

## Eric G. Blackman: *CURRICULUM VITAE*

### Professional Appointments

2004-Present	Professor of Physics and Astronomy and Senior Scientist (2004-2021)/ Distinguished Scientist (2021-present) Laboratory for Laser Energetics; University of Rochester, Rochester, NY, USA
2014-2015	IBM-Einstein Fellow / Simons Fellow / Member, School of Natural Sciences, Institute for Advanced Study, Princeton NJ
2003-2004	Associate Professor of Physics and Astronomy (with tenure), University of Rochester, Rochester, NY, USA:
2006-2011	Consultant, Institute for Defense Analyses, Alexandria VA
2000-2003	Assistant Professor of Physics and Astronomy, University of Rochester, Rochester, NY, USA:
1998-1999	Postdoctoral Scholar in Physics (Theoretical Astrophysics), Division of Physics, Mathematics, and Astronomy California Institute of Technology, Pasadena, CA, USA
1995-1998	PPARC Theory Research Fellow, Institute of Astronomy Cambridge University Cambridge, UK
1995	Summer Research Fellow Harvard-Smithsonian Center for Astrophysics, Cambridge, MA

### Education

Harvard University	Ph.D., June 1995 (theoretical astrophysics; advisor: George B. Field), A.M., 1993
Cambridge University	Master of Advanced Study, (Math. Tripos, Part III), June 1991 (Trinity College) Examination subjects: Quantum Field Theory I & II, String Theory, Group Theory, General Relativity, Cosmology
Massachusetts Institute of Technology	S.B. Physics, June 1990, S.B. Mathematics, June 1990

### Selected Extended Visits

Aug/Oct 2019	Institute for Theoretical Physics, Santa Barbara, CA, Program on Multi-scale Processes in Plasma Astrophysics
June 2019	Aspen Center for Physics, Aspen CO, Turbulent Life of Cosmic Baryons, summer program
March 2017	Institute for Theoretical Physics, Santa Barbara, CA, Confronting MHD Theories of Accretion Disks with Observations

Sep 2014- July 2015	Simons Fellow / Member, School of Natural Sciences, Institute for Advanced Study, Princeton, NJ
Nov-Dec 2007	Kavli Institute for Theoretical Physics Santa Barbara, CA, Program on Star Formation
June-July 2006	Aspen Center for Physics, Aspen, CO, Workshop on Magnetic Self-Organization
May-June 2005	Institute for Theoretical Physics, Santa Barbara, CA, Program on Accretion and Outflows
Nov 2004	Isaac Newton Institute, Cambridge Univ., Cambridge, UK, Program on Magnetohydrodynamics of Stellar Interiors
Mar 2004	Institute for Theoretical Physics, Santa Barbara, CA, Program on Planet Formation: Terrestrial and Extra Solar
June 2003	Aspen Center for Physics, Aspen, CO, Workshop on Magnetic Reconnection
Dec 2002	Sabbatical faculty visitor, Princeton Plasma Physics Laboratory, Princeton University, Princeton, NJ
Sept-Nov 2002	Sabbatical faculty visitor, Department of Astrophysical Sciences, Peyton Hall, Princeton University, Princeton, NJ
June-July 2002	Aspen Center for Physics, Aspen, CO, Workshop on Astrophysical Disks
Feb 2002	Institute for Theoretical Physics, Santa Barbara, CA, Solar Magnetohydrodynamics and Related Astrophysics Program
Oct 2001	Magnetohydrodynamic Turbulence Workshop Co-Organizer Virgin Gorda BVI
July 2000	Organizer/Participant, Aspen Center for Physics, Aspen, CO, Workshop on Magnetic Dynamos
April 2000	Member, Institute for Theoretical Physics, Santa Barbara, CA, Astrophysical Turbulence Program
Sep. 1998- Dec 1999	Member, Institute for Theoretical Physics, Santa Barbara, CA, Black Hole Astrophysics Program

**Pre-PhD Research Activities:**

Feb 1992-May1992	Harvard: computed neutrino decay rate in left-right symmetric particle physics model for decaying neutrino dark matter scheme. (S. Glashow supervisor)
Sept 1991-Dec 1991	Harvard: generalized Gott closed-timelike curve solutions around cosmic strings to include finite acceleration orbits (T. Piran, supervisor)
May 1990-July 1990	MIT: extracted redshift vs. flux relations from galaxy data samples (I. Segal, supervisor)

May 1989-July 1989	Harvard-CfA: mirror testing of Chandra X-ray telescope mirror design (P. Slane, supervisor)
Sept 1988-March 1990	MIT: inferred terrestrial limits on strange quark matter from heavy ion searches (R. Jaffe, supervisor)
June-Aug 1987 & 1988	General Electric Corporate Research Center, Schenectady, NY: modeled heat conduction in super-cooled magnetic resonance imaging coils
Fall 1986	MIT: helped construct a helium recovery system (T. Greytak, supervisor)

### **Selected Professional Activities**

2021	STFC (United Kingdom) / Astronomy Grants Panel for consolidated institutional grants
2021	DFG (Germany)/Review Panel, for 8-year Research Unit:"Relativistic Jets in Active Galaxies"
2021	UR/NSF Physics Frontiers Center For Matter at Atomic Pressure (Astrophysics lead)
2017+	Springer Plasma Astrophysics Book and Book Proposal Reviewer
2017+	Prize Committee, APS Laboratory Astrophysics Division
2017+	Astrophysics Section Director, (Institute for Matter at Extremes U. Rochester)
2014	APS Committee for Selection of Excellence in Plasma Physics Prize
2014	APS Committee for Selection of (Inaugural) Laboratory Astrophysics Prize
2014	Program Chair, Space Plasma Subcommittee, APS/DPP Annual Meeting
2014	Reviewer for DOD Army Rapid Innovation Fund (RIF) Traumatic Brain Injury Program
2013+	Cambridge University Press Book and Book Proposal Reviewer
2013	NSF Frontier Center site visiting committee (recused)
2010-2013	Executive Committee, APS Topical Group in Plasma Astrophysics
2009	Department of Energy Office of Fusion Energy Sciences (OFES), Committee of Visitors (COV) to Review DOE Funding in Basic Plasma Sciences
2009-	Scientific Editorial Advisory Board, New Astronomy
2009-2012	NRC Research Fellowship Review Panel, Physical Sciences
2008	ETH (Switzerland), Faculty Hiring Board for NORDITA
2006-07	Defense Science Study Group (DSSG, Institute for Defense Analysis)
2005-2006	Program Committee, APS Division of Plasma Physics
2005	Organizer, "Astrophysical Explosions" APS Mini-conference, Division of Plasma Physics meeting, Denver, Oct 24-25 2005
2005	Executive Committee, APS Topical Group in Plasma Astrophysics
2004	Organizer, Topical Session on "Astrophysical Coronae" AAS Meeting, Denver, CO
2003-	Reviewer for NASA Postdoctoral Fellowships
2003	Harley School (Private School, Rochester, NY) Board of Trustees
2002-	DOE Fusion Science, Plasma Physics Grant Reviewer
2002	NSF Physics Frontier Center Reviewer
2001-	NSF/DOE Plasma Physics Theory Grant Reviewer
2001-	NSF Astrophysics, Grant Reviewer
2000	Organizer, Aspen Center for Physics, Aspen, CO, Workshop on Magnetic Dynamos

## **Awards and Such**

Simons Fellowship in Theoretical Physics (2014-2015)

IBM-Einstein Fellowship , Institute for Advanced Study, (2014-2015)

Provost Multidisciplinary Award (U. Rochester; Interdisciplinary Approach Toward Protection Against Traumatic Brain Injury from Impacts and Blasts) 2011-2012

Physics and Astronomy Department (U. Rochester) Award for Excellence in Undergraduate Teaching 2008

Defense Science Study Group, Institute for Defense Analysis (Alexandria, VA) 2006-2007

Fellow of the American Physical Society (2005-)

Faculty Mentoring Honoree in “Take 5” Program, University of Rochester, for Undergraduate Supervision 2004

Faculty Development Award in Plasma Physics, Department of Energy, 2000-2004

Jewett Fund Prize, Harvard (top academic performance), 1994

Trinity College Bursary grant, Cambridge Univ., 1990-1991

American Nuclear Society Full Tuition Fellowship, MIT, 1989-1990 (declined).

Harvard Book Award, Bausch and Lomb Science Prize, Sisson Mathematics Award, Language Award, Harley School, (Rochester NY) 1985-86.

Brighton-Pittsford Post 1st team regional all-star and Finger Lakes Regional first team all-star in soccer (Rochester NY), 1985-86.

Ralph S. McKee Trophy (Top Male Athlete) and Wooden Award (Sportsmanship), Harley School (Rochester NY), 1985-86.

Harley School Scholar Award (4 year merit-based full tuition scholarship to the Harley School, Rochester NY), 1982-1986.

## **Memberships:**

American Astronomical Society  
American Physical Society  
American Geophysical Union  
Royal Astronomical Society  
Sigma Xi

## **Refereeing:**

Astronomy and Astrophysics, Astro-Particle Physics, Astrophysical Journal, American Journal of Physics, Monthly Notices of the Royal Astronomical Society, Nature, Nature Physics, Physical Review, Physical Review Letters, Physics of Fluids, Physics of Plasmas, Geophysical and Astrophysical Fluid Dynamics, Astrophysics and Space Science, Cambridge University Press, Annals of Biomedical Engineering, Journal of Plasma Physics, Physics Teacher, Physics of Fluids....

