

# China's mission to Moon's dark side

China's Chang'e-4 will be the first spacecraft ever to land on the far side of the Moon. The mission will test plant growth and listen for radio emissions normally blocked by the Earth's atmosphere

**Lander:** Dutch and Chinese low-frequency radio spectrometers (LFS) on lander and relay satellite will measure radiation to reveal universe's "dark age" – first few hundred million years of our cosmos following Big Bang

Three 5-metre booms for LFS

**Relay satellite:** Because Moon's far side never faces Earth, mission control is using satellite to act as relay station for communications with lander and rover

**Neutron dosimeter:** German lunar neutron and radiation dose detector will measure radiation levels – crucial for long-term human occupation

Lander also carries landing camera and terrain camera

**Biosphere experiment:** Lander carries 3kg canister containing seeds and silkworm eggs to try to grow food

**Rover:** Will analyse surface mineral composition using visible and near-infrared spectrometer. Interaction of solar wind with lunar surface will be measured by Swedish-designed **Advanced Small Analyzer for Neutrals**

Panoramic camera

**Landing site:** Moon's south pole – where some craters hide water ice in permanent shadows – is ideal spot to build human outpost