

S. Drew Chojnowski

CONTACT INFORMATION	3245 E University Ave, Apt 1016 Las Cruces, NM 88011	434-996-9855 drewski@nmsu.edu
CURRENT POSITION	Beginning January 2014 I have served as the plate design coordinator for the SDSS-IV/APOGEE2 survey, in charge of among other things developing, maintaining, and running APOGEE target selection & plate design software (written in IDL), delivering final plug-plate target lists, loading target & plate information into APO databases, and creating targeting flat files for data releases. Prior to this, I was the SDSS-III/APOGEE1 plate design coordinator from 12/2011 – 12/2013. I was stationed at the University of Virginia until June 2014, then relocated to New Mexico State University upon request. I am an SDSS-III architect and leader of the APOGEE hot/emission stars group.	
RESEARCH INTERESTS	Spectroscopy, emission line stars, AGN/Seyfert galaxies, black holes and other compact objects, spectral classification, binary stars, peculiar stars	
EDUCATION	Texas Christian University (TCU) , Fort Worth, TX B.S., Physics & Astronomy, Aug 2011 • Projects: (1) <i>Luminous Blue Compact Galaxies in SDSS DR1-7</i>, (2) <i>Galaxy-sized Clouds of AGN-ionized Gas</i>, (3) <i>Bulk Radial Velocities of Open Clusters</i> • Advisors: (1) Michael Fanelli, (2) Bill Keel (Alabama), (3) Peter Frinchaboy Tarrant County College (TCC) , Fort Worth, TX Attended from August 2006 through May 2007, then transferred to TCU. Louisiana State University (LSU) , Baton Rouge, LA Attended from August 2004 through February 2006. Returned to Fort Worth due to complications in aftermath of Hurricanes Katrina and Rita.	
PAID UNDERGRADUATE RESEARCH EXPERIENCE	Summer Research Assistant Dept. of Physics & Astronomy, Texas Christian University Supervisor: Peter Frinchaboy Summer Research Intern REU Program: Southeastern Association for Research in Astronomy (SARA), University of Alabama Supervisor: Bill Keel Research Assistant Dept. of Physics & Astronomy, Texas Christian University Supervisor: Michael Fanelli Summer Research Intern REU Program: Dept. of Physics & Astronomy, Texas Christian University Supervisor: Michael P. Fanelli	June 2011 to Aug 2011 May 2010 to Aug 2010 Aug 2009 to Jan 2010 May 2009 to Aug 2009

TEACHING EXPERIENCE	Research Supervisor 01/2013 – 01/2014 Matthew Hall, UVA undergraduate <i>Optical spectroscopy of Be stars</i> With Steve Majewski serving as overall supervisor, I created and directed Matt's project. In addition to measuring double emission peak separation for Be stars from APOGEE data, Matt searched for and analyzed corresponding optical spectra from the Be Star Spectra Database (BeSS). He was a co-author on my 2015 paper, and presented a related poster at the 223rd AAS meeting.
	Assistant Research Supervisor 06/2012 – 05/2013 Sten Hasslequist, UVA undergraduate <i>APOGEE observation of the Sgr dSph galaxy</i> With Steve Majewski serving as overall supervisor, I regularly fielded questions from Sten regarding APOGEE data and software/programming.
	Tutor 08/2010 – 12/2010 TCU undergraduates I tutored non-physics majors during this semester, primarily helping them solve physics I problems.
OBSERVING AND DATA REDUCTION EXPERIENCE	• APO 3.5m + ARCES/TripleSpec: spectroscopy – 2.5 nights, 2013–2014 (PI on three separate proposals) • KPNO 2m + GoldCam: spectroscopy – 7 nights, 06/2010 • SARA 0.6m (CTIO): remote imaging – 4 nights, 06/2010–07/2010 • SARA 1m (KPNO): imaging – 1 night, remote imaging – 2 nights, 06/2010 • University of Alabama 16in: imaging – 1 night, 06/2010 • McDonald Observatory 0.8m + PFC: imaging – 4 nights, 10/2009 • In addition to reducing data from the above observing runs, I also reduced long-slit spectra from the Lick 3m + Kast and multi-fiber spectra from WIYN 3.5m + Hydra and CTIO 4m + Hydra.
PROGRAMMING EXPERIENCE	• IDL: programming language of choice; used daily over the past > 3 years for APOGEE work and research • IRAF: used almost-daily over the past > 5 years for data reduction and basic analysis • HTML: frequent use; I write IDL scripts that generate HTML pages for research purposes, e.g. astronomy.nmsu.edu/drewski/apogee-sb2/apSB2.html • LaTeX: frequent use; this document is an example • Linux Shell Scripting: frequent use of utilities such as Awk, paste, sort, and grep. • Python/PyLab/Matplotlib: used for plotting data prior to learning IDL; for examples, see the figures in Keel et al. 2012 (2012MNRAS.420..878K) • Microsoft Office: reluctant expert in Excel, Powerpoint, and Word.
AWARDS, HONORS, & LEADERSHIP	• SDSS-III Architect, December 2014 • PI of the APOGEE hot/emission stars group, 02/2012–present • Joseph Morgan Physics scholarship, TCU, 01/2010 • First place poster for Physics & Astronomy undergraduates at the Student Research Symposium, TCU, 04/2010 (<i>Open Clusters as Milky Way Disc Tracers</i>) • Science & Engineering Research Center SERC grant, TCU, 05/2010 (used the \$670 to purchase an additional computer for the astrophysics lab)
PROFESSIONAL SOCIETIES AND OUTREACH	• Member, American Astronomical Society, 2013–present • Junior member, American Astronomical Society, 2009–2013 • President, TCU chapter of the Society of Physics Students, 2010–2011 • Guest speaker, Benbrook Elementary College Day, 04/2008 & 04/2011 • Undergraduate recruiter, TCU Physics & Astronomy, spring 2010 & 2011

