Dr. Bin Chen: Curriculum Vitae

Department of Physics
New Jersey Institute of Technology
323 Martin Luther King Jr. Blvd
Newark, NJ 07102

Phone: (973) 596-3565
Fax: (973) 596-3617
Email: binchen[at]njit.edu
http://binchensun.org

Education

University of Virginia	Charlottesville, VA	Astronomy	Ph.D.	08/2013
Dissertation: "Radio and X-ray Diagnostics of Energy Release in Solar Flares", Advisor: Tim Bastian				
Univ. of Chinese Academy of Sc.	Beijing, China	Astrophysics	M.S.	08/2008
Peking University	Beijing, China	Physics	B.S.	08/2005

Appointments

Associate Professor	New Jersey Institute of Technology	08/2019–present (tenure 2021)
Assistant Professor	New Jersey Institute of Technology	01/2016–08/2019
Astrophysicist	Center for Astrophysics | Harvard & Smithsonian	08/2014–12/2015
Jack Eddy Postdoc Fellow	UCAR/NJIT	08/2013–07/2014

Honors & Awards

Research Advisor of the Year, Albert Dorman Honors College, New Jersey Institute of Technology 2020

CSLA Rising Star Research Award, New Jersey Institute of Technology 2018

An award given annually by NJIT's College of Science and Liberal Arts (CSLA) in recognition of a pre-tenure faculty member's outstanding scholarly work

Faculty Early Career Development (CAREER) Award, National Science Foundation 2017

Jack Eddy Postdoctoral Fellowship, NASA/UCAR 2013

Competitive Postdoctoral fellowship by NASA's Living-with-a-Star program and UCAR

Liu Yong Ling Scholarship, University of Chinese Academy of Sciences 2008

A scholarship of the University to recognize outstanding graduate students

Professional Service

National Committees, Panels, and Boards

Member, Solar & Heliophysics Panel, NASEM Solar & Space Physics Decadal Survey 10/2022–present

The Panel on the Physics of the Sun and Heliosphere is charged to provide an overview of the current state of solar and heliospheric research and identify the highest priority science goals for 2024–2033.

Committee member, Solar Physics Division of American Astronomical Society 2019–2021

The Committee is charged to oversee general affairs of the Division; BC led the effort of compiling a List of Solar Physics Graduate Programs and made it available to community at the SPD website. He also organized the inaugural SPD Graduate Opportunity Fair in 2020.

Board member, SunPy 2019–present

The Board is charged to lead the overall structure and direction of SunPy

Meeting Organization

SOC member, Solar & Space Physics Decadal Workshop: Ground-Based Projects 2022

SOC member, FASR 2021 Workshop 2021

SOC member, SolFER 2021 Conference 2021

Session Convener, Asia Oceania Geosciences Society 2021

"Coronal Magnetic Field Measurements Through Multi-wavelength Observations"

Session Convener, American Geophysical Union Fall Meeting 2020

"Plasma Energization, Particle Acceleration, and High-energy Emission in Solar Flares"

Working group (co-)leader, Solar Physics High Energy Research (SPHERE) Workshop 2022

"Unified 'systems science'" topical session

Working group (co-)leader, for three (3) RHESSI Workshops 2015, 2017, 2019

"Radio and X-ray Flares" working group

Session convener, for two (2) SHINE Conferences 2018, 2019

"Global implications of kinetic-scale particle acceleration throughout the heliosphere"

Session Convener, Triennial Earth-Sun Summit (TESS) 2018

"Late-Phase Solar Activity in September 2017"

Peer Review Activities

Panelist, NRAO Science Review Panel 2020–2022

Panelist, for [3] NASA grant panels and [1] NSF grant panel Since 2015

Mail-in Reviewer, for [6] grant proposals submitted to NASA or NSF funding programs Since 2015

