

光学天文技术 领域动态

2019年第1期（总第1期） 2019年4月

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本期概要:

本期动态专题扫描了2018年以来天文光学干涉测量、天文望远镜光学设计、分析与检测技术方向的论文发表情况。

【研究动态：光学相关技术】

本期动态专题扫描了光学技术方面最新研究动态。

天文光学干涉测量

✧ Optical Interferometry for Astronomy

1	<p><u>Novel concept for visible and near infrared spectro-interferometry: laser-written layered arrayed waveguide gratings</u> Douglass, G.; Arriola, A.; Heras, I.; Martin, G.; Le Coarer, E.; Gross, S.; Withford, M. J. Optics Express 26(14) 18470-18479</p>
3	<p><u>Phase retrieval in generalized optical interferometry systems</u> Farriss, Wesley E.; Fienup, James R.; Malhotra, Tanya; Vamivakas, A. Nick Optics Express 26(3) 2191-2202</p>
3	<p><u>Towards a photonic mid-infrared nulling interferometer in chalcogenide glass</u> Gretzinger, Thomas; Gross, Simon; Arriola, Alexander; Withford, Michael J. 2019 Optics Express 27(6) 8626-8638</p>
4	<p><u>Passive optical gyroscope with double homodyne readout</u> Martynov, Denis; Brown, Nicolas; Nolasco-Martinez, Eber; Evans, Matthew 2019 Optics Letters 44(7) 1584-1587</p>

5	<p><u>Optical performance of large-area crystalline coatings</u> Marchi ò, Manuel; Flaminio, Raffaele; Pinard, Laurent; Forest, Dani ðe; Deutsch, Christoph; Heu, Paula; Follman, David; Cole, Garrett D. 2018 Optics Express 26(5) 6114-6125</p>
6	<p><u>Absolute sensitivity of phase measurement in an SU(1,1) type interferometer</u> Du, Wei; Jia, Jun; Chen, J. F.; Ou, Z. Y.; Zhang, Weiping 2018 Optics Letters 43(5) 1051-1054</p>

✧ Optical Synthesis Aperture

1	<p><u>Synthetic subaperture-based angle-independent Doppler flow measurements using single-beam line field optical coherence tomography in vivo</u> Ginner, Laurin; Wartak, Andreas; Salas, Matthias; Augustin, Marco; Niederleithner, Michael; Wurster, Lara M.; Leitgeb, Rainer A. 2019 Optics Letters 44(4) 967-970</p>
2	<p><u>Atmospheric Aerosol Multiband Synthesis Imaging Spectrometer</u> Wang, Xiaoxu; Zhang, Zihui; Wang, Shurong; Huang, Yu; Lin, Guanyu; Li, Zhanfeng; Yang, Xiaohu 2019 Applied Spectroscopy 73(2) 221-228</p>
3	<p><u>Superresolution far-field imaging by coded phase reflectors distributed only along the boundary of synthetic apertures</u> Bulbul, Angika; Vijayakumar, A.; Rosen, Joseph 2018 Optica 5(12) 1607-1616</p>
4	<p><u>Extending axial focus of optical coherence tomography using parallel multiple aperture synthesis</u> Bo, En; Ge, Xin; Yu, Xiaojun; Mo, Jianhua; Liu, Linbo 2018 Applied Optics 57(13) 3556-3560</p>
5	<p><u>Multiple aperture synthetic optical coherence tomography for biological tissue imaging</u> Bo, En; Ge, Xin; Wang, Lulu; Wu, Xuan; Luo, Yuemei; Chen, Shufen; Chen, Si; Liang, Haitao; Ni, Guangming; Yu, Xiaojun; Liu, Linbo 2018 Optics Express 26(2) 772-780</p>

天文望远镜光学设计、分析与检测

✧ Pyramid Wavefront Sensor

1	<p><u>Nonlinear wavefront reconstruction methods for pyramid sensors using Landweber and Landweber–Kaczmarz iterations</u> Hutterer, Victoria; Ramlau, Ronny 2018 Applied Optics 57(30) 8790-8804</p>
2	<p><u>Efficient, nonlinear phase estimation with the nonmodulated pyramid wavefront sensor</u> Frazin, Richard A. 2018 Journal of the Optical Society of America A 35(4) 594-607</p>
3	<p><u>Modulation-nonmodulation pyramid wavefront sensor with direct gradient reconstruction algorithm on the closed-loop adaptive optics system</u> Wang, Shengqian; Wei, Kai; Zheng, Wenjia 2018 Optics Express 26(16) 20952-20964</p>

