SpaceX successfully launches two humans into orbit [Updated]



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- Stormclouds roll into NASA’s Kennedy Space Center on the evening of May 29, 2020, as xenon lights illuminate historic pad 39A.
  Trevor Mahlmann
- Sunrise on pad 39A on Saturday. Hopefully, launch day weather retains these clear skies.
  Trevor Mahlmann
- Launch Pad 39A. Where Neil, Buzz, and Michael left for the Moon. Where the first and last Space Shuttle flew from. And now, where Bob and Doug will launch on May 30, 2020.

Trevor Mahlmann

- Beautiful partly cloudy skies grace the background of Falcon 9 and Crew Dragon one day before their 2nd launch attempt to send NASA Astronauts Bob Behnken and Doug Hurley to the Space Station.
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- Close-up of the Crew Dragon spacecraft atop the Falcon 9 rocket featuring the NASA meatball and United States flag.
  Trevor Mahlmann
- One of the 4 remote camera sites near historic launch pad 39A that Ars launch photographer Trevor Mahlmann has a camera established at. Should make for a gorgeous liftoff view.
  Trevor Mahlmann
- Exhibit A. Remote camera = established.
  Trevor Mahlmann
- Now this is what a 21st-century rocket, spacecraft, and launch pad look like.
  Trevor Mahlmann

3:30pm ET Update: The weather was good, and right on cue a Falcon 9 rocket lifted off from Kennedy Space Center on Saturday. The first stage performed nominally, and separating, it successfully landed on a drone ship in the Atlantic Ocean. Meanwhile, the second stage cruised into into orbit and dropped off the Dragon spacecraft right where it needed to be.

It will take about 19 hours for the Crew Dragon spacecraft to catch up with, and dock with the International Space Station. Ars will have continuing coverage of this historic mission.

Original post: After nine years without a human launch from Florida, it’s about damn time, isn’t it?

During Wednesday’s technically smooth countdown, NASA astronauts Doug Hurley and Bob Behnken came within 17 minutes of launching before a scrub due to poor weather. The crew will

suit up and try again on Saturday despite still iffy weather.

SpaceX is working toward an instantaneous launch at 3:22pm ET (19:22 UTC). The company's Falcon 9 rocket will lift Hurley and Behnken, aboard SpaceX's Crew Dragon capsule, into outer space, and the Crew Dragon will carry them to the International Space Station. The big concern again today is the development of thunderstorms near the launch site this afternoon, which could violate a number of weather criteria, including not just precipitation, but also residual electric energy from lighting in the atmosphere. Overall, the chance of acceptable weather at launch time is about 50 percent, forecasters estimate. They are also watching for down-range conditions in case an emergency abort is required during the rocket's ascent to space.

This is nothing new for NASA or US human spaceflight. As the commander, Hurley, noted on Twitter Friday, his first space mission in 2009 scrubbed five times for weather or technical issues before it finally lifted off. "All launch commit criteria is developed way ahead of any attempt," Hurley said. "This makes the correct scrub or launch decision easier in the heat of the moment."

It has been such a long, long road for NASA and SpaceX to reach this moment—thousands of engineers and technicians have labored to design, develop, test, and fly hardware for the Dragon spacecraft and Falcon 9 rocket over the last decade. But now the hardware and crew are ready, and at just the right time, to go fly.

Just in time

America is riven politically, and tensions have erupted this week with the awful death of a black man in Minnesota, George Floyd. America's return to human spaceflight now comes at a similar moment in history to Apollo 8, the first human spaceflight around the Moon, in December 1968.

Earlier this week, NASA administrator Jim Bridenstine acknowledged NASA's potential to unite the country through shared exploration.

"This space program that we have in this country unites people, period," he said. "It always has. We look at the most divisive times in American history. We think about the Vietnam War in the 1960s. Not just the war but the protests. We think about the Civil Right abuses and the Civil Rights protests. The very divisive, challenging times. And here we are, all these years later, in the midst of the coronavirus pandemic and we have this moment in time when we can unite people again."

We are looking to NASA and SpaceX to make that happen again this weekend. Should Saturday's mission scrub, there will be another launch opportunity on Sunday at 3pm ET (19:00 UTC), potentially with marginally better weather. Conditions really improve by Tuesday, but by then the rendezvous with the station will take about twice as long as the 19 hours required to reach the station after Saturday's launch.

A combined NASA and SpaceX webcast will begin today at 11am ET (15:00 UTC).

[embedded content]
Demo-2 launch.
Listing image by Trevor Mahlmann

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