



National Science Foundation
WHERE DISCOVERIES BEGIN

DFG – NSF Astrophysics Research Conference

"Advanced Photonics in Application to Astrophysical Problems"

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ADVANCING SCIENCE, SERVING SOCIETY

Program

Sunday, June 10, 2007

6:00 – 9:00 p.m. **Welcome Reception**
Washington Plaza Hotel, Washington Room
Dr. Kathie Olsen (Deputy Director NSF)
Prof. Dr.-Ing. Matthias Kleiner (President DFG)

Monday, June 11, 2007

6:30 – 7:15 a.m. **Breakfast at Washington Plaza Hotel**
7:20 a.m./7:30 a.m. **shuttle bus service to the AAAS conference venue** (outside the hotel)
7:40 a.m. **Registration & Poster Setup - AAAS Lobby**
8:00 – 8:15 a.m. **Welcome by Dr. Alan Leshner (CEO AAAS)**

Session I: Gravitational Wave Astronomy

8:15 – 8:40 a.m. **Scott Hughes: GW astrophysics**
8:40 – 9:05 a.m. **Peter Fritschel: Ground based GW interferometers**
9:05 – 9:20 a.m. **Dave Reitze: Optics for interferometers for ground-based detectors**
9:20 – 9:35 a.m. **Benno Willke: Lasers for GW interferometers**
9:35 – 9:50 a.m. **Rana Adhikari: Interferometric sensing techniques**
9:50 – 10:05 a.m. **Gerhard Heinzel: Space based GW interferometers**
10:05 – 10:20 a.m. **Guido Müller: LISA Optics and Interferometry**

10:20 – 10:40 a.m. **Coffee break & Posters – AAAS Lobby**

POSTERS

Roman Schnabel: Squeezed light and quantum noise
Phil Willems: Thermal optical distortions and compensation
Volker Quetschke: Electro-optics for high power operation
Daniel Sigg: Real-time controls systems for GW interferometers
Joan Centrella: Numerical simulations of GW sources & data analysis challenges

Session II: AO / Interferometry

10:40 – 11:00 a.m. **Phil Hinz: LBTI and the future of ground-based optical-infrared interferometry**
11:00 – 11:25 a.m. **Peter Wizinowich: Keck Interferometer & LGS AO**
11:25 – 11:40 a.m. **Tom Herbst: LBT LINC-Nirvana**
11:40 – 11:55 a.m. **Frank Eisenhauer: VLT GRAVITY Experiment**
11:55 – 12:10 p.m. **Andreas Quirrenbach: VLT PRIMA and the detection of exoplanets**
12:10 – 12:25 p.m. **Bob Fugate: Laser Guide Star Technology**
12:25 – 12:40 p.m. **Brent Ellerbroek: Advanced Technology for AO**
12:40 – 12:55 p.m. **Thomas Berkefeld: MCAO for Solar Telescopes**

12:55 – 2:15 p.m. **Lunch Break & Posters - Lunch Buffet in AAAS Lobby**

POSTERS

Markus Kasper: Adaptive optics for large telescopes

Stephen Eikenberry: AO NIR observations at the GranTeCan Telescope

Sebastian Rabien: Laser guide stars for 8m class telescopes

Matthew Muterspaugh: Cophasing of telescopes

Christian Straubmeier: Fringe tracking at LBT with LINC-NIRVANA

2:15 – 3:45 p.m.

Panel Discussions

Panel 1

Peter Fritschel & Benno Willke: Gravitational wave detection

Panel 2

Brent Ellerbroek & Frank Eisenhauer: Adaptive optics systems

Panel 3

Stephen Ridgway & Andreas Quirrenbach: Optical / NIR interferometers

3:45 – 4:00 p.m.

Coffee break – AAAS Lobby

4:00 – 5:30 p.m.

Continuation of Panel Discussions

5:30 – 6:00 p.m.

Posters

6:10 a.m./6:20 a.m.

shuttle bus service to Washington Plaza Hotel (New York Ave. entrance)

6:30 – 8:30 p.m.

Dinner at the Washington Plaza Hotel, Washington Room

8:30 – 10:00 p.m.