## Course Teaching

Solar System (general undergraduate course for non-majors)  
Elementary Astrophysics (undergraduate course for majors)  
Milky Way Galaxy (undergraduate course for majors)  
Thermal and Statistical Physics (undergraduate course for majors)  
Gravitation and General Relativity (undergraduate course for majors)  
Astrophysics II: astrophysical fluid dynamics (undergraduate course for majors)  
Physics of Astrophysics: Fluids and Plasmas (graduate course)  
Physics of Astrophysics: Radiative Processes (graduate course)  
High Energy Astrophysics (graduate course)  
Stellar Structure (graduate course)  
Galactic Dynamics (graduate course)  
Cosmology (graduate course)

## Research Supervision/Collaborative Mentoring

**Postdocs:** Jared Workman (2010-) Martin Huarte-Espinosa (2009-, Phd Cambridge) -Joachim Moortgat (PhD. Raboud Univ, Nimjen) 2006-2008 Richard Edgar (PhD. Cambridge) 2006- Peggy Varnière (PhD. Saclay) 2004- Gunnar Paesold (PhD. ETH Zurich) 2003-2005; Jason Maron (PhD. Caltech) 2002-2004 Vladimir Pariev (PhD. Arizona) 2001-2004; Luke Chamandy (Phd. IUCCA, Pune) 2016-2022; Victor Lherm (Phd Univ. Lyon ; 2021-present)

**U. Rochester Graduate Student Collaborators:** Alexei Poludnenko (Phd. 2004-w/Adam Frank); Rob Selkowitz (PhD 2007); Alex Hubbard (Phd 2008); Jason Nordhaus (Phd 2008); Jonathan Carroll-Nellenback (Phd 2012, w/Adam Frank); Jaehong Park (Phd 2013 w/ Chuang Ren), Kiwan Park (Phd 2013); Shule Li (PhD 2014, w/A. Frank), Farrukh Nauman (Phd 2015); Zhou Chen (Phd 2018, w/A Frank); Hongzhe Zhou (Phd 2020); A, Zou (w/A Frank);; Atma Anand (w/ J. Tarduno); Ketevan Kortorashvhili (2021-), Shubhonkar Paramanick (2021-); Ananya Mohapatra (2021- /w Petros Tzerafacos)

**Undergraduate Research Advisees/Collaborators:** Mingrui Liu, Jiacan Yu, Yinqi Fang, Zihao Lin, Yisheng Tu (grad school U Virginia); Bo Peng (grad school UToronto); Fiona Nichols-Fleming (grad school Brown U.), Wen-Fei Fong (Assistant Professor Northwestern); Sean Hartnoll (Associate Professor, Stanford); Scott Lucchini (Graduate Student U. Wisconsin); Robert Penna (Postdoc IAS, Princeton); Ryan Pettibone (Graduate Student, Caltech); Robert Siller (Grad Student, U Wisconsin); Scott Verbridge (Associate Prof., Virginia Tech); Lauren Weiss (Parrent Fellow IFA, U. Hawaii); William Wolf (Grad Student, UC Santa Barbara); Karen Xu (Univ. of Pittsburgh, Med. School), Alexandra Kuznetsov (Grad Student, U. Michigan); Jason Nordhaus (Assistant Professor, Rochester Institute of Technology); Tanveer Karim, Grad student, Harvard); Sanha Cheong (Grad student, Stanford); Trung Ha (grad student U. Texas) Jenn Witkowski, Snehal Patel, Dan Pfeffer (grad student Johns Hopkins), Will Bock, David Giannelli, Tanveer Karim (grad student Harvard)

## Selected Administrative Activities

Department of Physics and Astronomy Astronomy/Astrophysics Undergraduate Advisor (2015-present)  
Department of Physics and Astronomy , Undergraduate Curriculum Committee (2016-present)  
Dept. Committee on Appointments and Promotions, (2013-present, Chair 2013-14; 2015-16)  
Plasma Physics Faculty Search Committee 2012-2013  
Graduate Admissions Committee (2000-2002; 2012-2013,2017-present)  
Director of Graduate Student Advising for Department of Physics and Astronomy (2002-2010)

Astrophysics Colloquium Chair (2001-2003; 2011-2013, 2017-present)  
Chair, University Committee to Review adherence to NCAA regulations for student-athletes (2009)  
University Marshall Scholarship Nomination Committee  
Graduate Physics Written Qualifying Exam Committee (2001-2005, 2010-2013)  
Chair, Committee to Review “Target of Opportunity” Candidates (2008)  
Committee On Appointments and Promotions (2010-, Chair 2013-)  
Department Executive Committee (2006-2007)  
Graduate Curriculum Committee (2003-2017)  
Editor for “Cross Sections,” the Department Newsletter (2000-2002)

**Personal/Other**

Born and Raised in Rochester, N.Y., USA. Played intercollegiate soccer, basketball, and tennis in high school, and intercollegiate soccer, cross country and indoor track at MIT. Hobbies include sporting and fitness activities.

## Selected Grants/Funded Teams

NSF Physics Frontier Center: Center for Matter at Atomic Pressure (Astrophysics lead) NSF 09/2021 - 08/2026

Colliding Radiative Magnetized Flows: Laboratory Experiments for Basic Plasma Physics and Astrophysics (Co-PI), DOE, \$1,500,000; 08/15/2018 - 08/14/2021

Interacting Binaries: Mass Transfer and Common Envelope Evolution (Co-PI) , NSF, \$443,981, 07/01/2018 - 06/30/2021

MRI: Development of a Pulsed-power Driver for the Experimental Investigation of Extreme States of Matter, NSF, (co-PI) \$1,494,680, 10/01/2017 -09/30/2020

From Interstellar Cloud to Star to Laboratory: Frontier HEDP Studies of Magnetized Colliding Plasma Flows with Strong Radiative Cooling (Co-PI), DOE, \$865,000, 08/15/2015 - 08/14/2018

Particle Acceleration Due to Magnetically Driven Reconnection Using Laser-powered Capacitor Coils, Princeton University Subcontract, \$30,000, 10/01/2017 - 09/30/2019

HST Cycle 24: Accretion to Outflow in Evolved Star Binaries; Disks in AGB, PPN and PN (Co-PI) \$75,165, 11/01/2016 - 10/31/2019

From Core to Outflow: The Dynamics of Binary Interactions and the Generation of Collimated Flows in Evolved Stars (Co-PI), \$414,322, 08/01/2015 - 07/31/2018

From Interstellar Cloud to Star to Laboratory: Frontier HEDP Studies of Magnetized Colliding Plasma Flows with Strong Radiative Cooling (Co-PI), \$865,000, 08/15/2015 - 08/14/2018

“Toward a 21st Century Mean Field Accretion Disk and Dynamo Theory”, \$110,788, Simons Foundation Fellowship, 7/14-7/15

“The Reel Deal in 3D: The Spatio-Temporal Evolution of YSO Jets”, (Co-PI), Cycle 22 HST, \$73,569, 01/01/2015 - 12/31/2017

“Triggered Star Formation From Shock to Disk (PI)Triggered Star formation: From Shock to Disk” Nebulae’ (P.I.: E.G. Blackman Co-A .Frank)Cycle 22 HST, \$81,843, 11/01/2014 - 10/31/2017

“Study of turbulence, reconnection, and associated particle acceleration: Toward Realization of MHD turbulence and dynamos in HED plasmas” \$40,000 (UR amount) (P.I.: Hantao Ji ); Co-Pi: E.G. Blackman (and others), 02./2015 - 02/2018

“Study of Particle Acceleration and Fine-Scale Structures of Collisionless Magnetic Reconnection Driven by High Energy Petawatt Lasers,” \$40,000 (UR amount) (P.I.: Hantao Ji ); Co-Pi: E.G. Blackman (and others), 07/01/2013 - 01/30/2016

“New Interdisciplinary Approach to Improve Diagnosis of Traumatic Brain Injury: Combining Physics with Medical Imaging ”, Univ. of Rochester Provost Award (co-Is: E.G. Blackman, J. Bazarian, J. Zhong, X. Qiu) (2011-2012) \$37,000.

’From Core to Outflow: Binaries, MHD and the Origin of Planetary/ Pre-Planetary

Nebulae' \$477,518.00 (P.I.: A.Frank; Co-I: E.G. Blackman) NSF, awarded 2012-2015.

'Energy Transfer in Collisionless Astrophysical Plasmas' \$465,607 (P.I.: C. Ren ; Co-I: E.G. Blackman) NSF/DOE, awarded 2009-2013

'From Core to Outflow: Binaries, MHD and the Origin of Planetary/ Pre-Planetary Nebulae' \$393,684 (P.I.: A.Frank; Co-I: E.G. Blackman) NSF, awarded 2009-2012.

'From Core to Outflow: Understanding the Driving and shaping of Asymmetric Planetary Nebulae' \$377,390 (P.I.: A.Frank; Co-I: E.G. Blackman) NSF, awarded 2005-2008.

"Understanding Poynting Flux Dominated Outflows in Nature's Most Powerful Engines" \$371,568 (P.I.: E.G. Blackman, Co: G. Paesold, V. Pariev, M. Lyutikov) NASA, awarded 2005-2010.

"Holding footprints to the fire, planetary disk theory confronts observations" \$465,000, (P.I.: A. Quillen, Co-PIs: E.G. Blackman, A. Frank, D.M. Watson) National Science Foundation, Division of Astronomical Sciences, awarded 2004-2007.

"Non-Axisymmetric Accretion Engines and Quasi-Periodic Oscillations in Microquasars" \$289,354, (P.I.: E.G. Blackman; Co-I/collaborator: P. Varniere) National Science Foundation, Division of Astronomical Sciences, awarded 2004-2009.

"Astrophysics of Heterogenous Stellar Outflows" \$80,000, (P.I.: A. Frank; Co-PI: E.G. Blackman, P. Hartigan, J. Kastner, J.A. Morse), Space Telescope Science Institute, awarded 2004-2005.

"New Approaches to the Origin and Dynamics of Magnetic Fields of Cosmic Relevance," P.I.: E.G. Blackman, (Junior Faculty Development Award), \$450,000, US Department of Energy, Plasma Physics Program, awarded 2000-2004.



