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SCIENTIFIC INTERESTS

Protoplanetary disks, exoplanets, star and planet formation, astrostatistics, radio interferometry, spectroscopy

EDUCATION

- 2012 - 2016 *Ph.D.* in Astrophysics, Harvard University, Cambridge, MA
advisor Sean M. Andrews
- 2010 - 2012 *Masters of Arts* in Astronomy and Astrophysics, Harvard University
advisor Edo Berger
- 2006 - 2010 *Bachelor of Science*, Aerospace Engineering, Astronomy, University of Virginia
Jefferson Scholar, Graduated with High Distinction

PROFESSIONAL APPOINTMENTS

- 2020 - present Assistant Professor, Department of Astronomy and Astrophysics
ICDS Co-Hire, Institute for Computational and Data Sciences
Pennsylvania State University
- 2018 - 2020 NASA Hubble Fellowship Program (NHFP) Sagan Postdoctoral Fellow
University of California Berkeley
- 2016 - 2018 Porat Postdoctoral Fellow
Kavli Institute for Particle Astrophysics and Cosmology, Stanford University
- 2010 - 2016 Graduate Student
Harvard University

RESEARCH APPOINTMENTS

- 2018 - 2020 *Architectures and Dynamics of Protoplanetary Systems*, Postdoctoral Advisor Eugene Chiang
- 2016 - 2018 *Disk and Stellar Dynamics of Pre-Main Sequence Systems*, Postdoctoral Advisor Bruce Macintosh
- 2013 - 2016 **Ph.D. Thesis:** *The Fundamental Properties of Young Stars*, CfA, advised by Sean Andrews
- 2012 *MMTCam Commissioning*, Harvard-Smithsonian CfA, advised by Warren Brown
- 2010 - 2012 **Masters project:** *Intermediate Luminosity Transients*, Harvard University, advised by Edo Berger
- 2009 - 2010 *PAPER Instrumentation Study*, University of Virginia, advised by Richard Bradley
- 2009 - 2010 *ALMA Collaborative Engineering Study*, Santiago, Chile, advised by Kelsey Johnson and Alison Peck
- 2009 *Circumstellar Disks*, Smithsonian Astrophysical Observatory REU Intern, advised by Dr. Sean Andrews

HONORS AND AWARDS

2013, 2014	(2) <i>Certificates of Distinction in Teaching</i> , Harvard University
2011 - 2016	NSF Graduate Research Fellowship
2006 - 2010	Jefferson Scholar, UVA, full scholarship
2006 - 2010	Rodman Scholar, UVA
2010	Outstanding SEAS Student, UVA
2010	Louis T. Rader Award for Mechanical and Aerospace Engineering School of Engineering and Applied Sciences, UVA
2010	21 Society Fourth Year Recognition, UVA
2010	Limber Award, UVA Astronomy Department

REFEREED PUBLICATION SUMMARY

First author: 9 / total: 61 / citations (all): 2440 / h-index (all): 26 / (2021-09-21) [[link](#)]

FIRST AND SECOND AUTHOR REFEREED PUBLICATIONS

- [1] *A Coplanar Circumbinary Protoplanetary Disk in the TWA 3 Triple M Dwarf System*, **Czekala, Ian**, Ribas, Á., Cuello, N., Chiang, E., Macías, E., Duchêne, G., Andrews, S. M., and Espaillat, C. C. 2021, [ApJ](#), **912**, 6
- [2] *Dynamical Masses and Stellar Evolutionary Model Predictions of M Stars*, Pegues, J., **Czekala, Ian**, Andrews, S. M., Öberg, K. I., Herczeg, G. J., Bergner, J. B., Ilseidore Cleeves, L., Guzmán, V. V., Huang, J., Long, F., Teague, R., and Wilner, D. J. 2021, [ApJ](#), **908**, 42
- [3] *Molecules with ALMA at Planet-forming Scales (MAPS) II: CLEAN Strategies for Synthesizing Images of Molecular Line Emission in Protoplanetary Disks*, **Czekala, Ian**, Loomis, R. A., Teague, R., Booth, A. S., Huang, J., Cataldi, G., Ilee, J. D., Law, C. J., Walsh, C., Bosman, A. D., Guzmán, V. V., Le Gal, R., Öberg, K. I., Yamato, Y., Aikawa, Y., Andrews, S. M., Bae, J., Bergin, E. A., Bergner, J. B., Cleeves, L. I., Kurtovic, N. T., Ménard, F., Nomura, H., Pérez, L. M., Qi, C., Schwarz, K. R., Tsukagoshi, T., Waggoner, A. R., Wilner, D. J., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06188
- [4] *The Degree of Alignment between Circumbinary Disks and Their Binary Hosts*, **Czekala, Ian**, Chiang, E., Andrews, S. M., Jensen, E. L. N., Torres, G., Wilner, D. J., Stassun, K. G., and Macintosh, B. 2019, [ApJ](#), **883**, 22
- [5] *Disentangling Time-series Spectra with Gaussian Processes: Applications to Radial Velocity Analysis*, **Czekala, Ian**, Mandel, K. S., Andrews, S. M., Dittmann, J. A., Ghosh, S. K., Montet, B. T., and Newton, E. R. 2017, [ApJ](#), **840**, 49
- [6] *The Architecture of the GW Ori Young Triple-star System and Its Disk: Dynamical Masses, Mutual Inclinations, and Recurrent Eclipses*, **Czekala, Ian**, Andrews, S. M., Torres, G., Rodriguez, J. E., Jensen, E. L. N., Stassun, K. G., Latham, D. W., Wilner, D. J., Gully-Santiago, M. A., Grankin, K. N., Lund, M. B., Kuhn, R. B., Stevens, D. J., Siverd, R. J., James, D., Gaudi, B. S., Shappee, B. J., and Holoién, T. W. S. 2017, [ApJ](#), **851**, 132
- [7] *A Disk-based Dynamical Constraint on the Mass of the Young Binary DQ Tau*, **Czekala, Ian**, Andrews, S. M., Torres, G., Jensen, E. L. N., Stassun, K. G., Wilner, D. J., and Latham, D. W. 2016, [ApJ](#), **818**, 156
- [8] *A Disk-based Dynamical Mass Estimate for the Young Binary AK Sco*, **Czekala, Ian**, Andrews, S. M., Jensen, E. L. N., Stassun, K. G., Torres, G., and Wilner, D. J. 2015, [ApJ](#), **806**, 154
- [9] *Constructing a Flexible Likelihood Function for Spectroscopic Inference*, **Czekala, Ian**, Andrews, S. M., Mandel, K. S., Hogg, D. W., and Green, G. M. 2015, [ApJ](#), **812**, 128
- [10] *The Unusually Luminous Extragalactic Nova SN 2010U*, **Czekala, Ian**, Berger, E., Chornock, R., Pastorello, A., Marion, G. H., Margutti, R., Botticella, M. T., Challis, P., Ergon, M., Smartt, S., Sollerman, J., Vinkó, J., and Wheeler, J. C. 2013, [ApJ](#), **765**, 57
- [11] *Truncated Disks in TW Hya Association Multiple Star Systems*, Andrews, S. M., **Czekala, Ian**, Wilner, D. J., Espaillat, C., Dullemond, C. P., and Hughes, A. M. 2010, [ApJ](#), **710**, 462

