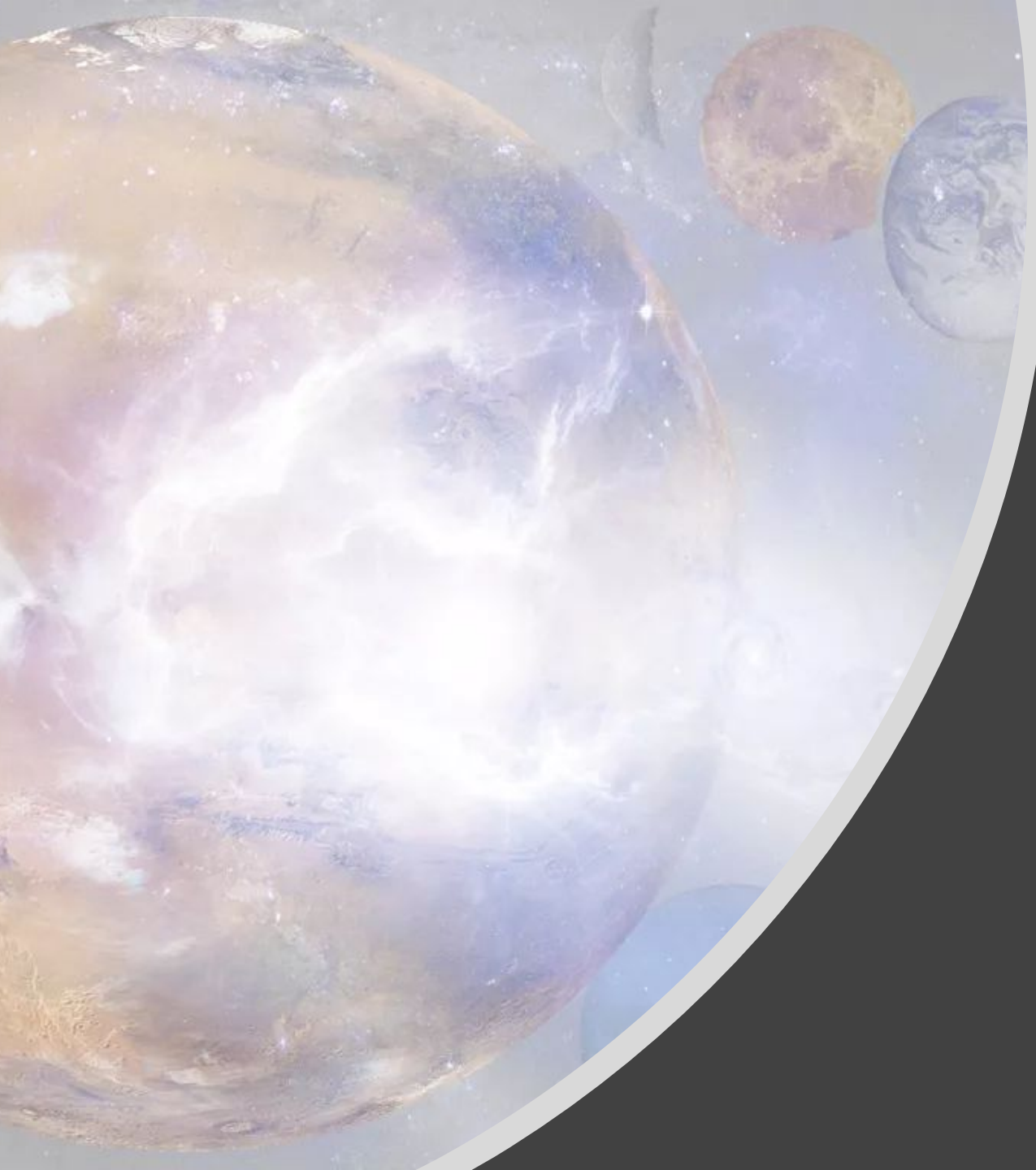


Innovative stacking technique results in highly detailed images of planets

Krugovyh Viktor

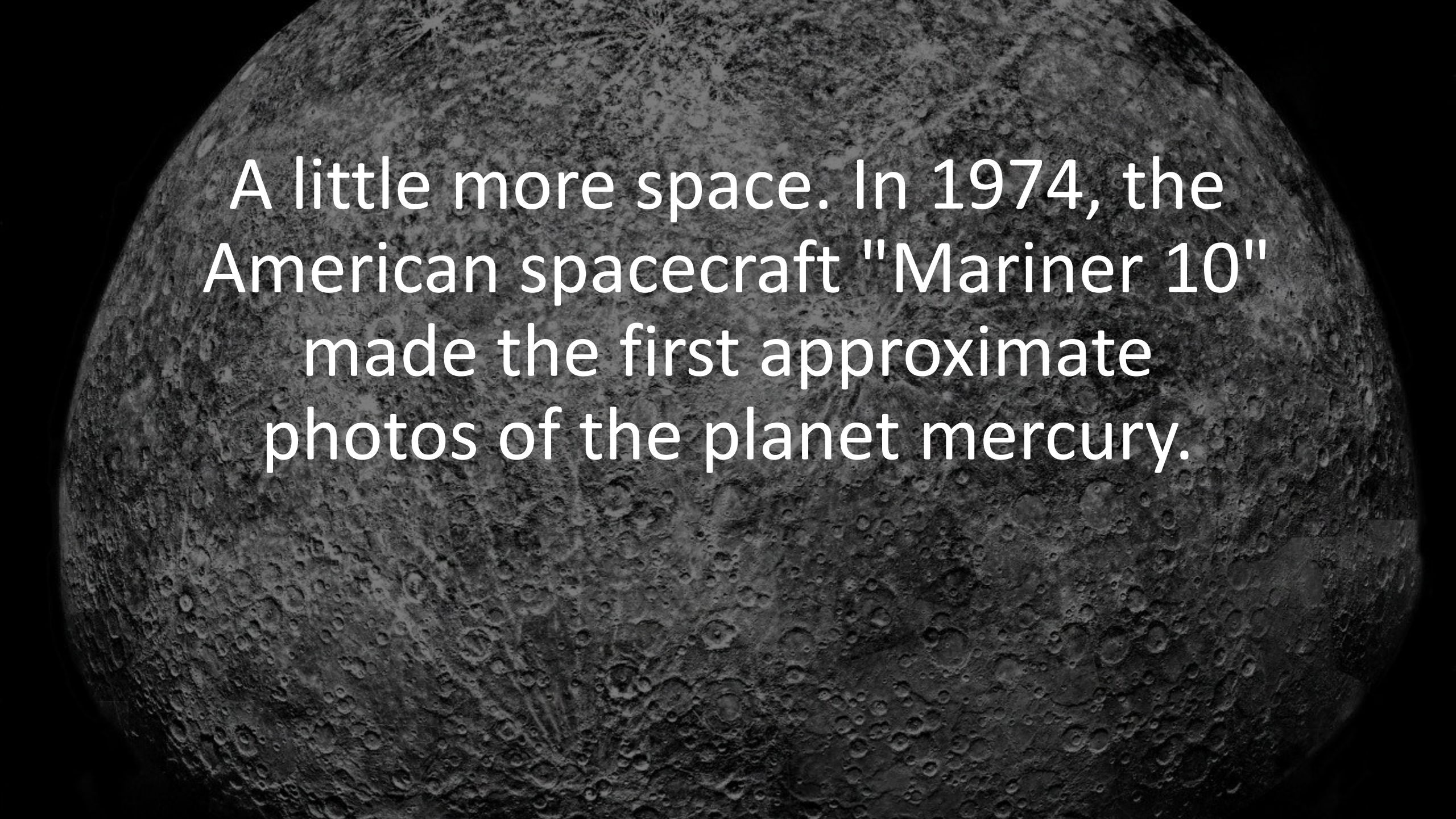
Space is alive! Space cannot be dead. There are many innovative projects being developed around the world that should expand our understanding of the Universe. They use incredible technologies, but many of them need a lot of time to implement. Although on an astronomical scale, it's not much.