1. **Chojnowski, S. D.**; Keel, W. C. “*Galaxy-Scale Clouds of Ionized Gas around AGN.*” JSARA, vol. 5, p. 29-33, 02/2012.
2. Keel, William C.; **Chojnowski, S. Drew**; Bennert, Vardha N.; Schawinski, Kevin; Lintott, Chris J.; Lynn, Stuart; Pancoast, Anna; Harris, Chelsea; Nierenberg, A. M.; Sonnenfeld, Alessandro; Proctor, Richard “*The Galaxy Zoo survey for giant AGN-ionized clouds: past and present black hole accretion events.*” MNRAS, Volume 420, Issue 1, pp. 878-900, 02/2012
3. Keel, William C.; Lintott, Chris J.; Schawinski, Kevin; Bennert, Vardha N.; Thomas, Daniel; Manning, Anna; **Chojnowski, S. Drew**; van Arkel, Hanny; Lynn, Stuart “*The History and Environment of a Faded Quasar: Hubble Space Telescope Observations of Hanny’s Voorwerp and IC 2497.*” AJ, Volume 144, Issue 2, article id. 66, 16 pp., 08/2012
4. Zasowski, G.; Johnson, Jennifer A.; Frinchaboy, P. M.; Majewski, S. R.; Nidever, D. L.; Rocha Pinto, H. J.; Girardi, L.; Andrews, B.; **Chojnowski, S. D.**; Cudworth, K. M.; and 36 coauthors “*Target Selection for the Apache Point Observatory Galactic Evolution Experiment (APOGEE).*” AJ, Volume 146, Issue 4, article id. 81, 28 pp., 10/2013
5. Mészáros, Sz.; Holtzman, J.; García Pérez, A. E.; Allende Prieto, C.; Schiavon, R. P.; Basu, S.; Bizyaev, D.; Chaplin, W. J.; **Chojnowski, S. D.**; Cunha, K.; and 18 coauthors “*Calibrations of Atmospheric Parameters Obtained from the First Year of SDSS-III APOGEE Observations.*” AJ, Volume 146, Issue 5, article id. 133, 19 pp., 11/2013
6. Eikenberry, Stephen S.; **Chojnowski, S. Drew**; Wisniewski, John; Majewski, Steven R.; Shetrone, Matthew; Whelan, David G.; Bizyaev, Dmitry; Borish, H. Jacob; Davenport, James R. A.; Ebelke, Garrett; and 12 coauthors “*Discovery of Two Rare Rigidly Rotating Magnetosphere Stars in the APOGEE Survey.*” ApJL, Volume 784, Issue 2, article id. L30, 5 pp., 04/2014
7. Many authors “*The Tenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Apache Point Observatory Galactic Evolution Experiment.*” AJ, Volume 146, Issue 4, article id. 81, 28 pp., 10/2013
8. Bovy, Jo; Nidever, David L.; Rix, Hans-Walter; Girardi, Léo; Zasowski, Gail; **Chojnowski, S. Drew**; Holtzman, Jon; Epstein, Courtney; Frinchaboy, Peter M.; Hayden, Michael R.; and 41 coauthors “*The APOGEE Red-clump Catalog: Precise Distances, Velocities, and High-resolution Elemental Abundances over a Large Area of the Milky Way’s Disk.*” ApJ, Volume 790, Issue 2, article id. 127, 21 pp., 08/2014
9. Cottaar, Michiel; Covey, Kevin R.; Meyer, Michael R.; Nidever, David L.; Stassun, Keivan G.; Foster, Jonathan B.; Tan, Jonathan C.; **Chojnowski, S. Drew**; da Rio, Nicola; Flaherty, Kevin M.; and 5 coauthors “*IN-SYNC I: Homogeneous Stellar Parameters from High-resolution APOGEE Spectra for Thousands of Pre-main Sequence Stars.*” ApJ, Volume 794, Issue 2, article id. 125, 18 pp., 10/2014
10. **Chojnowski, S. Drew**; Whelan, David G.; Wisniewski, John P.; Majewski, Steven R.; Hall, Matthew; Shetrone, Matthew; Beaton, Rachael; Burton, Adam; Damke, Guillermo; Eikenberry, Steve; and 19 coauthors “*High-Resolution H-Band Spectroscopy of Be Stars With SDSS-III/Apogee: I. New Be Stars, Line Identifications, and Line Profiles.*” AJ, Volume 149, Issue 1, article id. 7, 30 pp., 01/2015

