

ARTICLES REFERENCES LIST

Compiled by
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1 Journals Acronyms

AA	Astronomy & Astrophysics
AASS	Astronomy & Astrophysics Supplement Series
ALMA	Atacama Large Millimeter Array
AN	Astronomische Nachrichten
ANJ	Astronomical Journal
APJ	Astrophysical Journal
APL	Applied Physics Letters
APLO	Applied Optics
ASPCP	Astronomical Society of the Pacific Conference Proceedings
ARAA	Annual Review of Astronomy & Astrophysics
BLM	Boundary Layer Meteorology
BAMS	Bulletin of the American Meteorological Society
CQG	Classical and Quantum Gravity
CPC	Computer Physics Communications
EJC	Electronic Journal of Combinatorics
EMES	ESO Messenger
ESOCP	ESO conference proceedings
EXA	Experimental Astronomy
FERR	Ferroelectrics
GRL	Geophysical Research Letters
IAOP	Izvestiya, Atmospheric and Oceanic Physics
IJPAP	Indian Journal of Pure and Applied Physics
ICR	Icarus
JDSMC	Journal of Dynamical Systems, Measurement, and Control
JMO	Journal of Modern Optics
JOSA	Journal of the Optical Society of America
JOSA A	Journal of the Optical Society of America A
JOSA B	Journal of the Optical Society of America B
JOA	Journal of Optics, A
JOP	Journal of Optics, Paris
JOT	Journal of Optical Technology
JPC	Journal de Physique - Colloques
LFW	Laser Focus World
MAT	Materials Today
MEE	Microelectronic Engineering
METRO	Metrologia
MNRAS	Monthly Notices of the Royal Astronomical Society
MRT	Microscopy Research and Technique
MST	Meas. Sci. Technol.

NATO	Series C Math. & Physical Sciences NATO Advanced Study Institute
NAR	New Astronomy Reviews
NAT	Nature
NIMPRA	Nuclear Instruments and Methods in Physics Research, A
OEX	Optics Express
OPC	Optics Communications
OPE	Optical Engineering
OPH	Ophthalmology
OPL	Optics Letters
OPR	Optical Review
OLE	Optics and Lasers in Engineering
OLT	Optics and Laser Technology
PHS	Photonics Spectra
PIO	Progress in Optics
PASP	Publications of the Astronomical Society of the Pacific
ROO	Review of Optometry
RSI	Review of Scientific Instruments
SPIE	Proceeding of SPIE
SCI	Science - AAAS
SOP	Solar Physics
SJQE	Soviet Journal of Quantum Electronics
SAD	Stochastics and Dynamics
ULM	Ultramicroscopy
VR	Vision Research

2 Astronomical Adaptive Optics

2.1 Generalities

2007-06-0.ppt

Adaptive optics challenges for mid-IR ELT instrumentation

Sarah Kendrew

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The Strehl Efficiency of Adaptive Optics Systems

Racine, Rene

PASP 118, 845, p. 1066, 2006/07

2006-04-1.pdf

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Hu, Shijie; Xu, Bing; Zhang, Xuejun; Hou, Jing; Wu, Jian; Jiang, Wenhan

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astro-ph/0505086

Limits of Adaptive Optics for high contrast imaging

Olivier Guyon (Subaru Telescope)

APJ accepted for publication

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Adaptive-optics performance of Antarctic telescopes
Lawrence, Jon S
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Hou, Jing

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Bloemhof, E E
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Optimum imaging observation wavelength selection for astronomical telescopes with partial correction adaptive optics
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SPIE 4007, 167-174, 2000/07

2.5 Wavefront Sensing

2.5.1 Generalities

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2.7 PSF Modeling & PSF Reconstruction

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2.8 Phase Correction Devices

2.8.1 Deformable Mirrors

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Austin Roorda, Fernando Romero-Borja, William Donnelly, III, Hope Queener, Thomas Hebert, and Melanie Campbell
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Shirai, Tomohiro
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OEX 14, 3, 1027-1032, 2006/02

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Enrique J. Fernandez, Boris Povazay, Boris Hermann, Angelika Unterhuber, Harald Sattmann, Pedro M. Prieto, Rainer Leitgeb, Peter Ahnelt, Pablo Artal and Wolfgang Drexler
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Thomas A. Planchon, Jean-Phillipe Rousseau, Frdric Burgy, Gilles Chriaux and Jean-Paul Chambaret

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Safronov, A G; Tobke, B; Helms, P
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Arnon, Shlomi
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Shu Yang and Joanna Aizenberg
MAT 8, 12, 1, 40-46, 2005/12

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Compensation for multimode fiber dispersion by adaptive optics
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Baker, K L

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Sakakura, Masahiro; Komatsu, Shinichi

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APLO 41, 3506+5, 2002

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Zhang et al.,

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Robert Upton and Brent Ellerbroek

OPL 29, 24, 2840-2842, 2004/12

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Zernike Expansion of Separable Functions of Cartesian Coordinates

Colin J. R. Sheppard, Sam Campbell, Michael D. Hirschhorn

APLO 43, 3963-3966, 2004/07

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A novel approach for the determination of birefringence dispersion in nematic liquid crystals by using the continuous wavelet transform

Oguz Koysal, S Eren San, Serhat Ozder, and F Necati Ecevit

MST 14, 790-795, 2003/06

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Bad pixel identification by means of principal components analysis

Lopez-Alonso, Jose Manuel; Alda, Javier

OPE 41, 2152+6, 2002

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Dependence of the wave-front aberration on the radius of the reference sphere

