

Science on the ISS



**DOWN TO
EARTH**



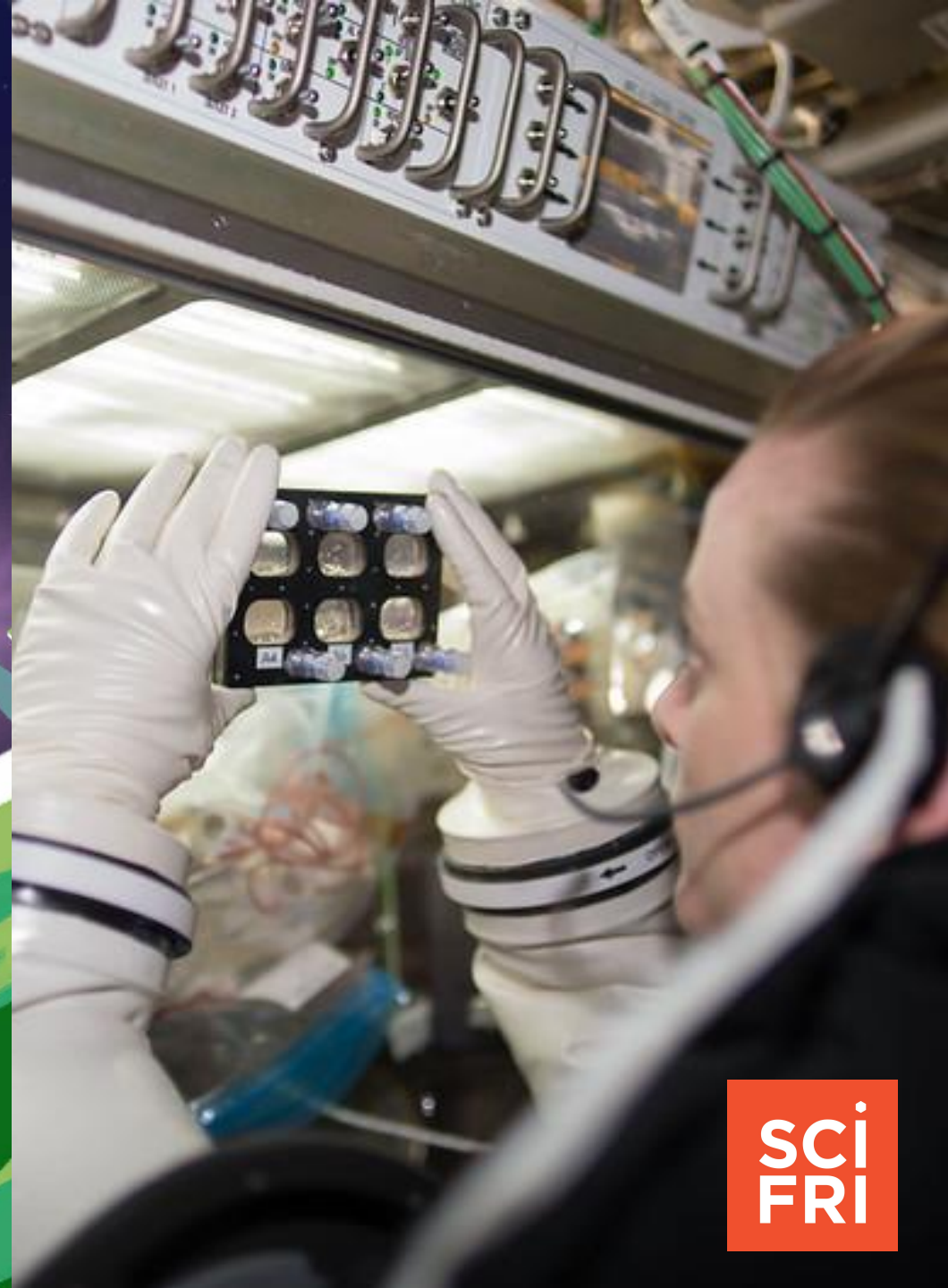
International Space Station

- The ISS is a laboratory in space for commercial, academic and government research.
- ISS has been in orbit 24 years.
- More than 200 astronauts have visited.
- An international partnership of five space agencies from 15 countries operates ISS.



