

Introduction to ASTRON

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General Director, ASTRON

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Basic facts and figures:

ASTRON founded in 1949

~ 200+ people work in Dwingeloo

Total annual budget (2008) of ~ 16 MEuro

Funding:

- NWO, NWO-EW***
- Regional funding (e.g. SNN -Samenwerking Nord NL)***
- European Commission (FP7)***

Basic mission:

**“MAKING DISCOVERIES IN
RADIO ASTRONOMY HAPPEN!”**

We achieve this via 4 main activities:

Operating and providing access to state-of-the art radio telescope facilities

Hosting the Joint Institute for VLBI in Europe (JIVE) and the NOVA-ASTRON Optical/IR Group

The development of innovative and novel technologies for radio astronomy

Conducting fundamental Astronomical research

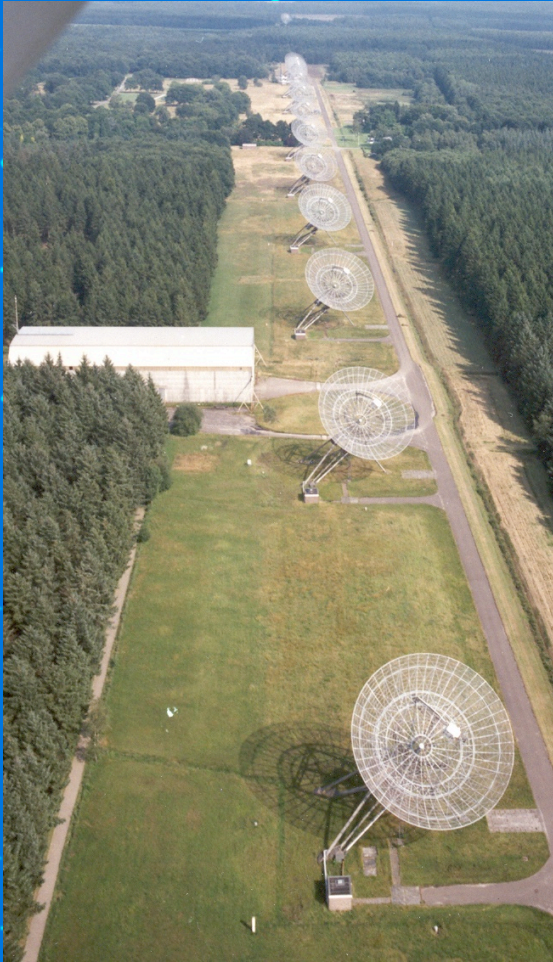
ASTRON & JIVE - International organisations:

19 Different nationalities:

- | | | | |
|---------------------------|-----------------------------|---------------------------|---------------------------|
| <i>- 3 Russian</i> | <i>-1 Australian</i> | <i>-6 German</i> | <i>-1 Swedish</i> |
| <i>- 2 Ukraine</i> | <i>-1 Irish</i> | <i>-2 China</i> | <i>-1 Greek</i> |
| <i>- 2 Indian</i> | <i>-1 Hungarian</i> | <i>-3 French</i> | <i>-1 Polish</i> |
| <i>- 5 UK</i> | <i>-6 USA</i> | <i>-1 Iranian</i> | <i>-2 Romanian</i> |
| <i>- 2 Italian</i> | <i>-1 Canadian</i> | <i>-1 Trinidad</i> | |

International telescope facilities:

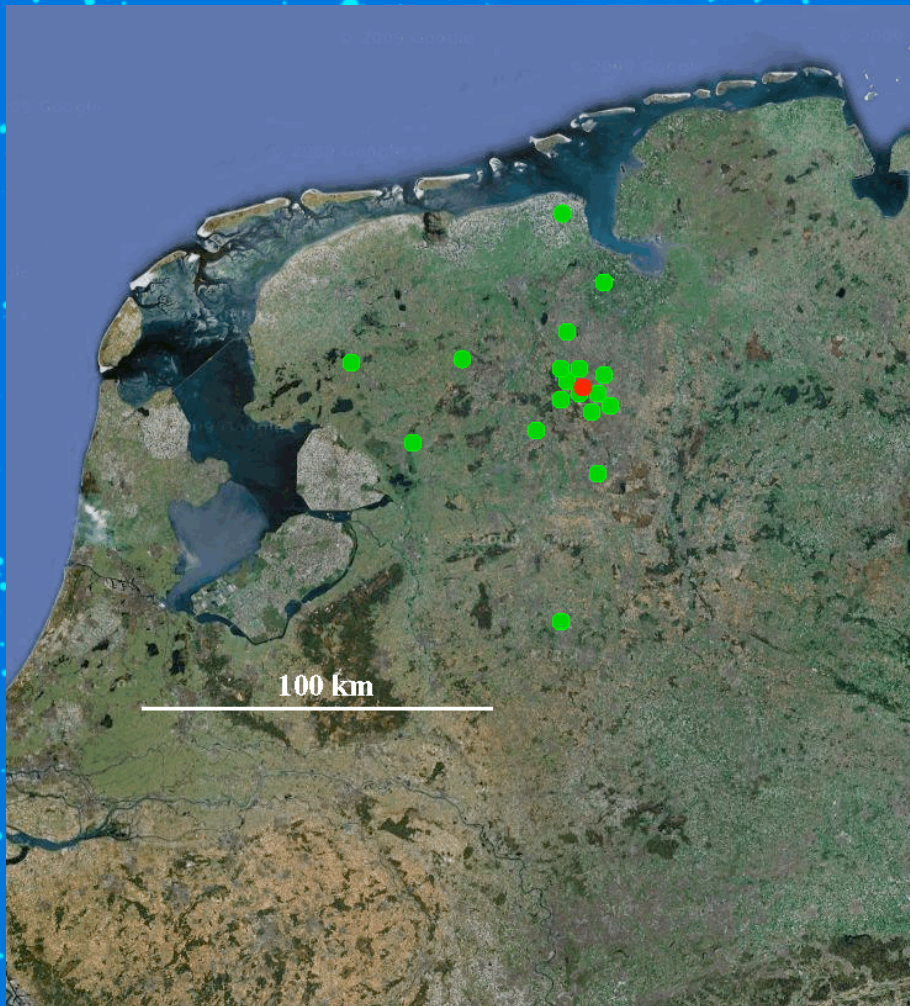
Westerbork Synthesis Radio Telescope



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International telescope facilities:

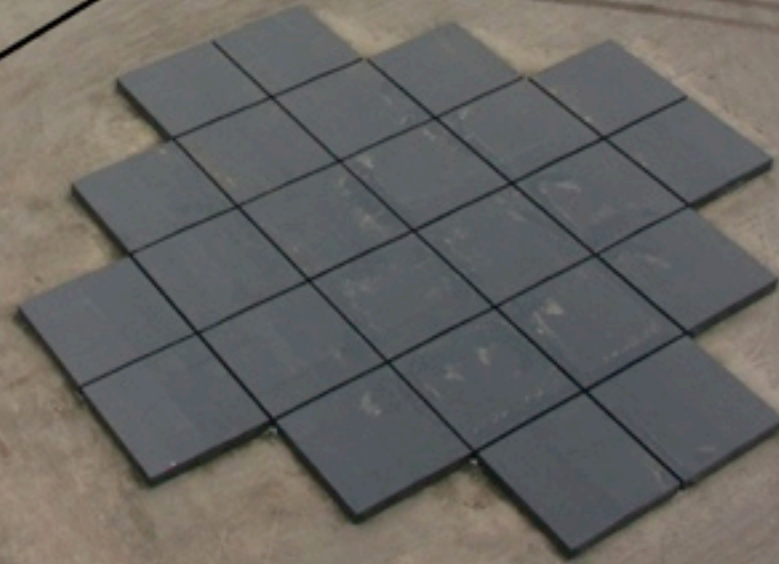
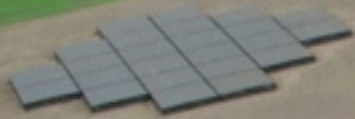
LOFAR - Low Frequency Array



