National Aeronautics and
Space Administration

Launching Science to Space

SpaceX's 22nd Commercial Resupply Mission

Social Media Toolkit

Join Us as Science and Supplies Blast Off to the International Space Station!

Who

The seven-person crew of Expedition 65, already aboard the International Space Station, is ready for the arrival of new research.

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What

Experiments launching include studies of: cotton roots, squids and bacteria, tardigrades in microgravity, and virtual reality control of robotics. These scientific studies and additional supplies will launch to the space station on a SpaceX Dragon spacecraft.

When

Liftoff of the Falcon 9 rocket is targeting no earlier than Thursday, June 3. Launch date and time subject to change. Visit NASA.gov for the most up-to-date launch information.

Where

Launch Complex 39A at NASA's Kennedy Space Center in Florida, and online at www.nasa.gov/live

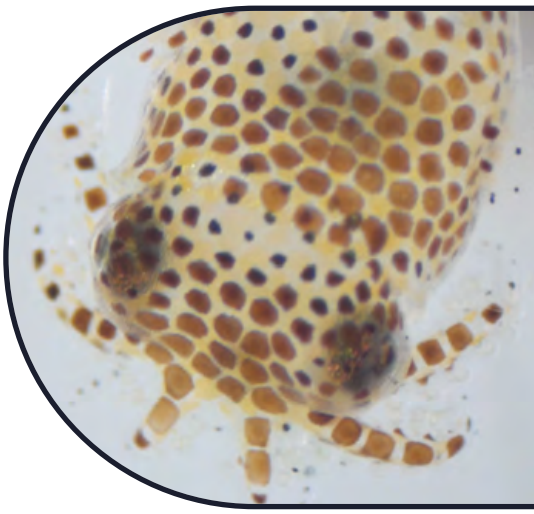
Why

Take gravity away, and we can view things in a radically new way. The space station orbits approximately 250 miles (~400 km) above the surface of our planet at 17,500 mph (8 km/s), creating a microgravity environment for research, providing a unique vantage point of our planet, and giving scientists access to the harsh environment of space.

What's Aboard the Spacecraft?

▶ *Explore the experiments launching to the space station:*

🦠 **MICROBES 🤝 SQUIDS 🦑:** The UMAMI study uses **bobtail squid** and bacteria to examine the effects of spaceflight on interactions between beneficial microbes and their animal hosts. This type of relationship is known as **symbiosis**. The experiment could support the development of measures to preserve astronaut health, and identify ways to protect and enhance these relationships for better wellbeing on Earth.



THE ROOT OF THE PROBLEM: Cotton is used in many products, but its production uses a significant amount of water and agricultural chemicals. TICTOC studies how **cotton root system** structure affects plant resilience, water-use, and carbon storing. What we learn could enable the development of more robust cotton varieties that require less water and pesticide use.

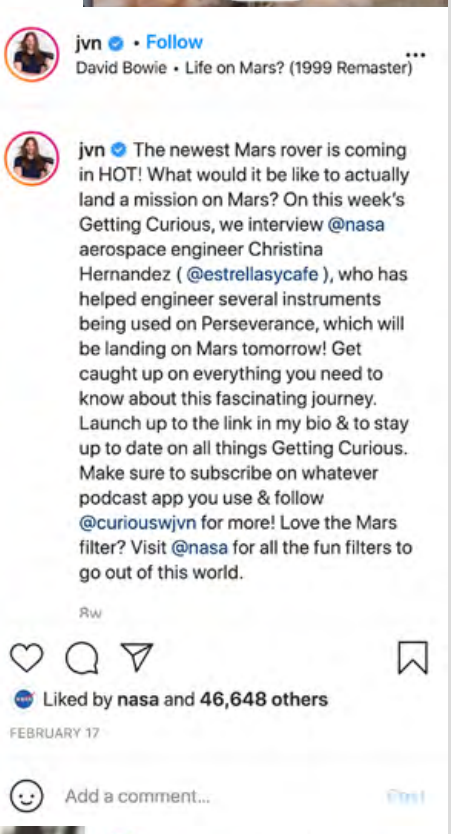
WATER BEARS IN SPACE: Tardigrades (aka **water bears**) are microscopic creatures that can tolerate extreme environments. Cell Science-04 aims to identify the genes involved in water bear adaptation and survival in these high stress environments. The results could advance understanding of the stress factors affecting humans in space.

