

NICHOLAS M. LAW
CURRICULUM VITAE & PUBLICATION LIST
Revised: June 2020

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University of North Carolina at Chapel Hill
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Education, professional experience and honors

Education	University of Cambridge Ph.D. in Astronomy Thesis: Lucky Imaging: Diffraction-limited Astronomy from the Ground in the Visible. Advisor: Craig Mackay	Oct 2003 – Jun 2006
	University of Cambridge Bachelor of Arts in Physics and Master of Science in Physics	Oct 1999 – May 2003
Professional experience	University of North Carolina at Chapel Hill Department of Physics and Astronomy Associate Professor	Jul 2019+
	University of North Carolina at Chapel Hill Department of Physics and Astronomy Assistant Professor	Jan 2014 – Jun 2019
	University of North Carolina at Chapel Hill Department of Physics and Astronomy Visiting Assistant Professor	Sep 2013 – Jan 2014
	University of Toronto Dunlap Institute Dunlap Postdoctoral Fellow	Sep 2009 – Sep 2013
	California Institute of Technology Department of Astronomy Postdoctoral Scholar in Astronomy	July 2006 – Sep 2009
Honors	NSF CAREER award	Jan 2016
	Scialog Fellow	Nov 2015+
	Dunlap Postdoctoral Fellowship	Aug 2009
	UK Particle Physics and Astronomy Research Council Studentship	Aug 2003
	University of Cambridge: Selwyn Corfield Scholarship	May 2003
Major External funding and honors awarded to members of my group	University of Cambridge: Selwyn Prize for Physics, Tripos Prize & Selwyn Scholar	May 2003
	Jeff Ratzloff	UNC Dean's Distinguished Dissertation Award
		NSF Graduate Fellowship honorable mention
	Carl Ziegler	Toronto Dunlap Postdoctoral Fellowship
	Hank Corbett	NSF Graduate Fellowship
		Apr 2020
		Apr 2016
		Jul 2018+
		2017-2020

Publication List

127 refereed papers. 7,900 total citations, 1,400 citations to 1st-author papers, H-index 47.

Papers led by members of my group are listed in bold.

Referred papers

127. A Pair of TESS Planets Spanning the Radius Valley around the Nearby Mid-M Dwarf LTT 3780
Cloutier, Ryan; Eastman, Jason D.; Rodriguez, Joseph E. and 84 co-authors.
Astronomical Journal, Volume 160 (2020)

126. EvryFlare. II. Rotation Periods of the Cool Flare Stars in TESS across Half the Southern Sky
Howard, Ward S.; Corbett, Hank; Law, Nicholas M.; Ratzloff, Jeffrey K.; Galliher, Nathan; Glazier, Amy; Fors, Octavi; del Ser, Daniel; Haislip, Joshua
Astrophysical Journal, Volume 895 (2020)

125. TOI-1338: TESS' First Transiting Circumbinary Planet
Kostov, Veselin B.; Orosz, Jerome A.; Feinstein, Adina D. and 65 co-authors.
Astronomical Journal, Volume 159 (2020)

124. LHS 1815b: The First Thick-disk Planet Detected by TESS
Gan, Tianjun; Shporer, Avi; Livingston, John H. and 35 co-authors.
Astronomical Journal, Volume 159 (2020)

123. Robo-AO M-dwarf Multiplicity Survey: Catalog
Lamman, Claire; Baranec, Christoph; Berta-Thompson, Zachory K. and 10 co-authors
Astronomical Journal, Volume 159 (2020)

122. A hot terrestrial planet orbiting the bright M dwarf L 168-9 unveiled by TESS
Astudillo-Defru, N.; Cloutier, R.; Wang, S. X. and 67 more
Astronomy & Astrophysics Volume 636A (2020)

121. TOI-132 b: A short-period planet in the Neptune desert transiting a $V = 11.3$ G-type star
Díaz, Matías R.; Jenkins, James S.; Gandolfi, Davide and 49 co-authors
Monthly Notices of the Royal Astronomical Society, Volume 493 (2020)

120. TOI-222: a single-transit TESS candidate revealed to be a 34-d eclipsing binary with CORALIE, EulerCam, and NGTS
Lendl, Monika; Bouchy, François; Gill, Samuel and 58 more
Monthly Notices of the Royal Astronomical Society, Volume 492 (2020)

119. Hot Subdwarf All Southern Sky Fast Transit Survey with the Evryscope
Ratzloff, Jeffrey K.; Barlow, Brad N.; Németh, Péter; Corbett, Henry T.; Walser, Stephen; Galliher, Nathan W.; Glazier, Amy; Howard, Ward S.; Law, Nicholas M.
Astrophysical Journal, Volume 890 (2020)

118. Planet Hunters TESS I: TOI 813, a subgiant hosting a transiting Saturn-sized planet on an 84-day orbit
Eisner, N. L.; Barragán, O.; Aigrain, S. and 47 co-authors
Monthly Notices of the Royal Astronomical Society, Volume 494 (2020)

117. HD 213885b: a transiting 1-d-period super-Earth with an Earth-like composition around a bright ($V = 7.9$) star unveiled by TESS
Espinoza, Néstor; Brahm, Rafael; Henning, Thomas and 60 co-authors
Monthly Notices of the Royal Astronomical Society, Volume 491 (2020)

116. Robotilter: an automated lens/CCD alignment system for the Evryscope
Ratzloff, Jeffrey K.; Law, Nicholas M.; Corbett, Henry T.; Fors, Octavi; del Ser, Daniel
Journal of Astronomical Telescopes and Instrumentation, Volume 6a8000R (2020)

115. ROBO-AO Kepler Asteroseismic Survey. II. Do Stellar Companions Inhibit Stellar Oscillations?
Schonhut-Stasik, Jessica; Huber, Daniel; Baranec, Christoph; Lamman, Claire; Salama, Maissa; Jensen-Clem, Rebecca; Duev, Dmitry A.; Riddle, Reed; Kulkarni, S. R.; Law, Nicholas M.
Astrophysical Journal, Volume 888 (2020)

**Refereed
papers (cont.)**

114. SOAR TESS Survey. I. Sculpting of TESS Planetary Systems by Stellar Companions
Ziegler, Carl; Tokovinin, Andrei; Briceño, César; Mang, James; Law, Nicholas; Mann, Andrew W.
Astronomical Journal, Volume 159 (2020)

113. EVR-CB-001: An Evolving, Progenitor, White Dwarf Compact Binary Discovered with the Evryscope
Ratzloff, Jeffrey K.; Barlow, Brad N.; Kupfer, Thomas; Corcoran, Kyle A.; Geier, Stephan; Bauer, Evan; Corbett, Henry T.; Howard, Ward S.; Glazier, Amy; Law, Nicholas
Astrophysical Journal, Volume 883 (2020)

112. Near-resonance in a System of Sub-Neptunes from TESS
Quinn, Samuel N.; Becker, Juliette C.; Rodriguez, Joseph E. and 78 co-authors
Astronomical Journal, Volume 158 (2019)

111. Variables in the Southern Polar Region Evryscope 2016 Data Set
Ratzloff, Jeffrey K.; Corbett, Henry T.; Law, Nicholas M.; Barlow, Brad N.; Glazier, Amy; Howard, Ward S.; Fors, Octavi; del Ser, Daniel; Trifonov, Trifon
Publications of the Astronomical Society of the Pacific, in press, 32 pages (2019)

110. A Hot Saturn Near (but Unassociated with) the Open Cluster NGC 1817
Rampalli, Rayna; Vanderburg, Andrew; Bieryla, Allyson and 14 co-authors
Astronomical Journal, Volume 158 (2019)

109. EvryFlare I: Long-term Evryscope Monitoring of Flares from the Cool Stars Across Half the Southern Sky
Howard, Ward S.; Corbett, Hank; Law, Nicholas M.; Ratzloff, Jeffrey K.; Glazier, Amy L.; Fors, Octavi; del Ser, Daniel; Haislip, Joshua
Astronomical Journal, Volume 881, 14 pages (2019)

108. An Eccentric Massive Jupiter Orbiting a Subgiant on a 9.5-day Period Discovered in the Transiting Exoplanet Survey Satellite Full Frame Images
Rodriguez, Joseph E.; Quinn, Samuel N.; Huang, Chelsea X.; Vanderburg, Andrew; Penev, Kaloyan; Brahm, Rafael; Jordán, Andrés; Ikwut-Ukwa, Mma; Tsirulik, Shelly; and 64 co-authors.
Astronomical Journal, Volume 157, 24 pages (2019)

107. Building the Evryscope: Hardware Design and Performance
Ratzloff, Jeffrey K.; Law, Nicholas M.; Fors, Octavi; Corbett, Henry T.; Howard, Ward S.; del Ser, Daniel; Haislip, Joshua
Publications of the Astronomical Society of the Pacific, Volume 131, 24 pages (2019)

