Part Two

7739 29 Ground-based observatory operations optimized and enhanced by direct atmospheric measurements [7739-79]
J. T. McGraw, P. C. Zimmer, M. R. Ackermann, D. C. Hines, A. B. Hull, L. Rossmann, D. C. Zirzow, The Univ. of New Mexico (United States); S. W. Brown, G. T. Fraser, K. R. Lykke, A. W. Smith, National Standards and Technology (United States); C. W. Stubbs, Harvard niv. (United States); J. T. Woodward, National Institute of Standards and Technology (United States)

7739 2B Fibre positioning revisited: the use of an off-the-shelf assembly robot for OPTIMOS-EVE [7739-192]
G. B. Dalton, Rutherford Appleton Lab. (United Kingdom) and Univ. of Oxford (United Kingdom); M. S. Whalley, Rutherford Appleton Lab. (United Kingdom); O. Mounissamy, Univ. of Oxford (United Kingdom) and IUT Paris Jussieu, Univ. Paris Diderot (France); E. C. Sawyer, I. A. J. Tosh, D. L. Terrett, Rutherford Appleton Lab. (United Kingdom); I. J. Lewis, Univ. of Oxford (United Kingdom)

7739 2C Fibre Bragg gratings for temporal spectral astronomy [7739-81]
G. Marien, N. Cvetojevic, Macquarie Univ. (Australia); N. Jovanovic, Macquarie Univ. (Australia) and Australian Astronomical Observatory (Australia); J. Dawes, Macquarie Univ. (Australia); J. Bland-Hawthorn, Sydney Institute for Astronomy, Univ. of Sydney (Australia); R. Haynes, innoFSPEC, Astrophysikalisches Institut Potsdam (Germany); J. Lawrence, Q. Parker, Macquarie Univ. (Australia) and Australian Astronomical Observatory (Australia); M. J. Withford, Macquarie Univ. (Australia)

POSTER SESSION: OPTICS FABRICATION/MATERIALS

7739 2D Fabrication of 4-meter class astronomical optics [7739-104]

7739 2E Studies on evaluating and removing subsurface damage on the ground surface of CLEARCERAM-Z HS [7739-105]
H. Akitaya, T. Yamashita, N. Oshima, M. Iye, National Astronomical Observatory of Japan (Japan); T. Maihara, H. Tokoro, K. Takahashi, Nano-Optonics Research Institute (Japan)

7739 2G Carbon fiber reinforced composites: their structural and thermal properties [7739-108]
J. Cheng, National Radio Astronomy Observatory (United States); D. Yang, Nanjing Institute of Astronomical Optics & Technology (China)

7739 2H Structural analysis of a new type lightweight optical mirror blank [7739-109]
Y. Li, X. Cui, National Astronomical Observatories, Nanjing Institute of Astronomical Optics & Technology (China) and Key Lab. of Astronomical Optics & Technology, Nanjing Institute of Astronomical Optics & Technology (China); N. Hu, The Civilizer New Products Institute Nanjing (China)
Herschel Space Telescope: Impact of new material strain data on optical test and model correlation [7739-112]
B. Catanzaro, CFE Services (United States); D. Doyle, European Space Research and Technology Ctr. (Netherlands); E. Cohen, CFE Services (United States)

Post-flight reflectance of COSTAR and WF/PC 2 pickoff mirrors upon their return from space [7739-113]
M. A. Quijada, R. M. Henry, T. Madison, R. Boucarut, J. G. Hagopian, NASA Goddard Space Flight Ctr. (United States)

Ultra-lightweighted HB-Cesic one-meter mirror demonstrator [7739-114]
M. R. Krödel, P. Hofbauer, ECM Ingenieur-Unternehmen für Energie- und Umwelttechnik GmbH (Germany)

Recent achievements with a cryogenic ultra-lightweighted HB-Cesic mirror [7739-115]
M. R. Krödel, P. Hofbauer, ECM Ingenieur-Unternehmen für Energie- und Umwelttechnik GmbH (Germany); C. Devilliers, Thales Alenia Space (France); Z. Sodnik, European Space Research and Technology Ctr. (Netherlands); P. Robert, Société Européenne de Systèmes Optiques (France)

CFRP composite mirrors for space telescopes and their micro-dimensional stability [7739-116]
S. Utsunomiya, T. Kamiya, R. Shimizu, Japan Aerospace Exploration Agency (Japan)

