Isakowitz to discuss the transformation of People Operations. (Photo: Elisa Haber)

Isakowitz also announced three new corporate officer changes:

Willie Krenz has been promoted to chief velocity officer, responsible for overseeing and facilitating actions designed to improve business efficiencies, company processes, and administrative procedures.

Jamie Morin will join Aerospace as vice president of Defense Systems Operations. He will oversee the Center for Space Policy and Strategy and assume leadership of Government and Legislative Relations. Most recently, Morin served as director of Cost Assessment and Program Evaluation (CAPE) for the Department of Defense. He also served as assistant secretary of the Air Force for financial management and comptroller, and as acting undersecretary of the Air Force.

Kevin Bell has been promoted to vice president of Space Program Operations. He will oversee Aerospace work with the Air Force, government, and industry partners to develop military satellites and advance national security space systems. Most recently, Bell was general manager of the Imagery Programs Division, National Systems Group.

Changes on a National Level

A number of changes are underway as a result of the new administration in Washington, Isakowitz explained. Having reviewed the recently released “skinny” budget, which provides a glimpse into what can be expected, he noted that a proposed increase for the defense budget could be beneficial for Aerospace, but significant cuts to the non-defense budget could also impact a number of the agencies with whom we work. “It’s still early and we have yet to see how this will trickle down to us,” he said. “There’s a big difference between what the president proposes and what the president signs into law.”

Congress has also been continuing discussions about acquisition reform, a trend that Isakowitz said will touch on all of our customers and could potentially result in the creation of a national space council that bridges civil, commercial, and national security.

Noting that a lot of changes are taking place within government and in our world at large, Isakowitz reinforced the importance of “keeping the recipe” here at Aerospace. “Regardless of national leadership, we have a value system that doesn’t change,” he said, specifically calling out the commitment to our people and staying open and respectful of each other, and our objectivity



Isakowitz and Goodman kicked off the All-Hands. (Photo: Elisa Haber)

and integrity. “We are paid to be objective and if we remain focused on that we’ll continue to be in a great place.”

Updates and Successes

Aerospace has had an impressive list of successes in the past quarter and Goodman highlighted some of these accomplishments, which were recently shared with the board. They include:

- Three successful launches prior to the board meeting and one this past week
- 10 executive reviews
- Preparation for two upcoming launches
- Progress on the GSSAP 3 and 4, and SBIRS Block 10
- GPS OCX updated Acquisition Program Baseline
- New work for NASA supporting the planning and execution of spacewalks or EVAs on the International Space Station
- Work on a growth opportunity to develop new processes for space operations as part of the Space Warfighting Construct and Enterprise System Engineering Council

Progress on Corporate Initiatives

As part of the Strategic Roadshow, Isakowitz and other corporate officers have been meeting with employees in small groups to talk about the strategic imperatives and, more specifically, the five corporate initiatives. Since the last quarter, 800 employees have participated in 14 roadshows in nine locations. In a post-roadshow survey, 68% of participants indicated that they now have better understanding of the initiatives and 73% feel empowered to support them. “It’s a great start but we have more to do,” Isakowitz said.

Isakowitz and Goodman highlighted each of the corporate initiatives and shared progress to date. (A summary of these updates will be posted soon on the new **Initiatives webpage** on Inside Aerospace.) Of particular note was recent activity that supports the Innovation imperative and iLab initiative. On Tuesday, March 21, the Exploration, Prototyping, and Innovation Center (EPIC) debuted in the transformed Lauritsen Library. The event was attended by over 350 people, including members of the media.

That same day, Aerospace partnered with a start-up incubator, Starburst, to host eleven start-up companies that pitched their products and services to a crowd of nearly 250 people gathered in Titan. At the event, keynote speeches were given by Isakowitz and Air Force Brig. Gen. Mark Baird.

People Operations Transformation

Heather Laychak joined Isakowitz on stage to talk about the ongoing transformation of the HR function, now known as People Operations. When asked about the factors that fueled recent changes, Laychak replied that there were many.

“The external market and political landscape is changing at warp speed. Our board of trustees and corporate officers recognized that HR needed to play a more strategic role in the company’s business and people strategy,” Laychak said. She added that the most recent employee engagement survey and the CEO listening tours, which she attended, also provided valuable feedback regarding HR’s role, as did the need to compete in a highly-competitive market.

