

# PROCEEDINGS OF SPIE

## *Optical and Infrared Interferometry II*

**William C. Danchi**  
**Françoise Delplancke**  
**Jayadev K. Rajagopal**  
*Editors*

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A. Amorim, J. Lima, Univ. de Lisboa (Portugal); O. Pfuhl, F. Eisenhauer, S. Kellner, M. Haug, M. Thiel, Max-Planck-Institut für extraterrestrische Physik (Germany); P. Carvas, Univ. de Lisboa (Portugal); G. Perrin, Observatoire de Paris à Meudon (France); W. Brandner, Max-Planck-Institut für Astronomie (Germany); C. Straubmeier, Univ. zu Köln (Germany); J.-P. Berger, Lab. d'Astrophysique de l'Observatoire de Grenoble (France)

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## SESSION 10 OBSERVING TECHNIQUES II

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- 7734 17 **The Fomalhaut debris disk seen from every angle with interferometry** [7734-42]  
O. Absil, Univ. of Liege (Belgium); B. Mennesson, Jet Propulsion Lab. (United States); J.-B. Le Bouquin, J.-C. Augereau, LAOG, CNRS, Univ. Joseph Fourier (France); R. Millan-Gabet, M. Colavita, Jet Propulsion Lab. (United States); P. Hinz, W. Liu, Steward Observatory, The Univ. of Arizona (United States); G. Serabyn, Jet Propulsion Lab. (United States)
- 7734 18 **Image reconstruction in optical interferometry: applications to the inner regions of protoplanetary disks** [7734-43]  
S. Renard, F. Malbet, Lab. d'Astrophysique de Grenoble, CNRS, UJF (France); M. Benisty, INAF, Osservatorio Astrofisico di Arcetri (Italy); E. Thiébaut, Ctr. de Recherche Astrophysique de Lyon, CNRS, UCBL, ENSL (France); J.-P. Berger, Lab. d'Astrophysique de Grenoble, CNRS, UJF (France) and European Southern Observatory (Chile)
- 7734 19 **PSF and field of view characteristics of imaging and nulling interferometers** [7734-44]  
F. Hénault, CNRS H. Fizeau, UNS, Observatoire de la Côte d'Azur (France)
- 7734 1A **MIRC closure phase studies for high precision measurements** [7734-45]  
M. Zhao, Jet Propulsion Lab. (United States); J. D. Monnier, X. Che, Univ. of Michigan (United States); T. ten Brummelaar, Georgia State Univ. (United States); E. Pedretti, N. D. Thureau, Univ. of St. Andrews (United Kingdom)
- 7734 1B **Speckle imaging with the SOAR and the very large telescopes** [7734-46]  
S. Rengaswamy, J. H. Girard, G. Montagnier, European Southern Observatory (Chile)

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- 7734 1C **Stellar intensity interferometry: imaging capabilities of air Cherenkov telescope arrays** [7734-47]  
P. D. Nuñez, S. LeBohec, D. Kieda, The Univ. of Utah (United States); R. Holmes, Boeing LTS, Inc. (United States); H. Jensen, D. Dravins, Lund Observatory (Sweden)
- 7734 1D **Stellar intensity interferometry: experimental steps toward long-baseline observations** [7734-48]  
S. LeBohec, B. Adams, The Univ. of Utah (United States); I. Bond, S. Bradbury, Univ. of Leeds (United Kingdom); D. Dravins, H. Jensen, Lund Observatory (Sweden); D. B. Kieda, D. Kress, E. Munford, P. D. Nuñez, R. Price, The Univ. of Utah (United States); E. Ribak, Technion-Israel Institute of Technology (Israel); J. Rose, Univ. of Leeds (United Kingdom); H. Simpson, J. Smith, The Univ. of Utah (United States)
- 7734 1E **The potential of rotating-baseline nulling interferometers operating within large single-telescope apertures** [7734-49]  
E. Serabyn, B. Mennesson, S. Martin, K. Liewer, D. Mawet, Jet Propulsion Lab. (United States); C. Hanot, Univ. de Liège (Belgium); F. Loya, M. M. Colavita, Jet Propulsion Lab. (United States); S. Ragland, W. M. Keck Observatory (United States)
- 7734 1G **Direct imaging with a hypertelescope of red supergiant stellar surfaces** [7734-51]  
F. Patru, European Southern Observatory (Chile); A. Chiavassa, Max Planck Institute for Astrophysics (Germany); D. Mourard, N. Tarmoul, Lab. Fizeau (France)

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**SESSION 12      SPACE INTERFEROMETER TECHNOLOGIES I**

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- 7734 1H **Systems engineering and application of system performance modeling in SIM Lite mission** [7734-52]  
M. Moshir, D. W. Murphy, D. L. Meier, M. H. Milman, Jet Propulsion Lab. (United States)
- 7734 1I **On-orbit dynamics and controls system architecture for SIM Lite** [7734-53]  
O. S. Alvarez-Salazar, Jet Propulsion Lab. (United States)
- 7734 1J **SIM Lite mission spectral calibration sensitivities and refinements** [7734-54]  
C. Zhai, X. An, R. Goullioud, B. Nemati, M. Shao, J. Shen, U. Wehmeier, X. Wang, M. Weilert, T. Werne, J. Wu, Jet Propulsion Lab. (United States)
- 7734 1K **SIM Lite: ground alignment of the instrument** [7734-55]  
F. G. Dekens, R. Goullioud, F. Nicaise, G. Kuan, M. Morales, Jet Propulsion Lab. (United States)
- 7734 1L **SIM Lite Guide-2 telescope system identification, control design and pointing performance evaluation** [7734-56]  
J. F. Shields, D. Boussalis, N. Fathpour, M. Weilert, I. Hahn, A. Ahmed, Jet Propulsion Lab. (United States)