## **Selected Talks / Invitations**

1. Arcetri Observatory Colloquium (Florence, Italy) May 1993
2. Institute for Advanced Study (Princeton, NJ), Dec 1994
3. Harvard-Smithsonian Thesis Colloquium (Cambridge, MA) April 1995
4. Institute of Astronomy, Astrophysics Seminar (Cambridge, England) Feb 1996
5. Aspen Center For Physics (Aspen, CO) Aug 1996
6. Physics Colloquium, Warwick University (Coventry, England) Jan 1997
7. Institute D'Astrophysique de Paris (Paris, France) Feb 1997
8. Cambridge X-ray Astrophysics Seminar (Cambridge, England) March 1997
9. National Astronomy Meeting, Active Galactic Nuclei Session (Southampton, England) June 1997
10. Interstellar Turbulence Conference (Puebla, Mexico) Jan 1998
11. Cambridge X-ray Astrophysics Seminar (Cambridge, England) March 1998
12. Particle Physics and Astronomy Research Council (PPARC) seminar (London, England) March 1998
13. Institute for Theoretical Physics (Santa Barbara, CA) April 1999
14. Institute for Theoretical Physics (Santa Barbara, CA) May 1999
15. University of Rochester, Astrophysics Colloquium (Rochester, NY) May 1999
16. UCLA Astronomy Colloquium (Los Angeles, CA) June 1999
17. CITA Astrophysics Colloquium (Toronto, Canada) Oct 1999
18. Caltech Theoretical Astrophysics Seminar (Pasadena, CA) Nov 1999
19. Cornell University, Relativity and Theor. Astrophysics Seminar, (Ithaca NY) Feb 2000
20. Cornell University, Astronomy Colloquium, (Ithaca NY) Feb 2000
21. Institute for Theoretical Physics, (Santa Barbara CA), Feb 2000
22. 1st Korean Institute for Advanced Study (KIAS) conference on Astrophysics (Seoul, Korea) May 2000
23. Aspen Center for Physics, (Aspen CO) June 2000
24. International Astronomical Union, (Manchester UK) Aug 2000
25. American Physical Society, Division of Plasma Physics/International Congress on Plasma Physics Joint Meeting (Quebec City, Canada) Oct 2000

26. Astronomy Colloquium, Penn State University, (State College PA) Mar 2001
27. NORDITA Meeting on Dynamos, (Copenhagen Denmark) Mar 2001
28. Institute for Advanced Study, (Princeton NJ), May 2001
29. American Physical Society, Division of Plasma Physics Meeting, (Long Beach CA) Nov 2001
30. MHD Turbulence Workshop, (Virgin Gorda BVI), Dec 2001
31. Astrophysics Seminar, Johns Hopkins Univ., (Baltimore MD), Jan 2002
32. Institute for Theoretical Physics, (Santa Barbara CA), Mar 2002
33. Columbia University, Plasma Physics Colloquium (New York, NY), April 2002
34. Harvard University, Center for Astrophysics (Cambridge MA), May 2002
35. Ringberg Castle Conf. on Plasma Astrophysics, (Munich GDR) June 2002 (unable to make it)
36. Workshop on Accretion Disks, Aspen Center for Physics, (Aspen CO) July 2002,
37. Conference on Beaming and Collimation of Gamma-Ray Bursts (Copenhagen, Denmark) Aug 2002,
38. Princeton Univ., Department of Astrophysical Sciences, (Princeton NJ) Nov 2002,
39. Princeton Univ., Plasma Physics Lab, (Princeton NJ) Dec 2002,
40. Univ. of Iowa, Department of Physics and Astronomy Colloquium, (Iowa City, IA) March 2003,
41. Conference on Magnetic Fields in Star Formation, (Madrid, Spain), May 2003.
42. Aspen Workshop on Magnetic Reconnection, (Aspen CO), June 2003.
43. Asymmetric Planetary Nebulae Conference (Seattle WA) July 2003.
44. American Physical Society, Division of Plasma Physics Meeting, Session on Laboratory Plasma Astrophysics (Albuquerque NM) October 2003.
45. Astronomy Colloquium, Caltech, January 2004.
46. Theoretical Astrophysics Seminar, Caltech, January 2004.
47. Physics and Astronomy Colloquium, University of Rochester, February 2004.
48. Center for Magnetic Self-Organization Meeting, Madison WI, Aug 2004.
49. Meeting on Relativistic Plasmas and Magnetic Fields, Stanford CA, Aug 2004.
50. APS, Division of Plasma Physics Savannah GA, Nov 2004.
51. Applied Math Colloquium, Newcastle Univ., Newcastle UK, Dec 2004.
52. Isaac Newton Institute for Mathematical Sciences, Cambridge Univ., Cambridge UK, Dec 2004.
53. Canadian Institute for Theoretical Astrophysics, Univ. of Toronto, Toronto CA, Feb 2005.

54. Astronomy Colloquium, Univ. of Maryland, College Park, MD, Mar 2005.
55. Center For Magnetic Self-Organization Meeting, Princeton Plasma Physics Lab., Princeton, NJ, April 2005.
56. JILA/Univ. of Colorado, Boulder, CO, Oct 2005
57. UC Berkeley Theoretical Astrophysics Center, Berkeley, CA, Nov 2005
58. Relativistic Jets Conference, Ann Arbor, MI, Dec 2005
59. Laboratory for Laser Energetics, Univ. of Rochester, Rochester, NY, Mar 2006
60. Meeting on Laboratory Astrophysics, Rice Univ., Houston (unable to attend) , TX, Mar 2006
61. Workshop on Magnetic Self-Organization, Aspen Center for Physics, CO, June 2006
62. Workshop on Magnetohydrodynamic Turbulence with Application to and Planetary and Stellar Dynamos, NCAR, Boulder, CO, June 2006
63. Astronomy/Astrophysics Colloquium, University of Arizona, Tuscon AZ, Sept 2006
64. Center for Magnetic Self-Organization Meeting, Chicago IL, Feb 2007
65. US-Japan Workshop on Magnetic Reconnection, St. Michaels, MD Mar 2007
66. Asymmetric Planetary Nebula IV (La Palmas, Spain) Jun. 2007
67. Astronomy/Astrophysics Colloquium, Univ. of Illinois, Urbana IL, Sept. 2007
68. Institute for Defense Analyses, Alexandria VA, Oct. 2007
69. Kavli Institute for Theoretical Physics, Santa Barbara CA, Oct. 2007
70. Rochester Institute of Technology, Rochester NY, Feb. 2008
71. Turbulence and Dynamos Program, NORDITA, Stockholm Sweden, April 2008
72. Magnetic Field Generation/Dynamo Conference, KITP (UCSB), Santa Barbara CA, July, 2008
73. IAU Symposium on Magnetic Fields in Astrophysics, Tenerife, Spain, November 2008
74. Princeton Plasma Physics Laboratory Colloquium, Princeton, NJ, March 2009,
75. Astrophysical MHD meeting, Kiljavanranta, Finland, Apr. 2009
76. Workshop on "Opportunities in plasma astrophysics"; PPPL, Princeton NJ, Jan 2010
77. University of Rochester, Dept. of Physics and Astronomy Colloquium, Apr 2010
78. AAS Meeting/Mini-Conference on Magneto-rotational Instability, June 2010
79. Astronomy and Astrophysics Colloquium, University of Chicago, October 2010
80. "Computations in Science" Seminar series, University of Chicago, October 2010
81. Physics and Astronomy Colloquium, University of Toledo, March 2011
82. Conference on Turbulent Mixing and Beyond, ITCP, Trieste, IT, August 2011

83. APS/ Division of Plasma Physics, Mini-Conference on Dynamos, Nov 2011
84. APS/ Division of Plasma Physics, Session on Magnetic Reconnection, Nov 2011
85. University of New Hampshire, Physics Colloquium, Mar 2012
86. Cornell University, Dept. of Astronomy and Astrophysics Colloquium, Sept 2012
87. International Space Science Institute (ISSI), Workshop on Multi-Scale Structure Formation and Dynamics in Cosmic Plasmas, Bern, Switzerland, April 2013
88. NCAR, Geophysical Turbulence Program, Workshop on Large Eddy Simulations, Boulder Co, May 2013
89. Lyman Spitzer 100th Birthday Memorial Conference, Princeton NJ, October 2013
90. Asymmetric Planetary Nebulae VI, Cancun MX, Nov 2013
91. Clinical and Translational Science Institute Seminar Series, U. Rochester Medical Center, Feb 2014
92. Stellar Tango in the Rockies, Conference, Lake Louise, CA, Mar 2014
93. Joint Astronomy & Astrophysics Colloquium, Institute for Advanced Study and Princeton Univ.) Princeton NJ, Oct 2014
94. Astronomy/Astrophysics Colloquium, Stony Brook Univ., Nov 2014
95. After Hours Talk, Institute for Advanced Study, Princeton NJ, Feb 2015
96. Princeton Center for Theoretical Science (PCTS) meeting, Plasma Processes in Astrophysics and Fusion Energy: A Workshop of the Max-Planck/Princeton Center for Plasma Physics (Mar 2015, Princeton NJ)
97. Princeton Center for Theoretical Science (PCTS) meeting, Accelerating Cosmic-Ray Comprehension (Apr 2015, Princeton NJ)
98. Princeton Univ. Star Formation/ISM Rendezvous Seminar (SFIR) (May 2015, Princeton NJ)
99. Princeton University Plasma Physics Laboratory (PPPL) Theory Seminar, (May 2015, Princeton NJ)
100. Princeton University, Astrophysical Sciences, Plasma Astrophysics Seminar, (June 2015, Princeton NJ)
101. IAU XXIX (Hilo, HI Jul 2015; Focus Meeting Planetary nebulae as probes of galactic structure and evolution—could not attend)
102. IAU XXIX (Hilo, HI; Focus Meeting on Laboratory Astrophysics, (Jul 2015—could not attend)
103. ESO Meeting Stellar End Products: the low mass - high mass connection Garching, (Aug 2015—could not attend)
104. University of Rochester Turbulence Meeting (Aug 2015; Rochester, NY)
105. University of Rochester Physics Colloquium (Sept 2015; Rochester, NY)
106. Astrophysics Colloquium, University of Calif. Santa Cruz (Oct 2015)

