

Curriculum Vita
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PERSONAL DATA: Born: December 15, 1951; Married, 3 children.

PRESENT POSITION: Professor, Bartol Research Institute

EDUCATION

1976-82: Department of Physics and Astrophysics, U. of Colorado, Boulder, CO 80309
Ph. D., Astrophysics, 1982.
1975-76: Department of Astronomy, Ohio State U., Columbus, OH 43210
1969-73: Brown University, Providence, RI 02912
B.S., Biophysics, 1973.

EMPLOYMENT

10/87-pres.: Bartol Research Institute, University of Delaware, Newark, DE 19716. 10/87:
Assistant Professor; 9/91: Associate Professor; 9/98: Professor.
1/84- 9/87: Center for Astrophysics and Space Science, U. of Cal. at San Diego, La Jolla, CA
92093. Research Physicist.
12/81- 1/84: Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 12138. Langley-
Abbott Fellowship.
9/77-11/81: High Altitude Observatory, National Center for Atmospheric Research, Boul-
der, CO 80307. Graduate Research Assistant. Thesis with T. Holzer on "The
Ionization State of the Solar Wind".
9/76- 6/77: Department of Physics, University of Colorado, Boulder, CO 80309.
Teaching Assistant in Physics.
9/73- 6/76: Department of Astronomy, Ohio State University, Columbus, OH 43210.
Teaching Asst. in Astronomy. 3/76: Won cash award for outstanding teaching.
9/73- 6/75: Max-Planck-Institutes, Seewiesen and Garching, Germany.
Applications Programmer in Biology (Seewiesen) and Astrophysics (Garching).

RESEARCH INTERESTS:

- mass loss and disk formation in massive stars
- computational radiation-hydrodynamics and magnetohydrodynamics
- radiative transfer theory/ stellar atmospheres
- structure and dynamics of solar corona and wind

VISITOR APPOINTMENTS

High Altitude Observatory, National Center for Atmospheric Research, Boulder, CO 80307:
Short-Term Visitor 7/87-10/87; 8/89; 7/90; 7/00.

Woods Hole Oceanographic Institute, Woods Hole, MA 02543: 7/1/90-7/15/90.

MPIA/Garching and Universitaet-Sternwarte/Munich, Germany, 7/91-10/91; 11/92; 1/96.

European Southern Observatory, Garching, Germany, 10/97-11/97.

TEACHING

Spring 1986: UCSD - El. Eng. & Comp. Sci. 64, Scientific Application of Computers

Fall 1990: U. of Del. - PS 632: Astrophysics

Spring 1992, 1996; Fall 1998: U. of Del. - PS 633: Stellar Astrophysics (with D Seckel).

RESEARCH SUPERVISION

1. Alex Fullerton, Research Scientist, 12/89-4/94. (now FUSE Project Scientist, Johns Hopkins)
2. R. Glenn Cooper, Ph.D. Student, 9/89-6/94. (now Support Scientist, Fermilab)
3. Steven Cranmer, Ph.D. Student, 9/92-8/96. (now Research Scientist, Harvard-Smithsonian)
4. Ken Gayley, Research Scientist, 11/92-8/97. (now Assistant Professor, U. Iowa)
5. Asif Ud-Doula, Ph. D. Student, 9/99-present
6. Vikram Dwarkadas, Research Scientist, 2/01-present

PROFESSIONAL SOCIETIES

American Astronomical Society; International Astronomical Union

COMMISSION ELECTIONS

10/94-present: IAU Commission 36 - Stellar Atmospheres

5/95-present: Hot-Star Working Group

9/97-present: Working group for Active B-stars

BOOK EDITED

1. *Instability and Variability in Hot Star Winds*, Proceedings of workshop held in August 1993 on the Isle-aux-Coudres, Quebec, Canada. A. Moffat, **S. Owocki**, A. Fullerton, and N. St-Louis, eds., (Kluwer: Dordrecht), 1995; also published as *Astrophysics & Space Science*, vol. 221.

FEATURE ARTICLES

1. *Winds that Sail on Starlight*, SDSC Gather/Scatter, Winter 1997; also on WWW at: www.sdsc.edu/GatherScatter/GSwinter97/owocki.html.