Time-dependent deformation of surface geometry on light weight and thermally stable CFRP mirror in humid environment [7739-117]
Y. Arao, Waseda Univ. (Japan); J. Koyanagi, S. Utsunomiya, S. Takeda, Japan Aerospace Exploration Agency (Japan); H. Kawada, Waseda Univ. (Japan)

Secondary mirror system for the European Solar Telescope (EST) [7739-119]
L. Cavalier, B. Siegel, G. Prieto, GRANTECAN S.A. (Spain); E. Hernandez, Instituto de Astrofisica de Canarias (Spain); J. M. Casalta, J. Mercader, J. Barriga, NTE-SENER S.A. (Spain)

An improved method of the spatial point’s position detection [7739-120]
Y. Zhang, X. Li, Univ. of Science and Technology of China (China); L. Zhu, National Astronomical Observatories (China); J. Jin, W. Li, Univ. of Science and Technology of China (China)

A method of attitude measurement of the calibration target [7739-121]
J. Jin, X. Li, Univ. of Science and Technology of China (China); L. Zhu, National Astronomical Observatories (China); Y. Zhang, B. Li, W. Li, Univ. of Science and Technology of China (China)

A method of 3D reconstruction based on single camera [7739-122]
L. Zhu, National Astronomical Observatories (China); X. Li, B. Li, J. Jin, Y. Zhang, W. Li, Univ. of Science and Technology of China (China)
7739 2S **Use of a Faro Arm for optical alignment** [7739-123]
L. A. Crause, D. E. O’Donoghue, J. E. O’Connor, F. Strümpfer, South African Astronomical Observatory (South Africa)

7739 2T **Surface measurements of radio antenna panels with white-light interferometry** [7739-124]
S. Chinellato, Univ. degli Studi di Padova (Italy); C. Pernechele, INAF, Astronomical Observatory of Cagliari (Italy); S. Camignato, Univ. degli Studi di Padova (Italy); F. Manzan, INAF, Astronomical Observatory of Cagliari (Italy)

7739 2V **Optical testing of the LSST combined primary/tertiary mirror** [7739-126]
M. T. Tuell, H. M. Martin, Steward Observatory, The Univ. of Arizona (United States); J. H. Burge, Steward Observatory, The Univ. of Arizona (United States) and College of Optical Sciences, The Univ. of Arizona (United States); W. J. Gressler, National Optical Astronomy Observatory (United States); C. Zhao, College of Optical Sciences, The Univ. of Arizona (United States)

7739 2W **Advanced wavefront sensing and control testbed (AWCT)** [7739-130]

7739 2X **Phase retrieval methods for wavefront sensing** [7739-131]
S. Bikkannavar, D. Redding, J. Green, S. Basinger, D. Cohen, J. Lou, C. Ohara, F. Shi, Jet Propulsion Lab. (United States)

7739 2Y **First cophasing of a segmented mirror with a tunable filter and the pyramid wavefront sensor** [7739-135]
M. Bonaglia, E. Pinna, A. Puglisi, S. Esposito, Osservatorio Astrofisico di Arcetri (Italy); J. C. Guerra, Isaac Newton Group of Telescopes (Spain); R. Myers, N. Dipper, Durham Univ. (United Kingdom)

---

**POSTER SESSION: TELESCOPE STRUCTURE AND MECHANICAL DESIGN**

7739 30 **An innovative low-cost antenna dish built with commercial off-the-shelf (COTS) components** [7739-136]
J. Cheng, J. Ruff, S. Sturgis, National Radio Astronomy Observatory (United States); D. Yang, Nanjing Institute of Astronomical Optics & Technology (China)

7739 31 **The VST active primary mirror support system** [7739-137]
P. Schipani, INAF, Osservatorio Astronomico di Capodimonte (Italy); M. Capaccioli, S. D’Orsi, L. Ferragina, L. Marty, C. Moltefe, INAF, VSTCeN (Italy); F. Perrotta, INAF, Osservatorio Astronomico di Capodimonte (Italy); G. De Paris, D. Fierro, INAF, Sede Centrale (Italy); R. Tomelleri, P. Rossellini, F. Perina, S. Recchia, Tomelleri s.r.l. (Italy); D. Magrin, INAF, Osservatorio Astronomico di Padova (Italy)

