“Here’s some of the stories trending This Week at NASA!”

On Jan. 6, Expedition 50 Commander Shane Kimbrough and Flight Engineer Peggy Whitson of NASA conducted the first of two planned spacewalks outside the International Space Station to upgrade the station’s power system.

Kimbrough and Whitson began installation of adapter plates and completing electrical connections for six new lithium-ion batteries, which arrived in December.

Kimbrough will venture outside the station again on Jan. 13 with Flight Engineer Thomas Pesquet of ESA (European Space Agency) to continue and complete the upgrade.

On Jan. 4, NASA announced the selection of two missions to explore previously unexplored asteroids. The first mission, called Lucy, will study asteroids, known as Trojan asteroids, trapped by Jupiter’s gravity.
The Psyche mission will explore a very large and rare object in the solar system’s asteroid belt that’s made of metal, and scientists believe might be the exposed core of a planet that lost its rocky outer layers from a series of violent collisions.

Lucy is targeted for launch in 2021 and Psyche in 2023. Both missions have the potential to open new windows on one of the earliest eras in the history of our solar system – a time less than 10 million years after the birth of our sun.

NASA Astrophysics news discussed Jan. 3 through 7 at the 229th meeting of the American Astronomical Society in Grapevine, Texas included the agency’s selection of a science mission to explore, for the first time, the hidden details of some of the most extreme and exotic astronomical objects, such as stellar and supermassive black holes, neutron stars and pulsars.

The Imaging X-ray Polarimetry Explorer (IXPE)
mission, targeted for launch in 2020, will

fly instruments capable of helping astronomers
answer fundamental questions about these phenomena

and their extreme environments.

The mission was selected out of 14 proposals.

A new NASA animation is providing a more detailed
view of how the moon's shadow will actually
appear as it travels across the U.S. during
the total solar eclipse on Aug. 21 of this
year.

Data visualizers have typically represented
the moon's shadow as an oval.

But, with data about lunar terrain, land forms
on Earth, and sun angle – provided by the
Lunar Reconnaissance Orbiter and other NASA
assets – this animation shows, for the first
time, that the moon's shadow is better represented
as a polygon.

The animation shows the eclipse path with
the greatest accuracy to date.

And that's what's up this week @NASA …
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