



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



I-LOFAR

Radio Astronomy in Birr

 lofar.ie

   @LOFARireland

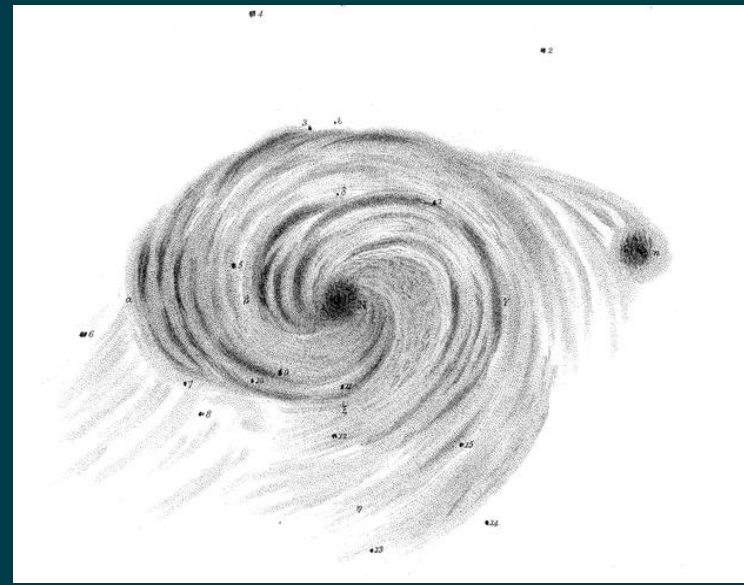
Science
Foundation
Ireland  **sfi**
For what's next

Ireland  **esero**

Astronomy at Birr Castle



The Leviathan Telescope at
Birr Castle Demesne



Spiral nature of nebula M51
observed in 1845



Whirlpool Galaxy (M51)
photographed by Hubble 2005

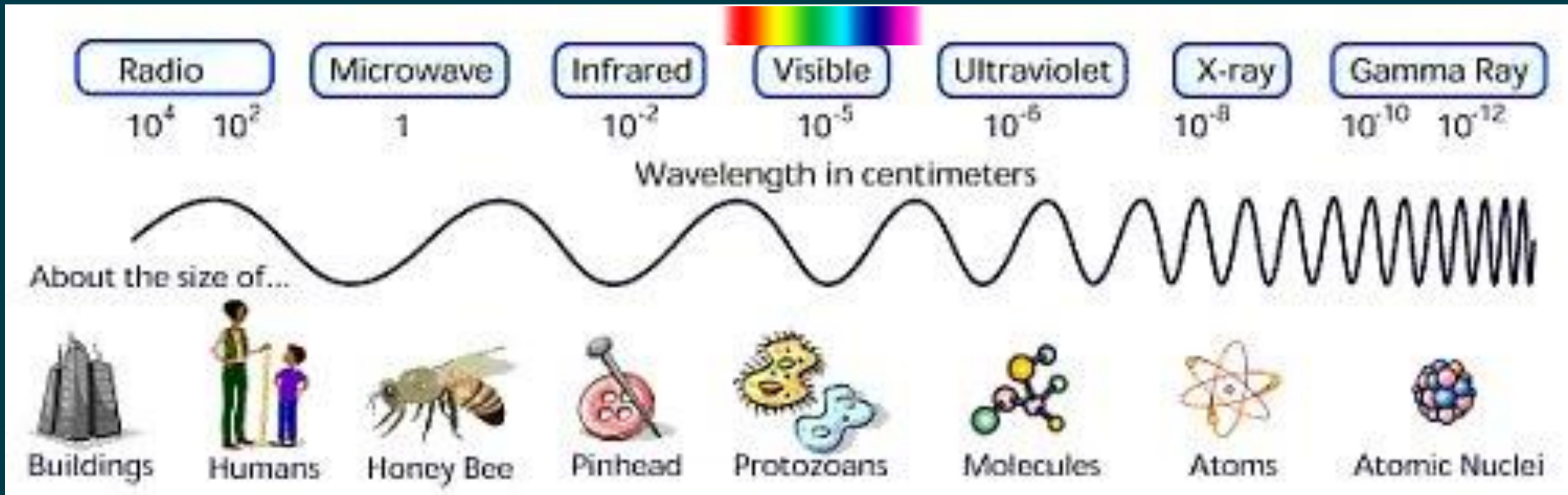


Leviathan Telescope



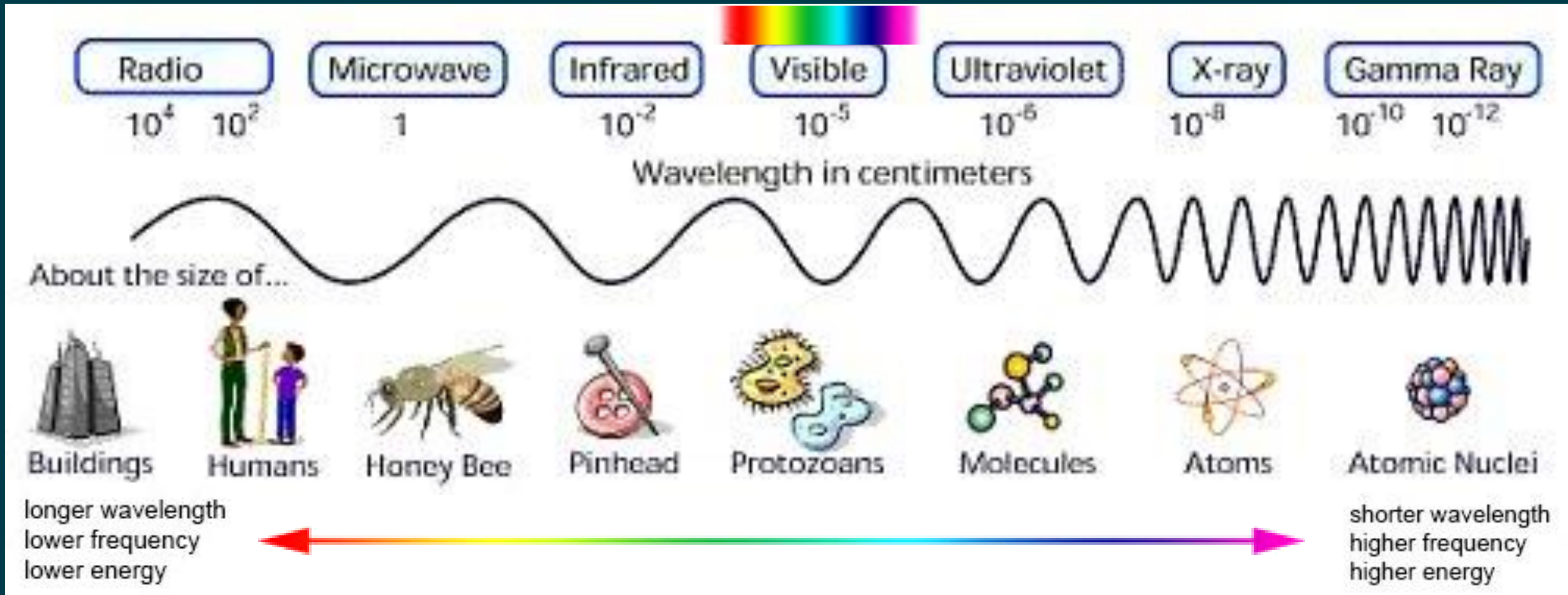
What is Radio Astronomy?