EU-funded scientists have used a revolutionary image stacking and matching technique to reveal unprecedented details of the surface of Mars.

- The research team, based at University College London (UCL), and part of the FP7 PROVIDE project have revealed exciting photos of Martian surface, including ancient lakebeds uncovered by NASA's Curiosity rover, NASA's MER-A rover tracks and Home Plate's rocks. They also released images of the 'lost' British landing spacecraft Beagle-2 that landed on Mars in December 2004 but failed to make contact with Earth.
- The technique, called Super-Resolution Restoration (SRR), used to take the images, allows objects

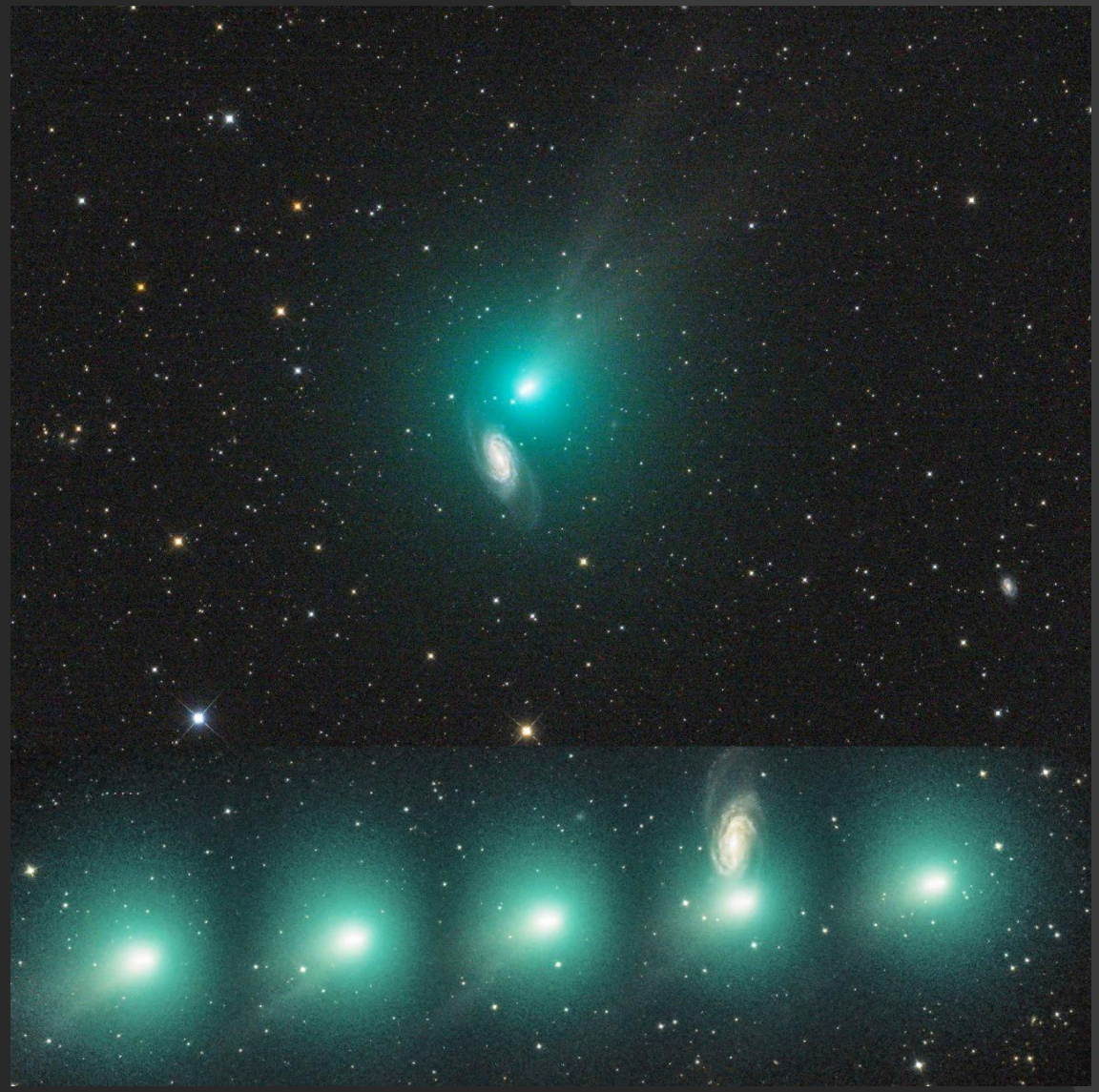
Professor Jan-Peter Muller from the UCL Mullard Space Science Laboratory commented:

«We now have the equivalent of drone-eye vision anywhere on the surface of Mars where there are enough clear repeat pictures. It allows us to see objects in much sharper focus than ever before and the picture quality is comparable to that obtained by landers... as more pictures are collected, we will see increasing evidence of the kind we have only seen from the three successful rover missions to date.»


A little more space. In 1974, the American spacecraft "Mariner 10" made the first approximate photos of the planet mercury.

A new look at Jupiter. Hubble telescope, in his spare time from other scientific Affairs, made a new series of images of Jupiter. A 15-second animation showing the full rotation of the planet has appeared on the telescope's website.

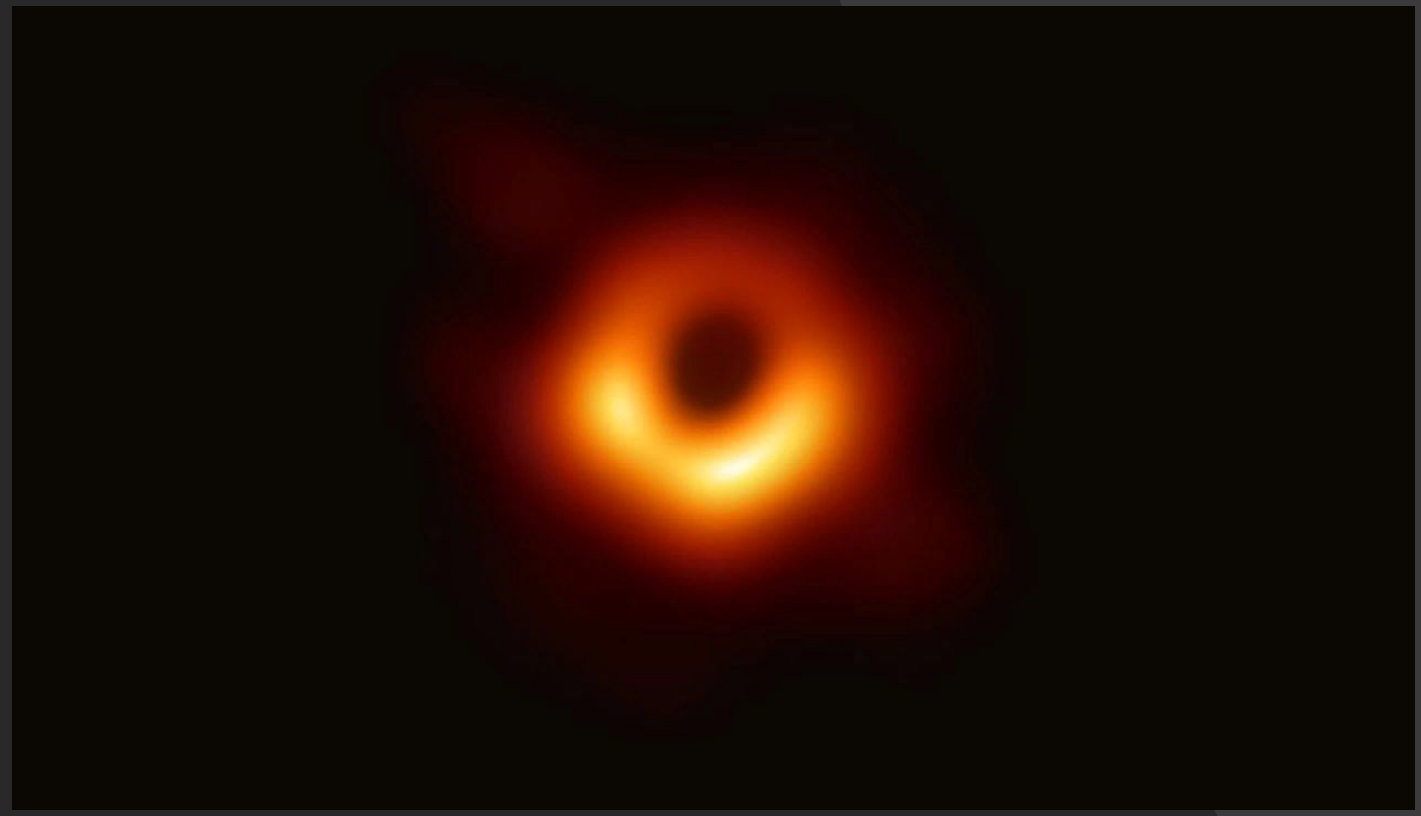
A very rare shot. Comet C / 2018 Y1, discovered only on December 20, 2018, and even by Japanese Amateur astronomer Masaki Iwamoto, and the galaxy NGC2903 in one frame!