106. Investigating the origin of the spectral line profiles of the Hot Wolf-Rayet Star WR 2
Chené, A.-N.; St-Louis, N.; Moffat, A. F. J.; Schnurr, O.; Crowther, P. A.; Wade, G. A.; Richardson, N. D.; Baranec, C.; Ziegler, C. A.; Law, N. M.; Riddle, R.; Rate, G. A.; Artigau, É.; Alecian, E.;
Monthly Notices of the Royal Astronomical Society, Volume 484, 10 pages (2019)

105. HD 2685 b: a hot Jupiter orbiting an early F-type star detected by TESS
Jones, Matías I.; Brahm, Rafael; Espinoza, Nestor; Wang, Songhu; Shporer, Avi; Henning, Thomas; Jordán, Andrés; Sarkis, Paula; Paredes, Leonardo A.; Hodari-Sadiki, James; and 43 coauthors
Astronomy & Astrophysics, Volume 625, 9 pages (2019)

104. The Elusive Majority of Young Moving Groups. I. Young Binaries and Lithium-Rich Stars in the Solar Neighborhood
Bowler, Brendan P.; Hinkley, Sasha; Ziegler, Carl; Baranec, Christoph; Gizis, John E.; Law, Nicholas M.; Liu, Michael C.; Shah, Viyang S.; Shkolnik, Evgenya L.; Riaz, Basmah; Riddle, Reed
Astronomical Journal, Volume 158, 45 pages (2019)

103. Follow-up Imaging of Disk Candidates from the Disk Detective Citizen Science Project: New Discoveries and False Positives in WISE Circumstellar Disk Surveys
Silverberg, Steven M.; Kuchner, Marc J.; Wisniewski, John P.; Bans, Alissa S.; Debes, John H.; Kenyon, Scott J.; Baranec, Christoph; Riddle, Reed; Law, Nicholas; Teske, Johanna K.; and 10 coauthors
Astrophysical Journal, Volume 868, 23 pages (2018)

102. Measuring the recoverability of close binaries in Gaia-DR2 with the Robo-AO Kepler Survey
C. Ziegler, N. Law, C. Baranec, T. Morton, R. Riddle, D. Huber, S. Mahadevan, J. Pepper
Astronomical Journal, Volume 156, 18 pages (2018)

**Refereed
papers (cont.)**

101. Young and eccentric: the quadruple system HD 86588
A. Tokovinin, H. Corbett, O. Fors, W. Howard, N. Law, M. Moe, J. Ratzloff, F. Walter
Astronomical Journal, Volume 156, 2018
- 100. The First Naked-Eye Superflare Detected from Proxima Centauri**
W. Howard, M. Tilley, H. Corbett, A. Youngblood, R. Loyd, J. Ratzloff, N. Law, O. Fors, D. del Ser, E. Shkolnik, C. Ziegler, E. Goetze, A. Pietraallo
Astrophysical Journal Letters, Volume 860, 6 pages (2018).
99. Robo-AO Kepler Survey V: the Effect of Physically Associated Stellar Companions on Planetary Systems
C. Ziegler, N. Law, C. Baranec, W. Howard, T. Morton, R. Riddle, D. Duev, M. Salama, R. Jensen-Clem, S. Kulkarni
Astronomical Journal, *AJ* 156 (2018), 19 pages
98. A New Look at an Old Cluster: The Membership, Rotation, and Magnetic Activity of Low-mass Stars in the 1.3 Gyr Old Open Cluster NGC 752
Agüeros, M. A.; Bowsher, E. C.; Bochanski, J. J.; Cargile, P. A.; Covey, K. R.; Douglas, S. T.; Kraus, A.; Kundert, A.; Law, N. M.; Ahmadi, A.; Arce, H. G.
Astrophysical Journal, Volume 862, 97, 23 pages (2018)
97. Bright opportunities for atmospheric characterization of small planets: masses and radii of K2-3 b, c, d and GJ3470 b from radial velocity measurements and Spitzer transits
M. Kosiarek, I. Crossfield, K. Hardegree-Ullman, J. Livingston, G. Henry, W. Howard, D. Berardo, S. Blunt, B. Fulton, L. Hirsch, A. Howard, H. Isaacson, E. Petigura, E. Sinukoff, L. Weiss, B. Benneke, X. Bonfils, C. Dressing, H. Knutson, J. Schlieder, M. Werner, V. Gorjian, J. Krick, F. Morales, N. Astudillo-Defru, J.-M. Almenara, X. Delfosse, T. Forveille, C. Lovis, M. Mayor, F. Murgas, F. Pepe, N. Santos, S. Udry, H. Corbett, Octavi Fors, N. Law, J. Ratzloff, and D. del Ser
Astronomical Journal, Volume 157, 26 pages (2018)
96. K2-140b - an eccentric 6.57 d transiting hot Jupiter in Virgo
H. Giles, D. Bayliss, N. Espinoza, R. Brahm, S. Blanco-Cuadros, A. Shporer, D. Armstrong, C. Lovis, S. Udry, F. Bouchy, M. Marmier, A. Jordán, J. Bento, A. Cameron, R. Sefako, W. Cochran, F. Rojas, M. Rabus, J. Jenkins, M. Jones, B. Pantoja, M. Soto, R. Jensen-Clem, D. Duev, M. Salama, R. Riddle, C. Baranec, N. Law
Monthly Notices of the Royal Astronomical Society, Volume 475, p.1809-1818 (2018)
- 95. Robo-AO Kepler Survey. IV. The Effect of Nearby Stars on 3857 Planetary Candidate Systems**
C. Ziegler, N. Law, C. Baranec, R. Riddle, D. Duev, W. Howard, R. Jensen-Clem, S. Kulkarni, T. Morton, M. Salama
Astronomical Journal, Volume 155, 161, 15 pages (2018)
- 94. Laser-only Adaptive Optics Achieves Significant Image Quality Gains Compared to Seeing-limited Observations over the Entire Sky**
W. Howard, N. Law, C. Ziegler, C. Baranec, R. Riddle
Astronomical Journal, Volume 155, 59, 7 pages (2018)
93. Robo-AO Discovery and Basic Characterization of Wide Multiple Star Systems in the Pleiades, Praesepe, and NGC 2264 Clusters
L. Hillenbrand, C. Zhang, R. Riddle, C. Baranec, C. Ziegler, N. Law, J. Stauffer
Astronomical Journal, Volume 155, 51, 15 pages (2018)
92. The Performance of the Robo-AO Laser Guide Star Adaptive Optics System at the Kitt Peak 2.1 m Telescope
R. Jensen-Clem, D. Duev, R. Riddle, M. Salama, C. Baranec, N. Law, S. Kulkarni, A. Ramprakash
Astronomical Journal, Volume 155, 32, 12 pages (2018)
91. Neptune long-lived atmospheric features in 2013-2015 from small (28-cm) to large (10-m) telescopes
R. Hueso, I. de Pater, A. Simon, A. Sánchez-Lavega, M. Delcroix, M. Wong, J. Tollefson, C. Baranec, K. de Kleer, S. Luszcz-Cook, G. Orton, H. Hammel, J. Gómez-Forrellad, I. Ordóñez-Etxeberria, L. Sromovsky, P. Fry, F. Colas, J. Rojas, S. Pérez-Hoyos, P. Gorczynski, J. Guarro, W. Kivits, P. Miles, D. Millika, P. Nicholas, J. Sussenbach, A. Wesley, K. Sayanagi, S. Ammons, E. Gates, D. Gavel, E. Victor Garcia, N. Law, I. Mendikoa, R. Riddle
Icarus, Volume 295, p. 89-109 (2017)
90. Robo-AO Kepler Asteroseismic Survey. I. Adaptive Optics Imaging of 99 Asteroseismic Kepler Dwarfs and Subgiants
J. Schonhut-Stasik, C. Baranec, D. Huber, C. Ziegler, D. Atkinson, E. Gaidos, N. Law, R. Riddle, J. Hagelberg, N. van der Marel, K. Hodapp

**Refereed
papers (cont.)**

Astrophysical Journal, Volume 847, 97, 11 pages (2017)

89. Magnetic Inflation and Stellar Mass. I. Revised Parameters for the Component Stars of the Kepler Low-mass Eclipsing Binary T-Cyg1-12664

E. Han, P. Muirhead, J. Swift, C. Baranec, N. Law, R. Riddle, D. Atkinson, G. Mace, D. DeFelippis
Astronomical Journal, Volume 154, 100, 14 pages (2017)

88. The Factory and the Beehive. III. PTFEB132.707+19.810, A Low-mass Eclipsing Binary in Praesepe Observed by PTF and K2

A. Kraus, S. Douglas, A. Mann, M. Agüeros, N. Law, K. Covey, G. Feiden, A. Rizzuto, A. Howard, H. Isaacson, E. Gaidos, G. Torres, G. Bakos