Collecting radio waves, a form of Electromagnetic radiation, from space, using a radio telescope.

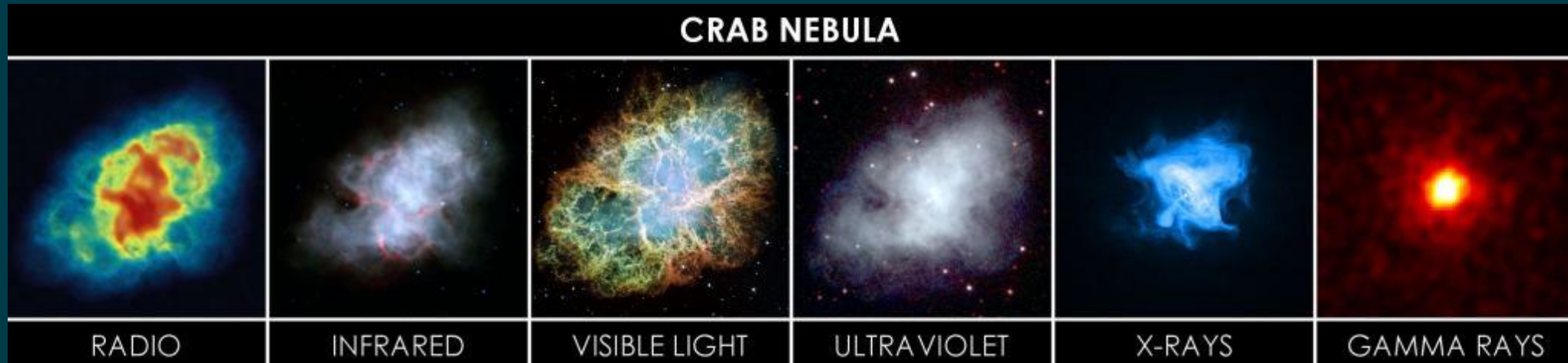
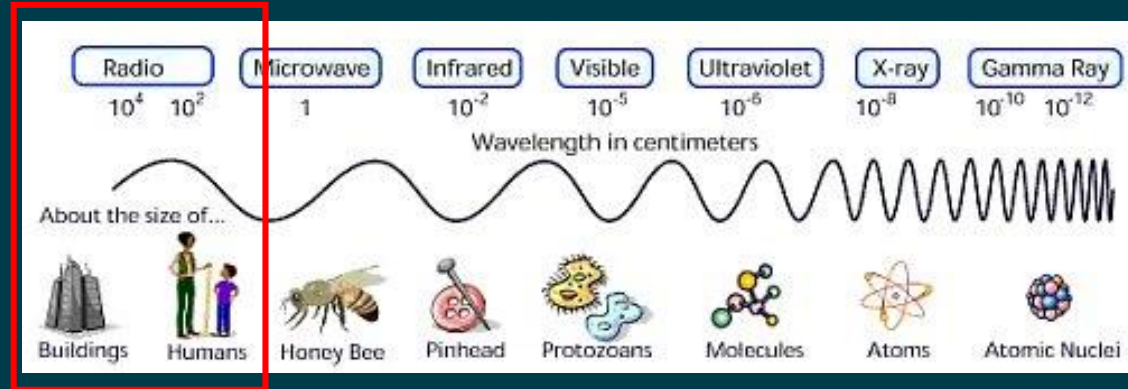


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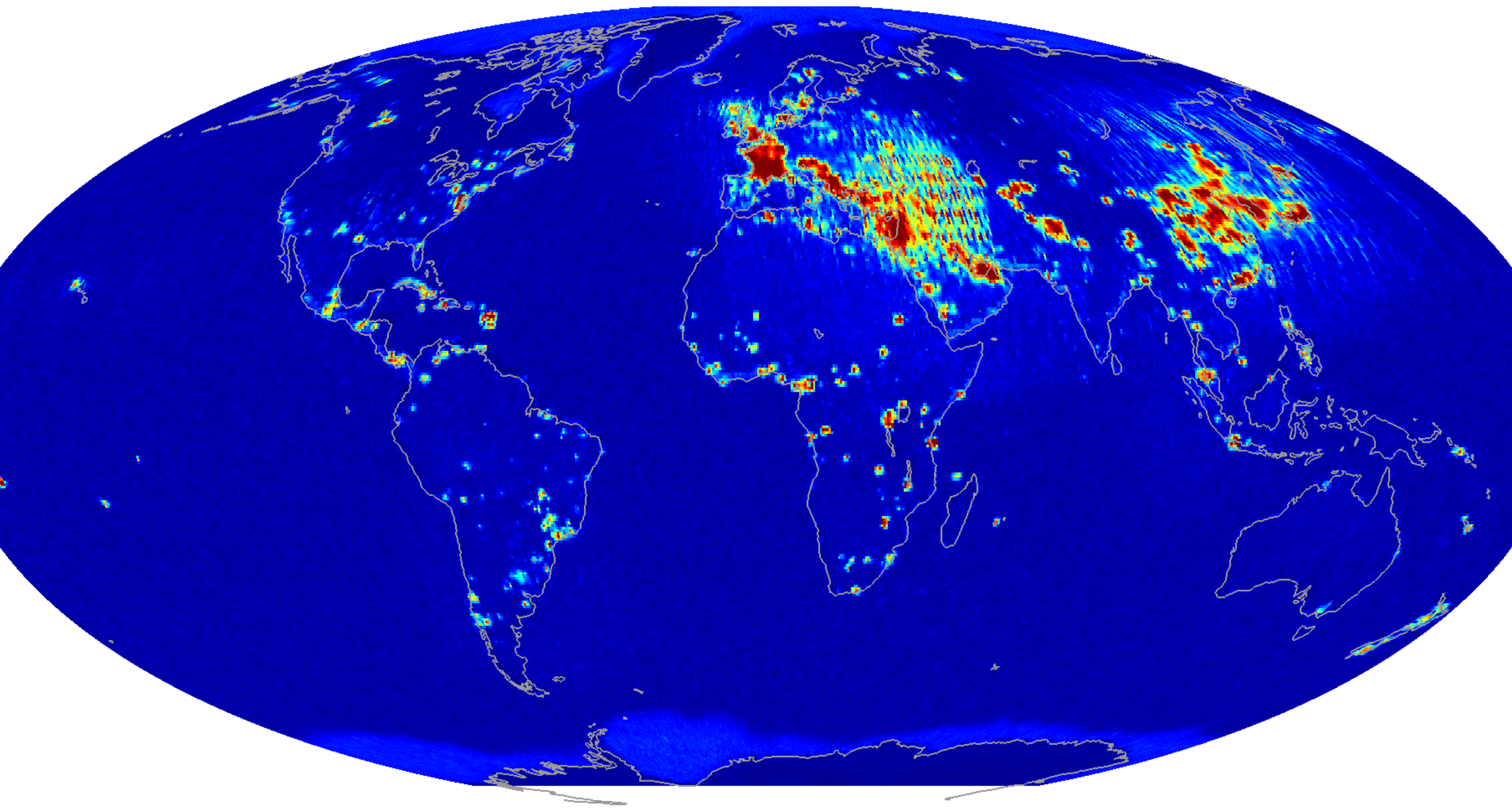


