

IAN W. STEPHENS

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AREAS OF INTEREST

Observations: High- and Low-mass Star Formation, Planet Formation, Disk Formation, Survey Astronomy, Magnetic Fields, Polarization, Interstellar Medium, Young Stellar Objects (YSOs), Astrochemistry, Interferometry, Outflows, H II Regions, Large Magellanic Cloud (LMC)

POSITIONS HELD

CfA/SAO Postdoctoral Fellow June 2016 – Present

Center for Astrophysics | Harvard & Smithsonian

Advisor: Philip C. Myers

Visiting Scholar September 2017 – December 2018

University of Pennsylvania

Visiting Scientist August 2016 – June 2017

Haverford College

Postdoctoral Associate August 2013 – June 2016

Boston University

Advisor: James M. Jackson

Research Assistant January 2009 – July 2013

University of Illinois at Urbana-Champaign

Advisor: Leslie W. Looney

Intel Electrical Engineering Intern January 2006 – August 2006

Albuquerque, New Mexico

EDUCATION

University of Illinois at Urbana-Champaign August 2008 – July 2013

PhD in Astronomy

Advisor: Leslie W. Looney

Georgia Institute of Technology August 2003 – May 2007

Bachelor of Science in Electrical Engineering

Highest Honors

STUDENT ADVISING

Head Advisor

- 9) Ana Georgescu, Undergraduate of Harvard College Summer 2019 – Fall 2019
8) Daniel Heimsoth, Undergraduate of Yale University Summer 2019
– Presented poster at the 235th AAS Meeting of the American Astronomical Society (2020)
7) Patrick Nordahl, Knock.com Spring 2019
6) Lyn Swanson, Recent Graduate of University of Illinois Summer 2018 – Fall 2019
5) Bridget Anderson, Undergraduate of the University of Virginia Summer 2017
– **Undergraduate First Author Paper, Andersen et al. 2019**
– Presented Poster at the 231st Meeting of the American Astronomical Society (2018)
4) Naigambi Patience Namusuubo, Undergraduate of UMass Lowell, Summer 2017
– SAO Latino Initiative Program
3) Sean Dillet, Undergraduate of Harvard College Fall 2016
2) Oscar De La Rosa, Undergraduate of UMass Lowell Summer 2016 – Fall 2016
– SAO Latino Initiative Program
– Presented Poster at the 229th Meeting of the American Astronomical Society (2017)
1) Kimberly Mowry, Undergraduate of University of Illinois Summer 2012

Co-Advisor

- 2) Riwayj Pokrehl, Graduate Predoctoral Student at CfA Summer 2016 – Spring 2018
1) Taylor Hogge, Graduate Student at Boston University Fall 2015 – Summer 2016

TEACHING EXPERIENCE

- Course Instructor, Harvard University, Astronomy 191, Spring 2020
Guest Lecturer Summer 2017, 2018, 2019
– Center for Astrophysics | Harvard & Smithsonian, Python Workshop
– Harvard Physics Department, Python Course (2019 only)
Video Guest Lecturer Summer 2014
– Massive Open Online Course (MOOC), Alien Worlds, Boston University
Teaching Assistant, University of Illinois, Stars and Galaxies (ASTR 122) Fall 2009
– Taught three discussion sections using my own lesson plans
Teaching Assistant, University of Illinois, Stars and Galaxies (ASTR 122) Fall 2008
– Taught three discussion sections using my own lesson plans
Teaching Assistant, Midwestern State University, Physical Science Lab (GNSC 1204) Spring 2008
– Three lab sections; Basic physics and chemistry for Education majors
– Labs set up by me
– Wrote my own lab tests
Teaching Assistant, Midwestern State University, Electronics II Lab (PHYS 2204) Spring 2008
– Three lab sections; AC circuits for Engineering majors
– Labs selected and set up by me
– Wrote my own lab quizzes
– **Awarded TA of the year for Physics**

AWARDED FELLOWSHIPS/GRANTS AS PI (TOTAL: \$655,460)