INVITED REVIEW TALKS

1. “Applicability of Steady-State Models of Hot-Star Winds”, First Boulder-Munich Workshop on *Properties of Hot Luminous Stars*, Boulder, CO, August 1989.
2. “Winds from Hot Stars”, *Astronomische Gesellschaft* meeting on *Akkretion und Winde*, Berlin, Germany, March, 1990.
3. “Theory of Intrinsic Variability in Hot-Star Winds”, IAU Colloquium #143 on *Wolf-Rayet Stars and their Interrelations with other Massive Stars in Galaxies*, Den Pasar, Indonesia, June, 1990.
4. “Radiation Hydrodynamics in Stellar Winds”, Workshop on *Stellar Fluid Dynamics*, Woods Hole, MA, July, 1990.
5. “Effect of Scattering on the Nonlinear Evolution of Instabilities in Hot-Star Winds”, NATO Advanced Study Workshop on *Stellar Atmospheres: Beyond Classical Models*, Trieste, Italy, September, 1990.
6. “Instabilities in Hot-Star Winds”, Workshop on *Atmospheres of Early-Type Stars*, University of Kiel (Germany), September, 1991.
7. “Instabilities in Hot-Star Winds”, Workshop on *Variable, Non-Spherically Symmetric Outflows from Stars*, Space Telescope Science Institute, October, 1991.
8. “Theory Review: Line-Driven Instability and Other Possible Causes of Structure and Variability in Hot-Star Winds”, Workshop on *Instability and Variability in Hot Star Winds*, Isle-aux-Coudre, Quebec, August 1993.
9. “The Basic Physics of Hot-Star Winds”, IAU Symposium #162 on *Pulsation, Rotation, and Mass Loss in Early-Type Stars*, Cote-d’Azur, France, October, 1993.
10. “The Dynamics of Wolf-Rayet Winds”, IAU Symposium #163 on *WR Stars: Binaries, Colliding Winds, Evolution*, Elba, Italy, May, 1994.
11. “Origin of OB Wind Discrete Absorption Components and Be star Disks”, CCP-7 Workshop, Glasgow, Scotland, April, 1996.
12. “Current Problems in Hot-Star Wind Theory”, Hot-Star Mini-Workshop, Matanwanie, Quebec, June, 1996.
13. “The Physics of Stellar Winds Near the Eddington Limit”, Symposium on *Luminous Blue Variables: Massive Stars in Transition*, Kona, HI, October, 1996.’
14. “Bipolar Outflows from B[e] Stars”, *Workshop on B[e] stars*, Paris France, June 9-12, 1997.
15. “Radiatively Driven Winds from Rotating Hot-Stars”, Summer School on *Star-Gas Interactions*, INAOE, Tonantzilla, Mexico, July 1997.
16. “Effect of Gravity Darkening on Radiatively Driven Mass Loss from Rapidly Rotating Hot-Stars”, *Bouler-Munich Workshop II*, Windsor Castle, England, July 21-24, 1997.
17. “Mass Loss from Rotating Hot Stars: Inhibition of Wind Compressed Disks by Nonradial Line-Forces”, *Non-Equilibrium Radiative Hypersonic Flows*, Mt. Ste. Odile, France, September 22-25, 1997.
18. “Modelling Variability in Hot-Star Winds”, *Cyclical Variability in Stellar Winds*, Garching, Germany, October 10-14,1997.
19. “Turbulence in Line-Driven Stellar Winds”, *Interstellar Turbulence*, Puebla, Mexico, Jan. 1998.

20. “Co-Rotating Interaction Regions in Stellar Winds”, IAU Colloquium # 169, *Variable and Non-spherical Stellar Winds in Luminous Hot Stars*, Heidelberg, Germany, June, 1998.
21. “Dynamics and Variability of Winds from Single WR Stars”, IAU Symposium #193, *Wolf-Rayet Phenomena in Massive Stars and Starburst Galaxies*, Puerto Vallarta, Mexico, Nov. 1998.
22. “Effect of Instability-Generated Clumping on Wind Compressed Disk Inhibition”, IAU Colloquium #175, *The Be Phenomenon in Early-Type Stars*, Alicante, Spain, July 1999.
23. “Outer Wind Evolution of Instability-Generated Clumped Structure in Hot-Star Winds”, *Thermal and Ionization Aspects of Flows from Hot Stars: Observations and Theory*, Tartu, Estonia, August 1999.
24. “Interacting Stellar Winds: Theory Review”, *Interacting Winds from Massive Stars*, Isle-de-la-Madeleine, Quebec, Canada, July 2000.
25. “Links Between Pulsations and Line-Driven Mass Loss in Massive Stars”, IAU Coll. #185, *Radial and Nonradial Pulsation as Probes of Stellar Physics*, Leuven, Belgium, July 2001.