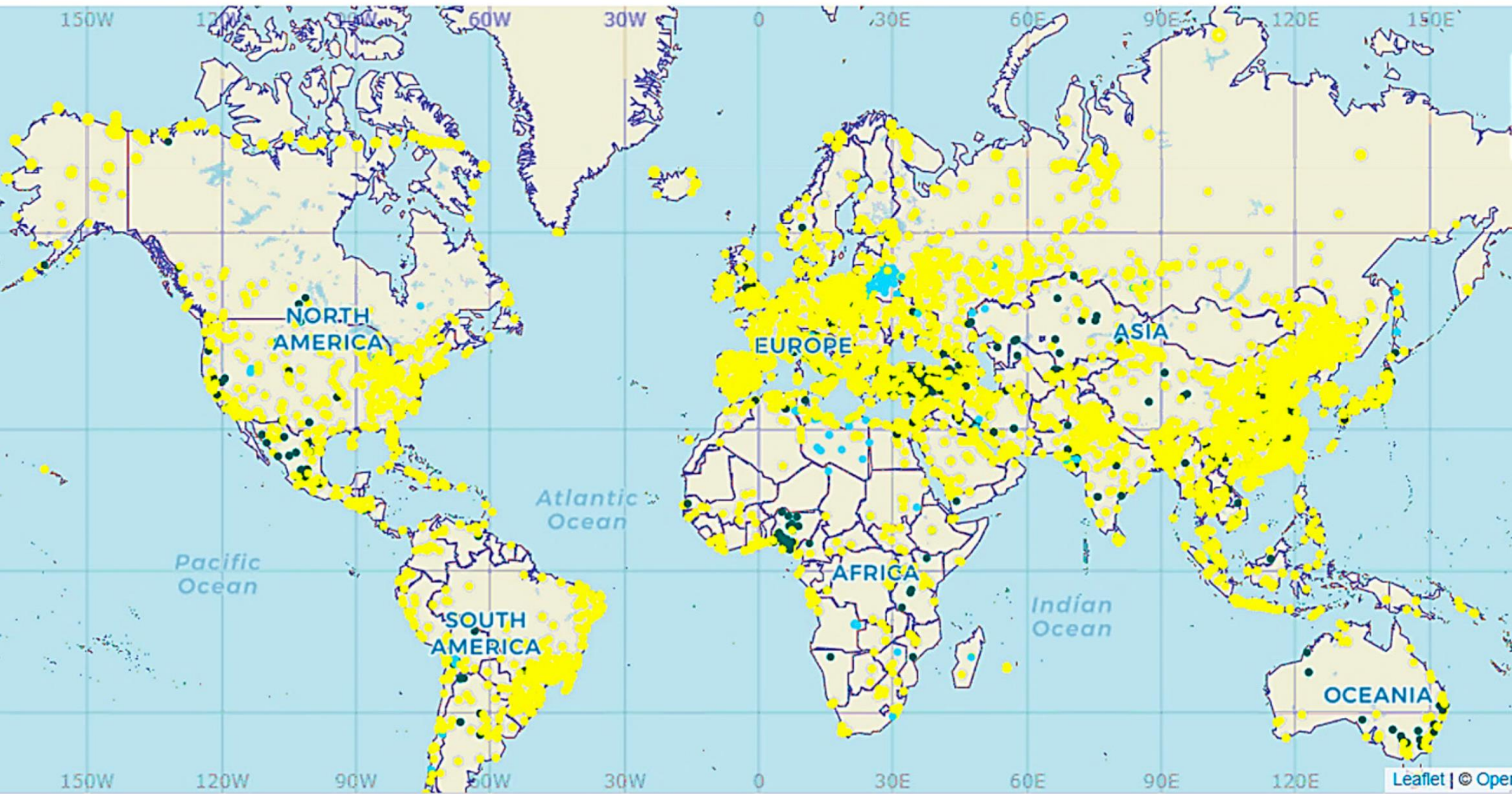
What is Radio Astronomy?

