Dr. John P. Wisniewski

NPP Fellow
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1. Research Interests

- **Circumstellar Disks:** I use multi-wavelength observational techniques to investigate the structure, evolution, and origin of circumstellar disks and envelopes. My current research concentrates on: a) spatially resolving structure in protoplanetary and debris disks as means to diagnose the formation and early evolution of exoplanetary systems; and b) diagnosing the geometry of massive main- and post-main-sequence circumstellar disk systems.
- **Extrasolar Planets:** I am currently engaged in projects which use transit photometry and high-precision astrometry as means to detect new extrasolar planetary systems.
- **Observational Polarimetry**

2. Education

Ph.D., Physics, University of Toledo Advisor: Karen S. Bjorkman *2005*
M.S., Physics, University of Toledo *2002*
B.S., Astrophysics, University of Wisconsin Thesis Advisor: K.H. Nordsieck *1999*

3. Employment History

NPP Fellow (aka NRC Fellowship) *9/2006 to present*
Post-doc USRA/NASA GSFC Research Mentor: Mark Clampin *9/2005 - 8/2006*
NASA GSRP Fellow University of Toledo *9/2003 - 12/2005*
Instructor University of Toledo *1/2003 - 6/2003*
Ritter Observatory Research Assistant University of Toledo *9/2001 - 8/2003*
Graduate Research Assistant University of Toledo *summer 2000, 2001*
Teaching Assistant University of Toledo *9/1999 - 5/2001*
Research Assistant Space Astronomy Lab U. Wisconsin *6/1996 - 8/1999*

4. Teaching Experience

Instructor, University of Toledo *Spring 2003*

175 student, non-science major astronomy 101 class

Teaching Assistant, University of Toledo *9/1999 - 5/2001*

Astronomy lab instructor, calculus and non-calculus based physics discussion section leader and lab instructor

Guest Lecturer, University of Toledo *2004-2005*

I served as a guest lecturer for Dr. A Miroshnichenko (Introductory Astronomy: non-majors), Dr. K Bjorkman (Astrophysics: for majors), and Dr. L Anderson-Huang (Introductory Physics: non calculus-based).

Student Research Mentoring

2001 - Amanda Gault, University of Toledo undergraduate student (co-mentor)
2004 - Adam Kowalski, University of Chicago undergraduate student (co-mentor)
2007 - Brad Rush, University of Toledo graduate student
2007 - Adam Kowalski, University of Washington graduate student

CAPER Teaching Workshop *Winter 2003*

I participated in a 1-day workshop led by the Conceptual Astronomy & Physics Research Team. Through this workshop I learned how to incorporate active learning techniques, such as think-pair-share questions and lecture-tutorials, into my teaching practice.

5. Education and Public Outreach

Project ASTRO

Assisted K-12 teachers with the development and implementation of hands-on learning activities.

Ritter Observatory/Brooks Planetarium Outreach Liaison

Conducted public observing sessions and observatory tours, utilizing 10 inch and 40 inch telescopes.

Toledo Astronomical Association (TAA) Guest Lecturer

Presented numerous 1-hour public lectures to the TAA amateur astronomy group.

TAA Star Parties

I served as a frequent guest lecturer at TAA star parties, and served as a guest astronomer during night-time viewing.

FIRST LL judge

I served as a science panel expert for the Toledo chapter of the FIRST Lego League robotic-oriented science competition.

Science Fair Judge

I have served as a physics/astronomy judge for numerous science fairs throughout my tenure as a graduate student as post-doctoral researcher.