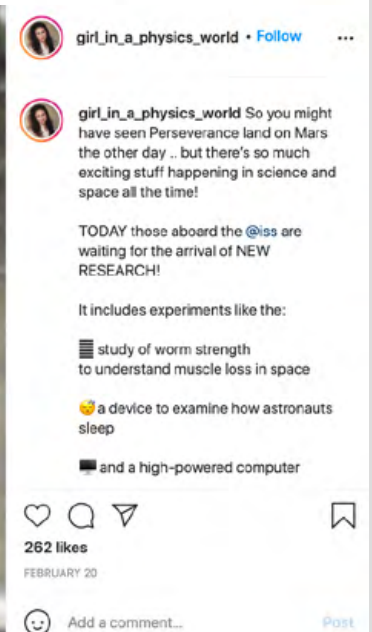
REMOTELY CONTROLLING ROBOTS: ESA (European Space Agency) and the Centre Nationale d'Etudes Spatiales (CNES) study **Pilote** tests the effectiveness of remote operation of robotic arms and space vehicles using virtual reality and haptic interfaces in space. The investigation compares astronaut performance using these tools on Earth and during long-duration space missions. Results could help optimize workstations on the space station and future vehicles for missions to the Moon and Mars.

BONUS POWER: New solar panels are headed to station! Based on a previous technology demonstration of roll out panels performed on station, these arrays will provide an increase in energy available for research and station activities.

Learn more in our research highlights feature story!

Find pictures and video of the experiments here.





5 Ways You Can Join the Celebration of Science

1. **Set a reminder** to watch live coverage on Thursday, June 3 on NASA TV (www.nasa.gov/live) or @NASA social media accounts. Post a picture watching the livestream!

2. **Host a virtual watch party** and encourage others to do so too!

3. **Take a trip** to the International Space Station's cupola window with our Window to the World Instagram filter!

4. **Share the science** you're most excited about heading to station! Join the conversation on social media by tagging @ISS on Instagram and @ISS_Research on Twitter. Find pictures and video for sharing here.

5. **Join our virtual NASA Social!** Get a behind-the-scenes look at the launch on the Facebook event and through Eventbrite.

Social Media Messaging Suggestions

Science is about the launch to the @Space_Station, and I'll be watching! 🔬From a study of squids in space to experiments that could create more water efficient cotton, check out some of the cool @ISS_Research about to head to microgravity.

I'm visiting @NASA_Kennedy virtually and I have space for guests! 🚀 Let's launch science to space together and watch as some really cool research lifts off to the @Space_Station on June 3!

Squids and water bears are headed to space! 🚀 Alongside a spacecraft full of research experiments, these creatures will help us learn more about the stresses humans undergo in space, and how our relationships with microbes could change in microgravity. Tune in to nasa.gov/live on June 3 to watch them launch to the @ISS with me.

Grab pictures and video for your posts here!

SpaceX CRS-22 Science Resources

Science Overview Video

2-minute highlight video of the research heading to space.

Research Highlights Feature Article

Get the details of the science heading to station.

NASA TV Broadcast Details

How to tune in to watch the launch.

Imagery of the Science Heading to Space

Pictures and video of the SpaceX CRS-22 research

Social Accounts

NASA

Twitter: @NASA
Facebook: @NASA
Instagram: @NASA

Space Station Research

Twitter: @ISS_Research

International Space Station

Twitter: @Space_Station
Facebook: @ISS
Instagram: @ISS

Kennedy Space Center

Twitter: @NASAKennedy
Facebook: @NASAKennedy
Instagram: @NASAKennedy

Hashtags

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