

Michelson Summer School

Astronomical Interferometry in the Optical and Near-Infrared

July 7-11, 2003



Presented in 2003
by the
Michelson Science Center

SCHOOL LOCATION: Sharp Lecture Hall in Arms building on Caltech campus

SUNDAY Opening Reception & School Registration, 7pm – Dabney Gardens on Caltech Campus, complimentary hors d'oeuvres and cash bar

MONDAY

8:00 am - Registration / help desk opens at Sharp Lecture Hall

8:45 am - Opening Comments - G. van Belle (Michelson Science Center)

INTRODUCTION TO OPTICAL AND NEAR-IR STELLAR INTERFEROMETRY

- 9:00 am - Why Build Stellar Interferometers? H.A. McAlister (Georgia State University)
- 9:45 am - History of Stellar Interferometry - G. van Belle (Michelson Science Center)
- 11:00 am - Theory of Astronomical Interferometry - C.A. Haniff (University of Cambridge)
- 1:30 pm - Observing Through the Turbulent Atmosphere - A. Quirrenbach (Leiden Observatory)
- 2:30 pm - Interferometer Beam Combination for Synthesis Imaging - D. Mozurkewich (Naval Research Laboratory)
- 4:00 pm - Spherical Geometry and Aperture Synthesis - J. Moran (Harvard-Smithsonian Center for Astrophysics)

TUESDAY

ENGINEERING CONSIDERATIONS FOR INTERFEROMETRY

- 9:00 am - Design of Stellar Interferometers: Considerations - W. Tango (University of Sydney)
- 10:00 am - Design of Stellar Interferometers: Realizations - T.A. ten Brummelaar (Georgia State University)
- 11:30 am - Modern Servo Control - M. Regehr (Jet Propulsion Laboratory)
- 1:30 pm - Interferometer Optical Design - W. Traub (Harvard-Smithsonian Center for Astrophysics)

MEASUREMENT AND CALIBRATION OF FRINGE PARAMETERS

- 2:30 pm - Fringe Tracking, Noise, Biases, Visibility Estimators - M. Colavita (Jet Propulsion Laboratory)
- 4:00 pm - Data Reduction and Calibration for Synthesis Imaging - P. Tuthill (University of Sydney)

WEDNESDAY

- 9:00 am - Know Your Instrument - A. Booth (Jet Propulsion Laboratory)
- 10:00 am - Calibrator Selection, On-Sky - M. Creech-Eakman (Jet Propulsion Laboratory)
- 11:00 am - Design of an Example Observing Program - R. R. Thompson (Jet Propulsion Laboratory)

TOUR OF MOUNT WILSON – Departs at 12:15 pm from the campus turn-about at 370 S. Holliston

THURSDAY

ASTROPHYSICS WITH OPTICAL/NEAR-IR INTERFEROMETERS

- 9:00 am - Stellar Atmospheric Structure - J. Aufdenberg (Harvard-Smithsonian Center for Astrophysics)
- 10:00 am - Interferometric Measures of Stellar Atmospheres - J. Davis (University of Sydney)
- 11:30 am - Young Stellar Objects - E. Jensen (Swarthmore College)
- 1:30 pm - Interferometric Observations of Young Stellar Objects - R. Akeson (Michelson Science Center)
- 2:30 pm - Fundamental Properties of Stars - G. Torres (Harvard-Smithsonian Center for Astrophysics)
- 4:00 pm - Interferometric Measures of Binaries - A. Boden (Michelson Science Center)

SUMMER SCHOOL BANQUET, 7pm – Burger Continental at 535 S. Lake Ave, \$15 per person includes meal and soda

FRIDAY

- 9:00 am - Extragalactic Objects - A. Wehrle (Michelson Science Center)

ADVANCED OBSERVATIONAL MODES

- 10:00 am - Astrometry & Bootstrapping - T. Armstrong (Naval Research Laboratory)
- 11:30 am - Nulling & Differential Phase - E. Serabyn (Jet Propulsion Laboratory)
- 1:30 pm - Pupil versus Image Plane Combination - M. Swain (Jet Propulsion Laboratory)
- 2:30 pm - Future Ground Facilities - P. Lawson (Jet Propulsion Laboratory)
- 4:00 pm - Space Missions - S. Shaklan (Jet Propulsion Laboratory)

5:00 pm - Concluding Remarks - G. van Belle (Michelson Science Center)

EVERYDAY SCHEDULE ITEMS

- 8:30 am – Coffee, pastries, registration / help desk open (8 am on Monday)
- 11:00 am – Coffee break, 30 minutes (10:30 am on Monday)
- 12:30 pm – Lunch, 1 hour (1:15 pm summit lunch on Wednesday)
- 3:30 pm – Coffee break, 30 minutes (except Wednesday)
- 5:00 pm – End of day

For more information on the summer school, please visit our web site: <http://msc.caltech.edu>

