

List of NASA/JPL related publications for Peter G. Halverson

Primary author on these papers:

“Cryogenic Performance of Piezo-Electric Actuators for Opto-Mechanical Applications,” Peter G. Halverson, Tyler J. Parker and Marie Levine, SPIE Optics and Photonics, 26-30 August 2007, San Diego, California

“The JPL cryogenic dilatometer: measuring the thermal expansion coefficient of aerospace materials,” Peter G. Halverson, Tyler J. Parker, Paul Karlmann, Kerry J. Klein, Robert D. Peters, Marie Levine, ITCC 29/ITES 17 (International Thermal Conductivity Conference 29/International Thermal Expansion Symposium 17), 24-27 June 2007, Birmingham, Alabama

“Measurement of wavefront phase delay and optical density in apodized coronagraphic mask materials,” Halverson, Peter G.; Ftaclas, Micheal Z.; Balasubramanian, Kunjithapatham; Hoppe, Daniel J.; Wilson, Daniel W., Techniques and Instrumentation for Detection of Exoplanets II, Proceedings of the SPIE, Volume 5905, pp. 473-482 (2005).

“Search for general relativistic effects in table-top displacement metrology” Peter G. Halverson, Daniel R. Macdonald, Rosemary T. Diaz, 2004 CLEO/IQEC, San Francisco, May 16-21 2004

“Progress towards picometer accuracy laser metrology for the space interferometry mission - update for ICSO 2004,” Peter G. Halverson, Oscar Alvarez-Salazar, Alireza Azizi, Frank Dekens, Bijan Nemati, Feng Zhao, Proceedings of the 5th International Conference on Space Optics (ICSO 2004), 30 March - 2 April 2004, Toulouse, France, ESA SP-554, 2004, p. 515 - 522

“Signal processing for order 10 pm accuracy displacement metrology in real-world scientific applications,” Peter G. Halverson, Frank M Loya, Proceedings of the 5th International Conference on Space Optics (ICSO 2004), 30 March - 2 April 2004, Toulouse, France, ESA SP-554, 2004, p. 571 - 577

“Signal processing and testing of displacement metrology gauges with picometre-scale cyclic nonlinearity,” Peter G. Halverson and Robert E. Spero, J. Opt. A: Pure Appl. Opt., Volume 4, Issue 6, pp. S304-S310 (2002).

“Characterization of Picometer Repeatability Displacement Metrology Gauges,” Peter G. Halverson, Lawrence S. Azevedo, Rosemary T. Diaz, Robert E. Spero, Proceedings of ODIMAP III, the 3rd Topical Meeting on Optoelectronic Distance/Displacement Measurements and Applications, 20-22 September 2001, Pavia, Italy, pp. 63-68.

“Techniques for the reduction of cyclic errors in laser metrology gauges for the Space Interferometry Mission,” Peter G. Halverson, Feng Zhao, Robert Spero, Stuart Shaklan,

Oliver P. Lay, Serge Dubovitsky, Rosemary T. Diaz, Ray Bell, Lawrence Ames, Kalyan Dutta, Proceedings of the ASPE 2001 Annual Meeting, 10-15 November, Crystal City Virginia. pp.103-106 (2001)

“Progress towards picometer accuracy laser metrology for the Space Interferometry Mission,” Peter G. Halverson, Andreas Kuhnert, Jennifer Logan, Martin Regehr, Stuart Shaklan, Robert Spero, Feng Zhao, Tallis Chang, Edouard Schmidlin, Roman Gutierrez, Thomas R. VanZandt, Jeffrey Yu, proceedings of the International Conference of Space Optics ICSO 2000, 5-7 December 2000, Toulouse, France, pp. 417-428.

“A Multichannel Averaging Phasemeter for Picometer Precision Laser Metrology,” Peter G. Halverson, Donald R. Johnson, Andreas Kuhnert, Stuart B. Shaklan, Robert Spero, Optical Engineering for Sensing and Nanotechnology (ICOSN ’99), 16-18 June 1999, Yokohama, Japan, Proceedings of the SPIE Volume 3740, pp 646-649

Co-author on these papers:

“Overview of the LISA Phasemeter,” Shaddock, D.; Ware, B.; Halverson, P. G.; Spero, R. E.; Klipstein, B., Laser Interferometer Space Antenna: 6th International LISA Symposium. AIP Conference Proceedings, Volume 873, pp. 654-660 (2006)

“Clock Noise Removal in LISA,” Klipstein, William; Halverson, Peter G.; Peters, Robert; Cruz, Rachel; Shaddock, Daniel Laser Interferometer Space Antenna: 6th International LISA Symposium. AIP Conference Proceedings, Volume 873, pp. 312-318 (2006)

“Linear Thermal Expansion Measurements of Single Crystal Silicon for Validation of Interferometer Based Cryogenic Dilatometer,” Karlmann, P. B.; Klein, K. J.; Halverson, P. G.; Peters, R. D.; Levine, M. B.; van Buren, D.; Dudik, M. J., ADVANCES IN CRYOGENIC ENGINEERING. AIP Conference Proceedings, Volume 824, pp. 35-42 (2006)

“Occulting Focal Plane Masks for Terrestrial Planet Finder Coronagraph: Design, Fabrication, Simulations and Test Results,” Balasubramanian, Kunjithapatham *et al.*, Direct Imaging of Exoplanets: Science & Techniques. Proceedings of the IAU Colloquium #200, pp.405-410 (2006)