- [1] *A Circumplanetary Disk around PDS70c*, Benisty, M., Bae, J., Facchini, S., Keppler, M., Teague, R., Isella, A., Kurtovic, N. T., Pérez, L. M., Sierra, A., Andrews, S. M., Carpenter, J., **Czekala, Ian**, Dominik, C., Henning, T., Menard, F., Pinilla, P., and Zurlo, A. 2021, [ApJ](#), **916**, L2
- [2] *Deep exploration of the planets HR 8799 b, c, and d with moderate resolution spectroscopy*, Ruffio, J.-B., Konopacky, Q. M., Barman, T., Macintosh, B., Wilcomb, K. K., De Rosa, R. J., Wang, J. J., **Czekala, Ian**, and Marois, C. 2021, arXiv e-prints, arXiv:2109.07614
- [3] *exoplanet: Gradient-based probabilistic inference for exoplanet data & other astronomical time series*, Foreman-Mackey, D., Luger, R., Agol, E., Barclay, T., Bouma, L., Brandt, T., **Czekala, Ian**, David, T., Dong, J., Gilbert, E., Gordon, T., Hedges, C., Hey, D., Morris, B., Price-Whelan, A., and Savel, A. 2021, [The Journal of Open Source Software](#), **6**, 3285
- [4] *Gemini Planet Imager Spectroscopy of the Dusty Substellar Companion HD 206893 B*, Ward-Duong, K., Patience, J., Follette, K., De Rosa, R. J., Rameau, J., Marley, M., Saumon, D., Nielsen, E. L., Rajan, A., Greenbaum, A. Z., Lee, J., Wang, J. J., **Czekala, Ian**, Duchêne, G., Macintosh, B., Ammons, S. M., Bailey, V. P., Barman, T., Bulger, J., Chen, C., Chilcote, J., Cotten, T., Doyon, R., Esposito, T. M., Fitzgerald, M. P., Gerard, B. L., Goodsell, S. J., Graham, J. R., Hibon, P., Hom, J., Hung, L. W., Ingraham, P., Kalas, P., Konopacky, Q., Larkin, J. E., Maire, J., Marchis, F., Marois, C., Metchev, S., Millar-Blanchaer, M. A., Oppenheimer, R., Palmer, D., Perrin, M., Poyneer, L., Pueyo, L., Rantakyro, F. T., Ren, B., Ruffio, J. B., Savransky, D., Schneider, A. C., Sivaramakrishnan, A., Song, I., Soummer, R., Tallis, M., Thomas, S., Wallace, J. K., Wiktorowicz, S., and Wolff, S. 2021, [AJ](#), **161**, 5
- [5] *Molecules with ALMA at Planet-forming Scales (MAPS) I: Program Overview and Highlights*, Oberg, K. I., Guzman, V. V., Walsh, C., Aikawa, Y., Bergin, E. A., Law, C. J., Loomis, R. A., Alarcon, F., Andrews, S. M., Bae, J., Bergner, J. B., Boehler, Y., Booth, A. S., Bosman, A. D., Calahan, J. K., Cataldi, G., Cleeves, L. I., **Czekala, Ian**, Furuya, K., Huang, J., Ilee, J. D., Kurtovic, N. T., Le Gal, R., Liu, Y., Long, F., Menard, F., Nomura, H., Perez, L. M., Qi, C., Schwarz, K. R., Sierra, A., Teague, R., Tsukagoshi, T., Yamato, Y., van 't Hoff, M. L. R., Waggoner, A. R., Wilner, D. J., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06268
- [6] *Molecules with ALMA at Planet-forming Scales (MAPS) III: Characteristics of Radial Chemical Substructures*, Law, C. J., Loomis, R. A., Teague, R., Öberg, K. I., **Czekala, Ian**, Andrews, S. M., Huang, J., Aikawa, Y., Alarcón, F., Bae, J., Bergin, E. A., Bergner, J. B., Boehler, Y., Booth, A. S., Bosman, A. D., Calahan, J. K., Cataldi, G., Cleeves, L. I., Furuya, K., Guzmán, V. V., Ilee, J. D., Le Gal, R., Liu, Y., Long, F., Ménard, F., Nomura, H., Qi, C., Schwarz, K. R., Sierra, A., Tsukagoshi, T., Yamato, Y., van't Hoff, M. L. R., Walsh, C., Wilner, D. J., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06210
- [7] *Molecules with ALMA at Planet-forming Scales (MAPS) IV: Emission Surfaces and Vertical Distribution of Molecules*, Law, C. J., Teague, R., Loomis, R. A., Bae, J., Öberg, K. I., **Czekala, Ian**, Andrews, S. M., Aikawa, Y., Alarcón, F., Bergin, E. A., Bergner, J. B., Booth, A. S., Bosman, A. D., Calahan, J. K., Cataldi, G., Cleeves, L. I., Furuya, K., Guzmán, V. V., Huang, J., Ilee, J. D., Le Gal, R., Liu, Y., Long, F., Ménard, F., Nomura, H., Pérez, L. M., Qi, C., Schwarz, K. R., Soto, D., Tsukagoshi, T., Yamato, Y., van't Hoff, M. L. R., Walsh, C., Wilner, D. J., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06217
- [8] *Molecules with ALMA at Planet-forming Scales (MAPS). IX. Distribution and Properties of the Large Organic Molecules HC₃N, CH₃CN, and c-C₃H₂*, Ilee, J. D., Walsh, C., Booth, A. S., Aikawa, Y., Andrews, S. M., Bae, J., Bergin, E. A., Bergner, J. B., Bosman, A. D., Cataldi, G., Cleeves, L. I., **Czekala, Ian**, Guzmán, V. V., Huang, J., Law, C. J., Le Gal, R., Loomis, R. A., Ménard, F., Nomura, H., Öberg, K. I., Qi, C., Schwarz, K. R., Teague, R., Tsukagoshi, T., Wilner, D. J., Yamato, Y., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06319
- [9] *Molecules with ALMA at Planet-forming Scales (MAPS) V: CO gas distributions*, Zhang, K., Booth, A. S., Law, C. J., Bosman, A. D., Schwarz, K. R., Bergin, E. A., Öberg, K. I., Andrews, S. M., Guzmán, V. V., Walsh, C., Qi, C., van 't Hoff, M. L. R., Long, F., Wilner, D. J., Huang, J., **Czekala, Ian**, Ilee, J. D., Cataldi, G., Bergner, J. B., Aikawa, Y., Teague, R., Bae, J., Loomis, R. A., Calahan, J. K., Alarcón, F., Ménard, F., Le Gal, R., Sierra, A., Yamato, Y., Nomura, H., Tsukagoshi, T., Pérez, L. M., Trapman, L., Liu, Y., and Furuya, K. 2021, arXiv e-prints, arXiv:2109.06233
- [10] *Molecules with ALMA at Planet-forming Scales (MAPS) VI: Distribution of the small organics HCN, C₂H, and H₂CO*, Guzmán, V. V., Bergner, J. B., Law, C. J., Oberg, K. I., Walsh, C., Cataldi, G., Aikawa, Y., Bergin, E. A., **Czekala, Ian**, Huang, J., Andrews, S. M., Loomis, R. A., Zhang, K., Le Gal, R., Alarcón, F., Ilee, J. D., Teague, R., Cleeves, L. I., Wilner, D. J., Long, F., Schwarz, K. R., Bosman, A. D., Pérez, L. M., Ménard, F., and Liu, Y. 2021, arXiv e-prints, arXiv:2109.06391