<i>SOFIA</i> grant in conjunction with observations budget pending, ~\$150,000	January 2020
Student Observing Support for ALMA Observations, \$26,334	October 2019
Student Observing Support for ALMA Observations, \$19,000	October 2019
AAS Travel Grant to IAU XXX General Assembly, Vienna, Austria, \$1649	August 2018
IAU Grant for IAU XXX General Assembly, Vienna, Austria, \$630	August 2018
<i>SOFIA</i> grant in conjunction with observations \$55,500	November 2017
<i>SOFIA</i> grant in conjunction with observations \$55,000	November 2017
<i>SOFIA</i> grant in conjunction with observations \$42,000	November 2017
Student Observing Support for ALMA Observations, \$31,534	September 2017
<i>SOFIA</i> grant in conjunction with observations, \$99,000	October 2015
<i>Hubble Space Telescope</i> grant in conjunction with observations, \$161,303	December 2012
AAS Travel Grant to IAU XXVII General Assembly, Beijing, China, \$1,510	August 2012
EAPSI: NSF and Australia Academy of Science Grant, ~\$12,000	Summer 2010

OBSERVING PROPOSALS ACCEPTED AS PI AND DATES ACCEPTED

SOFIA: FIELDMAPS, Legacy Pilot, 15 hrs	2019
ALMA: Snow Lines and the Seven Rings: Resolving Polarized Substructures, A-ranked, 25 hrs	2019
– Student Observing Support for Rachel Harrison at UIUC, \$19,000	
ALMA: Using Hourglass Field Morphologies to Estimate Magnetic Fields, A-ranked, 10 hrs	2019
ALMA: HL Tau: “Rosetta Stone” For Understanding Disk Polarization, A-ranked, 6 hrs	2019
ALMA: BOPS: B-field Orion Protostellar Survey, A-ranked, 13.5 hrs	2019
– Student Observing Support for Renato Mazzei at UVA, \$26,334	
VLA: HL Tau Polarization: Long Wavelengths Provide a Critical Test, 35 hrs	2018
BLAST-TNG: NGC 6357 part of the Twin Complex NGC 6334 – NGC 6357, 5 hrs	2018
BLAST-TNG: Converging our Understanding on Filamentary IRDCs, 7 hrs	2018
ALMA: HL Tau: “Rosetta Stone” For Deciphering Disk Polarization, B-ranked, 6 hrs	2018
ALMA: Measuring Magnetic Field Morphologies in Disks via the GK Effect, B-ranked, 7 hrs	2018
SOFIA: Role of B-Fields in High-Mass Star-Forming Filaments, 6 hrs	2017
SOFIA: Role of B Fields in a Filamentary Low-mass Star-Forming Region, 9 hrs	2017
SOFIA: Mapping the Magnetic Fields in Intermediate-Mass Clumps, 7 hrs	2017
ALMA: BOPS: B-field Orion Protostellar Survey, A-ranked, 13.5 hrs	2017
– Student Observing Support for Andy Lam at UVA, \$31,534	
ALMA: HL Tau: “Rosetta Stone” For Deciphering Disk Polarization, C-ranked, 6 hrs	2017
SOFIA: Role of B-Fields in High-Mass Star-Forming Filaments, 8 hrs	2016
ALMA: mm and Submm Pol. of Disks: Emission or Scattered Light?, B-ranked, 6 hrs	2016
SOFIA: Role of B-Fields in High-Mass Star-Forming Filaments, 8 hrs	2015
– Highest Ranked Cycle 4 HAWC+ Proposal; top 5% of all SOFIA proposals	
SMA: Mapping Line Polarization in L1157, 2 nights	2015
Perkins, MIMIR: Probing the Large-Scale Polarization of HL Tau’s Cloud, 3 nights	2014
SMA: Mapping Line Polarization in L1527, 2 nights	2014
ATCA: Two High-Mass Cores at Different Evolutionary Stages, 8.5 hrs	2014
ALMA: The Morphology of the Magnetic Field of HL Tau, B-ranked, 4 hrs	2013
CARMA: Director’s Discretionary Time for CARMA key result, HL Tau, 14 hrs	2013
CARMA: Resolving Polarization: The Disk Around HL Tau, 14 hrs	2013
<i>Herschel Space Observatory</i> : The Evolution of Massive Star Forming Regions, 49 hrs OT2	2012
<i>Hubble Space Telescope</i> : Probing Isolated Massive Star Formation in the LMC	2012
– 21 orbits with WFC3/IR and WFC3/UVIS	
– 21 parallel orbits with ACS/WFC	
CARMA: Rotating Bipolar Outflows Reveal the Driving Mechanism, 30 hrs	2010
ATCA: The Evolution of Massive Young Stellar Objects in the LMC, 40 hrs	2010

