



July 2024

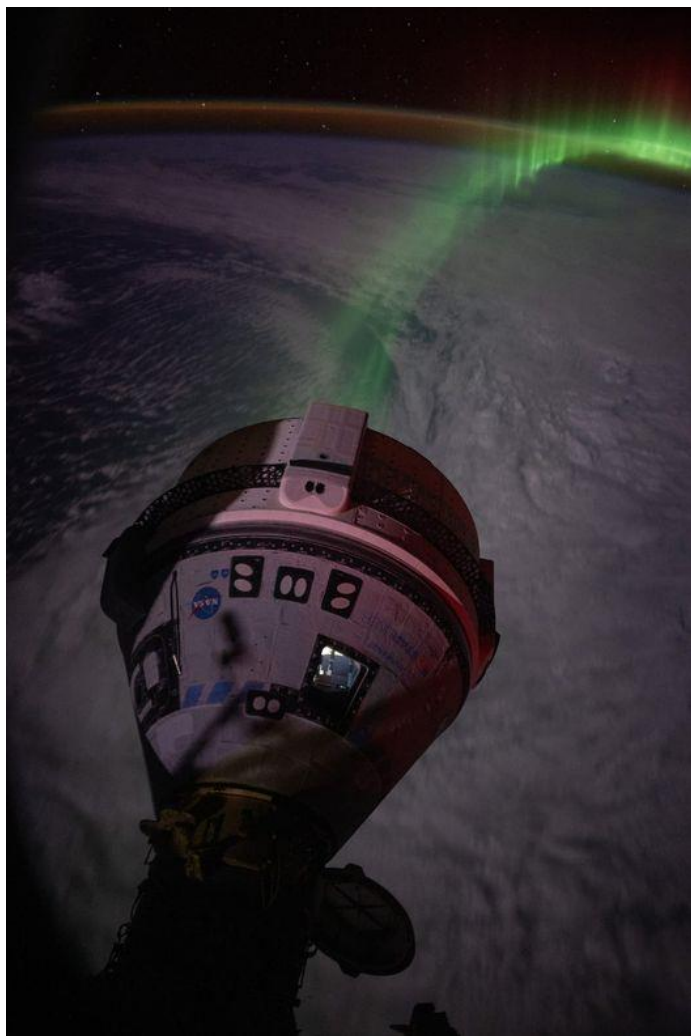
Update

**Oklahoma Space
Alliance**

A Chapter of The
National Space Society

A free email newsletter of the Oklahoma Space Alliance

Aurora from ISS



Credit: NASA



July 2024 OSA Meeting

Saturday, July 13, 2024

2:00 PM

Norman Computers

916 W Main St, Norman, OK 73069

405-863-6173

Program— Space News and
Events

Website: <http://osa.nss.org>

Quote of the Month

Every vision is a joke until the first man accomplishes it.— Robert Goddard

Table of Contents

Aurora from ISS.....	1
July 2024 OSA Meeting	1
Quote of the Month.....	1
Table of Contents.....	2
First Samples From the Farside.....	3
Is Anyone Paying Attention?.....	4
Ariane 6 Debuts.....	5
No Patience.....	6
Maybe They're Serious	7
Lunar Sample Return, Indian Style.....	8
Bailing a Leaky Ship.....	9
Betting on a New Horse.....	10
Mind Those Tie-Down Clamps!.....	11
Thanks, But No Thanks – For Now.....	12
Another Breakup.....	13
Raise Shields!.....	14
And Then There's Russia	15
The Inevitable Lawsuit	16
Space Pirates: The Conference.....	17
Wargaming Whack-a-Mole	18
New Shepard Meets Reality TV	19
This Week At NASA	20
That's All Folks	21

Oklahoma Space Alliance Update

July 13, 2024

Editor Cliff McMurray

Asst Editor Claire McMurray

cliffmcmurray@hotmail.com

405-863-6173 (C)

The *Oklahoma Space Alliance Update* is a bi-monthly newsletter of the Oklahoma Space Alliance a chapter of the National Space Society, a non-profit organization headquartered in Washington, D.C. The address of OSA is **102 W. Linn, #1, Norman, OK 73071.**

Unless otherwise noted, all contents of articles herein do not necessarily reflect the opinion of anyone but the writer. Reprint rights are granted to recognized chapters of NSS, provided credit is given.

