



RESEARCH & EDUCATION AFFILIATES NEWSLETTER

Summer 2014

CSF REM Affiliates,

With the appropriations process in full swing, and the release of the interim Category XV rule, it is looking to be a busy summer! We would like to hold our next REM Affiliates call this month on **June 20th at 2:00pm ET**. A formal calendar invite will be sent out with dial-in instructions.

As always, please reach out to any of CSF staff if you have any questions on the newsletter content or otherwise.

I look forward to speaking to everyone on our call!

Sincerely,

Michael L-A

EDUCATION NEWS AND CONTESTS

[NASA Mars Ascent Vehicle Challenge](#)

The Centennial Challenges program is seeking input on a Mars Ascent Vehicle challenge being considered for a 2014 start. The challenge focuses on highly reliable and autonomous sample insertion, preparation, launch, and deployment for Mars Ascent Vehicle Cache Sequence Demonstration.

[NASA, Khan Academy Collaboration](#)

NASA and Khan Academy—a non-profit, educational website—debuted a series of online tutorials on May 27 designed to increase student interest in science, technology, engineering, and mathematics.

[SARG Ambassador](#)

Professors and researchers - Become a Suborbital Applications Research Group Ambassador! A SARG Ambassador works to increase awareness of the potential applications of commercial suborbital vehicles in the science, R&D, and education communities. Learn more about becoming a SARG Ambassador [here!](#)

POLICY UPDATE

This summer, we are witnessing a rare sight in Washington--a functioning, on-time appropriations process. Due to the budget agreement reached late last year, there is broad consensus on overall spending levels, and appropriations are moving fast. The House passed its [CJS appropriations bill](#) on May 30 in a bipartisan vote and the Senate passed its bill out of committee last week. Both bills did not fully fund the Commercial Crew or Space Technology programs, but provided increases from last year. The Commercial Crew funding in particular was significantly increased due to our allies in Congress. There was concerning (but different) language in the appropriations reports that would change the character of the program, and we are working to prevent those from proceeding.

Meanwhile, the rules that move many satellites and components from export regulation by the State Department to the Department of Commerce were [issued](#) in mid-May. As expected, although the rule releases many useful items, it maintains vehicles with integrated propulsion on the State Department's Munitions List. CSF plans to respond to both rules and continue to work with both State and Commerce to create a controls environment that will not harm the growth of the industry.

The House passed a NASA Authorization bill earlier this week and the Senate continues to work on its version. It is still unclear whether such a bill can be completed before the end of the year.

Sincerely,
Alex

UPCOMING EVENTS AND DEADLINES

[June 9-13, Flagstaff, AZ: Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun](#). More than 350 scientists have registered for this biennial workshop, which has been running since 1980 and is now one of the largest conferences for the professional astronomical community. Scientific programs will run throughout the week and include morning plenary sessions, afternoon splinter sessions, and 300 poster displays.

[June 14-19, NASA Wallops RockOn! Workshop](#). During the workshop, participants work in teams to build experimental payloads to fly on a NASA Terrier-Improved Orion sounding rocket expected to fly to an altitude of 73 miles. The flight will take place the final day of the workshop, weather permitting.

[June 17-19, Chicago, IL: 3rd Annual ISS R&D Conference](#). The American Astronautical Society will host a conference focusing on ISS discoveries, applications, and opportunities in physical sciences, life sciences, Earth and space sciences, STEM education, spacecraft technology, and exploration development.

[July 4-5, Kyoto, Japan: International Workshop on Education in Astrobiology](#). This two day workshop brings together scientists and teachers to discuss new teaching and assessment forms in astrobiology, foster international cooperation in astrobiology teaching, and give the attendants a thorough overview of the field.

[July 6-11, Nara, Japan: Origins 2014](#). The mission of this conference is to bring together scientists from all over the world who are interested in the emergence of life on Earth and in the Universe to share recent research achievements and future trends.

[July 14-18, Pasadena, CA: The Eighth International Conference on Mars](#). The conference will be an ideal time to step back and summarize our current understanding of Mars, consolidate our primary paradigms for martian processes and history, and refocus the primary scientific questions that remain in front of us.

[July 21-23. NASA Ames Research Center: Solar System Exploration Research Virtual Institute's Exploration Science Forum.](#) This year's forum will feature scientific discussions of exploration targets of interest (the Moon, near-Earth asteroids, and the moons of Mars). Science sessions will focus on recent mission result and in-depth analyses of science and exploration studies.

[July 24-26. Silicon Valley, CA: NewSpace 2014 Conference.](#) The Space Frontier Foundation's annual conference is where networking with leaders, supporters, investors, and activists evolves into enterprises that propel the industry upward. It will feature a wide-range of thought-provoking panels and visionary keynote speakers that will surpass NewSpace 2013's highly-praised programming.

