

Mary Elizabeth Oksala

California Lutheran University
Department of Physics
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Thousand Oaks, CA 91360

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Education

Ph.D. in Astrophysics

University of Delaware

Advisor: Stanley P. Owocki

Thesis: Observations and models of centrifugally supported magnetospheres in massive stars

September 2011

Newark, DE

B. S. in Physics

West Chester University of Pennsylvania

Cum Laude, with minors in Astronomy and Mathematics

May 2004

West Chester, PA

Research Interests

- Massive stars: evolution, stellar atmospheres and circumstellar environments
- Magnetism: massive-star wind interaction, effects on photosphere and magnetosphere
- Variable stars: abundance spots, photometric effects, spectral variability
- Techniques: photometry, spectroscopy, spectropolarimetry, optical and infrared observations

Research Experience

Associate Professor

Department of Physics

California Lutheran University

August 2022 - Present

Department Chair

Department of Physics

California Lutheran University

January 2022 - Present

Assistant Professor

Department of Physics

California Lutheran University

August 2016 - August 2022

Postdoctoral Fellow

LESIA, Observatoire de Paris-Meudon

Advisor: Coralie Neiner

July 2014 - June 2016

- Postdoctoral Fellow** July 2013 - June 2014
 Academy of Sciences of the Czech Republic
 Astronomical Institute of the Academy of Sciences of the Czech Republic
- Postdoctoral Researcher** Oct 2011 - June 2013
 Astronomical Institute of the Academy of Sciences of the Czech Republic
 Advisor: Michaela Kraus
- Graduate Research Assistant** 2006-2007, Fall 2010
 Department of Physics and Astronomy, University of Delaware
 Advisor: Stanley Owocki
- Visiting Scholar** Fall 2008, Fall 2009
 Department of Physics, Royal Military College of Canada
 Advisor: Gregg Wade
- NASA Space Grant Fellow** 2007-2009
 Department of Physics and Astronomy, University of Delaware
- Undergraduate Research Assistant** 2002-2004
 Department of Earth & Space Sciences, West Chester University of Pennsylvania
 Advisor: Marc Gagné

Teaching Experience

- Instructor of Record** 2016-Present
 Department of Physics, California Lutheran University
 Courses taught:
- PHYS 100 Introduction to Astronomy
 - PHYS 100L Introduction to Astronomy Lab
 - PHYS 110 Physical Science for Liberal Art Majors
 - PHYS 110L Physical Science for Liberal Art Majors Lab
 - PHYS 201L Mechanics and Thermodynamics-Algebra Lab
 - PHYS 202L Electricity, Magnetism & Optics-Algebra Lab
 - PHYS 211 Mechanics and Thermodynamics-Calculus
 - PHYS 211L Mechanics and Thermodynamics-Calculus Lab
 - PHYS 212 Electricity, Magnetism & Optics-Calculus
 - PHYS 212L Electricity, Magnetism & Optics-Calculus Lab
 - PHYS 300 Pre-Capstone Seminar
 - PHYS 340 Advanced Experimental Physics

- PHYS 400 Senior Research Seminar - Capstone
- PHYS 415 Thermodynamics and Statistical Physics
- PHYS 4ST Special topics: Particle physics/Cosmology (co-taught)
- PHYS 4ST Special topics: Astrophysics
- HNRS 130 Honors Natural Science Seminar – Life in the Universe

Teaching Assistant

2004-2006, Spring 2010,

Department of Physics and Astronomy, University of Delaware

Spring 2011

Courses taught:

- Introduction to Physics I (for non-science majors) - Discussion & Laboratory courses covering basic mechanics using algebraic techniques
- Introduction to Physics I (for science majors) - Laboratory course covering basic mechanics using calculus techniques
- Introduction to Astronomy - Laboratory course covering a wide variety of topics

Professional Service + Memberships

CFHT proposal science reviewer	May 2023, May 2024
Subject-matter expert reviewer in a NASA peer review	April 2023, April 2024
Elected Vice Chair IAU Working Group on Active B Stars	November 2022
U.S. Army Corps of Engineers peer review	April 2022
SOC member, meeting: MOBSTER Collaboration Conference: Stellar variability as a probe of magnetic fields in massive stars	
Virtual meeting	July 2020
Reviewer – National Science Centre, Poland	October 2019
SOC+LOC member, workshop: Stellar Magnetism and Spectropolarimetry	December 2018
Thousand Oaks, CA	
Member of the American Astronomical Society	December 2018
Reviewer – Czech Science Foundation, Czech Republic	July 2018
SOC member, meeting: Stars with a stable magnetic field	September 2017
Brno, Czech Republic	
Member of the International Astronomical Union	September 2015
ESO Observing Programmes Committee Panelist	November 2015, May 2016
Journal Referee – ApJ, IBVS, A&A, PASP, MNRAS	August 2015-present
Institute seminar organizer	Sept. 2012 - June 2014
Astronomical Institute of the Academy of Sciences of the Czech Republic	

Grants + Awards

College Dean Mini-Grant	April 2024
Grant to support an event for the 2024 Solar Eclipse	
\$500	

National Science Foundation Astronomy and Astrophysics Research Grant September 2021
*Collaborative Research: New Models Of Stellar Evolution To Understand The Past, Present & Future Of
 Magnetic Massive Stars*

\$55,836, 3 year grant, Award Number: 2107871

Distinguished Alumni Award April 2021

Department of Physics and Engineering, West Chester University of PA

College Dean's Award for Excellence in Undergraduate Advising May 2020

College of Arts and Sciences, California Lutheran University

Hewlett Faculty Development Grant, Cal Lutheran September 2017

\$1250 to attend workshop BRITepol #3: BRITE Spectropolarimetric Survey

Workshop

Community Leaders Association Grant January 2017

\$2000 Proposal to purchase telescopes for education and outreach

International Collaboration Memberships

- Magnetic [OBA] stars with TESS: probing their Evolutionary and 2023-Present
 Rotational properties (MOBSTER) collaboration
- Large Impact of magnetic Fields on massive star Evolution (LIFE) project 2015-Present
Science Steering Committee member
- BRITE spectropolarimetric project 2014-2018
Working group leader — Be stars
- UVMag/Arago Consortium 2014-Present
- Magnetism in Massive Stars (MiMeS) collaboration 2008-Present
- Binarity and Magnetic Interactions in various classes of Stars (BinaMIcS) project 2012-Present
- Whole Earth Telescope (WET) Project 2007-2011