Astrophysical Journal, Volume 845, 72, 24 pages (2017)

87. Ultra-short-period Planets in K2 with Companions: A Double Transiting System for EPIC 220674823

E. Adams, B. Jackson, M. Endl, W. Cochran, P. MacQueen, D. Duev, R. Jensen-Clem, M. Salama, C. Ziegler, C. Baranec, S. Kulkarni, N. Law, R. Riddle

Astronomical Journal, Volume 153, 82, 7 pages (2017)

86. Robo-AO Kepler Planetary Candidate Survey. III. Adaptive Optics Imaging of 1629 Kepler Exoplanet Candidate Host Stars

C. Ziegler, N. Law, T. Morton, C. Baranec, R. Riddle, D. Atkinson, A. Baker, S. Roberts, D. Ciardi

Astronomical Journal, Volume 153, 66, 26 pages (2017)

85. Probability of the Physical Association of 104 Blended Companions to Kepler Objects of Interest Using Visible and Near-infrared Adaptive Optics Photometry

D. Atkinson, C. Baranec, C. Ziegler, N. Law, R. Riddle, T. Morton

Astronomical Journal, Volume 153, 25, 17 pages (2017)

84. 197 Candidates and 104 Validated Planets in K2's First Five Fields

I. Crossfield, D. Ciardi, E. Petigura, E. Sinukoff, J. Schlieder, A. Howard, C. Beichman, H. Isaacson, C. Dressing, J. Christiansen, B. Fulton, S. Lépine, L. Weiss, L. Hirsch, J. Livingston, C. Baranec, N. Law, R. Riddle, C. Ziegler, S. Howell, E. Horch, M. Everett, J. Teske, A. Martinez, C. Obermeier, B. Benneke, N. Scott, N. Deacon, K. Aller, B. Hansen, L. Mancini, S. Cicci, R. Brahm, A. Jordán, H. Knutson, T. Henning, M. Bonnefoy, M. Liu, J. Crepp, J. Lothringer, P. Hinz, V. Bailey, A. Skemer, D. Defrere

Astrophysical Journal Supplement Series, Volume 226, 7, 20 pages (2016)

83. Two Small Planets Transiting HD 3167

A. Vanderburg, A. Bieryla, D. Duev, R. Jensen-Clem, D. Latham, A. Mayo, C. Baranec, P. Berlind, S. Kulkarni, N. Law, M. Nieberding, R. Riddle, M. Salama

Astrophysical Journal Letters, Volume 829, L9, 6 pages (2016)

82. Five Planets Transiting a Ninth Magnitude Star

A. Vanderburg, J. Becker, M. Kristiansen, A. Bieryla, D. Duev, R. Jensen-Clem, T. Morton, D. Latham, F. Adams, C. Baranec, P. Berlind, M. Calkins, G. Esquerdo, S. Kulkarni, N. Law, R. Riddle, M. Salama, A. Schmitt

Astrophysical Journal Letters, Volume 827, L10, 11 pages (2016)

81. Eleven Multiplanet Systems from K2 Campaigns 1 and 2 and the Masses of Two Hot Super-Earths

E. Sinukoff, A. Howard, E. Petigura, J. Schlieder, I. Crossfield, D. Ciardi, B. Fulton, H. Isaacson, K. Aller, C. Baranec, C. Beichman, B. Hansen, H. Knutson, N. Law, M. Liu, R. Riddle, C. Dressing

Astrophysical Journal, Volume 827, 78, 27 pages (2016)

80. Robo-AO Kepler Planetary Candidate Survey. II. Adaptive Optics Imaging of 969 Kepler Exoplanet Candidate Host Stars [major contributions from my group]

C. Baranec, C. Ziegler, N. Law, T. Morton, R. Riddle, D. Atkinson, J. Schönhut, J. Crepp
Astronomical Journal, Volume 152, 18, 16 pages (2016)

79. Why Are Rapidly Rotating M Dwarfs in the Pleiades so (Infra)red? New Period Measurements Confirm Rotation-dependent Color Offsets From the Cluster Sequence

K. Covey, M. Agüeros, N. Law, J. Liu, A. Ahmadi, R. Laher, D. Levitan, B. Sesar, J. Surace
Astrophysical Journal, Volume 822, 81, 26 pages (2016)

78. Two Small Temperate Planets Transiting Nearby M Dwarfs in K2 Campaigns 0 and 1

J. Schlieder, I. Crossfield, E. Petigura, A. Howard, K. Aller, E. Sinukoff, H. Isaacson, B. Fulton, D. Ciardi, M. Bonnefoy, C. Ziegler, T. Morton, S. Lépine, C. Obermeier, M. Liu, V. Bailey, C. Baranec, C. Beichman, D. Defrere, T. Henning, P. Hinz, N. Law, R. Riddle, A. Skemer

Astrophysical Journal, Volume 818, 87, 15 pages (2016)

77. Planet Hunters. VIII. Characterization of 41 Long-period Exoplanet Candidates from Kepler Archival Data

**Refereed
papers (cont.)**

J. Wang, D. Fischer, T. Barclay, A. Picard, B. Ma, B. Bowler, J. Schmitt, T. Boyajian, K. Jek, D. LaCourse, C. Baranec, R. Riddle, N. Law, C. Lintott, K. Schawinski, D. Simister, B. Grégoire, S. Babin, T. Poile, T. Jacobs, T. Jebson, M. Omohundro, H. Schwengeler, J. Sejkpa, I. Terentev, R. Gagliano, J. Paakkonen, H. Otnes Berge, T. Winarski, G. Green, A. Schmitt, M. Kristiansen, A. Hoekstra
Astrophysical Journal, Volume 815, 127, 20 pages (2015)

76. HII 2407: An Eclipsing Binary Revealed By K2 Observations of the Pleiades
T. David, J. Stauffer, L. Hillenbrand, A. Cody, K. Conroy, K. Stassun, B. Pope, S. Aigrain, E. Gillen, A. Collier Cameron, D. Barrado, L. Rebull, H. Isaacson, G. Marcy, C. Zhang, R. Riddle, C. Ziegler, N. Law, C. Baranec
Astrophysical Journal, Volume 814, 62, 8 pages (2015)

75. KELT-8b: A Highly Inflated Transiting Hot Jupiter and a New Technique for Extracting High-precision Radial Velocities from Noisy Spectra
B. Fulton, K. Collins, B. Gaudi, K. Stassun, J. Pepper, T. Beatty, R. Siverd, K. Penev, A. Howard, C. Baranec, G. Corfini, J. Eastman, J. Gregorio, N. Law, M. Lund, T. Oberst, M. Penny, R. Riddle, J. Rodriguez, D. Stevens, R. Zambelli, C. Ziegler, A. Bieryla, G. D'Ago, D. DePoy, E. Jensen, J. Kielkopf, D. Latham, M. Manner, J. Marshall, K. McLeod, P. Reed
Astrophysical Journal, Volume 810, 30, 14 pages (2015)

74. High-speed Imaging and Wavefront Sensing with an Infrared Avalanche Photodiode Array
C. Baranec, D. Atkinson, R. Riddle, D. Hall, S. Jacobson, N. Law, M. Chun
Astrophysical Journal, Volume 809, 70, 6 pages (2015)

73. Planets Around Low-mass Stars (PALMS). V. Age-dating Low-mass Companions to Members and Interlopers of Young Moving Groups
B. Bowler, E. Shkolnik, M. Liu, J. Schlieder, A. Mann, T. Dupuy, S. Hinkley, J. Crepp, J. Johnson, A. Howard, L. Flagg, A. Weinberger, K. Aller, K. Allers, W. Best, M. Kotson, B. Montet, G. Herczeg, C. Baranec, R. Riddle, N. Law, E. Nielsen, Z. Wahhaj, B. Biller, T. Hayward
Astrophysical Journal, Volume 806, 62, 36 pages (2015)

72. Multiplicity of the Galactic Senior Citizens: A High-resolution Search for Cool Subdwarf Companions

C. Ziegler, N. Law, C. Baranec, R. Riddle, J. Fuchs
Astrophysical Journal, Volume 804, 30, 14 pages (2015)

71. Know the Star, Know the Planet. IV. A Stellar Companion to the Host Star of the Eccentric Exoplanet HD 8673b
L. Roberts, B. Mason, C. Neyman, Y. Wu, R. Riddle, J. Shelton, J. Angione, C. Baranec, A. Bouchez, K. Bui, R. Burruss, M. Burse, P. Chordia, E. Croner, H. Das, R. Dekany, S. Guiwits, D. Hale, J. Henning, S. Kulkarni, N. Law, D. McKenna, J. Milburn, D. Palmer, S. Punjabi, A. Ramaprakash, J. Roberts, S. Tendulkar, T. Trinh, M. Troy, T. Truong, J. Zolkower
Astronomical Journal, Volume 149, 144, 6 pages (2015)