7739 32 **Performance of the VST secondary mirror support system** [7739-138]
P. Schipani, INAF, Osservatorio Astronomico di Capodimonte (Italy); S. D’Orsi, D. Fierro, L. Marty, INAF, VSTCeN (Italy); F. Perrotta, INAF, Osservatorio Astronomico di Capodimonte (Italy); C. Arcidiacono, INAF, Osservatorio Astrofisico di Arcetri (Italy)
The axial actuators for the VST primary mirror [7739-139]
D. Fierro, INAF (Italy); S. D’Orsi, L. Marty, Tomelleri s.r.l. (Italy); C. Molfese, F. Perrotta, P. Schipani, INAF, Osservatorio Astronomico di Capodimonte (Italy); M. Capaccioli, Tomelleri s.r.l. (Italy); G. De Paris, INAF (Italy); R. Tomelleri, P. F. Rossellini, Tomelleri s.r.l. (Italy); J. Farinato, INAF, Osservatorio Astronomico di Padova (Italy)

Thermal behavior of the Medicina 32-meter radio telescope [7739-141]
T. Pisanu, F. Buffa, National Institute for Astrophysics, Cagliari Astronomical Observatory (Italy); M. Morsiani, National Institute for Astrophysics, Institute of Radio Astronomy (Italy); C. Pemechele, S. Poppi, National Institute for Astrophysics, Cagliari Astronomical Observatory (Italy)

Fast force actuators for LSST primary/tertiary mirror [7739-143]
E. Hileman, National Optical Astronomy Observatory (United States); M. Warner, Cerro Tololo Inter-American Observatory (Chile); O. Wiecha, National Optical Astronomy Observatory (United States)

Innovative relocation system for enclosures for MROI array telescopes [7739-145]
A. Busatta, L. Ghedin, G. Marchiori, S. Mian, European Industrial Engineering s.r.l. (Italy); I. Payne, New Mexico Institute of Mining and Technology, Magdalena Ridge Observatory (United States); M. Pozzobon, European Industrial Engineering s.r.l. (Italy)

Design and simulation of the direct drive servo system [7739-147]
C. Ren, Z. Liu, L. Song, Q. Yi, K. Chen, Tsinghua Univ. (China); Z. Zhang, Nanjing Institute of Astronomical Optics & Technology (China)

Toward high-dynamic active mirrors for LGS refocusing systems [7739-148]
E. Hugot, F. Madec, S. Vives, M. Ferrari, D. Le Mignant, J. G. Cuby, Lab. d’Astrophysique de Marseille, CNRS, Univ. de Provence (France)

In-flight aberrations corrections for large space telescopes using active optics [7739-149]
M. Laslandes, M. Ferrari, E. Hugot, G. Lemaitre, Lab. d’Astrophysique de Marseille, CNRS, Univ. de Provence (France)

The calibration and evaluation for laser tracker application in LAMOST site environment [7739-151]
Z. Zhou, Y. Jin, C. Zhai, Y. Gu, Univ. of Science and Technology of China (China)

Performance verification testing for HET wide-field upgrade tracker in the laboratory [7739-152]
J. Good, McDonald Observatory, The Univ. of Texas at Austin (United States); R. Hayes, J. Beno, The Univ. of Texas at Austin (United States); J. Booth, M. E. Cornell, G. J. Hill, H. Lee, McDonald Observatory, The Univ. of Texas at Austin (United States); J. Mock, The Univ. of Texas at Austin (United States); M. Rafaıl, R. Savage, McDonald Observatory, The Univ. of Texas at Austin (United States); I. Soukup, The Univ. of Texas at Austin (United States)
7739 3D Upgrading the controller of the fast tip-tilt tertiary mirror for the SOAR Telescope [7739-153]
M. Warner, Cerro Tololo Inter-American Observatory (Chile); S. Heathcote, SOAR Telescope (Chile); G. Schumacher, R. Cantarutti, E. Parkes, Cerro Tololo Inter-American Observatory (Chile)

POSTER SESSION; CRYOGENICS, MECHANISMS, INSTRUMENTS

7739 3E LN2 continuous flow cryostats: a compact vibration free cooling system for single to multiple detector systems [7739-154]
J. L. Lizon, M. Accardo, European Southern Observatory (Germany)

