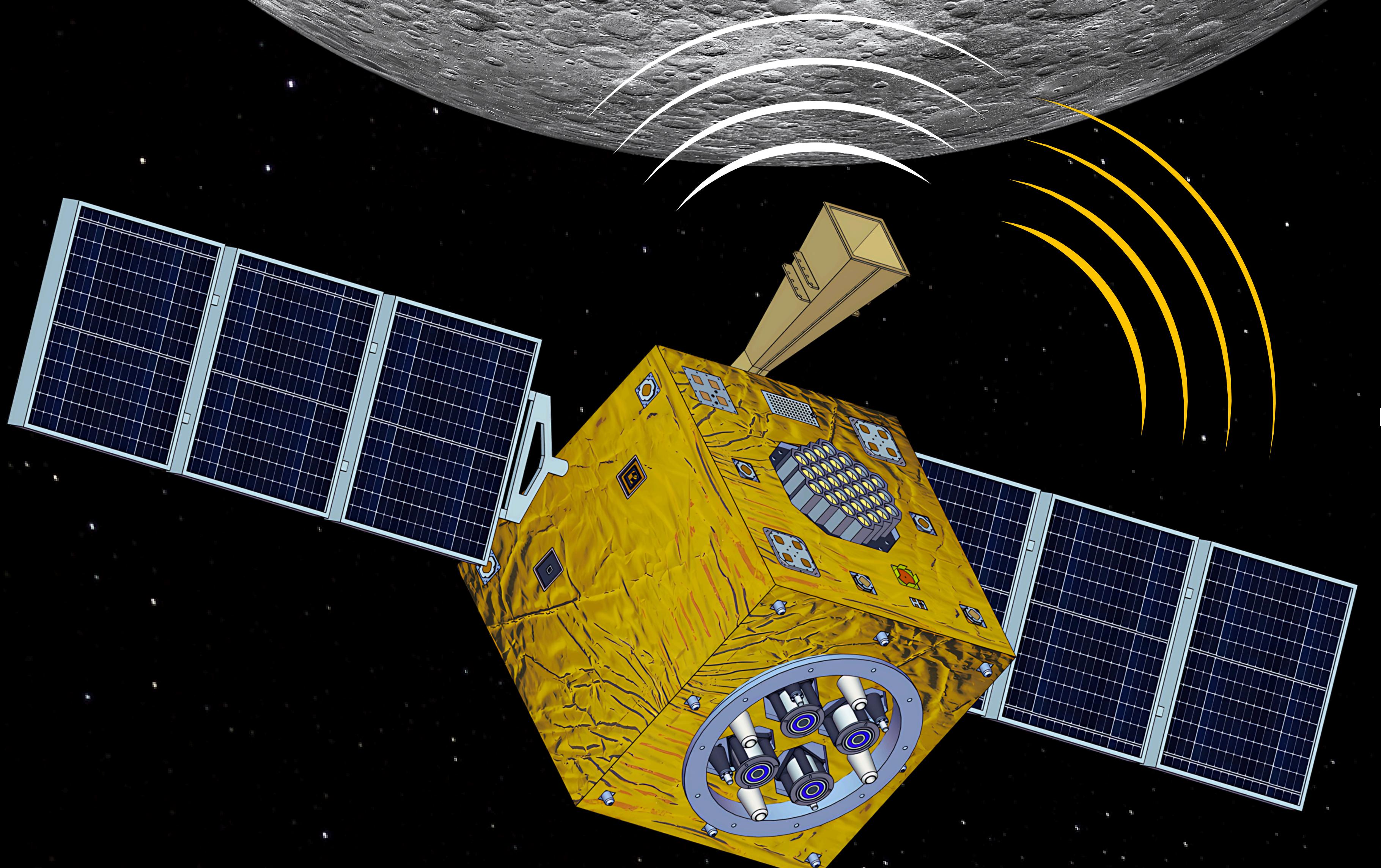




HERMES

HALO EARTH MOON RELAY SATELLITES



The main features are:

- 📍 Precise tracking positioning system
 - crucial during landing phases and exploration scouting;
- 📡 Data Uplink from Moon - from 800 Mbps up to 5 Gbps;
- 📡 Data Downlink to Moon - from 200 Mbps up to 1 Gbps;
- ⌚ Possible extension with more satellites enlarging coverage and communication on the far-side.