Articles may be submitted by U.S. mail or electronically. Articles may be sent to the Editor at 121 South Creekdale Drive, Norman, OK 73072 or to david.sheely51@gmail.com. Each submission should include the author's name and either e-mail address or phone number (for verification only). A text or Microsoft Word file is preferred. Please contact the Editor by phone, e-mail or texting before mailing your information.

OSA Officers for 2024

President Adam Hemphill

ahemphil@gmail.com

405-863-6173 (C)

Vice President David Sheely

david.sheely51@gmail.com

405-8321-9077 (C)

Secretary & Outreach Editor Syd Henderson

sydh@ou.edu

405-321-4027(H)

405-365-8983(C)

Treasurer Tim Scott

ctsscott@mac.com

405-740-7549(H)

NSS Headquarters

1155 15th Street NW, Suite 500 Washington DC 20005

Exec Director Kirby Ikin

nsshq@nss.org

202-429-1600

First Samples from the Farside



Credit: CNSA/CLEP

China bags another first: on June 25, Chang'e-6 returned 1,935.3 grams of lunar regolith, the first samples from the lunar farside.

Articles: <https://spacenews.com/change-6-lands-on-far-side-of-the-moon-to-collect-unique-lunar-samples/>

<https://www.space.com/china-chang-e-6-lunar-far-side-video>

<https://www.space.com/china-chang-e-6-moon-sample-return-transfer-orbiter>

<https://spacenews.com/esa-china-moon-cooperation-could-end-with-change-6/>

<https://spacenews.com/change-6-heads-for-earth-with-first-ever-lunar-far-side-samples/>

<https://spacenews.com/change-6-delivers-first-lunar-far-side-samples-to-earth-after-53-day-mission/>

<https://www.space.com/chang-e-6-moon-far-side-return-capsule-opened>

<https://spacenews.com/china-gears-up-for-deep-space-missions-after-collecting-1935-grams-of-lunar-far-side-samples/>

Is Anyone Paying Attention?



Credit: CASC

On June 11 the China Manned Space Engineering Office (CMSEO) selected of eight pilots and two payload specialists for its fourth batch of astronauts. Is this China's equivalent of NASA's astronaut class of 1962, which contained many of our first astronauts to walk on the moon? Three days after this announcement, China carried out a successful static fire test of the first stage of Long March 10, the rocket designed to take its taikonauts to the moon.

Articles: <https://spacenews.com/china-selects-new-batch-of-astronauts-with-an-eye-on-the-moon/>

<https://spacenews.com/china-takes-small-step-towards-the-moon-with-rocket-test/>

Ariane 6 Debuts



Credit: ESA

ESA's new Ariane 6 rocket was launched successfully from the Kourou launch site in French Guiana on July 9, almost exactly a year after its predecessor, Ariane 5, took its last flight. It carried an experimental comsat and a French military comsat. This latest Ariane incarnation has 30 launch orders already on the books.

Articles: <https://spacenews.com/europe-set-for-crucial-first-launch-of-ariane-6/>
<https://spacenews.com/ariane-6-performs-flawlessly-on-long-awaited-first-flight/>
<https://www.space.com/europe-ariane-6-rocket-debut-launch>

No Patience



Credit: dearMoon

Starship just lost one of its first customers. On June 1, Japanese billionaire Yusaku Maezawa canceled his planned flight around the moon, out of patience with delays with Starship. The eight artists who he'd invited to join him on the consciousness-expanding experience were stunned and disappointed with the abrupt announcement.

Articles: <https://www.space.com/japanese-billionaire-cancels-spacex-starship-moon-dearMoon-flight>

<https://spacenews.com/japanese-billionaire-cancels-planned-starship-lunar-mission/>

<https://www.space.com/spacex-starship-dearMoon-crew-reacts-private-mission-canceled>

Maybe They're Serious



Credit: NASA

NASA has said right along that it's going to send ISS into the ocean someday. SpaceX just got the NASA contract to deorbit ISS. On June 26, it awarded SpaceX an \$843 million contract to build the United States Deorbit Vehicle (USDV). Former NASA Administrator Mike Griffin and former ESA director general Jean-Jacques Dordain argue in a Space News op-ed that any ISS boosting should be into a higher mothball orbit to allow a future generation time to decide to do with all that 405 metric tons of hardware, not into the ocean.

