

NASA mission to unlock gas-giant secrets

NASA is sending a solar-powered probe on a five-year journey to make the first in-depth study of Jupiter. *Juno*, the second mission in the space agency's *New Frontiers* programme, aims to improve our understanding of the giant planet's origins, evolution and structure

Solar array: 9m-long panels designed to operate in low light conditions at Jupiter

Payload: Camera and seven instruments to study planet's dense cloud cover, magnetic field and possible existence of solid core

MISSION TIMELINE

Launch
Aug 2011

Earth fly-by
Oct 2013

Deep space manoeuvres
Sep 2012

Jupiter arrival
Jul 2016.
Probe enters polar orbit, studies planet for one year

Mission ends: Oct 2017. Probe de-orbits and crashes into Jupiter

JUPITER

Earth to scale

■ **Diameter:** 142,000km (11 times size of Earth)

■ **Volume:** 1,320 Earths could fit inside Jupiter

■ **Distance from sun**
780 million km. Takes 12 Earth years to orbit sun

■ **Length of day:** 10 hours

■ **Average temperature**
-145°C (at top of clouds)

■ **Composition:** Hydrogen 90%, Helium 10%

■ **Number of moons:** 64