Panelist, NASA NPP Postdoc Fellowship proposals 2017

Mail-in reviewer, for [3] NASA NPP Postdoc Fellowship proposals Since 2016

Poster Judge, SHINE conference, AAS/SPD meeting, and APS meeting Since 2016

Referee, 28 papers for 11 journals

Nature Astronomy [1], *Astrophysical Journal* [9], *Astrophysical Journal Letters* [4], *Astronomy & Astrophysics* [3], *Solar Physics* [4], *Advances in Space Research* [1], *Publ. Astron. Soc. Australia* [1], *New Astronomy* [2], *J. Space Weather. Space Clim.* [1], *Research in Astronomy & Astrophysics* [1], *Progress in Astronomy* (天文学进展) [1]

Journal Editing

Guest Editor, *Frontiers in Astronomy and Space Sciences* 2019–2021

For topical issue on "Solar and Space Weather Radio Physics"

University & Departmental Service

Director, Applied Physics Graduate Program, NJIT	2020–present
Committee Member, Applied Physics Graduate Program, NJIT	2016–present
Member, Research Vision Subcommittee for NJIT 2025 Strategic Plan	2019–2020
Member, Search committee for a faculty position in material sciences	Fall 2018
Member, Advisory Board Committee on Research Cyberinfrastructure	2018–present

Awarded Grants

As Principal Investigator

PI, NSF Division of Atmospheric and Geospace Sciences (SHINE) 2023–2026
"Collaborative Research: Where are particles accelerated in coronal jets?" (lead of collaborative proposals: P. Kumar/NASA-GSFC)

PI, NSF Division of Astronomical Sciences 2021–2024
"Collaborative Research: Achieving a New Understanding of Solar Flare Termination Shocks" (lead of collaborative proposals: G. Fan/LANL)

PI, NASA Heliophysics Supporting Research 2020–2023
"Exploring Energy Release and Conversion in Solar Eruptive Events Using Multi-wavelength Observations and Numerical Simulations"

PI, NSF Division of Atmospheric and Geospace Sciences (CAREER) 2017–2023
"Probing Energy Release in Solar Explosive Events with New Generation Radio Telescopes"

PI, NSF Division of Atmospheric and Geospace Sciences (SHINE) 2017–2020
"Collaborative Research: Magnetic Energy Release During Solar Eruptions: From Large and Small Scales" (lead of collaborative proposals: K. Reeves/SAO)

PI, NSF Division of Astronomical Sciences 2017–2020
"Collaborative Research: Electron Acceleration and Emissions from the Solar Flare Termination Shock" (lead of collaborative proposals: G. Fan/LANL)

PI, NASA Heliophysics Guest Investigator 2016–2019
"Particle Energization in Solar Flares: Combing Observations from a Suite of NASA Missions with the Jansky Very Large Array"

As Co-Investigator

Co-PI, NSF Division of Astronomical Sciences 2021–2024
"The Expanded Owens Valley Solar Array as a Community Facility" (PI: D. Gary/NJIT)

Co-PI, NSF Division of Astronomical Sciences 2021–2024
"REU Site: Solar, Terrestrial, and Space Weather Sciences at New Jersey Institute of Technology" (PI: H. Kim/NJIT)

Co-I (Institutional PI), NASA HSO Connect 2020–2023

"Energetics of solar eruptions from the chromosphere to the inner heliosphere" (PI: K. Reeves/SAO)

Co-I, NASA HSO Connect 2020–2023

"Study of Small Scale Magnetic Reconnection and Energy Release in the Source Regions of Solar Wind" (PI: H. Wang/NJIT)

Co-I, NASA Heliophysics DRIVE Science Center Phase I 2020–2022

"Solar Flare Energy Release" (PI: J. Drake/UMD)

Co-I, NASA HSO Data Support 2019–2024

"Microwave Imaging Spectroscopy Support for Parker Solar Probe" (PI: D. Gary/NJIT)

Co-PI, NSF Division of Astronomical Sciences 2019–2021

"Microwave Imaging Spectropolarimetry of the Sun and Solar Activity" (PI: D. Gary/NJIT)

Instrumentation Projects and Science Center Activities

Ground-based Facilities

Expanded Owens Valley Solar Array (EOVSA) 2016–present

Co-PI; co-lead (with Director D. Gary) instrument commissioning, calibration, software development, and science investigation.

