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# Bibliography

- Abbe, E. 1883, *J. Royal Microsc. Soc.*, 3, 790 (p. 5).
- Airy, G. B. 1834, *Transactions Camb. Philos. Soc.*, 5, 283 (p. 4).
- Albert, O., Sherman, L., Mourou, G., Norris, T. B., & Vdovin, G. 2000, *Opt. Lett.*, 25, 52 (p. 58).
- Andersen, M., Dahl, J., Liu, Z., & Vandenberghe, L. 2011, in *Optimization for machine learning*, ed. S. Sra, S. Nowozin, & S. J. Wright (Cambridge, MA: MIT Press), 55 (p. 71).
- Andersen, M., Dahl, J., & Vandenberghe, L. 2013, CVXOPT: A Python package for convex optimization, version 1.1.6, Available at <http://cvxopt.org> (p. 71).
- Antonello, J., Verhaegen, M., Fraanje, R., et al. 2012, *J. Opt. Soc. Am. A*, 29, 2428 (pp. 17, 40, 59, 59, 62, 63, 65, 66, 67, 67, 70, 70, 71, 72, 74, 78, 79, 79).
- Artal, P., Iglesias, I., López-Gil, N., & Green, D. G. 1995a, *J. Opt. Soc. Am. A*, 12, 2358 (p. 45).
- Artal, P., Marcos, S., Navarro, R., & Williams, D. R. 1995b, *J. Opt. Soc. Am. A*, 12, 195 (pp. 45, 58).
- Asplund, M., Grevesse, N., Sauval, A. J., & Scott, P. 2009, *Annu. Rev. Astron. Astrophys.*, 47, 481 (p. 117).
- Aviles-Espinosa, R., Andilla, J., Porcar-Guezenec, R., et al. 2011, *Biomedical Opt. Express*, 2, 3135 (p. 58).
- Azucena, O., Crest, J., Cao, J., et al. 2010, *Opt. Express*, 18, 17521 (pp. 11, 34, 58).
- Azucena, O., Crest, J., Kotadia, S., et al. 2011, *Opt. Lett.*, 36, 825 (pp. 11, 34).
- Babcock, H. W. 1953, *Publ. Astron. Soc. Pac.*, 65, 229 (pp. 2, 144).
- Baglin, A., Auvergne, M., Barge, P., et al. 2006, in *ESA Special Publication, Vol. 1306, The CoRoT Mission Pre-Launch Status - Stellar Seismology and Planet Finding*, ed. M. Fridlund, A. Baglin, J. Lochard, & L. Conroy, 33 (p. 22).

## Bibliography

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- Baraffe, I., Chabrier, G., Allard, F., & Hauschildt, P. H. 1998, *Astron. Astrophys.*, 337, 403 (p. 117).
- Bardell, D. 2004, *BIOS*, 75, 78 (p. 1).
- Beck, A., Stoica, P., & Li, J. 2008, *Signal Process. IEEE Transactions on*, 56, 1770 (pp. 64, 65, 65, 66, 66, 66, 66, 66, 79).
- Bell, C. P. M., Naylor, T., Mayne, N. J., Jeffries, R. D., & Littlefair, S. P. 2013, *Mon. Notices Royal Astron. Soc.*, 434, 806 (p. 116).
- Beuzit, J. L., Feldt, M., Dohlen, K., et al. 2008, in *SPIE Proceedings*, Vol. 7014, *Ground-based and Airborne Instrumentation for Astronomy II*, ed. I. S. McLean & M. M. Casali (Marseille, France: SPIE) (pp. 11, 23).
- Bifano, T. 2011, *Nat. Photonics*, 5, 21 (p. 12).
- Bone, D. J., Bachor, H. A., & Sandeman, R. J. 1986, *Appl. Opt.*, 25, 1653 (p. 35).
- Booth, M., Wilson, T., Sun, H.-B., Ota, T., & Kawata, S. 2005, *Appl. Opt.*, 44, 5131 (p. 60).
- Booth, M. J. 2006, *Opt. Express*, 14, 1339 (pp. 59, 59, 59, 78).
- . 2007a, *Philos. Transactions Royal Soc. A: Math. Phys. Eng. Sci.*, 365, 2829 (pp. 10, 34, 58, 59).
- . 2007b, *Opt. Lett.*, 32, 5 (pp. 4, 10, 34, 34, 59, 59, 78).
- Booth, M. J., Débarre, D., & Jesacher, A. 2012, *Opt. Photonics News*, 23, 22 (pp. 10, 11, 12).
- Booth, M. J., Neil, M. A. A., & Wilson, T. 2002, *J. Opt. Soc. Am. A*, 19, 2112 (pp. 59, 59, 78).
- Booth, M. J., & Wilson, T. 2001, *J. Biomedical Opt.*, 6, 266 (p. 14).
- Borucki, W. J., Agol, E., Fressin, F., et al. 2013, *Science*, 340, 587 (p. 22).
- Bouchez, A. H., Acton, D. S., Agapito, G., et al. 2012, in *SPIE Proceedings*, Vol. 8447, *Adaptive Optics Systems III*, ed. B. L. Ellerbroek, E. Marchetti, & J.-P. Véran, SPIE (Amsterdam, Netherlands: SPIE), 84471I (p. 3).
- Brakenhoff, G. J., Visscher, K., & Voort, H. T. M. 1990, in *Handbook of Biological Confocal Microscopy*, revised edn., ed. J. B. Pawley (New York, USA: Plenum Press), 87 (p. 39).
- Broggi, M., Keller, C. U., Ovelar, D. J., et al. 2012, *Astron. Astrophys.*, 545, L5 (pp. 27, 28, 29, 85, 85, 90, 90, 91, 91, 97, 126).
- Brown, T. M. 2003, *The Astrophys. J.*, 593, L125 (p. 24).