“Phase Measurement System for Inter-Spacecraft Laser Metrology,” B. Ware, W.M. Folkner, D. Shaddock, R. E. Spero, P. G. Halverson, I. Harris, T. Rogstad Earth Science Technology Conference 2006, Adelphi, Maryland

“Linear thermal expansion measurements of lead magnesium niobate (PMN) electroceramic material for the Terrestrial Planet Finder Coronagraph,” Karlmann, Paul B.; Klein, Kerry J.; Halverson, Peter G.; Peters, Robert D.; Levine, Marie B.; Van Buren, David; Dudik, Matthew J., Optical Modeling and Performance Predictions II. Proceedings of the SPIE, Volume 5868, pp. 192-201 (2005).

“Time-dependent thermal strain behavior of Zerodur from 270K to 310K,” Karlmann, Paul B.; Klein, Kerry J.; Halverson, Peter G.; Peters, Robert D.; Levine, Marie B.; Van Buren, David; Dudik, Matthew J., Optical Modeling and Performance Predictions II. Edited by Kahan, Mark A. Proceedings of the SPIE, Volume 5868, pp. 181-191 (2005).

“Continued development of a precision cryogenic dilatometer for the James Webb Space Telescope,” Karlmann, Paul B.; Dudik, Matthew J.; Halverson, Peter G.; Levine, Marie B.; Marcin, Martin R.; Peters, Robert D.; Shaklan, Stuart B.; Van Buren, David Advances in Thin Film Coatings for Optical Applications. Edited by Kruschwitz, Jennifer D. T.; Oliver, James B. Proceedings of the SPIE, Volume 5528, pp. 63-71 (2004).

“Precision cryogenic dilatometer for James Webb Space Telescope materials testing” Matthew J. Dudik, Peter G. Halverson, Marie Levine, Martin Marcin, Robert D. Peters, Stuart Shaklan, Fifteenth Symposium on Thermophysical Properties, June 22-27, 2003, Boulder, Colorado, U.S.

“Development of a precision cryogenic dilatometer for James Webb Space Telescope materials testing,” Dudik, Matthew J.; Halverson, Peter G.; Levine, Marie B.; Marcin, Martin; Peters, Robert D.; Shaklan, Stuart, Optical Materials and Structures Technologies, Proceedings of the SPIE, Volume 5179, pp. 155-164 (2003).

“SIM external metrology beam launcher (QP) development,” Lawrence Ames, Bob Barrett, Ray Bell, Larry Dries, Kalyan Dutta, Peter Halverson, Buck Holmes, Todd Kvamme, Dave Leary, Pat Perkins, Mark Scott, Tim Van Eck, Feng Zhao, Interferometry in Space, Proceedings of the SPIE, Volume 4852, pp. 347-354 (2003).

“Automatic alignment of a displacement-measuring heterodyne interferometer,” Logan, J. E., Halverson, P. G., Regehr, M. W. and Spero R. E., Applied Optics, vol. 41, Issue 21, pp.4314-4317 (2002)

“Development of sub-nanometer racetrack laser metrology for external triangulation measurement for the Space interferometry Mission,” Feng Zhao, Rosemary Diaz, Philip Dumont, Peter G. Halverson, Stuart Shaklan, Robert Spero, Lawrence Ames, Stephanie Barrett, Robert Barrett, Ray Bell, Robert Benson, Gene Cross, Kalyan Dutta, Todd Kvamme, Buck Holmes, David Leary, Patrick Perkins, Mark Scott, and David Stubbs Proceedings of the ASPE 2001 annual meeting, 10-15 November, Crystal City Virginia, pp. 349-352 (2001)

“Micro-Arcsecond Metrology testbed (MAM),” Shaklan, Stuart B.; Azevedo, Steve; Bartos, Randall D.; Carlson, Andrew E.; Gursel, Yekta; Halverson, P.; Kuhnert, Andreas C.; Lin, Yao; Savedra, R.; Schmidtlin, Edouard G., Astronomical Interferometry, Proc. SPIE Vol. 3350, p. 1009-1019 (1998)

Technical Reports (NASA Tech Briefs)

“High-Accuracy, High-Dynamic-Range Phase-Measurement System,” Daniel Shaddock, Brent Ware, Peter Halverson, and Robert Spero, NPO-41927, NASA Tech Briefs, Vol. 31, No. 7, pp. 22 (2007)

“Automatic Alignment of Displacement-Measuring Interferometer,” Peter Halverson, Martin Regehr, Robert Spero, Oscar Alvarez- Salazar, Frank Loya, and Jennifer Logan, NPO-40957, NASA Tech Briefs, Vol. 30, No. 10, pp. 13a-14a (2006)

“Precision Cryogenic Dilatometer,” Matthew Dudik, Peter Halverson, Marie Levine-West, Martin Marcin, Robert D. Peters, and Stuart Shaklan, NPO-40389, NASA Tech Briefs, Vol. 29, No. 11, pp. 34-36 (2005)

“Digital Averaging Phasemeter for Heterodyne Interferometry,” Donald Johnson, Robert Spero, Stuart Shaklan, Peter Halverson, and Andreas Kuhnert, NPO-30866, , NASA Tech Briefs, Vol. 28, No. 9, pp. 6a-7a (2004)