

**Modules:**

astro830 **Elective Advanced Lectures**  
 astro840 **Observational Astronomy**

**Course:**

## Astronomical Interferometry and Digital Image Processing

Course No.: astro843

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

**Requirements:****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