

Publications

h-index = 17, first-authored h-index = 14

■ Refereed, First-Authored Publications

- 16) **Neugent, K.F.**, 2021, “The Red Supergiant Binary Fraction as a Function of Metallicity in M31 and M33,” *ApJ*, 908, 87
- 15) **Neugent, K.F.**, Levesque, E. M., Massey, P., Morrell, N. I., & Drout, M. R., 2020, “The Red Supergiant Binary Fraction in the Large Magellanic Cloud,” *ApJ*, 900, 118
- 14) **Neugent, K. F.**, Massey, P., Georgy, C., Drout, M. R., Mommert, M., Levesque, E. M., Meynet, G., & Ekstrom, S., 2020, “The Luminosity Function of Red Supergiants in M31,” *ApJ*, 889, 1
- 13) **Neugent, K. F.**, & Massey, P., 2019, “The Wolf-Rayet Content of the Galaxies of the Local Group and Beyond,” Review paper in MDPI Galaxies special issue on “Luminous Stars in Nearby Galaxies.” ed. Roberta Humphreys, *Galaxies*, 7, 74
- 12) **Neugent, K. F.**, Levesque, E. M., Massey, P., & Morrell, N. I., 2019, “Binary Red Supergiants II: Discovering and Characterizing B-type Companions,” *ApJ*, 875, 124
- 11) **Neugent, K. F.**, Levesque, E. M., & Massey, P., 2018, “Binary Red Supergiants: A New Method for Detecting B-type Companions,” *AJ*, 156, 5
- 10) **Neugent, K. F.**, Massey, P., & Morrell, N. I., 2018, “A Modern Search for Wolf-Rayet Stars in the Magellanic Clouds. IV. A Final Census,” *ApJ*, 863, 181
- 9) **Neugent, K. F.**, Massey, P., Morrell, N. I., Skiff, B., & Georgy, C., 2018, “A Runaway Yellow Supergiant Star in the Small Magellanic Cloud,” *AJ*, 155, 207
- 8) **Neugent, K. F.**, Massey, P., Hillier, D. J., & Morrell, N. I. 2017, “The Evolution and Physical Parameters of WN3/O3s: a New Type of Wolf-Rayet Star,” *ApJ*, 841, 20
- 7) **Neugent, K. F.**, & Massey, P. 2014, “The Close Binary Frequency of Wolf-Rayet Stars as a Function of Metallicity in M31 and M33,” *ApJ*, 789, 10
- 6) **Neugent, K. F.**, Massey, P., & Morrell, N. I. 2012, “The Discovery of a Rare WO-type Wolf Rayet Star in the Large Magellanic Cloud,” *AJ*, 144, 162
- 5) **Neugent, K. F.**, Massey, P., & Georgy, C. 2012, “The Wolf-Rayet Content of M31,” *ApJ*, 759, 11
- 4) **Neugent, K. F.**, Massey, P., Skiff, B., & Meynet, G. 2012 “Yellow Supergiants in the Large Magellanic Cloud,” *ApJ*, 749, 177
- 3) **Neugent, K. F.**, & Massey, P. 2011, “The Wolf-Rayet Content of M33,” *ApJ*, 733, 123
- 2) **Neugent, K. F.**, & Massey, P. 2010, “The Spectrum of the Night Sky over Kitt Peak: Changes Over Two Decades,” *PASP*, 122, 1246
- 1) **Neugent, K. F.**, Massey, P., Skiff, B., Meynet, G., & Olsen, K. A. F. 2010, “Yellow Supergiants in the SMC: Putting Current Evolutionary Theory to the Test,” *ApJ*, 719, 1784

