

Euclid dark universe mission

Europe's Euclid space telescope will explore the evolution of the dark universe over the past 10 billion years.

Dark energy and dark matter make up 95% of the cosmos, but scientists remain unsure about what they are

EUCLID SPACE TELESCOPE

Sunshield:
Blocks light from Sun, Earth and Moon

Euclid: Will launch to orbit around Sun-Earth Lagrange point L2

1.2m Korsch telescope:
Operates in visible and near-infrared wavelengths

MOON
384,000km from Earth

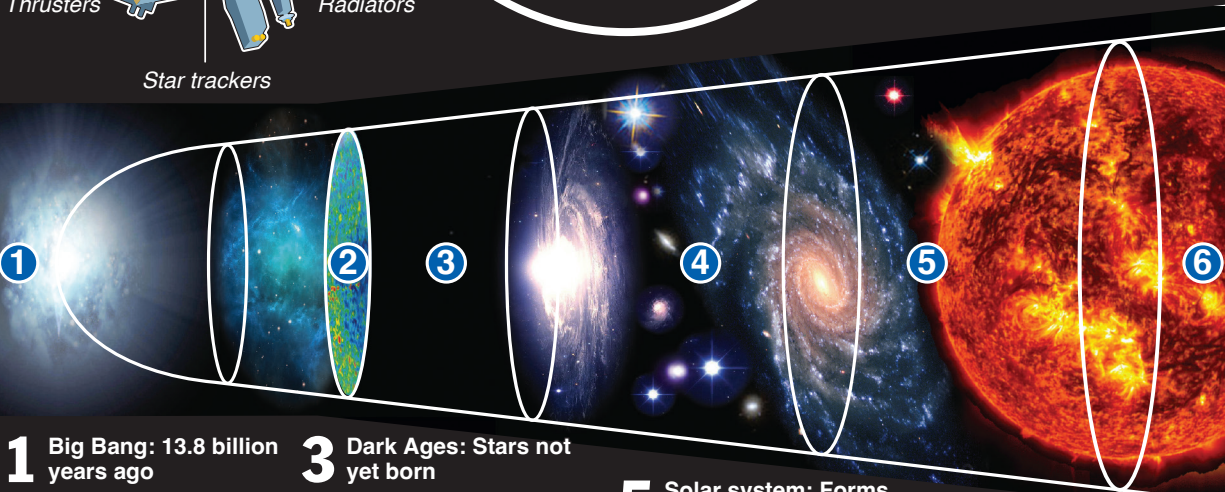
EARTH
150 million km from Sun

Lagrange point L2:
Equilibrium point of Sun-Earth system is located 1.5 million kilometres from Earth in opposite direction of Sun

L2 is locked in perfect unison with Earth's orbit around Sun

Euclid's orbit has diameter of about 1 million km around L2

Star trackers



- 1** Big Bang: 13.8 billion years ago
- 2** 380,000 years after Big Bang: Atoms of hydrogen form. Earliest evidence of dark matter

- 3** Dark Ages: Stars not yet born
- 4** 200 million years after Big Bang: Gas and dust condense into first stars which eventually form galaxies

- 5** Solar system: Forms about 4.5 billion years ago. Hydrogen atoms combine to form helium, releasing energy – Sun is born

- 6** Present day: Euclid will look at galaxies 10 billion years ago – more than double age of solar system

