Rocket Report: Brazil opens equatorial launch site, Kerbal launch slips

Enlarge / High winds scrubbed an Electron launch attempt earlier this week.

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Welcome to Edition 3.03 of the Rocket Report! Depending on your local time zone, this weekend looks busy in the world of launch, with Electron and Falcon 9 launches potentially occurring within five hours of one another.

As always, we welcome reader submissions, and if you don't want to miss an issue, please subscribe using the box below (the form will not appear on AMP-enabled versions of the site). Each report will include information on small-, medium-, and heavy-lift rockets as well as a quick look ahead at the next three launches on the calendar.

Brazilian launch site opens to commercial customers. The first launch of sounding rockets occurred from Alcântara Launch Center in 1990, but now the facility primarily used for military purposes is opening up to commercial providers from other countries, Airway reports. The Brazilian Space Agency

(AEB) announced the public call for activities at the space center earlier this month.

Launching with momentum … It's not clear who will use the facility, but Brazilian President Jair Bolsonaro tweeted that "Brazil has just entered the select group of nations that host private launches, such as those from SpaceX." That seems a bit like hyperbole, but the site does have some advantages. At just 2 degrees South, it is the world's closest launch site to the equator. (submitted by UMineiro)

High winds delay Electron launch. The "Don't Stop Me Now" mission was, in fact, stopped by high winds at the company's New Zealand launch site early on Thursday morning (US time). With continued unfavorable winds in the forecast for the next day, the company is now targeting 4:43 UTC on June 13 for its next attempt. Several days remain in the launch window.

Crazy little thing called love … The mission's name is a recognition of former Rocket Lab board member and Queen fan Scott Smith, who passed away in February 2020. The mission will deploy small satellites from NASA, the NRO, and the University of New South Wales. (submitted by JohnCarter17)

The Rocket Report: An Ars newsletter

The easiest way to keep up with Eric Berger's space reporting is to sign up for his newsletter, we'll collect his stories in your inbox.

Virgin Orbit pressing ahead with UK launch plans. Virgin Orbit and the British government are continuing efforts to begin flights of the company's air-launch system from an English airport by early 2022 despite challenges on both sides of the Atlantic, SpaceNews reports. Virgin, which still must demonstrate the viability of its booster, seeks to fly its 747 from a spaceport in Cornwall to support its LauncherOne rocket.

Government approval still needed … "We're confident that we

can get to that end goal of that launch towards the end of ’21 or early ’22,” said Miles Carden, spaceport director for the Cornwall Council, which has helped fund infrastructure improvements to the airport in partnership with Virgin Orbit and the UK Space Agency. The British government has yet to approve the horizontal launch system. (submitted by JohnCarter17, platykurtic, and Ken the Bin)

Planet VP touts Falcon 9 rideshare. The US small-satellite company is seeking to add six additional SkySats to its constellation on a pair of Falcon 9 launches in the coming weeks. The Planet satellites will ride on top of existing Starlink payloads, said Planet Vice President Mike Safyan. A deal was signed just six months ago. SpaceX will remove two of its 60 Starlink satellites to accommodate the additional payload.

A steal of a deal … “This is the result of SpaceX dramatically cutting the cost of access to launch,” Safyan told Ars. “It’s significant. They cut the price so much we could not believe what we were looking at.” For the Falcon 9 launch, the SkySats will have to use their onboard propulsion system to raise the satellites from their drop-off point to their final orbit of 450km. In this case, Safyan said, the trade is more than worth it.

Chinese firms looking into methane engines. The next generation of US launch vehicles, including SpaceX’s Starship, Blue Origin’s New Glenn, and United Launch Alliance’s Vulcan rockets, are all based on methane-LOX engines. SpaceNews reports that Chinese companies are also now using this fuel.

Methane here, there, everywhere … Landspace and iSpace are reporting progress with methane rocket engines, while Galactic Energy is moving closer to launch of its Ceres-1 launcher.

Deep Blue Aerospace has meanwhile secured early funding for development of a liquid launch vehicle series. The companies are primarily looking at methalox for smaller rockets than the US launch providers. (submitted by Ken the Bin, platykurtic, and JohnCarter17)

Mars 2020 launch slips three days. A launch vehicle processing "hiccup" has pushed back next month's launch of NASA's Mars 2020 rover mission by three days.

NASA Associate Administrator Steve Jurczyk revealed the delay in a presentation to a joint meeting of the National Academies' Aeronautics and Space Engineering Board and Space Studies Board June 9, SpaceNews reports.

