Module: Elective Advanced Lectures: Observational Astronomy

Module No.: astro840

Course: Radiointerferometry: Methods and Science

Course No.: astro8404

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	2+2	4	ST

Requirements for Participation:

Preparation:
Einführung in die Radioastronomie (astro123), Radio Astronomy (astro841)

Form of Testing and Examination:
Requirements for the examination (written or oral): Successful participation in the exercise sessions

Length of Course:
1 semester

Aims of the Course:
Basics of radiointerferometric observations and techniques; review of science highlights; use of common data analysis packages.

Contents of the Course:
Principles of interferometry, aperture synthesis, calibration, continuum and spectral line imaging, zero spacing, VLBI, use of AIPS and CASA, ALMA and VLA proposal writing, LOFAR and SKA, science highlights.

Recommended Literature:
"Synthesis Imaging in Radio Astronomy II" (ASP Conference Series, V. 180, 1998), Editors: Taylor, Carilli, Perley
Interferometry and Synthesis in Radio Astronomy (Wiley 2001), by Thompson, Moran, Swenson

On-line material