- Budaj, J. 2013, *Astron. Astrophys.*, 557, A72 (pp. 27, 84, 85, 89, 98, 102, 104).
- Bueno, J. M., Gualda, E. J., & Artal, P. 2010, *J. Biomedical Opt.*, 15, 066004 (p. 58).
- Burrows, C. J., Holtzman, J. A., Faber, S. M., et al. 1991, *The Astrophys. J.*, 369, L21 (p. 5).
- Butters, O. W., West, R. G., Anderson, D. R., et al. 2010, *Astron. Astrophys.*, 520, L10 (p. 109).
- Cameron, A. C., Bouchy, F., Hébrard, G., et al. 2007, *Mon. Notices Royal Astron. Soc.*, 375, 951 (p. 109).
- Campagnola, P. J., Lewis, A., Loew, L. M., Clark, H. A., & Mohler, W. A. 2001, *J. Biomedical Opt.*, 6, 277 (p. 58).
- Cha, J. W., Ballesta, J., & So, P. T. C. 2010, *J. Biomedical Opt.*, 15, 046022 (pp. 11, 34, 58).
- Chauvin, G., Lagrange, A. M., Dumas, C., et al. 2005, *Astron. Astrophys.*, 438, L25 (p. 23).
- Chen, C. H., Mamajek, E. E., Bitner, M. A., et al. 2011, *The Astrophys. J.*, 738, 122 (p. 115).
- Claret, A., & Bloemen, S. 2011a, *Astron. Astrophys.*, 529, A75 (p. 99).
- . 2011b, *VizieR Online Data Catalog*, 352, 99075 (pp. 118, 118, 119, 122).
- Collier Cameron, A., Wilson, D. M., West, R. G., et al. 2007, *Mon. Notices Royal Astron. Soc.*, 380, 1230 (p. 24).
- Crowe, M. J. 1999, *The Extraterrestrial Life Debate, 1750–1900* (Courier Dover Publications) (p. 21).
- de Grauw, C. J., Vroom, J. M., van der Voort, H. T. M., & Gerritsen, H. C. 1999, *Appl. Opt.*, 38, 5995 (p. 34).
- de Zeeuw, P. T., Hoogerwerf, R., de Bruijne, J. H. J., Brown, A. G. A., & Blaauw, A. 1999, *The Astron. J.*, 117, 354 (p. 115).
- Débarre, D., Booth, M. J., & Wilson, T. 2007, *Opt. Express*, 15, 8176 (pp. 10, 18, 34, 59, 59, 74, 78).
- Débarre, D., Botcherby, E. J., Booth, M. J., & Wilson, T. 2008, *Opt. Express*, 16, 9290 (pp. 17, 59, 59, 59, 63, 78).
- Débarre, D., Botcherby, E. J., Watanabe, T., et al. 2009, *Opt. Lett.*, 34, 2495 (pp. 10, 14, 17, 34, 53, 59, 59, 59, 62, 68, 78).