International Space Station

- ISS National Laboratory is a NASA organization that manages the ISS, providing expertise, connection, and inspiration for everyone.
- Special features of the research environment:
 - Microgravity
 - Extreme environmental conditions
 - Unique vantage point



International Space Station

- Physical Sciences Research
 - Fluid Dynamics
 - Complex Fluid Physics
 - Materials Science
 - Combustion
 - In-orbit production & manufacturing
 - Materials Testing



International Space Station

- Life Sciences Research
 - Modeling human diseases
 - Growing 3D cell cultures
 - Studying plant biology
 - Analyzing proteins and large molecules
 - Nanofluidics and biotechnology
 - Materials Testing



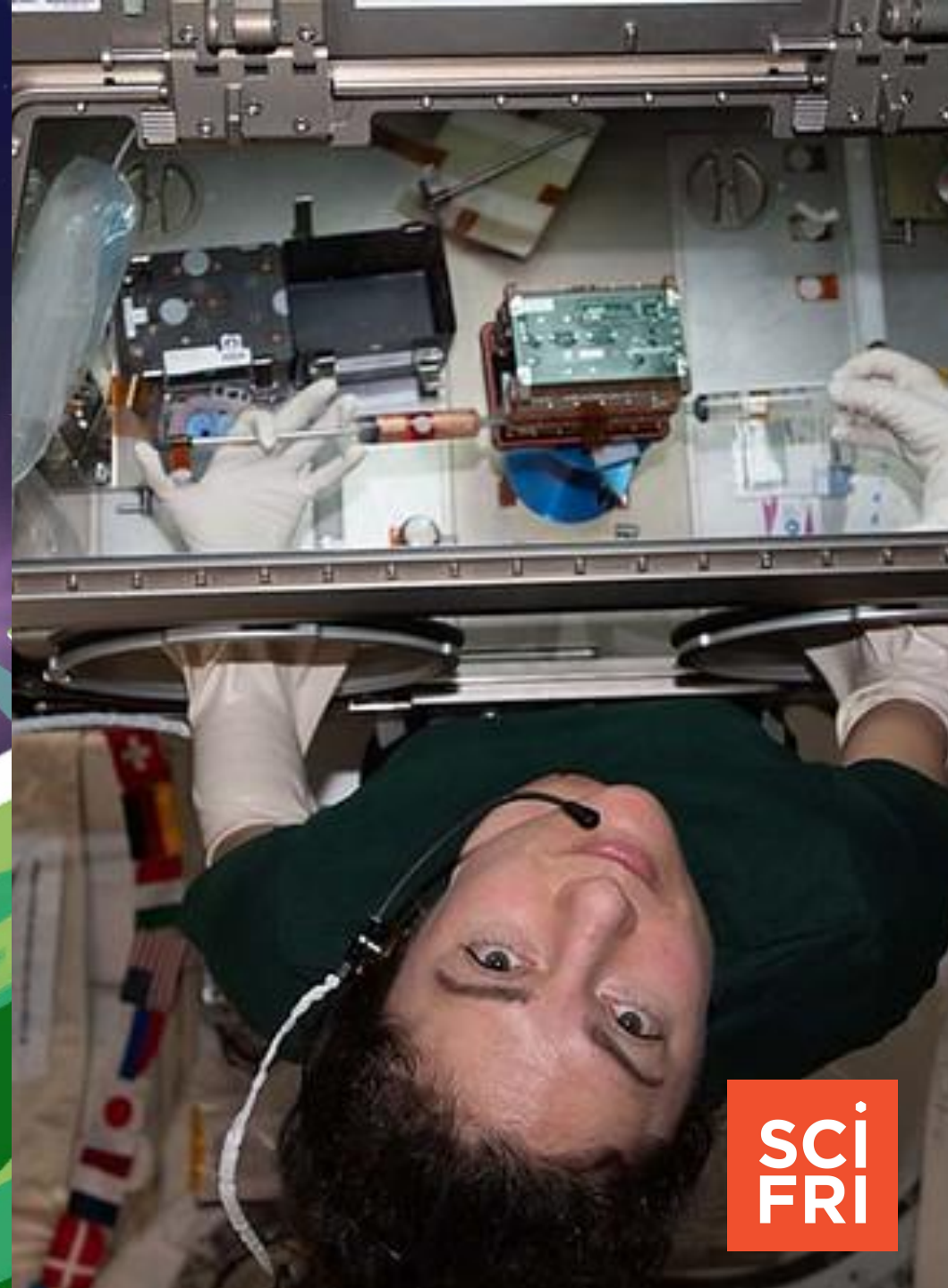
International Space Station

- Remote Sensing
 - Disaster Response
 - Spectral imaging
 - Monitoring land and sea
 - Space imaging
 - Technology testing and validation