"I feel very excited and happy at the same time. There are only a few photographers who can perfectly capture such a mysterious scene" - shares the emotions of the author Shenyan Zhang.

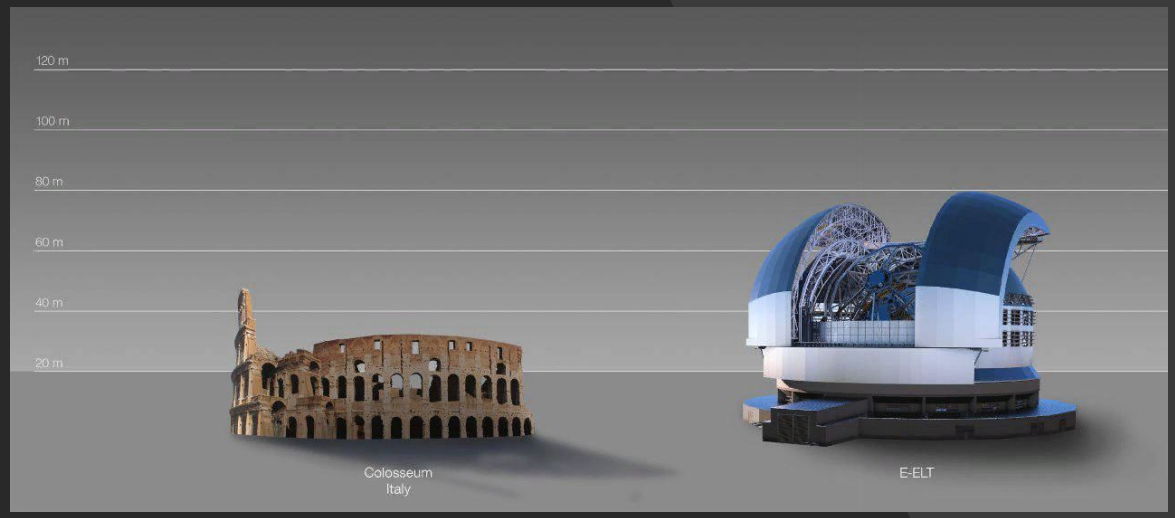
- NASA has presented the world a photo of one of the most beautiful "accident" - the collision of two galaxies: NGC 4485 and NGC 4490.

- Scientists have managed to "photograph" a black hole in the galaxy M87 in the constellation Virgo. And this galaxy is more than 50 million light-years away from Earth. The black hole is about 6.5 billion times heavier than the Sun. To capture it, it took a network of eight telescopes located on different continents.



The European space Agency in these pictures shows that a Very Large Telescope, which is being built in Chile, for a reason so called.

- In the first, it stands next to the recognizable Colosseum.
- On the second in comparison with younger brother-optical telescope Leviathan, or same 6-foot telescope Ross, as want. It was built by the Irish astronomer William Parsons in 1845, and until 1917 the telescope was considered the largest



- By using such novel machine image methods, there is huge potential to improve scientific knowledge of a planet’s surface from multiple remotely sensed images.

THANKS FOR YOUR ATTENTION!