



LAUNCH PACK



NATIONAL
SPACE CENTRE

02

MISSION BRIEFING

WELCOME ABOARD

We are incredibly excited to to play a part in the Virgin Orbit **Start Me Up** mission launching from Spaceport Cornwall and very proud to share the role of the National Space Centre in supporting the launch from Ireland.

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ROLE OF THE NSC

Ireland has an important part to play in the burgeoning space industry, due in large part to our geographic position. While tonight will be a first for our British colleagues, it will be the third time we've provided ground control data for space launches at the NSC. We've previously supported RocketLabs' Electron rocket launch, and provided groundstation services for South Korea's recent Nuri rocket launch for Contec.

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ANTENNA PHOTOGRAPHS

Livestream Information

If, like us, you are keen to watch this moment in history, you are invited to join us live at the NSC via YouTube: <https://www.youtube.com/@NationalSpaceCentreIRE>

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MISSION QUIZ

If the launch proceeds as planned, we expect the livestream to begin at around 10:00PM, and we hope you'll join in from wherever you are in the universe.

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MISSION BINGO



Rory Fitzpatrick
CEO, National Space Centre

MISSION

Curious about this evening's scheduled launch, what it means for Europe, and National Space Centre's role tonight?
Here's the basic mission briefing.



Virgin Orbit is scheduled to send its first satellites from Europe into space during the **Start Me Up** mission with help from the **National Space Centre**.

The Virgin Orbit jumbo jet known as **Cosmic Girl** will climb to 35,000 feet before launching its LauncherOne rocket into orbit in what's known as an Air to Orbit launch.

LauncherOne will then release eight miniaturised satellites into Low Earth Orbit (LEO).

The eight 'smallsat' satellites on board LauncherOne are being delivered into Low Earth Orbit for various Virgin customers. Each the size of a cereal box, these satellites have diverse futures in space, from measuring the ionosphere to novel GPS applications and hyperspectral imaging.





The **Start Me Up** mission will communicate with mission control at Spaceport Cornwall via a network of four ground stations, including one in Ireland at the National Space Centre. For the past few months, the NSC has been the home of a LeafSpace tracking antenna which will follow Cosmic Girl as it flies out over the Atlantic and then continue tracking LauncherOne on its way out of the atmosphere.

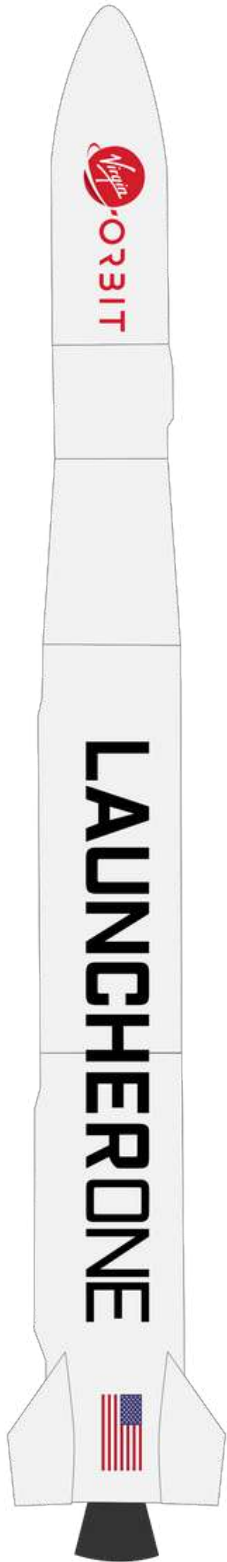
NSC is specifically supporting Telemetry, Tracking and Control (TT&C) groundstation services for partners Goonhilly, a teleport, and LeafSpace, a ground segment provider. The antenna will follow the trajectory of the LauncherOne rocket and relay critical positioning parameters back to mission control.

Image: Luke McCarthy (3) in front of the LeafSpace antenna at the NSC.





MISSION LAUNCH QUIZ



1 What is the length of LauncherOne?

- A. 70 FEET B. 170 FEET C. 270 FEET

2 The Start Me Up mission is named for a song from which popular rock band?

- A. THE ROLLING STONES B. THIN LIZZIE
 C. THE DOORS D. THE POLICE

3 What is the name of the Start Me Up Launch Commander?

- A. BRYCE SCHAEFER B. DAYLE ALEXANDER
 C. STEPHANIE OLLOM D. DEENAH SANCHEZ

4 The jumbo jet used for the mission is known as Cosmic Girl.

- TRUE FALSE

5 The rocket propellant used is a form of refined kerosene.

- TRUE FALSE

6 The call sign for Newquay Airport and Spaceport Cornwall is:

- A. COR B. NOY
 C. NQY D. COW

1) A 2) A 3) D 4) True 5) True 6) B

LAUNCH PARTY

Bingo!

You can print out this bingo card and play along at home during the NSC livestream of the landing. **Any 5 in a row is BINGO!**

Share a photo of your winning BINGO card on Twitter, Facebook or Instagram with the hashtag **#NSClaunch** and we'll choose a winner at random to win a fun prize delivered to your door!

| | | | | |
|-----------------|--------------|------------|----------------|-------------------|
| Branson | SSO | Flight | Cornwall | Crowd |
| Mission Control | Ride Share | MEO | Rolling Stones | Separation |
| Future | Virgin Orbit | Spaceport | Deploy | Responsive Launch |
| Satellite | Cereal Box | Air Launch | Runway | Atmosphere |
| Payload | Second Stage | Orbit | Countdown | Excitement |

51° 57' 12.96" N, 8° 10' 31.8" W

ELFORDSTOWN EARTHSTATION



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