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**SESSION 13      SPACE INTERFEROMETER TECHNOLOGIES II**

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- 7734 1M **The SIM Lite Astrometric Observatory: engineering risk reduction activity** [7734-62]  
R. Goullioud, F. Dekens, B. Nemati, X. An, L. Hovland, Jet Propulsion Lab. (United States)
- 7734 1N **SIM interferometer testbed (SCDU) status and recent results** [7734-57]  
B. Nemati, X. An, R. Goullioud, M. Shao, T.-P. Shen, U. J. Wehmeier, M. A. Weilert, X. Wang, T. A. Werne, J. P. Wu, C. Zhai, Jet Propulsion Lab. (United States)
- 7734 1O **Flight qualification and performance testing of SIM precision optical mechanisms** [7734-58]  
A. Toorian, R. Smythe, M. Morales, J. Carson, J. D. Moore, Jet Propulsion Lab. (United States)
- 7734 1P **Photonic technologies for a pupil remapping interferometer** [7734-59]  
P. Tuthill, The Univ. of Sydney (Australia); N. Jovanovic, Macquarie Univ. (Australia) and Australian Astronomical Observatory (Australia); S. Lacour, Observatoire de Paris à Meudon (France); A. Lehmann, Macquarie Univ. (Australia); M. Ams, G. Marshall, Macquarie Univ. (Australia) and Ctr. for Ultrahigh bandwidth Devices for Optical Systems (Australia); J. Lawrence, Macquarie Univ. (Australia) and Australian Astronomical Observatory (Australia); M. Withford, Macquarie Univ. (Australia) and Ctr. for Ultrahigh bandwidth Devices for Optical Systems (Australia); G. Robertson, M. Ireland, B. Pope, P. Stewart, The Univ. of Sydney (Australia)
- 7734 1R **Picometer stable scan mechanism for gravitational wave detection in space** [7734-61]  
N. Rijnveld, J. A. C. M. Pijnenburg, TNO Science & Industry (Netherlands)

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- 7734 1S **MATISSE cold optics opto-mechanical design** [7734-63]  
N. Tromp, F. Rigal, E. Elswijk, G. Kroes, NOVA-ASTRON (Netherlands); Y. Bresson, Observatoire de la Côte d'Azur (France); R. Navarro, NOVA-ASTRON (Netherlands)
- 7734 1T **Stellar intensity interferometry: optimizing air Cherenkov telescope array layouts** [7734-64]  
H. Jensen, D. Dravins, Lund Observatory (Sweden); S. LeBohec, P. D. Nuñez, The Univ. of Utah (United States)
- 7734 1U **LINC-NIRVANA piston control elements** [7734-65]  
M. Brix, J.-U. Pott, T. Bertram, Max-Planck-Institut für Astronomie (Germany); S. Rost, Univ. zu Köln (Germany); J. L. Borelli, T. M. Herbst, M. Kuerster, R.-R. Rohloff, Max-Planck-Institut für Astronomie (Germany)
- 7734 1V **The LINC-NIRVANA fringe and flexure tracker: control design overview** [7734-66]  
S. Rost, A. Eckart, M. Horrobin, B. Lindhorst, U. Lindhorst, L. Moser, S. Smajic, C. Straubmeier, E. Tremou, I. Wank, J. Zuther, Univ. zu Köln (Germany); T. Bertram, Max-Planck-Institut für Astronomie (Germany)

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**SESSION 15      CRITICAL SUBSYSTEMS I**

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- 7734 1W **Testing and alignment of the LBTI** [7734-67]  
J. Kim, P. Hinz, O. Durney, T. Connors, M. Montoya, Steward Observatory, The Univ. of Arizona (United States); C. Schwab, Univ. Heidelberg (Germany)

- 7734 1X **Fringe detection and piston variability in LINC-NIRVANA** [7734-68]  
M. Horrobin, A. Eckart, B. Lindhorst, U. Lindhorst, L. Moser, S. Rost, S. Smajic, C. Straubmeier, E. Tremou, I. Wank, J. Zuther, Univ. zu Köln (Germany); T. Bertram, Max Planck Institute for Astronomy (Germany); C. Arcidiacono, Osservatorio Astrofisico di Arcetri (USA)

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**SESSION 16 CRITICAL SUBSYSTEMS II**

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- 7734 1Z **GRAVITY: design and performance of the fringe tracker** [7734-70]  
E. Choquet, LESIA, Observatoire de Paris à Meudon (France) and Groupement d'intérêt Scientifique PHASE (France); F. Cassaing, ONERA/DOTA (France) and Groupement d'intérêt Scientifique PHASE (France); G. Perrin, LESIA, Observatoire de Paris à Meudon (France) and Groupement d'intérêt Scientifique PHASE (France); F. Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); W. Brandner, Max-Planck-Institut für Astronomie (Germany); C. Straubmeier, Univ. zu Köln (Germany); K. Perraut, Lab. d'Astrophysique, Observatoire de Grenoble (France); S. Gillessen, Max-Planck-Institut für extraterrestrische Physik (Germany)
- 7734 20 **First results using PRIMA FSU as a fringe tracker for MIDI** [7734-130]  
A. Müller, European Southern Observatory (Germany) and Max-Planck-Institut für Astronomie (Germany); J.-U. Pott, Max-Planck-Institut für Astronomie (Germany); S. Morel, European Southern Observatory (Chile); R. Abuter, G. van Belle, European Southern Observatory (Germany); R. van Boekel, L. Burtscher, Max-Planck-Institut für Astronomie (Germany); F. Delplancke, European Southern Observatory (Germany); T. Henning, Max-Planck-Institut für Astronomie (United States); W. Jaffe, Sterrewacht Leiden, Leiden Univ. (United States); C. Leinert, Max-Planck-Institut für Astronomie (Germany); B. Lopez, A. Matter, Lab. Fizeau (France); K. Meisenheimer, Max-Planck-Institut für Astronomie (Germany); C. Schmid, European Southern Observatory (Germany); K. Tristram, Max-Planck-Institut für Radioastronomie (Germany); A. P. Verhoeff, Astronomical Institute Anton Pannekoek, Univ. of Amsterdam (Netherlands)
- 7734 21 **The fringe detection laser metrology for the GRAVITY interferometer at the VLTI** [7734-72]  
H. Bartko, S. Gillessen, S. Rabien, M. Thiel, A. Gräter, M. Haug, S. Kellner, F. Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); S. Lacour, LESIA, Observatoire de Paris, CNRS, UPMC, Univ. Paris Diderot (France); C. Straubmeier, Univ. zu Köln (Germany); J.-P. Berger, Lab. d'Astrophysique de l'Observatoire de Grenoble (France) and European Southern Observatory (Germany); L. Jocou, Lab. d'Astrophysique de l'Observatoire de Grenoble (France); W. Chibani, S. Lust, D. Moch, O. Pfuhl, W. Fabian, Max-Planck-Institut für extraterrestrische Physik (Germany); C. Araujo-Hauck, Univ. zu Köln (Germany); K. Perraut, Lab. d'Astrophysique de l'Observatoire de Grenoble (France); W. Brandner, Max-Planck-Institut für Astronomie (Germany); G. Perrin, LESIA, Observatoire de Paris, CNRS, UPMC, Univ. Paris Diderot (France); A. Amorim, Univ. de Lisboa (Portugal)
- 7734 22 **First results from fringe tracking with the PRIMA fringe sensor unit** [7734-73]  
J. Sahlmann, Observatoire de Genève (Switzerland), European Southern Observatory (Germany), European Southern Observatory (Chile); R. Abuter, S. Ménardi, C. Schmid, N. Di Lieto, F. Delplancke, R. Frahm, N. Gomes, European Southern Observatory (Germany); P. Haguenuauer, European Southern Observatory (Chile); S. Lévêque, European Southern Observatory (Germany); S. Morel, European Southern Observatory (Chile); A. Müller, European Southern Observatory (Germany) and Max-Planck-Institut für Astronomie

