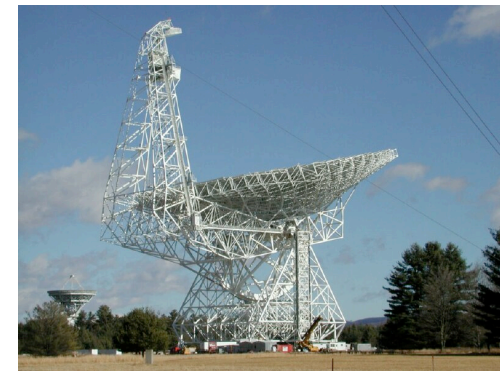




Radio Astronomy



Course Goals

Give a broad overview of the science, techniques and context of radio astronomy.

Enable the student to feel comfortable with using radio astronomical observations as part of their multi-wavelength science approach.

Get you excited about radio astronomy!

Resources

Course Wiki

http://www.astron.nl/astrowiki/doku.php?id=uva_msc_radioastronomy_2013

Includes valuable links:

- Lecture slides
- Materials from other similar courses
- Recommended books

Lecturers

Jason Hessels (hessels@astron.nl)

Joeri van Leeuwen (leeuwen@astron.nl)

Michael Wise (wise@astron.nl)

Teaching Assistant

Dario Carbone (D.Carbone@uva.nl)

Marking Scheme

- 25% - Observing proposal and presentation
- 25% - Data analysis and report
- 50% - Final exam

Lectures

Lecture 1: April 2, 2013 - The History of Radio Astronomy: Past to Present - Jason

Lecture 2: April 4, 2013 - The Science of Radio Astronomy: Extragalactic - Michael

Lecture 3: April 8, 2013 - The Science of Radio Astronomy: Galactic and Solar System - Joeri

Lecture 4: April 11, 2013 - Emission Mechanisms in Radio Astronomy - Jason

Lecture 5: April 15, 2013 - The Radio Telescope - Joeri

Lecture 6: April 18, 2013 - The Techniques of Radio Interferometry I: The Basics - Jason

Lecture 7: April 22, 2013 - The Techniques of Radio Interferometry II: Calibration - Michael

Lecture 8: April 25, 2013 - The Techniques of Radio Interferometry III: Imaging - Michael

Lecture 9: May 2, 2013 - Field Trip to LOFAR and Westerbork - Michael + Joeri + Jason + Dario

Lecture 10: May 6, 2013 - The Techniques of Time-Domain Radio Astronomy I: Single-dish techniques - Joeri

Lecture 11: May 13, 2013 - The Techniques of Time-Domain Radio Astronomy II: High time resolution with interferometers - Jason

Lecture 12: May 16, 2013 - Project Presentations - Michael + Jason + Dario

Lecture 13: May 21, 2013 - The Future of Radio Astronomy - Michael

Lecture 14: May 23, 2013 - Final Exam - Dario + one other

Practica

Lecture 1: April 2, 2013 - None

Lecture 2: April 4, 2013 - Basic account setup etc.

Lecture 3: April 8, 2013 - Writing of mock observing proposal I

Lecture 4: April 11, 2013 - Writing of mock observing proposal II

Lecture 5: April 15, 2013 - Writing of mock observing proposal III

Lecture 6: April 18, 2013 - Radio interferometry data analysis project I

Lecture 7: April 22, 2013 - Radio interferometry data analysis project II

Lecture 8: April 25, 2013 - Radio interferometry data analysis project III

Lecture 9: May 2, 2013 - Field trip

Lecture 10: May 6, 2013 - Time domain data analysis project I

Lecture 11: May 13, 2013 - Time domain data analysis project II

Lecture 12: May 16, 2013 - Project presentations

Lecture 13: May 21, 2013 - None

Lecture 14: May 23, 2013 - Final Exam