107. Princeton Center for Theoretical Science (PCTS) Magnetic Fields in Laboratory High Energy Density Plasmas (Nov 2015, Princeton NJ)
108. Princeton Center for Theoretical Science (PCTS) Dynamo Effect in Astrophysical and Laboratory Plasmas (Dec 2015, Princeton NJ)
109. Princeton Center for Theoretical Science (PCTS) Dynamo Effect in Astrophysical and Laboratory Plasmas (Jan 2016, Princeton NJ)
110. Purdue University, Astrophysics Colloquium (Jan 2016, Lafayette, IA)
111. Geophysical Turbulence Program, International Workshop on TURBULENCE AND WAVES IN FLOWS DOMINATED BY ROTATION: LESSONS FROM GEOPHYSICS AND PERSPECTIVES IN SPACE PHYSICS AND ASTROPHYSICS, NCAR, (Aug , 2016) Boulder Colorado
112. Science and Technology Colloquium, Laboratory for Laser Energetics, U. Rochester, (Rochester NY, 9/2016)
113. Physics Colloquium, School of Physics and Astronomy, Rochester Institute of Technology (September 2016, Rochester NY)
114. High Energy Density Physics Seminar, Department of Physics, University of Rochester, (Rochester NY, Dec 2016 )
115. Canadian Institute for Theoretical Astrophysics (Toronto CA) June 2017
116. Ginzburg Conference 2017, Moscow Russia (June 2017)
117. Magnetic Fields in Astrophysics Conference, Pune India (sept 2017) (attended remotely)
118. APS Division of Plasma Physics Meeting , Milwaukee, WI; Oct 2017
119. APS Mid Atlantic Meeting, NJIT, New Jersey, Nov 2017
120. RIT Center of Computational Relativity and Gravity (May 2018)
121. US-Japan Magnetic Reconnection Meeting (Princeton, NJ) Sep 2018
122. Geophysical Turbulence Program (NCAR, UCB, Boulder CO.) Sep 2018
123. Simons Flatiron Institute, Plasma Physics of Neutron Star Mergers (Simons Foundation, New York NY) Oct 2018
124. Aspen Center for Physics, *Turbulent Life of Cosmic Baryons Workshop* (Aspen CO) Jun 2019
125. KITP *Multiscale Phenomena in Plasma Astrophysics* Workshop (Aug 2019)
126. Laboratory Astrophysics Workshop, T.D. Lee Institute, Shanghai (Oct. 2019; unable to attend)
127. NSF Frontier Center for Matter at Atomic Pressure, U. Rochester CMAP collaboration meeting (Feb 2021)
128. Magnetic fields, Atmospheres, and the Connection to Habitability (MACH) Workshop (June 2021) talk on Role of planetary atmosphere protection by magnetic fields and effect of stellar activity evolution

129. International Astronomical Union (IAU) Symposium 366, Origin of Outflows in Evolved Stars; , Invited Review Talk, Leuven, Belgium (Oct 2021, operated as virtual meeting)
130. Pulsed Power Z-Fundamental Science Workshop, Sandia National Lab talk title “Spotlight on some astrophysical phenomena linked to photoionization front physics”, Albuquerque, NM, Aug 2022
131. Frontiers in Dynamo Theory, Isaac Newton Institute for Mathematical Science, Cambridge UK Programme’s satellite workshop in Leeds UK on Fluid flow and magnetic field generation in fluids and plasmas - theory and laboratory experiments, (Oct 2022)
132. Stellar Activity Evolution and Planetary Atmosphere Protection as Context for Basic Dynamo Principles, Nordic Institute for Theoretical Physics seminar (Stockholm, SE), March 2023
133. Origin and Consequence of Planetary Magnetic Fields Exemplify Interconnection of Microphysics and Macrophysics, Center for Matter at Atomic Pressure, advisory board meeting Nov 2023
134. Planetary Magnetic Fields and the Interconnection of Microphysics and Macrophysics, Center for Matter at Atomic Pressure, NSF site visit for Center for Matter at Atomic Pressure, Dec 2023
135. Center for Matter at Atomic Pressure (Annual Meeting), How Magnetic Fields Connect Micro, Macro and System Scale Physics of Planets and Stars, May 2024
136. Jets in Transient Sources as a Context for Principles of Jet Formation, European Astronomical Society (EAS) meeting in special session SS36 *“Role of Jets in Transients”*, July 2024, Padova, Italy

### **Eric G. Blackman: Publications**

#### **Refereed Publications**

1. E.G. Blackman and R.L. Jaffe 1989, “Concentration Limits on Terrestrial Strange Quark Matter from Heavy Isotope Searches,” Nuclear Physics B324, 205.
2. E.G. Blackman and G.B. Field, 1993, “Ohm’s Law for a Relativistic Pair Plasma,” Physical Review Letters 71, 3481.
3. E.G. Blackman and G.B. Field, 1994, “Kinematics of Relativistic Magnetic Reconnection,” Physical Review Letters 72, 494.
4. I.E. Segal, J.F. Nicholl, and E.G. Blackman, 1994, “Statistically Efficient Parallel Testing of Flux-Redshift Predictions in the Radio Band,” Astrophysical Journal 430, 63.
5. I. Yi, G.B. Field, and E.G. Blackman, 1994, “On the Origin of Obscuring Tori in the Galactic Nucleus and Active Galactic Nuclei,” Astrophysical Journal 432, L31.
6. E.G. Blackman and G.B. Field, 1994, “Relativistic Reconnection in an Astrophysical Pair Plasma,” Physica Scripta T52, 93.
7. E.G. Blackman and G.B. Field, 1994, “Non-Thermal Acceleration from Reconnection Shocks,” Physical Review Letters 73, 3097.

8. E.G. Blackman, 1996, "Reconnecting Flux Tubes as a source of *In Situ* Acceleration in Extragalactic Radio Sources," *Astrophysical Journal Letters* 56, L87.
9. T. Chou & E.G. Blackman, 1996, "A Magnetic Field Diagnostic for Sonoluminescence," *Physical Review Letters* 76, 1549.
10. E.G. Blackman & I. Yi, 1996, "Can the Formation of X-Ray Obscuring Tori and Jets in Active Galaxies be Determined by One Parameter?" *Astrophysical Journal* 461, L21.
11. E.G. Blackman, 1996, "Overcoming the Back Reaction on Turbulent Motions in the Presence of Magnetic Fields," *Physical Review Letters* 77, 2694.
12. Z. Kuncic, E.G. Blackman & M.J. Rees, 1996, "Physical constraints on the sizes of dense clouds in the central magnetospheres of active galactic nuclei," *Monthly Notices of the Royal Astronomical Society* 283, 1322.
13. E.G. Blackman, I. Yi, and G.B. Field, 1996, "Relativistic Precessing Jets and Cosmological Gamma-Ray Bursts," *Astrophysical Journal*, 473, L79.
14. I. Yi and E.G. Blackman, 1997, "Formation of Millisecond Pulsars from Accretion Induced Collapse and Constraints on Pulsar Gamma-Ray Burst Models," *Astrophysical Journal* 482, 383.
15. E.G. Blackman, 1997, "Distinguishing Solar Flare Types by Differences in Reconnection Regions," *Astrophysical Journal* 484, L79.
16. T. DiMatteo, E.G. Blackman, & A.C. Fabian, 1997, "Two-Temperature Coronae in Active Galactic Nuclei," *Monthly Notices of the Royal Astronomical Society*, 291, L23.
17. E.G. Blackman and T. Chou, 1997, "A Vorticity-Magnetic Field Dynamo Instability," *Astrophysical Journal*, 489, L95.
18. I. Yi and E.G. Blackman, 1997, "An explanation for the bimodal duration distribution of gamma-ray bursts: Millisecond pulsars from accretion-induced collapse," *Astrophysical Journal Letters*, 494, L63.
19. E.G. Blackman, 1998, "Importance of an Astrophysical Perspective for Textbook Relativity," *European Journal of Physics*, 19, 195.
20. E.G. Blackman, 1998, "In Situ Origin of Large Scale Galactic Magnetic Fields without Kinetic Helicity?" *Astrophysical Journal Letters*, 496, L17.
21. E.G. Blackman & I. Yi 1998, "On Fueling Gamma-Ray Bursts and their Afterglows with Pulsars," *Astrophysical Journal Letters*, 498 L31.
22. E.G. Blackman, 1998 "Variability Associated with Alpha Accretion Disk Theory for Standard and Advection Dominated Disks," *Monthly Notices of the Royal Astronomical Society*, 299 L48.
23. J. Herrnstein, J. Moran, L. Greenhill, E.G. Blackman, and P. Diamond 1998, "Polarimetric Observations of Masers in NGC4258: An Upper Limit on the Large-Scale Magnetic Field 0.2 pc from the Central Engine," *Astrophysical Journal*, 508 243.
24. E.G. Blackman, 1999 "On Particle Energization in Accretion Flows," *Monthly Notices of the Royal Astronomical Society*, 302, 723.