Refereed Publications

1. Shultz, M. E., Casini, R., Cheung, M. C. M., David-Uraz, A., del Pino Alemán, T., Erba, C., Folsom, C. P., Gayley, K., Ignace, R., Keszthelyi, Z., Kochukhov, O., Nazé, Y., Neiner, C., **Oksala, M.**, Petit, V., Scowen, P. A., Sudnik, N., ud-Doula, A., Vink, J. S., Wade, G. A.
Ultraviolet spectropolarimetry with Polstar: using Polstar to test magnetospheric mass-loss quenching
 2022, *Ap&SS*, 367, 120
2. Krtićka, J., Mikulášek, Z., Kurfürst, P., **Oksala, M.E.**
Photometric signatures of coronating magnetospheres of hot stars governed by higher-order magnetic multipoles
 2022, *A&A*, 659A, 37
3. Das, B., Chandra, P., Shultz, M. E., Wade, G. A., Sikora, J., Kochukhov, O., Neiner, C., **Oksala, M.E.**, Alecian, E.
Discovery of eight 'Main-sequence Radio Pulse emitters' using the GMRT: clues to the onset of coherent radio emission in hot magnetic stars
 2022, *Astrophysical Journal*, 925, 125

4. Seach, J. M., Marsden, S. C., Carter, B. D., Neiner, C., Folsom, C. P., Mengel, M. W., **Oksala, M. E.**, Buyschaert, B.
A magnetic snapshot survey of F-type stars
2020, Monthly Notices of the Royal Astronomical Society, 494, 5682
5. Buyschaert, B., Neiner, C., Martin, A. J., **Oksala, M. E.**, Aerts, C., Tkachenko, A., Alecian, E., MiMeS Collaboration
Magnetic characterization and variability study of the magnetic SPB star α Lupi
2019, Astronomy & Astrophysics, 622, A67
6. Buyschaert, B., Neiner, C., Martin A.J., Aerts, C., Bowman, D.M., **Oksala, M.E.**, Van Reeth, T.
Detection of magnetic fields in chemically peculiar stars observed with the K2 space mission
2018, Monthly Notices of the Royal Astronomical Society, 478, 2777
7. Bowman, D.M., Buyschaert, B., Neiner, C., Pápics, P. I., **Oksala, M. E.**, Aerts, C.
K2 space photometry reveals rotational modulation and stellar pulsations in chemically peculiar A and B stars
2018, Astronomy & Astrophysics, 616A, 77
8. Martin, A.J., Neiner, C., **Oksala, M. E.**, & 6 other co-authors
First results from the LIFE project: discovery of two magnetic hot evolved stars
2018, Monthly Notices of the Royal Astronomical Society, 475, 1521
9. Alvarado-Gómez, J.D., Hussain, G.A.J., Drake, J. J., Donati, J.-F., Sanz-Forcada, J., Stelzer, B. Cohen, O., Amazo-Gómez, E.M., Grunhut, J.H., Garraffo, C., Moschou, S.P., Silvester, J., **Oksala, M.E.**
Far beyond the Sun: I. The beating magnetic heart of Horologium
2018, Monthly Notices of the Royal Astronomical Society, 473,4326
10. **Oksala, M. E.**, Silvester, J., Kochukhov, O., Neiner, C., Wade, G. A. & The MiMeS Collaboration
Mixed poloidal-toroidal magnetic configuration and surface abundance distributions of the Bp star 36 Lyn
2018, Monthly Notices of the Royal Astronomical Society, 473, 3367
11. Kraus, M., Liimets, T., Cappa, C. E., Cidale, L. S., Nickeler, D. H., Duronea, N. U., Arias, M. L., Gunawan, D. S., **Oksala, M. E.**, & 3 other co-authors
Resolving the Circumstellar Environment of the Galactic B[e] Supergiant Star MWC 137 from Large to Small Scales
2017, Astronomical Journal, 154, 186
12. Neiner, C., **Oksala, M. E.**, & 9 other co-authors
Discovery of magnetic A supergiants: the descendants of magnetic main sequence B stars
2017, Monthly Notices of the Royal Astronomical Society, 471,1926
13. Buyschaert, B., Neiner, C., Richardson, N. D., Ramiaramantsoa, T., David-Uraz, A., Pable, H., P., **Oksala, M. E.**, & 10 additional co-authors
Studying the photometric and spectroscopic variability of the magnetic hot supergiant zeta Orionis Aa
2017, Astronomy & Astrophysics, 602, A91
14. Grunhut, J. H., Wade, G. A., Neiner, C., **Oksala, M.E.** & 7 additional co-authors
The MiMeS Survey of Magnetism in Massive Stars : magnetic analysis of the O-type stars
2017, Monthly Notices of the Royal Astronomical Society, 465, 2432