Panel Discussion Reports (Washington Plaza Hotel, Washington Room)

Tuesday, June 12, 2007

6:30 – 7:40 a.m.

Breakfast at the Washington Plaza Hotel

7:40 a.m./7:50 a.m.

shuttle bus service to the AAAS conference venue (outside the hotel)

8:00 – 8:10 a.m.

Announcements, logistics at the AAAS conference venue

Session III: Sun

8:10 – 8:35 a.m.

Oskar v.d. L  he: Solar observations at the diffraction limit – A vision for the future

8:35 – 8:50 a.m.

Hugh Hudson: Physics of solar flare

8:50 – 9:10 a.m.

Joerg Buechner: Magneto-plasma physics of the sun and stars:

9:10 – 9:25 a.m.

Thomas Rimmele: Solar adaptive optics and large aperture telescopes for the future

9:25 – 9:40 a.m.

Haosheng Lin: State of the art polarimetry of solar magnetic fields

9:40 – 9:55 a.m.

Michael Sigwarth: Polarimetry with POLIS and DLSP – a US/German Collaborative Effort

9:55 – 10:10 a.m.

Jack Harvey: SOLIS Network – potential collaborations

10:10 – 10:30 a.m.

Hardi Peter: Modelling stellar activity and EUV diagnostics

10:30 – 10:45 a.m.

Coffee break & Posters – AAAS Lobby

POSTERS

Carsten Denker: Speckle Interferometry of solar adaptive optics imagery

Steve Tomczyk: Coronal magnetic fields – Photonics tools of the future

Jiong Qiu: An observational view of magnetic reconnection in explosions on the sun

Session IV: Galactic Center

- 10:45 – 11:05 a.m. **Stefan Gillessen:** Stellar populations and star formation in the GC
11:05 – 11:25 a.m. **Mark Morris:** Near-Infrared variability and the spectral index of SgrA*
11:25 – 11:40 a.m. **Andreas Eckart:** Coordinated radio/NIR/X-Ray observations of SgrA*
11:40 – 11:55 a.m. **Wolfgang Duschl:** Black hole growth
11:55 – 12:10 p.m. **Rainer Schödel:** The structure of the central stellar cluster
12:10 – 12:25 p.m. **Jörg-Uwe Pott:** First GC science with NIR long baseline interferometry
12:25 – 12:40 p.m. **Andrea Stolte:** The proper motion of the GC Arches Cluster
12:40 – 12:55 p.m. **Richard Green:** Science scopes for the LBT
- 12:55 – 2:00 p.m. **Lunch Break & Posters** – Lunch buffet in AAAS Lobby

POSTERS

Thomas Beckert: Physics of Tori
Tobias Illenseer: Winds from disks feeding of jets
Leo Meyer: Relativistic models of the SgrA* accretion disk
Steffen Brinkmann: Accretion onto the galactic centre - Simulating Tori using high-resolution-shock-capturing methods
Koraljka Muzic: Proper motions of dust filaments at the galactic center

2:00 – 4:45 p.m. **Panel Discussions**

Panel 4

Thomas Rimmele & Oskar von der Lühe: Solar physics – Future directions and collaborations

Panel 5

Andreas Eckart & Mark Morris: Galactic center

4:45 – 5:00 p.m. **Coffee break & Posters** – AAAS Lobby

5:00 – 5:30 p.m. **Panel Discussion Reports**

Panel Discussion

5:30 – 6:30 p.m. Panel 6

Thomas Rimmele, Andreas Eckart, Julian Christou, Beverly Berger, Stefan Krückeberg: Cross-Fertilization of optical / NIR interferometers, adaptive optics systems and gravitational wave detection; Ways for future cooperation

6:30 – 7:00 p.m. **Plenary Discussion: Round-up of Conference**

7:20 p.m./7:30 p.m. **shuttle bus service to Hotel Washington**

8:00 p.m. **Evening Reception / Dinner**

Hotel Washington – Skyroom

15th & Pennsylvania Ave. N.W., Washington, DC 20004

Wednesday, June 13, 2007

- 6:30 – 10:30 a.m. **Small American breakfast at the Washington Plaza Hotel**
12:00 noon **Departure, check-out time at the Washington Plaza Hotel**