Laychak gave a high-level overview of the changes currently being put in place. In order to play a more strategic role, HR partners—known as strategic people partners—will be embedded in each organization to fully understand their business and provide strategic direction. These partners will work not only with each organization’s leadership, but also with the various People Operations’ Centers of Excellence. These centers will focus on specific areas such as People Acquisition, Aerospace University, Diversity and Inclusion, and others.

“This transformation is about strengthening our operations and reclaiming ownership for our HR processes, providing expertise, and driving efficiency with process streamlining and a robust HR system infrastructure,” she said.

Early Wins

The People Operations transformation within the Mach One initiative has already resulted in a number of successes—or Velocity Wins. These include:

Reducing the job posting requirement time from 10 days to five for non-bargaining unit positions
 A plan to have a recruiting presence at diversity conferences where Aerospace can make on-the-spot offers to remain competitive (10 letters of intent for employment were extended at the most recent BEYA conference)
 Centralization of our companywide University Relations and Recruiting efforts (including CUAP)
 New guidance on goal setting that aligns to the Aerospace strategic imperatives and corporate initiatives

Laychak noted that the new organizational structure establishing Centers of Excellence and embedded strategic people partners is currently being put in place with the goal of aligning organizational priorities to the strategic imperatives.



Isakowitz and Goodman presented to a full house. (Photo: Eric Hamburg)

Branding Updates: From Vaeros to Civil Systems Group

In addition to a fresh, innovative, and energetic look currently being developed for The Aerospace Corporation (to be rolled out soon), Isakowitz said that Vaeros has been renamed Civil Systems Group (CSG), except for limited international pursuits where the Vaeros name will still be used.

“Vaeros was created to grow the corporation to new civil customers,” Isakowitz said. “But our customers know who we are and they want The Aerospace Corporation, even on non-aerospace activities. We do innovation and it didn’t make sense to have an entity that seemed to compete.”

Hero and 007 Awards

Before wrapping up, Isakowitz announced the first recipients of the new Hero and 007 Award pins. The Hero Award pins were created to recognize accomplishments that align with each of the strategic imperatives. The 007 pin is a special CEO recognition from Isakowitz, the seventh CEO of The Aerospace Corporation, for extraordinary effort and work.

Recipients of the first Hero pins:

Shaping the Future: Jim Vemma, senior project engineer for the Defense Systems Group, for his work in authoring the early papers for Space Policy

Innovation: Terence Yeoh, NSG associate systems director, for his work in virtual reality and bringing our story to life in 3-D

Growth: Jeff Hanley, principal director for CSG, for bringing in a significant piece of new NASA business to the EVA Project Office

Velocity: Angela Couture, People Operations manager, for developing the on-the-spot job offers in time for Black Engineer of the Year event

Recipients of the first 007 pins were Tim Bixler, LPO RD-180 lead, and Trinh Nguyen, ETG propulsion analyst, who exercised their expertise during the January 2017 SBIRS launch. While in the terminal countdown for launch, Bixler and Nguyen put a hold on the countdown due to a malfunction of sensors. “They worked it through and worked with ULA,” Isakowitz recalled, all under the watchful eyes of General Greaves, a local congressman, and Isakowitz himself. Both Greaves and the COO of United Launch Alliance congratulated and thanked Aerospace afterward for their constant partnership and expertise. “This was a classic case of keeping the recipe and I want to recognize them for doing the right thing.”

Velocity: Procurement Increases Efficiency and Agility

by Gail Kellner

March 29, 2017

The processing time for Purchase Requests (PRs) has substantially shortened thanks to improvements implemented by the Procurement Department.

The department has begun reviewing and validating PRs as soon as they are submitted to provide early communication to its customers when the PR information is incomplete, and it has also initiated a new policy redirecting PRs less than \$3,500 to p-card usage.

The results speak for themselves – PR time has gone down from an average of 38 days in recent years to 25 days in fiscal year 2016, and p-card use has risen.

With the Procurement initiative pushing back on processing low-dollar PRs, IT Management Services has obtained p-cards and is able to use them for those purchases. “Having a p-card has made a great impact,” said Sierra Weaver, IT Management Services. “We can purchase items right away and it allows the customer to get what they need, almost instantly.”

Rochelle Herod, administration specialist, Space Instrumentation Department, has been a p-card user for two years. “Using p-card, I can get my guys their supplies so much quicker, and I can make sure it comes in,” she said. “Using the Aerospace Fed-Ex number for shipping is a smooth process. Without a p-card, it would take a lot longer.”

