

**View from Above** Thursday, October 19, 2017 10:15 am Terry Virts, NASA Astronaut

Sometimes, a little distance is all you need to see things in a brand new way. For astronaut Terry Virts, his newfound perspective was from the International Space Station (ISS), where he installed the Cupola module, granting an unprecedented 360- degree view from the station. When he later became the commander of the ISS, he made good use of the Cupola, taking more photographs than any astronaut who came before him. Many of those images were later used in the National Geographic book View From Above and IMAX film A Beautiful Planet, but to hear Virts tell it, no photo can capture the perfect shade of blue from a sunrise viewed from outer space. Grade levels 5 - 8

#### **Meet Terry Virts**

### http://terryvirts.com/

On November 23, 2014, Terry launched onboard <u>Soyuz TMA-15M</u> from Baikonur, Kazakhstan to the ISS. In March of the following year, Terry assumed command of the ISS as Commander of <u>Expedition</u> 43. Terry spent 200 days in space on his Expedition 42/43 flight, which is the third longest continuous space mission of any NASA astronaut. He is one of 4 astronauts ever to have piloted a space shuttle, fly on a Russian Soyuz spacecraft, performed space walks and Command the ISS. This site has his bio, articles, a gallery of pictures.

### NASA Astronaut Biography (pdf)

https://www.jsc.nasa.gov/Bios/htmlbios/virts-tw.pdf

### NASA GoPro Spacewalk with Terry Virts [720p HD] (YouTube)

https://www.youtube.com/watch?v=--ysPOJepOw

Approx 1 hour. Published on Apr 13, 2015

This footage was taken by U.S. astronaut Terry Virts during two spacewalks (EVAs) on the International Space Station on February 25, 2015 and March 1, 2015.

A Beautiful Planet - Interview with Terry Virts from LondonReal (YouTube) <u>https://londonreal.tv/terry-virts-a-beautiful-planet/</u> Approx 2 hours. Includes index to "chapters". Talks about the IMAX documentary. Flat Earth Debunked - NASA Astronaut Terry Virts (YouTube) <u>https://www.youtube.com/watch?v=Ul1YJLfWSgY</u>

### Segment of A Beautiful Planet interview.

Lessons from the NASA Astronaut Terry Virts for our human expedition from Modesto Diário https://meumodestodiario.wordpress.com/2016/11/22/lessons-from-the-nasa-astronaut-terry-virtscommander-of-expedition-43-to-our-human-expedition/ Publicado em 22 de novembro de 2016

Australian Geographic: NASA astronaut Terry Virts talks about what he learnt in space http://www.australiangeographic.com.au/topics/science-environment/2016/11/nasa-astronaut-terryvirts-talks-about-what-he-learnt-in-space

Terry Virts has spent 200 days in space, been commander of the ISS, and taken more photos of Earth from space than any other person. He shares his photos, as well as things he's learnt watching the world from afar.

# From ASU's School of Earth and Space Exploration (SESE)

- ASU Connections Podcast (Episode 39) Dr. Scott Parazynski is a former NASA astronaut who flew on five shuttle missions. He was recently inducted into the United States Astronaut Hall of Fame. During his time with NASA he conducted seven spacewalks. Dr. Parazynski is also the only astronaut to summit Mt. Everest. Now, he serves as the first Professor or Practice and University Explorer at Arizona State University.
- SESE TEDx & KED talks <a href="https://sese.asu.edu/public-engagement/videos">https://sese.asu.edu/public-engagement/videos</a>
- Ask SESE! <u>https://sese.asu.edu/public-engagement/ask-sese</u>
- **K-12 Field Trip Program in ISTB 4** <u>https://sese.asu.edu/public-engagement/ask-sese</u> This facility was designed to include the assets common to most science centers, which include: a 3-D theater and/or planetarium, exhibit galleries, breakout spaces for handson laboratories, educational technology and mediated-demonstrational science shows.
- **3-D Astronomy Shows** <u>https://sese.asu.edu/public-engagement/3-d-astronomy</u> The theater employs Definiti SkySkan Planetarium technology utilizing 4K projection systems that render Earth and Space Science themes in 3-D stereographic vision.
- New Discoveries Lecture Series <a href="https://sese.asu.edu/public-engagement/new-discoveries">https://sese.asu.edu/public-engagement/new-discoveries</a>

## Remote Sensing Tutorial

## http://www.nrcan.gc.ca/node/9309

The Canada Centre for Mapping and Earth Observation (formerly Canada Centre for Remote Sensing) is pleased to offer this tutorial on remote sensing technology and its applications. This interactive module is intended as an overview at a senior high school or early university level and touches on physics, environmental sciences, mathematics, computer sciences and geography.

For teachers and students there are additional details and suggestions for using the tutorial. Pdf format ( 258 pages)

http://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/resource/tutor/fundam/ pdf/fundamentals\_e.pdf



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