7739 3F Liquid nitrogen pre-cooling of large infrared instrument at ESO [7739-155]
J. L. Lizon, European Southern Observatory (Germany)

7739 3G A very accurate filter wheel for a large field IR imager [7739-156]
J. L. Lizon, European Southern Observatory (Germany)

7739 3H A hybrid liquid nitrogen system for the cooling of the ESO OmegaCAM detector [7739-157]
J. L. Lizon, A. Silber, G. Jakob, European Southern Observatory (Germany)

7739 3I Advanced high-cooling power 2-stage Gifford-McMahon refrigerator systems [7739-158]
G. Jakob, J. L. Lizon, European Southern Observatory (Germany)

7739 3J First concept for the E-ELT cryogenic infrastructure [7739-159]
J. L. Lizon, J. C. Gonzalez, European Southern Observatory (Germany); C. Monroe, Monroe Brothers Ltd. (United Kingdom); I. Bryson, D. Montgomery, UK Astronomy Technology Ctr. (United Kingdom)

7739 3K An optical shutter for the Euclid imager [7739-161]
A. M. Glauser, Institute for Astronomy, ETH Zurich (Switzerland) and UK Astronomy Technology Ctr. (United Kingdom); J. Amiaux, J.-L. Auguères, CEA, IRFU, SAP (France); S. Lilly, Institute for Astronomy, ETH Zurich (Switzerland); A. Refregier, CEA, IRFU, SAP (France)

7739 3L Large format filter changer mechanism for the Dark Energy Survey [7739-162]
G. Tarlé, B. Bigelow, D. Boprie, C. Cooper, E. Dede, W. Lorenzon, B. Nord, M. Schubnell, C. Weaverdyck, Univ. of Michigan (United States)

7739 3M Assembly of the Dark Energy Survey CCD Imager [7739-163]
G. Derylo, H. Cease, H. T. Diehl, J. Estrada, B. Flaugher, Fermi National Accelerator Lab. (United States)

7739 3N Cooling the Dark Energy Camera CCD array using a closed-loop two-phase liquid nitrogen system [7739-164]
H. Cease, Fermi National Accelerator Lab. (United States); D. DePoy, Texas A&M Univ. (United States); G. Derylo, H. T. Diehl, J. Estrada, B. Flaugher, K. Kuk, Fermi National Accelerator Lab. (United States); S. Kuhlmann, Argonne National Lab. (United States); A. Lathrop, K. Schultz, R. J. Reinert, R. L. Schmidt, A. Stefanik, Fermi National Accelerator Lab. (United States); A. Zhao, Argonne National Lab. (United States)

7739 3O A precision lens mount for large temperature excursions [7739-166]
S. A. Smee, The Johns Hopkins Univ. (United States)
POSTER SESSION: SPECTROSCOPY AND IMAGE SLICER

7739 3P The GRAVITY spectrometers: mechanical design [7739-169]
S. Fischer, M. Wiest, C. Straubmeier, S. Yazici, C. Araujo-Hauck, Univ. zu Köln (Germany); F. Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); G. Perrin, Lab. d’Etudes Spatiales et d’Instrumentation en Astrophysique (France), Institut National des Sciences de l’Univers (France), and Groupement d’Intérêt Scientifique PHASE (France); W. Brandner, Max-Planck-Institut für Astronomie (Germany); K. Perraut, Lab. d’Astrophysique de l’Observatoire de Grenoble (France); A. Amorim, Univ. de Lisboa (Portugal); M. Schöller, European Southern Observatory (Germany); A. Eckart, Univ. zu Köln (Germany) and Max-Planck-Institut für Radioastronomie (Germany)

7739 3Q Prototyping and testing of mechanical components for the GRAVITY spectrometers [7739-170]
M. Wiest, S. Fischer, Univ. zu Köln (Germany); M. Thiel, M. Haug, Max-Planck-Institut für extraterrestrische Physik (Germany); R-R. Rohloff, Max-Planck-Institut für Astronomie (Germany); C. Straubmeier, C. Araujo-Hauck, S. Yazici, Univ. zu Köln (Germany); F. Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); G. 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 de l’Observatoire de Grenoble (France); A. Amorim, Univ. de Lisboa (Portugal); M. Schöller, European Southern Observatory (Germany); A. Eckart, Univ. zu Köln (Germany) and Max-Planck-Institut für Radioastronomie (Germany)

