

# Module: Elective Advanced Lectures: Observational Astronomy

Module No.: astro840

## Course: Astronomical Interferometry and Digital Image Processing

Course No.: astro843

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture	English	2	3	WT

### Requirements for Participation:

#### Preparation:

#### Form of Testing and Examination:

Written or oral examination

#### Length of Course:

1 semester

### Aims of the Course:

Students learn the basics required to carry out research projects in the field of wave optics and astronomical infrared interferometry

### Contents of the Course:

Statistical optics; Wave optics; image detectors; resolution enhancement by digital deconvolution; interferometric imaging methods in optical astronomy; Theory of photon noise; iterative image reconstruction methods; astronomical applications

### Recommended Literature:

J. W. Goodman; Introduction to Fourier Optics (Roberts & Company Publishers 3. Aufl. 2004)  
Lecture Notes