

Cosmology

Physics

The expanding universe, and the evidence for it.

The observational pillars of the standard model.

Evidence

Hubble's law — recession  distance

Cosmic microwave background at 2.7 K

Light element abundances match prediction

Large-scale structure matches simulation

Open questions

Dark matter — about 27% of the total

Dark energy — about 68%

Why expansion is accelerating

What happened before the earliest moments

Ordinary matter is roughly 5% of the universe. The rest is inferred from its gravitational effects only.