15. Kurapati, S., Chandra, P., Wade, G., Cohen, D. H., David-Uraz, A., Gagne, M., Grunhut, J. H., **Oksala, M. E.**, & 5 additional co-authors
A JVLA survey of the high-frequency radio emission of the massive magnetic B-a and O-type stars
2017, Monthly Notices of the Royal Astronomical Society, 465, 2160
16. Wade, G. A., Neiner, C., Alecian, E., Grunhut, J. H., Petit, V., de Batz, B., Bohlender, D. A., Cohen, D. H., Henrichs, H. F., Kochukhov, O., Landstreet, J. D., Manset, N., Martins, F., Mathis, S., **Oksala, M. E.**, & 36 additional co-authors
The MiMeS Survey of Magnetism in Massive Stars: Introduction and overview
2016, Monthly Notices of the Royal Astronomical Society, 456, 2
17. Hussain, G. A. J., Alvarado-Gomez, J. D., Grunhut, J., Donati, J-F., Alecian, E., **Oksala, M.**, & 9 additional co-authors
A spectro-polarimetric study of the planet-hosting G dwarf, HD 147513
2016, Astronomy & Astrophysics, 585, 77
18. Alvarado-Gomez, J. D., Hussain, G.A. J., Grunhut, J., Fares, R., Donati, J.-F., Alecian, E., Kochukhov, O., **Oksala, M.**, & 8 additional co-authors
Activity and Magnetic Field Structure of the Sun-Like Planet Hosting Star HD 1237
2015, Astronomy & Astrophysics, 582, A38
19. Neiner, C., Buyschaert, B., **Oksala, M.E.**, Blazere, A.
Discovery of two new bright magnetic B stars: i Car and Atlas
2015, Monthly Notices of the Royal Astronomical Society, 454, L56
20. Kraus, M., Haucke, M., Cidale, L.S., Venero, R.O.J., Nickeler, D. H., Németh, P., Niemczura, E., Tomic, S., Aret, A., Kubat, J., Kubatova, B., **Oksala, M.E.**, Kaminski, K., Dimitrov, W., Fagas, M., & Polinska, M.
The interplay between pulsations and mass loss in the blue supergiant 55 Cygnus = HD 198478
2015, Astronomy & Astrophysics, 581, A75
21. Chandra, P., Wade, G. A., Sundqvist, J. O., Oberoi, D., Grunhut, J. H., ud-Doula, A., Petit, V., Cohen, D. H., **Oksala, M. E.**, David-Uraz, A.
First detections of 610 MHz radio emission from hot magnetic stars
2015, Monthly Notices of the Royal Astronomical Society, 452, 1245
22. Sikora, J., Wade, G. A., Bohlender, D. A., Neiner, C., **Oksala, M. E.**, Shultz, M., Cohen, D. H., ud-Doula, A., Grunhut, J., Monin, D., Owocki, S., Petit, V., Rivinius, T., Townsend, R. H. D.
Confirming HD 23478 as a new magnetic B star hosting an H α -bright centrifugal magnetosphere
2015, Monthly Notices of the Royal Astronomical Society, 451, 1928
23. **Oksala, M. E.**, Kochukhov, O., Krticka, J., Townsend, R.H.D, Wade, G. A., Prvak, M., Mikulasek, Z., Silvester, J., Owocki, S.
Revisiting the Rigidly Rotating Magnetosphere model for sigma Ori E - II. Magnetic Doppler imaging, arbitrary field RRM, and light variability
2015, Monthly Notices of the Royal Astronomical Society, 451, 2015
24. **Oksala, M. E.**, Grunhut, J. H., Kraus, M., Borges Fernandes, M., Neiner, C., Condori, C. A. H., Campagnolo, J. C. N., Souza, T. B.
An infrared diagnostic for magnetism in hot stars
2015, Astronomy & Astrophysics, 578, A112

25. Kraus, M., **Oksala, M. E.**, Cidale, L. S., Arias, M. L., Torres, A. F., Borges Fernandes, M.
Discovery of SiO band emission from Galactic B[e] supergiants
2015, *Astrophysical Journal Letters*, 800, 20
26. Muratore, M. F., Kraus, M., **Oksala, M. E.**, Arias, M. L., Cidale, L., Borges Fernandes, M., &
Liermann, A.
Evidence of the Evolved Nature of the B[e] Star MWC 137
2015, *Astronomical Journal*, 149, 13
27. Alecian, E., Kochukhov, O., Petit, V., Grunhut, J., Landstreet, J., **Oksala, M. E.**, Wade, G. A.,
Hussain, G., Neiner, C., Bohlender, D., & the MiMeS Collaboration
Discovery of new magnetic early-B stars within the MiMeS HARPSpol survey
2014, *Astronomy & Astrophysics*, 567, A28
28. Kraus, M., Cidale, L. S., Arias, M. L., **Oksala, M. E.**, & Borges Fernandes, M.
Discovery of the First B[e] Supergiants in M 31
2014, *Astrophysical Journal Letters*, 780, 10
29. **Oksala, M. E.**, Kraus, M., Cidale, L. S., Muratore, M. F., & Borges Fernandes, M.
Probing the ejecta of evolved massive stars in transition. A VLT/SINFONI K-band survey
2013, *Astronomy & Astrophysics*, 558, A17
30. Petit, V., Owocki, S. P., Wade, G. A., Cohen, D. H., Sundqvist, J. O., Gagné, M., Maiz Apellàiz,
J., **Oksala, M. E.**, Bohlender, D. A., Rivinius, Th., Henrichs, H. F., Alecian, E., Townsend, R.
H. D., ud-Doula, A., & the MiMeS Collaboration
A Magnetic Confinement vs. Rotation Classification of Massive-Star Magnetospheres
2013, *Monthly Notices of the Royal Astronomical Society*, 429, 398
31. Kraus, M., **Oksala, M. E.**, Nickeler, D. H., Muratore, M. F., Borges Fernandes, M., Aret, A.,
Cidale, L.S., & de Wit, W. J.
Molecular emission from GG Car's circumbinary disk
2013, *Astronomy & Astrophysics*, 549, A28
32. Borges Fernandes, M., Kraus, M., Nickeler, D. H., De Cat, P., Lampens, P., Pereira, C.B., &
Oksala, M. E.
*The galactic unclassified B[e] star HD 50138: III. The short term line profile variability of its
photospheric lines*
2012, *Astronomy & Astrophysics*, 548, A13
33. **Oksala, M. E.**, Kraus, M., Arias, M. L., Borges Fernandes, M., Cidale, L., Muratore, M. F., &
Cure, M.
The sudden appearance of CO emission in LHA 115-S 65
2012, *Monthly Notices of the Royal Astronomical Society*, 426, L56
34. Henrichs, H. F., Kolenberg, K., Plaggenborg, B., Marsden, S. C., Waite, I.A., Landstreet, J. D.,
Wade, G. A., Grunhut, J. H., **Oksala, M. E.**, & the MiMeS Collaboration
Discovery of a magnetic field in the early B-type star sigma Lupi
2012, *Astronomy & Astrophysics*, 545, A119
35. Kraus, M., Tomic, S., **Oksala, M. E.**, & Smole, M.
Detection of a 1.59 h period in the B supergiant star HD 202850
2012, *Astronomy & Astrophysics*, 542, L32

