

# Mary Elizabeth Oksala

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California Lutheran University  
Department of Physics  
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## Education

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### 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

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- 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

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### Assistant Professor

Department of Physics

California Lutheran University

August 2016 - Present

### Postdoctoral Fellow

LESIA, Observatoire de Paris-Meudon

Advisor: Coralie Neiner

July 2014 - June 2016

### Postdoctoral Fellow

Academy of Sciences of the Czech Republic

Astronomical Institute of the Academy of Sciences of the Czech Republic

July 2013 - June 2014

### Postdoctoral Researcher

Astronomical Institute of the Academy of Sciences of the Czech Republic

Advisor: Michaela Kraus

Oct 2011 - June 2013

- Visiting Scholar** Fall 2008, Fall 2009  
 Department of Physics, Royal Military College of Canada  
 Advisor: Gregg Wade
- Graduate Research Assistant** 2006-2007, Fall 2010  
 Department of Physics and Astronomy, University of Delaware  
 Advisor: Stanley Owocki
- 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

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### Instructor

Department of Physics, California Lutheran University

Courses taught:

- PHYS 100 Introduction to Astronomy    Spring 2017
- PHYS 100L Introduction to Astronomy Lab    Spring 2017
- PHYS 110 Physical Science for Liberal Art Majors    Fall 2016, Spring 2017
- PHYS 110L Physical Science for Liberal Art Majors Lab    Fall 2016, Spring 2017
- PHYS 211 Mechanics and Thermodynamics-Calculus    Fall 2016
- PHYS 211L Mechanics and Thermodynamics-Calculus Lab    Fall 2016

**Teaching Assistant** 2004-2006, Spring 2010,  
Spring 2011  
 Department of Physics and Astronomy, University of Delaware

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

**Curriculum Development** Summer 2010

Department of Physics and Astronomy, University of Delaware

Developed new Introduction to Astronomy lab curriculum with emphasis on student participation and night observations. New telescopes and observing equipment were acquired.

## Professional Service + Memberships

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Institute seminar organizer	Sept. 2012 - June 2014
Astronomical Institute of the Academy of Sciences of the Czech Republic	
Journal Referee ApJ, IBVS, A&A	August 2015-present
ESO Observing Programmes Committee Panelist	November 2015, May 2016
Member of the International Astronomical Union	September 2015
SOC member, meeting: Stars with a stable magnetic field Brno, Czech Republic	September 2017

## International Collaboration Memberships

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- Large Impact of magnetic Fields on massive star Evolution (LIFE) project 2015-Present  
*Science Steering Committee member*
- BRITE spectropolarimetric project 2014-Present  
*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

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1. 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*  
MNRAS, submitted
2. **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*  
MNRAS, submitted
3. Neiner, C., **Oksala, M. E.**, & 9 other co-authors  
*Discovery of magnetic A supergiants: the descendants of magnetic main sequence B stars*  
MNRAS, in press
4. Buyschaert, B., Neiner, C., Richardson, N. D., Ramiamanantsoa, 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*  
A&A, 602, A91, 2017
5. 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*  
MNRAS, 465, 2432, 2017

6. 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*  
MNRAS, 465, 2160, 2017
7. 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*  
MNRAS, 456, 2, 2016
8. 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*  
A&A, 585, 77, 2016
9. 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*  
A&A, 582, A38, 2015
10. Neiner, C., Buyschaert, B., **Oksala, M.E.**, Blazere, A.  
*Discovery of two new bright magnetic B stars: i Car and Atlas*  
MNRAS, 454, L56, 2015
11. 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*  
A&A, 581, A75, 2015
12. 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*  
MNRAS, 452, 1245, 2015
13. 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 $\alpha$ -bright centrifugal magnetosphere*  
MNRAS, 451, 1928, 2015
14. **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*  
MNRAS, 451, 2015, 2015
15. **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*  
A&A, 578, A112, 2015

16. 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  
*ApJL*, 800, 20, 2015
17. 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*  
*AJ*, 149, 13, 2015
18. 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*  
*A&A*, 567, A28, 2014
19. Kraus, M., Cidale, L. S., Arias, M. L., **Oksala, M. E.**, & Borges Fernandes, M.  
*Discovery of the First B[e] Supergiants in M 31*  
*ApJL*, 780, 10, 2014
20. **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*  
*A&A*, 558, A17, 2013
21. Petit, V., Owocki, S. P., Wade, G. A., Cohen, D. H., Sundqvist, J. O., Gagné, M., Maiz Apellànic,  
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*  
*MNRAS*, 429, 398, 2013
22. 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*  
*A&A*, 549, A28, 2013
23. 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*  
*A&A*, 548, A13, 2012
24. **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*  
*MNRAS*, 426, L56, 2012
25. 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*  
*A&A*, 545, A119, 2012
26. Kraus, M., Tomic, S., **Oksala, M. E.**, & Smole, M.  
*Detection of a 1.59 h period in the B supergiant star HD 202850*  
*A&A*, 542, L32, 2012

27. **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*  
MNRAS, 419, 959, 2012
28. 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*  
A&A, 536, L6, 2011
29. 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*  
MNRAS, 415, 1220, 2011
30. **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*  
MNRAS, 405, L51, 2010.
31. 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*  
ApJL, 714, L318, 2010.
32. 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" (ApJ, 628, 986 [2005])*  
ApJ, 634, 712, 2005.
33. 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*  
ApJ, 628, 986, 2005.

