

SKA

The Square Kilometre Array

What is the SKA?

The SKA will be a revolutionary radio telescope made of thousands of receiving elements linked together across an area the size of a continent. The total collecting area of all the receptors combined will be approximately one square kilometre, making the SKA the largest and most sensitive radio telescope ever built. The SKA will be built in South Africa and Australia. SKA construction commenced in 2023, with initial science operations ramping up during the construction phase.

Who designs the SKA?

SKA members in Europe, Asia, Africa, Australia, Canada and New Zealand, together with universities and industry, are designing the SKA that will be 50 times more sensitive, and will survey the sky 10,000 times faster than any other telescope. Data from the SKA as a truly global telescope will be processed in centres around the world.

What will the SKA do and how will it do it?

The SKA will address five fundamental and so far unanswered questions about the universe we live in:

- How do galaxies evolve and what is dark energy?
- Are we alone?
- How were the first black holes and stars formed?
- What generates the giant magnetic fields in space?
- Was Einstein right?

ASTRON & Aperture Arrays

ASTRON plays a leading role in the technological and scientific development of the SKA. Together with scientists and industry, ASTRON is preparing the Dutch knowledge contribution to the SKA. Thanks to LOFAR and ASTRON's leading efforts in the development of aperture arrays (Aas), ASTRON has a strong position in the international SKA programme.

