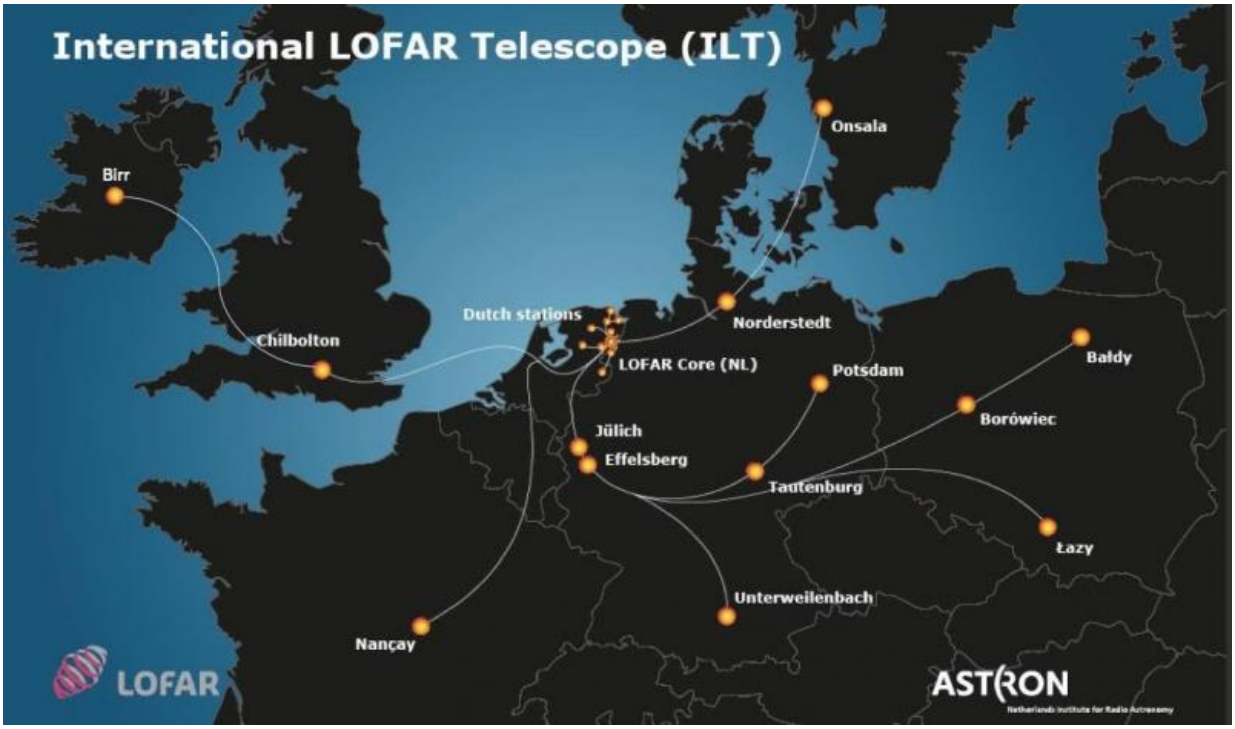
LOFAR telescope array expands into Ireland

January 13 2016



The world's largest connected radio telescope is about to become even bigger! LOFAR, the Low Frequency Array, will expand into Ireland in 2016. This is not only great news for Irish astrophysics, but also for the International LOFAR Telescope (ILT).

The plans for a LOFAR station in Ireland have been around for a while, but now it's official: a LOFAR station will be built this year in Ireland. I-

LOFAR, the Irish LOFAR consortium, has been awarded €1.4 million by Science Foundation Ireland (SFI). Together with €0.5 million in philanthropic grants plus contributions of I-LOFAR members, it is possible to build and exploit the LOFAR station, which will be constructed on the grounds of Birr Castle, located centrally in Ireland.

Today, during a meeting at Birr Castle, Irish Ministers Bruton (Jobs, Enterprise and Innovation) and English (Education and Skills) announced the award for I-LOFAR, as one element of a €30 million investment by SFI in research infrastructures.

LOFAR is a world-leading facility for astronomical studies, providing for highly sensitive and detailed scrutiny of the nearby and far-away Universe. LOFAR is designed and operated on behalf of the ILT by ASTRON, the Netherlands institute for Radio Astronomy.

Dr. Rene Vermeulen, Director of the ILT, is delighted with the news: "The added Irish antenna station will be an excellent enhancement, extending the ILT to a pan-European fibre-connected network spanning nearly 2000 km. Such long distances allow exquisitely finely detailed sky imaging capability. And, at least as importantly, the Irish astronomical community will now add their expertise and effort to the "ILT family", in the pursuit of a great many cutting-edge science questions that LOFAR can answer. Topics range from the properties of the Earth's upper atmosphere, flaring of the Sun, out to the far reaches of the early Universe when the first stars and galaxies formed."

According to Prof. Peter Gallagher, Head of I-LOFAR, "The Irish LOFAR station at Birr builds on Ireland's great scientific heritage of the Leviathan Telescope of Birr and will connect us to the largest low frequency radio telescope in the world. I-LOFAR will also inspire students to study science, engineering and computer science, and attract additional visitors to Birr. It will also act as a magnet to attract

technology companies to the area."

The International LOFAR Telescope is the largest connected radio telescope in the world. There are currently six partner countries: of the 50 antenna stations, 38 are located in the Netherlands, 6 in Germany, 3 in Poland, and 1 each in France, Sweden, and the United Kingdom. Together, these have many thousands of receiving elements. The new Irish station will increase the distances between antenna stations, thus providing finer image details.

More information: LOFAR brochure available here: dl.dropbox.com/u/3521586/i-lof … r_brochure_final.pdf

LOFAR white paper is available online: dl.dropbox.com/u/3521586/i-lof … hite_paper_draft.pdf

Provided by LOFAR

Citation: LOFAR telescope array expands into Ireland (2016, January 13) retrieved 23 April 2024 from https://phys.org/news/2016-01-lofar-telescope-array-ireland.html