Glenn Edward Miller

Publications

Refereed Publications

Stellar Birthrate and Initial Mass Function

"On the Birthplaces of Stars", G.E. Miller, and J.M. Scalo, Publications of the Astronomical Society of the Pacific, 90, 506-513 (1978).

"The Initial Mass Function and Stellar Birthrate in the Solar Neighborhood", G.E. Miller, and J.M. Scalo, Astrophysical Journal Supplement Series, 41, 513-547 (1979).

"The History of the Stellar Birthrate from Lithium Abundances in Red Giants", J.M. Scalo, and G.E. Miller, Astrophysical Journal, 239, 953-960 (1980).

"Nucleosynthetic Yields and the History of the Stellar Birthrate", J.C. Wheeler, G.E. Miller, and J.M. Scalo, Astronomy and Astrophysics, 82, 152-156 (1980).

Red Giant Evolution

"A Constraint on Proposed Explanations for Low C^{12}/C^{13} Ratios in G and K Giants", J.M. Scalo, and G.E. Miller, Astrophysical Journal, 255, 523-526 (1978).

"Constraints on the Evolution of Peculiar Red Giants. II. Masses and Space Densities", J.M. Scalo, and G.E. Miller, Astrophysical Journal, 233, 596-610 (1979).

"A Method for the Determination of Metal Abundances in the Galactic Nuclear Bulge and Nearby Galaxies", J.M. Scalo, and G.E. Miller, Astrophysical Journal Letters, 248, L65-L68 (1981).

"Technetium and Mixing in Simulated Populations of Double Shell Phase Stars", J.M. Scalo, and G.E. Miller, Astrophysical Journal, 246, 251-266 (1981).

"A Comparison of Observed and Theoretical Luminosity Functions of Carbon Stars and Late M Giants", G.E. Miller, and J.M. Scalo, Astrophysical Journal, 263, 259-268 (1982).

Galaxies and Galaxy Clusters

"Effects of Galaxy Collisions on the Structure and Evolution of Galaxy Clusters. I. Mass and Luminosity Functions and Background Light", G.E. Miller, Astrophysical Journal, 268, 495-512 (1983).

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"A Comparison of Theoretical to Observed Type I Supernova Rates", G.E. Miller, and R.A. Chevalier, Astrophysical Journal, 274, 840-845 (1983).

Spectroscopy

"Isotope Shifts in the Arc Spectra of Dysprosium, Erbium and Ytterbium", G.E. Miller, and J.S. Ross, Journal of the Optical Society of America, 66, 585-589 (1976).

Computer Assisted Instruction

"Interactive Ray Tracing Program for Geometrical Optics", G.E. Miller, L.H. Eaton, and D.C. Griffin, American Journal of Physics, 43, 913 (1975).

Invited Contributions

"Knowledge Based Tools for Hubble Space Telescope Planning and Scheduling: Constraints and Strategies", G.E. Miller, M. Johnston, S. Vick, J. Sponsler, and K. Lindenmayer, in "Proceedings of the 1988 Goddard Conference on Space Applications of Artificial Intelligence", ed. J. Rash and P. Hughes, NASA Conference Publication 3009, (Greenbelt MD: NASA), pp. 91-106, reprinted in Telematics and Informatics, 5, 197-212 (1988).

"Artificial Intelligence Applications for Hubble Space Telescope Operations", G.E. Miller, in "Knowledge Based Systems in Astronomy (Lecture Notes in Physics #329)", ed. F. Murtagh and A. Heck, (Berlin: Springer Verlag) 5-32 (1989).

"Spike: Intelligent Scheduling of Hubble Space Telescope Observations", M. Johnston and G. Miller, invited chapter to Intelligent Scheduling, ed. M. Fox and M. Zweben, (San Francisco: Morgan-Kaufmann), pp 391-422 (1994).

"Adaptation and Evolution of the Spike Planning and Scheduling System", invited presentation at the NASA Workshop on Planning and Scheduling for Space (1997).

Conference Papers

“Effective Management of Information Technology for Multi-Mission Organizations”, Glenn Miller, Doris McClure, Marty Durkin and Lisa Wolff, Proceedings of the SpaceOps 2004 Conference (2004).

"Observation Scheduling Scheme for the Subaru Telescope", Toshiyuki Sasaki, George Kosugi, Jun A. Kawai, Toyoaki Kusumoto, Norikazu Koura, Laurence Kramer, Anthony P. Krueger, and Glenn Miller,Proceedings of Advanced Telescope and Instrumentation Control Software, ed. Hilton and Lewis, SPIE Vol 4009, P. 350-354 (2000).

"A New Paradigm for User Support and Software Tools", Glenn Miller, Anuradha Koratkar, Dan Golombek,), Astronomical Data Analysis Software and Systems IX, ASP Conference Series 216, ed. Manset, Veillet and Crabtree, p. 12-16 (2000).

"Long and Short Term Scheduling Tools in ESO", Gino Giannone, Alberto M. Chavan, David Silva, Anthony P. Krueger (STScI), Glenn E. Miller (STScI), Astronomical Data Analysis Software and Systems IX, ASP Conference Series 216, ed. Manset, Veillet and Crabtree, p. 111-115 (2000).