6. Grant and Scholarship History

Chandra Cy-9 GO-09200830 (co-I) *2007 - present*
HST Cy-16 GO-11214 (PI) $11,613 *2007 - present*
HST Cy-16 GO-11155 (co-I) *2007 - present*
FUSE Cy-8 GO-0052 (PI) $ 26,500 *2007 - present*
NPP Fellowship (PI) $121,500 *2006 - present*

HST Cy-15 AR-10936 (co-I) $19,450 subcontract *2006 - present*
HST Cy-15 GO-10897 (co-I) *2006*
HST Cy-15 GO-10895 (co-I) *2006*
AAS International Travel Grant (PI) $1255 *2006*
AAS International Travel Grant (PI) $936 *2005*
NASA GSRP Fellowship (PI) $72,000 *2003 - 2005*
GSA Career Development Award $175 *2004*
Sigma-Xi GIAR (PI) $750 *2003*
Theodore Dunham Jr. Grant (Morrison PI) $2160 *2001*
Wisconsin Space Grant Consortium Scholarship $500 *1998*
Wisconsin Academic Excellence Scholarship full tuition to U. Wisc. *1995 - 1999*

7. Observing Time Allocations and Experience

Ground-based Observatories

1996-1999 PBO 1m - 1 night per week
2001-2005 Ritter 1m - ∼1 night per week
2001B-0326 (co-I) CTIO 1.5m - 10 nights
2002B-0310 (co-I) CTIO 1.5m - 10 nights
2002B-0310 (co-I) CTIO 0.9m - 5 nights
2004A-029 (co-I) NASA IRTF 3m - 3 nights
2004B-0350 (co-I) CTIO 4.0m - 5 nights
2004B-0357 (co-I) CTIO 4.0m - 1 night
2005B-0350 (co-I) CTIO 4.0m - 4 nights
2005B-042 (co-I) NASA IRTF 3m - 4 nights
2006B-057 (co-I) NASA IRTF 3m - 4 nights
2006B-015 (co-I) NASA IRTF 3m - 6 nights
2006B-0323 (co-I) Gemini South 8.0m - 20 hours
2006B-0554 (PI) Gemini North 8.0m - 5 hours
2007A-028 (co-I) NASA IRTF 3m - 5 nights
2007A-048 (co-I) NASA IRTF 3m - ∼10 nights
2007A-0182 (PI) Gemini North 8.0m - 9.8 hours
2007A-0023 (PI) UKIRT 3.8m - 16 hours
2007A-079C-410 (co-I) VLT 8.0m - 10.5 hours
2007A-079C-420 (co-I) VLT 8.0m - 14.4 hours
2007B-0023 (PI) UKIRT 3.8m - 16 hours
2007B-069 (co-I) NASA IRTF 3m - 5 nights
2007B-008 (co-I) NASA IRTF 3m - 7 nights

Space-based Observatories

Chandra Cycle 9 GO-09200830 (co-I) - 10 kiloseconds
HST Cycle16 GO-11214 (PI) - 6 orbits per cycle, 3 cycle duration
HST Cycle16 GO-11155 (co-I) - 17 orbits

HST Cycle15 GO-10895 (co-I) - 12 orbits
HST Cycle15 GO-10897 (co-I) - 9 orbits
FUSE Cycle 8 GO-0052 (PI) - 84 kiloseconds

8. Professional Talks

1. Carnegie Institution of Washington, DTM Seminar, October 2007
2. Joint Astronomy Centre, Seminar, June 2007
3. Goddard Space Flight Center, SEAL Seminar, May 2007
4. Goddard Space Flight Center, Exoplanet Club Seminar, December 2006
5. University of Sao Paulo, Astronomy Colloquium, September 2006
6. Gemini Observatory + CTIO, Astronomy Colloquium, January 2005