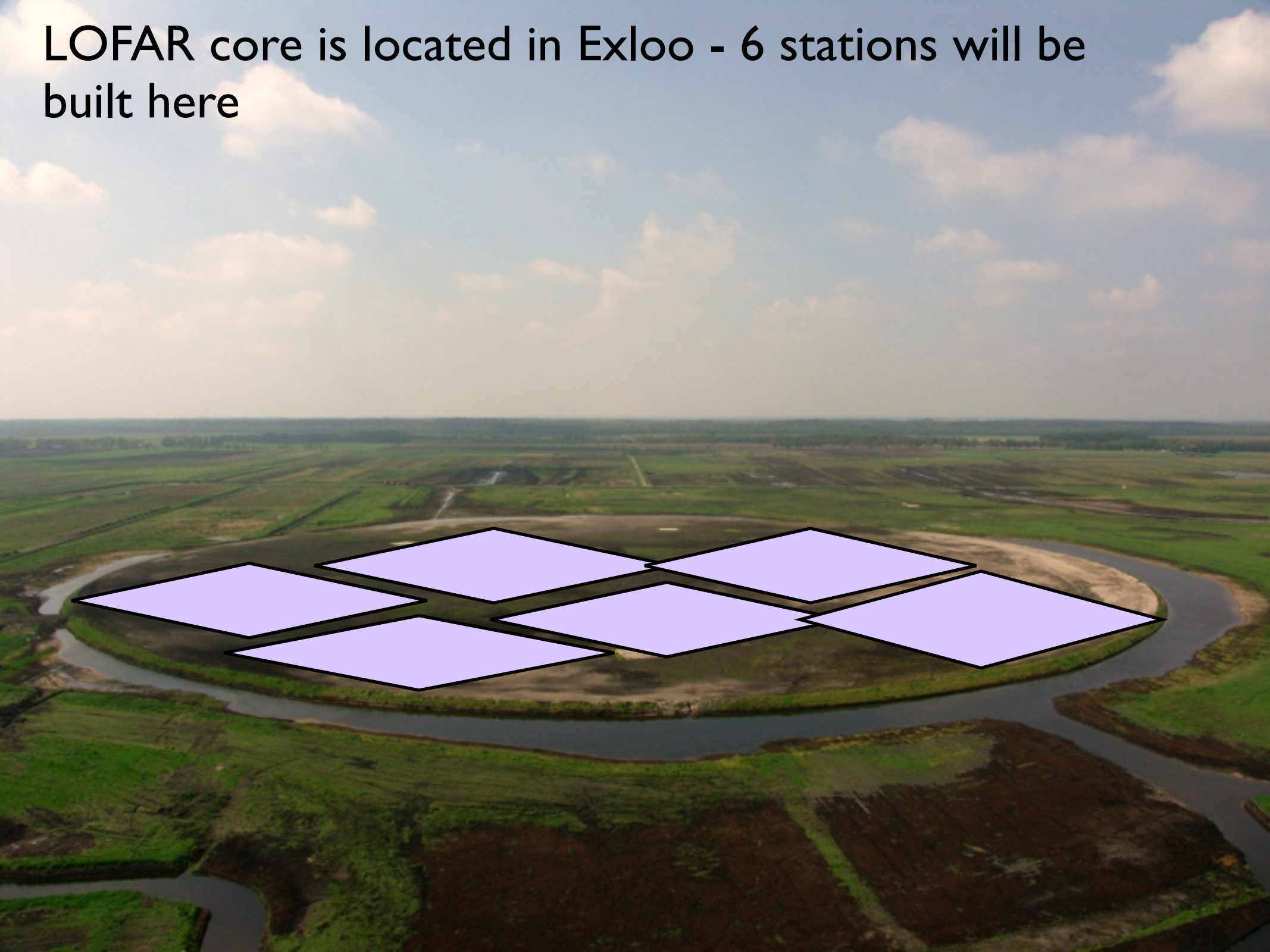
100+ M€ project -
40 telescopes located
around the Netherlands
- currently under
construction