"Support Tools for the VLT Operations: the NTT Prototyping Experience", Alberto Maurizio Chavan, Gino, Giannone (Serco), David Silva, Tony Krueger, Glenn Miller, in "Observatory Operations to Optimize Scientific Return" ed. P.J. Quinn, SPIE Proceedings Vol 3349, pp. 97-104 (1998).

"Applying the Lessons Learned from HST Operations to New Missions", Glenn Miller and Peg Stanley in "Observatory Operations to Optimize Scientific Return" ed. P.J. Quinn, SPIE Proceedings Vol 3349, pp. 20-29 (1998).

"Electronic Submission of HST Phase I Proposals", Brett Blacker, Glenn Miller, Meg Urry, Harry Payne, and Drew Asson, in "Observatory Operations to Optimize Scientific Return" ed. P.J. Quinn, SPIE Proceedings Vol 3349, pp. 80-88 (1998).

"Service Observing and Data Quality Control: Some Lessons Learned From the Hubble Space Telescope", Anuradha Koratkar, Ray Lucas, Stefano Casertano, Megan Donahue, Faith Abney, and Glenn Miller, in "Observatory Operations to Optimize Scientific Return" ed. P.J. Quinn, SPIE Proceedings Vol 3349, pp. 224-234 (1998).

"Proposal Solicitation and Selection for the 21st Century", Palle Moller, Glenn Miller, Brett Blacker and Meg Urry, in "Observatory Operations to Optimize Scientific Return" ed. P.J. Quinn, SPIE Proceedings Vol 3349, pp. 135-142 (1998).

"Nightly Scheduling of ESO's Very Large Telescope", Alberto Maurizio Chavan (ESO), Gino Giannone (Serco), Dave Silva, Tony Krueger, Glenn Miller, Astronomical Data Analysis Software and Systems VII, ASP Conference Series, Vol. 145, Editors: R. Albrecht, R.N. Hook and H. A. Bushouse, pp. 255-258 (1998).

"Hubble Space Telescope Planning and Scheduling - Experience, Lessons Learned and Future Directions", G. Miller, in New Observing Modes for the Next Century, (ASP Conference Series, Vol. 87), ed. T. Boroson, J. Davies and I. Robson (San Francisco: ASP), pp. 158-161 (1996).

"A System for Long-Term Scheduling of Ground-Based Observatories", G. Miller, in New Observing Modes for the Next Century, (ASP Conference Series, Vol. 87), ed. T. Boroson, J. Davies and I. Robson (San Francisco: ASP), pp. 81-84 (1996).

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"Planning and Scheduling for the Hubble Space Telescope", G. Miller, in Robotic Telescopes (ASP Conference Series, Vol. 79), ed. G.W. Henry and J.A. Eaton (San Francisco: ASP), pp. 173-183 (1995).

"Planning and Scheduling the Hubble Space Telescope: Practical Application of Advanced Techniques", G. Miller, Third International Symposium on Artificial Intelligence, Robotics and Automation for Space (i-SAIRAS '94), JPL Publication 94-23 (Pasadena: JPL), pp. 339-342 (1994).

"Spike: Intelligent Scheduling of Hubble Space Telescope Observations", M. Johnston and G. Miller, in Intelligent Scheduling, ed. M. Fox and M. Zweben, (San Francisco: Morgan-Kaufmann), ISBN 1-55860-260-7, pp 391-422 (1994).

"DRACO: An Expert Assistant for Data Reduction and Analysis, Glenn Miller and Felix Yen, in Astronomical Data Analysis and Software Systems III (ASP Conference Series, Vol 61), ed. D.R. Crabtree, R.J. Hanisch and J. Barnes (San Francisco: ASP), pp 100-103 (1994).

"The Data Reduction Expert Assistant", G. Miller, in Astronomy From Large Databases II, ESO Conference and Workshop Proceedings No. 43, Ed. A. Heck and F. Murtagh, pp. 99-110 (1992).

"A Case Study of Hubble Space Telescope Proposal Processing, Planning and Long-Range Scheduling", G. Miller and M. Johnston, "Computing in Aerospace 8", American Institute of Aeronautics and Astronautics, pp. 1-13 (1991).

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"Artificial Intelligence Scheduling for NASA's Hubble Space Telescope", M.D. Johnston and G.E. Miller, "Proceedings of the Fifth Annual Expert Systems in Government Conference" (Washington, May 7-11, 1990), ed. B. Silverman, V. Huang and S. Post (Los Alamitos, IEEE Computer Society Press), pp. 33-39 (1990).

"Spike: Artificial Intelligence Scheduling for Hubble Space Telescope", M. Johnston, G. Miller, J. Sponsler, S. Vick and R. Jackson, in "Fifth Conference on Artificial Intelligence for Space Applications" (Huntsville, May 22-23, 1990), ed. S.L. O'Dell, NASA Conference Publication 3073 (Marshall Space Flight Center: NASA), pp. 11-18 (1990).

"Orbital Sites Tradeoff Study", J.D. Neill, P. Bely, G.E. Miller and A. Spigler, in "Proceedings of the Conference on the Next Generation Space Telescope", (Baltimore, September 13-15, 1989), ed. P. Bely, C. Burrows and G. Illingworth (Baltimore: Space Telescope Science Institute), pp. 333-340 (1989).

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