7739 3R HARPS secondary guiding [7739-171]
G. Ihle, G. Avila, I. Kastinen, G. Lo Curto, A. Segovia, P. Sinclaire, European Southern Observatory (Germany); R. Tomelleri, Tomelleri s.r.l. (Italy)

7739 3S High-performance silicon grisms for 1.2-8.0 μm: detailed results from the JWST-NIRCam devices [7739-173]
M. Gully-Santiago, W. Wang, C. Deen, The Univ. of Texas at Austin (United States); D. Kelly, The Univ. of Arizona (United States); T. P. Greene, NASA Ames Research Ctr. (United States); J. Bacon, Il-VI Inc. (United States); D. T. Jaffe, The Univ. of Texas at Austin (United States)

7739 3T Optomechanical system of AIT tools to perform tests and integrations of 24 IFU [7739-174]
E. Renault, F. Laurent, L. Adjalii, R. M. Bacon, D. Boudon, P. Cailler, E. Daguisé, J.-P. Dubois, Univ. de Lyon (France), Observatoire de Lyon (France), CNRS (France), and Ctr. de Recherche Astrophysique de Lyon (France); H. Anwand, Georg-August-Univ. (Germany); J. Kosmatki, M. Lopias, Univ. de Lyon (France), Observatoire de Lyon (France), CNRS (France), and Ctr. de Recherche Astrophysique de Lyon (France); H. E. Nicklas, Georg-August-Univ. (Germany); A. Remilleux, Univ. de Lyon (France), Observatoire de Lyon (France), CNRS (France), and Ctr. de Recherche Astrophysique de Lyon (France)

7739 3U Progress in the fabrication of a prototype ZnSe immersion grating for the WINERED spectrograph [7739-175]
P. J. Kuzmenko, S. L. Little, Lawrence Livermore National Lab. (United States); Y. Ikeda, Photocoding Inc. (Japan); N. Kobayashi, Institute of Astronomy, The Univ. of Tokyo (Japan)
ESPRESSO: design and analysis of Coudé-Train concepts for stable and efficient optical feeding [7739-178]
A. Cabral, A. Moutinho, J. Coelho, J. Lima, P. Carvas, A. Amarim, J. Rebordão, Univ. de Lisboa (Portugal); G. Ávila, European Southern Observatory (Germany); D. Mégevand, Observatoire de l'Univ. de Genève (Switzerland); J-M. Herreros, Instituto de Astrofísica de Canarias (Spain); F. Zerbi, INAF, Osservatorio Astronomico di Brera (Italy); P. Di Marcantonio, INAF, Osservatorio Astronomico di Trieste (Italy); C. Lovis, Observatoire de l'Univ. de Genève (Switzerland); N. C. Santos, Univ. do Porto (Portugal); F. Pepe, Observatoire de l'Univ. de Genève (Switzerland); S. Cristiani, INAF, Osservatorio Astronomico di Trieste (Italy); R. Rebolo, Instituto de Astrofísica de Canarias (Spain)

Scattered light in a DMD based multi-object spectrometer [7739-195]
K. D. Fourspring, Z. Ninkov, J. P. Kerekes, Rochester Institute of Technology (United States)

Progress toward high-performance astronomical coatings [7739-180]
A. C. Phillips, W. E. Brown, B. Dupraw, D. F. Hilyard, D. J. Cowley, Univ. of California Observatories (United States)

Cleaning the Southern African Large Telescope's M5 mirror [7739-182]

Blocking filters with enhanced throughput for x-ray microcalorimetry [7739-184]
D. A. Grove, J. C. Betcher, B. Lairson, R. Smith, T. Ayers, Luxel Corp. (United States)

Pass-band filter performance for space-flight Dark Energy missions [7739-186]
J. Edelstein, Univ. of California, Berkeley (United States); S. L. Mufson, Indiana Univ. (United States); N. J. Mostek, Lawrence Berkeley National Lab. (United States); B. J. Baptista, Indiana Univ. (United States); B. E. Woodgate, NASA Goddard Space Flight Ctr. (United States); A. G. Kim, Lawrence Berkeley National Lab. (United States); C. R. Bower, Indiana Univ. (United States); R. Boucarut, M. A. Quijada, NASA Goddard Space Flight Ctr. (United States)