Article: <https://spacenews.com/nasa-awards-spacex-contract-for-space-station-deorbit-vehicle/>

<https://spacenews.com/transferring-the-international-space-station-into-the-future/>

Lunar Sample Return, Indian Style



Credit: ISRO/YouTube

NASA isn't the sole proprietor of complicated mission planning. India's plan for lunar sample return is about as complicated as NASA's old plan for Mars sample return, involving two launch vehicles carrying four lunar spacecraft. Targeting Shiv Shakti Point, the same site as its successful Chandrayaan-3 landing in August of last year, the mission will launch no sooner than 2028. India also announced plans to put Indian astronauts on the moon by 2040.

Article: <https://spacenews.com/india-plans-chandrayaan-4-moon-sample-return-will-involve-private-sector/>

Bailing a Leaky Ship



Credit: NASA

When Starliner launched on June 5 it was scheduled for a 10-day mission, but multiple helium leaks thruster issues have plagued the ship ever since it lifted off. After multiple postponements of mission end, Starliner is still docked to ISS, with no firm end date in sight. NASA and Boeing said they “want to take more time to understand the root cause” of the thruster problems, but stress that Butch Wilmore and Suni Williams are not stranded in space; Starliner is okay for an emergency return if necessary.

Articles: <https://spacenews.com/fifth-helium-leak-detected-on-starliner/>

<https://spacenews.com/starliner-iss-stay-extended-to-complete-thruster-and-helium-leak-testing/>

<https://spacenews.com/starliner-return-delayed-to-july/>

<https://spacenews.com/starliner-to-remain-on-iss-for-more-thruster-tests/>

<https://www.space.com/nasa-boeing-starliner-crew-flight-test-mission-delays-webcast>

Betting on a New Horse



Credit: Virgin Galactic

After just seven commercial flights, Virgin Galactic retired VSS Unity on June 8. The Galactic 07 mission's paying passengers were a Turkish researcher and three private astronauts. Also along for the ride was a rack with two automated payloads sponsored by NASA's Flight Opportunities program: one from Purdue University to study propellant slosh in microgravity and one from UC Berkeley to test 3D printing. VG retired Unity to conserve its cash (about \$1B when the announcement was made last November) to complete work on its Delta class of vehicles, which promise much higher flight rates and lower operating costs needed for VG's business case to close. Its stock price had fallen low enough to put it in danger of delisting when a 1-for-20 reverse stock split was approved on June 12.

Article: <https://spacenews.com/virgin-galactic-conducts-final-vss-unity-commercial-suborbital-spaceflight/>

<https://spacenews.com/virgin-galactic-proposes-reverse-stock-split/>

<https://spacenews.com/virgin-galactic-announces-reverse-stock-split-to-boost-share-price/>

Mind Those Tie-Down Clamps!