36. **Oksala, M. E.**, Wade, G. A., Townsend, R. H. D., Owocki, S. P., Kochukhov, O., Neiner, C., Alecian, E., Grunhut, J., & the MiMeS Collaboration
Revisiting the Rigidly Rotating Magnetosphere model for sigma Ori E - I. Observations and data analysis
2012, Monthly Notices of the Royal Astronomical Society, 419, 959
37. Alecian, E., Kochukhov, O., Neiner, C., Wade, G. A., deBatz, B., Henrichs, H., Grunhut, J. H., Bouret, J., Briquet, M., Gagne, M., Naze, Y., **Oksala, M. E.**, Rivinius, T., Townsend, R. H. D., Walborn, N. R., Weiss, W., & the MiMeS Collaboration
First HARPSpol discoveries of magnetic fields in massive stars
2011, Astronomy & Astrophysics, 536, L6
38. Redaelli, M., Kepler, S. O., Costa, J. E. S, Winget, D. E., Handler, G., Castanheira, B. G., Kanaan, A., Fraga, L., Henrique, P., Giovannini, O., Provencal, J. L., Shipman, H. L., Dalessio, J., Thompson, S. E., Mullally, F., Brewer, M. M., Childers, D., **Oksala, M. E.**, & 60 additional coauthors
The pulsations of PG 1351+489
2011, Monthly Notices of the Royal Astronomical Society, 415, 1220
39. **Oksala, M. E.**, Wade, G. A., Marcolino, W. L. F., Grunhut, J., Bohlender, D., Manset, N., Townsend, R. H. D., & The MiMeS Collaboration
Discovery of a strong magnetic field in the rapidly rotating B2Vn star HR 7355
2010, Monthly Notices of the Royal Astronomical Society, 405, L51.
40. Townsend R. H. D., **Oksala M. E.**, Cohen D. H., Owocki S. P., & ud-Doula A.
Discovery of Rotational Braking in the Magnetic Helium-Strong Star Sigma Orionis E
2010, Astrophysical Journal Letters, 714, L318.
41. Gagné M., **Oksala M. E.**, Cohen D. H., Tonnesen S. K., ud-Doula A., Owocki S. P., Townsend R. H. D., & MacFarlane J. J.
Erratum: "Chandra HETGS Multiphase Spectroscopy of the Young Magnetic O Star Theta 1 Orionis C" (Astrophysical Journal, 628, 986 [2005])
2005, Astrophysical Journal, 634, 712.
42. Gagné M., **Oksala M. E.**, Cohen D. H., Tonnesen S. K., ud-Doula A., Owocki S. P., Townsend R. H. D., & MacFarlane J. J.
Chandra HETGS Multiphase Spectroscopy of the Young Magnetic O Star Theta 1 Orionis C
2005, Astrophysical Journal, 628, 986.

Conference Proceedings

- Oksala, M. E., Seadrow, S., Petit, V.
Infrared Spectropolarimetry of Magnetic Massive Stars
IAUS 360: Astronomical Polarimetry 2020 - New Era of Multi-Wavelength Polarimetry, in press
- Neiner, C., Martin, A., Wade, G., **Oksala, M.**
The magnetic field of evolved hot stars
SF2A-2018: Proceedings of the Annual meeting of the French Society of Astronomy and

- Astrophysics. Eds.: P. Di Matteo, F. Billebaud, F. Herpin, N. Lagarde, J.-B. Marquette, A. Robin, O. Venot, pp.319-322
3. Buyschaert, B., Neiner, C., Martin, A.J., **Oksala, M. E.**, Aerts, C.
Detecting magnetic fields in Ap/Bp stars observed with the K2 space mission
Contributions of the Astronomical Observatory Skalnaté Pleso, 2018, vol. 48, no. 1, p. 82-86
 4. **Oksala, M. E.**
Observational signatures of hot-star magnetospheres
In The Lives and Death-Throes of Massive Stars, IAU Symposium No. 329, 2017, pp.433-433
 5. **Oksala, M. E.**, Neiner, C., Georgy, C., Pryzbilla, N., Keszthelyi, Z., Wade, G., Mathis, S., Blazère, A., Buyschaert, B.
The evolution of magnetic fields in hot stars
In The Lives and Death-Throes of Massive Stars, IAU Symposium No. 329, 2017, pp. 141-145
 6. Kraus, M., Cidale, L. S., Liimets, T., Cappa, C. E., Duronea, N., Gunawan, D. S., **Oksala, M. E.**, & 6 additional coauthors
Clumpy Molecular Structures Revolving the B[e] Supergiant MWC 137
In The B[e] Phenomenon: Forty Years of Studies, ed. A. Miroshnichenko, S. Zharikov, D. Korčáková, M. Wolf, ASP Conference Series Vol.. 508, pp. 381-382, 2017
 7. **Oksala, M. E.**, Kochukhov, O., Krücka, J., Prvák, M., & Mikulasek, Z.
Unraveling the variability of sigma Ori E
In New Windows on Massive Stars: Asteroseismology, Interferometry, and Spectropolarimetry, ed. G. Meynet, C. Georgy, J. H. Groh, Ph. Stee, IAU Symposium No. 307, pp. 348-352, 2015
 8. Tomic, S., Kraus, M., & **Oksala, M.**
Spectral Effects of Pulsations in Blue Supergiants
In New Windows on Massive Stars: Asteroseismology, Interferometry, and Spectropolarimetry, ed. G. Meynet, C. Georgy, J. H. Groh, Ph. Stee, IAU Symposium No. 307, pp. 235-236, 2015
 9. Tomic, S., Kraus, M., & **Oksala, M.**
Pulsations in the Late-type B Supergiant Star HD 202850
In Precision Asteroseismology, eds. W. Chaplin, J. Guzik, G. Handler, A. Pigulski, IAU Symposium No. 301, pp. 503-504, 2014
 10. **Oksala, M. E.**, Kraus, M., Cidale, L., Muratore, M. F., & Borges Fernandes, M.
Probing the ejecta of evolved massive stars in transition
ID 173, Massive Stars: From α to Ω , Rhodes, Greece, 2013
 11. Kraus, M., Cidale, L. S., Arias, M. L., Torres, A. F., Aret, A., Borges Fernandes, M., Muratore, F., Cure, M., & **Oksala, M. E.**
Tracing the mass-loss history of B[e] supergiants
ID 160, Massive Stars: From α to Ω , Rhodes, Greece, 2013
 12. Tomic, S., Kraus, M., **Oksala, M.**, Smole, M.
Pulsations in the Late-type B Supergiant Star HD 202850
Publications of the Astronomical Observatory of Belgrade, Vol. 92, pp. 201-204, 2013
 13. Petit, V., Owocki, S. P., **Oksala, M. E.**, & the MiMeS Collaboration
Magnetospheres of massive stars across the EM spectrum
ASP Conf. Ser. 465, p. 48, 2013
 14. Alecian, E., Peralta, R., **Oksala, M. E.**, Neiner, C., & the MiMeS Collaboration
The Magnetism in Massive Stars project: first HARPSpol discoveries
SF2A-2012: Proceedings of the Annual meeting of the French Society of Astronomy and