(Germany); T. Phan Duc, European Southern Observatory (Germany); N. Schuhler, European Southern Observatory (Chile); G. van Belle, European Southern Observatory (Germany)

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**SESSION 17 CRITICAL SUBSYSTEMS III**

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- 7734 23 **The polarization-based collimated beam combiner and the proposed NOVA fringe tracker (NFT) for the VLTI** [7734-74]  
J. A. Meisner, W. J. Jaffe, Leiden Univ. (Netherlands); R. S. Le Poole, Leiden Univ. (Netherlands) and TNO Science and Industry (Netherlands); S. F. Pereira, Technische Univ. Delft (Netherlands); A. Quirrenbach, Landessternwarte Heidelberg (Germany); D. Raban, A. Vossteen, TNO Science and Industry (Netherlands)
- 7734 24 **The planar optics phase sensor: a study for the VLTI 2nd generation fringe tracker** [7734-76]  
N. Blind, J.-B. Le Bouquin, Lab. d'Astrophysique de Grenoble (France); O. Absil, Univ. de Liège (Belgium); M. Alimir, GIPSA-Lab (France); J.-P. Berger, European Southern Observatory (Chile); D. Defrère, Univ. de Liège (Belgium); P. Feautrier, Lab. d'Astrophysique de Grenoble (France); F. Hénault, Lab. H. FIZEAU, Observatoire de la Côte d'Azur (France); L. Jocou, P. Kern, Lab. d'Astrophysique de Grenoble (France); T. Laurent, Univ. de Liège (Belgium); F. Malbet, Lab. d'Astrophysique de Grenoble (France); D. Mourard, Lab. H. FIZEAU, Observatoire de la Côte d'Azur (France); K. Rousselet-Perraut, Lab. d'Astrophysique de Grenoble (France); A. Sarlette, J. Surdej, Univ. de Liège (Belgium); N. Tarmoul, Lab. H. FIZEAU, Observatoire de la Côte d'Azur (France); E. Tatulli, Lab. d'Astrophysique de Grenoble (France); L. Vincent, Lab. d'Astrophysique de Grenoble (France) and GIPSA-Lab (France)
- 7734 25 **Multi-axial integrated optics solution for POPSS, a 2nd-generation VLTI fringe tracker** [7734-77]  
N. Tarmoul, F. Hénault, D. Mourard, Lab. H. FIZEAU, CNRS, Univ. de Nice Sophia, Observatoire de la Côte d'Azur (France); J.-B. Le Bouquin, L. Jocou, Univ. Joseph-Fourier, CNRS, Lab. d'Astrophysique de Grenoble (France); P. Kern, Lab. d'Astrophysique de l'Observatoire de Grenoble (France); J.-P. Berger, European Southern Observatory (Chile); O. Absil, Univ. de Liège (Belgium)
- 7734 26 **Coherent integration: to real time or not to real time? That is the question.** [7734-78]  
A. M. Jorgensen, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); D. Mozurkewich, Seabrook Engineering (United States)

**Part Two**

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**SESSION 18 TECHNOLOGIES I**

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- 7734 27 **The 2008-2009 outburst of the young binary system Z CMa unraveled by interferometry with high spectral resolution** [7734-79]  
F. Malbet, Lab. d'Astrophysique de Grenoble, Univ. Joseph Fourier, CNRS (France); M. Benisty, INAF, Osservatorio Astrofisico di Arcetri (Italy); C. Dougados, Lab. d'Astrophysique de Grenoble, Univ. Joseph Fourier, CNRS (France); A. Natta, INAF, Osservatorio Astrofisico di Arcetri (Italy); J.-B. Le Bouquin, Lab. d'Astrophysique de Grenoble, Univ. Joseph Fourier, CNRS (France); F. Massi, INAF, Osservatorio Astrofisico di Arcetri (Italy); J. Bouvier, Lab. d'Astrophysique de Grenoble, Univ. Joseph Fourier, CNRS (France); K. Grankin, Crimean

- Astrophysical Observatory (Ukraine); M. Bonnefoy, E. Whelan, Lab. d'Astrophysique de Grenoble, Univ. Joseph Fourier, CNRS (France)
- 7734 2B **Implementation of the chromatic phase diversity method on the SIRIUS test bench** [7734-80]  
 N. Tarmoul, D. Mourard, F. Hénault, J.-M. Clauze, P. Girard, A. Marcotto, N. Mauclert, A. Spang, Y. Rabbia, A. Roussel, Lab. H. FIZEAU, CNRS, Univ. de Nice Sophia Antipolis, Observatoire de la Côte d'Azur (France)
- 7734 29 **Wavefront calibration and correction of an optical train path: a compliant static deformable mirror approach** [7734-81]  
 J. H. Clark III, U.S. Naval Research Lab. (United States); F. E. Penado, Northern Arizona Univ. (United States); F. Cornelius, Lowell Observatory (United States)
- 7734 2A **The Fiber Coupler subsystem of the future VLTI instrument GRAVITY** [7734-82]  
 O. Pfuhl, F. Eisenhauer, M. Haug, M. Thiel, S. Kellner, Max-Planck-Institut für extraterrestrische Physik (Germany); A. Amorim, SIM, Fac. de Ciências da Univ. de Lisboa (Portugal); W. Brandner, Max-Planck-Institut für Astronomie (Germany); J.-P. Berger, Laboratoire d'Astrophysique Observatoire de Grenoble (France) and European Southern Observatory (Germany); K. Rousselet-Perraut, Laboratoire d'Astrophysique Obs. de Grenoble (France); G. S. Perrin, LESIA, Observatoire de Paris Meudon (France) and Groupement d'Intérêt Scientifique PHASE (France); C. Straubmeier, Univ. zu Köln (Germany); S. Gillessen, H. Bartko, A. P. Gräter, Max-Planck-Institut für extraterrestrische Physik (Germany)
- 7734 2B **Reliable optical pump architecture for highly coherent lasers used in space metrology applications** [7734-83]  
 H. Erlig, Y. Qiu, I. Poberezhskiy, P. Meras, J. Wu, Jet Propulsion Lab. (United States)
- 7734 2C **'OHANA-Iki: a test-bed for the 'OHANA beam combiner and delay line at CFHT** [7734-84]  
 M. Baril, O. Lai, G. Zahariade, F. Bouchacourt, Canada-France-Hawaii Telescope (United States); G. Perrin, P. Fedou, LESIA, Observatoire de Paris à Meudon (France); J. Woillez, W. M. Keck Observatory (United States)