PUBLICATIONS

1. **Owocki, S. P.**, and Auer, L. H. 1980, “Two-Dimensional Radiative Transfer: II. The Wings of Ca K and Mg k”, *Ap. J.*, 241, 448.
2. **Owocki, S. P.**, Newkirk, G. N., and Sime D. G. 1982, “Radar Studies of the Non-Spherically Symmetric Solar Corona”, *Solar Phys.*, 78, 317.
3. **Owocki, S. P.** and Scudder, J. D. 1982, “The Ionization State of a Gas with a Non-Maxwellian Electron Distribution”, *The Second Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun*, M. Giampappa and L. Golub, eds., (Cambridge: Harvard).
4. **Owocki, S.** 1982, “The Ionization State of the Solar Wind”, NCAR Cooperative Thesis No. 66, University of Colorado and National Center for Atmospheric Research, (Boulder: NCAR).
5. **Owocki, S. P.** and Scudder, J. D. 1983, “The Effect of a Non-Maxwellian Electron Distribution on the Ionization Balances of Oxygen and Iron in the Solar Corona”, *Ap. J.*, 270, 758.
6. **Owocki, S. P.** and Hundhausen, A. J. 1983, “The Effect of a Coronal Shock Wave on the Solar Wind Ionization State”, *Ap. J.*, 274, 414.
7. **Owocki, S. P.**, Holzer, T. E., and Hundhausen, A. J. 1983, “The Solar Wind Ionization State as a Coronal Temperature Diagnostic”, *Ap. J.*, 275, 354.
8. **Owocki, S. P.** 1983, “Interpreting the Solar Wind Ionization State”, in *Solar Wind V*, M. Neugebauer, ed., NASA CP-2280.
9. **Owocki, S. P.** and Rybicki, G. B. 1984, “The Stability of Line-Driven Stellar Winds: I. Dependence on Perturbation Wavelength”, *Ap. J.*, 284, 354.
10. **Owocki, S. P.** and Rybicki, G. B. 1984, “The Effect of Scattered Radiation on Instabilities in Line-Driven Stellar Winds”, in *The Origin of Nonradiative Heating/Momentum in Hot Stars*, A. Underhill and A. Michalitsianos, eds., NASA CP-2358.
11. **Owocki, S. P.** and Rybicki, G. B. 1984, “The Stability of Line-Driven Stellar Winds: II. Effect of Scattering”, *Ap. J.*, 284, 354.
12. **Owocki, S. P.** and Canfield, R. C. 1986, “The Role of Nonclassical Electron Transport in the Lower Solar Transition Region”, *Ap. J.*, 300, 420.
13. **Owocki, S. P.** and Rybicki, G. B. 1986, “The Stability of Line-Driven Stellar Winds: III. Wave Propagation in the Case of Pure Line-Absorption”, *Ap. J.*, 309, 127.
14. **Owocki, S. P.**, Castor, J. I., and Rybicki, G. B. 1986, “Nonlinear Dynamics of Instabilities in Line-Driven Stellar Winds”, in *Instabilities in Luminous Early-Type Stars*, H. J. G. L. M. Lamers and C. W. de Loore, eds., (Dordrecht: Reidel), p. 269.
15. Castor, J. I., **Owocki, S. P.**, and Rybicki, G. B. 1988, “Time-Dependent Mass Loss from Hot Stars with and without Radiative Driving”, in *Pulsation and Mass Loss in Stars*, L. A. Willson and R. Stalio, eds., (Dordrecht: Reidel), p. 229.
16. **Owocki, S. P.**, Castor, J. I., and Rybicki, G. B. 1988, “Supercomputer Simulations in Radiation Hydrodynamics: Nonlinear Evolution of Instabilities in Radiatively Driven Flows”, in *Proceedings Third International Conference on Supercomputing (Vol. 1)*, L. P. Kartashev and S. I. Kartashev, eds., (St. Petersburg: International Supercomputing Institute), p. 351.
17. **Owocki, S. P.**, Castor, J. I., and Rybicki, G. B. 1988, “Physics of Instabilities in Radiatively Driven Stellar Winds”, in *The Physics of Luminous Blue Variables*, K. Davidson and

