

Thaxted Astronomical Society

News

Features

NF0055

SpaceX's Starship Rocket Is Now Top Priority

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says-SpaceXs-Starship-rocket-priority-on.html>

SpaceX's Starship reusable rocket that could one day carry humans to Mars is the company's 'top priority' from now on

Daily Mail 8th June 2020 >

- **In a email Musk asked his employees to consider Starship SpaceX's top priority**
- **Musk want to use his Starship to transport a human colony to Mars in the 2030s**
- **SpaceX has been busy with a manned mission to the ISS and satellite launches**

Elon Musk has said SpaceX's Starship rocket that could one day carry humans to Mars is the company's 'top priority' from now on.

In a company email, Musk urged SpaceX employees to accelerate progress on Starship 'dramatically and immediately', a week after its historic first crewed mission to the International Space Station (ISS).

The launch on May 30 successfully transported NASA astronauts Robert Behnken and Douglas Hurley on a 19 hours journey to the ISS.

In the process it became be the first crewed launch from the US into orbit since NASA's space shuttle program ended in 2011.

But SpaceX is now turning back to its primary aim of carrying humans and commercial cargo to 'the Moon, Mars and beyond'.

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says-SpaceXs-Starship-rocket-priority-on.html>

SpaceX's Starship reusable rocket that could one day carry humans to Mars is the company's 'top priority' from now on

Daily Mail 8th June 2020 >

'Please consider the top SpaceX priority (apart from anything that could reduce Dragon return risk) to be Starship,' Musk wrote on Saturday in the email, seen by CNBC.

SpaceX is planning to send humans to Mars using a two-stage spacecraft composed of Starship (the passenger-carrying section) and the Super Heavy rocket booster.

However, SpaceX has some work to do to finish the construction of Starship, previously known as 'BFR', at SpaceX's Texas development site.

Only last month, SpaceX's fourth Starship rocket prototype exploded into a ball of flames following a pressurised test at the Boca Chica facility in Texas.

'Unfortunately what we thought was going to be a minor test of a quick disconnect ended up being a big problem,' Musk told Reuters, referring to the explosion

SpaceX will pick up Starship testing once more with SN5, which is expected to begin this week, Wednesday, June 10.

The completed launch vehicle won't be ready until 2021 at the very earliest, although it has completed several successful 'hop tests' involving tethered launches and landings.

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says-SpaceXs-Starship-rocket-priority-on.html>

SpaceX's Starship reusable rocket that could one day carry humans to Mars is the company's 'top priority' from now on

Daily Mail 8th June 2020 >

Musk, who also owns electric car company Tesla, wants to build 1,000 Starships to put up to a million humans on Mars by 2050, to make us a 'multi-planetary species'.

To get there, Musk envisages the Starship will operate much like a commercial airliner by transporting paying customers to the surface of the Moon and Mars.

Musk previously said the lifetime of each Starship will be around 20 to 30 years, 'like an aircraft'.

Around three Starship flights will launch from Earth per day, or around 1,000 flights a year, and each will have a capacity of more than 90,000 pounds.

By continuously ferrying people the 180 million miles to Mars, Musk is predicting 1,000 human inhabitants by 2030 and 'maybe around' one million by 2050.

Musk thinks each Starship mission could launch for \$2 million, with an individual ticket 'one day costing less than \$500,000' and 'maybe even below \$100,000', he previously revealed.

As the distance between Earth and Mars varies depending on their orbits, SpaceX is planning to send a spacecraft full of humans to Mars when the two planets are at their closest.

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says-SpaceXs-Starship-rocket-priority-on.html>

SpaceX's Starship reusable rocket that could one day carry humans to Mars is the company's 'top priority' from now on

Daily Mail 8th June 2020 >

During this launch window – around once every 26 months – Musk is aiming to send around 100,000 people off to the red planet.

SpaceX's mission would also require huge amounts of infrastructure and resources to be taken to the red planet before humans arrive.

SpaceX is planning to send two unmanned cargo ships to Mars in 2022 to set up support infrastructure and water mining systems.

Most water on Mars exists as ice trapped in the planet's polar ice caps, and this would have to be melted in preparation for the first human inhabitants.

The first crewed red planet mission for the rocket and 100-passenger Starship could then follow as early as 2024 if development and testing go well, Musk has said.