Credit: Space Pioneer

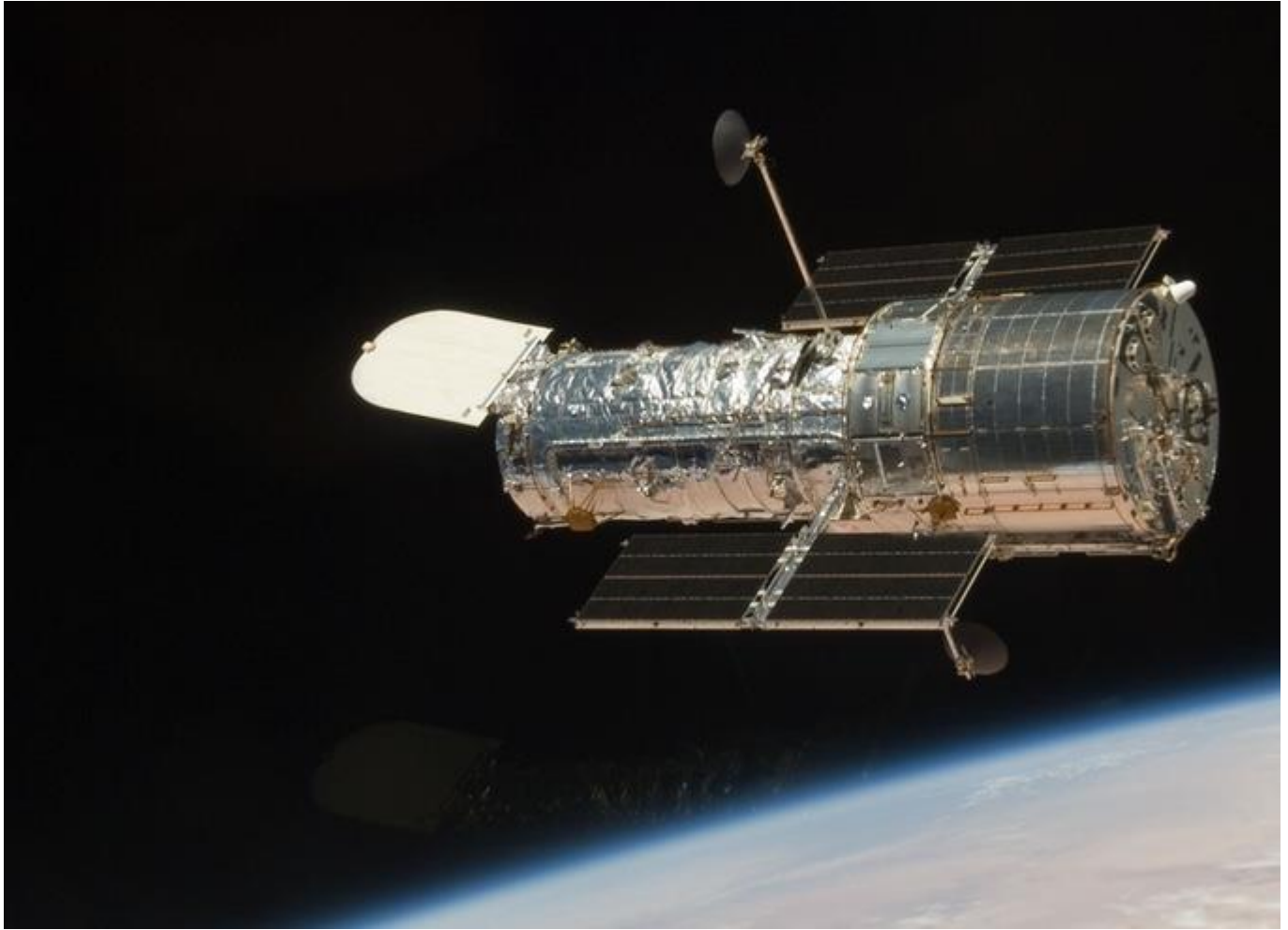
“Embarrassing” doesn’t quite cover it. On June 30, the first stage of Space Pioneer’s new Tianlong-3 (“Sky Dragon-3”) rocket began a static fire test when its hold-down anchors failed, leaving the booster free to take an unplanned, brief flight that terminated after 50 seconds in a fireball in the hills near Gongyi. Local emergency-management officials claim no one was injured. The accident occurred just a few weeks after Space Pioneer (full name Beijing Tianbing Technology Co., Ltd) had announced the conclusion of a successful fundraising round worth more than 1.5B yuan (\$207M) for the two-stage kerolox-fueled rocket, planned to deliver 17 tons to LEO, and with a first stage that will eventually be reusable.

Article: <https://www.space.com/space-pioneer-tianlong-3-rocket-accidental-launch>

<https://spacenews.com/chinese-rocket-static-fire-test-results-in-unintended-launch-and-huge-explosion/>

<https://spacenews.com/space-pioneer-raises-207-million-for-reusable-rocket/>

Thanks, But No Thanks – For Now



Credit: NASA

From here on out, the Hubble Space Telescope will be a semi-crippled bird operating on one gyro. NASA announced on June 4 that one of three remaining gyros (originally HST had six) has failed, permanently, and they will use just one of the two remaining gyros at a time, leaving the other gyro as a backup. They think this will keep HST going for about another decade, albeit with a significant reduction in operating efficiency. Atmospheric drag may doom the 34-year-old HST around that time anyway. NASA had been exploring the possibility of a commercial mission to reboost HST, but NASA has announced that it will pass on that option for the time being. A number of reasons were cited, and they may be valid.