CURRENT LARGE SURVEYS WITH MAJOR INVOLVEMENT

- PI of SOFIA Legacy Pilot Program FIELDMAPS, 15 hours
 - Observations start Summer 2020
- ATCA Census of High-Mass Clumps, 3000 hrs, Australia Telescope Compact Array
 - Observations started Fall 2017
- Radio Ammonia Mid-Plane Survey (RAMPS), 1000 hrs, Green Bank Telescope
 - 700 hrs observed
- KFPA Examinations of Young STellar (O-star) Natal Environments, 540 hrs, Green Bank Telescope
 - 360 hrs observed
- Mass Assembly of Stellar Systems and their Evolution with the SMA, 600 hrs, Submillimeter Array
 - Co-PI, Stephens et al. (2017, 2018, 2019)
 - Largest survey ever with the SMA
 - Undergraduate (Bridget Andersen) published paper using survey data.
- The Millimetre Astronomy Legacy Team 90 GHz Survey, 2000 hrs, Mopra
 - Stephens et al. (2015, 2016)

SERVICE

- Letter of Recommendation Writer for Four Students
- Proposal Reviewer for Canada-France-Hawaii Telescope
- NSF Proposal Review Panelist for the NSF Astronomy and Astrophysics Research Grant
- Referee for *Nature*, *Astrophysical Journal*, and *Monthly Notices of the Royal Astronomical Society*
- First Author Article for the SMA Newsletter July 2019
- ToI TEC, Fields in Filaments, scientific advisory December 2017 – Present
- ToI TEC, 90 sq. degree Clouds-to-Cores Legacy Survey, scientific advisory October 2017 – Present
- Probe of Inflation and Cosmological Origins (PICO), scientific advisory July 2017 – Present
- Decadal survey concept mission
- CfA Star Formation Journal Club Organizer and Host August 2016 – December 2017
- Boston University Lunch Talk Organizer and Host August 2014 – May 2015
- Illinois Journal Club Organizer and Host Spring 2011
- Co-Host for Undergraduate Night Observing Fall 2008, 2009

OUTREACH

- Advising underrepresented undergraduate students: 2 black and 5 female students
- Scientia* article contributor Fall 2019
- YouthAstroNet (see teaching statement) Summer 2018–Present
- Clouds School Astronomy Summer Camp Summer 2019
 - Summer camp for students in Chengdu, China children aged 6–10
 - Welcome video for students
 - Video Skype session with students, including a presentation and Q&A
- Smithsonian Astrophysical Observatory Latino Initiative Program Summer 2016, 2017, 2018, 2019
 - Research Program at SAO for underrepresented minority UMass-Lowell undergraduate students
 - Primary and secondary Mentor for many students
 - Python instruction
- Astronomy on Tap, San Jose November 2018
 - Creating Stars and Planets from Clouds
- Massive Open Online Course (MOOC), Alien Worlds, Boston University Summer 2014
 - Star formation on multiple scales
- Astronomy Observatory at UIUC, Night Observing Fall 2008, 2009

ACCEPTED INVITED TALKS

Lafayette Colloquium	December 2019
Tufts Seminar	September 2019
Villanova Colloquium	February 2019
AAS, Special Session, Magnetic Fields in Filaments and Star Formation	January 2019
USRA, NASA Ames Seminar	November 2018
SMA Science Meeting, CfA	September 2018
Jet Propulsion Laboratory Seminar	August 2018
University of Connecticut, Astronomy Seminar Series	April 2018
Sub-pc Framing Talk for Harvard-Heidelberg Star Formation 2017	November 2017
SMA Steering Committee, CfA	August 2017
SMA Science Meeting, CfA	March 2017
Workshop: SMA Science in the Next Decade, Taipei, Taiwan	October 2016
Haverford College Colloquium	October 2016
Boston University Colloquium	March 2016
CfA/SAO Seminar	February 2016
USRA, NASA Ames Seminar	February 2016
Northwestern University Seminar	January 2016
CfA Radio and Geoastronomy Talk	November 2014
ATNF CASS Colloquium, Marsfield, Australia	July 2014
University of Illinois Seminar and CARMA seminar	February 2014
Australian Academy of Science, Sydney, Australia	July 2010