70. Know the Star, Know the Planet. III. Discovery of Late-Type Companions to Two Exoplanet Host Stars
L. Roberts, A. Tokovinin, B. Mason, R. Riddle, W. Hartkopf, N. Law, C. Baranec
Astronomical Journal, Volume 149, 118, 7 pages (2015)

69. Evryscope Science: Exploring the Potential of All-Sky Gigapixel-Scale Telescopes
N. Law, O. Fors, J. Ratzloff, P. Wulfsen, D. Kavanaugh, D. Sitar, Z. Pruett, M. Birchard, B. Barlow, K. Cannon, S. Cenko, B. Dunlap, A. Kraus, T. Maccarone
Publications of the Astronomical Society of the Pacific, Volume 127, pp. 234 (2015)

68. Characterizing the Cool KOIs. VII. Physical Properties of the Transiting Brown Dwarf LHS 6343 C
B. Montet, J. Johnson, P. Muirhead, A. Villar, C. Vassallo, C. Baranec, N. Law, R. Riddle, G. Marcy, A. Howard, H. Isaacson
Astrophysical Journal, Volume 800, 134, 11 pages (2015)

67. Characterizing K2 Planet Discoveries: A Super-Earth Transiting the Bright K Dwarf HIP 116454
A. Vanderburg, B. Montet, J. Johnson, L. Buchhave, L. Zeng, F. Pepe, A. Collier Cameron, D. Latham, E. Molinari, S. Udry, C. Lovis, J. Matthews, C. Cameron, N. Law, B. Bowler, R. Angus, C. Baranec, A. Bieryla, W. Boschin, D. Charbonneau, R. Cosentino, X. Dumusque, P. Figueira, D. Guenther, A. Harutyunyan, C. Hellier, R. Kuschig, M. Lopez-Morales, M. Mayor, G. Micela, A. Moffat, M. Pedani, D. Phillips, G. Piotto, D. Pollacco, D. Queloz, K. Rice, R. Riddle, J. Rowe, S. Rucinski, D. Sasselov, D. Ségransan, A. Sozzetti, A. Szentgyorgyi, C. Watson, W. Weiss
Astrophysical Journal, Volume 800, 59, 14 pages (2015)

66. An Ancient Extrasolar System with Five Sub-Earth-size Planets
T. Campante, T. Barclay, J. Swift, D. Huber, V. Adibekyan, W. Cochran, C. Burke, H. Isaacson, E. Quintana, G. Davies, V. Silva Aguirre, D. Ragozzine, R. Riddle, C. Baranec, S. Basu, W. Chaplin, J.

Refereed papers (cont.)

Christensen-Dalsgaard, T. Metcalfe, T. Bedding, R. Handberg, D. Stello, J. Brewer, S. Hekker, C. Karoff, R. Kolbl, N. Law, M. Lundkvist, A. Miglio, J. Rowe, N. Santos, C. Van Laerhoven, T. Arentoft, Y. Elsworth, D. Fischer, S. Kawaler, H. Kjeldsen, M. Lund, G. Marcy, S. Sousa, A. Sozzetti, T. White
Astrophysical Journal, Volume 799, 170, 17 pages (2015)

65. A Survey of the High Order Multiplicity of Nearby Solar-type Binary Stars with Robo-AO
R. Riddle, A. Tokovinin, B. Mason, W. Hartkopf, L. Roberts, C. Baranec, N. Law, K. Bui, M. Burse, H. Das, R. Dekany, S. Kulkarni, S. Punnaadi, A. Ramaprakash, S. Tendulkar
Astrophysical Journal, Volume 799, 4, 21 pages (2015)

64. The Near-ultraviolet Luminosity Function of Young, Early M-type Dwarf Stars
M. Ansdell, E. Gaidos, A. Mann, S. Lépine, D. James, A. Buccino, C. Baranec, N. Law, R. Riddle, P. Mauas, R. Petrucci
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M. Zhao, J. O'Rourke, J. Wright, H. Knutson, A. Burrows, J. Fortney, H. Ngo, B. Fulton, C. Baranec, R. Riddle, N. Law, P. Muirhead, S. Hinkley, A. Showman, J. Curtis, R. Burruss
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62. The Factory and the Beehive. II. Activity and Rotation in Praesepe and the Hyades
S. Douglas, M. Agüeros, K. Covey, E. Bowsher, J. Bochanski, P. Cargile, A. Kraus, N. Law, J. Lemonias, H. Arce, D. Fierroz, A. Kundert
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N. Law, T. Morton, C. Baranec, R. Riddle, G. Ravichandran, C. Ziegler, J. Johnson, S. Tendulkar, K. Bui, M. Burse, H. Das, R. Dekany, S. Kulkarni, S. Punnaadi, A. Ramaprakash

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R. Laher, J. Surace, C. Grillmair, E. Ofek, D. Levitan, B. Sesar, J. van Eyken, N. Law, G. Helou, N. Hamam, F. Masci, S. Mattingly, E. Jackson, E. Hacoceans, W. Mi, S. Groom, H. Teplitz, V. Desai, D. Hale, R. Smith, R. Walters, R. Quimby, M. Kasliwal, A. Horeh, E. Bellm, T. Barlow, A. Waszczak, T. Prince, S. Kulkarni
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P. Muirhead, J. Becker, G. Feiden, B. Rojas-Ayala, A. Vanderburg, E. Price, R. Thorp, N. Law, R. Riddle, C. Baranec, K. Hamren, E. Schlawin, K. Covey, J. Johnson, J. Lloyd
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C. Baranec, R. Riddle, N. Law, A. Ramaprakash, S. Tendulkar, K. Hogstrom, K. Bui, M. Burse, P. Chordia, H. Das, R. Dekany, S. Kulkarni, S. Punnaadi

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LIGO optical-astronomy collaboration (908 co-authors)

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A. Horeh, C. Stockdale, D. Fox, D. Frail, J. Carpenter, S. Kulkarni, E. Ofek, A. Gal-Yam, M. Kasliwal, I. Arcavi, R. Quimby, S. Cenko, P. Nugent, J. Bloom, N. Law, D. Poznanski, E. Gorbikov, D. Polishook, O. Yaron, S. Ryder, K. Weiler, F. Bauer, S. Van Dyk, S. Immler, N. Panagia, D. Pooley, N. Kassim
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E. Terziev, N. Law, I. Arcavi, C. Baranec, J. Bloom, K. Bui, M. Burse, P. Chordia, H. Das, R. Dekany, A. Kraus, S. Kulkarni, P. Nugent, E. Ofek, S. Punnaadi, A. Ramaprakash, R. Riddle, M. Sullivan, S. Tendulkar

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N. Law, R. Carlberg, P. Salbi, W. Ngan, A. Ahmadi, E. Steinbring, R. Murowinski, S. Sivanandam, W. Kerzendorf
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J. Bloom, J. Richards, P. Nugent, R. Quimby, M. Kasliwal, D. Starr, D. Poznanski, E. Ofek, S. Cenko, N. Butler, S. Kulkarni, A. Gal-Yam, N. Law
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A. Corsi, E. Ofek, A. Gal-Yam, D. Frail, D. Poznanski, P. Mazzali, S. Kulkarni, M. Kasliwal, I. Arcavi, S. Ben-Ami, S. Cenko, A. Filippenko, D. Fox, A. Horeish, J. Howell, I. Kleiser, E. Nakar, I. Rabinak, R. Sari, J. Silverman, D. Xu, J. Bloom, N. Law, P. Nugent, R. Quimby
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P. Nugent, M. Sullivan, S. Cenko, R. Thomas, D. Kasen, D. Howell, D. Bersier, J. Bloom, S. Kulkarni, M. Kandrashoff, A. Filippenko, J. Silverman, G. Marcy, A. Howard, H. Isaacson, K. Maguire, N. Suzuki, J. Tarlton, Y. Pan, L. Bildsten, B. Fulton, J. Parrent, D. Sand, P. Podsiadlowski, F. Bianco, B. Dilday, M. Graham, J. Lyman, P. James, M. Kasliwal, N. Law, R. Quimby, I. Hook, E. Walker, P. Mazzali, E. Pian, E. Ofek, A. Gal-Yam, D. Poznanski
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D. Levitan, B. Fulton, P. Groot, S. Kulkarni, E. Ofek, T. Prince, A. Shporer, J. Bloom, S. Cenko, M. Kasliwal, N. Law, P. Nugent, D. Poznanski, R. Quimby, A. Horeh, B. Sesar, A. Sternberg
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Monthly Notices of the Royal Astronomical Society, Volume 412, pp. 1309-1319 (2011)