✧ Tolerance Analysis of Optics

1	<p><u>Tolerance analysis on decenter error of multilayer diffractive optical elements based on polychromatic integral diffraction efficiency</u> Mao, Shan; Zhao, Jianlin 2019 Applied Optics 58(9) 2422-2428</p>
2	<p><u>Aberration analysis for freeform surface terms overlay on general decentered and tilted optical surfaces</u> Yang, Tong; Cheng, Dewen; Wang, Yongtian 2018 Optics Express 26(6) 7751-7770</p>

【会议扫描：光学相关技术】

SPIE 会议论文扫描

检索地址: <https://www.spiedigitallibrary.org/>

天文光学干涉测量

✧ Optical Interferometry for Astronomy

1	<p>Proceedings Article 4 March 2019</p> <p><u>Discrete beam combiners from astronomy to lasers</u></p> <p>Stefano Minardi, Momen Diab, Ettore Pedretti, Abani Shankar-Nayak, Allar Saviuk, Simone Piacentini, Giacomo Corrielli, Roberto Osellame, Romina Diener, Jan Tepper, Lucas Labadie, Felix Dreisow, Markus Gräfe, Thomas Pertsch, Stefan Nolte, Ronny Errmann, Diane Stoffel, Nadia Chakrova</p> <p>Proc. SPIE. 10921, Integrated Optics: Devices, Materials, and Technologies XXIII</p>
2	<p>Proceedings Article 10 July 2018</p> <p><u>The Faint Intergalactic Redshifted Emission Balloon-2: End-to-end ground Calibration (Conference Presentation)</u></p> <p>Vincent Picouet, Bruno Milliard, Didier Vibert, Robert Grange, Christopher Martin, Erika Hamden, Gillian Kyne, David Schiminovich, Ramona Augustin, Nicole Melso, Julia Gross, Samuel Quiret</p> <p>Proc. SPIE. 10699, Space Telescopes and Instrumentation 2018: Ultraviolet to Gamma Ray</p>
3	<p>Proceedings Article 10 July 2018</p> <p><u>The CHARA array adaptive optics program</u></p> <p>Theo ten Brummelaar, Judit Sturmman, Laszlo Sturmman, Matthew Anderson, Nils Turner, Michael Ireland, John Monnier, Denis Mourard, Stephen Ridgway, Douglas Gies, Jean-Baptiste Le Bouquin</p> <p>Proc. SPIE. 10703, Adaptive Optics Systems VI</p>

4	<p>Proceedings Article 10 July 2018</p> <p><u>A novel approach for the realization of thin glass substrates for optical mirrors</u></p> <p>G. Vecchi, S. Basso, R. Canestrari, M. Civitani, M. Ghigo, J. Hołyszko, G. Pareschi, B. Salmaso</p> <p>Proc. SPIE. 10706, Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation III</p>
5	<p>Proceedings Article 9 July 2018</p> <p><u>Recent technical and scientific highlights from the CHARA array</u></p> <p>Douglas Gies, Theo ten Brummelaar, Matthew Anderson, Christopher Farrington, Steven Golden, Jeremy Jones, Robert Klement, Olli Majoinen, Gail Schaefer, Judit Sturmman, Laszlo Sturmman, Nils Turner, Norman Vargas, Larry Webster, Craig Woods, Stephen Ridgway</p> <p>Proc. SPIE. 10701, Optical and Infrared Interferometry and Imaging VI</p>
6	<p>Proceedings Article 9 July 2018</p> <p><u>Masking interferometry at 150: old enough to mellow on redundancy?</u></p> <p>Peter Tuthill</p> <p>Proc. SPIE. 10701, Optical and Infrared Interferometry and Imaging VI</p>
7	<p>Proceedings Article 9 July 2018</p> <p><u>Panel discussion: next steps for OIFITS</u></p> <p>John Young, Michael Ireland, Xavier Haubois</p> <p>Proc. SPIE. 10701, Optical and Infrared Interferometry and Imaging VI</p>
8	<p>Proceedings Article 9 July 2018</p> <p><u>A six-apertures discrete beam combiners for J-band interferometry</u></p> <p>Ettore Pedretti, S. Piacentini, G. Corrielli, Roberto Osellame, Stefano Minardi</p> <p>Proc. SPIE. 10701, Optical and Infrared Interferometry and Imaging VI</p>
9	<p>Proceedings Article 9 July 2018</p> <p><u>GLINT South: a photonic nulling interferometer pathfinder at the Anglo-Australian Telescope for high contrast imaging of substellar companions</u></p> <p>Tiphaine Lagadec, Barnaby Norris, Simon Gross, Alexander Arriola, Thomas Gretzinger, Nick Cvetojevic, Jon Lawrence, Michael Withford, Peter Tuthill</p> <p>Proc. SPIE. 10701, Optical and Infrared Interferometry and Imaging VI</p>