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## **SESSION 19 TECHNOLOGIES II**

- 7734 2D **Recent progress in wide-field imaging interferometry** [7734-85]  
 S. A. Rinehart, D. T. Leisawitz, M. R. Bolcar, K. M. Chaprnka, R. G. Lyon, NASA Goddard Space Flight Ctr. (United States); S. F. Maher, Science Systems and Applications, Inc. (United States); N. Memarsadeghi, NASA Goddard Space Flight Ctr. (United States); E. J. Sinukoff, McMaster Univ. (Canada); E. Teichman, Univ. of Maryland, College Park (United States)
- 7734 2E **The NULLTIMATE test bench: achromatic phase shifters for nulling interferometry** [7734-86]  
 P. A. Schuller, O. Demangeon, A. Léger, Univ. Paris-Sud, Institut d'Astrophysique Spatiale, CNRS (France); M. Barillot, Thales Alenia Space (France); B. Chazelas, Univ. of Geneva (Switzerland); M. Decaudin, Univ. Paris-Sud, Institut d'Astrophysique Spatiale, CNRS (France); M. Derrien, Pôle Optique Rhône-Alpes (France); P. Duret, P. Gabor, Univ. Paris-Sud, Institut d'Astrophysique Spatiale, CNRS (France); G. Gadret, Lab. Interdisciplinaire Carnot de Bourgogne, CNRS, Univ. de Bourgogne (France); J. Gay, H. Fizeau, Univ. Nice Sophia Antipolis, CNRS, Observatoire de la Côte d'Azur (France); A. Labèque, Univ. Paris-Sud, Institut d'Astrophysique Spatiale, CNRS (France); R. Launhardt, Max-Planck-Institut für Astronomie (Germany); J. Mangin, Lab. Interdisciplinaire Carnot de Bourgogne, CNRS, Univ. de Bourgogne (France); Y. Rabbia, H. Fizeau, Univ. Nice Sophia Antipolis, CNRS, Observatoire

de la Côte d'Azur (France); Z. Sodnik, European Space Research and Technology Ctr. (Netherlands)

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**SESSION 20 SOFTWARE I**

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- 7734 2F **Estimating the phase in interferometry: performance comparison between multi-mode and single-mode schemes** [7734-87]  
E. Tatulli, N. Blind, F. Malbet, A. Chelli, Lab. d'Astrophysique de l'Observatoire de Grenoble (France); J.-P. Berger, European Southern Observatory (Chile)
- 7734 2G **Analysis of LBT LINC-NIRVANA simulated images of galaxies** [7734-88]  
P. Ciliegi, INAF - Osservatorio Astronomico di Bologna (Italy); A. La Camera, Univ. degli Studi di Genova (Italy); C. Arcidiacono, INAF - Arcetri Astronomical Observatory (Italy); M. Bertero, P. Boccacci, Univ. degli Studi di Genova (Italy); E. Diolaiti, INAF - Osservatorio Astronomico di Bologna (Italy); I. Foppiani, Univ. degli Studi di Bologna (Italy); M. Lombini, L. Schreiber, INAF - Osservatorio Astronomico di Bologna (Italy)
- 7734 2H **A novel imaging algorithm for broadband aperture synthesis data** [7734-89]  
C. A. Hummel, European Southern Observatory (Germany)

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**SESSION 21 SOFTWARE II**

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- 7734 2I **A novel image reconstruction software for optical/infrared interferometry** [7734-90]  
F. Baron, J. D. Monnier, Univ. of Michigan (United States); B. Kloppenborg, Univ. of Denver (United States)
- 7734 2J **Spectral regularization and sparse representation bases for interferometric imaging** [7734-91]  
M. Vannier, D. Mary, Lab. H. Fizeau, Univ. de Nice Sophia Antipolis (France); F. Millour, Max Planck Institute for Radio Astronomy, Bonn (Germany) and Lab. H. Fizeau, Univ. de Nice Sophia Antipolis (France); R. G. Petrov, Lab. H. Fizeau, Univ. de Nice Sophia Antipolis (France); S. Bourguignon, Cassiopé, Observatoire de la Côte d'Azur (France); C. Theys, Lab. H. Fizeau, Univ. de Nice Sophia Antipolis (France)

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**SESSION 22 SPACE INTERFEROMETER TECHNOLOGIES III**

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- 7734 2K **New concept for direct detection and spectra of exoplanets** [7734-92]  
T. Matsuo, National Astronomical Observatory of Japan (Japan) and Jet Propulsion Lab. (United States); W. A. Traub, Jet Propulsion Lab. (United States); M. Hattori, Tohoku Univ. (Japan); M. Tamura, National Astronomical Observatory of Japan (Japan); M. Shao, Jet Propulsion Lab. (United States)
- 7734 2L **Development of a CElestial Infrared Nuller Experiment (CELINE) for broadband nulling and new single-mode fiber testing** [7734-163]  
C. Hanot, P. Riaud, Univ. de Liège (Belgium); D. Mawet, Jet Propulsion Lab. (United States); O. Absil, J. Surdej, Univ. de Liège (Belgium); S. Habraken, Univ. de Liège (Belgium) and Ctr. Spatial de Liege (Belgium)

- 7734 2M **PERSEE: experimental results on the cophased nulling bench** [7734-95]  
J. Lozi, F. Cassaing, ONERA (France) and Groupement d'Intérêt Scientifique PHASE (France); J. M. Le Duigou, Ctr. National d'Études Spatiales (France); K. Houairi, B. Sorrente, J. Montri, ONERA (France) and Groupement d'Intérêt Scientifique PHASE (France); S. Jacquinod, Institut d'Astrophysique Spatiale d'Orsay (France); J.-M. Rees, L. Pham, E. Lhome, T. Buey, Observatoire de Paris à Meudon (France) and Groupement d'Intérêt Scientifique PHASE (France); F. Hénault, A. Marcotto, P. Girard, N. Mauclert, Observatoire de la Côte d'Azur (France); M. Barillot, Thales Alenia Space (France); V. Coudé du Foresto, Observatoire de Paris à Meudon (France) and Groupement d'Intérêt Scientifique PHASE (France); M. Ollivier, Institut d'Astrophysique Spatiale d'Orsay (France)

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**SESSION 23 OBSERVING TECHNOLOGIES**