9. Refereed Publications

1. **Wisniewski, J.P.**, Bjorkman, K.S., Bjorkman, J.E., & Clampin, M. 2007, "Discovery of a New Dusty B[e] Star in the Small Magellanic Cloud", ApJ, 670, in press
2. **Wisniewski, J.P.** Bjorkman, K.S., Magalhaes, A.M., Bjorkman, J.E., Meade, M.R., & Pereyra, A. 2007, "The Role of Evolutionary Age and Metallicity in the Formation of Classical Be Cicumstellar Disks II. Assessing the Evolutionary Nature of Candidate Disk Systems", ApJ, 670, in press
3. **Wisniewski, J.P.**, Bjorkman, K.S., Magalhaes, A.M., & Pereyra, A. 2007, "The Magnetic Field Structure of the LMC 2 Supershell: NGC 2100", ApJ, 664, 296
4. **Wisniewski, J.P.**, Kowalski, A.F., Bjorkman, K.S., Bjorkman, J.E., & Carciofi, A.C. 2007, "Toward Mapping the Detailed Density Structure of Classical Be Circumstellar Disks", ApJL, 656, 21
5. **Wisniewski, J.P.** & Bjorkman, K.S. 2006, "The Role of Evolutionary Age and Metallicity in the Formation of Classical Be Circumstellar Disks I. New Candidate Be Stars in the LMC, SMC, and Milky Way", ApJ, 652, 458
6. **Wisniewski, J.P**, Babler, B.L., Bjorkman, K.S., Kurchakov, A.V., Meade, M.R., & Miroshnichenko, A.M. 2006, "The Asymmetrical Wind of the Candidate Luminous Blue Variable MWC 314", PASP, 118, 820
7. Pogodin, M.A., Miroshnichenko, A.S., Tarasov, A.E., Mitskevish, M.P., Chountonov, G.A., Klochkova, V.G., Yushkin, M.V., Manset, N., Bjorkman, K.S., Morrison, N.D., & **Wisniewski, J.P.** 2004, "A New Phase of Activity of the Herbig Be Star HD 200775 in 2001: Evidence for Binarity", A&A, 417, 715

8. **Wisniewski, J.P.**, Bjorkman, K.S., & Magalhaes, A.M. 2003, "Evolution of the Inner Circumstellar Envelope of V838 Monocerotis", ApJL, 598, 43

9. Miroshnichenko, A.S., Bjorkman, K.S., Morrison, N.D., **Wisniewski, J.P.**, Manset, N., Levato, H., Grosso, M., Pollmann, E., Buil, C., & Knauth, D.C. 2003, "Spectroscopy of the Growing Circumstellar Disk in the delta Scorpii Be Binary", A&A, 408, 305

10. **Wisniewski, J.P.**, Morrison, N.D., Bjorkman, K.S., Miroshnichenko, A.S., Gault, A.C., Hoffman, J.L., Meade, M.R., & Nett, J.M. 2003, "Spectroscopic and Spectropolarimetric Observations of V838 Monocerotis", ApJ, 588, 486

11. Miroshnichenko, A.S., Mulliss, C.L., Bjorkman, K.S., Morrison, N.D., Kuratov, K.S., & **Wisniewski, J.P.** 1999, "Six Intermediate-Mass Stars with Far-Infrared Excess: A Search for Evolutionary Connections", MNRAS, 302, 612

10. Papers Submitted or In-Prep

1. **Wisniewski, J.P.**, Bjorkman, K.S., Magalhaes, A.M., & Bjorkman, J.E. 2007, "Aligned Disk Systems in the Young LMC Clusters NGC 1948 and NGC 2100", AJ, submitted

2. Sitko, M.L., Carpenter, W.J., Kimes, R.L., Wilde, J.L., Lynch, D.K., Russell, R.W., Rudy, R.J., Mazuk, S.M., Venturini, C.C., Puetter, R.C., Grady, C.A., Polomski, E.F., **Wisniewski, J.P.**, Brafford, S.M., Hummel, H.B., & Perry, R.B. 2007, "Variability of Disk Emission in Pre-Main Sequence and Related Stars I. HD 31648 and HD 163196 - Isolated Herbig Ae Stars Driving Herbig-Haro Flows", ApJ, submitted

3. Barry, R.K., Danchi, W.C., Sokoloski,J.L., Koresko, C., **Wisniewski, J.P.**, Serabyn, E., Traub, W., Kuchner, M., & Greenhouse, M.A. 2007, "High Resolution N-Band Observations of the Nova RS Ophiuchi with the Keck Interferometer Nuller", ApJ, submitted