CONTRIBUTED TALKS

2020 New England Star Formation Meeting	January 2020
Harvard-Heidelberg Star Formation 2019	November 2019
2019 New England Star Formation Meeting	January 2019
CfA Postdoctoral Symposium	October 2018
IAU General Assembly, Focus Meeting 5, “Magnetic Fields in Protostars”	August 2018
IAU General Assembly, IAU Symposium 345	August 2018
CfA Postdoctoral Symposium	October 2017
MA-CT Regional Star Formation Meeting, Yale	January 2017
229th AAS Meeting, Grapevine, TX	January 2017
227th AAS Meeting, Kissimmee, FL	January 2016
Regional Star Formation Mini-Meeting, CfA	January 2016
Midwest Magnetic Fields Workshop 2015, University of Wisconsin	May 2015
Soul of High-Mass Star Formation, Puerto Varas, Chile	February 2015
Regional Star Formation Mini-Meeting, University of Massachusetts, Amherst	January 2015
225th AAS Meeting, Seattle, WA	January 2015
Boston University Lunch Talk	November 2015
University of Illinois, Seminar	February 2015
Boston University Lunch Talk	January 2014
IRDC, Filaments, and Cores Meeting, CfA	November 2014
Boston University Seminar Talk	October 2013
University of Illinois Seminar, CARMA seminar	February 2013
University of Illinois Seminar, CARMA seminar	October 2012
University of Illinois Preliminary Exam	April 2012
Star Formation Astro-ph Meeting	March 2012
University of Illinois Seminar, CARMA seminar	March 2012
Star Formation Astro-ph Meeting	October 2011
University of Illinois Student Seminar	September 2011
University of Illinois Seminar, CARMA seminar	August 2011

CARMA Summer School	July 2011
University of Illinois Student Seminar	March 2011
University of Illinois Student Seminar	April 2010

POSTERS PRESENTED

Polarization Research Projects	November 2019
– <i>Harvard-Heidelberg Star Formation</i> , Cambridge, MA	
Mass Assembly of Stellar Systems and their Evolution with the SMA (MASSES)	January 2019
– <i>233rd Meeting of the AAS</i> , Seattle, WA	
Hubble Observations of Isolated YSOs in the LMC	February 2015
– <i>Soul of High-Mass Star Formation</i> , Puerto Varas, Chile	
Evolution of H II Regions around Massive YSOs	February 2013
– <i>Magellanic Cloud Star Formation: From the Milky Way to Distant Galaxies</i> , Leiden, Netherlands	
Probing Isolated Massive Star Formation in the LMC	February 2013
– <i>Magellanic Cloud Star Formation: From the Milky Way to Distant Galaxies</i> , Leiden, Netherlands	
The Magnetic Field Morphology of the Class 0 Protostar L1157	August 2012
– <i>IAU XXVIII General Assembly</i> , Beijing, China	
Evolution of H II Regions around Massive YSOs	August 2012
– <i>IAU XXVIII General Assembly</i> , Beijing, China	
Energy Feedback and Dust Properties of H II Regions	August 2012
– <i>IAU XXVIII General Assembly</i> , Beijing, China	
Probing Massive Star Formation in the Large Magellanic Cloud	May 2011
– <i>Midwest ALMA Community Event</i> , University of Iowa	

TECHNICAL EXPERIENCE

Interferometric Telescopes Used

Atacama Large Millimeter/submillimeter Array (ALMA)
Australia Telescope Compact Array (ATCA)
Combined Array for Research in Millimeter-wave Astronomy (CARMA)
Submillimeter Array (SMA)
Very Large Array (VLA)