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- 7734 2N **The 2010 interferometric imaging beauty contest** [7734-96]  
F. Malbet, Lab. d'Astrophysique de Grenoble, Univ. J. Fourier, CNRS (France) and Jean-Marie Mariotti Ctr. (France); W. Cotton, National Radio Astronomy Observatory (United States); G. Duvert, Lab. d'Astrophysique de Grenoble, Univ. J. Fourier, CNRS (France) and Jean-Marie Mariotti Ctr. (France); P. Lawson, Jet Propulsion Lab. (United States); A. Chiavassa, Max-Planck-Institut für Astrophysik (Germany); J. Young, Cavendish Lab. (United Kingdom); F. Baron, Univ. of Michigan (United States); D. Buscher, Cavendish Lab. (United Kingdom); S. Rengaswamy, European Southern Observatory (Germany); B. Kloppenborg, Univ. of Denver (United States); M. Vannier, Lab. H. Fizeau, Univ. de Nice-Sophia Antipolis (France); L. Mugnier, ONERA, DOTA (France)
- 7734 2O **Optical Long Baseline Interferometry News (OLBIN)** [7734-97]  
P. R. Lawson, Jet Propulsion Lab. (United States); F. Malbet, Lab. d'Astrophysique de l'Observatoire de Grenoble (France)
- 7734 2P **Developing achromatic coronagraphic optics for LMIRCam and the LBT** [7734-98]  
M. A. Kenworthy, Leiden Observatory, Leiden Univ. (Netherlands) and Steward Observatory, The Univ. of Arizona (United States); P. M. Hinz, J. L. Codona, Leiden Observatory, Leiden Univ. (United States); J. C. Wilson, M. F. Skrutskie, Univ. of Virginia (United States); E. Solheid, Leiden Observatory, Leiden Univ. (United States)
- 7734 2Q **Coherent integration results from the NPOI** [7734-99]  
A. M. Jorgensen, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); H. R. Schmitt, U.S. Naval Research Lab. (United States) and Computational Physics, Inc. (United States); J. T. Armstrong, U.S. Naval Research Lab. (United States); D. Mozurkewich, Seabrook Engineering (United States); E. K. Baines, R. Hindsley, U.S. Naval Research Lab. (United States); D. Hutter, U.S. Naval Observatory (United States); S. Restaino, U.S. Naval Research Lab. (United States)
- 7734 2R **Toward the stability required for direct observations of exoplanets with nulling interferometry** [7734-100]  
O. Demangeon, P. A. Schuller, A. Léger, P. Duret, Univ. Paris-Sud, Institut d'Astrophysique Spatiale, CNRS (France)
- 7734 2S **Development of a statistical reduction method for the Palomar Fiber Nuller** [7734-101]  
C. Hanot, Univ. de Liège (Belgium); B. Mennesson, E. Serabyn, S. Martin, K. Liewer, F. Loya, D. Mawet, Jet Propulsion Lab. (United States); P. Riaud, O. Absil, Univ. de Liège (Belgium)

- 7734 2T **Integrated optic beam combiners for stellar interferometry and nulling at near- and mid-infrared wavelengths** [7734-102]  
H. Hsiao, K. A. Winick, J. D. Monnier, Univ. of Michigan (United States); J.-P. Berger, Lab. d'Astrophysique, CNRS, Observatoire de Grenoble (France)

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- 7734 2U **Review of OCA activities on nulling testbench PERSEE** [7734-103]  
F. Hénault, CNRS H. Fizeau, UNS, Observatoire de la Côte d'Azur (France); P. Girard, Observatoire de la Côte d'Azur (France); A. Marcotto, N. Mauclert, C. Bailet, J.-M. Clausse, D. Mourard, Y. Rabbia, A. Roussel, CNRS H. Fizeau, UNS, Observatoire de la Côte d'Azur (France); M. Barillot, Thales Alenia Space (France); F. Cassaing, ONERA (France); J.-M. Le Duigou, Ctr. National d'Études Spatiales (France)
- 7734 2V **High precision interferometer: MIRC with photometric channels** [7734-104]  
X. Che, J. D. Monnier, S. Webster, Univ. of Michigan (United States)
- 7734 2W **Measuring the effective wavelength of CHARA classic** [7734-105]  
E. C. Bowsher, H. A. McAlister, Georgia State Univ. (United States); T. A. ten Brummelaar, The CHARA Array, Mount Wilson Observatory (United States)
- 7734 2X **The LINC-NIRVANA fringe and flexure tracker: first measurements of the testbed interferometer** [7734-106]  
L. Moser, Univ. zu Köln (Germany); A. Eckart, Univ. zu Köln (Germany) and Max-Planck-Institut für Radioastronomie (Germany); M. Horrobin, B. Lindhorst, S. Rost, C. Straubmeier, E. Tremou, I. Wank, J. Zuther, Univ. zu Köln (Germany); T. Bertram, Max-Planck-Institut für Astronomie (Germany)
- 7734 2Y **OVMS: the optical path difference and vibration monitoring system for the LBT and its interferometers** [7734-107]  
M. Kürster, T. Bertram, J. L. Borelli, M. Brix, W. Gässler, T. M. Herbst, V. Naranjo, J.-U. Pott, J. Trowitzsch, Max-Planck-Institut für Astronomie (Germany); T. E. Connors, P. M. Hinz, T. J. McMahon, Steward Observatory, The Univ. of Arizona (United States); D. S. Ashby, J. G. Brynnel, N. J. Cushing, T. Edgin, J. D. Esguerra, R. F. Green, J. Kraus, J. Little, LBTO, The Univ. of Arizona (United States); U. Beckmann, G. P. Weigelt, Max-Planck-Institut für Radioastronomie (Germany)
- 7734 2Z **GRAVITY spectrometer: metrology laser blocking strategy at OD=12** [7734-108]  
C. Araujo-Hauck, S. Fischer, Univ. zu Köln (Germany); H. Bartko, S. Gillessen, Max-Planck-Institut für extraterrestrische Physik (Germany); C. Straubmeier, M. Wiest, S. Yazici, Univ. zu Köln (Germany); F. Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); G. S. Perrin, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France) and Institut National des Sciences de l'Univers (France); W. Brandner, Max-Planck-Institut für Astronomie (Germany); K. Perraut, Lab. d'Astrophysique Observatoire de Grenoble (France); A. Amorim, Facultade de Ciencias da Univ. de Lisboa (Portugal); A. Eckart, Univ. zu Köln (Germany) and Max Planck Institute für Radio Astronomie (Germany)
- 7734 30 **The GRAVITY integrated optics beam combination** [7734-109]  
L. Jocou, K. Perraut, A. Nolot, LAOG, CNRS (France); J.-P. Berger, European Southern Observatory (Germany); T. Moulin, LAOG, CNRS (United States); P. Labeye, CEA/LETI (France); S. Lacour, G. Perrin, Max-Planck-Institute for extraterrestrial physics (Germany);