25. G.B. Field, E.G. Blackman & H. Chou 1999, "Non-linear Effect in Dynamo Theory," *Astrophysical Journal*, 513 638.
26. E.G. Blackman & G.B. Field, 1999, "Resolution of an Ambiguity in Magnetic Dynamo Theory and its Consequences for Back-reaction Studies" *Astrophysical Journal* 521, 597.
27. E.G. Blackman, 1999, "Concave Accretion Discs and X-ray Reprocessing," *Monthly Notices of the Royal Astronomical Society*, 306 L25.
28. E.G. Blackman, 2000, "Mean Magnetic Field Generation in Sheared Rotators," *Astrophysical Journal*, 529 138.
29. E.G. Blackman & G.B. Field, 2000, "Constraints on the Magnitude of  $\alpha$  in Dynamo Theory" *Astrophysical Journal*, 534 984.
30. S.A. Hartnoll & E.G. Blackman, 2000, "Reprocessed emission from warped accretion discs with application to X-ray iron line profiles", *Monthly Notices of the Royal Astronomical Society*, 317, 880.
31. E.G. Blackman & G.B. Field 2000, "Coronal activity from dynamos in astrophysical rotators," *MNRAS* 318 724.
32. E.G. Blackman, A. Frank, & C. Welch, 2001, "Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae," *ApJ*, 546 288.
33. M. Lyutikov & E.G. Blackman, 2001, "Gamma-ray Bursts from unstable Poynting dominated outflows," *MNRAS* 321 177.
34. E.G. Blackman, 2001, "Implications of mean field accretion disc theory for vorticity and magnetic field growth," *MNRAS* 323 497.
35. E.G. Blackman, A. Frank, A. Markiel, J.H. Thomas, H.M. Van Horn , 2001, " Dynamos in asymptotic-giant-branch stars as the origin of magnetic fields shaping planetary nebulae," *Nature* 409 485.
36. S.A. Hartnoll & E.G. Blackman, 2001, "Reprocessed emission line profiles from dense clouds in geometrically thick accretion engines" *MNRAS* 324 257.
37. E.G. Blackman & G.B. Field, 2001, "How astrophysical mean field dynamos can circumvent existing quenching constraints," *Physics of Plasmas* 8 2407.
38. S.V. Lebedev, J.P. Chittenden, F.N. Beg, S.N. Bland, A. Ciardi, D. Ampleford, S. Hughes, M.G. Haines, A. Frank, E.G. Blackman, T. Gardiner, 2002, "Laboratory Astrophysics and Collimated Stellar Outflows: The Production of Radiatively Cooled Hypersonic Plasma Jets," *ApJ* 564, 113.
39. J.C. Lee, C.S. Reynolds, N.S. Schultz, R. Remillard, E.G. Blackman, A.C. Fabian, 2002, "Environment of GRS 1915+105 as seen with Chandra HETG and RXTE Evidence for a Hot Disk Atmosphere and Possible Supernova Origin," *ApJ*, 567 1102.
40. J. Maron and E.G. Blackman, 2002, "Effect of Fractional Kinetic Helicity on Turbulent Magnetic Dynamo Spectra," *ApJ. Lett* 566 L41.



41. S.A. Hartnoll & E.G. Blackman, 2002, "Iron line profiles from black hole accretion disks with spiral velocity structure" MNRAS 332, L1.
42. G.B. Field & E.G. Blackman, "Dynamical Quenching of the  $\alpha$ -Dynamo," ApJ, 572, 685.
43. A. Poludnenko, A. Frank, E.G. Blackman, 2002 "Hydrodynamic Interaction of Shock Waves with Inhomogeneous Media I.: The Adiabatic Case," ApJ 576 832.
44. E.G. Blackman & A. Brandenburg, 2002, "Dynamical Quenching of Dynamos with Shear," ApJ, 579, 359.
45. E.G. Blackman & G.B. Field, "New Mean Field Dynamo Theory and Closure Approach," 2002, Phys. Rev. Lett., 89, 265007
46. H.M. Van Horn, J.H. Thomas, A. Frank, E.G. Blackman, 2003, "A Relaxation Oscillator Model for Shell Structures In Planetary Nebulae," ApJ 585 983.
47. E.G. Blackman & A. Brandenburg, "Doubly Twisted Coronal Ejections from Dynamos and their Role in Facilitating the Solar Cycle" 2003, ApJL, 584 L99
48. J.H. Kastner, B. Balick, E.G. Blackman, A. Frank, N. Soker, S.D. Vrtiklek, G.A. Franz, J. Li 2003, "An X-ray Jet Detection Within the Planetary Nebula Menzel 3" ApJL, 591, L37.
49. V. Pariev, E.G. Blackman, S. Boldyrev, 2003 "Extending the Shakura-Sunyaev Formalism to Magnetically Dominated Disks," Astronomy & Astrophysics, 407, 403
50. E.G. Blackman, 2003, "Understanding Helical Magnetic Dynamos with a Nonlinear Four-Scale Theory," MNRAS, 344, 707
51. A. Brandenburg, E.G. Blackman, G.R. Sarson, 2003, "How magnetic helicity ejection helps large scale dynamos" Adv. In Space Sci. 32, 1835
52. E.G. Blackman & G.B. Field 2003, "A New Approach to Turbulent Transport of a Mean Scalar," Phys. of Fluids, 15, L73.
53. R. Sahai, J. H. Kastner, A. Frank, M. Morris, & E.G. Blackman, 2003 "X-Ray Emission from the Pre-Planetary Nebula He3-1475," ApJL, 599, L87.
54. J. Tan & E.G. Blackman, 2004, ApJ 603, 401, "Protostellar Disk Dynamos and Hydromagnetic Outflows in Primordial Star Formation,"
55. E.G. Blackman & R. Perna, 2004, "Pulsars With Jets May Harbor Dynamically Important Accretion Disks," ApJL, 601, L71.
56. A. Frank & E.G. Blackman, 2004, "Application of MHD Wind Models to Protoplanetary and Planetary Nebulae," ApJ, 614, 737.
57. E.G. Blackman, 2004 "How Spectral Shapes of Magnetic Energy and Magnetic Helicity Influence their Respective Decay Time Scales," Plasma Physics and Cont. Fusion, 46, 423
58. J.L. Maron, B.D. Chandran, & E.G. Blackman, 2004, "The divergence of neighboring magnetic field lines and fast-particle diffusion in strong magnetohydrodynamic turbulence, with application to thermal conduction in galaxy clusters," Phys. Rev. Lett., 92, 045001

59. D.H. Douglass, E.G. Blackman, & R.S. Knox, 2004, *Physics Letters A*, 323, 315, "Temperature Response of Earth to the Annual Solar Irradiance Cycle"
60. E.G. Blackman & G.B. Field 2004, "Dynamical Magnetic Relaxation: A Magnetically Driven Dynamo in MHD Turbulence," *Phys. of Plasmas*, 11, 3264.
61. S.V. Lebedev, D. Ampleford, J.P. Chittenden, S.N. Bland, A. Ciardi, M.G. Haines, A. Frank, E.G. Blackman, A. Cunningham, 2004, "Jet Deflection via Cross-Winds: Laboratory Astrophysics Studies," *ApJ*, 616, 988.
62. E.G. Blackman & J.C. Tan, 2004, "Coronae & Outflows from Helical Dynamos, Compatibility with the MRI, and Application to Protostellar Disks," *Astrophysics and Space Science*, 292, 395.
63. R. Selkowitz & E.G. Blackman, 2004 "Stochastic Fermi acceleration of sub-relativistic electrons and its role in solar flares," *MNRAS*, 354, 870
64. A. Quillen, E.G. Blackman, A. Frank, P. Varnière 2004, "On the Planet and Disk in Coku- Tau/4," *ApJL*, 612 L137
65. E.G. Blackman, 2005, "Bi-helical Magnetic Relaxation and Large Scale Magnetic Field Growth," *Physics of Plasmas*, 12, 012304,
66. A. Brandenburg & E.G. Blackman, 2005, "Ejection of Bi-Helical Fields from the Sun," *Highlights of Astronomy*, 13, 101
67. S.V. Lebedev, A. Ciardi, D. Ampleford, S.N. Bland, S.C. Bott, J.P. Chittenden, G. Hall, J. Rapley, A. Frank, E. G. Blackman, T. Lery, 2005, "Magnetic Tower Outflows from a Radial Wire Array Z-Pinch," *MNRAS*, 361, 97
68. V.Pariiev & E.G. Blackman, 2005, "Limitations of the Hamiltonian treatment for collisionless astrophysical accretion flows," *Baltic Astronomy*, 14, 265
69. E.G. Blackman & G.B. Field, 2005, "On the Inapplicability of the Zeldovich Relations in Magnetohydrodynamics," *Astronomische Nachrichten*, 326, 386.
70. P. Varnière & E.G. Blackman 2005, "Flux Modulation from Non-Axisymmetric Structures in Accretion Disks," *New Astronomy*, 11, 43
71. A. C. Quillen, S.L. Thorndike, A. Cunningham, A. Frank, R. A. Gutermuth, E.G. Blackman, J.L. Pipher, N. Ridge, 2005, "Turbulence driven by outflow-blown cavities in the molecular cloud of NGC 1333" *ApJ*, 632, 941
72. J.C. Tan & E.G. Blackman, 2005, "Star-forming accretion flows: An explanation for low luminosity nuclei of giant elliptical galaxies," *MNRAS*, 362, 983
73. G. Paesold, E.G. Blackman, & P. Mesmer, 2005, "On Particle Acceleration and Trapping by Poynting Flux Dominated Outflows," *Plasma Physics and Controlled Fusion*, 47 1925
74. Lebedev, S. V.; Ciardi, A.; Ampleford, D. J.; Bland, S. N.; Bott, S. C.; Chittenden, J. P.; Hall, G. N.; Rapley, J.; Jennings, C.; Sherlock, M.; Frank, A.; Blackman, E. G., 2005, *Plasma Physics and Controlled Fusion*, 47, 465, Production of radiatively cooled hypersonic plasma jets and links to astrophysical jets