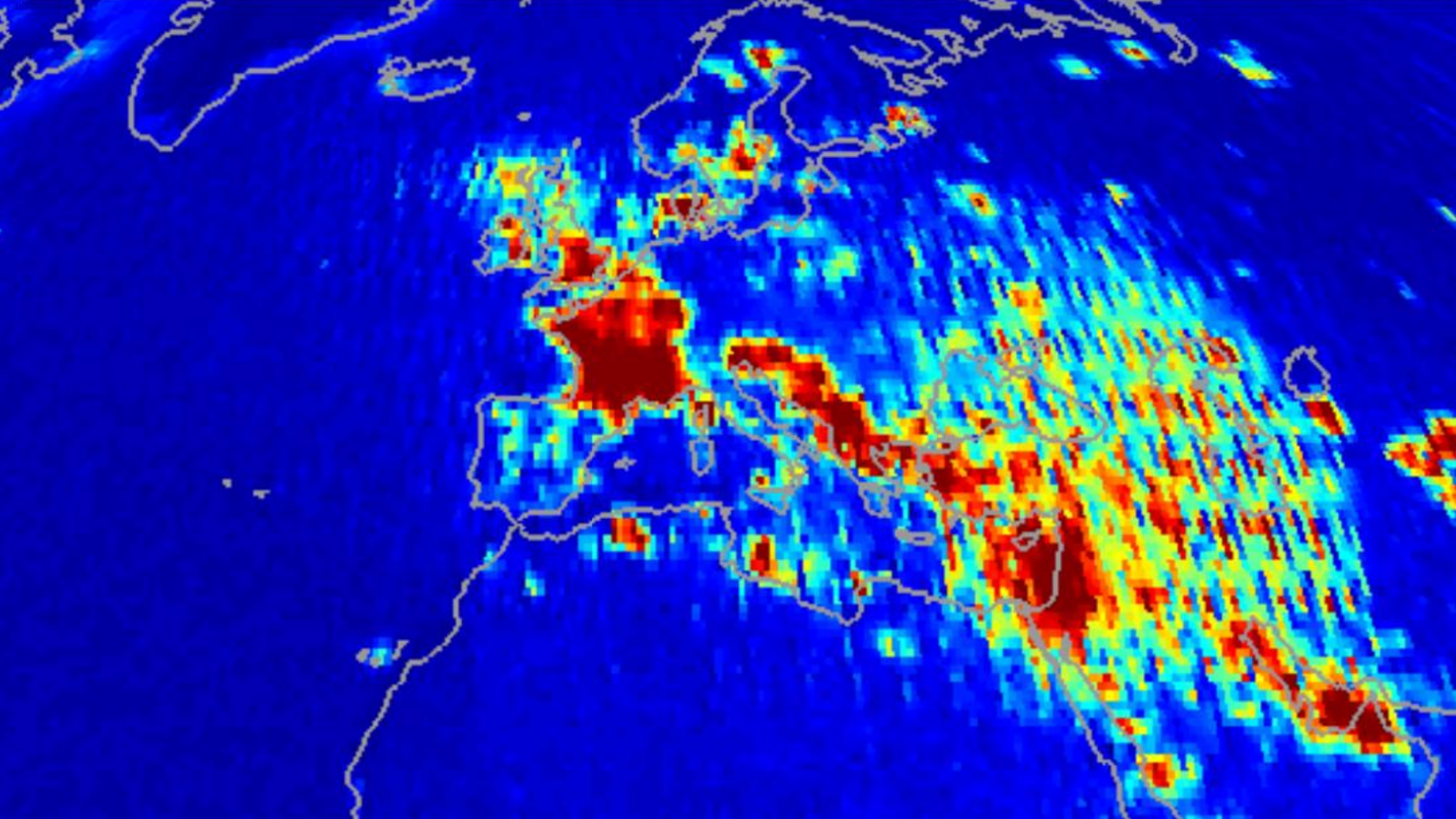


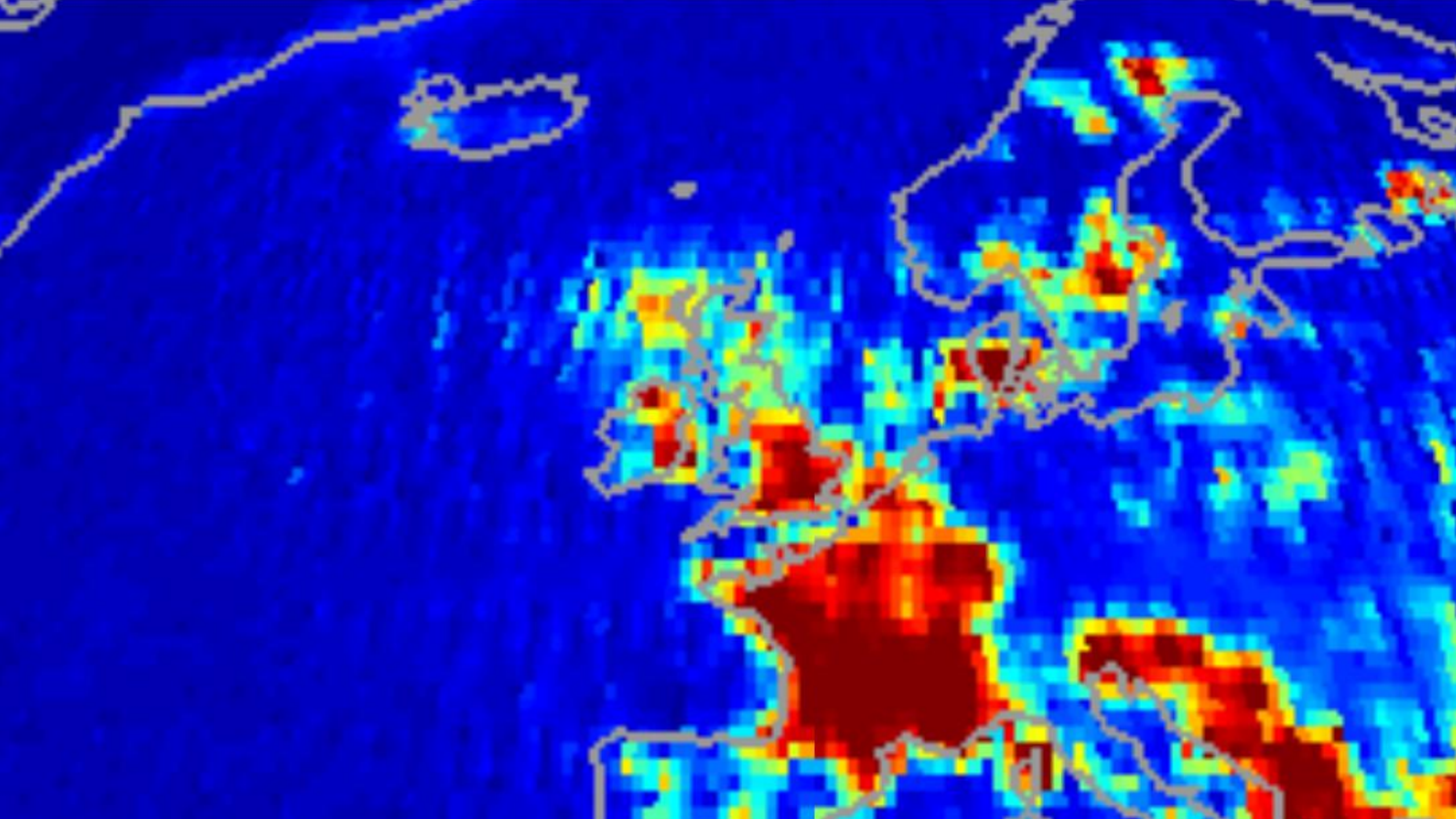
RFI - Radio Frequency Interference

- Light pollution makes it difficult to see the stars at night.
- There are radio waves that interfere with scientific observations.
- It comes from radio stations, but also different electrical devices and equipment that produce signals.