- [11] *Molecules with ALMA at Planet-forming Scales (MAPS). VII. Sub-stellar O/H and C/H and super-stellar C/O in planet feeding gas*, Bosman, A. D., Alarcón, F., Bergin, E. A., Zhang, K., van 't Hoff, M. L. R., Öberg, K. I., Guzmán, V. V., Walsh, C., Aikawa, Y., Andrews, S. M., Bergner, J. B., Booth, A. S., Cataldi, G., Cleeves, L. I., **Czekala, Ian**, Furuya, K., Huang, J., Ilee, J. D., Law, C. J., Le Gal, R., Liu, Y., Long, F., Loomis, R. A., Ménard, F., Nomura, H., Qi, C., Schwarz, K. R., Teague, R., Tsukagoshi, T., Yamato, Y., and Wilner, D. J. 2021, arXiv e-prints, arXiv:2109.06221
- [12] *Molecules with ALMA at Planet-forming Scales (MAPS) VIII: CO Gap in AS 209—Gas Depletion or Chemical Processing?*, Alarcón, F., Bosman, A., Bergin, E., Zhang, K., Teague, R., Bae, J., Aikawa, Y., Andrews, S. M., Booth, A., Calahan, J., Cataldi, G., **Czekala, Ian**, Huang, J., Ilee, J. D., Law, C. J., Le Gal, R., Liu, Y., Long, F., Loomis, R. A., Ménard, F., Öberg, K., Schwarz, K. R., Van't Hoff, M. L. R., Walsh, C., and Wilner, D. J. 2021, arXiv e-prints, arXiv:2109.06263
- [13] *Molecules with ALMA at Planet-forming Scales (MAPS). X. Studying deuteration at high angular resolution toward protoplanetary disks*, Cataldi, G., Yamato, Y., Aikawa, Y., Bergner, J. B., Furuya, K., Guzmán, V. V., Huang, J., Loomis, R. A., Qi, C., Andrews, S. M., Bergin, E. A., Booth, A. S., Bosman, A. D., Cleeves, L. I., **Czekala, Ian**, Ilee, J. D., Law, C. J., Le Gal, R., Liu, Y., Long, F., Ménard, F., Nomura, H., Öberg, K. I., Schwarz, K. R., Teague, R., Tsukagoshi, T., Walsh, C., Wilner, D. J., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06462
- [14] *Molecules with ALMA at Planet-forming Scales (MAPS) XI: CN and HCN as Tracers of Photochemistry in Disks*, Bergner, J. B., Oberg, K. I., Guzman, V. V., Law, C. J., Loomis, R. A., Cataldi, G., Bosman, A. D., Aikawa, Y., Andrews, S. M., Bergin, E. A., Booth, A. S., Cleeves, L. I., **Czekala, Ian**, Huang, J., Ilee, J. D., Le Gal, R., Long, F., Nomura, H., Menard, F., Qi, C., Schwarz, K. R., Teague, R., Tsukagoshi, T., Walsh, C., Wilner, D. J., and Yamato, Y. 2021, arXiv e-prints, arXiv:2109.06694
- [15] *Molecules with ALMA at Planet-forming Scales (MAPS) XII: Inferring the C/O and S/H ratios in Protoplanetary Disks with Sulfur Molecules*, Le Gal, R., Öberg, K. I., Teague, R., Loomis, R. A., Law, C. J., Walsh, C., Bergin, E. A., Menard, F., Wilner, D. J., Andrews, S. M., Aikawa, Y., Booth, A. S., Cataldi, G., Bergner, J. B., Bosman, A. D., Cleeves, L. I., **Czekala, Ian**, Furuya, K., Guzmán, V. V., Huang, J., Ilee, J. D., Nomura, H., Qi, C., Schwarz, K. R., Tsukagoshi, T., Yamato, Y., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06286
- [16] *Molecules with ALMA at Planet-forming Scales (MAPS) XIII: HCO⁺ and disk ionization structure*, Aikawa, Y., Cataldi, G., Yamato, Y., Zhang, K., Booth, A. S., Furuya, K., Andrews, S. M., Bae, J., Bergin, E. A., Bergner, J. B., Bosman, A. D., Cleeves, L. I., **Czekala, Ian**, Guzmán, V. V., Huang, J., Ilee, J. D., Law, C. J., Le Gal, R., Loomis, R. A., Ménard, F., Nomura, H., Öberg, K. I., Qi, C., Schwarz, K. R., Teague, R., Tsukagoshi, T., Walsh, C., and Wilner, D. J. 2021, arXiv e-prints, arXiv:2109.06419
- [17] *Molecules with ALMA at Planet-forming Scales (MAPS) XIV: Revealing disk substructures in multi-wavelength continuum emission*, Sierra, A., Pérez, L. M., Zhang, K., Law, C. J., Guzmán, V. V., Qi, C., Bosman, A. D., Öberg, K. I., Andrews, S. M., Long, F., Teague, R., Booth, A. S., Walsh, C., Wilner, D. J., Ménard, F., Cataldi, G., **Czekala, Ian**, Bae, J., Huang, J., Bergner, J. B., Ilee, J. D., Benisty, M., Le Gal, R., Loomis, R. A., Tsukagoshi, T., Liu, Y., Yamato, Y., and Aikawa, Y. 2021, arXiv e-prints, arXiv:2109.06433
- [18] *Molecules with ALMA at Planet-forming Scales (MAPS) XIX. Spiral Arms, a Tail, and Diffuse Structures Traced by CO around the GM Aur Disk*, Huang, J., Bergin, E. A., Öberg, K. I., Andrews, S. M., Teague, R., Law, C. J., Kalas, P., Aikawa, Y., Bae, J., Bergner, J. B., Booth, A. S., Bosman, A. D., Calahan, J. K., Cataldi, G., Cleeves, L. I., **Czekala, Ian**, Ilee, J. D., Le Gal, R., Guzmán, V. V., Long, F., Loomis, R. A., Ménard, F., Nomura, H., Qi, C., Schwarz, K. R., Tsukagoshi, T., van 't Hoff, M. L. R., Walsh, C., Wilner, D. J., Yamato, Y., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06224
- [19] *Molecules with ALMA at Planet-forming Scales (MAPS). XV. Tracing protoplanetary disk structure within 20 au*, Bosman, A. D., Bergin, E. A., Loomis, R. A., Andrews, S. M., van 't Hoff, M. L. R., Teague, R., Öberg, K. I., Guzmán, V. V., Walsh, C., Aikawa, Y., Alarcón, F., Bae, J., Bergner, J. B., Booth, A. S., Cataldi, G., Cleeves, L. I., **Czekala, Ian**, Huang, J., Ilee, J. D., Law, C. J., Le Gal, R., Liu, Y., Long, F., Ménard, F., Nomura, H., Pérez, L. M., Qi, C., and Schwarz, K. R. 2021, arXiv e-prints, arXiv:2109.06223
- [20] *Molecules with ALMA at Planet-forming Scales (MAPS) XVI: Characterizing the impact of the molecular wind on the evolution of the HD 163296 system*, Booth, A. S., Tabone, B., Ilee, J. D., Walsh, C., Aikawa, Y., Andrews, S. M., Bae, J., Bergin, E. A., Bergner, J. B., Bosman, A. D., Calahan, J. K., Cataldi, G., Cleeves, L. I., **Czekala, Ian**, Guzman, V. V., Huang, J., Law, C. J., Le Gal, R., Long, F., Loomis, R. A., Menard, F., Oberg, K. I., Qi, C., Schwarz, K. R., Teague, R., Tsukagoshi, T., Wilner, D. J., Yamato, Y., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06586

- [21] *Molecules with ALMA at Planet-forming Scales (MAPS) XVII: Determining the 2D Thermal Structure of the HD 163296 Disk*, Calahan, J. K., Bergin, E. A., Zhang, K., Schwarz, K. R., Oberg, K. I., Guzman, V. V., Walsh, C., Aikawa, Y., Alarcon, F., Andrews, S. M., Bae, J., Bergner, J. B., Booth, A. S., Bosman, A. D., Cataldi, G., **Czekala, Ian**, Huang, J., Ilee, J. D., Law, C. J., Le Gal, R., Long, F., Loomis, R. A., Menard, F., Nomura, H., Qi, C., Teague, R., van'T Hoff, M. L. R., Wilner, D. J., and Yamato, Y. 2021, arXiv e-prints, arXiv:2109.06202
- [22] *Molecules with ALMA at Planet-forming Scales (MAPS XVIII): Kinematic Substructures in the Disks of HD 163296 and MWC 480*, Teague, R., Bae, J., Aikawa, Y., Andrews, S. M., Bergin, E. A., Bergner, J. B., Boehler, Y., Booth, A. S., Bosman, A. D., Cataldi, G., **Czekala, Ian**, Guzmán, V. V., Huang, J., Ilee, J. D., Law, C. J., Le Gal, R., Long, F., Loomis, R. A., Ménard, F., Öberg, K. I., Pérez, L. M., Schwarz, K. R., Sierra, A., Walsh, C., Wilner, D. J., Yamato, Y., and Zhang, K. 2021, arXiv e-prints, arXiv:2109.06218
- [23] *Molecules with ALMA at Planet-forming Scales. XX. The Massive Disk Around GM Aurigae*, Schwarz, K. R., Calahan, J. K., Zhang, K., Alarcón, F., Aikawa, Y., Andrews, S. M., Bae, J., Bergin, E. A., Booth, A. S., Bosman, A. D., Cataldi, G., Cleeves, L. I., **Czekala, Ian**, Huang, J., Ilee, J. D., Law, C. J., Le Gal, R., Liu, Y., Long, F., Loomis, R. A., Macías, E., McClure, M., Ménard, F., Öberg, K. I., Teague, R., van Dishoeck, E., Walsh, C., and Wilner, D. J. 2021, arXiv e-prints, arXiv:2109.06228
- [24] *Weighing stars from birth to death: mass determination methods across the HRD*, Serenelli, A., Weiss, A., Aerts, C., Angelou, G. C., Baroch, D., Bastian, N., Beck, P. G., Bergemann, M., Bestenlehner, J. M., **Czekala, Ian**, Elias-Rosa, N., Escorza, A., Van Eylen, V., Feuillet, D. K., Gandolfi, D., Gieles, M., Girardi, L., Lebreton, Y., Lodieu, N., Martig, M., Miller Bertolami, M. M., Mombarg, J. S. G., Morales, J. C., Moya, A., Nsamba, B., Pavlovski, K., Pedersen, M. G., Ribas, I., Schneider, F. R. N., Silva Aguirre, V., Stassun, K. G., Tolstoy, E., Tremblay, P.-E., and Zwintz, K. 2021, *A&A Rev.*, **29**, 4
- [25] *An Unbiased ALMA Spectral Survey of the LkCa 15 and MWC 480 Protoplanetary Disks*, Loomis, R. A., Öberg, K. I., Andrews, S. M., Bergin, E., Bergner, J., Blake, G. A., Cleeves, L. I., **Czekala, Ian**, Huang, J., Le Gal, R., Ménard, F., Pegues, J., Qi, C., Walsh, C., Williams, J. P., and Wilner, D. J. 2020, *ApJ*, **893**, 101
- [26] *BAFFLES: Bayesian Ages for Field Lower-mass Stars*, Stanford-Moore, S. A., Nielsen, E. L., De Rosa, R. J., Macintosh, B., and **Czekala, Ian** 2020, *ApJ*, **898**, 27
- [27] *Debris Disk Results from the Gemini Planet Imager Exoplanet Survey's Polarimetric Imaging Campaign*, Esposito, T. M., Kalas, P., Fitzgerald, M. P., Millar-Blanchaer, M. A., Duchêne, G., Patience, J., Hom, J., Perrin, M. D., De Rosa, R. J., Chiang, E., **Czekala, Ian**, Macintosh, B., Graham, J. R., Ansdell, M., Arriaga, P., Bruzzone, S., Bulger, J., Chen, C. H., Cotten, T., Dong, R., Draper, Z. H., Follette, K. B., Hung, L.-W., Lopez, R., Matthews, B. C., Mazoyer, J., Metchev, S., Rameau, J., Ren, B., Rice, M., Song, I., Stahl, K., Wang, J., Wolff, S., Zuckerman, B., Ammons, S. M., Bailey, V. P., Barman, T., Chilcote, J., Doyon, R., Gerard, B. L., Goodsell, S. J., Greenbaum, A. Z., Hibon, P., Hinkley, S., Ingraham, P., Konopacky, Q., Maire, J., Marchis, F., Marley, M. S., Marois, C., Nielsen, E. L., Oppenheimer, R., Palmer, D., Poyneer, L., Pueyo, L., Rajan, A., Rantakyro, F. T., Ruffio, J.-B., Savransky, D., Schneider, A. C., Sivaramakrishnan, A., Soummer, R., Thomas, S., and Ward-Duong, K. 2020, *AJ*, **160**, 24
- [28] *The Gemini Planet Imager View of the HD 32297 Debris Disk*, Duchêne, G., Rice, M., Hom, J., Zalesky, J., Esposito, T. M., Millar-Blanchaer, M. A., Ren, B., Kalas, P., Fitzgerald, M. P., Arriaga, P., Bruzzone, S., Bulger, J., Chen, C. H., Chiang, E., Cotten, T., **Czekala, Ian**, De Rosa, R. J., Dong, R., Draper, Z. H., Follette, K. B., Graham, J. R., Hung, L.-W., Lopez, R., Macintosh, B., Matthews, B. C., Mazoyer, J., Metchev, S., Patience, J., Perrin, M. D., Rameau, J., Song, I., Stahl, K., Wang, J., Wolff, S., Zuckerman, B., Ammons, S. M., Bailey, V. P., Barman, T., Chilcote, J., Doyon, R., Gerard, B. L., Goodsell, S. J., Greenbaum, A. Z., Hibon, P., Ingraham, P., Konopacky, Q., Maire, J., Marchis, F., Marley, M. S., Marois, C., Nielsen, E. L., Oppenheimer, R., Palmer, D., Poyneer, L., Pueyo, L., Rajan, A., Rantakyro, F. T., Ruffio, J.-B., Savransky, D., Schneider, A. C., Sivaramakrishnan, A., Soummer, R., Thomas, S., and Ward-Duong, K. 2020, *AJ*, **159**, 251
- [29] *Radial Velocity Measurements of HR 8799 b and c with Medium Resolution Spectroscopy*, Ruffio, J.-B., Macintosh, B., Konopacky, Q. M., Barman, T., De Rosa, R. J., Wang, J. J., Wilcomb, K. K., **Czekala, Ian**, and Marois, C. 2019, *AJ*, **158**, 200
- [30] *The Gemini Planet Imager Exoplanet Survey: Giant Planet and Brown Dwarf Demographics from 10 to 100 au*, Nielsen, E. L., De Rosa, R. J., Macintosh, B., Wang, J. J., Ruffio, J.-B., Chiang, E., Marley, M. S., Saumon, D., Savransky, D., Ammons, S. M., Bailey, V. P., Barman, T., Blain, C., Bulger, J., Burrows, A., Chilcote, J., Cotten, T., **Czekala, Ian**, Doyon, R., Duchêne, G., Esposito, T. M., Fabrycky, D., Fitzgerald, M. P., Follette, K. B., Fortney, J. J., Gerard,