75. P. Varnière, E.G. Blackman, A. Frank, A.P. Quillen, 2006, ApJ 640, 1110, “Rapid Hole Formation from Planets in Circumstellar Disks”
76. E.G. Blackman, J.T. Nordhaus & J.H. Thomas, 2006, New Astronomy, 11, 452, ‘‘Extracting Rotational Energy in Supernova Progenitors: Transient Poynting Flux Growth vs. Turbulent Dissipation.’’
77. E. Blackman, 2006, Nature, 440, 148, (Correspondence) “Giants of physics found white-dwarf mass limits.”
78. Cunningham, A. J., Frank, A., & Blackman, E. G. 2006, ApJ, 653, 416, “Protostellar Jet Collisions Reduce the Efficiency of Outflow Driven Turbulence in Molecular Clouds”
79. E.G. Blackman & H. Ji, 2006, MNRAS 369, 1837, Laboratory Plasma Dynamos, Astrophysical Dynamos, and Magnetic Helicity Evolution
80. S.P. Matt, A. Frank, E.G. Blackman, 2006, ApJ Lett., 647 45, “Astrophysical Explosions Driven by a Rotating, Magnetized, Gravitating Sphere”
81. J.T. Nordhaus, E.G. Blackman, 2006, MNRAS, 370, 204 “Low-Mass Binary Induced Outflows from Asymptotic Giant Branch Stars”
82. A. Hubbard, E.G. Blackman, 2006, MNRAS 372 1717, “AGN Jet Mass Loading and Truncation by Stellar Winds”
83. A. Hubbard, E.G. Blackman, 2006, New Astronomy 12, 246, “Planetesimal growth in turbulent discs before the onset of gravitational instability”
84. Cunningham, A. J., Frank, A., Quillen, A. & Blackman, E. G. 2006, ApJ 653 416, “Outflow Driven Cavities: Numerical Simulations of Intermediaries of Protostellar Turbulence”
85. A. Ciardi, S. V. Lebedev, A. Frank, E. G. Blackman, D. J. Ampleford, C. A. Jennings, J.P. Chittenden, T. Lery, S. N. Bland, S. C. Bott, G. N. Hall, J. Rapley, F. A. Suzuki Vidal, A. Marocchino, 2007, Astrophys. & Space Sci., 307 17, 3D MHD Simulations of Laboratory Plasma Jets
86. E.G. Blackman, 2007, Astrophys. Space. Sci, 307, 7 “Distinguishing Propagation vs. Launch Physics of Astrophysical Jets and the Role of Experiments.”
87. Ren C., Blackman E.G., Fong Wen-fai, 2007, 14, 012901 Physics of Plasmas, Understanding the Saturation of the Proton Driven Weibel Instability and implications for Astrophysics
88. Nordhaus, J., Blackman E.G., Frank A., 2007, MNRAS, 376, 599, Isolated vs. Common Envelope Dynamos in Planetary Nebula Progenitors
89. D.J. Ampleford, A. Ciardi, S.V. Lebedev, S.N. Bland, S.C. Bott, J.P. Chittenden, G.N. Hall, A. Frank, E. Blackman, 2007, Astrophys. & Space Science, 307, 29, Jet Deflection by a Quasi-Steady-State Side Wind in the Laboratory
90. D.J. Ampleford, S.V. Lebedev, A. Ciardi, S.N. Bland, S.C. Bott, G.N. Hall, N. Naz, C.A. Jennings, M. Sherlock, J.P. Chittenden, A. Frank, E. Blackman, 2007, Astrophys. & Space Science, 307, 51, Laboratory Modeling of Standing Shocks and Radiatively Cooled Jets with Angular Momentum

91. Ciardi, A.; Lebedev, S. V.; Frank, A.; Blackman, E. G.; Chittenden, J. P.; Jennings, C. J.; Ampleford, D. J.; Bland, S. N.; Bott, S. C.; Rapley, J.; Hall, G. N.; Suzuki-Vidal, F. A.; Marocchino, A.; Lery, T.; Stehle, C., 2007, *Physics of Plasmas*, 14, 056501, The evolution of magnetic tower jets in the laboratory
92. P. Hartigan, A. Frank, P. Varnière, E.G. Blackman, 2007, *ApJ*, 661,910, Magnetic Fields in Stellar Jets
93. R. Selkowitz & E.G. Blackman, 2007 “The shock reprocessing model of electron acceleration in impulsive solar flares,” *MNRAS*, 379, 43.
94. R. Selkowitz & E.G. Blackman, 2007, “On the role of stochastic Fermi acceleration in setting the dissipation scale of turbulence in the interstellar medium,” *MNRAS*, 382, 1119.
95. E.G. Blackman, 2007, *New Journal of Physics*, 9, 309, “Toward Coupling Flow Driven and Magnetically Driven Dynamos,”
96. Field G.B., Blackman, E.G., Keto, E., 2008, *MNRAS*, 385, 181, “A Model of Cloud Fragmentation.”
97. E.G. Blackman, R.F. Penna, P. Varnière, 2008, *New Astronomy*, 13, 244, “Empirical relation between transport parameter  $\alpha$  and thermal-to-magnetic pressure ratio in accretion disc simulations,”
98. Ampleford, D. J.; Lebedev, S. V.; Ciardi, A.; Bland, S. N.; Bott, S. C.; Hall, G. N.; Naz, N.; Jennings, C. A.; Sherlock, M.; Chittenden, J. P.; Palmer, J. B. A.; Frank, A.; Blackman, E., 2008, *Physical Review Letters*, 100, 035001 “Supersonic radiatively cooled rotating flows and jets in the laboratory”
99. Edgar, R.G., Nordhaus, J., Blackman, E.G., & Frank, A. 2008, *ApJL*, 675 L101. The Formation of Crystalline Dust in AGB Winds from Binary Induced Spiral Shocks
100. E.G. Blackman & G.B. Field, 2008, “Dimensionless Measures of Turbulent Magnetohydrodynamic Dissipation Rates” *MNRAS*, 386,1481
101. Nordhaus, J.; Minchev, I.; Sargent, B.; Forrest, W.; Blackman, E. G.; De Marco, O.; Kastner, J.; Balick, B.; Frank, A., 2008, “Spectral Determination of Material Geometry Around Evolved Stars: The Case of HD 179821s” *MNRAS*, 388, 716
102. Dennis, T. J., Cunningham, A. J., Frank, A., Balick, B., Blackman E.G., & Mitran, S., 2008, *ApJ*, 69, 1327 “PPN as Explosions: Bullets vs. Jets and Nebular Shaping”
103. Tan, J. C., Beuther, H., Walter, F., & Blackman, E. G. 2008, *ApJ*, 689, 775 A Search for Molecular Gas in the Nucleus of M87 and Implications for the Fueling of Supermassive Black Holes
104. Hubbard, A., & Blackman, E. G. 2008, *MNRAS*, 390, 331, Identifying deficiencies of standard accretion disc theory: lessons from a mean-field approach
105. Nordhaus, J., Busso, M., Wasserburg, G. J., Blackman, E. G., & Palmerini, S. 2008, *ApJL*, 684, L29, Magnetic Mixing in Red Giant and Asymptotic Giant Branch Stars
106. Ampleford, D.J., et al., 2008, *Physical Review Letters*, 100, 035001, Supersonic Radiatively Cooled Rotating Flows and Jets in the Laboratory

107. Ciardi, A., Lebedev, S. V.; Frank, A., Suzuki-Vidal, F., Hall, G.N., Bland, S.N.; Harvey-Thompson, A.; Blackman, E.G., Camenzind, M., 2009, ApJL, 691, L147, Episodic Magnetic Bubbles and Jets: Astrophysical Implications from Laboratory Experiments
108. Carroll, J. J., Frank, A., Blackman, E. G., Cunningham, A. J., & Quillen, A. C., 2009, ApJ 695, 1376, Outflow Driven Turbulence in Molecular Clouds
109. Cunningham, A. J., Frank, A., Carroll, J., Blackman, E. G., & Quillen, A. C. 2009, ApJ, 692, 816, Protostellar Outflow Evolution in Turbulent Environments
110. Pettibone R., & Blackman, E.G., 2009, MNRAS 396, 1782, Stochastic wobble of accretion discs and jets from turbulent rocket torques
111. Suzuki-Vidal, F.; Lebedev, S. V.; Ciardi, A.; Bland, S. N.; Chittenden, J. P.; Hall, G. N.; Harvey-Thompson, A.; Marocchino, A.; Ning, C.; Stehle, C.; Frank, A.; Blackman, E. G.; Bott, S. C.; Ray, T., 2009, Astrophys., Space Supp. 322, 19, Formation of episodic magnetically driven radiatively cooled plasma jets in the laboratory
112. Hubbard, A., & Blackman, E.G., 2009, MNRAS, 398, 931, New constraints on turbulent transport in accretion discs
113. Moss, W.C., King, M.J., & Blackman, E.G. 2009, Physical Review Letters, 103, 108702, Skull Flexure from Blast Waves: A Mechanism for Brain Injury with Implications for Helmet Design
114. Blackman, E.G., & Pessah, M.E., 2009, ApJL, 704, L113, Coranae as a Consequence of Large-Scale Magnetic Fields in Turbulent Accretion Disks
115. Dennis, T.J., Frank, A., Blackman, E.G., De Marco, O., Balick, B., & Mitran, S. 2009, ApJ, 707, 1485 Magnetic Nested-Wind Scenarios for Bipolar Outflows: Pre-planetary and YSO Nebular Shaping
116. Blackman, E.G., 2010, Astronomische Nachrichten, 331, 101 Comparisons and connections between mean field dynamo theory and accretion disc theory
117. Blackman, E.G., 2010, Nature Physics, 6, 84, Star and black-hole formation: What's hot and what's not
118. Park, J., Ren, C., Blackman, E.G., & Kong, X., 2010, Physics of Plasmas, 17, 022901 Energy transfer and magnetic field generation via ion-beam driven instabilities in an electron-ion plasma
119. Park, K., & Blackman, E.G. 2010, MNRAS, 403, 1993 Effect of plasma composition on the interpretation of Faraday rotation
120. Ampleford, D.J., et al. 2010, Physics of Plasmas, 17, 056315 Bow shocks in ablated plasma streams for nested wire array z-pinches: A laboratory astrophysics test-bed for radiatively cooled shocks
121. Carroll, J.J., Frank, A., & Blackman, E.G. 2010, ApJ, 722, 145 Isotropically Driven Versus Outflow Driven Turbulence: Observational Consequences for Molecular Clouds