Single-Dish Telescopes Used

Caltech Submillimeter Observatory (CSO)
Green Bank Telescope (GBT)
Herschel Space Observatory
Hubble Space Telescope (HST)
Mopra Telescope
Perkins Telescope
Spitzer Space Telescope
Stratospheric Observatory for Infrared Astronomy (SOFIA)

Instrumentation Experience

Cryogenic motors for the SOFIA polarimeter, HAWC+
– Assembled at University of Illinois, Spring 2007, Summer 2011, and Fall 2013
– Funded by NASA
– Unique two-phase design; low-powered (~ 100 mW at highest frequencies)
– Spins a half-wave plate for the polarimetry module
– Implemented cryogenic tests of the motor at California Institute of Technology
– SPIE paper, 7th author
Undergraduate senior design project
– Microcontroller MP3 player
– Received a radio signal that told the player which track to play

ADDITIONAL TRAINING/EXPERIENCE

American Astronomical Society, Full Member	
Remote survey observations, GBT	March 2014 – March 2019
Remote observations, ATCA	August 2015
Observations on site, Perkins MIMIR	December 2014
Observations on site, ATCA	July 2014
Remote observations, ATCA	May 2014
Observations on site, GBT	March 2014
– Commissioning of new VEGAS spectrometer	
Mopra remote observations	April 2013
Observation duty on site, CARMA (1 week)	January 2013
Radio astronomy summer school student for CARMA (1 week)	July 2011
Remote Observations with ATCA	June 2011
Observations on site, ATCA	September 2010
– Commissioning and first science use of 64M-32k CABB mode	
East Asia and Pacific Summer Institutes (EAPSI) Fellowship	June – August 2010
– Australia fellowship with Maxim Voronkov	
– Learned radio astronomy, interferometry, and ATCA at ATNF	
Intel Internship	January 2006 - August 2006
– Fabrication facility in Albuquerque, NM	
– Tested processor chips and chipsets on 12-inch wafers	
– Taught and trained coworkers	

SKILLS

Astronomy

- Programming knowledge in Python, Shell-scripting, C, C++, Perl, VB, Java, Assembly, Fortran, etc.
- Skilled with MIRIAD, CASA, kvis, DS9 shell-scripting, Aladin, Linux, and FITS file manipulation
- Experience writing observing scripts and setting up final observations for ALMA, ATCA, CARMA, GBT, *HST*, SMA, VLA, etc.
- Strong knowledge in statistics, including propagation of error via covariance matrices, hypothesis testing, and Monte Carlo simulations
- Proficient with Adobe Photoshop/Illustrator, Gimp, and LaTeX

Engineering and Instrumentation

- Proficient with oscilloscopes, function generators, digital multimeters, voltage supplies, etc.
- Experienced with integrated circuits, microcontrollers, breadboards, PCBs, and soldering
- Knowledge of electric motors
- Software and programming experience with FPGAs (VHDL), MATLAB, PSpice, LabVIEW, etc.

PRESS

Press Releases

Boston University Study Images Magnetic Field in a Young Star for the First Time

Boston University

November 2014

<http://www.globalbrandsmagazine.com/boston-university-study-images-magnetic-field-in-a-young-star-for-the-first-time/>

Sculpting solar systems: Magnetic fields seen for first time

University of Illinois at Urbana-Champaign

October 2014

<https://news.illinois.edu/view/6367/204484>

Magnetic field of accretion disk finally captured

SRON Netherlands Institute for Space Research

October 2014

<http://www.sron.nl/press-releases-news-754/4042-magnetic-field-of-accretion-disk-finally-captured>

Importante descubrimiento realizado por un investigador del IAR

Instituto Argentino de Radioastronomía

October 2014

<https://www.iar.unlp.edu.ar/novedades/importante-descubrimiento-realizado-por-un-investigador-del-iar/>

Articles

‘Captain, There Be Planets Here!’

