

# Mission to find life under Jupiter moon's ice

NASA's *Europa Clipper* spacecraft will explore Jupiter's moon *Europa* and determine whether the ocean suspected of being beneath its icy crust is habitable

After reaching Jupiter by 2030, probe will make 49 flybys of Europa, as close as 25km, to map virtually entire moon

## STRUCTURE OF EUROPA

### Ice crust

15-25km thick

### Ocean

60-150km deep

### Interior

Silicate rock

### Core

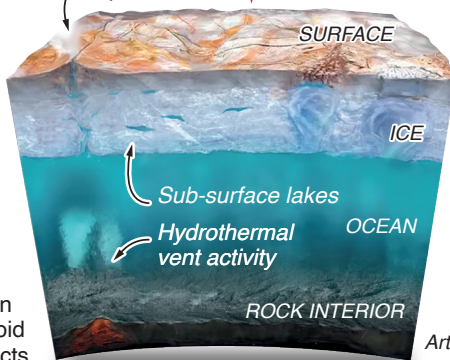
Iron

**Diameter:** 3,138km  
– roughly same size as Earth's moon

## ● CHEMISTRY

Building blocks for life – such as **carbon**, **hydrogen**, **nitrogen**, and **oxygen** – likely exist on Europa, stemming from moon's formation as well as asteroid and comet impacts

Water plumes



## Payload:

Includes **cameras** and **spectrometers** to understand moon's surface and atmosphere, **ice-penetrating radar** to map ice shell in 3D and **magnetometer** to characterise ocean



Human to scale

## INGREDIENTS FOR LIFE

● **WATER:** Scientists believe Europa's salty ocean contains twice as much water than all of Earth's oceans combined

## ● ENERGY

Chemical energy sources needed for life, such as surface radiation from Jupiter and interactions between water and rocky seafloor, may occur

Artwork  
not to scale