First LOFAR station complete - April 2009



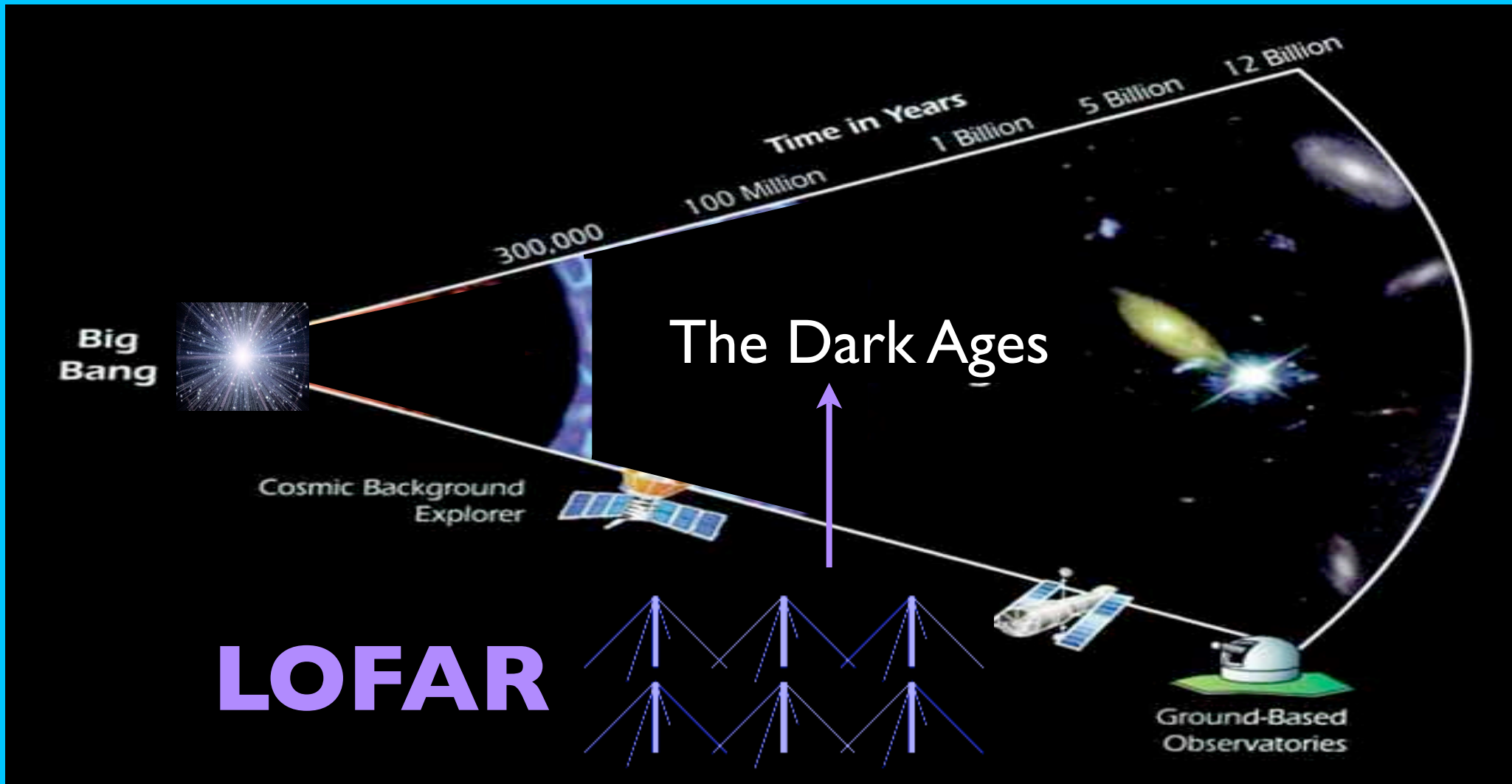
LOFAR core is located in Exloo - 6 stations will be built here



Together with the region, the water board and other local parties, ASTRON is returning this land to its natural formation:



Why LOFAR ?



International telescope facilities:

E-LOFAR - Extended Low Frequency Array

And across Europe!