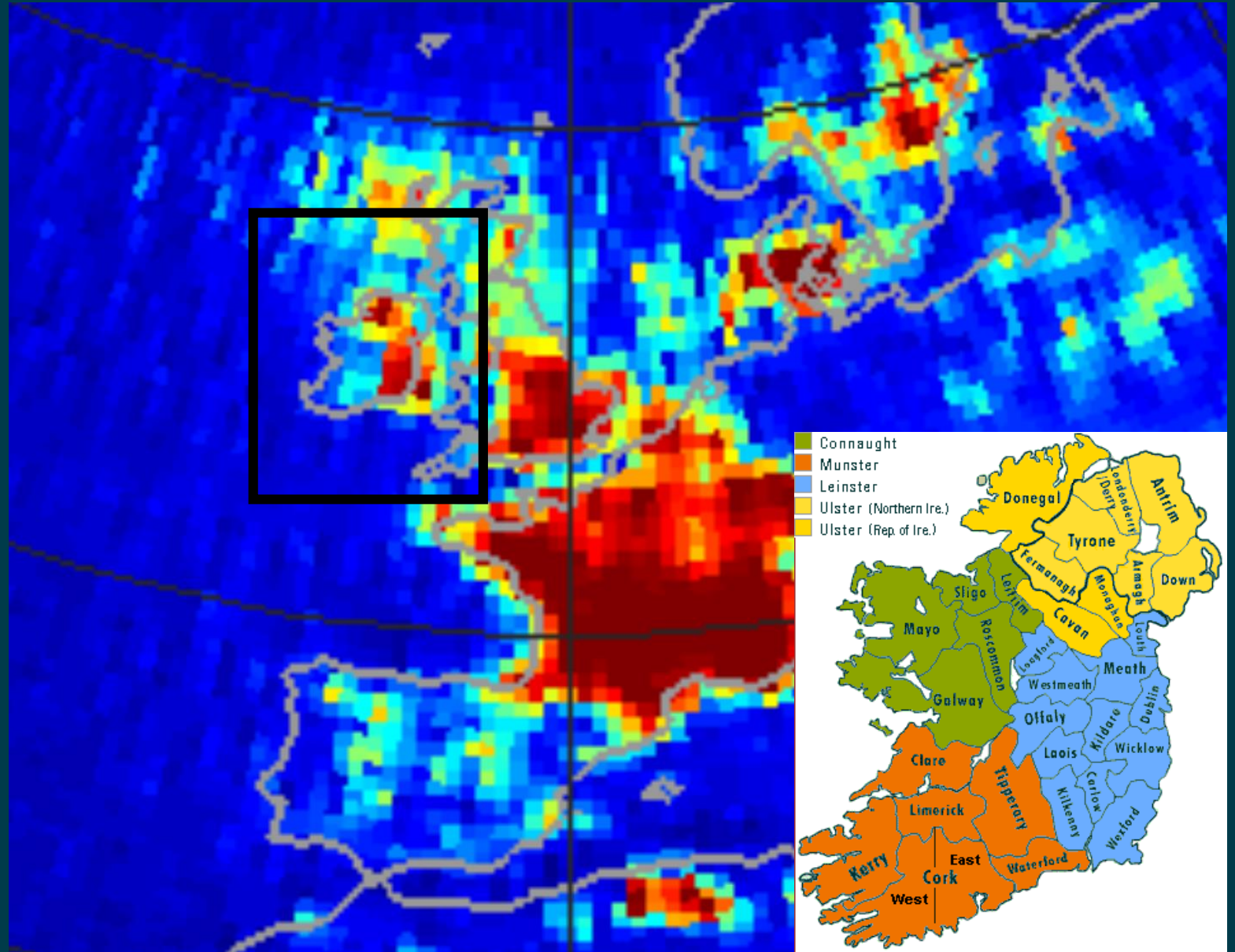








Where would you put a radio telescope in Ireland?





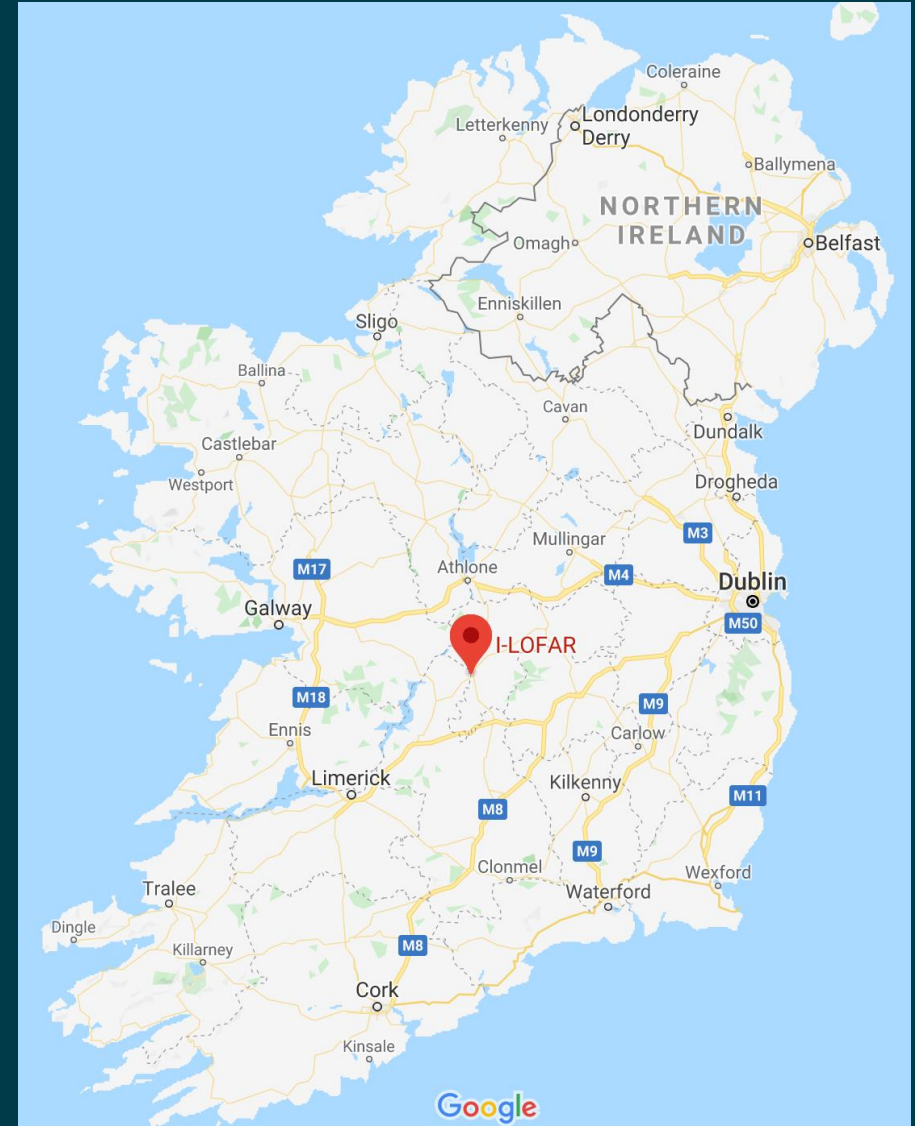
I-LOFAR

**Birr is the Best Place in
Ireland!***

***for Radio Astronomy**

Why Birr?