19. PTF 10fq: A Luminous Red Nova in the Spiral Galaxy Messier 99

M. Kasliwal, S. Kulkarni, I. Arcavi, R. Quimby, E. Ofek, P. Nugent, J. Jacobsen, A. Gal-Yam, Y. Green, O. Yaron, D. Fox, J. Howell, S. Cenko, I. Kleiser, J. Bloom, A. Miller, W. Li, A. Filippenko, D. Starr, D. Poznanski, N. Law, G. Helou, D. Frail, J. Neill, K. Forster, D. Martin, S. Tendulkar, N. Gehrels, J. Kennea, M. Sullivan, L. Bildsten, R. Dekany, G. Rahmer, D. Hale, R. Smith, J. Zolkower, V. Velur, R. Walters, J. Henning, K. Bui, D. McKenna, C. Blake
Astrophysical Journal, Volume 730, 134, 11 pages (2011)

18. Evidence for an FU Orionis-like Outburst from a Classical T Tauri Star

A. Miller, L. Hillenbrand, K. Covey, D. Poznanski, J. Silverman, I. Kleiser, B. Rojas-Ayala, P. Muirhead, S. Cenko, J. Bloom, M. Kasliwal, A. Filippenko, N. Law, E. Ofek, R. Dekany, G. Rahmer, D. Hale, R. Smith, R. Quimby, P. Nugent, J. Jacobsen, J. Zolkower, V. Velur, R. Walters, J. Henning, K. Bui, D. McKenna, S. Kulkarni, C. Klein, M. Kandrashoff, A. Morton
Astrophysical Journal, Volume 730, 80, 14 pages (2011)

**17. Astrometric Microlensing by Local Dark Matter Subhalos [equal author contribs.]
A. Erickcek, N. Law**

Astrophysical Journal, Volume 729, 49, 17 pages (2011)

16. Hubble Space Telescope Studies of Nearby Type Ia Supernovae: The Mean Maximum Light Ultraviolet Spectrum and its Dispersion

J. Cooke, R. Ellis, M. Sullivan, P. Nugent, D. Howell, A. Gal-Yam, C. Lidman, J. Bloom, S. Cenko, M. Kasliwal, S. Kulkarni, N. Law, E. Ofek, R. Quimby
Astrophysical Journal Letters, Volume 727, L35, 5 pages (2011)

15. PTF10nvg: An Outbursting Class I Protostar in the Pelican/North American Nebula

K. Covey, L. Hillenbrand, A. Miller, D. Poznanski, S. Cenko, J. Silverman, J. Bloom, M. Kasliwal, W. Fischer, J. Rayner, L. Rebull, N. Butler, A. Filippenko, N. Law, E. Ofek, M. Agüeros, R. Dekany, G. Rahmer, D. Hale, R. Smith, R. Quimby, P. Nugent, J. Jacobsen, J. Zolkower, V. Velur, R. Walters, J. Henning, K. Bui, D. McKenna, S. Kulkarni, C. Klein
Astronomical Journal, Volume 141, 40, 17 pages (2011)

14. Two Wide Planetary-mass Companions to Solar-type Stars in Upper Scorpius

M. Ireland, A. Kraus, F. Martinache, N. Law, L. Hillenbrand
Astrophysical Journal, Volume 726, 113, 11 pages (2011)

13. Supernova PTF 09UJ: A Possible Shock Breakout from a Dense Circumstellar Wind

E. Ofek, I. Rabinak, J. Neill, I. Arcavi, S. Cenko, E. Waxman, S. Kulkarni, A. Gal-Yam, P. Nugent, L. Bildsten, J. Bloom, A. Filippenko, K. Forster, D. Howell, J. Jacobsen, M. Kasliwal, N. Law, C. Martin, D. Poznanski, R. Quimby, K. Shen, M. Sullivan, R. Dekany, G. Rahmer, D. Hale, R. Smith, J. Zolkower, V. Velur, R. Walters, J. Henning, K. Bui, D. McKenna
Astrophysical Journal, Volume 724, pp. 1396-1401 (2010)

12. Rapidly Decaying Supernova 2010X: A Candidate "Ia" Explosion

M. Kasliwal, S. Kulkarni, A. Gal-Yam, O. Yaron, R. Quimby, E. Ofek, P. Nugent, D. Poznanski, J. Jacobsen, A. Sternberg, I. Arcavi, D. Howell, M. Sullivan, ..., E. Hsiao, N. Law, N. Gehrels, S. Immler, R. Dekany, G. Rahmer, D. Hale, R. Smith, J. Zolkower, V. Velur, R. Walters, J. Henning, K. Bui, D. McKenna
Astrophysical Journal Letters, Volume 723, pp. L98-L102 (2010)

11. A High-Contrast Imaging Survey of SIM Lite Planet Search Targets

**Refereed
papers (cont.)**

A. Tanner, C. Gelino, N. Law

Publications of the Astronomical Society of the Pacific, Volume 122, 13 pages (2010)

10. Core-collapse Supernovae from the Palomar Transient Factory: Indications for a Different Population in Dwarf Galaxies

I. Arcavi, A. Gal-Yam, M. Kasliwal, R. Quimby, E. Ofek, S. Kulkarni, P. Nugent, S. Cenko, J. Bloom, M. Sullivan, D. Howell, D. Poznanski, A. Filippenko, N. Law, ..., J. Cooke, R. Dekany, G. Rahmer, D. Hale, R. Smith, J. Zolkower, V. Velur, R. Walters, J. Henning, K. Bui, D. McKenna, J. Jacobsen
Astrophysical Journal, Volume 721, pp. 777-784 (2010)

9. The High-order Multiplicity of Unusually Wide M Dwarf Binaries: Eleven New Triple and Quadruple Systems

N. Law, S. Dhital, A. Kraus, K. Stassun, A. West

Astrophysical Journal, Volume 720, pp. 1727-1737 (2010)

8. The Palomar Transient Factory: System Overview, Performance, and First Results

N. Law, S. Kulkarni, R. Dekany, E. Ofek, R. Quimby, P. Nugent, J. Surace, C. Grillmair, J. Bloom, M. Kasliwal, L. Bildsten, T. Brown, S. Cenko, D. Ciardi, E. Croner, S. Djorgovski, J. van Eyken, A. Filippenko, D. Fox, A. Gal-Yam, D. Hale, N. Hamam, G. Helou, J. Henning, D. Howell, J. Jacobsen, R. Laher, S. Mattingly, D. McKenna, A. Pickles, D. Poznanski, G. Rahmer, A. Rau, W. Rosing, M. Shara, R. Smith, D. Starr, M. Sullivan, V. Velur, R. Walters, J. Zolkower

Publications of the Astronomical Society of the Pacific, Volume 121, 12 pages (2009)

7. Exploring the Optical Transient Sky with the Palomar Transient Factory

A. Rau, S. Kulkarni, N. Law, J. Bloom, D. Ciardi, G. Djorgovski, D. Fox, A. Gal-Yam, C. Grillmair, M. Kasliwal, P. Nugent, E. Ofek, R. Quimby, W. Reach, M. Shara, L. Bildsten, S. Cenko, A. Drake, A. Filippenko, D. Helfand, G. Helou, D. Howell, D. Poznanski, M. Sullivan

Publications of the Astronomical Society of the Pacific, Volume 121, 15 pages (2009)

6. Getting Lucky with Adaptive Optics: Fast Adaptive Optics Image Selection in the Visible with a Large Telescope

N. Law, C. Mackay, R. Dekany, M. Ireland, J. Lloyd, A. Moore, J. Robertson, P. Tuthill, H. Woodruff

Astrophysical Journal, Volume 692, pp. 924-930 (2009)

5. The LuckyCam survey for very low mass binaries - II. 13 new M4.5-M6.0 binaries

N. Law, S. Hodgkin, C. Mackay

Monthly Notices of the Royal Astronomical Society, Volume 384, pp. 150-160 (2008)

4. Taking the Measure of the Universe: Precision Astrometry with SIM PlanetQuest

S. Unwin, M. Shao, A. Tanner, R. Allen, C. Beichman, D. Boboltz, J. Catanzarite, B. Chaboyer, D. Ciardi, S. Edberg, A. Fey, D. Fischer, C. Gelino, A. Gould, C. Grillmair, T. Henry, K. Johnston, K. Johnston, D. Jones, S. Kulkarni, N. Law, S. Majewski, V. Makarov, D. Meier, R. Olling, X. Pan, R. Patterson, J. Pitesky, Quirrenbach, S. Shaklan, E. Shaya, L. Strigari, J. Tomsick, A. Wehrle, G. Worthey
Publications of the Astronomical Society of the Pacific, Volume 120, 48 pages (2008)

3. Discovery of five very low mass close binaries, resolved in the visible with lucky imaging*

N. Law, S. Hodgkin, C. Mackay

Monthly Notices of the Royal Astronomical Society, Volume 368, pp. 1917-1924 (2006)

2. Lucky imaging: high angular resolution imaging in the visible from the ground

N. Law, C. Mackay, J. Baldwin

Astronomy and Astrophysics, Volume 446, February I 2006, pp.739-745 (2006)

1. A search for X-ray flashes with XMM-Newton

N. Law, R. Rutledge, S. Kulkarni

Monthly Notices of the Royal Astronomical Society, Volume 350, pp. 1079-1086 (2004)

**SPIE
proceedings**

Note: International Society for Optics and Photonics [SPIE] proceedings are refereed conference proceedings and are one of the primary methods of publishing instrument design and performance in my field. Most contain original research; my SPIE papers have received a total of 180 citations.

