

A machine for discoveries

Gaia is one of the most accurate and technologically advanced instruments ever built.

Did you know that Gaia only consumes slightly more energy than a dishwasher?

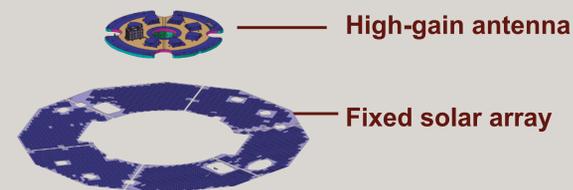
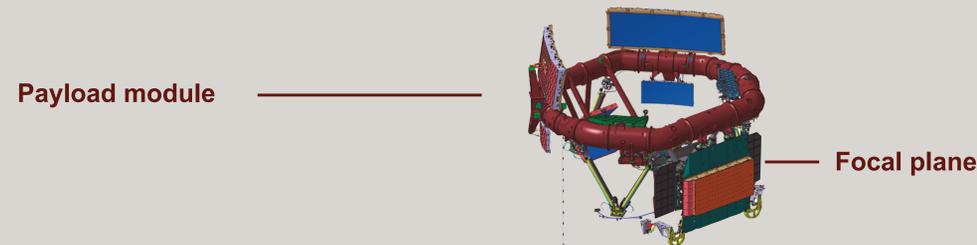
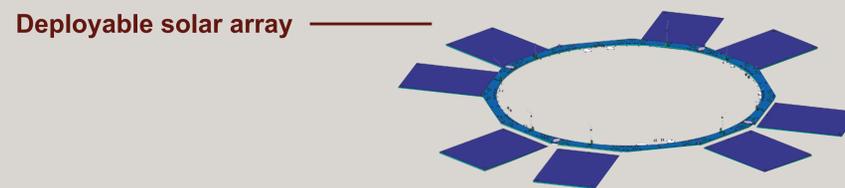
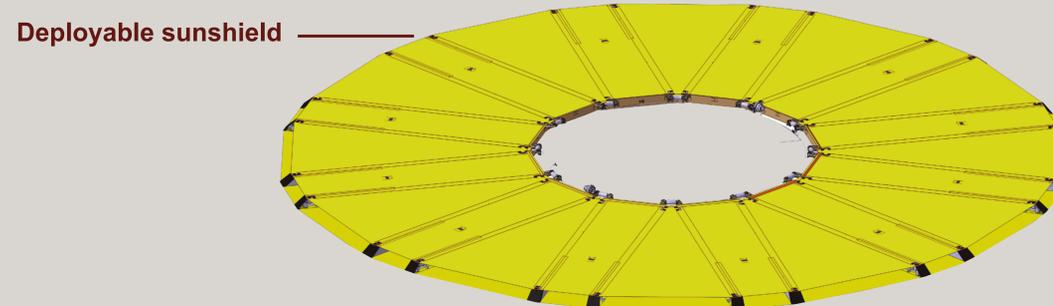
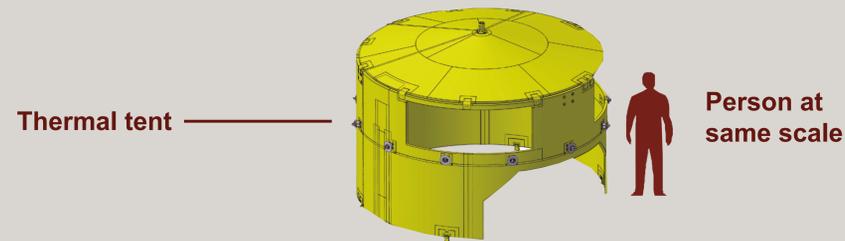
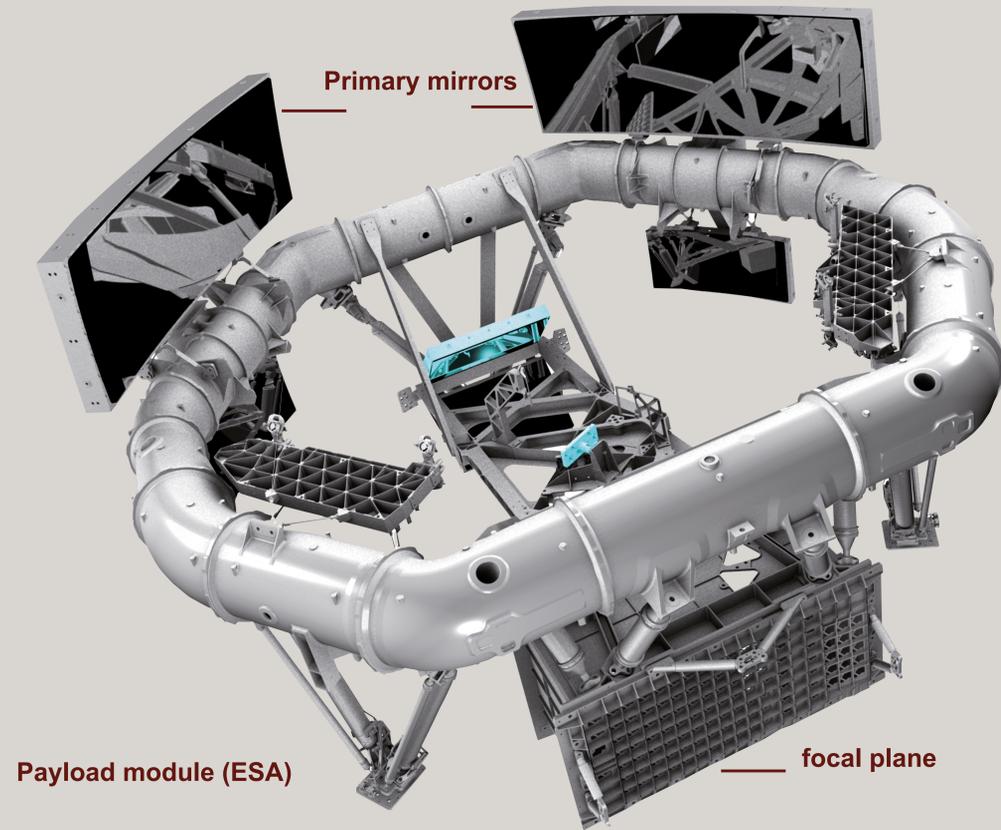


Diagram of Gaia (ASTRIUM)

The Telescope

Gaia has two telescopes that send light to a single focal plane, where the images of the observed objects are registered.

The mirror shape has been polished with an accuracy of a twenty-thousandth of a millimetre.



What is Gaia made of?

The structure and mirrors of Gaia are made of silicon carbide, a very resistant and light material which is almost as hard as diamond.

Gaia's power source

The electrical power of Gaia is generated by solar panels. They are mounted on the backside of the satellite and on the deployable sunshield assembly, which protects the satellite from sunlight and keeps it at a stable temperature of about -110°C.



Gaia in numbers

Mass	- 2030 kg
Dimensions	
Sunshield diameter	- 11 m
Thermal tent diameter	- 3 m
Thermal tent height	- 2 m
Number of telescopes	- 2
Focal distance of the telescopes	- 35 m
Size of the primary mirrors	- 1.45 m x 0.5 m
Total number of mirrors	- 10
Energy consumption	- 1720 W
Useful life	- 5 years
Cost of hardware	- 700 million €