SUBMITTED
JOURNAL
PUBLICATIONS

1. Keel, William C.; Maksym, W. Peter; Bennert, Vardha N.; Lintott, Chris J.; **Chojnowski, S. Drew**; Moiseev, Alexei; Smirnova, Aleksandrina; Schawinski, Kevin; Urry, C. Megan; Evans, Daniel A.; and 4 coauthors “*HST Imaging of Fading AGN Candidates I: Host-Galaxy Properties and Origin of the Extended Gas.*” Submitted to AJ, 2014
2. Foster, Jonathan B.; Cottaar, Michiel; Covey, Kevin R.; Arce, Héctor G.; Meyer, Michael R.; Nidever, David L.; Stassun, Keivan G.; Tan, Jonathan C.; **Chojnowski, S. Drew**; da Rio, Nicola; and 7 coauthors “*IN-SYNC II: Virial Stars from Sub-Virial Cores – The Velocity Dispersion of Embedded Pre-Main-Sequence Stars in NGC 1333.*” Accepted to ApJ, 2015
3. Many authors “*The Eleventh and Twelfth Data Releases of the Sloan Digital Sky Survey: Final Data from SDSS-III.*” Submitted to ApJS, 2015

PAPERS IN
PREPARATION

1. Zasowski, Gail; **Chojnowski, S. Drew**; Whelan, David; Miroshnichenko, Anatoly; Nidever, David L. “*An Anomalous Infrared Diffuse Interstellar Band in the Red Square Nebula.*”
2. Whelan, David; **Chojnowski, S. Drew**; Whelan, David; Miroshnichenko, Anatoly; Wisniewski, John P.; Zasowski, Gail “*APOGEE Observations of MWC 922 and the Red Square Nebula.*”
3. Wisniewski, John P.; **Chojnowski, S. Drew**; Whelan, David G.; Majewski, Steven R.; and more “*High-Resolution H-Band Spectroscopy of Be Stars With SDSS-III/Apogee: II. Spectral Variability.*”
4. **Chojnowski, S. Drew**; Wisniewski, John P.; Whelan, David G.; Majewski, Steven R.; and more “*High-Resolution H-Band Spectroscopy of Be Stars With SDSS-III/Apogee: III. Optical Follow-up Spectroscopy.*” (pending decision, the associated APO 3.5m + ARCES data may be used in paper II instead)
5. Wisniewski, John P.; **Chojnowski, S. Drew**; Eikenberry, Steven S.; and more “*Simultaneous Optical and NIR Spectroscopic Monitoring of the Newly-discovered σ Ori E Type Star HD 345439.*” (based on APO 3.5m telescope observations, using TripleSpec and ARCES)
6. Hasslequist, Sten; **Chojnowski, S. Drew** “*High-resolution, H-band Spectroscopy of Chemically-peculiar Stars in the SDSS-III/APOGEE Survey.*” (study of a sample of 300 AP/Bp stars with Ce III absorption lines that are occasionally Zeeman split)

PRESENTATIONS

American Astronomical Society (AAS) Posters

1. **Chojnowski, Drew**; Fanelli, M. N.; Newton, C.; Marcum, P. M. “*Galaxies under Assembly: An Investigation of Luminous Blue Compacts in the Sloan Digital Sky Survey.*”, AAS Meeting 215, 412.17, Washington D.C., 01/2010
2. **Chojnowski, Drew**; Keel, W. C. “*Galaxy-scale Clouds Of Ionized Gas Around Agn - History And Obscuration.*”, AAS Meeting 217, 142.07, Seattle WA, 01/2011
3. Keel, William C.; Lintott, C.; Schawinski, K.; Bennert, V.; Thomas, D.; Manning, A.; **Chojnowski, S. D.**; van Arkel, H.; Lynn, S.; Galaxy Zoo Team “*The History And Environment Of A Faded Quasar: HST Observations Of Hanny’s Voorwerp And IC 2497.*”, AAS Meeting 217, 142.08, Seattle WA, 01/2011
4. Frinchaboy, Peter M.; **Chojnowski, D.** “*Bulk Velocities and Orbits of Open Clusters.*”, AAS Meeting 217, 434.50, Seattle WA, 01/2011