- B. L., Goodsell, S. J., Graham, J. R., Greenbaum, A. Z., Hibon, P., Hinkley, S., Hirsch, L. A., Hom, J., Hung, L.-W., Dawson, R. I., Ingraham, P., Kalas, P., Konopacky, Q., Larkin, J. E., Lee, E. J., Lin, J. W., Maire, J., Marchis, F., Marois, C., Metchev, S., Millar-Blanchaer, M. A., Morzinski, K. M., Oppenheimer, R., Palmer, D., Patience, J., Perrin, M., Poyneer, L., Pueyo, L., Rafikov, R. R., Rajan, A., Rameau, J., Rantakyro, F. T., Ren, B., Schneider, A. C., Sivaramakrishnan, A., Song, I., Soummer, R., Tallis, M., Thomas, S., Ward-Duong, K., and Wolff, S. 2019, *AJ*, **158**, 13
- [31] *A Bayesian Framework for Exoplanet Direct Detection and Non-detection*, Ruffio, J.-B., Mawet, D., **Czekala, Ian**, Macintosh, B., De Rosa, R. J., Ruane, G., Bottom, M., Pueyo, L., Wang, J. J., Hirsch, L., Zhu, Z., and Nielsen, E. L. 2018, *AJ*, **156**, 196
- [32] *Detecting Weak Spectral Lines in Interferometric Data through Matched Filtering*, Loomis, R. A., Öberg, K. I., Andrews, S. M., Walsh, C., **Czekala, Ian**, Huang, J., and Rosenfeld, K. A. 2018, *AJ*, **155**, 182
- [33] *Hydrogen-poor Superluminous Supernovae from the Pan-STARRS1 Medium Deep Survey*, Lunnan, R., Chornock, R., Berger, E., Jones, D. O., Rest, A., **Czekala, Ian**, Dittmann, J., Drout, M. R., Foley, R. J., Fong, W., Kirshner, R. P., Laskar, T., Leibler, C. N., Margutti, R., Milisavljevic, D., Narayan, G., Pan, Y. C., Riess, A. G., Roth, K. C., Sanders, N. E., Scolnic, D., Smartt, S. J., Smith, K. W., Chambers, K. C., Draper, P. W., Flewelling, H., Huber, M. E., Kaiser, N., Kudritzki, R. P., Magnier, E. A., Metcalfe, N., Wainscoat, R. J., Waters, C., and Willman, M. 2018, *ApJ*, **852**, 81
- [34] *ALMA Measurements of Circumstellar Material in the GQ Lup System*, MacGregor, M. A., Wilner, D. J., **Czekala, Ian**, Andrews, S. M., Dai, Y. S., Herczeg, G. J., Kratter, K. M., Kraus, A. L., Ricci, L., and Testi, L. 2017, *ApJ*, **835**, 17
- [35] *ALMA Observations of the Young Substellar Binary System 2M1207*, Ricci, L., Cazzoletti, P., **Czekala, Ian**, Andrews, S. M., Wilner, D., Szűcs, L., Lodato, G., Testi, L., Pascucci, I., Mohanty, S., Apai, D., Carpenter, J. M., and Bowler, B. P. 2017, *AJ*, **154**, 24
- [36] *Characterizing 51 Eri b from 1 to 5 μ m: A Partly Cloudy Exoplanet*, Rajan, A., Rameau, J., De Rosa, R. J., Marley, M. S., Graham, J. R., Macintosh, B., Marois, C., Morley, C., Patience, J., Pueyo, L., Saumon, D., Ward-Duong, K., Ammons, S. M., Arriaga, P., Bailey, V. P., Barman, T., Bulger, J., Burrows, A. S., Chilcote, J., Cotten, T., **Czekala, Ian**, Doyon, R., Duchêne, G., Esposito, T. M., Fitzgerald, M. P., Follette, K. B., Fortney, J. J., Goodsell, S. J., Greenbaum, A. Z., Hibon, P., Hung, L.-W., Ingraham, P., Johnson-Groh, M., Kalas, P., Konopacky, Q., Lafrenière, D., Larkin, J. E., Maire, J., Marchis, F., Metchev, S., Millar-Blanchaer, M. A., Morzinski, K. M., Nielsen, E. L., Oppenheimer, R., Palmer, D., Patel, R. I., Perrin, M., Poyneer, L., Rantakyro, F. T., Ruffio, J.-B., Savransky, D., Schneider, A. C., Sivaramakrishnan, A., Song, I., Soummer, R., Thomas, S., Vasisht, G., Wallace, J. K., Wang, J. J., Wiktorowicz, S., and Wolff, S. 2017, *AJ*, **154**, 10
- [37] *Improving and Assessing Planet Sensitivity of the GPI Exoplanet Survey with a Forward Model Matched Filter*, Ruffio, J.-B., Macintosh, B., Wang, J. J., Pueyo, L., Nielsen, E. L., De Rosa, R. J., **Czekala, Ian**, Marley, M. S., Arriaga, P., Bailey, V. P., Barman, T., Bulger, J., Chilcote, J., Cotten, T., Doyon, R., Duchêne, G., Fitzgerald, M. P., Follette, K. B., Gerard, B. L., Goodsell, S. J., Graham, J. R., Greenbaum, A. Z., Hibon, P., Hung, L.-W., Ingraham, P., Kalas, P., Konopacky, Q., Larkin, J. E., Maire, J., Marchis, F., Marois, C., Metchev, S., Millar-Blanchaer, M. A., Morzinski, K. M., Oppenheimer, R., Palmer, D., Patience, J., Perrin, M., Poyneer, L., Rajan, A., Rameau, J., Rantakyro, F. T., Savransky, D., Schneider, A. C., Sivaramakrishnan, A., Song, I., Soummer, R., Thomas, S., Wallace, J. K., Ward-Duong, K., Wiktorowicz, S., and Wolff, S. 2017, *ApJ*, **842**, 14
- [38] *Placing the Spotted T Tauri Star LkCa 4 on an HR Diagram*, Gully-Santiago, M. A., Herczeg, G. J., **Czekala, Ian**, Somers, G., Grankin, K., Covey, K. R., Donati, J. F., Alencar, S. H. P., Hussain, G. A. J., Shappee, B. J., Mace, G. N., Lee, J.-J., Holoién, T. W. S., Jose, J., and Liu, C.-F. 2017, *ApJ*, **836**, 200
- [39] *The Coupled Physical Structure of Gas and Dust in the IM Lup Protoplanetary Disk*, Cleeves, L. I., Öberg, K. I., Wilner, D. J., Huang, J., Loomis, R. A., Andrews, S. M., and **Czekala, Ian** 2016, *ApJ*, **832**, 110
- [40] *The Intermediate Luminosity Optical Transient SN 2010da: The Progenitor, Eruption, and Aftermath of a Peculiar Supergiant High-mass X-Ray Binary*, Villar, V. A., Berger, E., Chornock, R., Margutti, R., Laskar, T., Brown, P. J., Blanchard, P. K., **Czekala, Ian**, Lunnan, R., and Reynolds, M. T. 2016, *ApJ*, **830**, 11
- [41] *Cosmological Constraints from Measurements of Type Ia Supernovae Discovered during the First 1.5 yr of the Pan-STARRS1 Survey*, Rest, A., Scolnic, D., Foley, R. J., Huber, M. E., Chornock, R., Narayan, G., Tonry, J. L., Berger, E., Soderberg, A. M., Stubbs, C. W., Riess, A., Kirshner, R. P., Smartt, S. J., Schlafly, E., Rodney, S., Botticella, M. T., Brout, D., Challis, P., **Czekala, Ian**, Drout, M., Hudson, M. J., Kotak, R., Leibler, C., Lunnan, R., Marion, G. H.,