Karl G. Jansky Very Large Array (JVLA) 2011–present

Commissioned the solar observing mode of JVLA as part of his Ph.D. thesis project (advised by T. Bastian). PI or Co-I on >10 JVLA solar observing programs through a competitive selection process.

Atacama Large (sub)Millimeter Array (ALMA) 2014–present

Member of the ALMA solar development team. PI or Co-I on four (4) solar observing programs through a competitive selection process.

Frequency Agile Solar Radiotelescope (FASR) 2015–present

FASR is a next-generation solar radio telescope concept. Co-PI on a proposal submitted to NSF for design and implementation (not selected). Author or co-author on 19 FASR-related white papers submitted to the 2020 Astronomy & Astrophysics Decadal Survey and 2024 Solar & Space Physics Decadal Survey.

Spacecraft Missions

Physics of Energetic and Non-thermal plasmas in the X region (PhoENiX) 2019–present

Collaborator, science team member. PhoENiX (PI: N. Narukage) is a mid-class ($150M) spacecraft mission concept to study X-rays from solar flares. Concept study and proposal development are underway.

The Focusing Optics X-ray Solar Imager (FOXSI) 2017–2019

Collaborator, science team member. FOXSI (PI: S. Christe) is a solar hard X-ray mission concept proposed to NASA as a Heliophysics Small Explorer (SMEX) mission. It was selected for Phase A concept study, but not selected as a full mission.

COronal Spectrographic Imager in the Extreme ultraviolet (COSIE) 2018–2019

Co-I, science team member. COSIE (PI: L. Golub) is a wide-field solar EUV spectrographic imager concept proposed to NASA as a Mission of Opportunity Small Complete Mission. Selected for technical development in 2017, but not selected as a full mission.

Heliophysics Radio Observer (HeRO) 2016–2017

Co-I, science team member. HeRO (PI: D. Gary) is a space-based radio interferometer proposed to NASA for concept study as a Mission of Opportunity Small Complete Mission (not selected).

NASA Heliophysics DRIVE Science Center

Solar Flare Energy Release (SolFER) 03/2020–04/2022

Co-I, leading a working group with Fan Guo on "electron energization in solar flares." SOC member for the SolFER 2021 Conference. SolFER (PI: J. Drake) is a NASA Heliophysics DRIVE Science Center funded for Phase I study.

Mentorship

Research Scientists			
Dr. Sijie Yu	NJIT	Mentor	08/2020–present
Postdoctoral Researchers			
Dr. Surajit Mondal	NJIT	Advisor	10/2021–present
Dr. Yingjie Luo	NJIT	Advisor	10/2022–present
Dr. Sijie Yu	NJIT	Advisor	06/2016–08/2020
Current Ph.D. Students			
Anastasia Kuske	NJIT	Primary Advisor (co-advisor G. Nita)	08/2021–present
Ivan Oparin	NJIT	Primary Advisor (co-advisor G. Fleishman)	08/2021–present
Meiqi Wang	NJIT	Primary Advisor	08/2019–present
Yuqian Wei	NJIT	Primary Advisor (co-advisor H. Wang)	08/2017–present
Matthew Cooper	NJIT	Thesis Committee Member	09/2019–present
Past Ph.D. Students			
Dr. Yingjie Luo	NJIT	Primary Advisor	08/2016–08/2022
Dr. Luo obtained his PhD in 2022. He is now a Postdoc at NJIT.			
Dr. Zhitao Wang	NJIT	Co-advisor (Primary Advisor D. Gary)	11/2014–08/2017
Dr. Wang obtained his PhD in 2017. He is now a Big Data Engineer at HSBC.			
Dr. Yi Chai	NJIT	Thesis Committee Member	07/2018–05/2022
Dr. Chai obtained his PhD in 2023. He is now a postdoc fellow at Czech Academy of Sciences.			
Dr. Shaheda Shaik	NJIT	Thesis Committee Member	04/2016–08/2021
Dr. Shaik obtained her PhD in 2021. She is now a postdoc fellow at Naval Research Lab.			
Dr. Sherry Chhabra	NJIT	Thesis Committee Member	09/2017–05/2021
Dr. Chhabra obtained her PhD in 2021. She is now a postdoc fellow at Naval Research Lab.			
Dr. Viacheslav Sadykov	NJIT	Thesis Committee Member	01/2017–08/2019

Dr. Sadykov Obtained his PhD in 2019. He is now a tenure-track Assistant Professor at Georgia State University.