4. **Wisniewski, J.P.**, Clampin, M., Grady, C., Ardila, D., Ford, H., Golimowski, D., Illingworth, G., Krist, J. 2007, "The HD 163296 Circumstellar Disk in Scattered Light: Evidence of Time-Variable Self-Shadowing", ApJ, submitted

5. Collins, K., Grady, C., **Wisniewski, J.P.**, Hamaguchi, K., van Boekel, R., Brittain, S., Carmona, A., Williger, G., van den Ancker, M., Sitko, M., Carpenter, W., Woodgate, B., Henning, T., & Petri, R. 2007, "The Disk and Environment of the Herbig Ae Star HD 100453", ApJ, in prep

6. Bjorkman, K.S., **Wisniewski, J.P.**, & Meade, M.R. "Interstellar Polarization Along the Line of Sight to Pi Aquarii", AJ, in prep

11. Conference Proceedings

1. **Wisniewski, J.P.**, Bjorkman, K.S., Magalhaes, A.M., & Bjorkman, J.E. 2007, in IAU 250, Massive Stars as Cosmic Engines (Cambridge University Press, ed. F. Bresolin, P. Crowther, & J. Puls), submitted

2. Bjorkman, K.S., Hesselbach, E.N., **Wisniewski, J.P.**, Kowalski, A.F., Bjorkman, J.E., & Carciofi, A.C. 2007, in IAU 250, Massive Stars as Cosmic Engines (Cambridge University Press, ed. F. Bresolin, P. Crowther, & J. Puls), submitted

3. **Wisniewski, J.P.** 2007, in ASP Conf. Ser., The Nature of V838 Monocerotis and Its Light Echo, ed. R. Corradi & U. Munari (San Francisco: ASP), 363,

4. **Wisniewski, J.P.**, Bjorkman, K.S., Magalhaes, A.M., & Bjorkman, J.E. 2007, in ASP Conf. Ser., Active OB Stars: Laboratories for Stellar and Circumstellar Physics, ed. S. Stefl, S. Owocki, & A.T. Okazaki (San Francisco: ASP), 361, 527

5. **Wisniewski, J.P.**, Kowalski, A.F., Bjorkman, K.S., & Bjorkman, J.E. 2007, in ASP Conf. Ser., Active OB Stars: Laboratories for Stellar and Circumstellar Physics, ed. S. Stefl, S. Owocki, & A.T. Okazaki (San Francisco: ASP), 361, 524

6. **Wisniewski, J.P** , Bjorkman, K.S., & Bjorkman, J.E. 2005, in ASP Conf. Ser. 343, Astronomical Polarimetry: Current Status and Future Directions, ed. A. Adamson, C. Aspin, & C.J. Davis (San Francisco: ASP), 288

7. **Wisniewski, J.P.**, Bjorkman, K.S., Magalhaes, A.M., Bjorkman, J.E., Carciofi, A.C. 2005, in ASP Conf. Ser. 337, The Nature and Evolution of Disks Around Hot Stars, ed. R. Ignace & K. Gayley (San Francisco: ASP), 333

8. Bjorkman, K.S., **Wisniewski, J.P.**, Bjorkman, J.E., & Hesselbach, E.N. 2005, in Proceedings of Protostars and Planets V, 1286, 8416

9. Nordsieck, K.H., **Wisniewski, J.P.**, & 9 additional co-authors 2001, in ASP Conf. Ser. 233, P Cygni 2000: 400 Years of Progress, ed. M. de Groot & C. Sterken (San Francisco: ASP), 261

12. Non-refereed Abstracts

1. **Wisniewski, J.P.**, Kowalski, A.F., Clampin, M., Grady, C.A., Sitko, M.L., Bjorkman, K.S., Hines, D.C., & Whitney, B.A. 2007, BAAS, 211, submitted