Development of five multifibre links for the OPTIMOS-EVE study for the E-ELT [7739-188]
I. Guinouard, F. Chemia, H. Flores, J.-M. Huet, F. Hammer, Observatoire de Paris (France); G. Wulterkens, Raadboud Univ. Nijmegen (Netherlands)

Multi-way optical fibre connectors for astronomy [7739-190]
D. M. Haynes, R. Haynes, W. Rambold, Anglo-Australian Observatory (Australia) and Astrophysikalisches Institut Potsdam (Germany); M. Goodwin, E. J. Penny, Anglo-Australian Observatory (Australia)
New scramblers for precision radial velocity: square and octagonal fibers [7739-191]
B. Chazelas, F. Pepe, F. Widi, Observatory of Geneva, Univ. of Geneva (Switzerland); F. Bouchy, Institut d’Astrophysique de Paris, CNRS, Univ. Pierre & Marie Curie (France) and Observatoire de Haute-Provence, CNRS/OAMP, St. Michel l’Observatoire (France); S. Perruchot, Observatoire de Haute-Provence, CNRS/OAMP, St. Michel l’Observatoire (France); G. Avila, European Southern Observatory (Germany)

The ADC for the VST Telescope: theory and preliminary test of the electromechanical system [7739-193]
P. Schipani, INAF, Osservatorio Astronomico di Capodimonte (Italy); J. Farinato, INAF, Osservatorio Astronomico di Padova (Italy); C. Arcidiacono, INAF, Osservatorio Astrofisico di Arcetri (Italy); S. D’Orsi, L. Ferragina, D. Fierro, INAF, VSTCeN (Italy); D. Magrin, INAF, Osservatorio Astronomico di Padova (Italy); L. Marty, INAF, VSTCeN (Italy); F. Perrotta, INAF, Osservatorio Astronomico di Capodimonte (Italy); R. Ragazzoni, INAF, Osservatorio Astronomico di Padova (Italy); G. Umbrico, INAF, Univ. degli Studi di Padova (Italy)

SESSION 12 CRYOGENIC INSTRUMENTS

Cryogenic submicron linear actuator (Invited Paper) [7739-82]

Design and prototype performance of an innovative cryogenic tip-tilt mirror [7739-83]

Different ways of reducing vibrations induced by cryogenic instruments [7739-84]
J. L. Lizon, G. Jakob, European Southern Observatory (Germany); B. de Marneffe, A. Preumont, Univ. Libre de Bruxelles (Belgium)

Ultrastable operation of detectors for high-resolution spectrographs [7739-85]
A. Manescau, European Southern Observatory (Germany); M. Guillemszik, Royal Observatory of Belgium (Belgium); O. Iwert, H. Dekker, J.-L. Lizon, G. Lo Curto, European Southern Observatory (Germany); P. Sinclaire, European Southern Observatory (Chile); F. M. Zerbi, INAF, Osservatorio di Brera (Italy); G. Jakob, European Southern Observatory (Germany); D. Sosa, Instituto de Astrofisica de Canarias (Spain); P. Amico, L. Pasquini, European Southern Observatory (Germany)

Cryogenic Fourier transform infrared spectrometer from 4 to 20 micrometers [7739-86]
S. G. Kaplan, S. I. Woods, T. M. Jung, A. C. Carter, National Institute of Standards and Technology (United States)

A novel athermal approach for high-performance cryogenic metal optics [7739-87]
R.-R. Rohloff, Max-Planck-Institut für Astronomie (Germany); A. Gebhardt, Fraunhofer-Institut für Angewandte Optik und Feinmechanik (Germany); V. Schönherr, Max-Planck-Institut für Astronomie (Germany); S. Risse, J. Kinst, S. Scheiding, T. Peschel, Fraunhofer-Institut für Angewandte Optik und Feinmechanik (Germany)
SESSION 13  SPECTROSCOPY/SLICERS I

7739 4G  Fabrication and current optical performance of a large diamond-machined ZnSe immersion grating [7739-90]
Y. Ikeda, Photocoding (Japan) and Kyoto-Sangyo Univ. (Japan); N. Kobayashi, The Univ. of Tokyo (Japan); P. J. Kuzmenko, S. L. Little, Lawrence Livermore National Lab. (United States); C. Yasui, National Astronomical Observatory of Japan (Japan); S. Kondo, Kyoto-Sangyo Univ. (Japan); H. Mitò, Kiso Observatory, The Univ. of Tokyo (Japan); K. Nakanishi, Kyoto-Sangyo Univ. (Japan); Y. Sarugaku, Japan Aerospace Exploration Agency (Japan)