[July 27-31. Rensselaer Polytechnic Institute, Troy, NY: AbGradCon 2014.](#) The Astrobiology Graduate Conference provides a unique setting for astrobiologically-inclined graduate students and early career researchers to come together to share their research, collaborate, and network.

[September 25-27. Toronto, Canada: The 13th Annual Space Generation Congress.](#) The Space Generation Congress aims to promote the voice of the next generation of space sector leaders on the topic of international space development. The deadline for applications with Early-Bird Registration is the 25th of June!

If you would like to have your organization's event posted, please email us at: REM@commercialspaceflight.org.

CSF NEWS AND ACTIVITIES

CSF applauds passage of bill providing renewal of government risk-sharing. The [bill](#) also provided critical funding for NASA's Commercial Crew Program, in addition to extending government risk-sharing for U.S. commercial launch companies until December 31, 2016. The previous law that provided this risk-sharing expired on December 31, 2013.

CSF conducted its biannual Members Meeting on March 26 - 27, 2014 in Washington, DC. The productive meeting featured speeches and presentations from Rep. Steven Palazzo, Rep. Chaka Fattah, Ann Zulkosky, Bailey Edwards, NASA's Jason Crusan, Kevin Wolf from the Department of Commerce, and Dr. Rebecca Spyke Keiser.

CSF added thirteen new member companies this quarter. Four companies, [The Virginia Commercial Space Flight Authority](#), [Bigelow Aerospace](#), [Moon Express](#), and

[Orbital Outfitters](#), joined as Executive Members, while [Ares Corporation](#), [Colorado Space Coalition](#), [Penn State Applied Research Laboratory](#), [QinetiQ North America](#), [Satwest](#), Space Coast Spaceflight Alliance, [ASRC Federal](#), Spaceport Sweden, and World View Enterprises joined as Associate Members.

In April, members of CSF's Suborbital Applications Researchers Group (SARG) gathered in Washington, DC to discuss the current science and technology development on suborbital platforms with Congressional staff members and NASA officials.

CSF held a successful event with The Explorers Club on May 1 in New York City. The event brought together CSF member companies and nearly 200 members of the public to raise awareness of the commercial spaceflight industry and build excitement around its future potential.

CSF praises NASA for its selection of three winners in its innovative Lunar CATALYST partnership program. Two awards were given to CSF Executive Member Companies [Masten Space Systems](#) and [Moon Express](#), with the third going to Astrobotic Technology.

The Category XV interim rule was released in May, though CSF encourages further progress in the export controls of commercial human spacecraft. CSF commends the efforts the Administration is taking to modernize the United States Munitions List (USML).

RECENT INDUSTRY NEWS

[Florida legislators authorized \\$42.5 million for space-related programs](#) in the state's 2015 budget year that begins July 1. The bill includes revamping the space shuttle's runway and landing facilities for commercial users as well as educational programs at [Embry-Riddle Aeronautical University](#).

In an effort to foster stronger links between the space physics and astronomy/astrophysics members within their Department of Physics and Astronomy, the [Rice Space Institute](#) created the [Laboratory for Space and Astrophysical Plasmas](#).

On May 21, Erik Lindberg, CEO of Powering Imagination and grandson of Charles Lindbergh, [announced a partnership](#) with [The Museum of Flight](#) dedicated to innovations in aviation sustainability.

Former NASA Deputy Associate Administrator, [Mr. Dan Dumbacher](#), and Purdue alumnus astronaut [David Wolf](#) will join the School of Aeronautics and Astronautics at [Purdue](#)

[University](#).

If your organization is in the news, let us know by emailing us at:

news@commercialspaceflight.org.

RECENT CSF MEMBER NEWS

[RS&H](#) completed site selection as well as economic and preliminary environmental studies for the proposed Hawaii Air and Space Port at Kona International Airport on the Big Island of Hawaii.

The FAA has approved [Blue Origin's](#) request to expand operations at its West Texas test site to continue developing vehicles that use liquid oxygen and liquid hydrogen propellants.

[Space Florida](#) has signed a contract with Alliant Techsystems to continue the redevelopment and modernization of Space Launch Complex (SLC) 46 at the Cape Canaveral Spaceport. SLC-46 is a key launch complex that supports NASA, DoD, and commercial missions.

Scientists at the [Southwest Research Institute](#), in collaboration with West University of Timisoara in Romania, were awarded an NSF grant to study the evolution of rock glaciers in the Carpathian Mountains using remote sensing technology.

[SpaceX](#) launched its third cargo resupply mission to the International Space Station, successfully berthing its Dragon cargo capsule loaded with food, clothing, and scientific experiments with the ISS on Sunday, April 20.

