

# Thaxted Astronomical Society

## News

## Features

## NF0110

## SpaceX Inspiration4

## The Room With A View

<https://www.dailymail.co.uk/sciencetech/article-9996859/SpaceX-shares-video-window-Crew-Dragon-capsule-begins-three-day-orbit-Earth.html>

## Talk about a room with a view! SpaceX shares a mesmerising video of the domed window on its Crew Dragon capsule as the first all-civilian crew begins its three-day orbit of Earth

Daily Mail 16<sup>th</sup> September 2021 >

- **Jared Isaacman, Hayley Arceneaux, Sian Proctor and Chris Sembroski launched into space last night on board a modified Crew Dragon module**
- **The four civilians will spend three days in orbit around Earth**
- **SpaceX has shared a stunning video of the domed window on the module**

SpaceX has shared a stunning video of the domed 'cupola' window on its Crew Dragon capsule, as its first all-civilian crew began its three-day orbit of Earth.

Taking to Twitter, SpaceX simply wrote: 'View from Dragon's cupola,' alongside the video of the domed window, with Earth in the background.

The Inspiration4 crew - including Jared Isaacman, Hayley Arceneaux, Sian Proctor and Chris Sembroski - launched into space shortly after 8pm EST on Wednesday (1am BST on Thursday) from the Kennedy Space Centre in Florida.

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Shortly after the launch, the bottom part of the rocket detached and headed back down to Earth on a seafaring platform to be reused at a later time by SpaceX, as part of the company's plan to save money and make spaceflight cheaper.

Although this is not the first time civilians have travelled to space, Inspiration4 is the first mission manned solely by civilians.

The crew began their journey at 4:07pm ET, when the four individuals emerged from Hangar X where they were met by a large crowd cheering them on.

SpaceX CEO Elon Musk was also present to see the crew off and appeared to be just as excited as the team going to space.

The Inspiration team said their final goodbyes to friends and family and packed into two white Tesla Model X vehicles, which drove them to SpaceX's new suit-up room to get in their space gear.

From there they ventured to Launch Pad 39 where the massive Falcon 9 rocket stood, climbed to the top of the tower and headed into the capsule.

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The crew, however, stopped outside the capsule hatch to sign their names by the SpaceX symbol on the white wall, signifying the first all-civilian mission.

They were then strapped in by SpaceX staff, who are called 'SpaceX Nijas' due to their all black attire.

The crew was all smiles inside the capsule, as they proudly wore the iconic white space suits that are customized to fit each of the individual's bodies.

Isaacman, the commander of the mission, is funding the trip in a private deal made with SpaceX.

The other three civilians were selected via a competition launched in February.

Isaacman is the CEO of Shift4 Payments, while Proctor is a community college educator in Arizona, Sembroski a former Air Force missileman from Washington and Arceneaux is a physician assistant at St. Jude Children's Research Hospital in Tennessee.

Inspiration4 is designed primarily to raise awareness and support for the pediatric cancer center, which successfully treated Arceneaux for bone cancer when she was a child.

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The mission aimed to raise \$200 million for the hospital - Isaacman donated \$100 million of his own money to the goal.

Crew Dragon will orbit Earth for three days, completing one orbit every 90 minutes along a customized flight path as it travels at more than 17,000 miles per hour.

Its progress will be carefully monitored at every step by SpaceX mission control.

SpaceX says: 'Upon conclusion of the mission, Dragon will reenter Earth's atmosphere for a soft water landing off the coast of Florida.'

Crew Dragon's 365lbs cargo capacity has been allocated for both crew essentials as well as scientific equipment dedicated to micro-gravity research and experimentation.

'While we are up there we are going to bring payloads and do experiments,' Isaacman said.

'We offered to take payloads from St. Jude's and other places because the wait list is extremely long.'

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Following the announcement of Inspiration4 back in February, Musk told NBC News: 'Any mission where there's a crew onboard makes me nervous. The risk is not zero.'

'When you've got a brand new mode of transportation, you have to have pioneers. Things are expensive at first, and as you're able to increase the launch rate, increase the production rate, refine the technology, it becomes less expensive and accessible to more people.'

'We'll all be with Jared on the journey and we'll be seeing it in real time. It's an important milestone on the road toward making access to space more affordable.'

The SpaceX-led mission follows trips to space from two of Musk's billionaire rival's – Sir Richard Branson, who heads Virgin Galactic, and Jeff Bezos, founder of Blue Origin and Amazon.

Bezos jetted off to space on July 20 aboard a New Shepard rocket with his brother Mark Bezos, as well as Dutch 18-year-old Oliver Daemen, who became the youngest person in space, and former NASA trainee Wally Funk, 82, who became the oldest.

The Blue Origin founder reached 13 miles higher than billionaire rival Sir Richard Branson who flew to space during his own manned test flight on July 11.

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The Inspiration4 crew, the first all-civilian crew to fly to space-pose while suited up as they prepared to make their historic trip to space





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Pictured is the redesigned SpaceX Dragon Crew capsule, which now features a glass dome at the top for the crew to look out at space





https://www

X

# Space tourism: first all-civilian crew

SpaceX's Dragon spacecraft is chartered by the American billionaire Jared Isaacman at his expense



**Crew dragon**  
Three-day flight  
in orbit around  
the Earth

- PASSENGERS**
- Four non-professional astronauts
  - Received several months training
  - Automated mission (piloted from Earth)



**Dome**  
Installed for  
this flight

Dragon

**FALCON 9 ROCKET**  
Height 70 m

**September 15**  
Launch from  
the Kennedy  
Space Center

**Trunk**  
Used as a living  
space during  
the flight

Height  
8.1 m

Solar panels

Diameter  
4 m

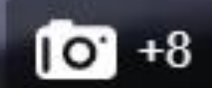


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### SPACEX CREW DRAGON CAPSULE MEASURES 20FT AND CAN CARRY 7 ASTRONAUTS AT A TIME

The capsule measures about 20 feet tall by 12 feet in diameter, and will carry up to 7 astronauts at a time.

The Crew Dragon features an advanced emergency escape system (which was tested earlier this year) to swiftly carry astronauts to safety if something were to go wrong, experiencing about the same G-forces as a ride at Disneyland.

It also has an Environmental Control and Life Support System (ECLSS) that provides a comfortable and safe environment for crew members.

Crew Dragon's displays will provide real-time information on the state of the spacecraft's capabilities, showing everything from Dragon's position in space, to possible destinations, to the environment on board.

Those CRS-2 Dragon missions will use 'propulsive' landings, where the capsule lands on a landing pad using its SuperDraco thrusters rather than splashing down in the ocean.

That will allow NASA faster access to the cargo returned by those spacecraft, and also build up experience for propulsive landings of crewed Dragon spacecraft.