

3rd Heidelberg Astronomy Summer School

**The Art & Craft of Astronomical Instrumentation
- from Optical to Infrared Wavelengths -**

September 1st - 5th, 2008

organized by the

***International Max Planck Research School (IMPRS) for
Astronomy and Cosmic Physics at the University of Heidelberg***

Invited Lecturers: Torsten Böker, ESA
Roberto Gilmozzi, ESO
Albrecht Poglitsch, MPE
Wolfgang Wild, SRON
Malcom Fridlund, ESA
Andreas Quirrenbach, LSW, Heidelberg University

Additional Lecturers: Sebastian Jester, MPIA
Tom Herbst, MPIA
German Hermann, MPIK
Roland Gredel, MPIA
Matthias Bartelmann, ITA

Location: Max Planck conference center (“Max-Planck-Haus”),
Gerhard-Hauptmann-Str. 36, 69120 Heidelberg, Germany

School program (as of Sept. 5th, 2008):

Monday, September 1st, 2008

10:00 - 13:30 *Registration, Lunch*
13:30 – 13:40 *Welcome address* (Stefan Wagner)
13:40 – 13:50 *LOC announcements* (Christian Fendt)
14:00 – 15:00 *General Introduction* (Andreas Quirrenbach)
15:00 - 15:30 *Coffee break*
15:30 – 16:30 *The Large Binocular Telescope* (Roland Gredel)
16:30 – 17:30 *Introduction to Adaptive Optics* (Andreas Quirrenbach)
17:30 – 18:30 *Infrared telescopes and instrumentation* (Tom Herbst)

Tuesday, September 2nd, 2008

09:00 – 10:00 *The Herschel Satellite and Mission* (Wolfgang Wild)
10:00 – 11:00 *Herschel HIFI* (Wolfgang Wild)
11:00 - 11:30 *Coffee break*
11:30 – 12:30 *Adaptive Optics: Advanced Concepts* (Andreas Quirrenbach)

12:30 – 14:00 *Lunch*

14:00 – 15:00 The SPIRE Instrument on Herschel (Albrecht Poglitsch)

15:00 - 15:30 *Coffee break*

15:30 – 16:30 Survey Telescopes and Instruments (Sebastian Jester)

17:30 – 22:00 *Excursion: Tour at MPIA & BBQ at LSW*

Wednesday, September 3rd, 2008 (at the Old Auditorium of Heidelberg University)

09:00 – 10:00 Herschel PACS (Albrecht Poglitsch)

10:00 – 11:00 CoRoT – The mission: ESA & Exoplanets (Malcom Fridlund)

11:00 - 11:30 *Coffee break*

11:30 – 12:30 The European Extremely Large Telescope: Overview and Science Goals
(Roberto Gilmozzi)

12:30 – 14:00 *Lunch*

14:00 – 18:00 *Excursion: Boat trip on the Neckar River*

19:00 – 24:00 *Pub evening*

Thursday, September 4th, 2008

09:00 – 10:00 Interferometry from the Ground (Andreas Quirrenbach)

10:00 – 11:00 Building an ELT: Optical Design, Mechanics, Enclosure etc. (Roberto Gilmozzi)

11:00 - 11:30 *Coffee break*

11:30 – 12:30 Interferometry in Space (Andreas Quirrenbach)

12:30 – 14:00 *Lunch*

14:00 – 15:00 James Webb Space Telescope: The Telescope (Torsten Böker)

15:00 - 15:30 *Coffee break*

15:30 – 16:30 ELT: Mirror Segmentation, Wavefront Control, Active and Adaptive Optics
(Roberto Gilmozzi)

17:30 – 19:00 *Excursion: Guided tour at the Castle of Heidelberg*

19:00 – 24:00 *Pub evening*

Friday, September 5th, 2008

09:00 – 10:00 ELT Instrument Challenges (Roberto Gilmozzi)

10:00 – 11:00 JWST: The Instruments (Torsten Böker)

11:00 - 11:30 *Coffee break*

11:30 – 12:30 H.E.S.S. (German Hermann)

12:30 – 14:00 *Lunch*

14:00 – 15:00 JWST: the Space Environment (Torsten Böker)

15:00 – 16:00 Planck: Observing the Cosmic Microwave Background (Matthias Bartelmann)

16:00 – 16:10 *Farewell address* (Hans-Walter Rix)

16:10 – 17:00 *Departure*