- Astrophysics. Eds.: S. Boissier, P. de Laverny, N. Nardetto, R. Samadi, D. Valls-Gabaud and H. Wozniak, pp. 401-404, 2012
15. Henrichs, H. F., Kolenberg, K., Plaggenborg, B., Marsden, S. C., Waite, I. A., Landstreet, J., Grunhut, J., Oksala, M., Wade, G., & the MiMeS Collaboration
Discovery of the magnetic field of the B1/B2V star σ Lupi
In AIP Conf. Proc. Vol 1429, Stellar Polarimetry: From Birth to Death, ed. J.L. Hoffman, J. Bjorkman, & B. Whitney, pp. 90-93, 2012
 16. Torres, A. F., Oksala, M. E., Cidale, L. S., Kraus, M., Borges Fernandes, M., & Barba, R
Spectroscopic study of the B[e] supergiant LHA 120-S 35
Boletín de la Asociación Argentina de Astronomía, Vol. 55, pp. 155-159, 2012
 17. Oksala, M. E., Wade, G. A., Marcolino, W. L. F., Grunhut, J. H., Bohlender D., Manset, N., Townsend, R. H. D., & the MiMeS Collaboration
Discovery of a strong rapidly rotating B2Vn star HR 7355
In Active OB Stars: structure, evolution, mass-loss, and critical limits, ed. C. Neiner, G. Wade, G. Meynet, & G. Peters, IAU Symposium No. 272, pp. 204-205, 2011
 18. Kochukhov, O., Rivinius, T., Oksala, M. E., & Romanyuk, I.
Magnetic Doppler imaging of early-type stars
In Active OB Stars: structure, evolution, mass-loss, and critical limits, ed. C. Neiner, G. Wade, G. Meynet, & G. Peters, IAU Symposium No. 272, pp. 166-171, 2011
 19. Oksala, M. E., Wade, G. A., Townsend, R. H. D., Kochukhov, O., & Owocki, S. P.
Modeling the magnetosphere of the B2Vp star σ Ori E
In Active OB Stars: structure, evolution, mass-loss, and critical limits, ed. C. Neiner, G. Wade, G. Meynet, & G. Peters, IAU Symposium No. 272, pp. 124-129, 2011
 20. Wade, G. A., Alecian, E., Bohlender, D. A., Bouret, J., Cohen, D. H., Duez, V., Gagne, M., Grunhut, J., Henrichs, H.F., Hill, N. R., Kochukhov, O., Mathis, S., Neiner, C., Oksala, M. E., Owocki, S., Petit, V., Shultz, M., Rivinius, T., Vink, J. S., & the MiMeS Collaboration
The MiMeS project: overview and current status
In Active OB Stars: structure, evolution, mass-loss, and critical limits, ed. C. Neiner, G. Wade, G. Meynet, & G. Peters, IAU Symposium No. 272, pp. 118-123, 2011
 21. Oksala, M. E. & Townsend, R. H. D.
New Photometric Observations of σ Ori E
In Active OB-Stars: Laboratories for Stellar & Circumstellar Physics, eds. Stefl, S., Owocki, S. P., & Okazaki, A., ASP Conf. Ser. 361, p. 476, 2007
 22. Oksala, M. E., Gagné, M., Cohen, D. H., Tonnesen, S. K., Ud-Doula, A., Owocki, S. P., Townsend, R. H. D., Macfarlane, J. J.
The Young Magnetic O Star Theta 1 Ori C: Multi-phase Chandra Grating Spectra
In The Nature and Evolution of Disks Around Hot Stars, eds. Ignace, R. & Gayley, K. G., ASP Conf. Ser. 337, p. 289, 2005

Seminars, conference talks, & posters

1. Magnetic Fields from Clouds to Stars (BFields 2024), Tokyo, Japan, March 2024
Poster+Oral Contribution: Observational studies of magnetic post-MS massive stars
Awarded Best Poster for Stars given 15 minute oral contribution.
2. American Astronomical Society Meeting #243, New Orleans, USA, January 2024
Poster: Time-variations of the magnetic fields of two post-MS B-type stars
3. American Astronomical Society Meeting #240, Pasadena, CA, USA, June 2022
Talk: New results of the LIFE project: characterization of the A5Ib-II supergiant 19 Aur and the newest sample of magnetic stars
4. OBA Stars: Variability and Magnetic Fields (STARS-2021), St. Petersburg, Russia and Virtually, April 2021
Talk, Speaker: Etienne Boucher, Magnetic monitoring of 4 A-F supergiants: evidence for fossil and dynamo magnetic fields
5. OBA Stars: Variability and Magnetic Fields (STARS-2021), St. Petersburg, Russia and Virtually, April 2021
Talk, Speaker: Coralie Neiner, The evolution of magnetic fields in hot stars and of the magnetic desert
6. IAU Symposium #360: Astronomical Polarimetry 2020 - New Era of Multi-Wavelength Polarimetry, Hiroshima, Japan and Virtually, March 2021
Poster: Infrared Spectropolarimetry of Magnetic Massive Stars
7. MOBSTER-1 virtual conference: Stellar variability as a probe of magnetic fields in massive stars, Virtual, July 2020
Talk: New results of the LIFE project: characterization of the A5Ib-II supergiant 19 Aur and the newest sample of magnetic stars
8. American Astronomical Society Meeting #235, Honolulu, HI, USA, January 2020
Poster: New results of the LIFE project: characterization of the A5Ib-II supergiant 19 Aur and the newest sample of magnetic stars
9. American Astronomical Meeting #233, Seattle, WA, USA, January 2019
Poster: Magnetic hot giants and supergiants: The descendants of magnetic main sequence massive stars
10. BRITePol #3: BRITe Spectropolarimetric Survey Workshop, Meudon France. November 2017
Talk: Bright magnetic stars in the IR
11. Math Department, California Lutheran University, Thousand Oaks, CA, September 2017
Seminar: Measurement of Simple, Large-scale Magnetic Fields
12. IAU Symposium #329, "The Lives and Death-Throes of Massive Stars", Auckland, New Zealand, November 2016
Talk: The evolution of magnetic fields in hot stars
Poster: Observational signatures of hot-star magnetospheres
13. BRITePol #2: BRITe Spectropolarimetric Survey Workshop, Meudon France. November 2016
Remote Talk: Progress report on magnetic massive supergiants
Remote Talk: High resolution analysis of the magnetic field and rotational parameters of 36 Lyn
14. Canada-France-Hawaii Telescope 11th Users' Meeting, Nice, France, May 2016
Talk: Multi-wavelength studies of hot-star magnetospheres

