Japan’s space agency (Jaxa) has released new images from the robot rovers it has deployed from the Hayabusa2 spacecraft to the surface of asteroid Ryugu.

Hayabusa2 arrived at the asteroid Ryugu on June 27th, 2018. Ryugu is ~900 m in diameter. After arrival, the spacecraft remained at a distance of ~20 km (the “Home Position”) to continue to observe the asteroid. In the week of July 16th, 2018, operations were begun to lower this altitude, eventually bringing the spacecraft to <6 km from the asteroid surface. The top left image shows three candidate landing sites for the pair of rovers that are part of the mission.

On September 21st, these two rovers were released on to the surface by the “mothership”, Hayabusa 2. In the top right image, the surface can be seen from an altitude of ~800 m – notice the shadow of the orbiter at far left, as well as the brightening of the surface around the shadow due to what is called the “opposition effect”.

The robots, known as Rover 1A and Rover 1B, are now both confirmed to be working on the surface of the space rock. The 1 kg autonomous rovers move about by hopping, using the asteroid's low gravity. Each one contains a motor-powered internal mass that rotates to generate force, propelling the robot across the surface. The bottom pair of images are shots from the same location (Rover-1B’s), but record differences in illumination as Ryugu rotates.

There continues to be some fascinating images from this mission on the JAXA website. Check out:  http://www.hayabusa2.jaxa.jp/en/