Current Undergraduate Students

Sabastian Fernandes	NJIT	Res. Mentor	05/2021–present
Tyler Ford	Illinois IT	REU Mentor	Summer 2022

Past Undergraduate Students

Samantha Lomuscio	NJIT	Res. Mentor	10/2017–05/2020

Samantha was awarded the prestigious Barry M. Goldwater Scholarship in 2019 under Dr. Chen's guidance. She is now pursuing Ph.D. in Astronomy at University of Virginia after her graduation in Spring 2020.

Jordan Smith	NJIT	Res. Mentor	08/2020–12/2020
Sylwia Janiak	NJIT	Res. Mentor	10/2016–08/2019
Marchello Caruso	NJIT	Res. Mentor	04/2018–11/2018
Alexander Rodriguez	NJIT	Res. Mentor	Summer 2018, 2019
Lindsey Gray	Ramapo Col.	REU Mentor	Summer 2016
Michael Prijatelj	CMU	REU Mentor	Summer 2015

High School Students

Rahul Harikrishnan	Montgomery	Res. Mentor	Summer 2018
Chris Stone	High Tech	Res. Mentor	Summer 2017
Daniel Vesecky	Milburn	Res. Mentor	Summer 2017
Tim Kouzmenkov	Fair Lawn	Res. Mentor	Summer 2016, 2017

Teaching

Phys 728 – Radio Astronomy	NJIT	Spring 2022
Phys 111 – Mechanics	NJIT	Fall 2016, 2017, 2018, 2019
Phys 320 – Astronomy and Astrophysics I	NJIT	Fall 2020, 2021
Phys 321 – Astronomy and Astrophysics II	NJIT	Spring 2018, 2019, 2020, 2021
Phys 780 – Solar Flares and CMEs	NJIT/COLLAGE	Spring 2017
ASTR 3480 – Introduction to Cosmology	Univ. of Virginia	Summer 2012

Invited Talks

Invited Conference Presentations

[20] Mini-Conference on Magnetic Reconnection, APS/DPP Annual Meeting, Spokane, WA 10/2022

"Radio Diagnostics of Reconnection-Driven Particle Energization in Solar Flares: Recent Progress and Future Outlook"

[19] IAU Symposium 372 "The Era of Multi-messenger Solar Physics", Busan, South Korea 08/2022

"Recent Results of Solar Microwave Imaging Spectroscopy"

[18] Magnetic Reconnection Workshop 2022, Monterey, California 05/2022
"Probing Energetic Electrons Accelerated by Solar Flares"

[17] National Radio Science Meeting/URSI Conference, Boulder, CO 01/2022
"Science Highlights from the Expanded Owens Valley Solar Array"

[16] American Geophysical Union Fall Meeting, New Orleans, LA 12/2021
"Evidence for Energetic Electrons Trapped and Accelerated in a Magnetic Bottle above a Solar Flare Arcade"

[15] American Geophysical Union Fall Meeting, New Orleans, LA 12/2021
"Radio Studies of the Middle Corona: Current State and Future Outlook"

[14] FASR 2021 Workshop: Solar Physics with a Next Generation Solar Radio Facility, Online 12/2021
"Microwave Studies of Solar Flare Energy Release: Outlook for FASR"

[13] Kavli IPMU Workshop on particle acceleration, Online 11/2021
"Magnetic Reconnection and Electron Acceleration: Recent Insights from Microwave Observations of Solar Flares"

[12] Plenary Talk, 20^{th} RHESSI Workshop, Online 07/2021
"EOVSA Updates: Science Highlights and Future Outlook"

[11] Plenary Talk, Max-Planck-Princeton Center for Fusion and Astro-Plasma Physics Workshop 01/2021
"Probing Magnetic Reconnection in Solar Flares with Radio Spectral Imaging"

[10] Mini-Conference on Magnetic Reconnection, APS Division of Plasma Physics Meeting 11/2020
"Probing Magnetic Reconnection in Solar Flares with Radio Spectral Imaging"