J. B. Lebouquin, LAOG, CNRS (France); H. Bartko, M. Thiel, F. Eisenhauer, LESIA, Observatoire de Paris à Meudon (France)

- 7734 32 **The GRAVITY spectrometers: optical design and principle of operation** [7734-111]  
C. Straubmeier, S. Fischer, C. Araujo-Hauck, M. Wiest, S. Yazici, Univ. zu Köln (Germany); F. Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); G. Perrin, LESIA, Observatoire de Paris, CNRS, UPMC (France), Institut National des Sciences de l'Univers (France), and Groupement d'Interet Scientifique PHASE (France); W. Brandner, Max-Planck-Institut für Astronomie (Germany); K. Perraut, Lab. d'Astrophysique Observatoire Grenoble (France); A. Amorim, Faculdade de Ciencias da Univ. de Lisboa (Portugal); M. Schöller, European Southern Observatory (Germany); A. Eckart, Univ. zu Köln (Germany) and Max-Planck-Institut für Radioastronomie (Germany)
- 7734 34 **The hydrogen emission of young stellar objects: key science for next-generation instruments and facilities** [7734-113]  
P. J. V. Garcia, Univ. Joseph Fourier, CNRS, Institut de Planetologie et d'Astrophysique de Grenoble (Portugal) and Univ. do Porto (Portugal); M. Benisty, S. Rajabi, INAF, Osservatorio Astrofisico di Arcetri (Italy); C. Dougados, Univ. Joseph Fourier, CNRS, Institut de Planetologie et d'Astrophysique de Grenoble (France); F. Massi, F. Bacciotti, INAF, Osservatorio Astrofisico di Arcetri (Italy); J.-B. Le Bouquin, F. Malbet, Univ. Joseph Fourier, CNRS, Institut de Planetologie et d'Astrophysique de Grenoble (France); L. Podio, Kapteyn Astronomical Institute (Netherlands); S. Renard, E. Whelan, Univ. Joseph Fourier, CNRS, Institut de Planetologie et d'Astrophysique de Grenoble (France)
- 7734 35 **PIONIER: a visitor instrument for VLTI** [7734-114]  
J.-P. Berger, LAOG, UJF, CNRS (France) and European Southern Observatory (Chile); G. Zins, B. Lazareff, J.-B. Lebouquin, L. Jocou, P. Kern, LAOG, UJF, CNRS (France); R. Millan-Gabet, NASA Exoplanet Science Institute (United States); W. Traub, Jet Propulsion Lab. (United States); P. Haguenauer, European Southern Observatory (Chile); O. Absil, Univ. de Liege (Belgium); J. Augereau, LAOG, UJF, CNRS (France); M. Benisty, INAF, Osservatorio Astrofisico di Arcetri (Italy); N. Blind, X. Bonfils, A. Delboulbe, P. Feautrier, M. Germain, Lab. d'Astrophysique de Grenoble (Chile); D. Gillier, Lab. d'Astrophysique de l'Observatoire de Grenoble (France); P. Gitton, European Southern Observatory (Chile); M. Kiekebusch, J. Knudstrup, J. Lizon, European Southern Observatory (Germany); Y. Magnard, F. Malbet, D. Maurel, F. Menard, M. Micallef, L. Michaud, LAOG, UJF, CNRS (France); S. Morel, European Southern Observatory (Chile); T. Moulin, LAOG, UJF, CNRS (France); D. Popovic, European Southern Observatory (Chile); K. Perraut, P. Rabou, S. Rochat, F. Roussel, A. Roux, E. Stadler, E. Tatulli, LAOG, UJF, CNRS (France)

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- 7734 36 **Evaluation of performance of the MACAO systems at the VLTI** [7734-115]  
S. Rengaswamy, P. Haguenauer, S. Brillant, A. Cortes, J. H. Girard, European Southern Observatory (Chile); S. Guisard, J. Paufique, European Southern Observatory (Germany); A. Pino, European Southern Observatory (Chile)

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- 7734 37 **Status of the VLTI-UT performances wrt vibrations [7734-116]**  
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- 7734 38 **Comparison between closure phase and phase referenced interferometric image reconstructions [7734-117]**  
N. Gomes, European Organisation for Astronomical Research in the Southern Hemisphere (Germany) and Univ. do Porto (Portugal) and Lab. de Sistemas (Portugal); P. J. V. Garcia, Lab. d'Astrophysique (France) and Lab. d'Astrophysique de l'Observatoire de Grenoble (Portugal); E. M. Thiébaut, Observatoire de Lyon (France); S. Renard, Lab. d'Astrophysique de l'Observatoire de Grenoble (France); M. Filho, Centro de Astrofísica da Univ. do Porto (Portugal)
- 7734 39 **The effects of atmospheric calibration errors on source model parameters [7734-118]**  
C. Tycner, Central Michigan Univ. (United States); D. J. Hutter, R. T. Zavala, U. S. Naval Observatory (United States)
- 7734 3A **Dual three-way infrared beam combiner at the CHARA Array [7734-119]**  
J. Sturmann, T. ten Brummelaar, L. Sturmann, H. A. McAlister, Georgia State Univ. (United States)
- 7734 3C **Detection of a geostationary satellite with the Navy Prototype Optical Interferometer [7734-121]**  
J. T. Armstrong, R. B. Hindsley, U.S. Naval Research Lab. (United States); H. R. Schmitt, Computational Physics, Inc. (United States); F. J. Vrba, J. A. Benson, D. J. Hutter, R. T. Zavala, U.S. Naval Observatory (United States)
- 7734 3D **Imaging simulations of selected science with the Magdalena Ridge Observatory Interferometer [7734-122]**  
M. Creech-Eakman, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); J. Young, C. Haniff, D. Buscher, Univ. of Cambridge (United Kingdom); M. Elvis, Harvard-Smithsonian Ctr. for Astrophysics (United States); A. Chiavassa, Max Planck Institute for Astrophysics (Germany); M. Schartmann, Max Planck Institute for Extraterrestrial Physics (Germany)
- 7734 3F **A publication database for optical long baseline interferometry [7734-124]**  
F. Malbet, G. Mella, Lab. d'Astrophysique de Grenoble, Univ. J. Fourier, CNRS (France) and Jean-Marie Mariotti Ctr. (France); P. Lawson, Jet Propulsion Lab. (United States); E. Taillifet, S. Lafrasse, Lab. d'Astrophysique de Grenoble, Univ. J. Fourier, CNRS (France) and Jean-Marie Mariotti Ctr. (France)
- 7734 3G **Observations of binaries with the NPOI [7734-125]**  
H. R. Schmitt, Computational Physics, Inc. (United States) and U.S. Naval Research Lab. (United States); J. T. Armstrong, U.S. Naval Research Lab. (United States); A. M. Jorgensen, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); E. K. Baines, R. B. Hindsley, U.S. Naval Research Lab. (United States)

