

PROCEEDINGS OF SPIE

Space Telescopes and Instrumentation 2014: Optical, Infrared, and Millimeter Wave

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Editors

22–27 June 2014
Montréal, Canada

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Published by
SPIE

Volume 9143

Proceedings of SPIE 0277-786X, V. 9143

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Space Telescopes and Instrumentation 2014: Optical, Infrared, and Millimeter Wave, edited by Jacobus M. Oschmann, Jr., Mark Clampin, Giovanni G. Fazio, Howard A. MacEwen, Proc. of SPIE Vol. 9143, 914301 · © 2014 SPIE
CCC code: 0277-786X/14/\$18 · doi: 10.1117/12.2075730

Proc. of SPIE Vol. 9143 914301-1

The papers included in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. The papers published in these proceedings reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

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Author(s), "Title of Paper," in *Space Telescopes and Instrumentation 2014: Optical, Infrared, and Millimeter Wave*, edited by Jacobus M. Oschmann Jr., Mark Clampin, Giovanni G. Fazio, Howard A. MacEwen, Proceedings of SPIE Vol. 9143 (SPIE, Bellingham, WA, 2014) Article CID Number.

ISSN: 0277-786X

ISBN: 9780819496119

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445

SPIE.org

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Printed in the United States of America.

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G. Marcy, Univ. of California, Berkeley (United States); P. R. McCullough, Space Telescope Science Institute (United States) and Johns Hopkins Univ. (United States); T. D. Morton, Princeton Univ. (United States); N. Narita, National Astronomical Observatory of Japan (Japan); M. Paegert, Vanderbilt Univ. (United States); E. Palles, Instituto de Astrofísica de Canarias (Spain); F. Pepe, Observatoire de Genève (Switzerland); J. Pepper, Vanderbilt Univ. (United States) and Lehigh Univ. (United States); A. Quirrenbach, Landessternwarte Heidelberg (Germany); S. A. Rinehart, NASA Goddard Space Flight Ctr. (United States); D. Sasselov, Harvard-Smithsonian Ctr. for Astrophysics (United States); B. Sato, Tokyo Institute of Technology (Japan); S. Seager, Massachusetts Institute of Technology (United States); A. Sozzetti, INAF - Osservatorio Astrofisico di Torino (Italy); K. G. Stassun, Vanderbilt Univ. (United States) and Fisk Univ. (United States); P. Sullivan, Massachusetts Institute of Technology (United States); A. Szentgyorgyi, G. Torres, Harvard-Smithsonian Ctr. for Astrophysics (United States); S. Udry, Observatoire de Genève (Switzerland); J. Villaseñor, Massachusetts Institute of Technology (United States)

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A. M. Di Giorgio, E. Galli, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); M. Farina,
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Astronomical Observatory of Japan (Japan); E. Serabyn, W. A. Traub, K. M. Liewer,
D. C. Moody, J. T. Trauger, Jet Propulsion Lab. (United States); O. Guyon, Subaru Telescope,
National Astronomical Observatory of Japan (United States) and The Univ. of Arizona
(United States); F. Martinache, Lab. Lagrange, CNRS, Observatoire de la Côte d'Azur
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T. Morford, California Institute of Technology (United States); Y. Onishi, Japan Aerospace Exploration Agency (Japan); M. Shirahata, National Astronomical Observatory of Japan (Japan); K. Tsumura, Tohoku Univ. (Japan); T. Wada, Japan Aerospace Exploration Agency (Japan); M. Zemcov, California Institute of Technology (United States) and Jet Propulsion Lab. (United States)

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Lee D. Feinberg, NASA Goddard Space Flight Center (United States)
Makenzie Lystrup, Ball Aerospace & Technologies Corporation (United States)
Jean-Pierre Maillard, Institut d'Astrophysique de Paris (France)
Gary W. Matthews, Exelis Inc. (United States)
Jaymie Mark Matthews, The University of British Columbia (Canada)