- A. F. J. Moffat, eds., (Dordrecht: Reidel).
18. **Owocki, S. P.**, Castor, J. I., and Rybicki, G. B. 1988, “Time-Dependent Models of Radiatively Driven Stellar Winds: I. Nonlinear Evolution of Instabilities for a Pure-Absorption Model”, *Ap. J.*, 335, 914.
 19. Rybicki, G. B., **Owocki, S. P.**, and Castor, J. I. 1990, “The Stability of Line-Driven Stellar Winds: IV. Linear Perturbations in Three Dimensions”, *Ap. J.*, 349, 274.
 20. Poe, C. H., **Owocki, S. P.**, and Castor, J. I. 1990, “The Steady-State Solutions of Radiatively Driven Stellar Winds for a Nonsobolev, Pure-Absorption Model”, *Ap. J.*, 358, 199.
 21. **Owocki, S. P.**, Poe, C. H., and Castor, J. I. 1990, “Applicability of Steady Models for Hot-Star Winds”, in *Properties of Hot Luminous Stars*, C. D. Garmany, ed., (San Francisco: A.S.P.), p. 283.
 22. Poe, C. H., **Owocki, S. P.**, and Castor, J. I. 1990, “The Steady-State Solutions of Radiatively Driven Stellar Winds for a Nonsobolev, Pure-Absorption Model”, in *Properties of Hot Luminous Stars*, C. D. Garmany, ed., (San Francisco: A.S.P.), p. 278.
 23. **Owocki, S. P.** 1990, “Winds from Hot Stars”, in *Reviews of Modern Astronomy*, 3, 98, (Berlin: Springer).
 24. **Owocki, S. P.** 1990, “Theory of Intrinsic Variability in Hot Star Winds”, in *Wolf-Rayet Stars and their Interrelations with Other Massive Stars in Galaxies*, IAU Colloq. #143, K. Van der Hucht and B. Hidayat, eds., (Dordrecht: Kluwer), p. 155.
 25. **Owocki, S. P.** and Rybicki, G. B. 1991, “Instabilities in Line-Driven Stellar Winds: V. Effect of an Optically Thick Continuum”, *Ap. J.*, 368, 261.
 26. **Owocki, S. P.** and Zank, G. P. 1991, “The Effect of Viscosity on Steady Transonic Flow with a Nodal Solution Topology”, *Ap. J.*, 368, 491.
 27. **Owocki, S. P.** 1991, “A Smooth Source Function Method for Including Scattering in Radiatively Driven Wind Simulations”, in *Stellar Atmospheres: Beyond Classical Models*, I. Hubeny and L. Crivellari, eds. (Dordrecht: Kluwer), p. 235.
 28. **Owocki, S. P.** 1992, “Instabilities in Hot-Star Winds: Basic Physics and Recent Developments”, in *Atmospheres of Early-Type Stars*, U. Heber and S. Jeffrey, eds. (Berlin: Springer), p. 393.
 29. Fullerton, A. W. and **Owocki, S. P.** 1992, “Can Non-Stationary Velocity Plateaus Account for Slowly Moving Discrete Absorption Components”, in *Nonisotropic and Variable Outflows from Stars*, L. Drissen, C. Leitherer, and A. Nota, eds. (A.S.P. Conference Series), p 177.
 30. Cooper, R. G. and **Owocki, S. P.** 1992, “Time-Dependent Models of X-ray Emission from Shocks in Radiatively Driven Stellar Winds”, in *Nonisotropic and Variable Outflows from Stars*, L. Drissen, C. Leitherer, and A. Nota, eds. (A.S.P. Conference Series), p. 281.
 31. Puls, J., Pauldrach, A., Kudritzki, R., **Owocki, S. P.**, and Najarro, F. 1993, “Radiation Driven Winds of Hot Stars – Some Remarks on Stationary Models and Spectrum Synthesis in Time-Dependent Simulations”, in *Reviews in Modern Astronomy*, 6, 271, (Berlin: Springer).
 32. Puls, J., **Owocki, S. P.**, and Fullerton, A. W. 1993, “On the Synthesis of Resonance Lines in Dynamical Models of Structured Hot-Star Winds”, *Astron. Astrophys.*, 279, 457.
 33. **Owocki, S. P.**, Cranmer, S., and Blondin, J. 1994, “Two-Dimensional Hydrodynamical Simulations of Wind Compressed Disks Around Rapidly Rotating B-Stars”, *Astrophys. J.*, 424,