25. Evryscopes North and South: Hardware to Science

J. Ratzloff, N. Law, H. Corbett, O. Fors, W. Howard

Proceedings of the SPIE, Volume 10702, 12 pages (2018)

24. Evryscope Robotilter automated camera / ccd alignment system

J. Ratzloff, N. Law, O. Fors, D. Ser, H. Corbett

Proceedings of the SPIE, Volume 9908, 99080W 9 pages (2016)

23. SRAO: the first southern robotic AO system

N. Law, C. Ziegler, A. Tokovinin

Proceedings of the SPIE, Volume 9907, 99070K 10 pages (2016)

22. The Evryscope: design and performance of the first full-sky gigapixel-scale telescope

N. Law, O. Fors, J. Ratzloff, H. Corbett, D. del Ser, P. Wulfken

Proceedings of the SPIE, Volume 9906, 99061M 6 pages (2016)

21. The Robo-AO KOI survey: laser adaptive optics imaging of every Kepler exoplanet candidate

C. Ziegler, N. Law, C. Baranec, T. Morton, R. Riddle, D. Atkinson, L. Nofi

Proceedings of the SPIE, Volume 9909, 99095U 17 pages (2016)

20. SRAO: optical design and the dual-knife-edge WFS

C. Ziegler, N. Law, A. Tokovinin

Proceedings of the SPIE, Volume 9909, 99093Z 6 pages (2016)

19. Robo-AO Kitt Peak: status of the system and deployment of a sub-electron readnoise IR camera to detect low-mass companions

M. Salama, C. Baranec, R. Jensen-Clem, R. Riddle, D. Duey, S. Kulkarni, N. Law

Proceedings of the SPIE, Volume 9909, 99091A 15 pages (2016)

18. The Robo-AO automated intelligent queue system

R. Riddle, K. Hogstrom, A. Papadopoulos, C. Baranec, N. Law

Proceedings of the SPIE, Volume 9152, 91521E 13 pages (2014)

17. Second generation Robo-AO instruments and systems

C. Baranec, R. Riddle, N. Law, M. Chun, J. Lu, M. Connelley, D. Hall, D. Atkinson, S. Jacobson

Proceedings of the SPIE, Volume 9148, 914812 11 pages (2014)

16. Twelve thousand laser-AO observations: first results from the Robo-AO large surveys

N. Law, C. Baranec, R. Riddle

Proceedings of the SPIE, Volume 9148, 91480A 9 pages (2014)

15. Optical turbulence profiling with SloDAR in the Canadian High Arctic

J. Maire, E. Mieda, E. Steinbring, R. Murowinski, J. Graham, R. Carlberg, S. Wright, N. Law, S. Sivanandam

Proceedings of the SPIE, Volume 9145, 91453J 8 pages (2014)

14. The Evryscope: the first full-sky gigapixel-scale telescope

N. Law, O. Fors, P. Wulfken, J. Ratzloff, D. Kavanaugh

Proceedings of the SPIE, Volume 9145, 91450Z 9 pages (2014)

13. New results from the first exoplanet survey in the Canadian High Arctic

N. Law, R. Carlberg, O. Fors, E. Steinbring, W. Ngan, P. Wulfken, B. Pedersen, J. Maire, S. Sivanandam

Proceedings of the SPIE, Volume 9145, 91450H 9 pages (2014)

12. Characterizing near-infrared sky brightness in the Canadian high arctic

S. Sivanandam, J. Graham, R. Abraham, A. Tekatch, E. Steinbring, W. Ngan, D. Welch, N. Law

Ground-based and Airborne Instrumentation for Astronomy IV. Proceedings of the SPIE, Volume 8446, 844643, 12 pages (2012)

11. New Exoplanet Surveys in the Canadian High Arctic at 80 Degrees North

N. Law, S. Sivanandam, R. Murowinski, R. Carlberg, W. Ngan, P. Salbi, A. Ahmadi, E. Steinbring, M. Halman, J. Graham

Ground-based and Airborne Telescopes IV. Proceedings of the SPIE, Volume 8444,

**SPIE
proceedings
(cont.)**

84445C, 10 pages (2012)

10. The Robo-AO software: fully autonomous operation of a laser guide star adaptive optics and science system

R. Riddle, M. Burse, N. Law, S. Tendulkar, C. Baranec, A. Rudy, M. Sitt, A. Arya, A. Papadopoulos, A. Ramaprasanth, R. Dekany

Adaptive Optics Systems III. Proceedings of the SPIE, Volume 8447, 84472O, 9 pages (2012)

9. Robo-AO: autonomous and replicable laser-adaptive-optics and science system

C. Baranec, R. Riddle, A. Ramaprasanth, N. Law, S. Tendulkar, S. Kulkarni, R. Dekany, K. Bui, J. Davis, M. Burse, H. Das, S. Hildebrandt, S. Punnadi, R. Smith

Adaptive Optics Systems III. Proceedings of the SPIE, Volume 8447, 844704, 11 pages (2012)

8. The Palomar Transient Factory Survey Camera: first year performance and results

N. Law, R. Dekany, G. Rahmer, D. Hale, R. Smith, R. Quimby, E. Ofek, M. Kasliwal, J. Zolkower, V. Velur, J. Henning, K. Bui, D. McKenna, P. Nugent, J. Jacobsen, R. Walters, J. Bloom, J. Surace, C. Grillmair, R. Laher, S. Mattingly, S. Kulkarni

Proceedings of the SPIE, Volume 7735, 77353M (2010)

7. Getting lucky with adaptive optics: diffraction-limited resolution in the visible with current AO systems on large and small telescopes

N. Law, R. Dekany, C. Mackay, A. Moore, M. Britton, V. Velur

Adaptive Optics Systems. Edited by Hubin, Norbert; Max, Claire E.; Wizinowich, Peter L. Proceedings of the SPIE, Volume 7015, 70152I, 11 pages (2008)

6. Lucky imaging and speckle discrimination for the detection of faint companions with adaptive optics

S. Gladysz, J. Christou, N. Law, R. Dekany, M. Redfern, C. Mackay

Adaptive Optics Systems. Edited by Hubin, Norbert; Max, Claire E.; Wizinowich, Peter L.

Proceedings of the SPIE, Volume 7015, 70152H, 12 pages (2008)

5. CAMERA: a compact, automated, laser adaptive optics system for small aperture telescopes

M. Britton, V. Velur, N. Law, P. Choi, B. Penprase

Adaptive Optics Systems. Edited by Hubin, Norbert; Max, Claire E.; Wizinowich, Peter L.

Proceedings of the SPIE, Volume 7015, 701516, 11 pages (2008)

4. The 12K×8K CCD mosaic camera for the Palomar Transient Factory

G. Rahmer, R. Smith, V. Velur, D. Hale, N. Law, K. Bui, H. Petrie, R. Dekany

Ground-based and Airborne Instrumentation for Astronomy II. Edited by McLean, Ian S.; Casali, Mark M. Proceedings of the SPIE, Volume 7014, 70144Y, 12 pages (2008)

3. Diffraction limited imaging in the visible from large ground-based telescopes: new methods for future instruments and telescopes

C. Mackay, N. Law, T. Staley

Ground-based and Airborne Instrumentation for Astronomy II. Edited by McLean, Ian S.; Casali, Mark M. Proceedings of the SPIE, Volume 7014, 70141C, 7 pages (2008)

2. Astrometric detection of exo-Earths in the presence of stellar noise

J. Catanzarite, N. Law, M. Shao

Optical and Infrared Interferometry. Edited by Schöller, Markus; Danchi, William C.; Delplancke, Françoise. Proceedings of the SPIE, Volume 7013, 70132K, 11 pages (2008)

1. High-resolution imaging in the visible from the ground without adaptive optics: new techniques and results

C. Mackay, J. Baldwin, N. Law, P. Warner

Ground-based Instrumentation for Astronomy. Edited by Alan F. M. Moorwood and Iye Masanori. Proceedings of the SPIE, Volume 5492, pp. 128-135 (2004)

