

News story: UK signs up to the world's biggest ever radio telescope

- UK signs an agreement in Rome as one of the first organisations involved in the science behind the world's largest radio telescope today
- the international headquarters for the telescope, which is 50 times more sensitive than the Hubble Space Telescope, will be in Jodrell Bank, Manchester
- the signing underlines the government's commitment to keep the UK a world-leader in science and research as part of its modern Industrial Strategy

British scientists will get the chance to improve our understanding of the evolution of the universe over billions of years and map hundreds of millions of galaxies thanks to this new powerful telescope project.

Unlike the optical telescopes that just point into the sky and can be affected by cloud cover, the special radio telescope detects radio waves emitted by a wide range of celestial objects some millions of light years away.

With its headquarters at Jodrell Bank near Manchester, the Square Kilometre Array (SKA) will have its telescopes in South Africa and Australia and will be the world's largest and most sensitive radio telescope in history.

The UK signed up to the SKA project in a special ceremony in Rome today (12 March, 11am) and directly benefits from 3 different aspects of the project:

- hosting the International HQ
- involvement in the design and construction
- performing world leading science

Business Secretary Greg Clark said:

Science has no borders and the UK's hosting of the global HQ of this international project demonstrates our leading position and influence in leading scientific collaboration and exploration.

For generations Jodrell Bank has inspired young people and children to take an interest in science and this will now inspire the next generation of scientists.

This government, through our modern Industrial Strategy is giving the biggest boost to research and development funding in UK history to ensure we inspire our young people.

- The telescope's dish-shaped antennae will produce 10 times the data of

the current global internet traffic

- it will be so sensitive, it could detect an airport radar on a planet tens of light years away
- the data collected in a single day would take nearly two million years to play as music on a digital device
- it will have 4,000 antennas and be 50 times more sensitive than the Hubble Space Telescope

The telescope will be able to study the period in the early universe around 380,000 years after the Big Bang, when the universe was mostly dark until the first galaxies began to shine.

Scientists and engineers at UK universities and institutions are involved right across the design of the SKA.

UK industry has also been involved with the design of the SKA with around 55 UK companies awarded contracts in systems engineering, project management and software development.

A new £16.5 million building has been constructed to house the SKA HQ with funding from BEIS (£9.8 million) via the Science and Technology and Facilities Council (STFC), The University of Manchester (£5.7 million) and Cheshire East Council (£1 million).

The SKA HQ will eventually be home to some 135 staff from more than 13 countries, tasked with managing the construction and remotely monitoring the operation of the telescope.

The UK has also committed to investing £100 million in construction of the SKA – 16% of the total construction cost.

Organisations from 10 countries are members of the SKA Organisation (SKAO):

- Australia
- Canada
- China
- India
- Italy
- New Zealand
- South Africa
- Sweden
- The Netherlands
- United Kingdom