10	<p>Proceedings Article 6 July 2018</p> <p><u>Commissioning status of the Greenland Telescope (GLT)</u></p> <p>Satoki Matsushita, Keiichi Asada, Makoto Inoue, Hiroaki Nishioka, Chih-Wei Huang, Nimesh Patel, Jun Yi Koay, Shoko Koyama, Patrick Koch, Zheng Meyer-Zhao, Lupin C.-C. Lin, Paul T. Ho, Ming-Tang Chen, Timothy Norton, Kuan-Yu Liu, Chen-Yu Yu, etal.</p> <p>Proc. SPIE. 10700, Ground-based and Airborne Telescopes VII</p>
11	<p>Proceedings Article 3 April 2018</p> <p><u>Integrated optics applied to astronomical aperture synthesis: general concept for space and ground based applications</u></p> <p>Kern Pierre, Fabien Malbet, Jean Philippe Berger, Karine Rousselet-Perraut, Isabelle Schanen, Laurent Nabias, Pierre Benech</p> <p>Proc. SPIE. 10570, International Conference on Space Optics — ICSO 1997</p>
12	<p>Proceedings Article 3 April 2018</p> <p><u>Integrated optics applied to astronomical aperture synthesis III: simulation of components optimized for astronomical interferometry</u></p> <p>Laurent Nabias, Isabelle Schanen, Jean-Philippe Berger, Pierre Kern, Fabien Malbet, Pierre Benech</p> <p>Proc. SPIE. 10570, International Conference on Space Optics — ICSO 1997</p>

✧ Optical Long Baseline Interferometer

1	<p>Proceedings Article 17 September 2018</p> <p><u>Beamed-energy propulsion: optical phase noise in 1064nm fiber amplifiers</u></p> <p>P. Srinivasan, P. Krogen, P. Meinhold, W. Hettle, Owen Ou, P. Lubin, N. Blasey, G. Hughes</p> <p>Proc. SPIE. 10743, Optical Modeling and Performance Predictions X</p>
2	<p>Proceedings Article 19 September 2018</p> <p><u>Experimental verification of compliant mirror wavefront correction using a single actuator</u></p> <p>James Clark III, F. Ernesto Penado, Micha Heilman, Wyatt Clark</p> <p>Proc. SPIE. 10747, Optical System Alignment, Tolerancing, and Verification XII</p>

天文望远镜光学设计、分析与检测

✧ Primary focus optical system

1	<p>Proceedings Article 4 September 2018</p> <p><u>Stray light test results of Operational Landsat Imager 2 (OLI-2) compared to OLI</u></p> <p>Frank Grochocki, John Fleming, Thomas Kampe</p> <p>Proc. SPIE. 10750, Reflection, Scattering, and Diffraction from Surfaces VI</p>
2	<p>Proceedings Article 10 July 2018</p> <p><u>Recent advances in stray light modeling for large telescope/observatory systems</u></p> <p>Richard Pfisterer, Stephen Pompea, Scott Ellis</p> <p>Proc. SPIE. 10705, Modeling, Systems Engineering, and Project Management for Astronomy VIII</p>
3	<p>Proceedings Article 10 July 2018</p> <p><u>The hunt for Sirius Ab: comparison of algorithmic sky and PSF estimation performance in deep coronagraphic thermal-IR high contrast imaging</u></p> <p>Joseph Long, Jared Males, Katie Morzinski, Laird Close, Frans Snik, Matthew Kenworthy, Gilles P. Otten, John Monnier, Volker Tolls, Alycia Weinberger</p> <p>Proc. SPIE. 10703, Adaptive Optics Systems VI</p>
4	<p>Proceedings Article 6 July 2018</p> <p><u>Straylight analysis for the externally occulted Lyot solar coronagraph ASPIICS</u></p> <p>Raphaël Rougeot, Claude Aime, Cristian Baccani, Silvano Fineschi, R éni Flamary, Damien Galano, Camille Galy, Volker Kirschner, Federico Landini, Marco Romoli, Sergei Shestov, C édric Thizy, Jorg Versluys, Andrei Zhukov</p> <p>Proc. SPIE. 10698, Space Telescopes and Instrumentation 2018: Optical, Infrared, and Millimeter Wave</p>