Astronomical Interferometry and Digital Image Processing - astro843

Degree - M.Sc. in Astrophysics (PO von 2014)

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