Students and Teaching

Courses Taught	Fall 2019: ASTR 502, UNC Chapel Hill (2 students) Spring 2019: ASTR 502, UNC Chapel Hill (12 students) Fall 2018: ASTR 202, UNC Chapel Hill (22 students) Fall 2017: ASTR 519 & ASTR 719, UNC Chapel Hill (6 students). Spring 2017: ASTR 519 & ASTR 719, UNC Chapel Hill (15 students). Spring 2016: ASTR 101, UNC Chapel Hill (168 students). Fall 2015: ASTR 519 & ASTR 719, UNC Chapel Hill (22 students). Spring 2015: ASTR 101, UNC Chapel Hill (245 students). Fall 2014: ASTR 519 & ASTR 719, UNC Chapel Hill (9 students). Spring 2014: ASTR 101, UNC Chapel Hill (182 students).
Courses Developed	ASTR 519 & 719 (new design of existing course, from scratch) ASTR 502: Astronomy in the era of big data (CURE high-impact-experience course; \$16k of competitive UNC funding) Co-led the re-design of the UNC Astronomy Graduate Curriculum (co-lead: Sheila Kannappan)
Current graduate students	Ward Howard (4th year) Hank Corbett (4th year) Amy Glazier (3rd year) Alan Vasquez-Soto (2nd year) Ramses Gonzalez (2nd year) Nathan Galliher (2nd year)
Graduated students	Dec 2015: Phillip Wulfken, Masters, "The Evryscope: Construction and Data Analysis Techniques" May 2018: Carl Ziegler, Ph.D. "Characterization of Exoplanets and Stellar Systems with New Robots" May 2020: Jeffrey Ratzloff, Ph.D. "Building and Designing the Evryscopes and Fast Transit Survey Results"
Postdoctoral Scholar Mentorship	2014-2017: Octavi Fors (moved to a position at ICCUB, University of Barcelona)
Undergraduate research projects	2017-18: Erin Goeke (PHY295; Evryscope machine learning, paid undergraduate researcher) Aaron Pietraallo (PHY395; Evryscope stellar activity search) 2017: Erin Conn (PHY395; Evryscope solar-type-star planet search) Mark Tierney (PHY395; Robo-AO nearby-star survey) 2016: Sheridan Green (PHY 395; 2nd-gen Evryscope cameras) 2015: Drew Smith (PHY-395; finding exoplanets in PTF-SNe data) Sarah Roberts (CAP-REU; systematics removal in Arctic-camera data) Ward Howard (incoming grad student; LGS-AO without a tip/tilt guide star) Hark Corbett (parallel Evryscope image calibration) 2014: Bjorn Pederson (PHYS482L: Arctic sky brightness and cloud cover) Julie Wellons (PHYS482L: stellar populations in the PTF/M-dwarfs survey) Jeff Ratzloff (incoming grad student; Evryscope mechanical design) Dustin Kavanaugh (independent study: Evryscope camera placement)

Grants

External grant awards while at UNC	Institutional PI for "The Origin and Impact of Flares in the Closest Planetary System Proxima Centauri" NASA HST-GO-15651.008-A; \$57k , in collaboration with M. MacGregor (Carnegie)	May 2019 – May 2020
	co-PI for "A Southern Hemisphere RV Follow-up Program for TESS"; NASA Exoplanet Research Program 80NSSC19K0290; total award \$417k, UNC share \$28k	May 2019 – May 2020
	co-PI for "Quickening Heartbeats: Measuring Tidal Orbital Decay in Eccentric Young Binaries". 0% salary effort (all funding to graduate students) <i>Heising-Simons Foundation/ Scialog, \$110k, in collaboration with K. Kratter (University of Arizona) and J. Fuller (Caltech)</i>	Sep 2018 – Aug 2019
	co-PI for "Enhanced Gravitational Wave Search via Simultaneous Advanced LIGO/Virgo and Evryscope Detection" (collab. with University of Florida) 0% salary effort (all funding to graduate students) <i>NSF Physics Gravitational Physics Program; PHY-1806625; \$40k</i>	Aug 2018 – July 2019

	PI for “Evryscope Science: Realizing the Potential of the first full-sky gigapixel-scale telescope” 5% salary effort (most funding to graduate students) <i>NSF Astronomy CAREER AST-155175; \$914k</i>	Jan 2016 – Dec 2020
	co-PI for “Linking the Evryscope with the AAVSO” 0% salary effort (all funding to graduate students) <i>Scialog award #23822; \$100k, in collaboration w. J. Sokoloski (Columbia Univ)</i>	Jan 2016 – Dec. 2017
	co-PI for “Monitoring Extrasolar Space Weather with LWA and the Evryscope” 0% salary effort (all funding to graduate students) <i>Scialog award #23782; \$100k, in collaboration w. G. Hallinan (Caltech)</i>	Jan 2016 – Dec. 2017
	PI for “The Robo-AO survey of Kepler exoplanet hosts” 16% salary effort (most funding to graduate students) <i>NASA Exoplanet Research Program NNX15AC91G; \$437k</i> <i>Subcontracts to C. Baranec (Univ. Hawaii) & T. Morton (Princeton)</i>	Jan 2015 – Dec 2017
	PI for “The Evryscope: the first full-sky gigapixel-scale telescope” 9% salary effort (most funding to graduate students) <i>NSF Astronomy Advanced Technologies and Instrumentation AST-1407589; \$463k</i>	Jul 2014 – Jul 2016
Collaboration funding	Co-PI for the Northern Evryscope, a collaboration between San Diego State University (SDSU) and UNC. SDSU share: \$256k ; UNC provides in-kind contributions and an externally-funded \$50k hardware contribution.	Feb 2017 – Feb 2020

Professional Talks

Professional talks	58. Exploring the sky every minute with the Evryscopes (invited colloquium cancelled by COVID-19) <i>University of Toronto, Toronto, ON, Canada, March 2020</i>
	57. Exploring the sky every minute with the Evryscopes (invited colloquium) <i>San Diego State University, San Diego, CA, February 2020</i>
all invited talks and selected contributed talks listed	56. The Evryscopes: observing the entire sky at high cadence <i>SPIE Astronomical Telescopes and Instrumentation, Austin, TX, Jun 2018</i>
	55. UNC’s Evryscopes: Watchful Eyes on the Entire Sky (invited talk) <i>UNC Board of Trustees, Chapel Hill, NC, Mar 2018</i>
	54. Evryscope and CAREER Science and Education (invited talk) <i>NSF Fellows Symposium, Washington D.C., Jan 2018</i>
	53. Evryscope: the first gigapixel-scale all-sky telescope (invited colloquium) <i>University of Maryland, Department of Astronomy, College Park, MD, Nov 2017</i>
	52. Evryscope: the first gigapixel-scale all-sky telescope (invited colloquium) <i>North Carolina State University, Department of Physics, Raleigh, NC, Nov 2017</i>
	51. Evryscope-North: SDSU and UNC monitoring the sky together (invited colloquium) <i>San Diego State University, Department of Astronomy, San Diego, CA, Oct 2017</i>
	50. Optical and Infrared Telescope Basics (invited talk) <i>University of Toronto, Dunlap Summer School, Toronto, ON, Canada, Jul 2017</i>
	49. Robots Exploring the Habitable Sky: Robo-AO and Evryscope (invited seminar) <i>Institute for Advanced Study, Princeton University, Princeton, NJ, Jun 2017</i>
	48. Evryscope: the first gigapixel-scale all-sky telescope (invited colloquium) <i>Argonne National Laboratory, Physics Division, Argonne, IL, May 2017</i>
	47. Evryscope: the first gigapixel-scale all-sky telescope (invited colloquium) <i>Wake Forest University, Department of Physics, Winston-Salem, NC, Mar 2017</i>
	46. Evryscope: the first gigapixel-scale all-sky telescope (invited colloquium) <i>University of Notre Dame, Department of Physics, Notre Dame, IN, Nov 2016</i>
	45. AAVSO and Evryscope: professional / amateur collaborations (invited talk) <i>Scialog Time-Domain Fellows workshop, Austin, TX, Nov 2016</i>
	44. Stellar flares and planetary habitability with the Evryscope & LWA (invited talk) <i>Scialog Time-Domain Fellows workshop, Austin, TX, Oct 2016</i>
	43. Building the Evryscope high-cadence survey of the whole sky (invited talk) <i>SRK@60 workshop: Compact, Cataclysmic and Catastrophic, Temecula, CA, Sep 2016</i>
	42. SRAO: the first southern robotic AO system <i>SPIE Astronomical Telescopes and Instrumentation, Edinburgh, Scotland, Jun 2016</i>
	41. The Evryscope: design and performance of the first full-sky gigapixel-scale telescope <i>SPIE Astronomical Telescopes and Instrumentation, Edinburgh, Scotland, Jun 2016</i>
	40. Following-up TESS Exoplanets with Robo-AO (invited talk) <i>TESS Science Team Meeting, MIT, Cambridge, MA, May 2015</i>