15. 4th BinaMIcS Workshop, Melbourne, FL, December 2016
 - Talk: Magnetospheres in the IR
 - Talk: The magnetic field of 36 Lyn
16. American Astronomical Society Meeting #227, Kissimmee, Florida, USA, December 2016
 - Talk: Massive-Star Magnetospheres in the Near-Infrared, id.129.03
17. Action Fédératrice Etoiles de l'Observatoire de Paris Forum, Meudon, France, November 2015
 - Talk: Recent results of the BinaMIcS survey
18. BRITepol: BRITE Spectropolarimetric Survey Workshop, Meudon, France, October 2015
 - Talk: The descendants of magnetic massive stars: BRITE magnetic hot supergiants
19. ESO Headquarters, Vitacura, Chile, July 2015
 - Seminar: Massive-star magnetospheres in the NIR
20. European Week of Astronomy and Space Science (EWASS), Tenerife, Spain, June 2015
 - Invited Review (Special Session): The influence of magnetic fields on the circumstellar environments of hot stars
21. Action Fédératrice Etoiles de l'Observatoire de Paris Forum, Meudon, France, November 2014
 - Talk: Massive-star magnetospheres in the NIR
22. First SPIrou Science Meeting, Paris, France, September 2014
 - Talk: Massive-star magnetospheres in the NIR
23. Magnetism and Variability in O stars, Amsterdam, Netherlands, September 2014
 - Talk: Massive-star magnetospheres in the NIR
24. IAU Symposium #307, New Windows on Massive Stars: Asteroseismology, Interferometry, and Spectropolarimetry, June 2014
 - Talk: Unraveling the variability of sigma Ori E
25. Massive Stars: From α to Ω , Rhodes, Greece, June 2013
 - Poster: Probing the ejecta of evolved massive stars in transition
26. Stellar Department, Astronomical Institute AVCR, Ondrejov, Czech Republic, April 2013
 - Seminar: Investigating the mass-loss history of evolved massive stars
27. Workshop on Stellar Astrophysics at Observatorio Nacional: Stellar Evolution and Stars in Transition Phases, Rio de Janeiro, Brazil, December 2012
 - Talk: Results of the VLT/SINFONI K-band spectral survey of evolved massive stars
28. Tartu Observatory, Tartu, Estonia, November 2012
 - Seminar: Centrifugally Supported Massive Star Magnetospheres
29. Masaryk University, Brno, Czech Republic, October 2012
 - Seminar: Massive Star Magnetospheres: From X-ray to Radio
30. Astronomical Institute AVCR, Ondrejov, Czech Republic, May 2012
 - Institute Seminar: Massive Star Magnetospheres: From X-ray to Radio
31. Stellar Department, Astronomical Institute AVCR, Ondrejov, Czech Republic, November 2011
 - Seminar: Observations and Models of Magnetic Massive Stars
32. IAU Symposium #272: Active OB Stars: structure, evolution, mass-loss, and critical limits, July 2010
 - Poster: Discovery of a strong magnetic field in the rapidly rotating B2Vn star HR 7355

33. IAU Symposium #272: Active OB Stars: structure, evolution, mass-loss, and critical limits, July 2010
Talk: Spectropolarimetric observations of the B2Vp star σ Ori E
34. IAU Symposium #250: Massive Stars as Cosmic Engines, Kauai, HI USA, December 2007
Poster: A Magnetosynthesis Model for Massive Stars
35. Active OB Stars: Laboratories for Stellar & Circumstellar Physics, ASP Conf. Ser. 361, Sapporo, Japan, September 2005
Poster: New Photometric Observations of σ Ori E

Telescope Time Awarded

PI or co-I on the following successful observing proposals:

2024

- **PI: Oksala**, *Monitoring the magnetic fields of the A-type supergiants 13 Mon and eta Leo*, 2024(A), CFHT/Espadons, ID: 24AF22, 1.6 hours
- **PI: Oksala**, *Characterizing the magnetic field of 19 Aur*, 2024(A), TBL/Narval, ID: 2024A_PNPS_12, 6.2 hours

2023

- **PI: Oksala**, *Characterizing the magnetic field of 19 Aur*, 2023(A), CFHT/Espadons, ID: 23AF19, 1.8 hours
- **PI: Oksala**, *Characterizing the magnetic field of 19 Aur*, 2023(B), CFHT/Espadons, ID: 23BF04, 3.7 hours

2022

- **PI: Oksala**, *Characterizing the magnetic field of 19 Aur*, 2022(B), CFHT/Espadons, ID: 22BF05, 1.8 hours

2021

- **PI: Oksala**, *Characterizing the magnetic field of 19 Aur*, 2021(B), TBL/Narval, ID: L212N06, 6.2 hours
- **PI: Oksala**, *Monitoring the magnetic fields of the hot supergiant stars 13 Mon, 19 Aur and Eta Leo: Understanding stellar magnetism at advanced evolutionary phases*, 2021(B), CFHT/Espadons, ID: 21BF22, 9.2 hours
- **PI: Oksala**, *Two new candidate magnetic massive stars identified from IR emission signatures*, 2021(B), CFHT/Espadons, 21BF24, 3 hours