- Low RFI levels
- Centre of Ireland – accessible
- Great history of astronomy research in Birr
- Links up across Europe to create the International LOFAR Telescope





I-LOFAR

Credit: Alison Delaney, Birr Castle

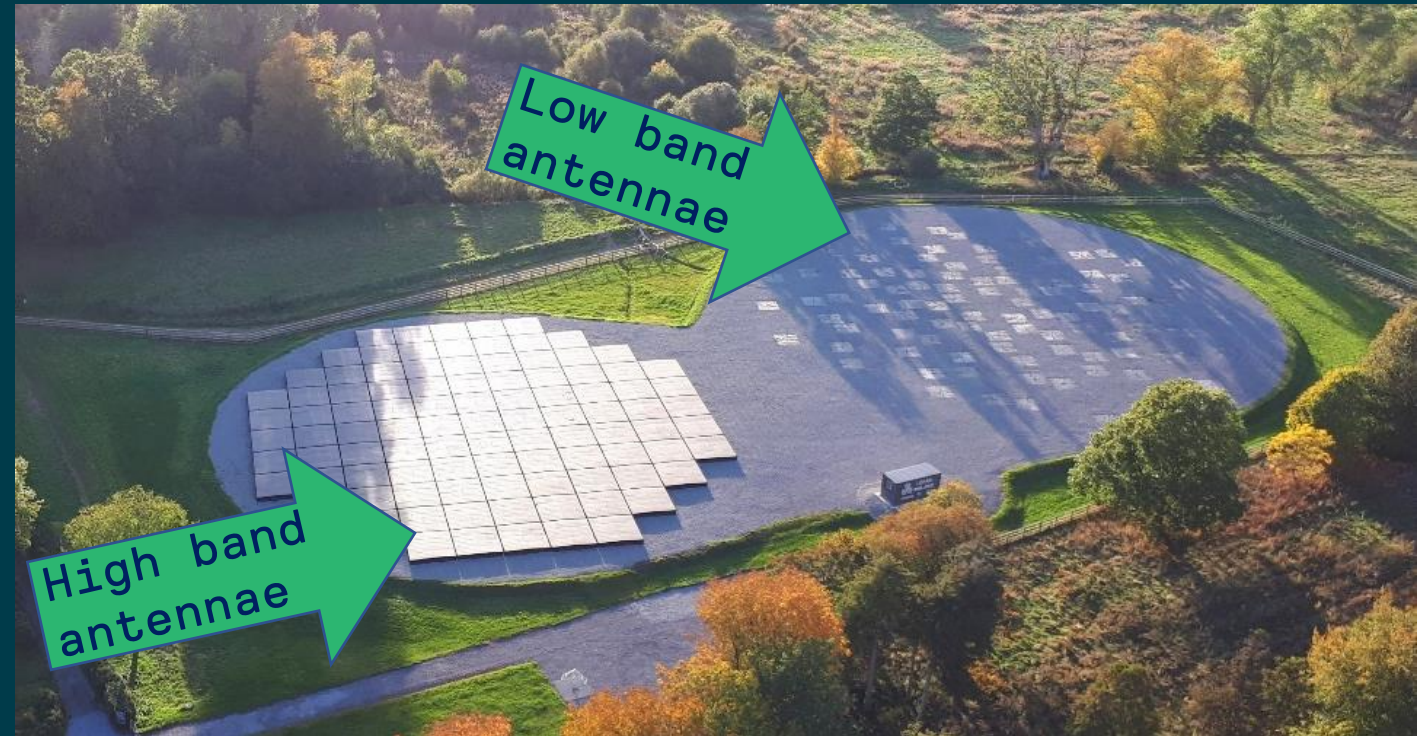


International LOFAR telescope



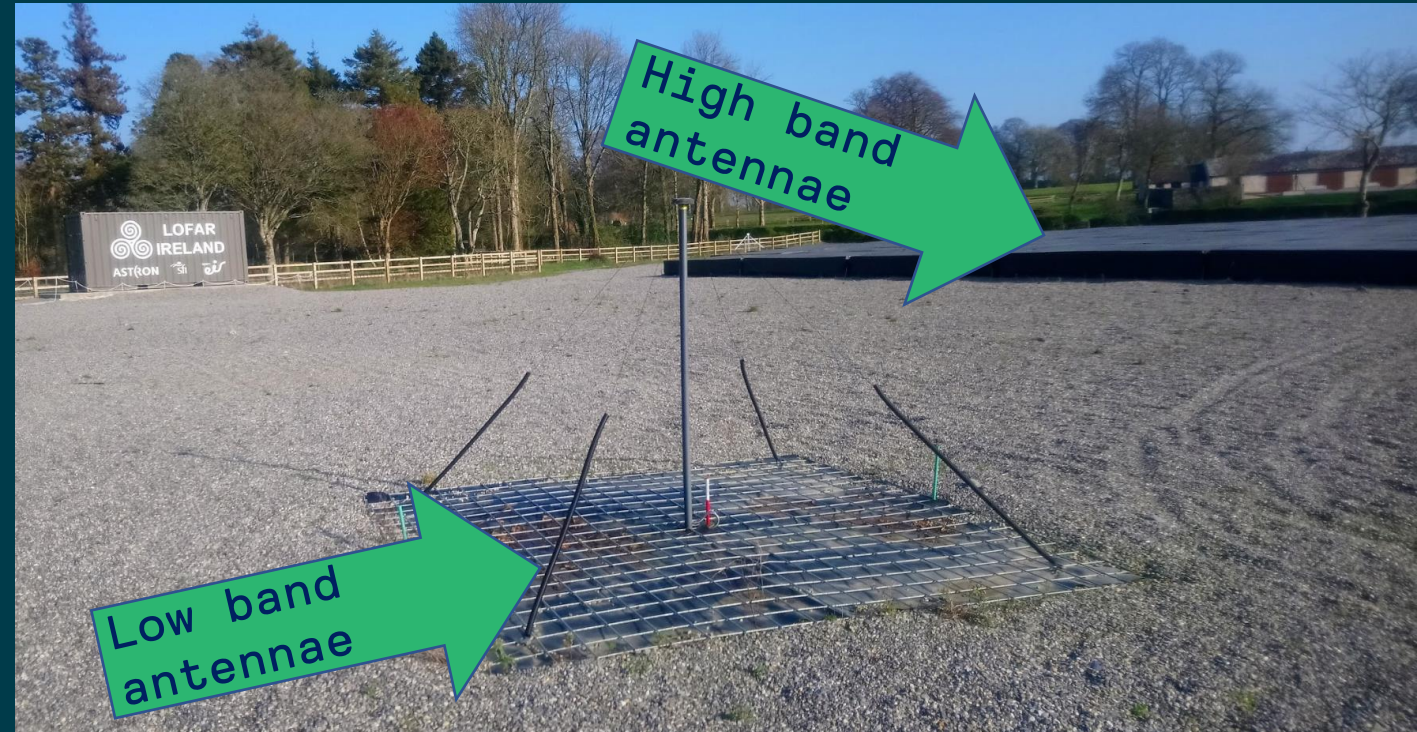
What happens at I-LOFAR?