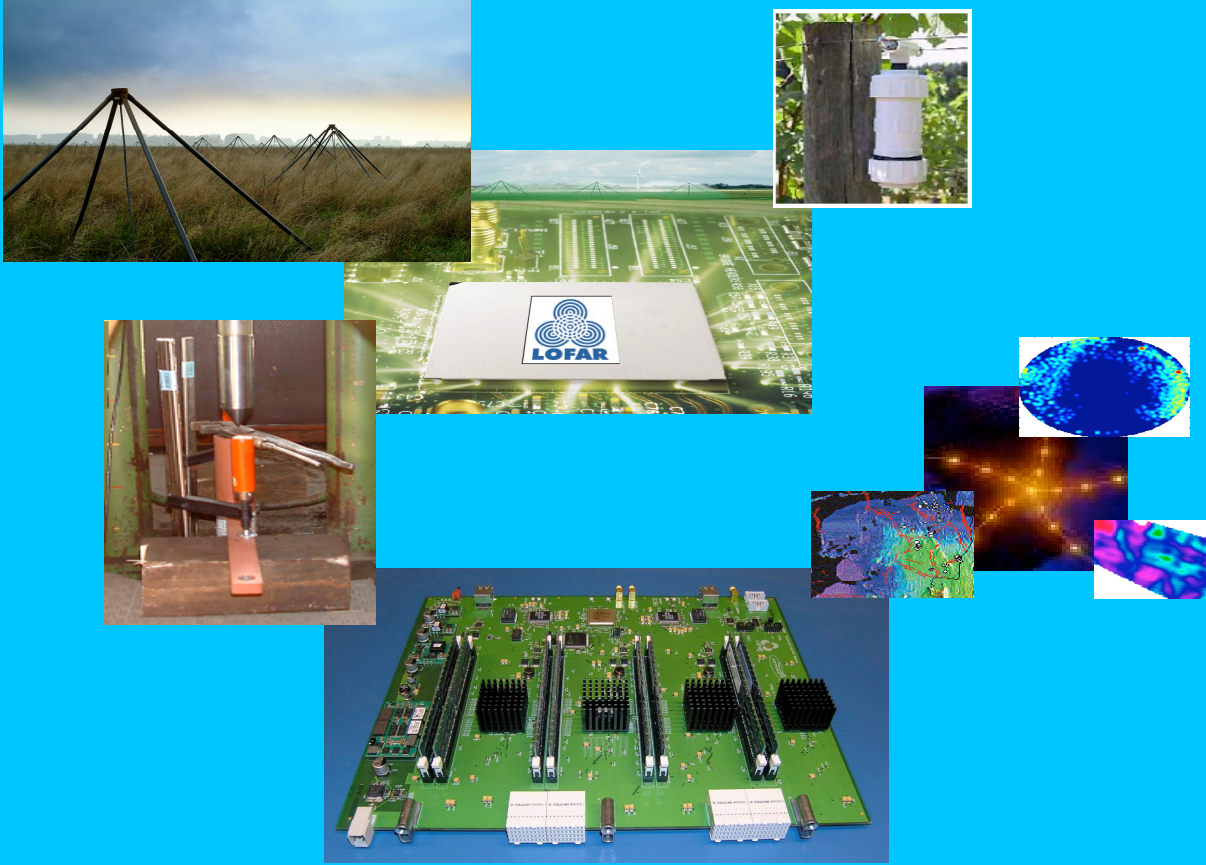


Tautenburg, Germany



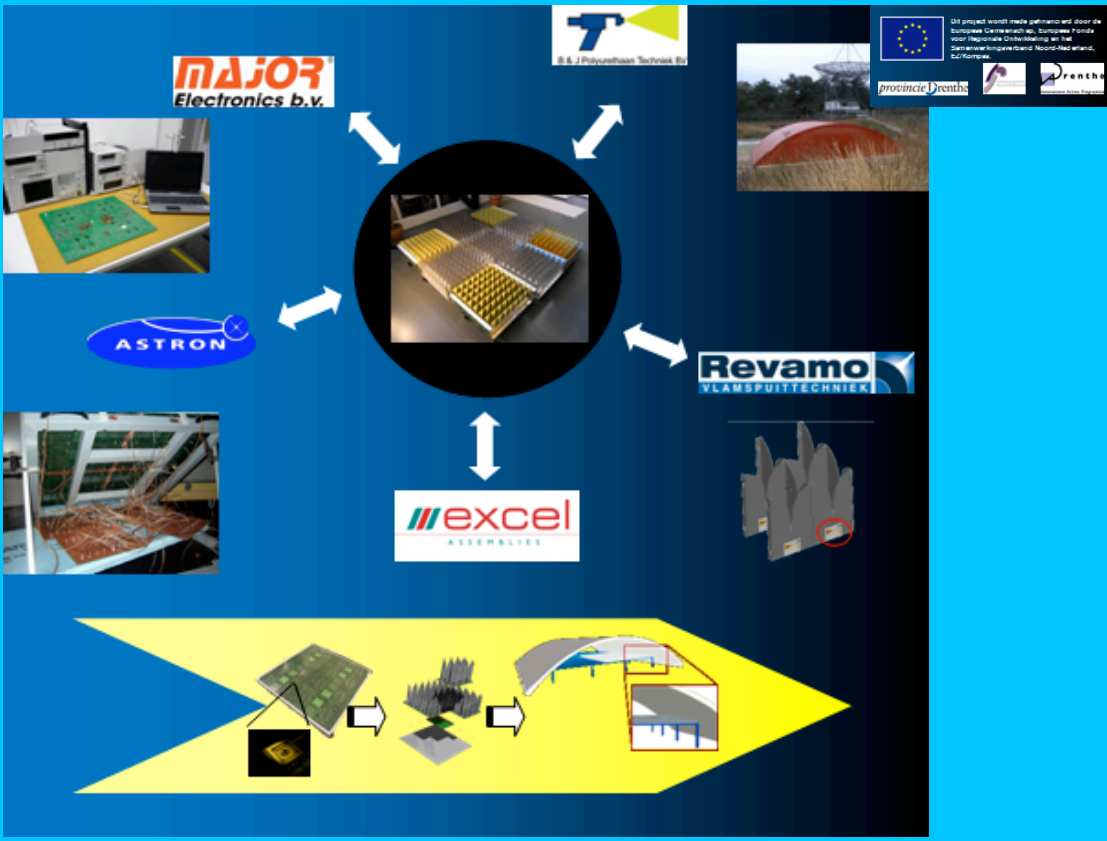
Technology spin-off

From the edge of the edge of the Universe to the market place...