[9] SolFER Conference 04/2020
"Onset of Flare Energy Release: Observations"

[8] American Geophysical Union Fall Meeting, San Francisco, CA 12/2019
"Recent Advances in Radio Imaging Spectroscopy for Studying High-Energy Processes on the Sun"

[7] American Geophysical Union Fall Meeting 12/2018
"Radio Dynamic Spectroscopic Imaging: A Powerful New Tool for Studying Electron Acceleration and Transport in Solar Flares"

[6] Radio Stars Workshop, MIT Haystack Observatory 11/2017
"Solar Radio Emission at High Frequencies"

[5] Joint Hinode-11/IRIS-8 Science Meeting, Seattle, WA 05/2017
"Recent Results from Coordinated VLA and Hinode/IRIS Observations"

[4] SHINE Conference, Santa Fe, NM 07/2016
Scene-setting talk for session "Particle Acceleration and Wave Generation Across Scales: From Reconnection to Shocks"

[3] SunDC Workshop, NASA Goddard Space Flight Center 05/2016
"Solar Flare Studies in the New Era of Radio Imaging Spectroscopy"

[2] 15th Annual International Astrophysics Conference 04/2016
"Particle Acceleration by a Solar Flare Termination Shock"
[1] American Geophysics Union Fall Meeting 12/2014
"Constraining Solar Coronal Magnetic Fields with New Radio Observing Techniques"

Invited Colloquium/Seminar

[17] IfA Colloquium, Institute of Astronomy, University of Hawaii, online 03/2022
"Probing the 'Central Engine' of Solar Flares: Recent Insights from Broadband Radio Imaging Spectroscopy"
[16] Space Science Seminar, NASA Marshall Space Flight Center 04/2021
"Solar Flare Energy Release: New Insights from Broadband Radio Imaging Spectroscopy"
[15] Astronomy & Astrophysics Seminar, Dublin Institute for Advanced Studies 01/2021
"Solar Flare Energy Release: New Insights from Recent Radio Observations"
[14] Heliophysics Seminar, Heliophysics Division of NASA Goddard Space Flight Center 10/2020
"Magnetic Reconnection and Particle Acceleration in Solar Flares: New Insights from Recent Radio Studies"
[13] Institute for Space Weather Sciences Colloquium, New Jersey Institute of Technology 10/2020
"Measurement of Magnetic Field and Relativistic Electrons along a Solar Flare Current Sheet"
[12] Space & Plasma Seminar, Dartmouth College 10/2020
"Radio Diagnostics of Magnetic Reconnection and Particle Acceleration in Solar Flares"
[11] Astronomy & Space Science Colloquium, Nanjing University 09/2020
"The Sun as a Laboratory for High-Energy Astrophysics: A Radio Perspective"
[10] Key Laboratory of Solar Activities Seminar Series, Chinese Academy of Sciences 07/2020
"High-Energy Astrophysics on the Sun: New Insights from Broadband Radio Imaging Spectroscopy"
[9] Solar Physics Webinar of Global Reach—SolFER Colloquium 04/2020
"Solar Flare Observations with the Jansky Very Large Array"
[8] Astrophysics Seminar, American Museum of Natural History 10/2019
"High-Energy Astrophysics on Our Nearest Star: New Insights from Radio Observations"
[7] Space Physics Seminar, Los Alamos National Laboratory 03/2019
"Probing Magnetic Reconnection in Solar Flares"
[6] Heliophysics Seminar, Princeton Plasma Physics Laboratory 03/2019
"Probing Magnetic Reconnection in Solar Flares"
[5] Space Physics and Astrophysics Colloquium, University of Minnesota 11/2018
"Solar Flare Observations with the Karl G. Jansky Very Large Array"
[4] Princeton Astroplasmas Seminar, Princeton University 05/2016
"Particle Acceleration in Solar Flares: New Insights from Radio Observations"

[3] Physics Department Seminar, New Jersey Institute of Technology 05/2016
"Explosions on the Sun: New Insights from Recent Radio Observations"