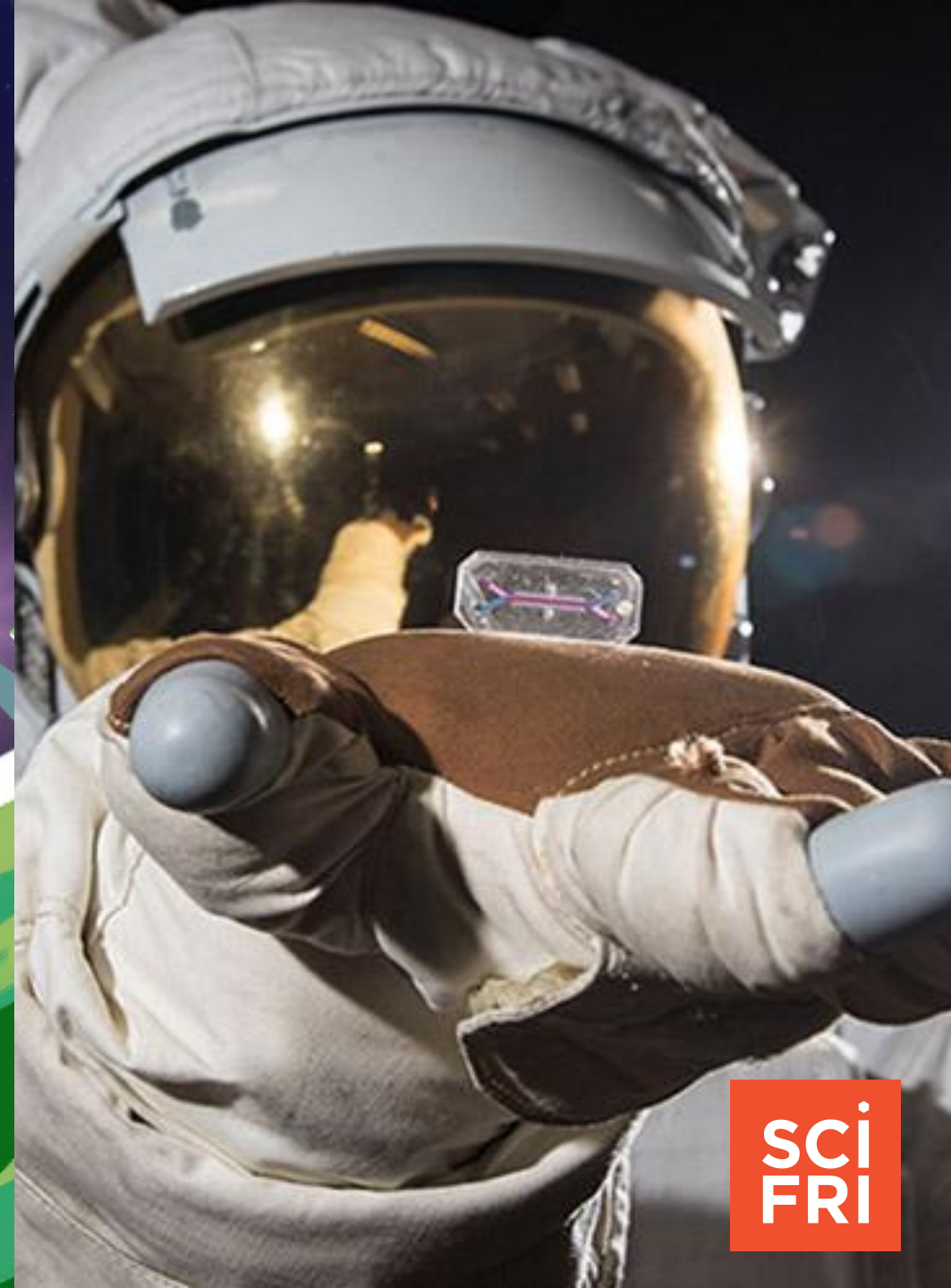
International Space Station

- Technology Development
 - Imaging and sensors
 - Energy efficiency
 - Satellites and spacecraft
 - Communication
 - Materials, nanotechnology, and robotics



International Space Station

- In Space Production
 - Advanced Manufacturing and Materials
 - Crystal Growth
 - Thin-Layer Deposition
 - Tissue Engineering and Regenerative Medicine
 - Quantum Technologies



International Space Station

- Education
 - Space Station Explorers is a community of educators, learners, and organizations that make STEM learning fun and exciting through connections with the ISS National Lab.



15 Benefits of Space Station Research



Solving Humanity's Biggest Problems



Reflection

- What problems do you want to solve?
- How can science from the ISS help your community?



Learn more!

- Visit [Space Station Explorers](#)
- Read [Upward](#)