The initial SpaceX settlement on Mars would start with only 12 people but would expand to a million within another 25 years thanks to a rapid burst of commercial flights.

Musk also believes the Starship rocket, once built, could be used for travel on Earth - saying that passengers would be able to get anywhere in under an hour.

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says-SpaceXs-Starship-rocket-priority-on.html>

SpaceX's Starship reusable rocket that could one day carry humans to Mars is the company's 'top priority' from now on

Daily Mail 8th June 2020 >

Shuttling humans to Mars is all part of the \$23.6-billion-CEO's belief that space travel is the only way to save humanity from extinction.

His highly entertaining research paper published in *New Space*, entitled 'Making Humans a Multi-Planetary Species', outlines the company's vision.

SpaceX also has a constellation of internet space satellites – named 'Starlink' – to contend with as part of a separate project.

The firm launched another 60 of its Starlink internet satellites into space last week, bringing the total number in orbit around the Earth to 482.

At least 400 satellites are needed for SpaceX to start introducing minimal internet coverage, Musk has said, and at least 800 are necessary for moderate coverage.

The firm aims to have more than 1,000 satellites in orbit by the end of the year and has also been approved by the FCC to launch over 12,000 in total.

Collectively they will form a constellation of thousands of satellites, designed to provide low-cost broadband internet service from low-Earth orbit.

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says-SpaceXs-Starship-rocket-priority-on.html>

SpaceX's Starship reusable rocket that could one day carry humans to Mars is the company's 'top priority' from now on

Daily Mail 8th June 2020 >

'Building 100 Starships a year gets to 1,000 in 10 years,' Mr Musk wrote on Twitter. Pictured, the Starship MK1, a prototype, seen here at a SpaceX facility in Boca Chica, Texas



TAS > News Features > NF0055 > SpaceX's Starship Rocket Is Now Top Priority >

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says-SpaceXs-Starship-rocket-priority-on.html>

SpaceX's Starship reusable rocket that could one day carry humans to Mars is the company's 'top priority' from now on

Daily Mail 8th June 2020 >

x

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says-SpaceXs-Starship-rocket-priority-on.html>

SpaceX's Starship reusable rocket that could one day carry humans to Mars is the company's 'top priority' from now on

Daily Mail 8th June 2020 >

WHAT IS ELON MUSK'S 'BFR'?

The BFR (Big F***ing Rocket), now known as Starship, will complete all missions and is smaller than the ones Musk announced in 2016.

The SpaceX CEO said the rocket would take its first trip to the red planet in 2022, carrying only cargo, followed by a manned mission in 2024 and claimed other SpaceX's products would be 'cannibalised' to pay for it.

The rocket would be partially reusable and capable of flight directly from Earth to Mars.

Once built, Musk believes the rocket could be used for travel on Earth - saying that passengers would be able to get anywhere in under an hour.

<https://www.dailymail.co.uk/sciencetech/article-8398449/Elon-Musk-says->

SpaceX's Starship reusable rocket company's 'top priority' from now
Daily Mail 8th June 2020 >

WHAT IS ELON MUSK'S 'BFR'?

X

Los Angeles 32 mins
New York 29 mins
Cape Town 34 mins
London
Hong Kong 34 mins

The same vehicle will also be able to make the journey to the Moon and then to Mars - unmanned missions in 2022 followed by manned missions in 2024

- It can carry 150 tons of cargo and be used to deliver satellites into orbit
- It has the capacity to transport 100 people in 40 cabins and features large communal areas
- Legs will deploy for a vertical landing
- Raptor engines
- Central storage, galley and solar storm shelter
- Fuel tanks
- Delta wing

Without any friction from the air or the weather, the rocket is able to travel at up to 18,000mph miles per hour

The Space X rocket code-named 'BFR' will take off vertically, powered by 37 so-called 'raptor' engines - 31 on the booster rocket and six on the space craft itself

Once the BFR has broken through the earth's atmosphere, its booster rocket will detach and power itself back down to earth where it will land

Booster rocket

348ft
363ft

Its payload is even higher than the Saturn V, right, which took people to the moon in 1969 and could carry 135 tonnes

A Boeing 787 Dreamliner can fly 290 people up to 9,782 miles at a top speed of 678mph

Life on Mars: Illustration of craft on Planet

Graphic by John Lawson