## Bibliography

---

- Débarre, D., Facomprez, A., & Beaulrepaire, E. 2012, in SPIE Proceedings, Vol. 8253, MEMS Adaptive Optics VI, ed. S. S. Olivier, T. G. Bifano, & J. Kubby (San Francisco, California, USA: SPIE), 82530F (p. 63).
- Deng, S., Liu, L., Cheng, Y., Li, R., & Xu, Z. 2009, *Opt. Express*, 17, 1714 (p. 15).
- Denk, W., Strickler, J. H., & Webb, W. W. 1990, *Science*, 248, 73 (pp. 9, 34, 58).
- Des Marais, D. J., Harwit, M. O., Jucks, K. W., et al. 2002, *Astrobiology*, 2, 153 (p. 23).
- Dotter, A., Chaboyer, B., Jevremović, D., et al. 2008, *The Astrophys. J. Suppl. Ser.*, 178, 89 (p. 117).
- Duffner, R. W. 2009, *ITEA J.*, 29, 341 (p. 3).
- Eastman, J., Siverd, R., & Gaudi, B. S. 2010, *Publ. Astron. Soc. Pac.*, 122, 935 (p. 90).
- Ellerbroek, B. L. 2013, *J. Astrophys. Astron.*, 34, 121 (p. 3).
- Facomprez, A., Beaulrepaire, E., & Débarre, D. 2012, *Opt. Express*, 20, 2598 (pp. 10, 10, 17, 34, 59, 59, 62, 68, 68, 74, 78, 79, 79).
- Feierabend, M. 2004, PhD thesis, Ruperto-Carola University of Heidelberg, Heidelberg, Germany (p. 38, 38).
- Feierabend, M., Rückel, M., & Denk, W. 2004, *Opt. Lett.*, 29, 2255 (pp. 11, 16, 34, 38, 42, 43, 44, 53).
- Fernandez, E., & Artal, P. 2003, *Opt. Express*, 11, 1056 (p. 60).
- Fiolka, R., Si, K., & Cui, M. 2012, *Opt. Express*, 20, 16532 (p. 53).
- Foy, R., & Labeyrie, A. 1985, *Astron. & Astrophys.*, 152, L29 (p. 34).
- Fraquelli, D., & Thompson, S. E. 2012, Kepler Archive Manual (KDMC-10008-004), Tech. rep., Space Telescope Science Institute (pp. 87, 87, 110).
- Fried, D. L. 1965, *J. Opt. Soc. Am.*, 55, 1427 (p. 5).
- Friedrich, J., Seidel, C., Ebner, R., & Kunz-Schughart, L. A. 2009, *Nat. Protoc.*, 4, 309 (p. 49).
- Fugate, R. Q., Fried, D. L., Ameer, G. A., et al. 1991, *Nature*, 353, 144 (p. 34).
- Gelman, A., & Rubin, D. B. 1992, *Stat. Sci.*, 7, 457 (p. 100).
- Ghiglia, D. C., & Pritt, M. D. 1998, Two-Dimensional Phase Unwrapping: Theory, Algorithms, and Software, 1st edn. (Wiley-Interscience) (p. 42).
- Gilliland, R. L., Jenkins, J. M., Borucki, W. J., et al. 2010, *The Astrophys. J.*, 713, L160 (p. 86).

