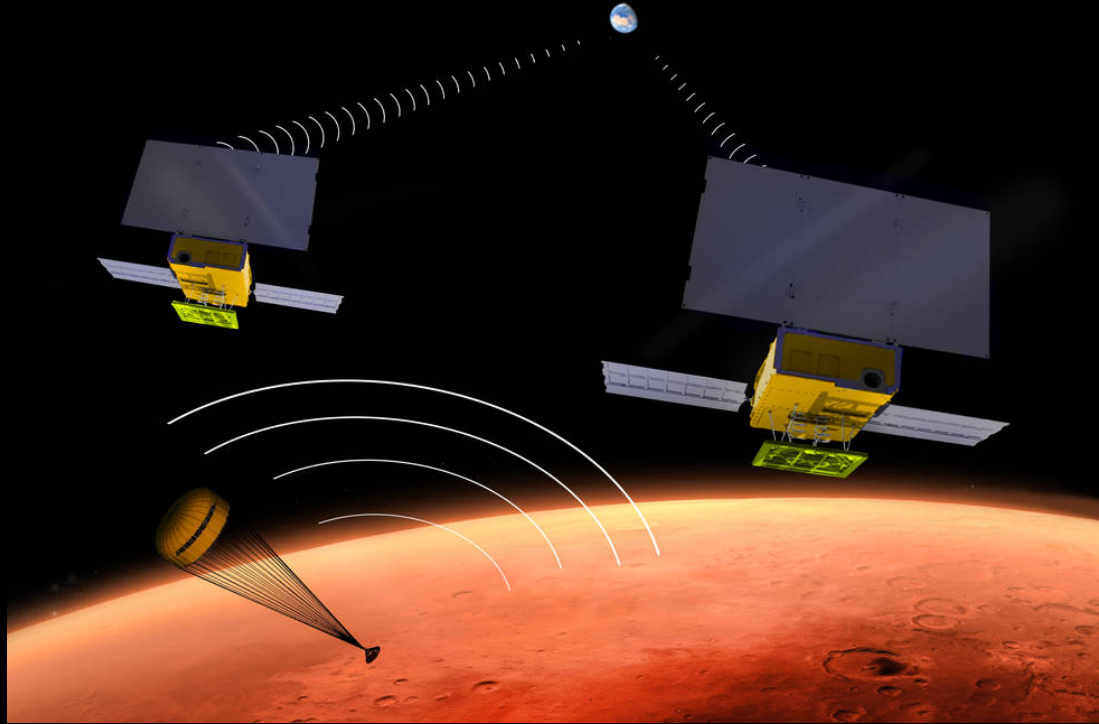


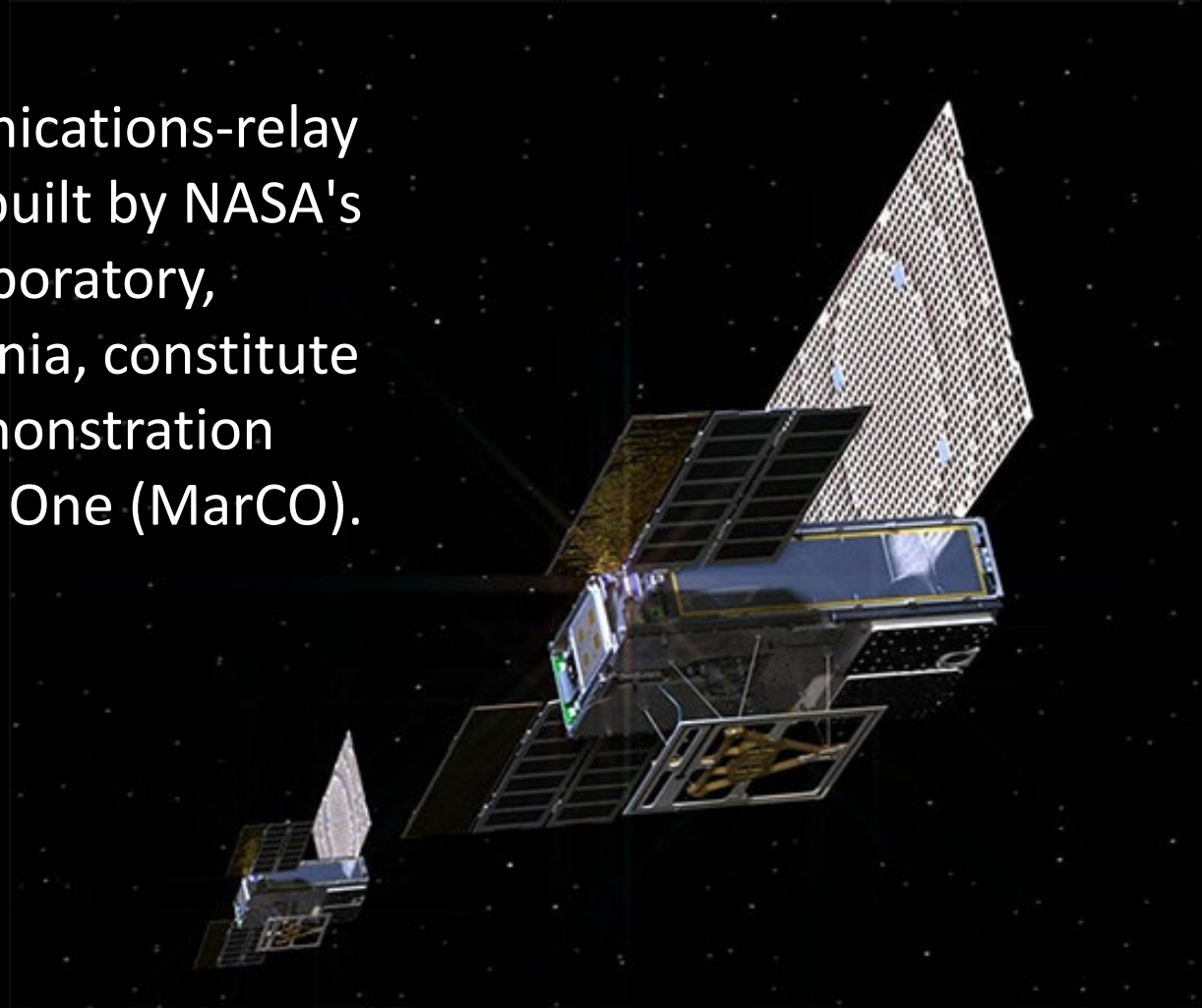
MarCO (CubeSat)



Mars Cube One (MarCO) spacecraft

MarCO (CubeSat)

The twin communications-relay CubeSats, being built by NASA's Jet Propulsion Laboratory, Pasadena, California, constitute a technology demonstration called Mars Cube One (MarCO).