2020

- **PI: Oksala**, *Characterizing the magnetic fields of 19 Aur*, 2020(B), TBL/Narval, ID: L202N12, 6.2 hours
- **PIs: Wade**, *Characterizing the magnetic fields of early-type giants and supergiants*, 2020(B), joint French+Canadian proposal for CFHT/Espadons, ID: 20BC032, 20 hours

- **PI: Oksala**, *Characterizing the magnetic fields of early-type giants and supergiants*, 2020(A), CFHT/Espadons, ID: 20AF016, 20 hours

2019

- **PI: Oksala**, *Characterizing the magnetic evolved hot star 19 Aur*, 2019(B) Director's Discretionary Time, CFHT/Espadons, ID: 19BD94, 1.9 hours
- **PI: Wade**, *Characterisation of the magnetic fields of early-type giants and supergiants*, 2019(B), CFHT/Espadons, ID: 19BC23, 22 hours
- **PIs: Wade and Neiner**, *Characterization of the magnetic fields of early-type giants: testing the principle of stellar magnetic flux conservation*, 2019(A), joint French+Canadian proposal for CFHT/Espadons, IDs: 19AC14 and 19AF20, 22 hours

2018

- **PI: Martin**, *Characterization of magnetic fields of early type giants: testing the principle of stellar magnetic flux conservation*, 2018, ESO/3.6 m/HARPS, ID: 0101.D-0091, 3.5 nights
- **PIs: Wade and Martin**, *Characterisation of the magnetic evolved hot stars 13 Mon, 19 Aur and eta Leo*, 2018(B), joint French+Canadian proposal for CFHT/Espadons, IDs: 18BC08 and 18BF06, 15.95 hours
- **PIs: Wade and Martin**, *Characterization of the magnetic fields of early-type giants: testing the principle of stellar magnetic flux conservation*, 2018(B), joint French+Canadian proposal for CFHT/Espadons, IDs: 18BC009 and 18BF007, 22 hours
- **PIs: Wade and Martin**, *Characterisation of the magnetic evolved hot star HD167686*, 2018(A), joint French+Canadian proposal for CFHT/Espadons, IDs: 18AC010 and 18AF014, 1.35 hours
- **PIs: Wade and Martin**, *Characterization of the magnetic fields of early-type giants: testing the principle of stellar magnetic flux conservation*, 2018(A), joint French+Canadian proposal for CFHT/Espadons, IDs: 18AC011 and 18AF013, 13.1 hours

2017

- **PI: Martin**, *Characterization of magnetic fields of early type giants: testing the principle of stellar magnetic flux conservation*, 2017, ESO/3.6 m/HARPS, ID: 0100.D-0776, 4.3 nights
- **PIs: Wade and Oksala**, *Characterization of the magnetic fields of early-type giants: testing the principle of stellar magnetic flux conservation*, 2017(B), joint French+Canadian proposal for CFHT/Espadons, IDs: 17BC018 and 17BF016, 31 hours
- **PIs: Wade and Oksala**, *Characterization of the magnetic fields of early-type giants: testing the principle of stellar magnetic flux conservation*, 2017(A), joint French+Canadian proposal for CFHT/Espadons, IDs: 17AF026 and 17AC025, 12 hours
- **PI: Oksala**, *Optical spectroscopy of IR emission line stars*, 2017(A), CFHT/Espadons, ID: 17AF019, Snapshot/Bad weather proposal, 2.1 hours
- **PI: Neiner**, *Spectropolarimetric follow-up of BRITE asteroseismic targets*, 2017, TBL/Narval, 57.2 hours

2016

- **PIs: Keszthelyi and Oksala**, *A sensitive search for weak magnetic fields in hot evolved stars*, 2016(B), joint French+Canadian proposal for CFHT/Espadons, IDs: 16BC004 and 16BF005, 18.9 hours

- **PIs: Keszthelyi and Oksala**, *A first sensitive search for weak magnetic fields in hot, evolved high mass stars*, 2016(A), joint French+Canadian proposal for CFHT/Espadons, IDs: 16AF030 and 16AC039, 27.2 hours
- PI: Buyschaert, *Detecting magnetic fields in AP/Bp stars observed with K2*, 2016, CFHT/Espadons, ID:16AF012, 9.1 hours
- PI: Kraus, *Resolving the structure and kinematics of B[e] supergiant stars' disks*, 2016, ESO/VLT/SINFONI, ID: 097.D-0033, 3 hours
- PI: Neiner, *Characterization of four magnetic hot stars discovered in the spectropolarimetric survey of BRITE asteroseismic targets*, 2016, ESO/3.6 m/HARPS, 097.D-00156, 5 nights
- PI: Borges Fernandes, *Characterizing the magnetosphere of the extremely rapidly rotating Bp star HR 5907 via IR spectra*, 2016, SOAR/OSIRIS, ID:2016A-001, 20 hours

2015

- **PI: Oksala**, *Characterizing the newly discovered magnetic field of the IR emission star HD 23478*, 2015, TBL/Narval, 42 hours
- PI: Neiner, *Characterization of four magnetic hot stars discovered in the spectropolarimetric survey of BRITE asteroseismic targets*, 2015, ESO/3.6 m/HARPS, 096.D-0072, 6.2 nights
- PI: Neiner, *Spectropolarimetric observations of BRITE asteroseismic targets: a complete census of magnetic fields in bright stars up to $V=4$* , 2015, ESO3.6 m/HARPS, ID: 095.D-0155, 6 nights
- **PI: Oksala**, *Studying the magnetosphere of the magnetic massive stars HR 7355 via its IR emission features*, 2015, ESO/VLT/SINFONI, ID: 095.D-0613, 6.5 hours
- PI: Grunhut, *Characterizing the magnetosphere of the new magnetic Bp star HD 23478 via IR emission features*, 2015, GEMINI/GNIRS, ID: GN-2015B-Q-48, 3.4 hours
- PI: Borges Fernandes, *Characterizing the magnetosphere of the prototypical Bp star sigma Ori E via IR emission features*, 2015, SOAR/OSIRIS, ID: 2015B-005, 25 hours
- PI: Borges Fernandes, *Characterizing low-density, optically undetected magnetospheres with IR spectroscopy*, 2015, SOAR/OSIRIS, 17 hours
- PI: Borges Fernandes, *Studying the magnetosphere of the magnetic massive star HR 7355 via its IR emission*, 2015, SOAR/OSIRIS, 16 hours
- PI: Neiner, *Spectropolarimetric observations of BRITE asteroseismic targets: a complete census of magnetic fields in bright stars up to $V=4$* , 2015, ESO3.6 m/HARPS, ID: 094.D-0274, 6 nights
- PI Grunhut, *Probing the magnetic properties of extremely massive stars*, 2015, ESO/VLT/FORS2, ID: 094.D-0533, 6.2 hours
- PI: Kubát, *Submillimetre observations with ARTEMIS: a key to constrain clumping and determine precise mass-loss rates in massive stars*, 2015, ESO/APEX/ARTMIS, ID: 0.95.D-0550, 29.1 hours
- PI Kraus, *Resolving the inner structure and kinematics of the nebula around the unclassified Galactic B[e] star MWC 137*, 2015, ESO/VLT/SINFONI, ID: 094.D-0637, 0.8 hours
- **PI: Oksala**, *IR diagnostics as a tool to study low density magnetospheres*, 2015, ESO/VLT/SINFONI, ID: 094.D-0709, 1.1 hours