- Goodman, J. W. 1976, *J. Opt. Soc. Am.*, 66, 1145 (p. 42).
- Gould, T. J., Burke, D., Bewersdorf, J., & Booth, M. J. 2012, *Opt. Express*, 20, 20998 (p. 15).
- Greenwood, D. P. 1977, *J. Opt. Soc. Am.*, 67, 390 (p. 5).
- Guinan, E. F., & Dewarf, L. E. 2002, in ASP Conference Proceedings, Vol. 279, Exotic Stars as Challenges to Evolution, ed. C. A. Tout & W. van Hamme (San Francisco: Astronomical Society of the Pacific), 121 (p. 108, 108).
- Hansen, P. C. 2010, Discrete inverse problems: insight and algorithms, Vol. 7 (SIAM) (p. 62).
- Hartmann, J. 1900, *Zeitschrift Für Instrumentenkunde*, 20, 17 (p. 6).
- Hecht, E. 2002, Optics, 4th edn. (Addison-Wesley) (p. 5).
- Hell, S., Reiner, G., Cremer, C., & Stelzer, E. H. K. 1993, *J. Microsc.*, 169, 391 (p. 14).
- Hell, S. W. 2003, *Nat. Biotechnol.*, 21, 1347 (pp. 14, 15).
- Hell, S. W., & Wichmann, J. 1994, *Opt. Lett.*, 19, 780 (p. 14).
- Helmholtz, & Fripp, H. 1876, *The Mon. Microsc. J.*, 16, 15 (p. 5).
- Hermann, B., Fernández, E. J., Unterhuber, A., et al. 2004, *Opt. Lett.*, 29, 2142 (p. 4).
- Hillenbrand, L. A., & White, R. J. 2004, *The Astrophys. J.*, 604, 741 (p. 116).
- Hinkley, S., Oppenheimer, B. R., Brenner, D., et al. 2008, in SPIE Proceedings, Vol. 7015, Adaptive Optics Systems, ed. N. Hubin, C. E. Max, & P. L. Wizinowich, The International Society for Optical Engineering (Marseille, France: SPIE) (p. 11).
- Hodapp, K. W., Suzuki, R., Tamura, M., et al. 2008, in SPIE Proceedings, Vol. 7014, Ground-based and Airborne Instrumentation for Astronomy II, ed. I. S. McLean & M. M. Casali (Marseille, France: SPIE) (pp. 3, 11).
- Hough, G. W. 1885, *Observatory*, 8, 275 (p. 2).
- Huang, D., Swanson, E. A., Lin, C. P., et al. 1991, *Science*, 254, 1178 (p. 35).
- Itoh, K. 1982, *Appl. Opt.*, 21, 2470 (p. 42).
- Jenkins, J. M., Caldwell, D. A., Chandrasekaran, H., et al. 2010a, *The Astrophys. J.*, 713, L120 (p. 86).
- . 2010b, *The Astrophys. J.*, 713, L87 (p. 86).
- Jesacher, A., Marshall, G. D., Wilson, T., & Booth, M. J. 2010, *Opt. Express*, 18, 656 (p. 4).

## Bibliography

---

- Jesacher, A., Thayil, A., Grieve, K., et al. 2009, *Opt. Lett.*, 34, 3154 (pp. 14, 59, 59, 66, 68, 78).
- Ji, N., Milkie, D. E., & Betzig, E. 2009, *Nat. Methods*, 7, 141 (pp. 11, 58).
- Ji, N., Sato, T. R., & Betzig, E. 2011, *Proc. Natl. Acad. Sci.*, 109, 22 (p. 11).
- Kalas, P., Graham, J. R., & Clampin, M. 2005, *Nature*, 435, 1067 (p. 126).
- Kalas, P., Graham, J. R., Chiang, E., et al. 2008, *Science*, 322, 1345 (pp. 1, 23).
- Kane, S. R., Cameron, A. C., Horne, K., et al. 2004, *Mon. Notices Royal Astron. Soc.*, 353, 689 (p. 109).
- Kasper, M., Beuzit, J.-L., Verinaud, C., et al. 2010, in SPIE Proceedings, Vol. 7735, Ground-based and Airborne Instrumentation for Astronomy III, ed. I. S. McLean, S. K. Ramsay, & H. Takami, SPIE (San Diego, California: SPIE), 77352E (p. 7).
- Kawahara, H., Hirano, T., Kurosaki, K., Ito, Y., & Ikoma, M. 2013, *The Astrophys. J.*, 776, L6 (pp. 89, 95).
- Koch, D. G., Borucki, W. J., Webster, L., et al. 1998, in SPIE Proceedings, Vol. 3356, Space Telescopes and Instruments V, ed. P. Y. Bely & J. B. Breckinridge (Kona, HI: SPIE), 599 (p. 22).
- Koch, D. G., Borucki, W. J., Basri, G., et al. 2010, *The Astrophys. J.*, 713, L79 (p. 86).
- Kolmogorov, A. N. 1941a, *Akademiia Nauk SSSR Doklady*, 32, 16, translated into English by V. Levin in Kolmogorov (1991a). (pp. 5, 136).
- 1941b, *Akademiia Nauk SSSR Doklady*, 30, 301, translated into English by V. Levin in Kolmogorov (1991b). (pp. 5, 136).
- 1991a, *Royal Soc. Lond. Proc. Ser. A*, 434, 15, english translation of Kolmogorov (1941a) by V. Levin. (p. 136).
- 1991b, *Royal Soc. Lond. Proc. Ser. A*, 434, 9, english translation of Kolmogorov (1941b) by V. Levin. (p. 136).
- Korff, D., Dryden, G., & Leavitt, R. P. 1975, *J. Opt. Soc. Am.*, 65, 1321 (p. 5).
- Kriss, T. C., & Kriss, V. M. 1998, *Neurosurgery*, 42, 899 (p. 1).
- Kromann, E. B., Gould, T. J., Juette, M. F., Wilhjelm, J. E., & Bewersdorf, J. 2012, *Opt. Lett.*, 37, 1805 (p. 15).
- Lagarias, J., Reeds, J., Wright, M., & Wright, P. 1998, *SIAM J. on Optim.*, 9, 112 (p. 69).
- Langley, S. P. 1903, *Observatory*, 26, 249 (p. 2).