Huffington Post

November 2014

http://www.huffingtonpost.com/dr-sten-odenwald/captain-there-be-planets-here_b.6188988.html

Star’s magnetic field imaged for first time

Futurity

November 2014

<http://www.futurity.org/stars-magnetic-field-803342/>

A Star Is Born – Unraveling the magnetic mysteries of stellar birth

Boston University

November 2014

<http://www.bu.edu/research/articles/a-star-is-born/>

Baby Stars’ Twisted Magnetism More Chaotic Than Thought

Discovery

October 2014

<https://www.seeker.com/baby-stars-twisted-magnetism-more-chaotic-than-thought-1769216242.html>

La Naissance des Etoiles Mieux Comprise

Ca se passe là haut

October 2014

<http://www.ca-se-passe-la-haut.fr/2014/10/la-naissance-des-etoiles-mieux-comprise.html>

Comprueban la importancia de los campos magnéticos para la formación de estrellas

Conicet La Plata

October 2014

<https://laplata.conicet.gov.ar/comprueban-la-importancia-de-los-campos-magneticos-para-la-formacion-de-estrellas/>

Magnetic field around young star captured

phys.org

October 2014

<http://phys.org/news/2014-10-magnetic-field-young-star-captured.html>

Magnetfelder füttern junge Sterne

pro-physik.de

October 2014

<https://www.pro-physik.de/nachrichten/magnetfelder-fuettern-junge-sternez>

Astrophysics: Secret ingredient exposed

Nature News and Views

October 2014

<http://www.nature.com/nature/journal/vaop/ncurrent/full/nature13932.html>

PUBLICATIONS

>1250 citations, H-index: 21. The most up-to-date publication list (and NASA ADS link) can be found at: <https://www.cfa.harvard.edu/~istephen/publications.html>

Refereed First-Author Publications

11) *Mass Assembly of Stellar Systems and their Evolution with the SMA -- Full Data Release*

Stephens, Ian W.; Bourke, Tyler L.; Dunham, Michael M.; Myers, Philip C.; Pokhrel, Riwanj; Tobin, John J.; G. Arce, Héctor; Sadavoy, Sarah I.; Vorobyov, Eduard I.; Pineda, Jaime E.; Offner, Stella S. R.; Lee, Katherine I.; Kristensen, Lars E.; Jørgensen, Jes K.; Gurwell, Mark A.; Goodman, Alyssa A. 2019, *ApJS*, 245, 2

10) *Mass Assembly of Stellar Systems and their Evolution with the SMA - 1.3 mm Subcompact Data Release*

Stephens, Ian W.; Dunham, Michael M.; Myers, Philip C.; Pokhrel, Riwanj; Bourke, Tyler L.; Vorobiev, Eduard I.; Tobin, John J.; Sadavoy, Sarah I.; Pineda, Jaime E.; Offner, Stella S. R.; Lee, Katherine I.; Kristensen, Lars E.; Jørgensen, Jes K.; Goodman, Alyssa A.; Arce, Héctor G.; Gurwell, Mark, 2018, *ApJS*, 237, 22

9) *ALMA Reveals Transition of Polarization Pattern with Wavelength in HL Tau's Disk*

Stephens, Ian W.; Yang, Haifeng; Li, Zhi-Yun; Looney, Leslie W.; Kwon, Woojin; Fernández-López, Manuel; Hughes, A. Meredith; Mundy, Lee G.; Crutcher, Richard M.; Rao, Ramprasad; Segura-Cox, Dominique M., 2017, *ApJ*, 851, 55

8) *Alignment Between Protostellar Outflows and Filamentary Structure*

Stephens, Ian W.; Dunham, Michael M.; Myers, Philip C.; Pokhrel, Riwanj; Sadavoy, Sarah I.; Vorobiev, Eduard I.; Tobin, John J.; Pineda, Jaime E.; Offner, Stella S. R.; Lee, Katherine I.; Kristensen, Lars E.; Jørgensen, Jes K.; Goodman, Alyssa A.; Bourke, Tyler L.; Arce, Héctor G.; Plunkett, Adele, 2017, *ApJ*, 846, 16

7) *Stellar Clusterings around "Isolated" Massive YSOs in the LMC*

Stephens, Ian W.; Gouliermis, Dimitrios; Looney, Leslie W.; Gruendl, Robert A.; Chu, You-Hua; Weisz, Daniel R.; Seale, Jonathan P.; Chen, C.-H. Rosie; Hughes, Annie; Pineda, Jorge L.; Ott, Jürgen; Muller, Erik, 2017, *ApJ*, 834, 94