7739 4H  Miniature spectrographs: characterization of arrayed waveguide gratings for astronomy [7739-91]
N. Cvetojevic, N. Jovanovic, Macquarie Univ. (Australia) and Australian Astronomical Observatory (Australia); J. Bland-Hawthorn, Sydney Institute for Astronomy, The Univ. of Sydney (Australia); R. Haynes, innoFSPEC, Astrophysikalisches Institut Potsdam (Germany); J. Lawrence, Macquarie Univ. (Australia) and Australian Astronomical Observatory (Australia)

SESSION 14  SPECTROSCOPY/SLICERS II

7739 4J  Fibre optical spectroscopy and sensing innovation at innoFSPEC Potsdam [7739-93]
R. Haynes, innoFSPEC Potsdam, Astrophysikalisches Institut Potsdam (Germany); O. Reich, innoFSPEC Potsdam, Univ. Potsdam (Germany); W. Rambold, innoFSPEC Potsdam, Astrophysikalisches Institut Potsdam (Germany); R. Hass, innoFSPEC Potsdam, Univ. Potsdam (Germany); K. Janssen, innoFSPEC Potsdam, Astrophysikalisches Institut Potsdam (Germany) and innoFSPEC Potsdam, Univ. Potsdam (Germany)

7739 4L  Manufacturing of silicon immersion gratings for infrared spectrometers [7739-172]
W. Wang, M. Gully-Santiago, C. Deen, The Univ. of Texas at Austin (United States); D. J. Mar, Liquidia Technologies, Inc. (United States); D. T. Jaffe, The Univ. of Texas at Austin (United States)

7739 4M  MUSE integral field unit: test results on the first out of 24 [7739-95]
F. Laurent, L. Adjali, Univ. de Lyon (France), Observatoire de Lyon (France), and Ctr. de Recherche Astrophysique de Lyon, CNRS, Ecole Normale Supérieure de Lyon (France); J. Arns, Kaiser Optical Systems, Inc. (United States); R. Bacon, D. Boudon, P. Caillier, E. Daguisé, Univ. de Lyon (France), Observatoire de Lyon (France), and Ctr. de Recherche Astrophysique de Lyon, CNRS, Ecole Normale Supérieure de Lyon (France); B. Delabre, European Southern Observatory (Germany); J. Dubois, Univ. de Lyon (France), Observatoire de Lyon (France), and Ctr. de Recherche Astrophysique de Lyon, CNRS, Ecole Normale Supérieure de Lyon (France); P. Godefroy, Winlight Optics & Winlight System (France); A. Jarno, Univ. de Lyon (France), Observatoire de Lyon (France), and Ctr. de Recherche Astrophysique de Lyon, CNRS, Ecole Normale Supérieure de Lyon (France); P. Jorden, E2V
ERASMUS-F: pathfinder for an E-ELT 3D instrumentation (Invited Paper) [7739-96]
A. Kelz, M. M. Roth, Astrophysikalisches Institut Potsdam (Germany); R. Bacon, Ctr. de Recherche Astronomique de Lyon (France); J. Bland-Hawthorn, Sydney Institute for Astronomy, The Univ. of Sydney (Australia); H. E. Nicklas, Institut für Astrophysik Göttingen, Georg-August-Univ. Göttingen (Germany); J. J. Bryant, Sydney Institute for Astronomy, The Univ. of Sydney (Australia); M. Colless, Australian Astronomical Observatory (Australia); S. Croom, S. Ellis, Sydney Institute for Astronomy, The Univ. of Sydney (Australia); A. Fleischmann, Institut für Astrophysik Göttingen, Georg-August-Univ. Göttingen (Germany); P. Gillingham, Australian Astronomical Observatory (Australia); R. Haynes, InnoFSPEC Potsdam (Germany) and Australian Astronomical Observatory (Australia); A. Hopkins, Australian Astronomical Observatory (Australia); J. Kosmalski, Ctr. de Recherche Astronomique de Lyon (France); J. W. O'Byrne, Sydney Institute for Astronomy, The Univ. of Sydney (Australia); J-C. Olaya, W. N. Rambold, InnoFSPEC Potsdam (Germany); G. Robertson, Sydney Institute for Astronomy, The Univ. of Sydney (Australia)