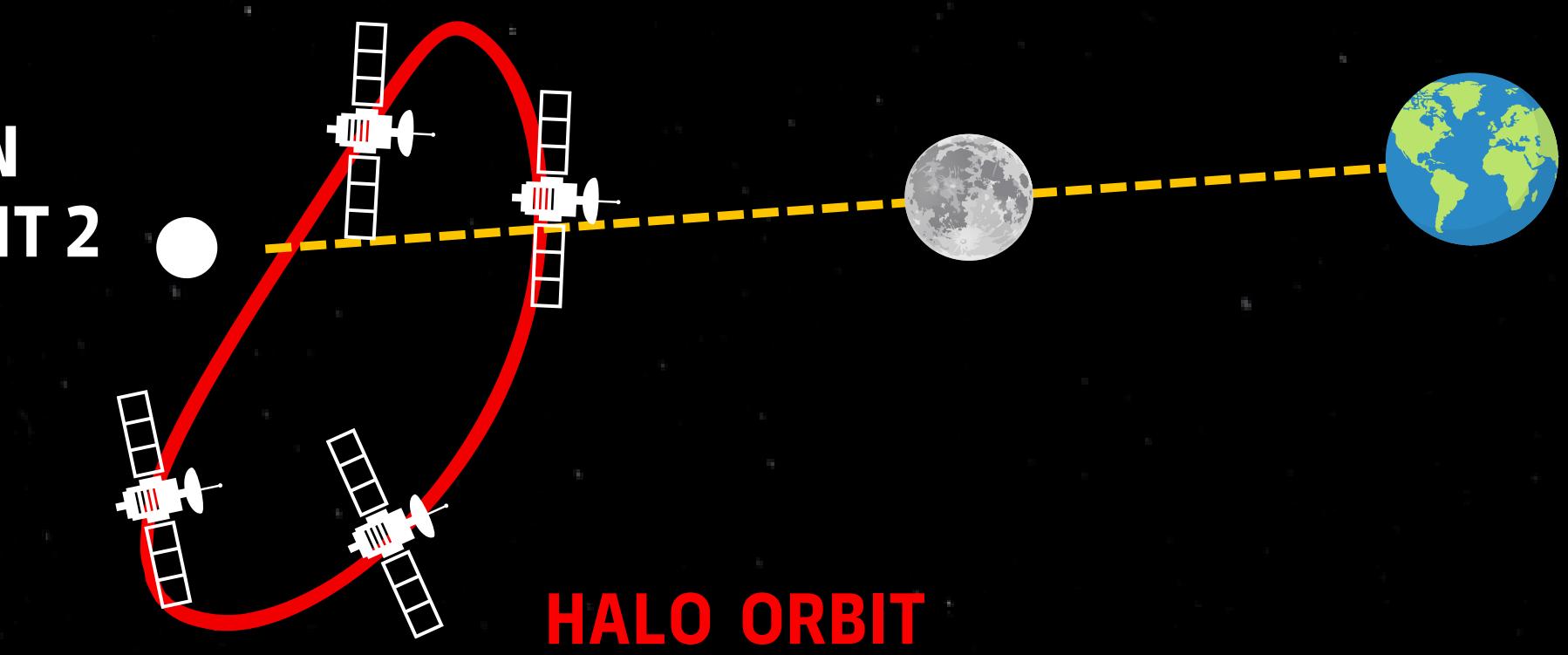
The 4 satellites guarantee almost full coverage of the lunar far side with more attention to the South Pole.

In this way we can support all kinds of human activities:

- 🛰 Exploration rovers;
- lander;
- 🔭 Astronomy facilities;
- 🏗 Human infrastructures.



EARTH-MOON
LAGRANGE POINT 2



HALO ORBIT

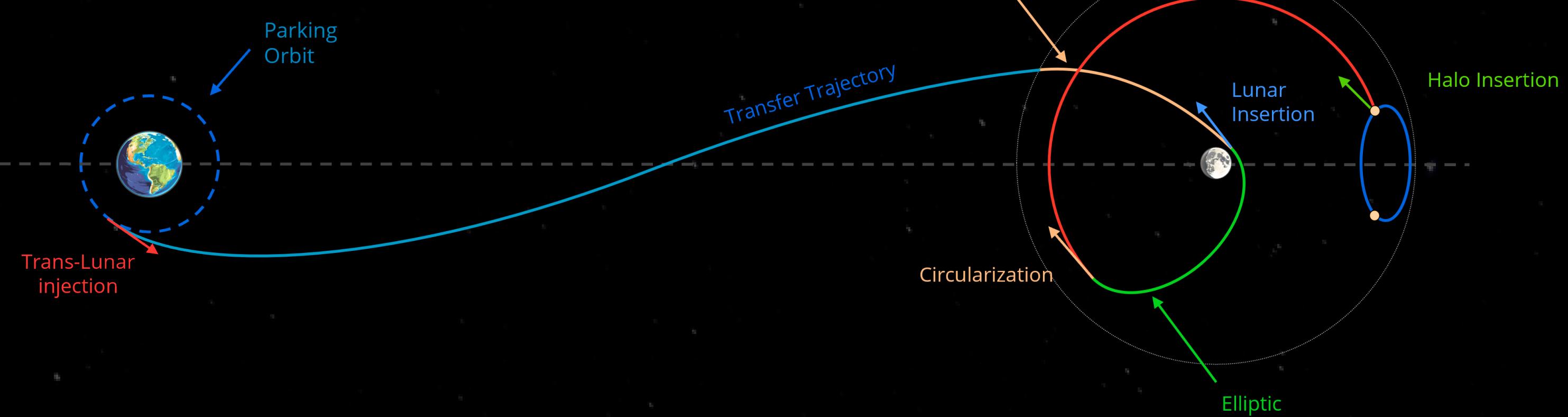
Z-Amplitude: 24'986.12 Km
Period: 14.987 days
Max Distance to Earth: 463'830 Km
Max Distance to Moon: 75'870 Km

SUPPORT FOR HUMAN ACTIVITIES ON THE MOON FROM EML2

"HERMES mission aim to support all kinds of lunar human activities as a relay system positioned in EML2."

Our spacecrafts will be able to perform constant high data rate transfer with the ground stations, ensuring a safe and reliable link.

Moreover, the mission will offer an innovative tracking system capable of tracing the precise position of lunar users."



All the antennas are located on the same face of the spacecrafts. The coordinated development of Telecommunication and Attitude Control subsystems ensures that the face with the antennas will always be oriented towards both Moon and Earth simultaneously.

The power on board is generated by solar panels having a total surface of 2 square meters.

The satellites are designed for performing the stationkeeping manouevres with electric propulsion.

4 SmallSat

250 kg

600W BOL

up to 5Gbps

10 years

1m x 1m x 1m

1 Billion €