2. Sitko, M.L., Russell, R.W., Lynch, D,K., Rudy, R.J., Mazuk, S.M., Venturini, C.C., Carpenter, W.J., Kimes, R.L., Beerman, L.C., Ablordeppey, K.E., Grady, C.A., **Wisniewski, J.P.**, Polomski, E.F., Brafford, S.M., Hammel, H.B., Perry, R.B., & Wilde, J.L. 2007, BAAS, 211, submitted

3. Barry, R.K., Danchi, W.C., Sokoloski,J.L., Koresko, C., **Wisniewski, J.P.**, Serabyn, E., Traub, W., Kuchner, M., & Greenhouse, M.A. 2007, BAAS, 211, submitted

4. Sitko, M.L., Carpenter, W.J., Grady, C.A., Russell, R.W., Lynch, D,K., Rudy, R.J., Mazuk, S.M., Venturini, C.C., Kimes, R.L., Beerman, L.C., Ablordeppey, K.E., Puetter, R.C., **Wisniewski, J.P.**, Brafford, S.M., Polomski, E.F., Hammel, H.B., Perry, R.B., & Wilde, J.L. 2007, DPS, 42.01

5. **Wisniewski, J.P.**, Clampin, M., Grady, C., Ardila, D., Ford, H., Golimowski, D., Illingworth, G., Krist, J. 2007, in proceedings of the In the Spirit of Lyot Conference (ed. P. Kalas), 48

6. Grady, C., Schneider, G., Woodgate, B.E., **Wisniewski, J.P.**, Brittain, S., Sitko, M.L., & Collins, K. 2007, in proceedings of the In the Spirit of Lyot Conference (ed. P. Kalas), 34

7. Bjorkman, K.S., **Wisniewski, J.P.**, Bjorkman, J.E., & Clampin, M. 2007, BAAS, 210, 8801

8. Collins, K., Grady, C., **Wisniewski, J.P.**, Hamaguchi, K., van Boekel, R., Brittain, S., Carmona, A., Williger, G., van den Ancker, M., Sitko, M., Carpenter, W., Woodgate, B., Henning, T., & Petri, R. 2007, BAAS, 210, 8714

9. **Wisniewski, J.P.**, Clampin, M., Grady, C., Ardila, D., Ford, H., Golimowski, D., Illingworth, G., Krist, J., & the HST ACS Science Team 2006, BAAS, 127.01

10. Bjorkman, K.S., Hesselbach, E.N., **Wisniewski, J.P.**, & Bjorkman, J.E. 2006, BAAS, 81.05

11. Petro, L.D., Hebb, L., Ford, H., Golimowski, D., Rogers, J., Sackett, P., Lewis, K., Clampin, M., **Wisniewski, J.P.**, Minniti, D., Toledo, I., Espinoza, P., & Ardila, D. 2006, BAAS, 196.06

12. Bjorkman, K.S., **Wisniewski, J.P.**, Bjorkman, J.E., & Hesselbach, E.N. 2005, BAAS, 207, 7421

13. **Wisniewski, J.P** 2005, BAAS, 207, 3903

14. **Wisniewski, J.P.**, Kowalski, A.F., Bjorkman, K.S., & Bjorkman, J.E. 2005, BAAS, 206, 0803

15. Bjorkman, K.S. & **Wisniewski, J.P.** 2004, BAAS, 204, 4508

16. **Wisniewski, J.P.**, Babler, B.L., Bjorkman, K.S., Meade, M.R., & Miroshnichenko, A.M. 2004, BAAS, 204, 0713

17. Bjorkman, K.S., **Wisniewski, J.P.**, & Magalhaes, A.M. 2002, BAAS, 201, 14407

18. **Wisniewski, J.P.**, Bjorkman, K.S., Magalhaes, A.M., & Bjorkman, J.E. 2002, BAAS, 201, 8104

19. **Wisniewski, J.P.**, Bjorkman, K.S., Bjorkman, J.E., Summers, G., & Meade, M.R. 2002, BAAS, 200, 7413

20. Morrison, N.D., Bjorkman, K.S., Miroshnichenko, A.S., & **Wisniewski, J.P.** 2002, IAU Circ., 7829, 2

13. Professional References

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