Articles: <https://spacenews.com/hubble-goes-to-single-gyro-operating-mode-as-nasa-passes-on-private-servicing-mission/>

<https://www.space.com/hubble-telescope-one-gyroscope-mode>

<https://www.space.com/jared-isaacman-hubble-space-telescope-reboost>

Another Breakup



Credit: Wikipedia

U.S Space Command (USSPACECOM) has announced that the Russian satellite Resurs P1 suffered some kind of event at around 12 p.m. EDT on June 26, breaking up into more than 100 pieces of trackable debris. LeoLabs, a company that monitors LEO with a global network of radars, upped that number to 180 pieces the next day; now it's up to 250... and counting. NASA advised the nine astronauts aboard ISS to shelter their three spacecraft as a precautionary measure, but they were released to return to ISS after only an hour.

Articles: <https://spacenews.com/russian-satellite-breaks-up-creating-debris-in-low-earth-orbit/>

<https://spacenews.com/low-intensity-explosion-caused-russian-satellite-to-spew-debris/>

<https://www.space.com/iss-astronauts-shelter-return-spacecraft-satellite-breakup>

Raise Shields!



Credit: UN Photo/Rick Bajornas

On July 3, two members of the three-person Shenzhou 18 crew spent about 6.5 hours working outside Tiangong to install space debris protection devices for extravehicular equipment, mainly cables and pipelines. It was the 16th EVA from Tiangong. The previous EVA, conducted in late May, taikonauts installed space debris protection on the outside of the Mengtian experiment module during a record-breaking 8.5 hours outside. As the threat of space-FOD grows, ESA announced May 22 that 12 countries (Austria, Belgium, Cyprus, Estonia, Germany, Lithuania, Poland, Portugal, Romania, Slovakia, Sweden and the United Kingdom) have signed its Zero Debris Charter, along with the agency itself. Dozens of companies may soon follow suit. The two-page document calls on signatories to work towards a set of targets to achieve the goal of no net addition of orbital debris by 2030. For its part, the FAA has proposed a new rule for the disposal of upper stages after commercial launches.

Articles: <https://www.space.com/shenzhou-18-second-spacewalk-tiangong-space-debris-shield>

<https://spacenews.com/esa-lines-up-initial-signatories-for-zero-debris-charter/>

<https://spacenews.com/new-upper-stage-disposal-rules-help-not-harm-us-leadership-space/>