[2] Space Sciences Laboratory Colloquium, Univ. of California, Berkeley 04/2015
"Solar Radio Astronomy in the Era of Broadband Dynamic Imaging Spectroscopy"

[1] NAOC Seminar, National Astronomical Observatories, CAS 03/2013
"Passages of Electron Beams in the Sun's Corona"

Selected Contributed Conference Presentations

[21] Triennial Earth-Sun Summit (TESS), Bellevue, WA 08/2022
"The Next Frontier in Solar Flare Science with the Frequency Agile Solar Radiotelescope"

[20] AOGS Conference, Online 08/2021
"Energetic Electron Distribution of the Coronal Acceleration Region: First Results from Joint Microwave and Hard X-ray Imaging Spectroscopy"

[19] AOGS Conference, Online 08/2021
"Measurement of Magnetic Field and Relativistic Electrons along a Solar Flare Current Sheet"

[18] Heliophysics 2050 Workshop, Online 05/2021
"A Next Generation Radio Heliograph: New Insights into the Physics of the Active Sun" (iPoster)

[17] American Geophysical Union Fall Meeting, Online 12/2020
"The Above-the-looptop Source of the 2017 September 10 Solar Flare: Energetic Electron Distribution over a Broad Energy Range" (iPoster)

[16] 236th American Astronomical Society Meeting, Online 06/2020
"Measurement of magnetic field and relativistic electrons along a solar flare current sheet"

[15] 234th American Astronomical Society Meeting, St. Louis, MO 06/2019
"Fast plasma outflows associated with impulsive microwave and hard X-ray bursts during the gradual phase of the 2017 September 10 X8.2 flare"

[14] 234th American Astronomical Society Meeting, St. Louis, MO 06/2019
"Radio Spectroscopic Imaging of Solar Flare Termination Shocks: Split-band Feature and A Second Possible Event"

[13] 18th RHESSI Workshop, Minneapolis, MN 05/2019
"Radio Spectral Imaging of Solar Flare Termination Shock: Co-Spatial Split-band Feature"

[12] American Geophysical Union Fall Meeting, Washington DC 12/2018
"Probing the Bi-Directional Magnetic Reconnection Outflow Region of An Eruptive Solar Flare with Microwave Spectroscopic Imaging"

[11] Triennial Earth-Sun Summit, Leesburg, VA 05/2018
"Microwave Spectroscopic Imaging of the Magnetic Reconnection Region in the 2017 September 10 Eruptive Solar Flare"

[10] American Geophysical Union Fall Meeting, New Orleans, LA 12/2017

"Tracing Fast Electron Beams Emanating from the Magnetic Reconnection Site in a Solar Jet"

[9] 5th US/China Workshop on Radio Astronomy, Charlottesville, VA 07/2017
"Solar Flare Observations with Jansky Very Large Array"

[8] 16th RHESSI Workshop, Boulder, CO 06/2017
"VLA Observation of dm-λ Type III Radio Bursts in a Microflare"

[7] American Astronomical Society Solar Physics Division Meeting, Boulder, CO 06/2016
"Radio Spectroscopic Imaging of Bi-directional Electron Beam Pairs in a Solar Flare"

[6] American Geophysical Union Fall Meeting, San Francisco, CA 12/2015
"Observations and Simulations of a Termination Shock in an Eruptive Solar Flare as a Possible Particle Accelerator"

[5] 14thRHESSI Workshop, Newark, NJ 08/2015
"New Insights into Particle Acceleration: Radio Observations of a Termination Shock"

[4] 223rd American Astronomical Society Meeting, Washington, DC 01/2014
"Probing Magnetic Energy Release in a Solar Flare with Radio Dynamic Imaging Spectroscopy"

[3] American Astronomical Society Solar Physics Division Meeting, Bozeman, MT 07/2013
"Radio and X-ray Diagnostics of Energy Release in Solar Flares"

[2] American Geophysical Union Fall Meeting, San Francisco, CA 12/2011
"The Role of Inversion Compton Scattering in Coronal HXR Sources"

[1] American Astronomical Society Solar Physics Division Meeting, Boulder, CO 06/2009
"Interplanetary Type II Radio Bursts and the Role of Gyrosynchrontron Radiation"