122. Suzuki-Vidal, F., Lebedev, S.V., Bland, S.N., Hall, G.N., Swadling, G., Harvey-Thompson, A.J., Marocchino, A., Ciardi, A., Frank, A., Blackman, E.G., and Bott, S.C, 2010, *Physics of Plasmas* 17, 112708, Generation of episodic magnetically driven plasma jets in a radial foil Z-pinch
123. Field, G.B., Keto, E., Blackman E.G., 2011, *MNRAS*, 416, 710, Does External Pressure Explain Recent Results for Molecular Clouds?
124. Blackman, E.G., 2011, *Physics Today*, 64, 8, Placing Chandra's Work in Historical Context
125. Nordhaus, J., Wellons, S., Spiegel, D.S., Metzger, B.D., and Blackman, E.G.: 2011, *Proceedings of the National Academy of Sciences*, 108, 3135, The formation of high-field magnetic white dwarfs from common envelopes
126. Workman J.C., Blackman E.G., Ren C., 2011, *PhPl*, 18, 092902, Simulations reveal fast mode shocks in magnetic reconnection outflows
127. Park K., Blackman E.G., 2012, *MNRAS*, 419, 913 Comparison between turbulent helical dynamo simulations and a non-linear three-scale theory
128. Li S., Frank A., Blackman E., 2012, *ApJ*, 748, 24 Consequences of Magnetic Field Structure for Heat Transport in Magnetohydrodynamics
129. Moss W.C., King M.J., Blackman E.G., 2012, *Computer Methods in Biomechanics and Biomedical Engineering*, DOI:10.1080/10255842.2012.739162, Toward reducing impact induced brain injury: Lessons from a computational study of army and football helmet pads
130. Park J., Workman J.C., Blackman E.G., Ren C., Siller R., 2012, *PhPl*, 19, 062904 Particle-in-cell simulations of particle energization from low Mach number fast mode shocks
131. Pietarila Graham J., Blackman E.G., Mininni P.D., Pouquet A., 2012, *PhRvE*, 85, 066406 Not much helicity is needed to drive large-scale dynamos
132. Park K., Blackman E.G., 2012, *MNRAS*, 423, 2120 Simulations of a magnetic fluctuation driven large-scale dynamo and comparison with a two-scale model
133. Kastner J.H., Montez R., Jr., Balick B., et al., 2012, *AJ*, 144, 58 The Chandra X-Ray Survey of Planetary Nebulae (CHANPLANS): Probing Binarity, Magnetic Fields, and Wind Collisions
134. Huarte-Espinosa M., Frank A., Blackman E.G., Ciardi A., Hartigan P., Lebedev S.V., Chittenden J.P., 2012, *ApJ*, 757, 66, On the Structure and Stability of Magnetic Tower Jets
135. Park J., Ren C., Workman J.C., Blackman E.G., 2013, *ApJ*, 765, 147, Particle-in-cell simulations of particle energization via shock drift acceleration from low Mach number quasi-perpendicular shocks in solar flares
136. Blackman E.G., 2012, *Physica Scripta*, 86, 058202 Accretion disks and dynamos: toward a unified mean field theory
137. Huarte-Espinosa M., Frank A., Balick B., Blackman E.G., De Marco O., Kastner J.H., Sahai R., 2012, *MNRAS*, 424, 2055 From bipolar to elliptical: simulating the morphological evolution of planetary nebulae

138. Tarduno, J. A.; Cottrell, R. D.; Nimmo, F.; Hopkins, J.; Voronov, J.; Erickson, A.; Blackman, E.; Scott, E. R. D.; McKinley, R., 2012, *Science*, 338, 939 Evidence for a Dynamo in the Main Group Pallasite Parent Body
139. Blackman E.G., 2013, *Eur. J. Phys.* 34 489, On deriving flux freezing in magnetohydrodynamics by direct differentiation
140. Blackman E.G., Subramanian K., 2013, *MNRAS*, 429, 1398 On the resilience of helical magnetic fields to turbulent diffusion and the astrophysical implications
141. M. Bocchi, B. Ummels, J. P. Chittenden, S. V. Lebedev, A. Frank, E. G. Blackman, 2013, *ApJ*, 767, 84, Numerical Simulations of Z-Pinch Experiments to Create Supersonic Differentially-rotating Plasma Flow,
142. Gao, L.; Nilson, P. M.; Igumenshev, I. V.; Fiksel, G.; Yan, R.; Davies, J. R.; Martinez, D.; Smalyuk, V.; Haines, M. G.; Blackman, E. G.; Froula, D. H.; Betti, R.; Meyerhofer, D. D., 2013, *Phys Rev. Lett*, 110, 185003, Observation of Self-Similarity in the Magnetic Fields Generated by the Ablative Nonlinear Rayleigh-Taylor Instability
143. Huarte-Espinosa M., Carroll-Nellenback J., Nordhaus J., Frank A., Blackman E.G., 2013, *MNRAS*, 433, 295, The formation and evolution of wind-capture discs in binary systems
144. Park K., Blackman E.G., Subramanian K., 2013, *PhRvE*, 87, 053110 , Large-scale dynamo growth rates from numerical simulations and implications for mean-field theories
145. Marchi N, Bazarian JJ, Puvenna V, Janigro M, Ghosh C, Zhong J, Zhu T, Blackman E, Stewart D, Ellis J, Butler R, Janigro D. Consequences of repeated blood-brain barrier disruption in football players. *PLoS One*. 2013; 8(3):e56805
146. Li. S., Frank, A., Blackman, E.G., 2013, *ApJ*, 774, 133, MHD Shock-Clump Evolution with Self-Contained Magnetic Fields
147. Blackman E.G., Carroll-Nellenback J.J., Frank A., Huarte-Espinosa M., Nordhaus J., 2013, *MNRAS*, 436, 909, Size of discs formed by wind accretion in binaries can be underestimated if the role of wind-driving force is ignored
148. Yurchak, R.; Ravasio, A.; Pelka, A.; Pikuz, S.; Falize, E.; Vinci, T.; Koenig, M.; Loupiau, B.; Benuzzi-Mounaix, A.; Fatenejad, M.; Tzeferacos, P.; Lamb, D. Q.; Blackman, E. G., 2014, *PhRvL*, 112, 155001 , Experimental Demonstration of an Inertial Collimation Mechanism in Nested Outflows
149. Blackman E.G., Lucchini S., 2014, *MNRAS Letters*, 440, L16-L20, Using Kinematic Properties of Pre-Planetary Nebulae to Constrain Engine Paradigms
150. Bhat P., Blackman E.G., Subramanian K. 2014, *MNRAS*, 438, 2954-2966, Resilience of helical fields to turbulent diffusion II: direct numerical simulations
151. J. J. Bazarian; T. Zhu; J. Zhong; D. Janigro; E. Rozen; A. Roberts; H. Javien; K. Merchant-Borna; B. Abar; E. G. Blackman, 2014, *PlosOne*, DOI: 10.1371/journal.pone.0094734 Persistent, Long-term Cerebral White Matter Changes After Sports-related Repetitive Head Impact
152. Blackman E.G. & Hubbard A.H., 2014, *MNRAS* 442, 1040-1048, Ribbons characterize magnetohydrodynamic magnetic fields better than lines: a lesson from dynamo theory

153. Li, S., Frank, A., Blackman, E.G., 2014, MNRAS 444,2884-2892, Triggered Star Formation and Its Consequences
154. Lebedev S.V., Lebedev, S. V.; Suttle, L.; Swadling, G. F.; Bennett, M.; Bland, S. N.; Burdiak, G. C.; Burgess, D.; Chittenden, J. P.; Ciardi, A.; Clemens, A.; de Grouchy, P.; Hall, G. N.; Hare, J. D.; Kalmoni, N.; Niasse, N.; Patankar, S.; Sheng, L.; Smith, R. A.; Suzuki-Vidal, F.; Yuan, J.; Frank, A.; Blackman, E. G.; Drake, R. P. , 2014, Physics of Plasmas, 21, 056305. , The formation of reverse shocks in magnetized high energy density supersonic plasma flows
155. Ueta, T.; Ladjal, D.; Exter, K. M.; Otsuka, M.; Szczerba, R.; Siódmiak, N.; Aleman, I.; van Hoof, P. A. M.; Kastner, J. H.; Montez, R.; McDonald, I.; Wittkowski, M.; Sandin, C.; Ramstedt, S.; De Marco, O.; Villaver, E.; Chu, Y.-H.; Vlemmings, W.; Izumiura, H.; Sahai, R.; Lopez, J. A.; Balick, B.; Zijlstra, A.; Tielens, A. G. G. M.; Rattray, R. E.; Behar, E.; Blackman, E. G.; Hebden, K.; Hora, J. L.; Murakawa, K.; Nordhaus, J.; Nordon, R.; Yamamura, I., 2014, Astronomy & Astrophysics, 565, A36, The Herschel Planetary Nebula Survey (HerPlaNS). I. Data overview and analysis demonstration with NGC 6781
156. Tarduno J.A., Blackman E.G., Mamajek E.E., 2014, Phys. of Earth and Planetary Interiors, 233, 68-87, Detecting the oldest geodynamo and attendant shielding from the solar wind: Implications for habitability
157. Nauman F., Blackman E.G., 2014, MNRAS, 441, 1855-1860, On characterizing non-locality and anisotropy for the magnetorotational instability
158. Freeman, M.; Montez, R., Jr.; Kastner, J. H.; Balick, B.; Frew, D. J.; Jones, D.; Miszalski, B.; Sahai, R.; Blackman, E.; Chu, Y.-H.; and 17 coauthors, 2014, ApJ, 794, 99, The Chandra Planetary Nebula Survey (CHANPLANS). II. X-Ray Emission from Compact Planetary Nebulae
159. Blackman E.G. & Thomas, J.H., 2015, MNRAS 466, L51-L55, Explaining the observed relation between stellar activity and rotation
160. J. A. Tarduno, M Watkeys, T Hu, R.D. Cottrell, E. G. Blackman, A. Wendt, C.A. Scribner, C. L. Wagner, 2015, Nature Communications, 6 7865, On the antiquity of the South Atlantic Anomaly: and evidence for top-down control of the geodynamo
161. E.G. Blackman, 2015, Space Science Reviews, 188, 59-91, Magnetic Helicity and Large Scale Fields: A Primer
162. Nilson, Philip M.; Gao, L.; Igumenshchev, I. V.; Fiksel, G.; Yan, R.; Davies, J. R.; Martinez, D.; Smalyuk, V. A.; Haines, M. G.; Blackman, E. G.; Froula, D. H.; Betti, R.; Meyerhofer, D. D. , 2015, Magnetic-field generation by the ablative nonlinear Rayleigh-Taylor instability. \ Journal of Plasma Physics 81, 365810201.
163. Blackman, E.G., Nauman, F., 2015, Motivation and challenge to capture both large-scale and local transport in next generation accretion theory, Journal of Plasma Physics 81, 395810505.
164. Nauman F., Blackman E.G., 2015, MNRAS, 446, 2102-2109, Sensitivity of the magnetorotational instability to the shear parameter in stratified simulations