- Layard, A. H. 1853, *Discoveries in the Ruins of Nineveh and Babylon; With Travels in Armenia, Kurdistan and the Desert* (London: John Murray), 197 (p. 1).
- Lenzen, R., Hartung, M., Brandner, W., et al. 2003, in *SPIE Proceedings*, Vol. 4841, *Instrument Design and Performance for Optical/Infrared Ground-based Telescopes*, ed. M. Iye & A. F. M. Moorwood (Waikoloa, HI: SPIE), 944 (p. 3).
- Liang, J., Williams, D. R., & Miller, D. T. 1997, *J. Opt. Soc. Am. A*, 14, 2884 (p. 4).
- Linhai, H., & Rao, C. 2011, *Opt. Express*, 19, 371 (pp. 59, 78).
- Linnik, V. P. 1957, *Opt. Spectrosc.*, 3, 401, translated into English by M. Slade in Linnik (1994). (pp. 2, 137).
- Linnik, V. P. 1994, in *ESO Conference and Workshop Proceedings*, Vol. 48, *Active and adaptive optics*, ed. F. Merkle, ESO (Garching: ESO), 535, english translation of Linnik (1957) by M. Slade and edited by Jacques M. Beckers. (p. 137).
- Macintosh, B. A., Graham, J. R., Palmer, D. W., et al. 2008, in *SPIE Proceedings*, Vol. 7015, *Adaptive Optics Systems*, ed. N. Hubin, C. E. Max, & P. L. Wizinowich (Marseille, France: SPIE) (pp. 3, 11, 23).
- Macy, W. W. 1983, *Appl. Opt.*, 22, 3898 (p. 35).
- Mamajek, E. E., Quillen, A. C., Pecaut, M. J., et al. 2012, *The Astron. J.*, 143, 72 (pp. 29, 29, 29, 107, 108, 108, 110, 113, 115, 116, 116, 116, 120, 122, 122, 123, 124, 127, 127).
- Mandel, K., & Agol, E. 2002, *The Astrophys. J.*, 580, L171 (p. 100).
- Marois, C., Macintosh, B., Barman, T., et al. 2008, *Science*, 322, 1348 (pp. 1, 23).
- Marsh, P., Burns, D., & Girkin, J. 2003, *Opt. Express*, 11, 1123 (pp. 10, 34, 58).
- Martin, J. A., & Roorda, A. 2005, *Ophthalmology*, 112, 2219 (p. 11).
- Mauclair, C., Mermillod-Blondin, A., Huot, N., Audouard, E., & Stoian, R. 2008, *Opt. Express*, 16, 5481 (p. 4).
- Mayor, M., & Queloz, D. 1995, *Nature*, 378, 355 (p. 21, 21).
- Mayor, M., Pepe, F., Queloz, D., et al. 2003, *Messenger*, 114, 20 (p. 22).
- McCray, P. 2000, Interview with Dr. Robert Q. Fugate, Interview (p. 3).
- McLaughlin, D. B. 1924, *The Astrophys. J.*, 60, 22 (p. 128).
- McPherson, A., Gilmozzi, R., Spyromilio, J., Kissler-Patig, M., & Ramsay, S. 2012, *The Messenger*, 148, 2 (p. 3).
- Mikolajewski, M., & Graczyk, D. 1999, *Mon. Notices Royal Astron. Soc.*, 303, 521 (p. 108).