And Then There's Russia



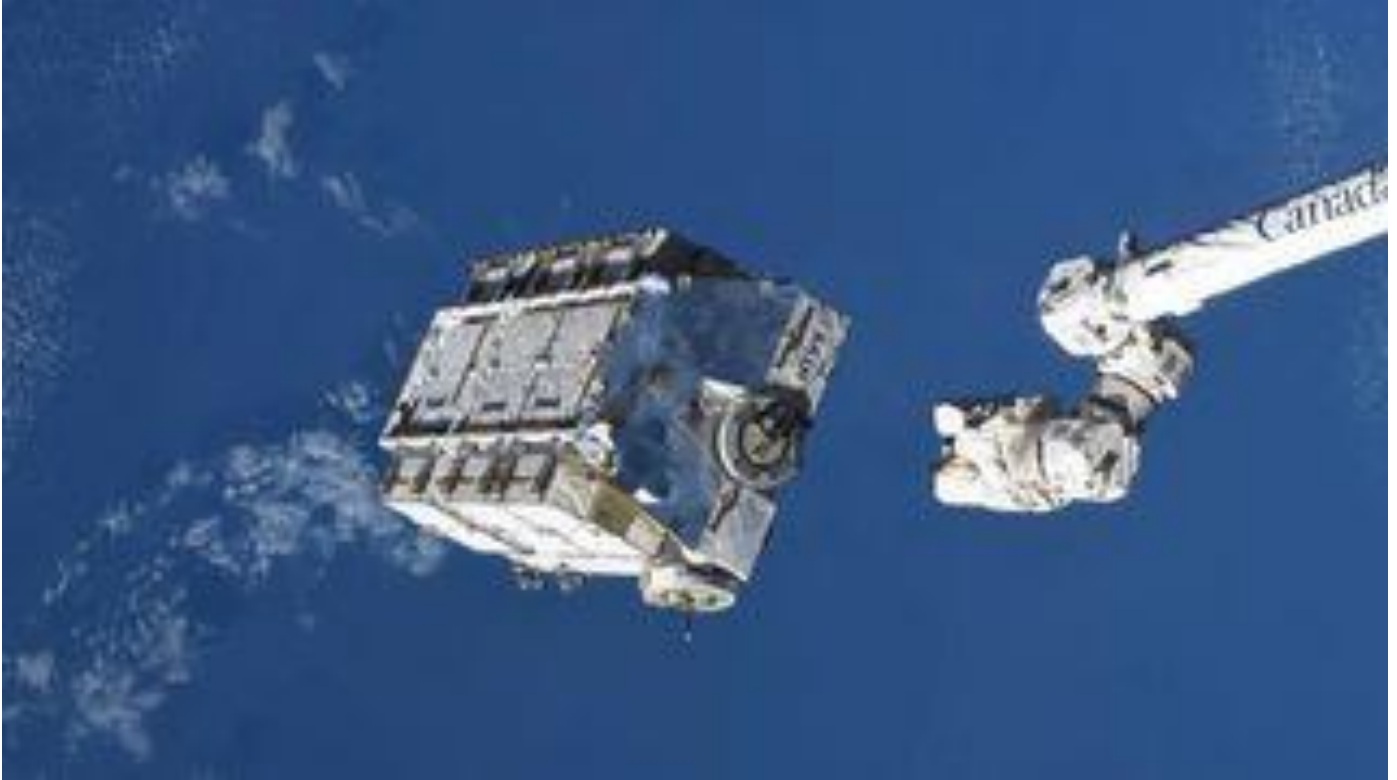
Credit: CSIS

House Intelligence Committee Chair Mike Turner (R-Ohio) continues to raise the alarm that the Biden administration for not being more transparent about intelligence on Russia's purported development of an ASAT program that involves a space-based nuclear weapon. Meanwhile, a Russian inspector satellite known as Luch 2 has been prowling around GEO for the past year, sequentially positioning itself near several comsats in what appears to be an ongoing signals intelligence-gathering mission.

Articles: <https://spacenews.com/house-intelligence-chair-blasts-white-house-over-russias-space-uke-threat/>

<https://spacenews.com/russian-spy-satellite-reportedly-continues-suspicious-maneuvers/>

The Inevitable Lawsuit



Credit: NASA/Mike Hopkins

In March of 2021 astronauts aboard ISS a 2.9-ton pallet of used batteries. That pallet didn't completely burn up on reentry. A chunk of it crashed through Alejandro Otero's seaside home in Naples, Florida on March 8. The debris tore through the roof and two floors of his family home; Otero said in a (now-deleted) post on X that a piece of it nearly injured his son. Surprise, surprise, he's suing. The result of the suit, whatever it is, will be precedent-setting.

Article: <https://www.space.com/space-debris-florida-family-nasa-lawsuit>

Space Pirates: The Conference



Credit: Wikipedia

The Center for the Study of Space Crime, Policy, and Governance will host a two-day invitation-only conference next February on the subject of “crime, piracy, and smuggling in space” and how to mitigate them. Per Marc Feldman, Executive Director of the CSCPG: "As we like to say, and please forgive me, Leon Trotsky, but you may not be interested in space piracy, but space pirates are interested in you..."

Articles: <https://www.space.com/1st-space-piracy-conference-crime-smuggling>

Wargaming Whack-a-Mole



Credit: NASA/JHUAPL/Ed Whitman

Nobody wants to be on the losing side of a cosmic game of Whack-a-Mole, so the international space/defense/emergency response communities are trying to put their heads together and think ahead. In early April, NASA and other government agencies, as well as international participants, conducted a two-day “tabletop” exercise regarding a hypothetical asteroid impact threat at the Johns Hopkins University Applied Physics Lab (APL). The exercise examined Earth’s response to the discovery of a near Earth object (NEO) that had a 72% chance of hitting Earth in 2038.

Article: <https://spacenews.com/exercise-examines-response-to-long-term-asteroid-impact-threat/>