■ Refereed, Co-Authored Publications

* = Student I advised

- 22) Olivier, G.M., **inc. Neugent, K.F.**, et al., “A Multiwavelength Study of the Massive Colliding Wind Binary WR 20a: A Possible Progenitor for Fast-Spinning LIGO Binary Black Hole Mergers,” ApJ, submitted
- 21) Margon, B., Morrell, N. I., Massey, P., **Neugent, K. F.**, & Williams, R. 2023, “A Survey for CII Emission-Line Stars in the Large Magellanic Cloud. II Final Results and the Origin of CII Emission in [WC] Spectra,” ApJ, 942, 85
- 20) Massey, P., **Neugent, K. F.**, Ekström, S., Georgy, C., & Meynet, G. 2022, “The Time-Averaged Mass-Loss Rates of Red Supergiants As Revealed by their Luminosity Functions in M31 and M33,” ApJ, in press
- 19) * O’Grady, A. J. G., Drout, M. R., Gaensler, B. M., Cochanek, C. S., **Neugent, K. F.**, et al. 2022, “Cool, Luminous, and Highly Variable Stars in the Magellanic Clouds. II: Spectroscopic and Environmental Analysis of Thorne-Żytkow Object and Super-AGB Star Candidates,” ApJ, in press
- 18) Dorn-Wallenstein, T. Z., Levesque, E. M., Davenport, J. R. A., **Neugent, K. F.**, Morris, B. M., & Bostroem, K. A. 2022, “The Properties of Fast Yellow Pulsating Supergiants: FYPS Point the Way to Missing Red Supergiants,” ApJ, 940, 27
- 17) Aadland, E., Massey, P., Hillier, D. J., Morrell, N. I., **Neugent, K. F.**, & Eldridge, J. J., 2022, “WO-Type Wolf-Rayet Stars: the Last Hurrah of Massive Star Evolution,” ApJ, 931, 157
- 16) * Dimitrova, T. A., **Neugent K. F.**, Massey, P., & Levesque, E. M., 2021, “Locating Red Supergiants in the Galaxy NGC6822,” AJ, 163, 70
- 15) Massey, P., **Neugent, K. F.**, Dorn-Wallenstein, T. Z., Eldridge, J. J., Stanway, E. R., & Levesque, E. M., 2021, “Testing Evolutionary Models with Red Supergiant and Wolf-Rayet Populations,” ApJ, 922, 127
- 14) Massey, P., **Neugent, K. F.**, Levesque, E. M., Drout, M. R., Courteau, S., 2021, “The Red Supergiant Content of M31 and M33,” AJ, 161, 79
- 13) Dorn-Wallenstein, T. Z., Levesque, E. M., **Neugent, K. F.**, Davenport, J. R. A., Morris, B. M., & Gootkin, K., 2020, “Short Term Variability of Evolved Massive Stars with *TESS* II: A New Class of Cool, Pulsating Supergiants,” ApJ, 902, 24
- 12) Margon, B., Massey, P., **Neugent, K. F.**, & Morrell, N., 2020, “A Survey for C II Emission-Line Stars in the Large Magellanic Cloud,” ApJ, 898, 85
- 11) Massey, P., **Neugent, K. F.**, & Levesque, E. M., 2019, “The Discovery of Quasi-stellar Objects behind M31 and M33,” AJ, 157, 227
- 10) Aadland, E., Massey, P., **Neugent, K. F.**, & Drout, M. R., 2018, “Shedding Light on the Isolation of Luminous Blue Variables,” AJ, 156, 294
- 9) Massey, P., Levine, S. E., **Neugent, K. F.**, Levesque, E. M., Morrell, N. I., & Skiff, B., 2018, “A Runaway Giant in the Galactic Halo,” AJ, 156, 265

- 8) Massey, P., **Neugent, K. F.**, & Morrell, N. I. 2017, “A Modern Search for Wolf-Rayet Stars in the Magellanic Clouds. III. A Third Year of Discoveries,” *ApJ*, 837, 122
- 7) Massey, P., **Neugent, K. F.**, & Smart, B. M. 2016, “A Spectroscopic Survey of Massive Stars in M31 and M33,” *AJ*, 152, 62
- 6) Massey, P., **Neugent, K. F.**, & Morrell, N. I. 2015, “A Modern Search for Wolf-Rayet Stars in the Magellanic Clouds. II. A Second Year of Discoveries,” *ApJ*, 807, 81
- 5) Morrell, N. I., Massey, P., **Neugent, K. F.**, Penny, L. R., & Gies, D. R. 2014, “Photometric and Spectroscopic Studies of Massive Binaries in the Large Magellanic Cloud. II. Three O-type Systems in the 30 For Region,” *ApJ*, 789, 139
- 4) Massey, P., **Neugent, K. F.**, Morrell, N., & Hillier, D. J. 2014, “A Modern Search for Wolf-Rayet Stars in the Magellanic Clouds: First Results,” *ApJ*, 788, 83
- 3) Margutti, R., et al., inc. **Neugent, K. F.** 2014, “A Panchromatic View of the Restless SN 2009ip Reveals the Explosive Ejection of a Massive Star Envelope”, *ApJ*, 780, 21
- 2) Massey, P., **Neugent, K. F.**, Hillier, D. J., & Puls, J. 2013, “A Bake-off Between CMFGEN and FASTWIND: Modeling the Physical Properties of SMC and LMC O-type Stars,” *ApJ*, 768, 6
- 1) Massey, P., Morrell, N. I., **Neugent, K. F.**, Penny, L. R., DeGioia-Eastwood, K., & Gies, D. R. 2012, “Photometric and Spectroscopic Studies of Massive Binaries in the Large Magellanic Cloud. I. Introduction and Orbits for Two Detached Systems: Evidence for a Mass Discrepancy?” *ApJ*, 748, 96