6) *Linking Dense Gas from the Milky Way to External Galaxies*

Stephens, Ian W.; Jackson, James M.; Whitaker, J. Scott; Contreras, Yanett; Guzmán, Andrés E.; Sanhueza, Patricio; Foster, Jonathan B.; Rathborne, Jill M., 2016, *ApJ*, 824, 29

5) *Interferometric Observations of High-Mass Star-Forming Clumps with Unusual N₂H⁺/HCO⁺ Line Ratios*

Stephens, Ian W.; Jackson, M. James.; Sanhueza, Patricio; Whitaker, J. Scott; Hoq, Sadia; Rathborne, Jill M.; Foster, Jonathan B., 2015, *ApJ*, 802, 6

4) *Spatially Resolved Magnetic Field Structure in the Disk of a T Tauri Star*

Stephens, Ian W.; Looney, Leslie W.; Kwon, Woojin; Fernández-López, Manuel; Hughes, A. Meredith; Mundy, Lee G.; Crutcher, Richard M.; Li, Zhi-Yun; Rao, Ramprasad, 2014, *Nature*, 514, 597

3) *Spitzer Observations of Dust Emission from H II Regions in the Large Magellanic Cloud*

Stephens, Ian W.; Evans, Jessica Marie; Xue, Rui; Chu, You-Hua; Gruendl, Robert A.; Segura-Cox, Dominique M., 2014, *ApJ*, 784, 147

2) *The Magnetic Field Morphology of the Class 0 Protostar L1157-mm*

Stephens, Ian W.; Looney, Leslie W.; Kwon, Woojin; Hull, Charles L. H.; Plambeck, Richard L.; Crutcher, Richard M.; Chapman, Nicholas; Novak, Giles; Davidson, Jacqueline; Vaillancourt, John E.; Shinnaga, Hiroko; Matthews, Tristan 2013, *ApJL*, 769, L15

1) *The Galactic Magnetic Field's Effect in Star-forming Regions*

Stephens, Ian W.; Looney, Leslie W.; Dowell, C. Darren; Vaillancourt, John E.; Tassis, Konstantinos, 2011, ApJ, 728, 99

Non-Refereed First-Author Publications

5) *Trying to Make Sense of Polarization Patterns in Circumstellar Disks*

Stephens, Ian W.; Yang, Haifeng; Li, Zhi-Yun, Magnetic fields along the star-formation sequence. Proceedings IAU Focus Meeting 4, 2019, ed. C. Hull, A. Maury, S. Hubrig

4) *MASSES: An SMA Large Project Surveying Protostars to Reveal How Stars Gain their Mass*

Stephens, Ian W.; Dunham, Michael M.; Myers, Philip C.; Pokhrel, Riwanj; Bourke, Tyler L.; and the MASSES team, Origins: From the Protosun to the First Steps of Life. Proceedings IAU Symposium No. 345, 2019, ed. B. G. Elmegreen, L. Viktor Tóth, M. Güdel

3) *Mass Assembly of Stellar Systems and their Evolution with the SMA*

Stephens, Ian W.; Dunham, Michael M.; Myers, Philip C.; Bourke, Tyler L.; Pokhrel, Riwanj; Vorobyov, Eduard I.; Tobin, John J.; Pineda, Jaime E.; Offner, Stella S. R.; Lee, Katherine I.; Kristensen, Lars E.; Jørgensen, Jes K.; Goodman, Alyssa A.; Arce, Héctor G.; Gurwell, Mark; Andersen, Bridget, 2019, July 2019 SMA Newsletter, https://www.cfa.harvard.edu/sma/Newsletters/SMA_NewsJuly2019.pdf

