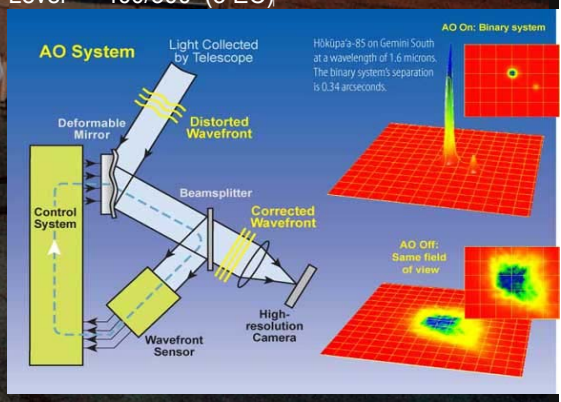
UL/TUD Masters Courses on Astronomical Instrumentation

Starting September 2007, Leiden University and the Technical University Delft offer a joint course program on "Technical Astronomy". The new, complementary lectures provide a broad coverage of the practical and technical aspects of modern astronomy.

Adaptive Optics in Astronomy

Ground-based observations in the visible and near-IR are limited by the atmospheric turbulence. To correct for this image blurring Adaptive Optics (AO) has been developed. This course will cover both atmospheric properties and the basics of AO systems.

Period 21 Sep – 21 Dec, 2007
Location TUD
Level 400/500 (3 EC)



Physics of Scientific Space Instruments

The course will treat remote sensing, in-situ instrumentation, high-energy optics, high-energy detectors, space interferometry, gravity wave detection in space, instrument design, mission design, and fundamental limits of space.

Period 1 Feb – 16 May, 2008
Location UL
Level 400 (4 EC)

Digital Image Processing

The course provides insights into state-of-the-art algorithms for image processing, including multi-resolution image processing and morphological image processing. The students are expected to read and discuss scientific publications in this area.

Period 7 Sep – 15 Dec, 2007
Location TUD
Level 400/500 (6 EC)

Detection of Light

Detectors are the crucial link between the astronomical target and the observer. As astronomers are aiming at fainter and fainter objects the quality and calibration of the detector systems have become increasingly important. The course provides an overview of the various techniques to detect electromagnetic radiation, from the UV to the sub-millimeter.

Period 13 Sep – 21 Dec, 2007
Location UL
Level 400/500 (6 EC)

Space-based Astronomy

This course explains the need for space-based observations, the planet Earth environment, the astronomical objectives of infrared and submm space missions, and their technologies, detection techniques and limitations.

Period 31 Jan – 8 May, 2008
Location UL
Level 400 (6 EC)

Further information: http://www.strw.leidenuniv.nl/education/courses.php
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