## Conference Proceedings

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1. **Oksala, M. E.**  
*Observational signatures of hot-star magnetospheres*  
In The Lives and Death-Throes of Massive Stars, IAU Symposium No. 329, 2017, in press
2. **Oksala, M. E.**, Neiner, C., Georgy, C., Przybilla, N., Keszthelyi, Z., Wade, G., Mathis, S., Blazère, A., Buysschaert, B.  
*The evolution of magnetic fields in hot stars*  
In The Lives and Death-Throes of Massive Stars, IAU Symposium No. 329, 2017, in press

3. 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
4. **Oksala, M. E.**, Kochukhov, O., Krticka, J., Prvak, 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
5. 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
6. 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
7. **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  $\alpha$  to  $\Omega$* , Rhodes, Greece, 2013
8. 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  $\alpha$  to  $\Omega$* , Rhodes, Greece, 2013
9. 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
10. 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
11. 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
12. 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  $\sigma$  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
13. 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
14. **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

15. 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

16. **Oksala, M. E.**, Wade, G. A., Townsend, R. H. D., Kochukhov, O., & Owocki, S. P.

*Modeling the magnetosphere of the B2Vp star  $\sigma$  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

17. 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

18. **Oksala, M. E.** & Townsend, R. H. D.

*New Photometric Observations of  $\sigma$  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

19. **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

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1. 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
2. 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
3. Canada-France-Hawaii Telescope 11th Users' Meeting, Nice, France, May 2016  
Talk: Multi-wavelength studies of hot-star magnetospheres
4. 4th BinaMIcS Workshop, Melbourne, FL, December 2016  
Talk: Magnetospheres in the IR  
Talk: The magnetic field of 36 Lyn
5. American Astronomical Society Meeting #227, Kissimmee, Florida, USA, December 2016  
Talk: Massive-Star Magnetospheres in the Near-Infrared, id.129.03



6. Action Fédératrice Etoiles de l'Observatoire de Paris Forum, Meudon, France, November 2015  
Talk: Recent results of the BinaMIcS survey
7. BRITepol: BRITe Spectropolarimetric Survey Workshop, Meudon, France, October 2015  
Talk: The descendants of magnetic massive stars: BRITe magnetic hot supergiants
8. ESO Headquarters, Vitacura, Chile, July 2015  
Seminar: Massive-star magnetospheres in the NIR
9. 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
10. Action Fédératrice Etoiles de l'Observatoire de Paris Forum, Meudon, France, November 2014  
Talk: Massive-star magnetospheres in the NIR
11. First SPIRou Science Meeting, Paris, France, September 2014  
Talk: Massive-star magnetospheres in the NIR
12. Magnetism and Variability in O stars, Amsterdam, Netherlands, September 2014  
Talk: Massive-star magnetospheres in the NIR
13. IAU Symposium 307, New Windows on Massive Stars: Asteroseismology, Interferometry, and Spectropolarimetry, June 2014  
Talk: Unraveling the variability of  $\sigma$  Ori E
14. Massive Stars: From  $\alpha$  to  $\Omega$ , Rhodes, Greece, June 2013  
Poster: Probing the ejecta of evolved massive stars in transition
15. Stellar Department, Astronomical Institute AVCR, Ondrejov, Czech Republic, April 2013  
Seminar: Investigating the mass-loss history of evolved massive stars
16. 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
17. Tartu Observatory, Tartu, Estonia, November 2012  
Seminar: Centrifugally Supported Massive Star Magnetospheres
18. Masaryk University, Brno, Czech Republic, October 2012  
Seminar: Massive Star Magnetospheres: From X-ray to Radio
19. Astronomical Institute AVCR, Ondrejov, Czech Republic, May 2012  
Institute Seminar: Massive Star Magnetospheres: From X-ray to Radio
20. Stellar Department, Astronomical Institute AVCR, Ondrejov, Czech Republic, November 2011  
Seminar: Observations and Models of Magnetic Massive Stars
21. 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
22. IAU Symposium 272: Active OB Stars: structure, evolution, mass-loss, and critical limits, July 2010  
Talk: Spectropolarimetric observations of the B2Vp star  $\sigma$  Ori E
23. IAU Symposium 250: Massive Stars as Cosmic Engines, Kauai, HI USA, December 2007  
Poster: A Magnetosynthesis Model for Massive Stars

24. Active OB Stars: Laboratories for Stellar & Circumstellar Physics, ASP Conf. Ser. 361, Sapporo, Japan, September 2005  
Poster: New Photometric Observations of  $\sigma$  Ori E

## Telescope Time Awarded

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

#### 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, 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,  *$^{13}\text{C}$  Carbon 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, *<sup>13</sup>Carbon 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. *<sup>13</sup>Carbon 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