2014

- PI: Grunhut, *Are stellar mergers the key to understanding the phenomenon of magnetism in higher mass stars?*, 2014, ESO/3.6 m/HARPS, ID: 093.D-0367, 4 nights

- PI: Sikora, *Characterizing the magnetic fields of two recently discovered rare sigma Ori E type stars*, 2014, CFHT/Espadons. ID: 14BC011, 10.4 hours
- PI: Kraus, *Studying the structure and kinematics of disk around evolved massive stars using SiO band head emission*, 2014, ESO/VLT/CRIFRES, ID: 093.D-0248, 12.7 hours
- PI: Kubát, *Submillimetre observations with LABOCA and SABOCA: a key to constrain clumping and determine precise mass-loss rates in massive stars*, 2014, ESO/APEX/LABOCA, ID: 092.D-0299, 13 hours
- PI: Kraus, *Disentangling the population of evolved massive stars in the galaxy M33*, 2014, ESO/VLT/KMOS, ID: 092.D-0256, 16.1 hours

2013

- PI: Curé, *¹³Carbon footprint: An ideal tool to distinguish post-AGB and HaeBe stars*, 2013, ESO/VLT/SINFONI, ID: 091.D-0376, 4 hours
- **PI: Oksala**, *Searching for periodic spectral variability in the LBV MWC 314 and B supergiants sigma Cyg (HD 202850) and HD 164353*, 2013, DAO/1.2-m telescope, 6 nights
- PI: Oksala, *Searching for periodic spectral variability in the B[e] star HD 50138 and MWC 623 and the A supergiant HD 87737*, 2013, DAO/1.2-m telescope, 6 nights
- PI: Oksala, *Searching for periodic spectral variability in the B[e] star HD 50138 and the supergiants HD 12301 and HD 87737*, 2013, DAO/1.2-m telescope, 6 nights
- PI: Cidale, *Developing a near infrared diagnostic for magnetism in hot, massive stars*, 2013, Gemini/GNIRS, 1.9 hours
- PI: Borges Fernandes, *¹³Carbon footprint: An ideal tool to distinguish post-AGB and HaeBe stars*, 2013, 2013A002, SOAR/OSIRIS, 16 hours
- PI: Borges Fernandes, *Developing a near infrared diagnostic for magnetism in hot, massive stars*, 2013, 2013A001, SOAR/OSIRIS, 12 hours
- PI: Borges Fernandes, *Revealing the mass loss history of evolved massive stars*, 2013A003, 2013, SOAR/OSIRIS, 12 hours

2012 and earlier

- **PI: Oksala**, *Searching for periodic spectra variability in the B[e] star HD 50138 and the B supergiant HD 12301*, 2012, DAO/1.2-m telescope, 5 nights
- **PI: Oksala**, *Line profile variability in the spectrum of the B supergiant kappa Cas (HD 29025)*, 2012, DAO/1.2-m telescope. 4 nights
- **PI: Oksala**, *Searching for pulsational modes in the spectrum of sigma Cyg (HD 202850)*, 2012, DAO/1.2-m telescope. 9 nights
- PI: Borges Fernandes. *¹³Carbon footprint: An ideal tool to distinguish post-AGB and HaeBe stars*, 2012B623, SOAR/OSIRIS, 2012, 27.9 hours
- PI: Borges Fernandes, *Developing a near infrared diagnostic for magnetism in hot, massive stars*, 2012B621, SOAR/OSIRIS, 2012, 12 hours
- PI: Borges Fernandes, *Hot water in the disks of evolved massive stars*, 2012B622, SOAR/OSIRIS, 2012, 12 hours
- PI: Alecian, *Magnetism in Massive Stars: the MiMeS project*, ESO/HARPSpol, Large Program, ID:187.D-0917, 30 nights total (2011-2012)

- PI: Rivinius, *The most rapidly rotating magnetic non-degenerate stars and first candidate for interferometry of a magnetosphere*, ESO/FORS2 and ESO/UVES, ID: 284.D-5058, 2010, 2 hours DDT.
- PI: Neiner, *MiMeS: Magnetism in Massive Stars*, Bernard Lyot Telescope/Narval, 2010-2012, Large Program (LP) 130 hours
- PI: Neiner, *MiMeS: Magnetism in Massive Stars*, Bernard Lyot Telescope/Narval, 2010, 14 nights
- **PI: Oksala**, Broadband Polarimetry of the magnetic B2Vp star sigma Ori E, Mont Megantic/Belle et Bete polarimeter, 2009, 7 nights
- PI: Neiner, *MiMeS: Magnetism in Massive Stars*, Bernard Lyot Telescope/Narval, 2009, 11 nights
- **PI: Oksala**, *Probing the outer edge of the circumstellar disks of massive magnetic stars through higher-level Balmer lines*, 2008, DAO/1.8-m telescope, 7 nights
- **PI: Oksala**, *Probing the outer edge of the circumstellar disks of sigma Ori E through higher-level Balmer lines*, 2008, DAO/1.8-m telescope, 7 nights
- **PI: Oksala**, *Times Series Photometry of Massive Magnetic Stars*, CTIO/SMARTS 0.9-m telescope, 2007-2012, 96 total hours