5. **Chojnowski, Drew**; Beaton, R.; Burton, A.; Cunha, K. M.; Eikenberry, S. S.; Frinchaboy, P. M.; Hasselquist, S.; Hearty, F. R.; Holtzman, J. A.; Majewski, S. R.; and 12 coauthors “*Characterization of a Large Sample of Be-type Emission-line Stars with SDSS-III/APOGEE.*”, AAS Meeting 221, 144.08, Long Beach CA, 01/2013
6. Wisniewski, John P.; **Chojnowski, D.**; Burton, A.; Cunha, K. M.; Hearty, F. R.; Majewski, S. R.; Meszaros, Sz.; Nidever, D. L.; Schiavon, R. P.; Shetrone, M. D.; Whelan, D. G. “*An Emission-Line Star Conundrum Identified by SDSS-III/APOGEE.*”, AAS Meeting 221, 144.09, Long Beach CA, 01/2013
7. Keel, William C.; Maksym, W. P.; Bennert, V.; Schawinski, K.; Lintott, C. J.; **Chojnowski, D.** “*HST Imaging of Giant Ionized Clouds Around Fading AGN.*”, AAS Meeting 221, 339.47, Long Beach CA, 01/2013
8. **Chojnowski, S. Drew**; Wisniewski, J. P.; Whelan, D. G.; Hall, M.; Majewski, S.; Eikenberry, S. S.; Nidever, D. L.; Shetrone, M. D.; Zasowski, G.; Beaton, R.; and 6 coauthors “*Discovery and Variability of More Than 100 New Be Stars with SDSS-III/APOGEE.*”, AAS Meeting 223, 350.29, Washington D.C., 01/2014
9. Hall, Matthew; **Chojnowski, S.**; Wisniewski, J. P.; Whelan, D. G.; Majewski, S. R.; Eikenberry, S. S.; Nidever, D. L.; Shetrone, M. D.; Hearty, F. R.; Zasowski, G.; and 6 coauthors “*Optical Spectroscopy of Be Stars Identified in SDSS-III/APOGEE Data.*”, AAS Meeting 223, 350.30, Washington D.C., 01/2014
10. Whelan, David G.; **Chojnowski, S.**; Zasowski, G.; Wisniewski, J. P.; Nidever, D. L.; Majewski, S.; SDSS-III/APOGEE Team “*High-Resolution Near-Infrared Spectra of the Proto-Planetary Nebula, MWC 922.*”, AAS Meeting 223, 353.13, Washington D.C., 01/2014
11. **Chojnowski, S. Drew**; Nguyen, Duy Cuong; Nidever, David L.; Zasowski, Gail; Bender, Chad F.; Troup, Nicholas William; Beers, Timothy C.; de Lee, Nathan M.; Fleming, Scott W.; Frinchaboy, Peter M.; and 6 coauthors “*Two for the Price of One: SB2s in the SDSS-III/APOGEE Survey.*”, AAS Meeting 225, 340.05, Seattle WA, 01/2015
12. Labadie-Bartz, Jonathan; Pepper, Joshua; McSwain, M. Virginia; **Chojnowski, S. Drew**; Wisniewski, John P.; Whelan, David G. “*Multi-mode Observations of Be Stars from the APOGEE and KELT Surveys.*”, AAS Meeting 225, 343.01, Seattle WA, 01/2015

American Astronomical Society (AAS) Talks

1. Eikenberry, Stephen S.; **Chojnowski, S.**; Wisniewski, J. P.; Majewski, S. R.; Shetrone, M. D.; Whelan, D. G.; Bizyaev, D.; Borish, H.; Davenport, J. R.; Ebelke, G.; and 11 coauthors “*The APOGEE view of Be stars.*”, AAS Meeting 223, 403.07, Washington D.C., 01/2014 (Steve Eikenberry couldn't make it, so I gave the talk)

SDSS Collaboration Meeting Talks

1. **Chojnowski, S. Drew** “*New σ Ori E Type Stars Discovered with APOGEE.*”, 15-minute talk, Johns Hopkins University, 07/2013

Other Talks

1. **Chojnowski, S. Drew**; Keel, William C. “*Galaxy-Scale Clouds of Ionized Gas around AGN.*”, 45-minute talk, East Tennessee State University (ETSU), SARA REU, 07/2010

REFERENCES

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