- McCrum, M., Milisavljevic, D., Pastorello, A., Sanders, N. E., Smith, K., Stafford, E., Thilker, D., Valenti, S., Wood-Vasey, W. M., Zheng, Z., Burgett, W. S., Chambers, K. C., Denneau, L., Draper, P. W., Flewelling, H., Hodapp, K. W., Kaiser, N., Kudritzki, R. P., Magnier, E. A., Metcalfe, N., Price, P. A., Sweeney, W., Wainscoat, R., and Waters, C. 2014, *ApJ*, **795**, 44
- [42] *High-density Circumstellar Interaction in the Luminous Type II In SN 2010jl: The First 1100 Days*, Fransson, C., Ergon, M., Challis, P. J., Chevalier, R. A., France, K., Kirshner, R. P., Marion, G. H., Milisavljevic, D., Smith, N., Bufano, F., Friedman, A. S., Kangas, T., Larsson, J., Mattila, S., Benetti, S., Chornock, R., **Czekala, Ian**, Soderberg, A., and Sollerman, J. 2014, *ApJ*, **797**, 118
- [43] *Systematic Uncertainties Associated with the Cosmological Analysis of the First Pan-STARRS1 Type Ia Supernova Sample*, Scolnic, D., Rest, A., Riess, A., Huber, M. E., Foley, R. J., Brout, D., Chornock, R., Narayan, G., Tonry, J. L., Berger, E., Soderberg, A. M., Stubbs, C. W., Kirshner, R. P., Rodney, S., Smartt, S. J., Schlafly, E., Botticella, M. T., Challis, P., **Czekala, Ian**, Drout, M., Hudson, M. J., Kotak, R., Leibler, C., Lunnan, R., Marion, G. H., McCrum, M., Milisavljevic, D., Pastorello, A., Sanders, N. E., Smith, K., Stafford, E., Thilker, D., Valenti, S., Wood-Vasey, W. M., Zheng, Z., Burgett, W. S., Chambers, K. C., Denneau, L., Draper, P. W., Flewelling, H., Hodapp, K. W., Kaiser, N., Kudritzki, R. P., Magnier, E. A., Metcalfe, N., Price, P. A., Sweeney, W., Wainscoat, R., and Waters, C. 2014, *ApJ*, **795**, 45
- [44] *The superluminous supernova PS1-11ap: bridging the gap between low and high redshift*, McCrum, M., Smartt, S. J., Kotak, R., Rest, A., Jerkstrand, A., Inserra, C., Rodney, S. A., Chen, T. W., Howell, D. A., Huber, M. E., Pastorello, A., Tonry, J. L., Bresolin, F., Kudritzki, R. P., Chornock, R., Berger, E., Smith, K., Botticella, M. T., Foley, R. J., Fraser, M., Milisavljevic, D., Nicholl, M., Riess, A. G., Stubbs, C. W., Valenti, S., Wood-Vasey, W. M., Wright, D., Young, D. R., Drout, M., **Czekala, Ian**, Burgett, W. S., Chambers, K. C., Draper, P., Flewelling, H., Hodapp, K. W., Kaiser, N., Magnier, E. A., Metcalfe, N., Price, P. A., Sweeney, W., and Wainscoat, R. J. 2014, *MNRAS*, **437**, 656
- [45] *The Ultraviolet-bright, Slowly Declining Transient PS1-11af as a Partial Tidal Disruption Event*, Chornock, R., Berger, E., Gezari, S., Zauderer, B. A., Rest, A., Chomiuk, L., Kamble, A., Soderberg, A. M., **Czekala, Ian**, Dittmann, J., Drout, M., Foley, R. J., Fong, W., Huber, M. E., Kirshner, R. P., Lawrence, A., Lunnan, R., Marion, G. H., Narayan, G., Riess, A. G., Roth, K. C., Sanders, N. E., Scolnic, D., Smartt, S. J., Smith, K., Stubbs, C. W., Tonry, J. L., Burgett, W. S., Chambers, K. C., Flewelling, H., Hodapp, K. W., Kaiser, N., Magnier, E. A., Martin, D. C., Neill, J. D., Price, P. A., and Wainscoat, R. 2014, *ApJ*, **780**, 44
- [46] *Demographics of the Galaxies Hosting Short-duration Gamma-Ray Bursts*, Fong, W., Berger, E., Chornock, R., Margutti, R., Levan, A. J., Tanvir, N. R., Tunnicliffe, R. L., **Czekala, Ian**, Fox, D. B., Perley, D. A., Cenko, S. B., Zauderer, B. A., Laskar, T., Persson, S. E., Monson, A. J., Kelson, D. D., Birk, C., Murphy, D., Servillat, M., and Anglada, G. 2013, *ApJ*, **769**, 56
- [47] *PS1-10afx at $z = 1.388$: Pan-STARRS1 Discovery of a New Type of Superluminous Supernova*, Chornock, R., Berger, E., Rest, A., Milisavljevic, D., Lunnan, R., Foley, R. J., Soderberg, A. M., Smartt, S. J., Burgasser, A. J., Challis, P., Chomiuk, L., **Czekala, Ian**, Drout, M., Fong, W., Huber, M. E., Kirshner, R. P., Leibler, C., McLeod, B., Marion, G. H., Narayan, G., Riess, A. G., Roth, K. C., Sanders, N. E., Scolnic, D., Smith, K., Stubbs, C. W., Tonry, J. L., Valenti, S., Burgett, W. S., Chambers, K. C., Hodapp, K. W., Kaiser, N., Kudritzki, R. P., Magnier, E. A., and Price, P. A. 2013, *ApJ*, **767**, 162
- [48] *PS1-10bzj: A Fast, Hydrogen-poor Superluminous Supernova in a Metal-poor Host Galaxy*, Lunnan, R., Chornock, R., Berger, E., Milisavljevic, D., Drout, M., Sanders, N. E., Challis, P. M., **Czekala, Ian**, Foley, R. J., Fong, W., Huber, M. E., Kirshner, R. P., Leibler, C., Marion, G. H., McCrum, M., Narayan, G., Rest, A., Roth, K. C., Scolnic, D., Smartt, S. J., Smith, K., Soderberg, A. M., Stubbs, C. W., Tonry, J. L., Burgett, W. S., Chambers, K. C., Kudritzki, R. P., Magnier, E. A., and Price, P. A. 2013, *ApJ*, **771**, 97
- [49] *A Jet Break in the X-Ray Light Curve of Short GRB 111020A: Implications for Energetics and Rates*, Fong, W., Berger, E., Margutti, R., Zauderer, B. A., Troja, E., **Czekala, Ian**, Chornock, R., Gehrels, N., Sakamoto, T., Fox, D. B., and Podsiadlowski, P. 2012, *ApJ*, **756**, 189
- [50] *A Spectroscopic Study of Type Ibc Supernova Host Galaxies from Untargeted Surveys*, Sanders, N. E., Soderberg, A. M., Levesque, E. M., Foley, R. J., Chornock, R., Milisavljevic, D., Margutti, R., Berger, E., Drout, M. R., **Czekala, Ian**, and Dittmann, J. A. 2012, *ApJ*, **758**, 132
- [51] *Ultraluminous Supernovae as a New Probe of the Interstellar Medium in Distant Galaxies*, Berger, E., Chornock, R., Lunnan, R., Foley, R., **Czekala, Ian**, Rest, A., Leibler, C., Soderberg, A. M., Roth, K., Narayan, G., Huber, M. E.,

Milisavljevic, D., Sanders, N. E., Drout, M., Margutti, R., Kirshner, R. P., Marion, G. H., Challis, P. J., Riess, A. G., Smartt, S. J., Burgett, W. S., Hodapp, K. W., Heasley, J. N., Kaiser, N., Kudritzki, R. P., Magnier, E. A., McCrum, M., Price, P. A., Smith, K., Tonry, J. L., and Wainscoat, R. J. 2012, *ApJ*, **755**, L29