Publications

54 refereed journal articles and book chapters
18 refereed publications as the lead author
H-index: 22, citations: 1480 (as of Dec. 18, 2022)

Link to a public ADS library of Dr. Bin Chen's refereed publications:
https://ui.adsabs.harvard.edu/public-libraries/HR_t7W0_Th2sn5tzZmLCAg

Refereed Publications as Lead Author

First author, corresponding-author† & student/postdoc advisee* publications

[18] *Luo, Y., **Chen, B.**, Yu, S., Battaglia, M., Sharma, R., *Astrophys. J.*, 940, 137 (ADS) 2022
"Multiple Regions of Quasi-Periodic Pulsations during the Impulsive Phase of a Solar Flare"

[17] *Wei, Y., **Chen, B.**†, Yu, S., Wang, H., Jing, J., Gary, D., *Astrophys. J.*, 923, 213 (ADS) 2021
"Coronal Magnetic Field Measurements along a Partially Erupting Filament in a Solar Flare"

[16] *Luo, Y., **Chen, B.**†, Yu, S., Bastian, T., Krucker, S., *Astrophys. J.*, 911, 4 (ADS) 2021

"Radio Spectral Imaging of an M8.4 Eruptive Solar Flare: Possible Evidence of a Termination Shock"

[15] **Chen, B.**, Battaglia, M., Krucker, S., Reeves, K., Glesener, L., *Astrophys. J. Lett.*, 908, 55 (ADS) 2021

"Energetic Electron Distribution of the Coronal Acceleration Region: First results from Joint Microwave and Hard X-ray Imaging Spectroscopy"

[14] *Yu, S., **Chen, B.**, Reeves, K., Gary, D., Sophie M. *et al.*, *Astrophys. J.*, 900, 17 (ADS) 2020

"Magnetic Reconnection During the Post-Impulsive Phase of a Long-Duration Solar Flare: Bi-Directional Outflows as a Cause of Microwave and X-ray Bursts"

[13] **Chen, B.**, Shen, C., Gary, D., Reeves, K., Fleishman, G. *et al.*, *Nature Astronomy*, 4, 1140 (ADS) 2020

"Measurement of magnetic field and relativistic electrons along a solar flare current sheet"

• *Press Releases*: National Science Foundation; New Jersey Institute of Technology; Harvard-Smithsonian Center for Astrophysics; Yunnan Astronomical Observatory

• *Popular Science Stories*: Astronomy Magazine; Europa Press (Spain)

[12] **Chen, B.**, Yu, S., Reeves, K., Gary, D., *Astrophys. J. Lett.*, 895, 50 (ADS) 2020

"Microwave Observations of an Erupting Flux Rope: Implications for the Standard Solar Flare Model in Three Dimensions"

[11] **Chen, B.**, Shen, C., Reeves, K., Guo, F., *Astrophys. J.*, 884, 63 (ADS) 2019

"Radio Spectroscopic Imaging of a Solar Flare Termination Shock: Split-band Feature as Evidence for Shock Compression"

• *RHESSI Nugget*: "Rejuvenating Solar Flare Termination Shocks as Particle Accelerators"

[10] *Yu, S., **Chen, B.**[†], *Astrophys. J.*, 872, 71 (ADS) 2019

"Possible Detection of Subsecond-Period Propagating Magnetohydrodynamics Waves in Post-Reconnection Magnetic Loops During a Two-Ribbon Flare"

• *RHESSI Nugget*: "Short-Period Waves"

[9] **Chen, B.**, Yu, S., Battaglia, M., Samaiyah, F., Antonia S. *et al.* *Astrophys. J.*, 866, 62 (ADS) 2018

"Magnetic Reconnection Null Points as the Origin of Semi-relativistic Electron Beams in a Solar Jet"

• *AAS NOVA Highlight*: "Speeding Electrons in a Solar Jet"

[8] *Wang, Z., **Chen, B.**, Gary, D., *Astrophys. J.*, 848, 77 (ADS) 2017

"Dynamic Spectral Imaging of Decimetric Fiber Bursts in an Eruptive Solar Flare"