A crane pain … Tory Bruno, ULA president and chief executive, said on Twitter that a problem with a crane used as part of launch vehicle processing caused the delay, an issue that has since been corrected. The delay pushed back the launch of Mars 2020 to July 20, with a two-hour window opening at 9:15am ET from Cape Canaveral, Florida. (submitted by whitenknave, Ken the Bin and JohnCarter17)

James Webb launch delayed again. On Wednesday, the chief of NASA's science programs said the James Webb Space Telescope will not meet its current schedule of launching in March 2021, Ars reports. "Absolutely we will not launch in March," said Thomas Zurbuchen, the space agency's associate administrator for science. "That is not in the cards right now. That's not because they did anything wrong. It's not anyone's fault or mismanagement."

La fusée attend … He said the telescope was already cutting it close on its schedule before the COVID-19 pandemic struck the agency and that the virus had led to additional lost work time. The telescope is due to lift off on board an Ariane 5 rocket from the European Space Agency's spaceport in Kourou, French Guiana. It may be one of that rocket's final missions

before Arianespace transitions to the Ariane 6 booster.

Musk to SpaceX: Starship is our priority now. After successfully launching the Crew Dragon mission for NASA on May 30, SpaceX founder Elon Musk wrote an email to his employees in which he spelled out his priorities, CNBC reports. “Please consider the top SpaceX priority (apart from anything that could reduce Dragon return risk) to be Starship,” he wrote.

Gone to Texas … Musk said employees should do what is necessary to accelerate Starship development, up to and including moving to the South Texas Launch Site near Boca Chica beach. To that end, the company recently terminated its lease with the Port of Los Angeles. SpaceX has been all-in on development of the Texas rocket factory for a while, and this just further buttresses the notion that the company’s path to Mars begins in Texas. (submitted by JohnCarter17 and Ken the Bin)

Vulcan on track for 2021 Moon launch. United Launch Alliance says its Vulcan rocket is progressing toward its maiden launch as soon as early 2021, NASASpaceflight.com reports. While an exact launch target isn’t known yet, the mission will use a newly built Launch Umbilical Tower while sharing Atlas V’s Vertical Integration Facility and SLC-41 launch pad in Florida.

Staying ahead of the pandemic … The booster flight hardware for Vulcan’s inaugural flight is almost ready, said Tory Bruno, CEO and president of ULA, who noted that ULA is “missing no milestones” as Vulcan heads toward its first launch. For its first mission, Vulcan will launch Astrobotic’s Peregrine lander to the Moon, which in turn is part of NASA’s CLPS program to send payloads to the lunar surface. (submitted by Ken the Bin and platykurtic)

Battle over Air Force contracts continues. The Department of the Air Force plans to soon announce the two winners of the National Security Space Launch Phase 2 launch services procurement, SpaceNews reports. Blue Origin, United Launch Alliance, Northrop Grumman, and SpaceX are competing for two contracts to fly approximately 34 missions from 2022 to 2027.

The pen is mightier than the turbopump … Since the competition opened, Blue Origin has been pressuring the Air Force to select three rather than two winners. However, in a show of political force, a group of 28 lawmakers from Colorado, Alabama, and other states where United Launch Alliance has manufacturing and launch operations sent a letter on May 29 to the Air Force asking it to not cave to pressure to add a third provider in Phase 2. (submitted by JohnCarter17, Ken the Bin, and platykurtic)

Kerbal Space Program 2 delayed until fall 2021. Everything moves to the right in the launch business, it seems, and that includes video games. Private Division, the makers of the new sequel *Kerbal Space Program 2*, have announced that the *KSP* follow-up's launch has been pushed back to fall 2021, Space.com reports. The game allows players to design, build, and often destroy their creations.

Now what are we going to blow up? … "As you all know, we've been working hard to make the best and most authentic *KSP* sequel possible. This is an ambitious goal. We are making a big, expansive game loaded with new features, but doing so will take longer than we previously anticipated," Private Division wrote in a statement on Twitter. Bummer, man. (submitted by Ken the Bin)

Next three launches

June 13: Electron | "Don't Stop Me Now" | Mahia Peninsula, New Zealand | 04:43 UTC

June 13: Falcon 9 | Starlink-8 mission | Cape Canaveral, Fla. | 09:21 UTC

June 17: Long March 2D | Gaofen 9-03 | Jiuquan, China.| 07:18 UTC

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