[52] *Pan-STARRS1 Discovery of Two Ultraluminous Supernovae at $z \approx 0.9$* , Chomiuk, L., Chornock, R., Soderberg, A. M., Berger, E., Chevalier, R. A., Foley, R. J., Huber, M. E., Narayan, G., Rest, A., Gezari, S., Kirshner, R. P., Riess, A., Rodney, S. A., Smartt, S. J., Stubbs, C. W., Tonry, J. L., Wood-Vasey, W. M., Burgett, W. S., Chambers, K. C., **Czekala, Ian**, Flewelling, H., Forster, K., Kaiser, N., Kudritzki, R. P., Magnier, E. A., Martin, D. C., Morgan, J. S., Neill, J. D., Price, P. A., Roth, K. C., Sanders, N. E., and Wainscoat, R. J. 2011, *ApJ*, **743**, 114

SUBMITTED AND NON-REFEREED PAPERS

[1] *Astro2020 APC White Paper: The Early Career Perspective on the Coming Decade, Astrophysics Career Paths, and the Decadal Survey Process*, Moravec, E., **Czekala, Ian**, Follette, K., Ahmed, Z., Alpaslan, M., Amon, A., Armentrout, W., Arney, G., Barron, D., Bellm, E., Bender, A., Bridge, J., Colon, K., Datta, R., DeRoo, C., Feng, W. a., Florian, M., Gabriel, T., Hall, K., Hamden, E., Hathi, N., Hawkins, K., Hoadley, K., Jensen-Clem, R., Kao, M., Kara, E., Karkare, K., Kiessling, A., Kimball, A., Kirkpatrick, A., La Plante, P., Leisenring, J., Li, M., Lomax, J., Lund, M. B., McCleary, J., Mills, E., Montiel, E., Nelson, N., Nevin, R., Norris, R., Ntampaka, M., O'Donnell, C., Peretz, E., Plazas Malagon, A., Prescod-Weinstein, C., Pullen, A., Rice, J., Roettenbacher, R., Sanderson, R., Simon, J., Smith, K. L., Stevenson, K., Veach, T., Wetzel, A., and Youngblood, A. 2019, arXiv e-prints, arXiv:1907.01676

[2] *The Next Decade of Astrominformatics and Astrostatistics*, Siemiginowska, A., Eadie, G., **Czekala, Ian**, Feigelson, E., Ford, E. B., Kashyap, V., Kuhn, M., Loredo, T., Ntampaka, M., Stevens, A., Avelino, A., Borne, K., Budavari, T., Burkhart, B., Cisewski-Kehe, J., Civano, F., Chilingarian, I., van Dyk, D. A., Fabbiano, G., Finkbeiner, D. P., Foreman-Mackey, D., Freeman, P., Fruscione, A., Goodman, A. A., Graham, M., Guenther, H. M., Hakkila, J., Hernquist, L., Huppenkothen, D., James, D. J., Law, C., Lazio, J., Lee, T., López-Morales, M., Mahabal, A. A., Mandel, K., Meng, X.-L., Moustakas, J., Muna, D., Peek, J. E. G., Richards, G., Portillo, S. K. N., Scargle, J., de Souza, R. S., Speagle, J. S., Stassun, K. G., Stenning, D. C., Taylor, S. R., Tremblay, G. R., Trimble, V., Yanamand ra-Fisher, P. A., and Young, C. A. 2019, *BAAS*, **51**, 355

STUDENTS ADVISED

- Mr. Robert Frazier, Pennsylvania State University Undergraduate Student
Regularized Maximum Likelihood Imaging for ALMA with MPoL; 2021 - present
- Mr. Tyler Quinn, Pennsylvania State University Undergraduate Student
Regularized Maximum Likelihood Imaging for ALMA with MPoL; 2021 - present
- Ms. Hannah Grzybowski, Pennsylvania State University Undergraduate Student
Regularized Maximum Likelihood Imaging for ALMA with MPoL; 2021 - present
- Mr. Kadri Bin Mohamad Nizam, Pennsylvania State University Graduate Student
Variational Autoencoders for Image Reconstruction of Protoplanetary Disks; 2021 - present
- Ms. Brianna Zawadzki, Pennsylvania State University Graduate Student
Regularized Maximum Likelihood Imaging for ALMA; 2020 - present
- Ms. Zoe Ko, UC Berkeley Undergraduate Student
Sub-Millimeter Selected Spectroscopic Binary Survey; 2019 - present
- Mr. Joseph Michael Akana Murphy, Stanford University Coterminal Masters Student
Summer Research and Senior Thesis; 2017 - 2019
Unveiling the Spectra of Young Stars with Gaussian Processes: Applications to LkCa 15

INVITED RESEARCH TALKS, PRESENTATIONS, AND PANELS

Sep 22, 2021	Pennsylvania State University, Data Science Community Talk (virtual) <i>Making Images with Radio Interferometers</i>
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Sep 1, 2021	Pennsylvania State University, Colloquium (virtual) <i>Opportunities for Imaging the Planet Forming Environment with ALMA</i>
Jun 9, 2021	AAS 238 Meeting in a Meeting: Current Challenges & the Future of ML in Astronomy Panel <i>Learning responsibly I: Making inference in a world of imperfect models</i>
May 25, 2021	Emerging Researchers in Exoplanet Science (virtual) <i>Invited panelist for career discussion</i>
May 21, 2021	Joint ALMA Observatory Study Group (virtual) <i>Regularized Maximum Likelihood Imaging for ALMA</i>
April 28, 2021	University of California, Santa Cruz Colloquium (virtual) <i>Opportunities for Imaging the Planet Forming Environment with ALMA</i>
Dec 11, 2020	Five Years after HL Tau (virtual) <i>Panelist for General Discussion on disk dynamics and disk multiplicity</i>
Jun 11, 2020	Cambridge University Colloquium, Cambridge, UK <i>Disks and Dynamics of Protoplanetary Systems</i>
Feb 3, 2020	New Mexico State University Colloquium, Las Cruces, NM <i>Disks and Dynamics of Protoplanetary Systems</i>
Jan 30, 2020	NRAO Colloquium, Charlottesville, VA <i>Disks and Dynamics of Protoplanetary Systems</i>
Jan 27, 2020	Penn State University Colloquium, State College, PA <i>Disks and Dynamics of Protoplanetary Systems</i>
Dec 9, 2019	San Francisco State University Colloquium, San Francisco, CA <i>Disks and Dynamics of Protoplanetary Systems</i>
Oct 22, 2019	Frank Bash Symposium, UT Austin, TX <i>Disks and Dynamics of Protoplanetary Systems</i>
Mar 14, 2019	Department lunch talk, UC Berkeley, CA <i>Circumbinary Planets and Disks</i>
Feb 6, 2019	SOFIA colloquium, NASA Ames, Mountain View, CA <i>The Degree of Alignment of Circumbinary Disks and their Host Binaries</i>
Nov 29, 2018	Weekly seminar, Columbia University, NYC, NY <i>The Alignment of Binary Star Orbits and their Circumbinary Disks</i>
Nov 28, 2018	Stars Meeting, Flatiron Institute, NYC, NY <i>The Alignment of Binary Star Orbits and their Circumbinary Disks</i>
Nov 8, 2018	Sagan Fellows Symposium at Caltech, Pasadena, CA <i>The Alignment of Binary Star Orbits and their Circumbinary Disks</i>
Nov 7, 2018	CIPS Planet and Star Formation Seminar, UC Berkeley, CA <i>The Alignment of Binary Star Orbits and their Circumbinary Disks</i>
Apr 24, 2018	KIPAC Tea Talk at Stanford University, Palo Alto, CA <i>Using Gaussian Processes to Construct Flexible Models of Stellar Spectra</i>
Jan 10, 2018	AAS Special Session on Gaussian Processes and Machine Learning, Washington, D.C. <i>Using Gaussian Processes to Construct Flexible Models of Stellar Spectra</i>
Oct 18, 2017	CIPS Planet and Star Formation Seminar, UC Berkeley, CA <i>Protoplanetary Disks around Pre-Main Sequence Binary Stars</i>
June 1, 2017	NAOJ Star and Planet Formation Seminar, NAOJ, Tokyo, Japan <i>Protoplanetary Disks around Pre-Main Sequence Binary Stars</i>
May 31, 2017	RIKEN Star and Planet Formation Seminar, RIKEN, Tokyo, Japan <i>Protoplanetary Disks around Pre-Main Sequence Binary Stars</i>
May 25, 2017	Kavli Institute for Astronomy and Astrophysics Colloquium, Peking University, Beijing, China <i>Protoplanetary Disks around Pre-Main Sequence Binary Stars</i>