- 7734 3H **SIM Lite detection of habitable planets in P-type binary-planetary systems** [7734-126]  
 X. Pan, M. Shao, S. Shaklan, R. Goullioud, Jet Propulsion Lab. (United States)
- 7734 3I **Homothetic apodization of circular aperture HACA: simulation results** [7734-127]  
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- 7734 3J **Tunable spatial heterodyne spectroscopy (TSHS): a new technique for broadband visible interferometry** [7734-128]  
 S. S. Hosseini, A. Gong, D. Ruth, H. A. Baldis, W. Harris, Univ. of California, Davis (United States)
- 7734 3K **From fringes to the USNO Navy Prototype Optical Interferometer Astrometric Catalog**  
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 J. A. Benson, D. J. Hutter, R. T. Zavala, H. C. Harris, P. D. Shankland, K. J. Johnston, U.S. Naval Observatory (United States)
- 7734 3L **Limb-darkened angular diameters of stars with combined infrared and optical interferometry** [7734-131]  
 E. K. Baines, J. T. Armstrong, U.S. Naval Research Lab. (United States); H. R. Schmitt, U.S. Naval Research Lab. (United States) and Computational Physics, Inc. (United States)

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#### POSTER SESSION: TECHNOLOGIES

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- 7734 3M **A very wide-field wavefront sensor for a very narrow-field interferometer** [7734-132]  
 V. Viotto, INAF, Osservatorio Astronomico di Padova (Italy) and Univ. di Padova (Italy); R. Ragazzoni, INAF, Osservatorio Astronomico di Padova (Italy); C. Arcidiacono, INAF, Osservatorio Astronomico di Firenze (Italy); M. Bergomi, Univ. di Padova (Italy); A. Brunelli, Univ. degli Studi di Padova (Italy); M. Dima, J. Farinato, G. Gentile, D. Magrin, INAF, Osservatorio Astronomico di Padova (Italy); G. Cosentino, Univ. di Bologna (Italy); E. Diolaiti, I. Foppiani, M. Lombini, INAF, Osservatorio Astronomico di Bologna (Italy); L. Schreiber, Univ. di Bologna (Italy); T. Bertram, P. Bizenberger, F. De Bonis, W. Gässler, T. Herbst, M. Kuerster, D. Meschke, L. Mohr, R.-R. Rohloff, Max-Planck-Institut für Astronomie (Germany)
- 7734 3N **Monolithic Michelson Interferometer as ultra stable wavelength reference** [7734-133]  
 X. Wan, J. Ge, Univ. of Florida (United States)
- 7734 3O **Development of a high-dynamic range imaging instrument for a single telescope by a pupil remapping system** [7734-134]  
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- 7734 3P **Three-dimensional photonic combiner for optical astro interferometry** [7734-136]  
 S. Minardi, T. Pertsch, R. Neuhäuser, Friedrich-Schiller-Univ. Jena (Germany)
- 7734 3Q **Development of Monolithic Michelson Interferometer for RV measurement in IR** [7734-137]  
 J. Wang, X. Wan, J. C. Ge, Univ. of Florida (United States)
- 7734 3R **Single-mode mid-infrared waveguides for spectro-interferometry applications** [7734-138]  
 G. Martin, Lab. d'Astrophysique de l'Observatoire de Grenoble (France); L. Labadie, Instituto de Astrofísica de Canarias (Spain); O. Caballero-Calero, R. Grille, B. Arezki, P. Kern, Lab. d'Astrophysique de l'Observatoire de Grenoble (France); N. C. Anheier, H. A. Qiao, B. Bernacki, Pacific Northwest National Lab. (United States); T. Lewi, A. Katzir, Tel Aviv Univ. (Israel); J. Rodriguez Vazquez de Aldana, Univ. de Salamanca (Spain)
- 7734 3S **Feeding the wavefront sensors of LINC-NIRVANA: the dedicated Patrol Camera** [7734-139]  
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- 7734 3T **A new embedded control system for SUSI** [7734-140]  
 W. J. Tango, M. J. Ireland, The Univ. of Sydney (Australia)
- 7734 3U **Custom beamsplitter and AR coatings for interferometry** [7734-141]  
 K. Nyland, C. A. Jurgenson, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); D. F. Buscher, C. A. Haniff, J. S. Young, Univ. of Cambridge (United Kingdom); J. Lewis, R. Schnell, Optical Surface Technologies, LLC (United States)
- 7734 3V **Fringe modulation for an MROI beam combiner** [7734-142]  
 T. M. McCracken, C. A. Jurgenson, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); D. H. Baird, David Baird Embedded Systems (United States); J. K. Seamons, K. M. McCord, New Mexico Institute of Mining and Technology (United States); D. F. Buscher, C. A. Haniff, J. S. Young, Univ. of Cambridge (United Kingdom)
- 7734 3W **Fresnel diffraction in an interferometer: application to MATISSE** [7734-143]  
 S. Robbe-Dubois, Y. Bresson, E. Aristidi, S. Lagarde, P. Antonelli, B. Lopez, R. G. Petrov, Univ. de Nice-Sophia antipolis, Observatoire de la Côte d'Azur, CNRS (France)
- 7734 3X **Hybrid sol-gel technology for fast prototyping in astronomical interferometry** [7734-144]  
 A. Ghasempour, Univ. do Porto (Portugal), XLIM Institut de Recherche (France), and Tennessee State Univ. (United States); A. M. P. Leite, Univ. do Porto (Portugal); D. Alexandre, Univ. do Porto (Portugal), INESC Porto (Portugal), and Univ. de Trás-os-Montes e Alto Douro (Portugal); F. Reynaud, XLIM Institut de Recherche (France); P. V. S. Marques, Univ. do Porto (Portugal) and INESC Porto (Portugal); P. J. V. Garcia, Univ. do Porto (Portugal)

- 7734 3Y **MAMMUT: mirror vibration metrology for VLTI** [7734-145]  
I. Spaleniak, F. Gießler, R. Geiss, S. Minardi, T. Pertsch, R. Neuhäuser, Friedrich-Schiller-Univ. Jena (Germany); M. Becker, M. Rothhardt, IPHT Jena (Germany); F. Delplancke, A. Richichi, S. Ménardi, European Southern Observatory (Germany)