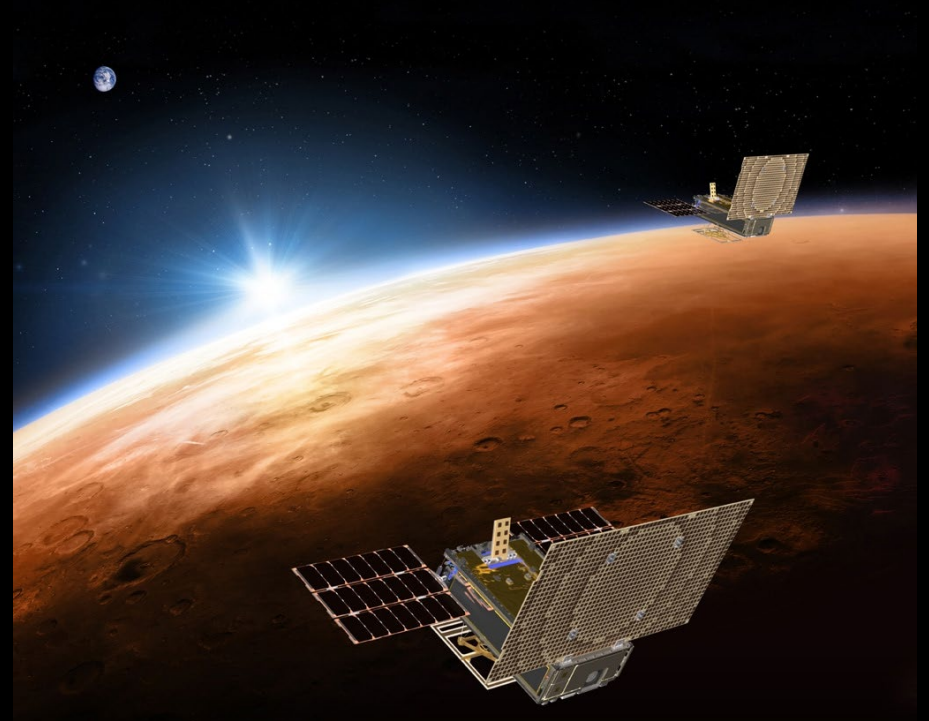


MarCO (CubeSat)

The MarCOs will be the first CubeSat -- a kind of modular, mini-satellite -- flown in deep space.

These are designed to fly along behind NASA's InSight lander on its cruise to Mars.

They will test a relay of data about InSight's entry, descent and landing back to Earth.



An artist's rendering of the twin Mars Cube One (MarCO) spacecraft flying over Mars with Earth in the distance.

MarCO (CubeSat)

Mars Cube One facts:

- Launch: May 5, 2018 (MarCO hitched a ride on the same rocket launching InSight)
- Rocket: Atlas V 401
- Launch site: Vandenberg Air Force Base
- Mission type:
Communications relay
test Mars flyby

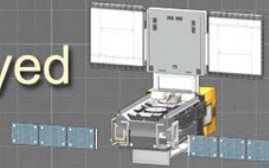


MarCO (CubeSat)

Launch Vehicle: Atlas U 401



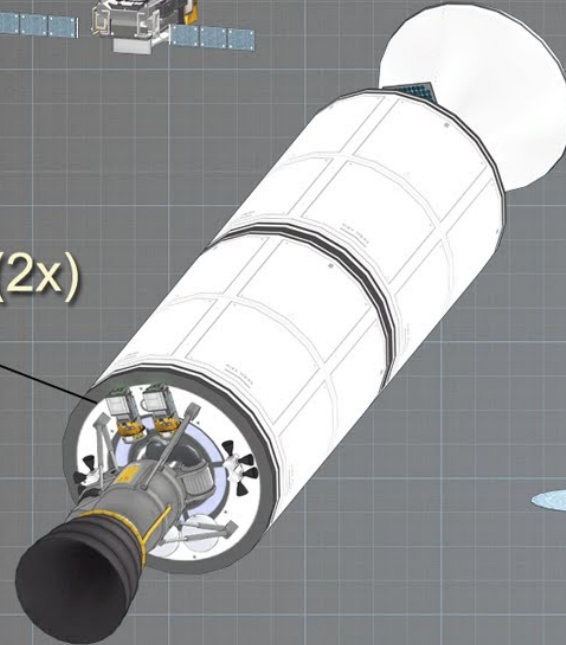
MarCO deployed



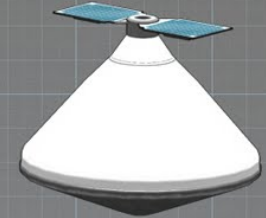
Mars Cube One (2x)



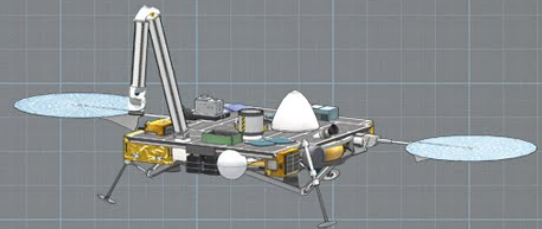
Centaur upper stage




Mars Insight
Spacecraft



Mars Insight Lander



End of Show

The image shows a close-up of the MarCO CubeSat in orbit. The satellite is a small, blue, rectangular object with a grid of solar panels. It is positioned in the upper right quadrant of the frame. In the background, the reddish, cratered surface of Mars is visible, with a bright, glowing horizon line on the left side. The overall scene is set against a dark, black background of space.