34. Gayley, K., and **Owocki, S. P.** 1994, “The Acceleration Efficiency of Line-Driven Flows”, *Astrophys. J.*, 434, 684.
35. Gayley, K., **Owocki, S. P.**, and Cranmer, S. 1994, “Momentum Deposition in Wolf-Rayet Winds: Non-Isotropic Diffusion with an Effectively Gray Opacity”, *Astrophys. J.*, 442, 296.
36. **Owocki, S. P.** 1994, “The Basic Physics of Hot-Star Winds”, in *Pulsation, Rotation, and Mass Loss in Early-Type Stars*, L. Balona and H. Henrichs, eds., (Kluwer: Dordrecht), p. 475.
37. **Owocki, S. P.** 1994, “Theory Review: Line-Driven Instability and Other Possible Causes of Structure and Variability in Hot-Star Winds”, in *Instability and Variability in Hot Star Winds*, A. Moffat, S. Owocki, N. St-Louis, and A. Fullerton, eds., (Kluwer: Dordrecht), p. 3.
38. **Owocki, S. P.** 1994, “Summary Comments”, in *Instability and Variability in Hot Star Winds*, A. Moffat, S. Owocki, N. St-Louis, and A. Fullerton, eds., (Kluwer: Dordrecht), 493.
39. **Owocki, S. P.**, Fullerton, A. and Puls, J. 1994, “1-D Models of Induced Density Enhancements in Hot-Star Winds”, in *Instability and Variability in Hot Star Winds*, A. Moffat, S. Owocki, N. St-Louis, and A. Fullerton, eds., (Kluwer: Dordrecht), p. 437.
40. Puls, J., Feldmeier, A., Springmann, U., **Owocki, S. P.**, and Fullerton, A. 1994, “Synthesis of Line Profiles from Models of Structured Winds”, in *Instability and Variability in Hot Star Winds*, A. Moffat, S. Owocki, N. St-Louis, and A. Fullerton, eds., (Kluwer: Dordrecht), 409.
41. Cooper, R. and **Owocki, S. P.** 1994, “X-Ray Emission in Wind Instability Simulations”, in *Instability and Variability in Hot Star Winds*, A. Moffat, S. Owocki, N. St-Louis, and A. Fullerton, eds., (Kluwer: Dordrecht), 427.
42. **Owocki, S. P.** and Gayley, K. 1995, “The Dynamics of Wolf-Rayet Winds”, in *Wolf-Rayet Stars: Binaries, Colliding Winds, Evolution*, K. van der Hucht and P. Williams, eds., (Kluwer: Dordrecht), p.138.
43. Gayley, K. and **Owocki, S. P.** 1995, “The Non-Isotropic Diffusion Approximation in Wolf-Rayet Winds”, in *Wolf-Rayet Stars: Binaries, Colliding Winds, Evolution*, K. van der Hucht and P. Williams, eds., (Kluwer: Dordrecht), p.158.
44. Cranmer, S., and **Owocki, S. P.** 1995, “The Effect of Oblateness and Gravity Darkening on Radiation Driving in Winds from Rapidly Rotating B-Stars”, *Astrophys. J.*, 440, 308.
45. Gayley, K., and **Owocki, S. P.** 1995, “Line-Driven Instability Growth Rates in Wolf-Rayet Winds”, *Astrophys. J.*, 446, 801.
46. Feldmeier, A., Puls, J., Reile, C., Pauldrach, A., Kudritzki, R., and **Owocki, S. P.** 1995, “Shocks and Shells in Hot-Star Winds”, in *Shocks in Astrophysics*, A. Raga, ed.
47. Cranmer, S., and **Owocki, S. P.** 1995, “Hydrodynamical Simulations of Corotating Interaction Regions and Discrete Absorption Components in Rotating Hot-Star Winds”, *Astrophys. J.*, 462, 469.
48. **Owocki, S. P.**, Cranmer, S., and Fullerton, A. 1995, “Periodic Variations in UV Spectral Lines of the B0.5 Ib Star HD 64760: Evidence for Corotating Wind Streams Rooted in Surface Variations”, *Astrophys. J. Lett.*, 453, L37.
49. Massa, D. et al. 1995 (with **Owocki, S. P.** listed 3rd of 32 additional authors), “The IUE MEGA Campaign. I. Wind Variability and Rotation in Early-Type Stars”, *Astrophys. J. Lett.*, 452, L53.