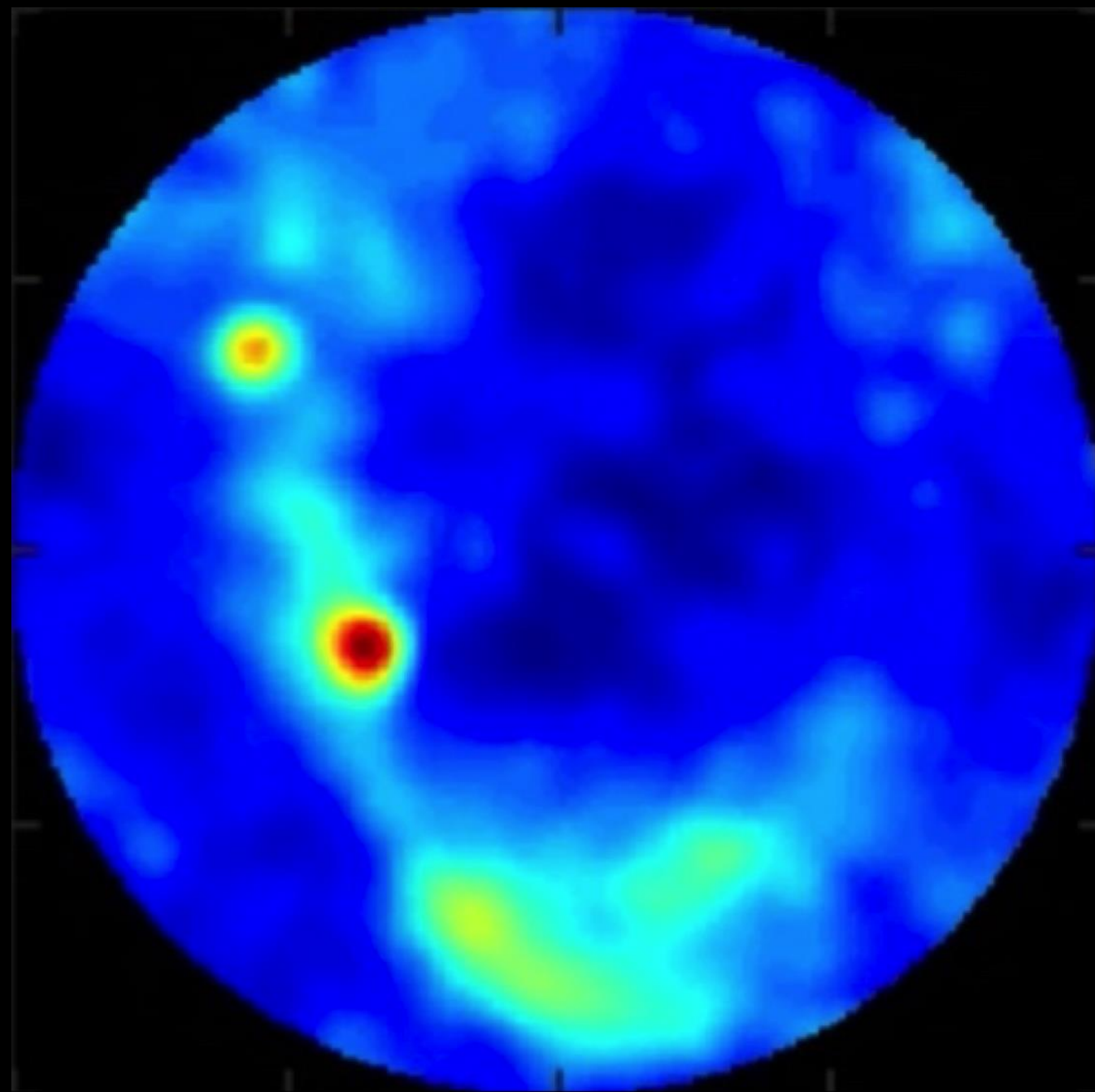
- Two types of antenna
- Data can be collected all day everyday