May 16, 2017	Harvard Astrostatistics Seminar, Harvard University, Cambridge, MA <i>Disentangling Spectra With Gaussian Processes: Applications to Radial Velocity Analysis</i>
Aug 23, 2016	SAMSI Astrostatistics Opening Workshop, Research Triangle Park, NC <i>Systematics-Dominated Spectroscopic Inference</i>
Jul 20, 2016	ASIAA Colloquium, Taipei, Taiwan <i>The Fundamental Properties of Young Stars</i>
Jul 5, 2016	ASIAA Star Formation Meeting, Taipei, Taiwan <i>Disk-Based Dynamical Masses and Applications with the SMA</i>
Jun 9, 2016	Kavli Institute for Astronomy and Astrophysics Lunch Seminar, Peking University, Beijing, China <i>The Fundamental Properties of Young Stars</i>
Mar 8, 2016	CfA Exoplanet Lunch, Harvard-Smithsonian Center for Astrophysics <i>Using Protoplanetary Disks to Precisely Weigh Stars</i>
Feb 9, 2016	BU Lunch Talk, Boston University, Boston, MA <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
Dec 10-11, 2015	ISM Seminar at UT Austin, Austin, TX <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
Dec 7-8, 2015	Tea Talk at Caltech, Pasadena, CA <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
Nov 17, 2015	KIPAC Tea Talk at Stanford University, Palo Alto, CA <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
Nov 16, 2015	ACES talk at NASA Ames, Mountain View, CA <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
Nov 12-13, 2015	FLASH talk at UC Santa Cruz, Santa Cruz, CA <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
Nov 4, 2015	CIPS Planet and Star Formation Seminar, UC Berkeley, CA <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
Apr 22, 2015	CIPS Planet and Star Formation Seminar, UC Berkeley, CA <i>Flexible Spectroscopic Inference for Young Stars</i>
Apr 14, 2015	Astrostatistics Seminar, Statistics Department, Harvard University, MA <i>Flexible Spectroscopic Inference</i>

CONTRIBUTED RESEARCH TALKS AND PRESENTATIONS

Jan 21, 2021	PSETI Seminar, Pennsylvania State University, PA <i>Introduction to Radio Interferometry with ALMA</i>
Jul 10, 2020	Bay Area Exoplanet Science Meeting #33, NASA Ames, Mountain View, CA <i>Protoplanetary Disks in Binaries and Regularized and Maximum Likelihood Imaging for ALMA</i>
Feb 4-6, 2020	High-resolution Infrared Spectroscopy for Exoplanet Characterization, Caltech <i>Gaussian Process Spectral Models</i>
Aug 19-23, 2019	Extreme Solar Systems IV, Reykjavik, Iceland <i>The Mutual Inclinations of the Proto-Tatooine Disks</i>
Jul 21-26, 2019	Great Barriers in Planet Formation conference, Palm Cove, Australia

	<i>The Degree of Alignment between Circumbinary Disks and their Host Binaries</i>
Jun 28, 2019	Bay Area Exoplanet Meeting, NASA Ames, Mountain View, CA <i>Gradient-based Inference Algorithms for Exoplanet Science</i>
Dec 14, 2018	Bay Area Exoplanet Meeting, NASA Ames, Mountain View, CA <i>The Degree of Alignment between Circumbinary Disks and their Host Binaries</i>
Nov 19-23, 2018	Lorentz Center, Leiden, Netherlands <i>Weighing Stars from Birth to Death Workshop Presentation</i>
Jan 9, 2018	AAS meeting, Washington, D.C. <i>Mutual Inclinations of Circumbinary Protoplanetary Disks</i>
Dec 13, 2017	Exoplanets and Planet Formation, Shanghai, China <i>Mutual Inclinations of Circumbinary Protoplanetary Disks</i>
Dec 1, 2017	Bay Area Exoplanet Meeting, NASA Ames, Mountain View, CA <i>Mutual Inclinations of Circumbinary Protoplanetary Disks</i>
Aug 22, 2017	Exoclipse Conference, Boise State University, Boise, ID <i>Disentangling Stellar Spectra with Gaussian Processes: Applications to Radial Velocity Analysis</i>
Mar 3, 2017	Bay Area Exoplanet Meeting, NASA Ames, Mountain View, CA <i>Disentangling Stellar Spectra with Gaussian Processes: Applications to Radial Velocity Analysis</i>
Oct 17-28, 2016	SAMSI Exoplanet Workshop, Research Triangle Park, NC <i>Modeling Stellar Spectra with Gaussian Processes</i>
Jan 7, 2016	Dissertation talk, AAS Winter Meeting, Kissimmee, FL <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
Oct 19-21, 2015	Fitting Stars, CMDs, and Galaxies, Rockport, MA <i>Constructing a Likelihood Function for Spectroscopic Inference</i>
Sep 18, 2015	Bay Area Exoplanet Science Meeting, The SETI Institute, Mountain View, CA <i>Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution</i>
May 28-29, 2015	Emerging Researchers in Exoplanet Science Symposium, The Pennsylvania State University <i>Accessing the Fundamental Properties of Young Stars</i>
Jun 18-21, 2014	ExoStat 2014, Carnegie Mellon University, PA <i>Fitting Stellar Spectra With Some Help From Gaussian Processes</i>
Apr 27, 2012	CfA OIR Symposium, Cambridge, MA <i>The Unusually Luminous Extragalactic Nova SN 2010U</i>
Jan 21 - 27, 2012	Physics of Astronomical Transients, Aspen Center for Physics, Aspen, CO <i>Supernovae Impostors and Pan-STARRS</i>
Jun 28 - 30, 2011	Intermediate Luminosity Red Transients, Space Telescope Science Institute, Baltimore, MD <i>The Unusually Luminous Extragalactic Nova SN 2010U</i>
Apr 16, 2010	ACC Meeting of the Minds Conference, Georgia Institute of Technology <i>Precision Array to Probe the Epoch of Reionization (PAPER) Instrumentation Study</i>
Apr 9 - 10, 2010	AIAA Region I-MA Student Conference, Virginia Institute of Technology <i>Precision Array to Probe the Epoch of Reionization (PAPER) Instrumentation Study</i>

P.I. GRANTS AND PROPOSALS

Nov 2020	IRAM 30m project No. 140-20, 2020 - 2021 winter semester, A ranking 13.7 hrs
Oct 2020	ALMA Cycle 8 Development Study <i>Regularized Maximum Likelihood Techniques for ALMA Spectral Line Imaging</i> Oct 2020 - 2021, \$167,746
Aug 2019	ALMA Cycle 7: <i>Mapping the Inner Edge and Interior Cavity of a Kepler-Analog Circumbinary Protoplanetary Disk</i> , 4.8 hrs Band 6
Aug 2019	Automated Planet Finder/Lick : <i>Identifying Circumbinary Disk Systems with the APF</i> 3 nights
Aug 2019	Automated Planet Finder/Lick : <i>Dynamical Masses to Set the Ages of Nearby Young Moving Groups</i> 3 nights
Feb 2019	Automated Planet Finder/Lick : <i>Identifying Circumbinary Disk Systems with the APF</i> 4 nights
Feb 2019	Automated Planet Finder/Lick : <i>Dynamical Masses to Set the Ages of Nearby Young Moving Groups</i> 3 nights
Aug 2018	ALMA Cycle 6: <i>Unlocking the TWA 3 Triple System with ALMA</i> 1.3 hrs Band 6
Aug 2018	ALMA Cycle 6: <i>Mapping the Inner Edge of a Kepler-Analog Circumbinary Protoplanetary Disk</i> 5.7 hrs Band 6
Aug 2016	ALMA Cycle 4: <i>Resolving the AK Sco Circumbinary Disk</i> 1 hour Band 6
Oct 2014	CfA Optical and Infrared division: <i>Pre-Main Sequence Models</i> 1 night on Magellan/MIKE
Jun 2014	CfA Optical and Infrared division: <i>Determining the Systematic Error of Veiling</i> 3 nights each on 1.5m/TRES and 1.2m/Keplercam
Oct 2013	CfA Optical and Infrared division: <i>Pre-Main Sequence Models</i> 1 night on Magellan/MIKE
Jun 2013	CfA Optical and Infrared division: <i>Pre-Main Sequence Models</i> 3 nights each on 1.5m/TRES and 1.2m/Keplercam

WORKSHOPS AND CONFERENCES

Jan 21 - 24, 2020	MAPS ALMA LP meeting, CfA Harvard and Smithsonian, Cambridge, MA
Oct 21 - 25, 2019	<i>Visualizing the Kinematics of Planet Formation</i> , Flatiron Institute, NYC
Jun 23 - 28, 2013	<i>Gordon Research Conference on Origins of Solar Systems</i> , Mount Holyoke, MA
May 29 - Jun 5, 2012	<i>NRAO Summer School on Interferometry and Aperture Synthesis</i> , Socorro, NM
Sept 14 - 16, 2011	<i>NRAO CASA Reduction Workshop</i> , Socorro, NM
Sept 18 - 21, 2011	<i>PAN-STARRS Science Consortium Meeting</i> , Cambridge, MA
Aug 24 - 25, 2011	<i>Derek Bok Teaching Conference</i> , Harvard University, Cambridge, MA
Sept 22, 2009	<i>The Fourth North American ALMA Science Center Conference</i> , Charlottesville, VA