50. **Owocki, S. P.** and Gayley, K. G. 1995, “The Importance of Radiative Braking for the Wind Interaction in the Close WR+O Binary V444 Cygni”, *Astrophys. J. Lett.*, 454, L145.
51. **Owocki, S. P.**, and Puls, J. 1996, “Nonlocal Escape-Integral Approximations for the Line-Force in Structured Line-Driven Stellar Winds”, *Astrophys. J.*, 462, 894.
52. Cohen, D., Cooper, R., MacFarlane, J., **Owocki, S. P.**, Cassinelli, J., and Wang, P. 1995, “Evidence for Wind Attenuation and a Multi-Temperature Plasma in the Combined *EUVE* and *ROSAT* Observations of ϵ Canis Majoris (B2 II)”, *Astrophys. J.*, 460, 506.
53. Feldmeier A., Puls J., Kudritzki R.P., Pauldrach A.W.A., **Owocki S. P.**, Reile C., Palsa R., 1996 “On flow phenomena that emit X-rays in hot star wind”. in *Roentgenstrahlung from the Universe*, eds. Truemper J., et al. (MPIE: Garching).
54. Gayley, K., **Owocki, S. P.**, and Cranmer, S. 1996, “Sudden Radiative Braking in Colliding Hot-Star Winds”, in *Colling Winds in Binary Stars*, V. Niemala and N. Morrell, eds., (Kluwer: Dordrecht).
55. **Owocki, S. P.**, Cranmer, S., and Gayley, K. 1996, “Inhibition of Wind-Compressed Disk Formation by Nonradial Line Forces in Rotating Hot-Star Winds”, *Astrophys. J. Lett.*, 472, L115.
56. Fullerton, A., Massa, D., Prinja, R., Cranmer, S, and **Owocki, S. P.**, 1996, “Structure in the Photophere and Stellar Wind of HD 64760 (B0.5 Ib)”, in *Newsletter on Analysis of Astronomical Spectra*, C.S. Jefferey, ed., no. 23, p. 50. (ISSN 0962-6034).
57. **Owocki, S. P.**, Cranmer, S., and Gayley, K., 1996, “Origin of OB Wind Discrete Absorption Components and Be star Disks”, in *Newsletter on Analysis of Astronomical Spectra*, C.S. Jefferey, ed., no. 23, p. 42. (ISSN 0962-6034).
58. Gayley, K., **Owocki, S. P.**, and Cranmer, S. 1997, “Sudden Radiative Braking in Colliding Hot-Star Winds”, *Astrophys. J.*, 475, 786.
59. **Owocki, S. P.**, and Gayley, K. 1997, “The Physics of Stellar Winds Near the Eddington Limit”, in *Luminous Blue Variables: Massive Stars in Transition*, (P.A.S.P.: San Fransico), H. Lamers and A. Nota, eds., p. 121.
60. **Owocki, S. P.** and Gayley, K. 1996, “Effect of Gravity Darkening on Bistable Winds in B[e] Stars”, *B.A.A.S.*, 189, 48070.
61. Feldmeier, A., Norman, C., Pauldrach, A., Puls, J, **Owocki, S. P.**, and Kaper, L. 1997, “Can the line-driven instability form BAL QSO clouds?”, in *Mass Ejection from AGNs*, Arav, N., Shlosman, I., Weymann, R. (eds.), (PASP: San Francisco), p. 285.
62. Fullerton, A., Massa, D., Prinja, R., **Owocki, S. P.**, and Cranmer, S. 1997, “Wind Variability of B Supergiants: III. Corotating Spiral Structures in the Stellar Wind of HD64760”, *Astron. Astrophys.*, 327. 699.
63. **Owocki, S. P.**, Cranmer, S., and Gayley, K. 1998, “Effect of Gravity Darkening on Radiatively Driven Mass Loss from Rapidly Rotating Hot-Stars”, in *Boulder-Munich Workshop II*, I. Howarth , ed., PASP, p. 237.
64. Puls, J., Kudritzki, R.-P., Santolaya-Rey, A. E., Herrero, A., **Owocki, S. P.** 1998, “Spectral Diagnostics of Blue Stars with Winds”, in *Boulder-Munich Workshop II*, I. Howarth , ed., PASP, p. 245.
65. **Owocki, S. P.**, Cranmer, S., and Gayley, K. 1998, “Latitudinal Dependence of Radiatively Driven Mass Loss from Rapidly Rotating Hot Stars”, in *B[e] Stars*, A. Hubert and C. Jaschek,