MarCO (CubeSat)

MarCO (CubeSat)

CubeSats

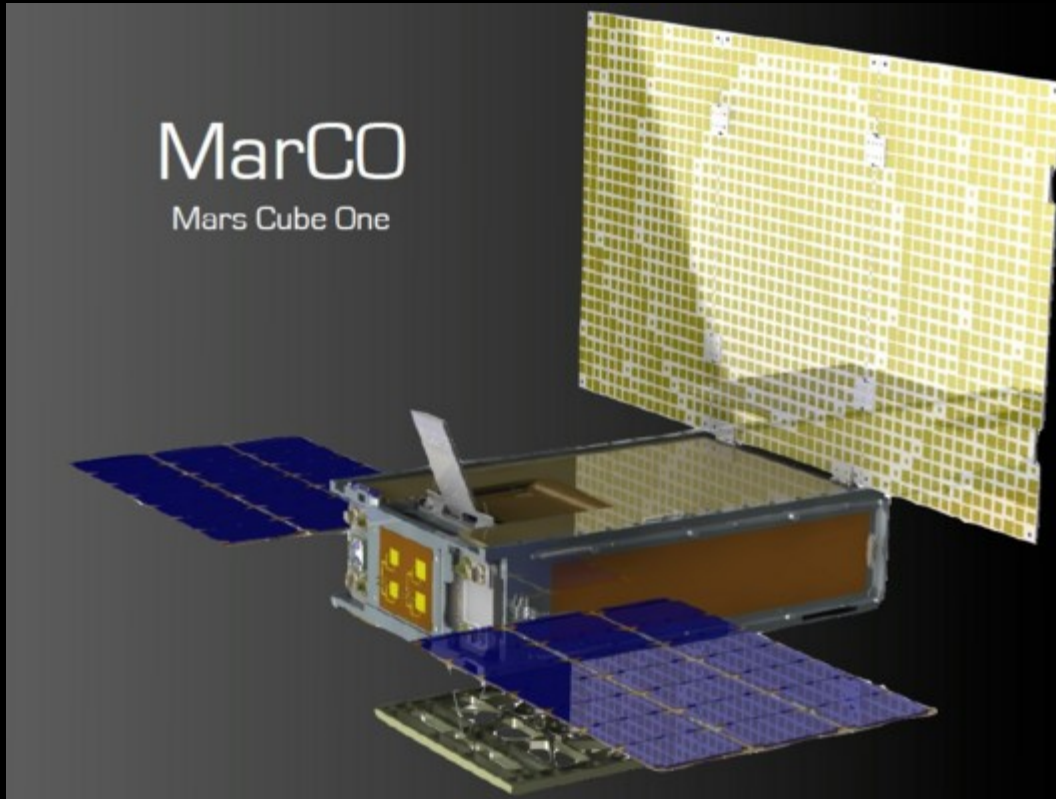


CubeSats are a class of spacecraft based on a standardized small size and modular use of off-the-shelf technologies. Many have been made by university students, and dozens have been launched into Earth orbit using extra payload mass available on launches of larger spacecraft.

[More info](#)

[Return](#)

MarCO (CubeSat)



The basic CubeSat unit is a box roughly 4 inches (10 cm) square. Larger CubeSats are multiples of that unit.

MarCO's design is a six-unit CubeSat – about the size of a briefcase -- with a stowed size of about 14.4 inches (36.6 cm) by 9.5 inches (24.3 cm) by 4.6 inches (11.8 cm).



MarCO (CubeSat)

Both MarCO spacecraft hitched a ride on the same rocket launching InSight, NASA's next robotic lander headed for Mars. The MarCOs are intended to follow InSight on its cruise through space; if they survive the journey, each is equipped with a folding high-gain antenna to relay data about InSight as it enters the Martian atmosphere and lands.

The MarCOs won't produce any science of their own, and aren't required for InSight to send its data back home (the lander will rely on NASA's Mars orbiters for that, in addition to communicating directly with antennas on Earth). But the twins will be a crucial first test of CubeSat technology beyond Earth orbit, demonstrating how they could be used to further explore the solar system.