During fiscal year 2017, Procurement’s goals are to reduce the average procurement cycle time from 25 to 20 days; reduce the number of PRs aging over 30 days from 34 to 25 percent; and to introduce paperless procurement utilizing the Electronic Procurement and Information Center



Becky Madison, procurement director, left, walks Sierra Weaver, asset and vendor management specialist, right, through the steps in making a purchase using her p-card. (Photo: Elisa Haber)

Happy Pi Day!

March 14, 2017

March 14: It's a good day to enjoy a slice of pi.



Photo credit: Pillsbury

March 2017 Obituaries

by Elaine Young
March 01, 2017

Sincere sympathy is extended to the families of:

Edmond Blond, member of technical staff, hired Jan. 12, 1961, retired June 1, 1991, died Feb. 10, 2017.
Manuel Brincat, member of administration staff, hired Aug. 29, 1960, retired Jan. 1, 1995, died Feb. 15, 2017.
Robert Brown, member of technical staff, hired May 14, 1963, retired Oct. 1, 1996, died Jan. 20, 2017.
Harry Eley, member of technical staff, hired Feb. 21, 1961, retired Oct. 1, 1996, died Feb. 11, 2017.
Robert Gruner, member of technical staff, hired April 22, 1963, retired Jan. 1, 1993, died Jan. 11, 2017.
Charles Herring, member of administration staff, hired Sept. 15, 1980, retired July 1, 1994, died Dec. 6, 2016.
Carol Malone, office of technical support, hired Feb. 19, 1968, retired Feb. 1, 1988, died Feb. 24, 2017.
Edith Nealeigh, member of administration staff, hired Aug. 26, 1974, retired June 1, 2006, died Jan. 30, 2017.
Floyd Rock, member of administration staff, hired Dec. 28, 1960, retired Nov. 1, 1989, died Jan. 19, 2017.
Larry Scott, member of technical staff, hired May 26, 1981, retired Oct. 1, 1996, died Jan. 4, 2017.
Marvel Sulser, office of technical support, hired Jan. 16, 1963, retired Oct. 1, 1988, died Feb. 16, 2017.
Sally Taylor, office of technical support, hired Nov. 14, 1960, retired July 1, 2000, died Feb. 5, 2017.
Elmer Witte, member of technical staff, hired June 3, 1980, retired Oct. 1, 1996, died, Sept. 17, 2016.

To notify Aerospace of a death and have it included in the Orbiter, please contact Human Resources at 310-336-5107.

March Notes

by Elaine Young
March 01, 2017

Notes of appreciation to fellow employees and Aerospace for thoughtfulness and sympathy have been received from:

Jeff and Joel Thomas on the recent passing of their father, C.C. Thomas.

To submit a note of appreciation to Aerospace, please contact Valerie Jackson in Human Resources at 310-336-0891.

March 2017 Anniversaries

by Elaine Young
March 01, 2017

35 Years

Engineering and Technology Group

Michael Muha, Taryn Montoya

Enterprise Information Services

Patricia Green

30 Years

Engineering and Technology Group

Colleen Ellis, John Welch, Wing Yeung

Defense Systems Group

Patricia Enns

National Systems Group

Mark Nelson

Office of Chief Velocity Officer

Stephanie Wheaton

Space Systems Group

Roger Charroux, Stanley Gustafson

20 Years

Engineering and Technology Group

Earl Parker, Gregory Furumoto, Kenneth Stutterheim,

Philip Martzen, Walter Buell

Enterprise Information Services

Cynthia Yen

National Systems Group

Craig Heatwole, Eric Lassiter, Paul Herman

Office of Chief Velocity Officer

Sandy Lin

Space Systems Group

David Goldstein, Dennis Roth, Garry Jared,

Gilbert Takahashi, Ilzoo Lee, Mark Smith,

Norman Goyette, Dr. S.M. Saad

15 Years

Engineering and Technology Group

Charles Fink

National Systems Group

Arthur Fleming-Dahl, David Lerret, Kenneth Herman

Office of Chief Velocity Officer

Mahesh Shah, Yvette Jackson

Space Systems Group

Bruce Bartos, Edward Salazar

Vaeros

Daniel Nigg

10 Years

Defense Systems Group

Philip Pepperl

Engineering and Technology Group

David Moyer, Geoffry Larsen, Sophia Deeds-Rubin

National Systems Group

Stuart Stanton

Office of Chief Velocity Officer

Maraea Weinberg

Space Systems Group

Carlos Orozco

5 Years

Defense Systems Group

Matthew Lisco

Operations and Support Group

Thomas Ezzo

Space Systems Group

Eric Herbert

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