## Bibliography

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- Milkie, D. E., Betzig, E., & Ji, N. 2011, *Opt. Lett.*, 36, 4206 (p. 58).
- Minsky, M. 1961, Microscopy apparatus, US patent 3,013,467 (pp. 9, 34).
- Moré, J. J. 1993, *Optim. Methods Softw.*, 2, 189 (pp. 65, 65, 65, 66, 66).
- Murray, L. P., Dainty, J. C., & Daly, E. 2005, in SPIE Proceedings, Vol. 5823, Opto-Ireland 2005: Imaging and Vision, ed. F. D. Murtagh (Dublin, Ireland: SPIE), 40 (p. 59).
- Neil, M. A. A., Booth, M. J., & Wilson, T. 2000, *Opt. Lett.*, 25, 1083 (pp. 59, 59, 78).
- Nelder, J. A., & Mead, R. 1965, *The Comput. J.*, 7, 308 (pp. 40, 115).
- Noll, R. J. 1976, *J. Opt. Soc. Am.*, 66, 207 (pp. 5, 42, 45, 50).
- Norton, A. J., Payne, S. G., Evans, T., et al. 2011, *Astron. Astrophys.*, 528, A90 (p. 110).
- Olivier, N., Débarre, D., & Beaufrepaire, E. 2009, *Opt. Lett.*, 34, 3145 (p. 14).
- Ooto, S., Hangai, M., Takayama, K., et al. 2011, *Ophthalmology*, 118, 873 (p. 11).
- Ooto, S., Hangai, M., Sakamoto, A., et al. 2010, *Ophthalmology*, 117, 1800 (p. 11).
- Oppenheimer, B. R., & Hinkley, S. 2009, *Annu. Rev. Astron. Astrophys.*, 47, 253 (pp. 23, 23, 26).
- Paterson, C., Munro, I., & Dainty, J. C. 2000, *Opt. Express*, 6, 175 (pp. 36, 62).
- Pawley, J. B., ed. 2006, Handbook Of Biological Confocal Microscopy, 3rd edn. (Boston, MA: Springer US) (pp. 9, 34).
- Paxton, B., Bildsten, L., Dotter, A., et al. 2011, *The Astrophys. J. Suppl. Ser.*, 192, 3 (p. 117, 117).
- Pecaut, M. J., & Mamajek, E. E. 2013, *The Astrophys. J. Suppl. Ser.*, 208, 9 (pp. 115, 116).
- Pecaut, M. J., Mamajek, E. E., & Bubar, E. J. 2012, *The Astrophys. J.*, 746, 154 (pp. 116, 116, 117).
- Peck, M. 2010, Interferometry mathematics, algorithms and data (pp. 42, 45).
- Perez-Becker, D., & Chiang, E. 2013, *Mon. Notices Royal Astron. Soc.*, 433, 2294 (pp. 27, 28, 85, 94, 104).
- Pollacco, D. L., Skillen, I., Cameron, A. C., et al. 2006, *Publ. Astron. Soc. Pac.*, 118, 1407 (p. 109).
- Potter, A. E., & Morgan, T. H. 1990, *Science*, 248, 835 (p. 94).
- Rahman, S. A., & Booth, M. J. 2013, *Appl. Opt.*, 52, 5523 (pp. 11, 19, 37, 43, 45, 45, 54, 55, 58, 58, 58).