New Shepard Meets Reality TV



Credit: Blue Origin

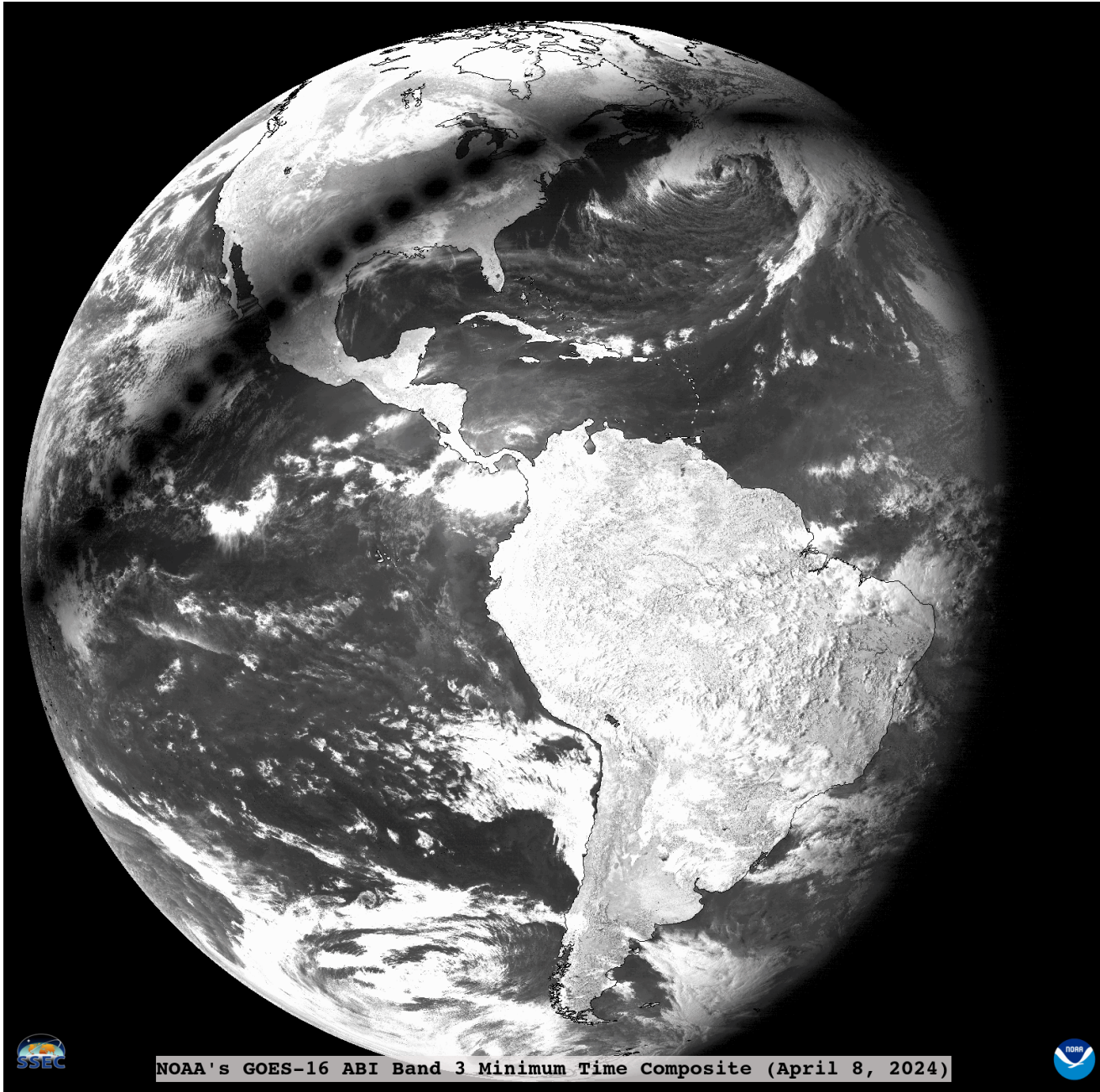
The Space Exploration and Research Agency (SERA), formerly called the Crypto Space Agency, announced on July 1 that it plans to send people from India, Nigeria and a region known as the Small Island Developing States on a future Blue Origin flight. The finalists will participate in a docuseries about the last step in the selection process after they are chosen through a public voting system. "Candidates will form into crews, with one representative from each seat, to compete in series of challenges that will be streamed over several episodes," said a SERA spokesman.

Article: <https://www.space.com/blue-origin-reality-television-spaceflight-crew>

This Week At NASA

Videos: <https://www.youtube.com/watch?v=WqPSN-P-y-o&list=PL1D946ACB21752C0E>

That's All Folks



Credit: CIMSS Satellite Blog <https://cimss.ssec.wisc.edu/>

April 8th Total Solar Eclipse via 21 GOES East images. A special enhancement was applied to each image to sharpen the outline of the Moon's shadow.