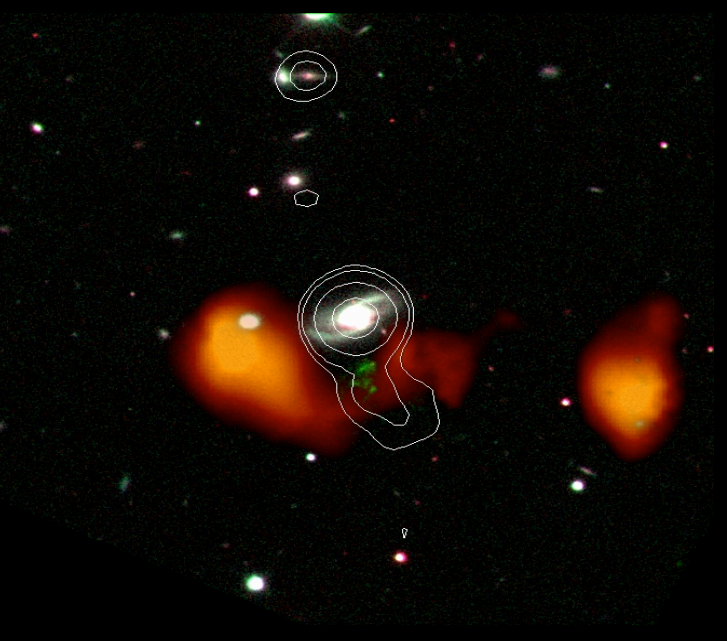
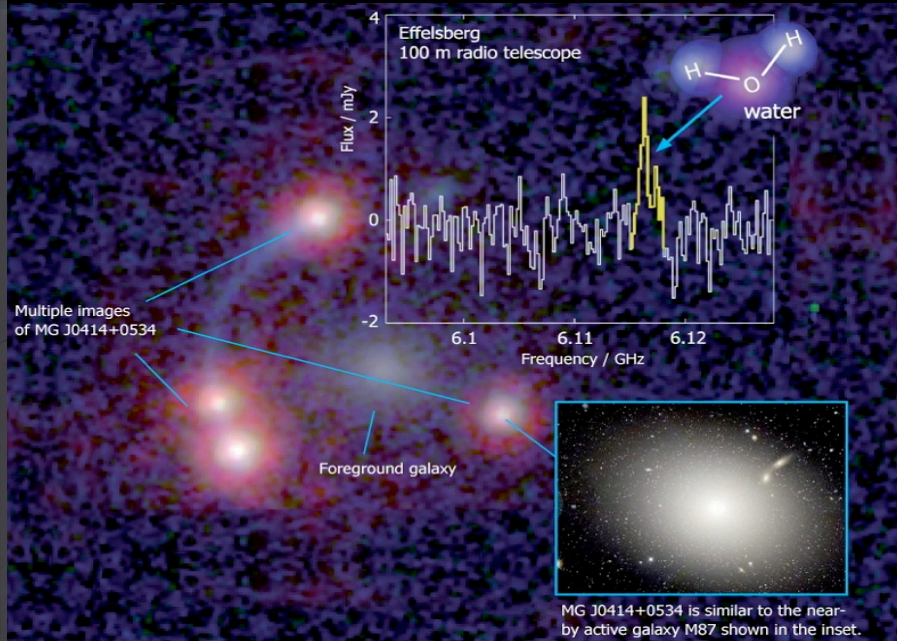
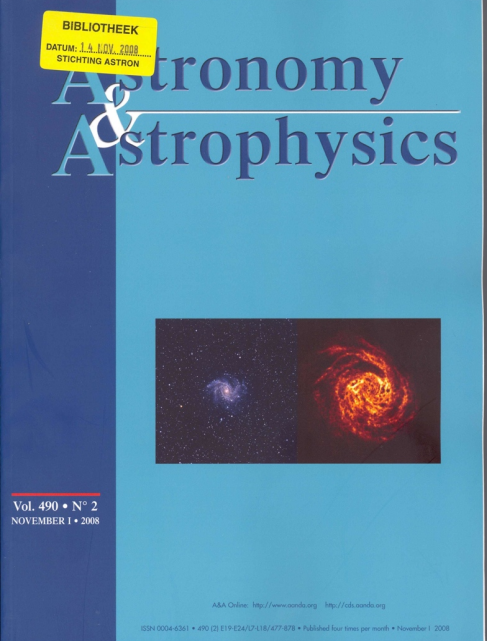
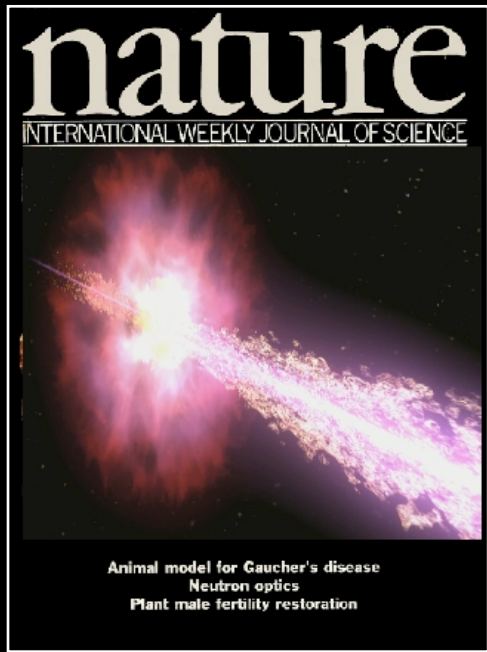


Technology spin-off (cont)

Collaboration with industrial partners at the local, regional, national and multi-national level...



We publish ~ 60 refereed papers per year in the top astronomy and astrophysics journal - incl. Nature & Science



- **SQUARO (South African Radio Astronomy) Code** a new initiative
Africa (SQUARO) telescope project in **South Africa**
I. S. M. ...
 - = Defining the scientific goals and scope
 - = Construction start 2019
 - = Setting the political agenda
 - = First phase completed 2017
 - = Telescope design & implementation

ASTRON



www.twitter.com/astron_lofar

www.astron.nl/dailyimage