

NASA is studying whether SpaceX can visit the Hubble Space Telescope

SpaceX and NASA have agreed to figure out whether or not a SpaceX ship could visit and potentially breathe new life into the iconic Hubble Space Telescope. They announced that they were partnering on a study that would look into whether or not that kind of mission was even possible.

The study will take about six months to complete and will involve NASA and SpaceX. It also involves the Polaris Program, a private human spaceflight effort funded by billionaire Jason Isaacman. Earlier this year, Isaacman bought three flights to space on SpaceX's Dragon spacecraft, a series of missions he's calling Polaris.

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It is not clear yet whether or not a trip to the Hubble would even require a crew, whether SpaceX's autonomous cargo-carrying Dragon capsules would be better for the job, or whether it's even possible for a SpaceX vessel to safely visit the telescope. There are a lot of unknowns for this potential mission, which is probably why they're starting with a study as a first step. The agreement is that NASA and SpaceX will specifically look at the "feasibility of a SpaceX and Polaris Program idea to boost the agency's Hubble Space Telescope into a higher orbit with the Dragon spacecraft, at no cost to the government," according to a press release.

Hubble, located in low Earth orbit, has already been visited

by spacecraft during its 32-year life. NASA's Space Shuttle conducted five missions to Hubble to repair the telescope, upgrade its parts, and boost its orbit. Since the last mission in 2009, Hubble's orbit has slowly degraded as the telescope has brushed against the outer edges of Earth's atmosphere. It's now about 30 kilometers closer to Earth than it was in 2009. Boosting the telescope could help extend the observatory's life.

NASA has no plans to revisit Hubble on its own. Panelists at the study announcement repeatedly emphasized that Hubble is still in good shape. Even without a new mission to Hubble, the observatory is expected to last for several more years. "Thanks to improvements of past servicing missions, we expect Hubble to remain operational until the latter part of this decade, if not into the next," said Patrick Crouse, Hubble Space Telescope project manager.

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If the mission is feasible, and if it does get approved, it would give SpaceX a chance to flex its capabilities. Specifically, it would show that it can work on space tech that wasn't designed with SpaceX in mind.

"SpaceX really sees the future in that we are a spacefaring civilization. And that means that there are spaceships flying all over the place. There's on-orbit refueling. There's space stations from various companies," said Jessica Jensen, vice president of customer operations and integration at SpaceX. "Missions like this, where companies are learning to adapt and figure out ways to talk to older vehicles ... I think that's an amazing capability and that's how the industry needs to move forward."

Though Hubble has been somewhat overshadowed lately by the amazing pictures out of NASA's new James Webb Space Telescope,

it continues to produce amazing images of the universe. In March, it spotted the oldest known star, and just this week, it took some incredible views of the DART mission, which sent a spacecraft on a collision course with an asteroid.

“Hubble is amazingly successful. It’s healthy; it’s doing great science as we speak,” said Thomas Zurbuchen, associate administrator for NASA’s Science Mission Directorate. “The data gathered from this study is another tool in humanity’s toolbox that we can use to support future science missions and keep Hubble at the forefront of scientific discovery.”

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