[Sierra Nevada Corporation](#) and [Houston Airport System](#) will jointly explore potential applications and economic benefits of using SNC's [Dream Chaser](#) vehicle at the proposed Ellington Field Spaceport.

Astrobotic Technology successfully tested its Astrobotic Autolanding System on board a [Masten Space Systems](#) Xombie vertical take-off and landing suborbital vehicle.

A team of students and researchers at [Arizona State University](#) is building a 3U CubeSat which will be used to study the gravitational properties of asteroid materials. This object, which will contain samples of asteroid regolith, will be the world's first CubeSat microgravitational research laboratory.

NASA announced the three winners of its new, innovative Lunar Cargo Transportation and

Landing by Soft Touchdown (CATALYST) partnership program. Two awards were given to CSF Executive Member Companies [Masten Space Systems](#) and [Moon Express](#), with the third going to Astrobotic Technology.

[Aerojet Rocketdyne](#) received a new contract with Stratolaunch Systems Corp for six RL 10C-1 production engines to be used for the third stage of a revolutionary commercial air-launch system.

A \$14.2 million Series B investment, led by Space Expedition Corporation (SXC) of The Netherlands, was approved for [XCOR](#) by the United States Treasury Department's Committee on Foreign Investment in the US (CFIUS). The funds will be used to bring the [XCOR Lynx](#) suborbital spaceplane to market.

Designed to carry astronauts into space, the Dragon Version 2 spacecraft was unveiled on May 29 by [SpaceX](#) founder and CEO Elon Musk.

RECENT LAUNCHES

April 18: The SpaceX Falcon 9 rocket launched the fifth Dragon spacecraft on the third operational cargo delivery mission to the International Space Station.

April 28: A Russian government Proton rocket with a Breeze M upper stage deployed the Luch 5V satellite to relay data from Russian spacecraft to ground sites, including the International Space Station, and the Kazsat 3 communications satellite for Kazakhstan.

April 29/30: A European Vega rocket, designated VV03, launched the DZZ-HR (KazEOSat 1) Earth observation satellite for Astrium and the Republic of Kazakhstan.

May 6: A Russian government Soyuz rocket launched a Kobalt optical reconnaissance satellite for Russian intelligence authorities.

May 15: A Russian government Proton rocket with a Breeze M upper stage failed on a launch while transporting the Express AM4R satellite for the Russian Satellite Communications Co.

May 16/17: A United Launch Alliance Delta 4 rocket deployed the Air Force's sixth Block 2F navigation satellite for the Global Positioning System.

May 22: A United Launch Alliance Atlas 5 rocket, designated AV-046, launched a classified spacecraft payload for the U.S. National Reconnaissance Office.

May 23: A Russian government Rockot vehicle launched three Rodnik communications satellites for the Russian military.

May 23/24: A Japanese H-2A rocket launched the second Advanced Land Observing Satellite for the Japan Aerospace Exploration Agency.

May 26: The Sea Launch Zenit 3SL rocket carried the Eutelsat 3B communications satellite into orbit to provide telecommunications services over Europe, Africa, the Middle East, Central Asia, and South America.

May 28: A Russian government Soyuz rocket launched the manned Soyuz spacecraft to the International Space Station with members of the Expedition 40/41 crew.

UPCOMING LAUNCHES

June 14: A Russian government Soyuz rocket will launch a Glonass M navigation satellite.

June 15: A SpaceX Falcon 9 rocket will launch six second-generation Orbcomm communications satellites.

June: India's Polar Satellite Launch Vehicle (PSLV), flying on the PSLV-C23 mission, will launch the Spot 7 remote sensing satellite for Astrium Services.

June 19: An ISC Kosmotras Dnepr rocket will launch the Deimos 2 Earth observation satellite for Elacnor Deimos of Spain, the KazEOSat 2 remote sensing satellite for Kazakhstan, the SkySat 3 spacecraft for Skybox Imaging of California, and several more payloads.

June 20: A Russian government Proton rocket with a Breeze M upper stage will deploy a secretive payload reportedly known as Olymp or Luch.

June 25: A Russian Angara rocket will launch on a suborbital demonstration flight. The mission will be the first flight of Russia's new Angara launch vehicle.

June 28: A Russian government Soyuz rocket will launch the Meteor M2 weather satellite and several secondary payloads.

July: A SpaceX Falcon 9 rocket will launch the AsiaSat 8 communications satellite.

July: The Orbital Sciences Antares rocket will launch the third Cygnus cargo freighter on the second operational flight to the International Space Station.

July 1: A United Launch Alliance Delta 2 rocket will launch the Orbiting Carbon Observatory 2 satellite for NASA.

July 9. A Russian government Rockot vehicle will launch three Gonets M communications satellites.

July 10. An Arianespace Soyuz rocket will carry four satellites for O3b Networks, which will provide broadband service to developing countries.

Learn more about our consultants!

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