- eds., Kluwer, 205.
66. Feldmeier, A. and **Owocki, S. P.** 1998, “Line-Driven Instability”, in *Non-Equilibrium Radiative Hypersonic Flows*, A. Acker, J. Lafon, and A. Moffat, eds., Kluwer, Astrophysics & Space Science, 260, 113.
 67. **Owocki, S. P.**, Cranmer, S., and Gayley, K. 1998, ‘Mass Loss from Rotating Hot Stars: Inhibition of Wind Compressed Disks by Nonradial Line Forces”, in *Non-Equilibrium Radiative Hypersonic Flows*, A. Acker, J. Lafon, and A. Moffat, eds., Kluwer, Astrophysics & Space Science, 260, 149.
 68. **Owocki, S. P.** 1998, “Modelling Variability in Hot-Star Winds”, in Proceedings of Workshop on *Cyclical Variability in Stellar Winds*, held in Garching, Germany, Oct. 1997, L. Kaper and A. Fullerton, eds., Kluwer, 325.
 69. Puls, J., Springmann, U., and **Owocki, S. P.** 1998, “Metallicity Dependence of Stellar Outflows and their Variability”, in Proceedings of Workshop on *Cyclical Variability in Stellar Winds*, held in Garching, Germany, Oct. 1997, L. Kaper and A. Fullerton, eds., Kluwer, 389.
 70. **Owocki, S. P.** 1998, “Turbulence in Line-Driven Stellar Winds”, *Interstellar Turbulence*, Proceedings of the 2nd Guillermo Haro Conference, held in Puebla, Mexico, Jan. 1998, J. Franco, and A. Carraminana, eds., Cambridge University Press, p. 310.
 71. **Owocki, S. P.**, and Puls, J. 1999, “Line-Driven Stellar Winds: The Dynamical Role of Diffuse Radiation Gradients and Limitations to the Sobolev Approach”, *Astrophys. J.*, 510, 355.
 72. **Owocki, S. P.** 1999, “Co-Rotating Interaction Regions in 2D Hot-Star-Wind Models with Line-Driven Instability”, IAU Colloquium 169, *Variable and Non-spherical Stellar Winds in Luminous Hot Stars*, B. Wolf, A. Fullerton, and O. Stahl, eds., Springer Lecture Series in Physics, p. 294.
 73. Gayley, K. G., **Owocki, S. P.**, and Cranmer, S. R. 1999, “Line-Driven Ablation by External Irradiation”, IAU Colloquium 169, *Variable and Non-spherical Stellar Winds in Luminous Hot Stars*, B. Wolf, A. Fullerton, and O. Stahl, eds., Springer Lecture Series in Physics, p. 150.
 74. Gayley, K. G., **Owocki, S. P.**, and Cranmer, S. R. 1999, “Line-Driven Ablation and Wind Tilting by External Irradiation”, *Astrophys. J.*, 513, 442.
 75. **Owocki, S. P.** and Gayley, K. G. 1999, “Dynamics and Variability of Winds from Single WR Stars”, in Proceedings of IAU Symposium #193, *Wolf-Rayet Phenomena in Massive Stars and Starburst Galaxies*, K. Van der Hucht, G. Koenigsberger, and P. Eenens, eds., p. 157.
 76. Gayley, K. G. and **Owocki, S. P.** 1999, “Dynamics and Variability of Winds in WR+O Binaries”, in Proceedings of IAU Symposium #193, *Wolf-Rayet Phenomena in Massive Stars and Starburst Galaxies*, K. Van der Hucht, G. Koenigsberger, and P. Eenens, eds., p. 168.
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