Volume phase holographic echelle grating: a theoretical study [7739-97]
A. Bianco, G. Pariani, INAF, Osservatorio Astronomico di Brera (Italy) and Politecnico di Milano (Italy)

Photochromic polymers for making volume phase holographic gratings: between theory and practice [7739-98]
A. Bianco, INAF, Osservatorio Astronomico di Brera (Italy); G. Pariani, INAF, Osservatorio Astronomico di Brera (Italy) and Politecnico di Milano (Italy); C. Bertarelli, Politecnico di Milano (Italy) and Ctr. for Nano Science and Technology (Italy); F. M. Zerbi, INAF, Osservatorio Astronomico di Brera (Italy)

Development of MEMS-based programmable slit mask for multi-object spectroscopy [7739-99]
M. Canonica, Ecole Polytechnique Fédérale de Lausanne (Switzerland); S. Waldis, Univ. de Neuchâtel (Switzerland); F. Zamkotsian, P. Lanzoni, Lab. d'Astrophysique de Marseille (France); W. Noell, N. De Roolj, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Efficiency measurements performed on the MUSE VPHG [7739-100]
E. Renault, M. Loupias, L. Adjali, Univ. de Lyon (France), Observatoire de Lyon (France), and Ctr. de Recherche Astrophysique de Lyon, CNRS, Ecole Normale Supérieure de Lyon (France); J. A. Arns, Kaiser Optical Systems, Inc. (United States); R. Bacon, D. Boudon, P. Coillier, P. Coadour, Univ. de Lyon (France), Observatoire de Lyon (France), and Ctr. de Recherche Astrophysique de Lyon, CNRS, Ecole Normale Supérieure de Lyon (France); H. Dekker, European Southern Observatory (Germany); J.-P. Dubois, J. Kosmalski, Univ. de Lyon (France), Observatoire de Lyon (France), and Ctr. de Recherche Astrophysique de
The SOAR Integral field unit spectrograph optical design and IFU implementation [7739-101]
A. C. de Oliveira, L. S. de Oliveira, C. D. Gneiding, Lab. Nacional de Astrofísica (Brazil);
B. Barbuy, Instituto Astronômico e Geofísico, Univ. de São Paulo (Brazil); D. Jones, Prime
Optics (Australia); M. V. Figueredo, Univ. Federal do Vale do São Francisco (Brazil);
J. R. D. Lépine, Instituto Astronômico e Geofísico, Univ. de São Paulo (Brazil);
V. B. P. Macanhan, J. B. C. de Oliveira, Lab. Nacional de Astrofísica (Brazil); K. Taylor, Instituto
Astronômico e Geofísico, Univ. de São Paulo (Brazil)

Combining laser frequency combs and iodine cell calibration techniques for Doppler
detection of exoplanets [7739-102]
K. Cahoy, NASA Ames Research Ctr. (United States); D. Fischer, J. Spronck,
D. DeMille, Yale Univ. (United States)

The Brazilian tunable filter imager for SOAR [7739-103]
K. Taylor, C. Mendes de Oliveira, Univ. de São Paulo (Brazil); R. Laporte, Instituto Nacional de
Pesquisas Espaciais (Brazil); C. D. Guzman, Astroinventions (Chile); J. Ramirez Fernandez,
Politécnica da Univ. de São Paulo (Brazil); S. Scarano, Jr., G. Ramos, Univ. de São Paulo
(Brazil); H. Piana, Univ. Estadual de Santa Cruz (Brazil); F. E. Lourenço, Univ. Paulista (Brazil);
J.-L. Gach, Lab. d’Astrophysique de Marseille (France); F. L. Fontes, XNOVA (Brazil); F. Ferrari,
Univ. Federal do Pampa (Brazil); L. Cavalcanti, E. C. Gutierrez Castañeda, A. de Calasans,
Univ. de São Paulo (Brazil); P. Balard, P. Amram, Univ. Estadual de Santa Cruz (Brazil);
D. Andrade, Univ. de São Paulo (Brazil)

Author Index