[7] **Chen, B.**, Bastian, T., Shen, C., Gary, D., Krucker, S., Glesener, L., *Science*, 350, 1238 (ADS) 2015

"Particle Acceleration by a Solar Flare Termination Shock"

• *Press Releases*: National Radio Astronomy Observatory; Harvard-Smithsonian Center for Astrophysics; New Jersey Institute of Technology

• *Popular Science Stories*: Scientific American; Daily Mail (UK); Le Scienze (Italy); ABC (AU)

[6] **Chen, B.**, Bastian, T., Gary, D., *Astrophys. J.*, 794, 149 (ADS) 2014

"Direct Evidence of an Eruptive, Filament-Hosting Magnetic Flux Rope Leading to a Fast Coronal Mass Ejection"

[5] **Chen, B.**, Bastian, T., White, S., Gary, D. *et al.*, *Astrophys. J. Lett.*, 763, 21 (ADS) 2013

"Tracing Electron Beams in the Sun's Corona with Radio Dynamic Imaging Spectroscopy"

• *NRAO Science Highlights*: "Imaging Magnetic Reconnection on the Sun"

[4] **Chen, B.**, Bastian, T., *Astrophys. J.*, 750, 35 (ADS) 2012

"The Role of Inverse Compton Scattering in Solar Coronal Hard X-Ray and Gamma-Ray Sources"

[3] **Chen, B.**, Bastian, T., Gary, D., Jing, J., *Astrophys. J.*, 736, 64 (ADS) 2011

"Spatially and Spectrally Resolved Observations of a Zebra Pattern in a Solar Decimetric Radio Burst"

[2] **Chen, B.**, Yan, Y., *Astrophys. J.*, 689, 1412 (ADS) 2008

"Short-Lived Absorptive Type III-like Microwave Bursts as a Signature of Fragmented Electron Injections"

[1] **Chen, B.**, Yan, Y., *Solar Physics*, 246, 431 (ADS) 2007

"On the Origin of the Zebra Pattern with Pulsating Superfine Structures on 21 April 2002"

Refereed Publications as Second Author

[6] Kong, X.; **Chen, B.**; Guo, F.; Shen, C.; *et al.*, *Astrophys. J.* (ADS) 2022

"Numerical Modeling of Energetic Electron Acceleration, Transport, and Emission in Solar Flares: Connecting Loop-top and Footpoint Hard X-Ray Sources"

[5] Zhang, J.; **Chen, B.**; Yu, S.; Tian, H. *et al.*, *Astrophys. J.* (ADS) 2022

"Implications for additional plasma heating during the extreme-ultraviolet late phase of a solar flare with microwave imaging spectroscopy"

[4] Shen, C., **Chen, B.**, Reeves, K. K.; Yu, S. *et al.*, *Nature Astronomy* (ADS) 2022

"The Origin of Underdense Plasma Downflows Associated with Magnetic Reconnection in Solar Flares"

[3] Karlicky, M., **Chen, B.**, Gary, D., Karsparova, J. *et al.*, *Astrophys. J.*, 889, 72 (ADS) 2020

"Drifting Pulsation Structure at the Very Beginning of the 2017 September 10 Limb Flare"

[2] Gary, D., **Chen, B.**, Dennis, B., Fleishman, G. et al, *Astrophys. J.*, 863, 83 (ADS) 2018

"Microwave and Hard X-Ray Observations of the 2017 September 10 Solar Limb Flare"

• NJIT press release; AAS/SPD press release; AAS NOVA Highlight

[1] Zeng, Z., **Chen, B.**, Ji, H., Goode, P., Cao, W., *Astrophys. J. Lett.*, 819, 3 (ADS) 2016

"Resolving the Fan-Spine Reconnection Geometry of a Small-Scale Chromospheric Jet Event with the New Solar Telescope"

Refereed Publications as Supporting Author

[29] Kou, Y.; Cheng, X.; Wang, Y.; Yu, S.; **Chen, B.** et al, *Nat. Comm.*, 13, 7680 (ADS) 2022

"Microwave imaging of quasi-periodic pulsations at flare current sheet"

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