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#### POSTER SESSION: CRITICAL SUBSYSTEMS

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- 7734 3Z **The atmospheric piston simulator as an integral part of the calibration unit of LINC-NIRVANA** [7734-146]  
R. Follert, T. M. Herbst, P. Bizenberger, F. DeBonis, Max-Planck-Institut für Astronomie (Germany)
- 7734 41 **The LINC-NIRVANA fringe and flexure tracker: laboratory tests** [7734-148]  
E. Tremou, A. Eckart, Univ. zu Köln (Germany) and Max-Planck-Institut for Radioastronomy (Germany); M. Horrobin, B. Lindhorst, L. Moser, S. Rost, S. Smajic, C. Straubmeier, I. Wank, J. Zuther, Univ. zu Köln (Germany); T. Bertram, Max-Planck-Institut für Astronomie (Germany)
- 7734 43 **Beam combination with a large number of apertures** [7734-150]  
D. Mozurkewich, Seabrook Engineering (United States); A. Traore, Sigma Space Corp. (United States)
- 7734 44 **Mechanical design of the Magdalena Ridge Observatory Interferometer** [7734-151]  
F. G. Santoro, A. M. Olivares, C. D. Salcido, S. R. Jimenez, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); X. Sun, C. A. Haniff, D. F. Buscher, Univ. of Cambridge (United Kingdom); M. J. Creech-Eakman, C. A. Jurgenson, A. V. Shtromberg, E. J. Bakker, R. J. Selina, New Mexico Institute of Mining and Technology (United States); M. Fisher, J. S. Young, D. M. A. Wilson, Univ. of Cambridge (United Kingdom)
- 7734 45 **Modified telescope alignment procedure for improving the beam quality of the CHARA Telescopes** [7734-152]  
L. Sturmann, J. Sturmann, T. A. ten Brummelaar, H. A. McAlister, Georgia State Univ. (United States)
- 7734 46 **The MROI fringe tracker: first fringe experiment** [7734-153]  
C. Jurgenson, F. Santoro, T. McCracken, K. McCord, A. Shtromberg, D. Klinglesmith, A. Olivarez, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); D. Buscher, Univ. of Cambridge (United Kingdom); M. Creech-Eakman, New Mexico Institute of Mining and Technology (United States); C. Haniff, J. Young, Univ. of Cambridge (United Kingdom)
- 7734 47 **A new control architecture for multi-beam fringe tracker** [7734-154]  
L. Vincent, Univ. of Grenoble (France) and Lab. d'Astrophysique de Grenoble, CNRS, Univ. Joseph Fourier (France); M. Alamir, Univ. of Grenoble (France); J.-B. Le Bouquin, European Southern Observatory (Chile); L. Jocou, K. Rousselet-Perraut, P. Kern, J.-P. Berger, Lab. d'Astrophysique de Grenoble, CNRS, Univ. Joseph Fourier (France)
- 7734 48 **The LINC-NIRVANA fringe and flexure tracker: an update of the opto-mechanical system** [7734-155]  
J. Zuther, A. Eckart, Univ. zu Köln (Germany); T. Bertram, Max-Planck-Institut für Astronomie (Germany); M. Horrobin, B. Lindhorst, U. Lindhorst, L. Moser, S. Rost, C. Straubmeier, E. Tremou, I. Wank, Univ. zu Köln (Germany)

- 7734 49 **Design of the MROI delay line optical path compensator** [7734-156]  
M. Fisher, R. C. Boysen, D. F. Buscher, C. A. Haniff, E. B. Seneta, X. Sun, D. M. A. Wilson, J. S. Young, Univ. of Cambridge (United Kingdom)

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#### POSTER SESSION: SOFTWARE

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- 7734 4A **Bias-free imaging at low light levels** [7734-157]  
J. Gordon, D. Buscher, H. Thorsteinsson, Univ. of Cambridge (United Kingdom)
- 7734 4B **The data-reduction software for micro-arcsecond astrometry with PRIMA at the VLTI** [7734-158]  
R. Köhler, I. Stilz, Zentrum für Astronomie der Univ. Heidelberg (Germany) and Max-Planck-Institut für Astronomie (Germany); A. Quirrenbach, A. Kaminski, Zentrum für Astronomie der Univ. Heidelberg (Germany); T. Schulze-Hartung, R. Launhardt, Max-Planck-Institut für Astronomie (Germany); N. M. Elias II, National Radio Astronomy Observatory (United States); T. Henning, Max-Planck-Institut für Astronomie (Germany); D. Queloz, Univ. of Geneva (Switzerland)
- 7734 4C **The third version of the AMBER data reduction software** [7734-159]  
F. Malbet, G. Duvert, Lab. d'Astrophysique de Grenoble, Univ. Joseph Fourier, CNRS (France); F. Millour, Max-Planck-Institut für Radioastronomie (Germany); J.-B. Le Bouquin, G. Mella, L. Halipré, A. Chelli, S. Lafraisse, E. Altariba, G. Zins, Lab. d'Astrophysique de Grenoble, Univ. Joseph Fourier, CNRS (France)
- 7734 4D **GPU-accelerated image reconstruction for optical and infrared interferometry** [7734-160]  
F. Baron, Univ. of Michigan (United States); B. Kloppenborg, Univ. of Denver (United States)
- 7734 4E **Building the 'JMMC Stellar Diameters Catalog' using SearchCal** [7734-161]  
S. Lafraisse, G. Mella, Univ. Joseph Fourier, CNRS, Lab. d'Astrophysique de Grenoble (France); D. Bonneau, Univ. Nice Sophia Antipolis, CNRS, Observatoire de la Côte d'Azur (France); G. Duvert, X. Delfosse, Univ. Joseph Fourier, CNRS, Lab. d'Astrophysique de Grenoble (France); O. Chesneau, Univ. Nice Sophia Antipolis, CNRS, Observatoire de la Côte d'Azur (France); A. Chelli, Univ. Joseph Fourier, CNRS, Lab. d'Astrophysique de Grenoble (France)
- 7734 4F **SCDU testbed automated in-situ alignment, data acquisition, and analysis** [7734-162]  
T. A. Werne, U. J. Wehmeier, J. P. Wu, X. An, R. Goullioud, B. Nemati, M. Shao, T.-P. J. Shen, X. Wang, M. A. Weilert, C. Zhai, Jet Propulsion Lab. (United States)

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#### POSTER SESSION: SPACE INTERFEROMETER TECHNOLOGY

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- 7734 4G **The fulfillment of two-level control in experimental optical delay line of Michelson Stellar Interferometer** [7734-164]  
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