OPEN SOURCE CODE PACKAGES

MPoL	Regularized Maximum Likelihood Imaging for ALMA https://mpol-dev.github.io/MPoL/
visread	Visibility Reading Tools for Radio Astronomy https://mpol-dev.github.io/visread/
PSOAP	Disentangling of Stellar Spectra for Radial Velocity Analysis https://github.com/iancze/PSOAP ASCL: http://adsabs.harvard.edu/abs/2017ascl.soft05013C
DiskJockey	UV plane modeling of sub-mm interferometric protoplanetary disk observations https://github.com/iancze/DiskJockey ASCL: http://adsabs.harvard.edu/abs/2016ascl.soft03011C
Starfish	Modular tools for spectroscopic inference http://iancze.github.io/Starfish/ ASCL: http://adsabs.harvard.edu/abs/2015ascl.soft05007C

OBSERVING EXPERIENCE

Magellan Clay 6.5 Meter, Las Campanas Observatory, Chile

Jul 3-4, 2015	MIKE Pre-Main Sequence Models
May 22-23, 2014	MIKE Pre-Main Sequence Models
Oct 20-21, 2011	LDSS-3 and <i>MagE</i> GRB host galaxies and supernovae candidates from Pan-STARRS
Jan 11-12, 2011	LDSS-3 GRB host galaxies and supernovae candidates from Pan-STARRS

Multiple Mirror Telescope 6.5 Meter, Fred Lawrence Whipple Observatory, Arizona

Nov 26-28, 2011	<i>BlueChannel</i> Pan-STARRS supernova and variable stars
Feb 21-23, 2011	<i>BlueChannel</i> Pan-STARRS supernova and variable stars

Commissioning

Jun - Aug, 2012	MMTCam commissioning and installation at MMT
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The Submillimeter Array Interferometer, Mauna Kea, Hawaii

Feb 20-24, 2014	SMA queue observing
Nov 6 - 10, 2014	SMA queue observing
Jan 14 - 20, 2015	SMA queue observing

Gemini Planet Imager (GPI), Gemini South, Chile

Nov 16-18, 2016	GPI Exoplanet Survey
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IRAM 30m (mm-wave), Pico Veleta, Spain

Apr 28 - May 1, 2021	IRAM 30m (project No. 140-20), 13.7 hrs
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TEACHING

Aug - Dec 2021	<i>Professor, Astro 542: The Interstellar Medium and Star Formation</i> (website) Pennsylvania State University
Aug - Dec 2020	<i>Professor, Astro 6: Stars, Galaxies, and the Universe</i> Pennsylvania State University
Jan - May 2013	<i>Teaching Fellow, AY 193: Noise and Data Analysis in Astrophysics</i> Bok Center Certificate of Distinction in Teaching Wrote and delivered two class lectures
Jan - May 2013	<i>AY302: Scientists Teaching Science</i> , taught by Dr. Phil Sadler
Sep - Dec 2012	<i>Teaching Fellow, AY 17: Galaxies and Cosmology</i> Bok Center Certificate of Distinction in Teaching

PROFESSIONAL SERVICE AND OUTREACH

Apr 2021	Pennsylvania State University Eberly College of Science, faculty search committee
Feb 2021	JWST Cycle 1 Time Allocation panelist, <i>exoplanets and disks</i>
Jan 2021	Eberly Postdoctoral Fellow, interview panelist
May 2021 - present	Ph.D. Thesis Committee Chair, Brianna Zawadzki
Dec 2020 - present	Ph.D. Thesis Committee Member, Alan Reyes
Dec 2020	Comprehensive Exam Committee Member, Macy Huston (PSU)
Oct 2020 - present	Ph.D. Thesis Committee Member, Elizabeth Melton
Sep 2020 - present	PSU Astronomy Graduate Admissions Committee
Aug 2020 - present	PSU Astronomy Development and Alumni Relations Committee
Mar 2020	TESS Cycle 3 GO Time Allocation Committee Panelist
Jan 2020 - present	Referee for MNRAS
Sep 2019 - Mar 2020	Berkeley ExoCoffeeTea arXiv discussion organizer
29 Apr - 2 May, 2019	AURA Future Leader
Fall 2018	NAS Astro2020 Early Career Decadal Survey Focus Session Participant
2017 - 2018	Stanford KIPAC Colloquium Committee
Aug 2016	Montauk Observatory Public Lecture, Montauk, NY <i>East End Dark Skies Spark a Career in Astrophysics</i>
Dec 2016	Bay Area Exoplanet Meeting LOC
2016 - present	Referee for the Astrophysical Journal
2013 - 2015	Harvard Astronomy Department Peer mentor
2012 - 2013	Harvard Undergrad Observing Project (HOP) volunteer
Apr 28, 2012	Cambridge Explores the Universe, volunteer
Sep 2011 - Mar 2012	Braintree High School Science Fair Mentor with students Mr. Joshua Kelleher and Mr. Brendan Newell
Feb 2011 - Feb 2012	Fauquier County Light Pollution High School Science Project Mentor with student Ms. Virginia Johnson
Feb 8, 2012	High Science Fair Judge, East Boston High School
Oct 26, 2011	Science in the News (SITN) Public Lecture, <i>The Chemical Enrichment of the Universe</i> , Boston, MA
Jul 2011 - 2015	Library Committee Graduate Student Representative, Harvard-Smithsonian CfA Wolbach Library
Dec 2010 - 2015	Astrobites (daily astrophysical literature journal) co-founder and contributing author
Oct 2009 - Apr 2010	<i>Dark Skies, Bright Kids</i> science program, Central Virginia

SELECTED POSTERS

6. *The Degree of Alignment Between Circumbinary Disks and their Host Binaries*
Ian Czekala, E. Chiang, S. M. Andrews, E. L. N. Jensen, G. Torres, D. J. Wilner, K. G. Stassun, & B. Macintosh
New Horizons in Planetary Systems, Victoria, BC, Canada. May 13-17, 2019
5. *Using Protoplanetary Disks to Weigh the Youngest Stars and Constrain The Earliest Stages of Stellar Evolution*
Ian Czekala, S. M. Andrews, E. L. N. Jensen, K. G. Stassun, D. Latham, D. J. Wilner, & G. Torres
Extreme Solar Systems III Conference, Waikoloa Village, HI, Nov 29 - 4, 2015
4. *A Disk-based Dynamical Mass Estimate for the Young Binary AK Sco*
Ian Czekala, S. M. Andrews, E. L. N. Jensen, K. G. Stassun, G. Torres, & D. J. Wilner
2015 Gordon Research Conference on Origins of Solar Systems, Mount Holyoke, MA
3. *A Novel Tool for the Spectroscopic Inference of Fundamental Stellar Parameters*
Czekala, Ian; Andrews, Sean M.; Latham, David W.; Torres, Guillermo
Summer AAS Meeting #224 #322.01, Boston, MA
2. *The Unusually Luminous Extragalactic Nova SN 2010U*
Czekala, Ian; Chornock, R.; Berger, E.; Pastorello, A.; Marion, G. H.; Challis, P.; Wheeler, J. C.; Botticella, M. T.; Smartt, S.; Ergon, M.; Sollerman, J.
American Astronomical Society, AAS Meeting #218, #127.11; Vol. 43, 2011
1. *Truncated Disks in TW Hya Association Multiple Star Systems*
Czekala, Ian; Andrews, Sean
American Astronomical Society, AAS Meeting #215, #428.05; Vol. 42, p.345 awarded **Chambliss Student Achievement Award**

COLLABORATIVE POSTERS

2. *Snapshots of the Universe: A Multi-Lingual Astronomy Art Book*
Beaton, Rachael; Jackson, L.; Carlberg, J.; Johnson, K.; Marchand, R.; Sivakoff, G.; **Czekala, I.**; Damke, G.; Dean, J.; Drosback, M.; Gugliucci, N.; Martinez, O.; Wong, A.; Zasowski, G.; Skies, Dark; Kids, Bright
American Astronomical Society, AAS Meeting #220, #437.13
1. *Astrobites: The Astro-ph Reader's Digest For Undergraduates*
Sanders, Nathan; Newton, E. R.; **Czekala, I.**; Rosenfeld, K.; Dressing, C. D.; Gifford, D.; Suresh, J.; Schneider, E.; Morley, C.; Kohler, S.
American Astronomical Society, AAS Meeting #218, #333.11; Bulletin of the American Astronomical Society, Vol. 43, 2011

REFERENCES

Professor Eugene Chiang	University of California at Berkeley (echiang@astro.berkeley.edu)
Professor Bruce Macintosh	Stanford University (bmacintosh@stanford.edu)
Dr. Sean M. Andrews	Center for Astrophysics Harvard and Smithsonian (sandrews@cfa.harvard.edu)
Professor Eric L. N. Jensen	Swarthmore College (ejensen1@swarthmore.edu)
Dr. Kaisey Mandel	University of Cambridge IfA (kmandel@ast.cam.ac.uk)
Dr. David Latham	Center for Astrophysics Harvard and Smithsonian (dlatham@cfa.harvard.edu)
Professor James Moran	Center for Astrophysics Harvard and Smithsonian (jmoran@cfa.harvard.edu)
Professor Kelsey Johnson	University of Virginia (kej7a@virginia.edu)