2) *Astro2020 Science White Paper: Polarization in Disks*

Stephens, Ian W.; Li, Zhi-Yun; Yang, Haifeng; Kataoka, Akimasa; Looney, Leslie W.; Hull, Charles L. H.; Fernández-López, Manuel; Sadavoy, Sarah I.; Kwon, Woojin; Ohashi, Satoshi; Tazaki, Ryo; Li, Dan; Hoang, Thiem; Bertrang, Gesa H.-M.; Carrasco-González, Carlos; Dent, William R. F.; Takahashi, Satoko; Bacciotti, Francesca; Alves, Felipe O.; Girart, Josep M.; Zhang, Qizhou; Rao, Ramprasad; Pohl, Adriana; Padovani, Marco; Galli, Daniele; Lee, Chin-Fei; Segura-Cox, Dominique M., 2019, BAAS, 51c, 246

1) *Evolution of H II Regions around Massive YSOs*

Stephens, Ian W.; Looney, Leslie W.; Indebetouw, Remy; Chu, You-Hua; Gruendl, Robert A.; Chen, C.-H. Rosie; Seale, Jonathan P.; Evans, Jessica Marie, 2013, IAU Symposium, 292, 56

Other Refereed Publications

44) *Validating Scattering-Induced (Sub)millimeter Disk Polarization through the Spectral Index, Wavelength-Dependent Polarization Pattern, and Polarization Spectrum: The Case of HD 163296*

Lin, Zhe-Yu Daniel; Li, Zhi-Yun; Yang, Haifeng; Looney, Leslie; **Stephens, Ian W.**; Hull, Charles L. H., MNRAS, submitted, arXiv:1912.10012

43) *Characterizing [C II] Line Emission in Massive Star Forming Clumps*

Jackson, James M.; Allingham, David; Killerby-Smith, Nicholas; Whitaker, J. Scott; Smith, Howard; Contreras, Yanett; Guzmán, Andrés; Hogge, Taylor; Sanhueza, Patricio; **Stephens, Ian W.**, ApJ, submitted

42) *Probing the Temperature Structure of Optically Thick Disks using Polarized Emission of Aligned Grains*

Lin, Zhe-Yu D.; Li, Zhi-Yun; Yang, Haifeng; Looney, Leslie; Lee, Chin-Fei; **Stephens, Ian W.**; Lai, Shih-Ping, MNRAS, submitted

41) *The VLA/ALMA Nascent Disk and Multiplicity (VANDAM) Survey of Orion Protostars. A Statistical Characterization of Class 0 and I Protostellar Disks*

Tobin, John J.; Sheehan, Patrick; Megeath, S. Thomas; Díaz-Rodríguez, Ana Karla; Offner, Stella S. R.; Murillo, Nadia M.; van't Hoff, Merel; van Dishoeck, Ewine F.; Osorio, Mayra; Anglada, Guillem; Furlan, Elise; Stutz, Amelia M.; Reynolds, Nickalás; Karnath, Nicole; Fischer, William J.; Persson, Magnus; Looney, Leslie W.; Li, Zhi-Yun; **Stephens, Ian W.**, Chandler, Claire J.; Cox, Erin; Francesco,

James Di; Dunham, Michael M.; Tychoniec, Lukasz; Kama, Mihkel; Kratter, Kaitlin; Kounkel, Marina; Mazur, Brian; Maud, Luke; Patel, Lisa; Perez, Laura; Sadavoy, Sarah I.; Segura-Cox, Dominique; Sharma, Rajeeb; Stephenson, Brian; Watson, Dan M.; Wyrowski, Friedrich, ApJ, in press

40) *SOFIA/HAWC+ traces the magnetic fields in NGC 1068*

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16) *Astro2020 APC White Paper: The Case for a Fully Funded Green Bank Telescope*
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15) *Astro2020 Science White Paper: Time-Domain Photometry of Protostars at Far-Infrared and Sub-millimeter Wavelengths*

Fischer, William J.; Dunham, Michael; Green, Joel; Hatchell, Jenny; Johnstone, Doug; Battersby, Cara; Klaassen, Pamela; Li, Zhi-Yun; Offner, Stella; Pontoppidan, Klaus; Sewilo, Marta; **Stephens, Ian W.**; Tobin, John; Brogan, Crystal; Gutermuth, Robert; Looney, Leslie; Megeath, S. Thomas; Padgett, Deborah; Roellig, Thomas, 2019, BAAS, 51c, 495

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