Miks, Antonin

JOSA A 19, 1187+4, 2002/06

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Jon Y. Wang, D. E. Silva
APLO 19, 1510+??, 1980

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Miks, Antonin
JOSA A 19, 1867+5, 2002/09

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Digital restoration of defocused images in the wavelet domain
Lam, Edmund Y
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"Storage" of light: a useful concept?
Payne, M G; Deng, L
OPC 209, 473+8, 2002

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Sensing Wave-Front Amplitude and Phase with Phase Diversity
APLO 41, 2095+8, 2002/04

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Extended Nijboer-Zernike approach for the computation of optical point-spread functions
Janssen, Augustus J. E. M.
JOSA A 19, 849-857, 2002/05

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Analysis of Seidel aberration by use of the discrete wavelet transform
Chang, Rong-Seng; Sheu, Jin-Yi; Lin, Ching-Huang
APLO 41, 2408-2413, 2002/05

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Basic Wavefront Aberration Theory for Optical Metrology
JAMES C. WYANT & KATHERINE CREATH
APPLIED OPTICS AND OPTICAL ENGINEERING, VOL. XI, 1992

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Diffraction optics:
Thin diffractive optical elements known as ???photon sieves??? could potentially be the answer for

creating ultralarge (≥ 20 m) optics for space-based telescopes, according to a scientist from the US Air Force Academy in Colorado. Geoff Andersen from the Academy's Laser and Optics Research Center has fabricated such a sieve and analysed its imaging performance. The sieve is made from a 2.5 mm-thick quartz plate that has a chrome coating perforated with over 10 million tiny (10-279 micron diameter) holes. The 10 cm diameter element has a focal length of 1m and offered diffracted-limited focusing of green light. Work is now looking at producing a broadband version. OPL 30, 2976.

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news_opto.0.org

Sur les miroirs ou dispositifs optiques deformables par la lumiere.

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Underwater imaging:

An underwater optical radar that can generate 3D images of an object at a range of about 10 m in clear sea water has been built by Italian researchers. The device consists of an amplitude-modulated blue (405 nm) laser diode, an aspheric lens mounted on a piezoactuator-based scanning system and a photomultiplier tube detection system. Luciano Bartolini and his colleagues from Ente Nazionale Energie Alternative (ENEA) in Rome say that in laboratory conditions the scheme provided a sub-millimeter accuracy at a laser modulation frequency of 36.7 MHz. The team is now exploring the use of lasers that can be driven at higher frequencies and output powers in order to improve the imaging performance. APLO 44, 7130

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Optical propagation within a three-dimensional shadowed atmosphere-ocean field: Application to large deployment structures

Doyle, John P; Zibordi, Giuseppe

APLO 41, 4283+24, 2002

1990-05-0.pdf

OTF MTF CCD

Modulation transfer function of charge-coupled devices

John C. Feltz and Mohammad A. Karim

APLO 29, Issue 5, pp. 717, 1990/05

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Wouter Rensen:

In Near-field optics, a sample is illuminated through a sub-wavelength aperture. This aperture is typically a pulled, coated optical fiber. From the illuminated area, optical information like transmission or fluorescence can be detected. For correct operation, the sample needs to be in the near field of the aperture, i.e. within a few nanometers. This is achieved by mounting the fiber on a quartz tuning fork. The tuning fork is mechanically excited at its resonance frequency. When the fiber tip is within several nanometers from the sample, the resonance frequency of the tuning fork with fiber shifts resulting in a drop in amplitude and a phase shift of the piezoelectric tuning fork signal. The aperture is kept in the near field by adjusting the tip-sample-distance to keep the tuning fork signal constant (tuning fork based shear-force feedback). If the sample is mounted on a x-y-z-scanner, the sample can be scanned under the aperture and an optical image can be reconstructed. Recording the adjustments to keep the tip-sample-distance constant, also a topographic image of the sample can be reconstructed.

The main advantages of NSOM are the high optical resolution (≈ 50 nm) and the combined

topography. In several fields of biology, like cell biology and molecular biology, NSOM would be a powerful tool. However, the requirement of a liquid environment has been a major obstacle for tuning fork based shear force feedback. This has prevented many applications for NSOM in biology to emerge. The goal of this project is to overcome the limitations put forward by the presence of a liquid environment. A NSOM dedicated to biology will be developed and applied in the field of cell biology.

Tuning fork shear-force feedback.

Ruiter, A.G.T.; Werf, K.O.; van der. Veerman, J.A.; Garcia Parajo, M.F.; Rensen, W.H.J. & van Hulst, N.F.

ULM 71, 149-157, 1998

7 Other Articles of Interest

2005-03-2.pdf

Digital holographic microscopy: a noninvasive contrast imaging technique allowing quantitative visualization of living cells with subwavelength axial accuracy

Pierre Marquet, Benjamin Rappaz, Pierre J. Magistretti, Etienne Cuche, Yves Emery, Tristan Colomb, and Christian Depeursinge

OPL 30, 468, 03/2005

2006-09-2.pdf

A deconvolution-based algorithm for crowded field photometry with unknown Point Spread Function

Magain, Courbin, Gillon, Sohy, Letawe, Chantry, Letawe

astro-ph/0609600

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A Practical Guide to Wavelet Analysis.

Torrence, Christopher; Compo, Gilbert P.

BAMS 79, 61-78, 1998/01

2006-01-0.pdf

Combinatorics of Partial Derivatives

Michael Hardy

EJC 13 (2006) #R1