

**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