- Rappaport, S., Levine, A., Chiang, E., et al. 2012, *The Astrophys. J.*, 752, 1 (pp. 27, 84, 84, 89, 92, 94, 126).
- Lord Rayleigh, J. W. S. 1902, in *Scientific papers*, Vol. 3, *Scientific papers* (Cambridge: Cambridge University Press), 47 (p. 5, 5).
- Reed, S. G., Van Atta, R. H., & Deitchman, S. J. 1990, *DARPA Technical Accomplishments: An Historical Review of Selected DARPA Projects*, Tech. rep., Defense Advanced Research Projects Agency (p. 3).
- Rocca, A., Roddier, F., & Vernin, J. 1974, *J. Opt. Soc. Am.*, 64, 1000 (p. 4).
- Roorda, A., Romero-Borja, F., Donnelly, W., et al. 2002, *Opt. Express*, 10, 405 (p. 4).
- Rossiter, R. A. 1924, *Astrophys. J.*, 60, 15 (p. 128).
- Rückel, M., & Denk, W. 2007, *J. Opt. Soc. Am. A*, 24, 3517 (pp. 11, 16, 45).
- Rückel, M., Mack-Bucher, J. A., & Denk, W. 2006, *Proc. Natl. Acad. Sci.*, 103, 17137 (pp. 11, 16, 34, 38, 39, 42, 42, 43, 44, 53, 53, 54, 54, 58).
- Sackett, P. D. 1999, in *NATO Science Series*, Vol. 532, *Planets Outside the Solar System: Theory and Observations*, ed. J. M. Mariotti & D. Alloin (Dordrecht: Springer Netherlands), 189 (p. 24, 24).
- Schwertner, M., Booth, M. J., Neil, M. A. A., & Wilson, T. 2004a, *J. Microsc.*, 213, 11 (pp. 12, 34).
- Schwertner, M., Booth, M. J., & Wilson, T. 2004b, *Opt. Express*, 12, 6540 (p. 12).
- . 2007, *J. Microsc.*, 228, 97 (pp. 12, 34).
- Shack, R. V., & Platt, B. C. 1971, in *Spring Meeting of the Optical Society of America*, ed. D. S. Chairman, *Optical Society of America* (Optical Society of America) (p. 6).
- Shaw, M., O'Holleran, K., & Paterson, C. 2013, *Opt. Express*, 21, 19353 (p. 58).
- Sheppard, C. J. R., & Török, P. 1997, *J. Microsc.*, 185, 366 (p. 14).
- Sherman, L., Ye, J. Y., Albert, O., & Norris, T. B. 2002, *J. Microsc.*, 206, 65 (p. 10).
- Shotton, D. M. 1989, *J. Cell Sci.*, 94, 175 (pp. 9, 34).
- Siess, L., Dufour, E., & Forestini, M. 2000, *Astron. Astrophys.*, 358, 593 (p. 117).
- Simmonds, R. D., & Booth, M. J. 2013, *J. Opt.*, 15, 094010 (pp. 12, 13).
- Smith, B. A., Soderblom, L., Batson, R., et al. 1982, *Science*, 215, 504 (pp. 29, 126).
- So, P. T. C., Dong, C. Y., Masters, B. R., & Berland, K. M. 2000, *Annu. Rev. Biomedical Eng.*, 2, 399 (p. 40).

## Bibliography

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- Soderblom, D. R., Hillenbrand, L. A., Jeffries, R. D., Mamajek, E. E., & Naylor, T. 2014, in *Protostars and Planets VI*, ed. H. Beuther, R. Klessen, C. Dullemond, & Th (University of Arizona Press) (p. 116).
- Song, H., Fraanje, R., Schitter, G., et al. 2010, *Opt. Express*, 18, 24070 (pp. 59, 78).
- Soule, H. D., Vazquez, J., Long, A., Albert, S., & Brennan, M. 1973, *J. Natl. Cancer Inst.*, 51, 1409 (p. 49).
- Southwell, W. H. 1980, *J. Opt. Soc. Am.*, 70, 998 (p. 42).
- Stellingwerf, R. F. 1978, *The Astrophys. J.*, 224, 953 (pp. 90, 115).
- Struve, O. 1952, *Observatory*, 72, 199 (p. 23).
- Swain, M. R., Vasisht, G., & Tinetti, G. 2008, *Nature*, 452, 329 (p. 26).
- Takeda, M. 1990, *Ind. Metrol.*, 1, 79 (pp. 35, 38, 39).
- Takeda, M., Ina, H., & Kobayashi, S. 1982, *J. Opt. Soc. Am.*, 72, 156 (pp. 16, 35, 35, 38, 39, 40, 40, 42, 45, 45).
- Tamuz, O., Mazeh, T., & Zucker, S. 2005, *Mon. Notices Royal Astron. Soc.*, 356, 1466 (pp. 109, 110).
- Tang, J., Germain, R. N., & Cui, M. 2012, *Proc. Natl. Acad. Sci.*, 109, 8434 (p. 10).
- Tao, X., Azucena, O., Fu, M., et al. 2011a, *Opt. Lett.*, 36, 3389 (pp. 11, 34).
- Tao, X., Crest, J., Kotadia, S., et al. 2012, *Opt. Express*, 20, 15969 (pp. 11, 34).
- Tao, X., Dean, Z., Chien, C., et al. 2013a, *Opt. Express*, 21, 31282 (p. 58).
- Tao, X., Fernandez, B., Azucena, O., et al. 2011b, *Opt. Lett.*, 36, 1062 (pp. 11, 34).
- Tao, X., Norton, A., Kissel, M., Azucena, O., & Kubby, J. 2013b, *Opt. Lett.*, 38, 5075 (pp. 11, 34, 58).
- Thayil, A., & Booth, M. 2011, *J. Eur. Opt. Soc. - Rapid publications*, 6 (p. 59).
- Tinetti, G., Beaulieu, J. P., Henning, T., et al. 2012, *Exp. Astron.*, 34, 311 (p. 26).
- Török, P., Hewlett, S. J., & Varga, P. 1997, *J. Microsc.*, 188, 158 (p. 14).
- Torrieri, D. 1984, *Aerosp. Electron. Syst. IEEE Transactions on*, AES-20, 183 (p. 63).
- Trauger, J. T., Ballester, G. E., Burrows, C. J., et al. 1994, *The Astrophys. J.*, 435, L3 (p. 5).
- Tuohy, S., & Podoleanu, A. G. 2010, *Opt. Express*, 18, 3458 (pp. 11, 34, 53).