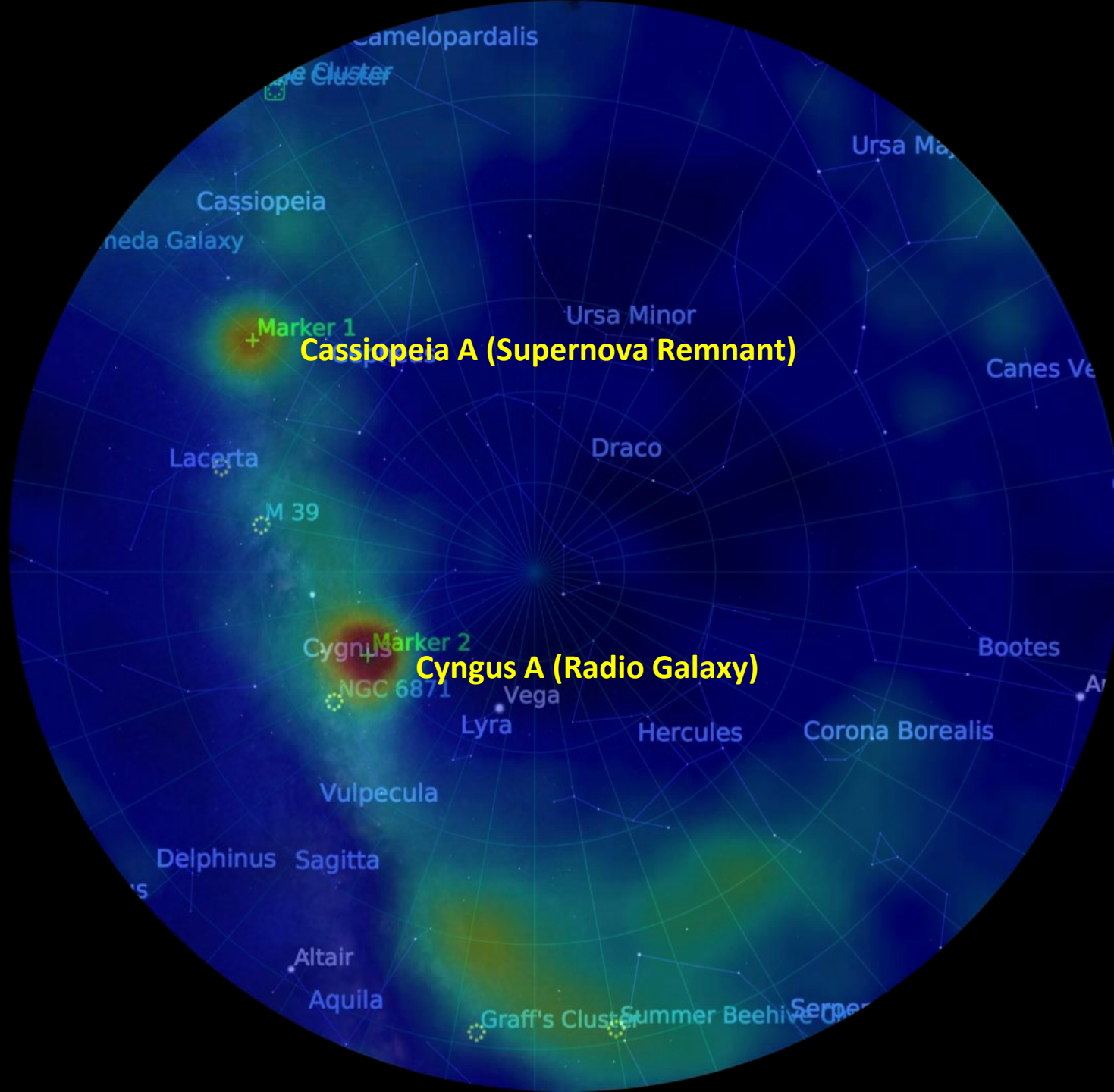


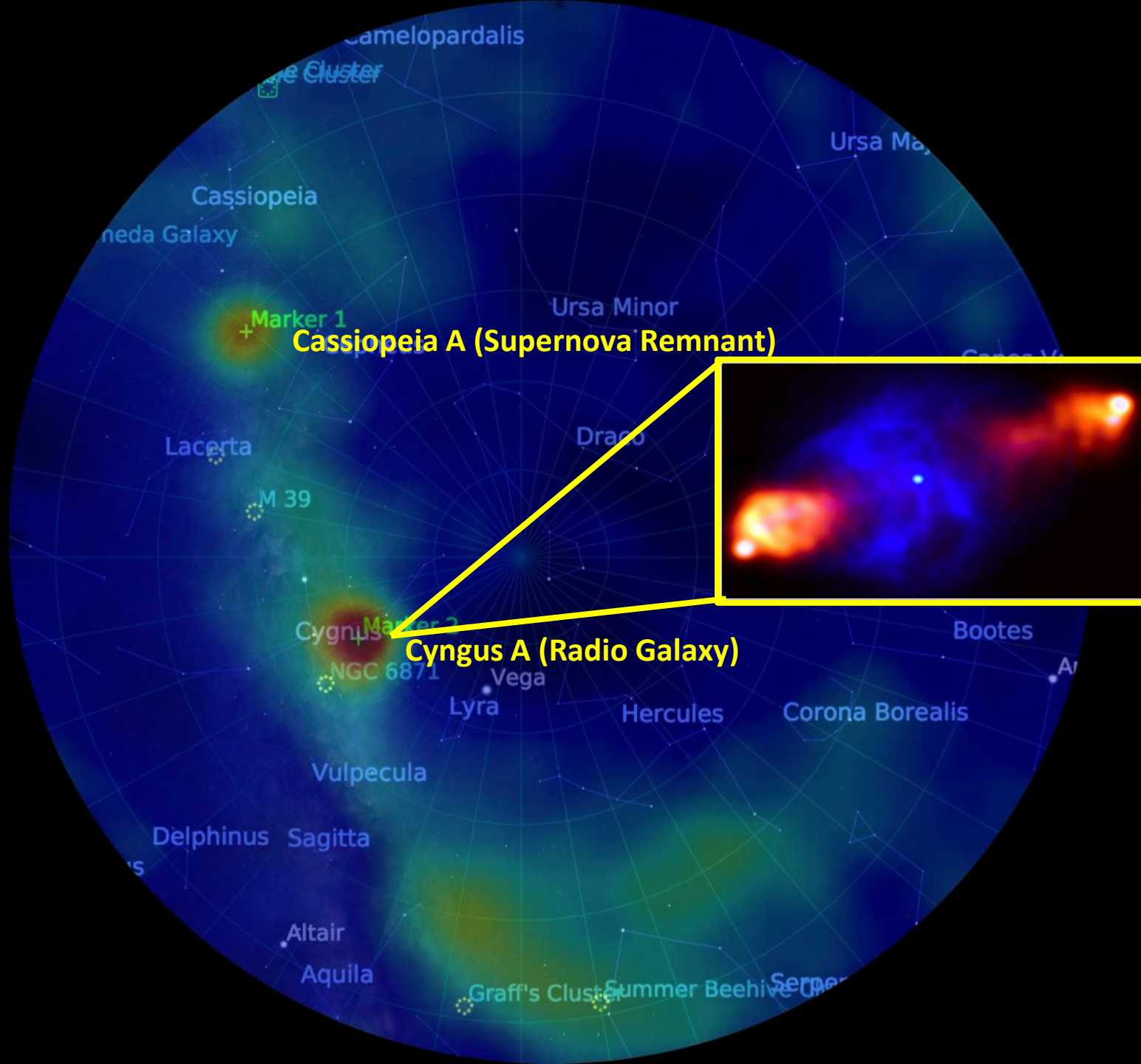
What happens at I-LOFAR?

- Two types of antenna
- Data can be collected all day everyday
- Researchers use this data to learn more about the Universe











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AstroLands

Exploring the Radio Universe from Ireland