**Professional
talks
(cont.)**

39. Evryscope: the first gigapixel-scale all-sky telescope (invited talk)
Caltech Small Telescope Sky Surveys Workshop, Pasadena, CA, Aug 2015
38. Monitoring the entire Antarctic sky, all the time (invited talk)
Scientific Committee on Antarctic Research Workshop, Volcano, HI, Aug 2015
37. Laser-AO imaging of every Kepler Planet Candidate
IAU General Assembly, Honolulu, HI, Aug 2015
36. The Evryscope: the first gigapixel-scale all-sky telescope (invited colloquium)
Las Cumbres Global Observatory, Santa Barbara, CA, Apr 2015
35. The Evryscope: the first gigapixel-scale all-sky telescope
American Astronomical Society Winter Conference, Seattle, WA, Jan 2015
34. The Evryscope: the first gigapixel-scale all-sky telescope (invited colloquium)
Caltech Astronomy Department, Pasadena, CA, Oct 2014
33. 12,000 Adaptive Optics observations: Robo-AO science
SPIE Astronomical Telescopes and Instrumentation, Montreal, QC, Canada, Jun 2014
32. Results from the first exoplanet survey at the North Pole
SPIE Astronomical Telescopes and Instrumentation, Montreal, QC, Canada Jun 2014
31. The Evryscope: the first gigapixel-scale all-sky telescope
SPIE Astronomical Telescopes and Instrumentation, Montreal, QC, Canada, Jun 2014
30. Robots with Lasers and an Arctic Adventure (invited colloquium)
University of Washington Astronomy Dept., Seattle, WA, May 2013
29. Detecting Exoplanets with a New Generation of Sky Surveys (invited colloquium)
UNC Chapel Hill Department of Physics & Astronomy, Chapel Hill, NC, Feb 2013
28. Detecting Exoplanets with a New Generation of Sky Surveys (invited colloquium)
University of Toronto Department of Astronomy, Toronto, ON, Canada, Feb 2013
27. Detecting Exoplanets with a New Generation of Sky Surveys (invited colloquium)
University of Hawaii Institute of Astronomy, Honolulu, HI, Feb 2013
26. High-speed astronomy (invited colloquium)
U. Hawaii Institute of Astronomy Hilo, Hilo, HI, Feb 2013
25. Cool Stars, Cool Planets, and Arctic Astronomy (invited colloquium)
Dalhousie University, Halifax, NS, Canada Oct 2012
24. Finding Exoplanets in the High Canadian Arctic (invited colloquium)
York University, Toronto, ON, Canada, Mar 2012
23. Cool Planets, Cool Stars, and Frigid Astronomy (invited colloquium)
University of British Columbia., Vancouver, BC, Canada, Mar 2012
22. Cool Planets, Cool Stars, and Frigid Astronomy (invited colloquium)
Columbia University, New York, NY, Feb 2012
21. Astronomy in the Canadian Arctic (invited colloquium)
University of Waterloo, Waterloo, ON, Canada, Feb 2012
20. Low-mass-star surveys with PTF (invited talk)
American Astronomical Society conference time-domain splinter, Boston, MA, Jun 2011
19. A new planet-finding telescope in the Canadian Arctic
Canadian Astronomical Society, Calgary, AB, Canada, 2011
18. PTF survey status, spring 2011 (keynote talk)
Palomar Transient Factory workshop, Santa Barbara, CA, Apr 2011
17. PTF/M-dwarfs: searching for planets around 100,000 M-dwarfs
Palomar Transient Factory workshop, Santa Barbara, CA, Apr 2011
16. The PTF search for planets around M-dwarfs (invited colloquium)
University of Toronto Department of Astronomy, Toronto, ON, Canada, Feb 2011
15. Searching for planets around 100,000 M-dwarfs
American Astronomical Society Winter Conference, Seattle, WA, Jan 2011
14. Cool stars with new AO and wide field instruments (invited colloquium)
Rochester Institute of Technology, Rochester, NY, Feb 2010
13. PTF survey status, fall 2010 (keynote presentation)
Palomar Transient Factory workshop, Santa Barbara, CA, Oct 2010
12. PTF/M-dwarfs: searching for planets around 100,000 M-dwarfs
Palomar Transient Factory workshop, Santa Barbara, CA, Oct 2010
11. Cool and Ultracool dwarfs with the Palomar Transient Factory
Cool Stars 16 binaries workshop, Barcelona, Spain, Jul 2010
10. Robo-AO: Robotic LGS-AO on the Palomar 60-inch in 2011 (invited colloquium)
Caltech Astronomy Department, Pasadena, CA, May 2010
9. PTF survey status, spring 2010 (keynote)
Palomar Transient Factory workshop, Santa Barbara, CA, Jun 2010
8. Cool things around cool stars (invited colloquium)
University of Toronto Astronomy Dept., Toronto, ON, Canada, May 2009
7. PTF: the survey is operational (invited talk)
Palomar Observatory Science Meeting, Pasadena, CA, Feb 2009

**Professional
talks
(cont.)**

6. A Robotic Laser Guide Star Adaptive Optics System
SPIE Astronomical Telescopes and Instrumentation, Marseilles, France, Jun 2008
5. LAMP: Lucky Imaging, Aperture Masking and Polarization at Palomar (invited seminar)
JPL, Pasadena, CA, Nov 2007
4. LAMP: Lucky Imaging, Adaptive Optics, Aperture Masking and Polarization at Palomar
Palomar Observatory Science Meeting, May 2007
3. Lucky Imaging: Hubble-Resolution Imaging in the Visible from the Ground (invited seminar)
Caltech Astronomy Dept., Pasadena, CA, May 2006
2. Lucky Imaging: Hubble-Resolution Imaging in the Visible from the Ground (invited seminar)
National Optical Astronomical Observatories, Tucson, Arizona, May 2006
1. Lucky Imaging: Hubble-Resolution Imaging in the Visible from the Ground
UK National Astronomy Meeting, Milton Keynes, UK, Jun 2005

Professional Service and Outreach

**UNC Dept. Of
Physics
Committees**

- Precandidacy Advising (2019-20)
- Graduate Affairs (2018-19)
- Graduate Admissions (2014-18)
- Graduate Recruiting (2014-18)
- Faculty Search Committee (2016/17 & 2017/18)
- Colloquium Committee (2016)

**External
Professional
service**

- SOAR Science Advisory Council (2014+)
- UNC AURA Representative (2020+)
- SRK@60 workshop instrumentation session chair (2016)
- NSF grant panel reviewer (multiple panels over the last 5 years)
- NSF grant external reviewer
- NASA grant review panel member
- Referee for the Astrophysical Journal (ApJ), the Astronomical Journal (AJ), Monthly Notices of the Royal Astronomical Society (MNRAS) and Publications of the Astronomical Society of the Pacific (PASP)
- Referee for BSF (US-Israel Binational Science Foundation) grants
- Referee for CANTAC (Canadian Gemini time allocation committee)

**Public Outreach
& Media
Coverage**

- Evryscope (PI):
- Evryscope discovery of a superflare from Proxima Centauri covered in Forbes, Popular Mechanics, New Scientist, El Pais, space.com, Ars Technica, and a variety of other outlets worldwide.
 - Popular Mechanics named the Evryscope as #2 of 50 technological innovations in their “Year of Good Things 2015” issue.
 - Evryscope featured in a variety of other publications including MIT Technology Review, Sky & Telescope, Science (full-page feature article), Science News, etc.
 - Developing an NSF-funded planetarium exhibit for Evryscope data (NSF funded; in collaboration with Morehead Planetarium)
- SOAR-AO (PI) & Robo-AO (Project Scientist):
- Robo-AO & ongoing adaptive optics programs were featured in a Nature News & Views article
 - SOAR-AO plans were covered in the Daily Tar Heel and other local outlets.
- DI Arctic Telescope (PI):
- profiled in the Montreal Gazette and several other newspapers
- PTF (Project Scientist):
- featured in a wide variety of national and international media, for discoveries ranging from a star falling into a supermassive black hole, to a new class of superluminous supernovae.
- LAMP Lucky+AO instrument at Palomar (PI):
- One of Time Magazine's Best Inventions of 2007.
 - The project was also covered in Nature, New Scientist, Discover, Slashdot, etc., as well as producing an ApJ paper and six SPIE papers.

**Recent Public
Talks**

Celebrating the 2019 Physics Nobel Prize, Chapel Hill, NC	Nov 2019
UNC Physics “Science is Awesome” elementary-school visit, UNC Chapel Hill, NC	May 2018
Astronomy on Tap, Durham, NC	Mar 2018
Chapel Hill Astronomy Club, Chapel Hill, NC	May 2016
Asheville Astronomy Club, Asheville, NC	May 2016
Morehead Teen Science Cafe, Chapel Hill, NC	April 2016
Raleigh Astronomy Club, Raleigh, NC	Nov 2015
UNC Humanities program: a North Pole Adventure, Chapel Hill, NC	Sep. 2014
UNC SHAPE program: a North Pole Adventure, Chapel Hill, NC	May 2014