- Tyson, R. K. 2010, Principles of adaptive optics, 3rd edn., ed. R. K. Tyson, Series in optics and optoelectronics (Boca Raton, FL: CRC Press) (p. 58).
- Urban, N. T., Willig, K. I., Hell, S. W., & Nägerl, U. V. 2011, *Biophys. J.*, 101, 1277 (p. 15).
- van Werkhoven, T., Truong, H., Antonello, J., et al. 2012, in SPIE Proceedings, Vol. 8253, MEMS Adaptive Optics VI, ed. S. S. Olivier, T. G. Bifano, & J. Kubby (San Francisco, California, USA: SPIE), 82530E (pp. 58, 69).
- van Werkhoven, T. I. M., Antonello, J., Truong, H. H., et al. 2014, *Opt. Express*, 22, 9715 (pp. 58, 58, 68, 69).
- Čižmár, T., Mazilu, M., & Dholakia, K. 2010, *Nat. Photonics*, 4, 388 (p. 4).
- Vdovin, G., Soloviev, O., Loktev, M., & Patlan, V. 2013, *Oko guide to adaptive optics*, 4th edn. (Flexible Optical B.V.) (pp. 60, 67, 67).
- Vdovin, G. V. 1998, in SPIE Proceedings, Vol. 3353, Adaptive Optical System Technologies, ed. D. Bonaccini & R. K. Tyson (Kona, HI: SPIE), 902 (p. 58).
- von Zernike, F. 1934, *Physica*, 1, 689 (pp. 5, 42).
- Vorontsov, M. A. 2002, *J. Opt. Soc. Am. A*, 19, 356 (p. 58).
- Wang, B., & Booth, M. J. 2009, *Opt. Commun.*, 282, 4467 (p. 60).
- Wang, J., Léger, J.-F., Binding, J., et al. 2012, *Biomedical Opt. Express*, 3, 2510 (pp. 38, 43, 43, 44, 53, 55, 55).
- Wang, J., & Podoleanu, A. G. 2012, *Opt. Lett.*, 37, 4862 (p. 11).
- Willig, K. I., Rizzoli, S. O., Westphal, V., Jahn, R., & Hell, S. W. 2006, *Nature*, 440, 935 (p. 1).
- Wolfing, J. I., Chung, M., Carroll, J., Roorda, A., & Williams, D. R. 2006, *Ophthalmology*, 113, 1014 (p. 11).
- Wolszczan, A., & Frail, D. A. 1992, *Nature*, 355, 145 (p. 21, 21).
- Wright, A. J., Burns, D., Patterson, B. A., et al. 2005, *Microsc. Res. Tech.*, 67, 36 (p. 59).
- Yi, S. K., Kim, Y.-C., & Demarque, P. 2003, *The Astrophys. J. Suppl. Ser.*, 144, 259 (p. 117).
- Yoo, H. W., Verhaegen, M., van Royen, M., & Schitter, G. 2012, in Instrumentation and Measurement Technology Conference (I2MTC), 2012 IEEE International, 1083 (p. 59).
- Zacharias, N., Finch, C. T., Girard, T. M., et al. 2013, *The Astron. J.*, 145, 44 (pp. 115, 117).

## Bibliography

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- Zeng, J., Mahou, P., Schanne-Klein, M.-C., Beaurepaire, E., & Débarre, D. 2012, *Biomedical Opt. Express*, 3, 1898 (pp. 12, 54, 59, 59, 62, 68, 68, 74, 78).
- Zipfel, W. R., Williams, R. M., & Webb, W. W. 2003, *Nat. Biotechnol.*, 21, 1369 (pp. 9, 34).
- Zuidervaart, H. J. 2010, in *History of Science and Scholarship in the Netherlands*, Vol. 12, *The Origins of the Telescope*, ed. A. Van Helden, S. Dupré, R. van Gent, & H. Zuidervaart (Amsterdam: KNAW Press), 9 (p. 1, 1).