■ Selected Non-Refereed Publications

* = Student I advised

- 13) *Dimitrova, T. A., **Neugent, K. F.**, Levesque, E. M., & Massey, P. 2020, “Locating Red Supergiants in the Galaxy IC10,” *RNAAS*, 4, 107
- 12) Slivan, S. M., **Neugent, K. F.**, Melton, C., & Beck, M. 2018, “Koronis Family Member (3032) Evans: Photometric Reconnaissance and Lightcurves in 2008, 2009, and 2016,” *Minor Planet Bulletin*, 45, 72
- 11) **Neugent, K. F.**, Massey, P., Hillier, D. J., & Morrell, N. I. 2017, “The Evolutionary Status of WN3/O3 Wolf-Rayet Stars,” *The Lives and Death-Throes of Massive Stars, Proceedings of the International Astronomical Union, IAU Symposium, Volume 329*, ed: J.J. Eldridge, pp. 176-180
- 10) Massey, P., Levesque, E., **Neugent, K. F.**, Evans, K., Drout, M. R., & Beck, M. 2017, “The Red Supergiant Content of the Local Group,” *The Lives and Death-Throes of Massive Stars, Proceedings of the International Astronomical Union, IAU Symposium, Volume 329*, ed: J.J. Eldridge, pp. 161-165
- 9) Massey, P., **Neugent, K. F.**, & Levesque, E. M. 2017, “The evolution of massive stars: bridging the gap in the Local Group,” *Philosophical Transactions of the RAS, Volume 375, Issue 2105*
- 8) **Neugent, K. F.**, Massey, P., Hillier, D. J., & Morrell, N. I. 2015, “The Discovery and Physical Parameterization of a New Type of Wolf-Rayet Star,” *Wolf-Rayet Stars: Proceedings of an International Workshop held in Potsdam, Germany, 1-5 June 2015*. Edited by Wolf-Rainer Hamann,

Andreas Sander, Helge Todt. Universitätsverlag Potsdam, 2015., p.101-104

- 7) Massey, P., **Neugent, K. F.**, & Morrell, N. I. 2015, "Finding Wolf-Rayet Stars in the Local Group," Wolf-Rayet Stars: Proceedings of an International Workshop held in Potsdam, Germany, 1-5 June 2015. Edited by Wolf-Rainer Hamann, Andreas Sander, Helge Todt. Universitätsverlag Potsdam, 2015., p.35-42
- 6) **Neugent, K. F.**, & Massey, P. 2015, "The Close Binary Frequency of Wolf-Rayet Stars as a Function of Metallicity in M31 and M33," New windows on massive stars: asteroseismology, interferometry, and spectropolarimetry, Proceedings of the International Astronomical Union, IAU Symposium, Volume 307, pp. 127-128
- 5) Massey, P., **Neugent, K. F.**, Morrell, N. I., & Hillier, D. J. 2015, "A New Class of Wolf-Rayet Stars: WN3/O3s," New windows on massive stars: asteroseismology, interferometry, and spectropolarimetry, Proceedings of the IAU Symposium, Volume 307, pp. 64-69
- 4) **Neugent, K. F.**, Massey, P., Meynet, G., & Georgy, C. 2013, "The Wolf-Rayet Content of Local Group Galaxies," Massive Stars: From α to Ω , held 10-14 June 2013 in Rhodes, Greece
- 3) Massey, P., **Neugent, K. F.**, Drout, M. R., & Meynet, G. 2013, "Yellow and Red Supergiants in the Local Group," Massive Stars: From α to Ω , held 10-14 June 2013 in Rhodes, Greece
- 2) Morrell, N., Herzog, M., Massey, P., & **Neugent, K. F.** 2013, "New spectroscopic study of NGC 3603 stars, " Massive Stars: From α to Ω , held 10-14 June 2013 in Rhodes, Greece
- 1) **Neugent, K. F.**, & Slivan, S. M. 2008, "Rotation Periods and H Magnitudes of Two Koronis Family Members," Minor Planet Bulletin, 35, 116