Mark J. McCaughrean, European Space Research and Technology Center (Netherlands)
Eric P. Smith, NASA Headquarters (United States)
Giorgio Savini, University College London (United Kingdom)
Giovanna Tinetti, University College London (United Kingdom)

Session Chairs

- 1 JWST I
Eric P. Smith, NASA Headquarters (United States)
- 2 JWST II
Giorgio Savini, University College London (United Kingdom)
- 3 JWST III
Mark Clampin, NASA Goddard Space Flight Center (United States)
- 4 Euclid
Jonathan W. Arenberg, Northrop Grumman Aerospace Systems (United States)

Monday Plenary Session

Luc Simard, National Research Council Canada (Canada)

- 5 AFTA/WFIRST I
Jacobus M. Oschmann Jr., Ball Aerospace & Technologies Corporation (United States)
- 6 AFTA/WFIRST II
Lee D. Feinberg, NASA Goddard Space Flight Center (United States)
- 7 Astrometry
Giovanni G. Fazio, Harvard-Smithsonian Center for Astrophysics (United States)

Plenary Session

Gillian S. Wright, UK Astronomy Technology Centre (United Kingdom)

- 8 Innovative Concepts I
Howard A. MacEwen, Reviresco LLC (United States)
- 9 Innovative Concepts II
Jacobus M. Oschmann Jr., Ball Aerospace & Technologies Corporation (United States)

Wednesday Plenary Session

Colin Cunningham, UK Astronomy Technology Centre
(United Kingdom)

- 10 SPICA/SPITZER
James B. Breckinridge, The University of Arizona (United States)
- 11 Solar System
Allison A. Barto, Ball Aerospace & Technologies Corporation
(United States)
- 12 Technology - Optics
Gary W. Matthews, Exelis Inc. (United States)

Thursday Plenary Session

Masanori Iye, National Astronomical Observatory of Japan (Japan)

- 13 Technology Instruments I
Jaymie Mark Matthews, The University of British Columbia (Canada)
- 14 Technology Instruments II
Etienne Artigau, Université de Montréal (Canada)
- 15 Exoplanets I
Jean-Pierre Maillard, Institut d'Astrophysique de Paris (France)
- 16 Exoplanets II
Makenzie Lystrup, Ball Aerospace & Technologies Corporation
(United States)

Introduction

In these conference proceedings, we address the current status of major space telescope flight programs, new concepts for systems and instruments under development, and enabling technologies for use in new or enhanced missions.

- The Proceedings volume begins with a large set of papers covering every aspect of the James Webb Space Telescope (JWST) program. Specific emphasis is paid to this year's program on the execution and planning of JWST's integration and test program, now well under way and positioning the JWST on the road to launch in 2018.
- Far-IR programs covered in these Proceedings include Herschel's scientific performance and a description of the new project framework for the SPICA mission. The instrument designs under this new framework for SPICA are summarized together with their scientific drivers. Finally, a new specialized technique developed to exploit the Spitzer Space Telescope warm mission will help improve astrometry with Spitzer, while additional papers address the analysis of existing Spitzer data.
- Europe's flagship Dark Energy mission, Euclid, has been approved for implementation and is moving forward. The mission is well represented by descriptions of the program status and science requirements, complemented by detailed descriptions of the design and performance of the observatory and the baselined science instruments.
- Sessions on innovative concepts presented several new ideas for future very large-aperture optical/IR space telescopes designed to undertake a range of astrophysics missions, with a primary goal of characterizing terrestrial planets around nearby stars. Much of these sessions focused on high contrast imaging and the fabrication of large aperture, low-cost space telescope optics.

The conference theme was the "behind-the-scene processes" that have led or are leading projects from the drawing board to the sky. The diversity of papers presented in the conference demonstrate the wide range and difficulty of challenges encountered at every stage of the process, and the innovative approaches that must be employed to overcome those challenges and realize the opportunities that they also present.

Jacobus M. Oschmann Jr.
Mark Clampin
Giovanni G. Fazio
Howard A. MacEwen