165. Montez, R., Jr.; Kastner, J. H.; Balick, B.; Behar, E.; Blackman, E. et al, 2015, ApJ, 800,8, The Chandra Planetary Nebula Survey (ChanPlaNS). III. X-Ray Emission from the Central Stars of Planetary Nebulae
166. Frank, A., Li, S., Blackman, E.G. 2015. Triggered star formation: Rotation, magnetic fields and outflows., High Energy Density Physics 17, 12-17.
167. Bennett, M. J.; Lebedev, S. V.; Hall, G. N.; Suttle, L.; Burdiak, G.; Suzuki-Vidal, F.; Hare, J.; Swadling, G.; Patankar, S.; Bocchi, M, Chittenden, J. P.; Smith, R.; Frank, A.; Blackman, E.; Drake, R. P.; Ciardi, A .,2015. Formation of radiatively cooled, supersonically rotating, plasma flows in Z-pinch experiments: Towards the development of an experimental platform to study accretion disk physics in the laboratory. High Energy Density Physics 17, 63-67.
168. Blackman, E.G., Owen, J.E., 2016, Minimalist coupled evolution model for stellar x-ray activity, rotation, mass loss, and magnetic field, MNRAS, 458,1548
- 169.Ebrahimi, F., Blackman, E.G., 2016, Radially dependent large-scale dynamos in global cylindrical shear flows and the local cartesian limit, MNRAS, 459, 1422
- 170.Drake R.P., Hazak G., Keiter P.A., Davis J.S., Patterson C.~R., Frank A., Blackman E.G., Busquet M., 2016, ApJ, 833, 249, Design of Laboratory Experiments to Study Photoionization Fronts Driven by Thermal Sources
- 171.Bhat P., Ebrahimi F., Blackman E.G., 2016, MNRAS, 462, 818, Large-scale dynamo action precedes turbulence in shearing box simulations of the magnetorotational instability
- 172.Chen Z., Nordhaus J., Frank A., Blackman E.G., Balick B., 2016, MNRAS, 460, 4182 ,Three-dimensional hydrodynamic simulations of L2 Puppis
- 173.Chen Z., Frank A., Blackman E.G., Nordhaus J., 2016, MNRAS, 457, 3219 , The creation of AGB fallback shells
- 174.Nauman, F., Blackman, E.G. 2017, Shearing box simulations in the Rayleigh unstable regime, MNRAS, 467, 1652
- 175.Bodman, Eva H. L.; Quillen, Alice C.; Ansdell, Megan; Hippke, Michael; Boyajian, Tabetha S.; Mamajek, Eric E.; Blackman, Eric G.; Rizzuto, Aaron; Kastner, Joel; 2017, MNRAS 470, 201, Dippers and dusty disc edges: new diagnostics and comparison to model predictions
- 176.Nauman F., Blackman E.G., 2017, Sustained turbulence and magnetic energy in non-rotating shear flows, Phys. Rev. E., 95, 033202
- 177.Carroll-Nellenback J., Frank A., Liu B., Quillen A.C., Blackman E.G., Dobbs-Dixon I., 2017, MNRAS, 466, 2458 , Hot planetary winds near a star: dynamics, wind-wind interactions, and observational signatures

178. Bhat P., Ebrahimi F., Blackman E.G., Subramanian K., 2017, MNRAS, 472, 2569, Evolution of the magnetorotational instability on initially tangled magnetic fields
179. Zhou, H., & Blackman, E.G. 2017, MNRAS, 469, 1466, Some consequences of shear on galactic dynamos with helicity fluxes
180. Chen, Z; Frank, A; Blackman, EG.; Nordhaus, Jason; Carroll-Nellenback, Jonathan, 2017, MNRAS, 468, 4465, Mass transfer and disc formation in AGB binary systems
181. Zhou, H; Blackman, EG.; Chamandy, L, 2017, Journal of Plasma Physics, 84, 735840302 Derivation and precision of mean field electrodynamics with mesoscale fluctuations
182. Blackman, E.G., 2017, Nature 550, 457; Science Writing: On what's neither clear nor obvious
183. Chamandy L., Frank, A; Blackman, EG.; Carroll-Nellenback, J; Liu, B; Tu, Y; Nordhaus, J; Chen, Z; Peng, B; 2018, MNRAS, 480, 1898, Accretion in common envelope evolution
184. Debrecht A., Carroll-Nellenback J., Frank A., Fossati L., Blackman E.G., Dobbs-Dixon I., 2018, MNRAS, 478, 2592, Generation of a circumstellar gas disc by hot Jupiter WASP-12b
185. Chen Z., Blackman E.G., Nordhaus J., Frank A., Carroll-Nellenback J., 2018, MNRAS, 473, 747, Wind-accelerated orbital evolution in binary systems with giant stars
186. Blackman E.G., Tarduno J.A., 2018, Monthly Notices of the Royal Astronomical Society 481 (4), 5146-5155, Mass, energy, and momentum capture from stellar winds by magnetized and unmagnetized planets: implications for atmospheric erosion and habitability
187. Calculating turbulent transport tensors by averaging single-plume dynamics and application to dynamos H Zhou, EG Blackman Monthly Notices of the Royal Astronomical Society: Letters, 2018, 483 (1), L104-L108
188. Planetary Nebulae Shaped by Common Envelope Evolution A Frank, Z Chen, T Reichardt, O De Marco, E Blackman, J Nordhaus, Galaxies 6 (4), 113 3, 2018
189. Photoevaporative flows from exoplanet atmospheres: a 3D radiative hydrodynamic parameter study A Debrecht, J Carroll-Nellenback, A Frank, J McCann, R Murray-Clay, E.G. Blackman Monthly Notices of the Royal Astronomical Society 483 (2), 1481-1495 2018
190. Energy Budget and Core-Envelope Motion in Common Envelope Evolution L Chamandy, Y Tu, EG Blackman, J Carroll-Nellenback, A Frank, B Liu, 2019, Monthly Notices of the Royal Astronomical Society, Volume 486, Issue 1, p.1070-1085
191. Experimental confirmation of the standard magnetorotational instability mechanism with a spring-mass analogue DMH Hung, EG Blackman, KJ Caspary, EP Gilson, H Ji, Communications Physics 2 (1), 7, 2019

192. Chien, A., Gao, L., Ji, H., Yuan, X., Blackman, E.G., Chen, H., Efthimion, P.C., Fiksel, G., Froula, D.H., Hill, K.W., Huang, K., Lu, Q., Moody, J.D... 2019, Study of a magnetically driven reconnection platform using ultrafast proton radiography, *Physics of Plasmas* 26, 062113.
193. Chen, Z., Coleman, M.S.B., Blackman, E.G., Frank, A, 2019, Solving the Riemann problem for realistic astrophysical fluids, *Journal of Computational Physics* 388, 490.
194. Guidarelli, G., Nordhaus, J., Chamandy, L., Chen, Z., Blackman, E.G., Frank, A., Carroll-Nellenback, J., and Liu, B, 2019, Hydrodynamic Simulations of Disrupted Planetary Accretion Discs Inside the Core of an AGB Star, *Monthly Notices of the Royal Astronomical Society* 490 (1), 1179-1185
195. Chamandy, L., Blackman, E.G., Frank, A., Carroll-Nellenback, J., Zou, Y., Tu, Y., 2019, How Drag Force Evolves in Global Common Envelope Simulations. *Monthly Notices of the Royal Astronomical Society* 490 (3), 3727-3739
196. Nichols-Fleming, F., Blackman, E.G. 2020, Determination of Starspot Covering Fraction as a function of Stellar Age from Observational Data, *Monthly Notices of the Royal Astronomical Society* 491 (2), 2706-2714
197. Beck, R., Chamandy, L., Elson, E., Blackman, E.G., 2020, Synthesizing Observations and Theory to Understand Galactic Magnetic Fields: Progress and Challenges, *Galaxies* 8, 4. L Chamandy, EG Blackman, A Frank, J Carroll-Nellenback, Y Tu *Monthly Notices of the Royal Astronomical Society* 495 (4), 4028-4039
198. Yangyuxin Zou, Adam Frank, Zhuo Chen, Thomas Reichardt, Orsola De Marco, Eric G Blackman, Jason Nordhaus, Bruce Balick, Jonathan Carroll-Nellenback, Luke Chamandy, Baowei Liu, 2020, Bipolar Planetary Nebulae from Outflow Collimation by Common Envelope Evolutions, *MNRAS*, 497 (3), 2855-2869
199. Keto, E., Field, G.B., Blackman, E.G., 2020., A Turbulent-Entropic Instability and the Fragmentation of Star-Forming Clouds, *Monthly Notices of the Royal Astronomical Society*, 492 (4), 5870-5877
200. Eric G Blackman, 2020, Cloud fragmentation cascades and feedback: on reconciling an unfettered inertial range with a low star formation rate, *Monthly Notices of the Royal Astronomical Society*, 493 (1), 815-820
201. Kastner JH, Bublitz J, Balick B, Montez R Jr., Frank A, Blackman E. First Results from a Panchromatic HST/WFC3 Imaging Study of the Young, Rapidly Evolving Planetary Nebulae NGC 7027 and NGC 6302. *Galaxies*. 2020; 8(2):49. <https://doi.org/10.3390/galaxies8020049>
202. John A Tarduno, Rory D Cottrell, Richard K Bono, Hirokuni Oda, William J Davis, Mostafa Fayek, Olaf van't Erve, Francis Nimmo, Wentao Huang, Eric R Thern, Sebastian Fearn, Gautam Mitra, Aleksey V Smirnov, Eric G Blackman, 2020, Paleomagnetism indicates that primary

magnetite in zircon records a strong Hadean geodynamo, *Proceedings of the National Academy of Sciences* 117 (5), 2309-2318

203. T O'Brien, JA Tarduno, A Anand, AV Smirnov, EG Blackman, 2021, Arrival and magnetization of carbonaceous chondrites in the asteroid belt before 4562 million years ago, *Communications earth & environment* 1 (1), 1-7
204. Alex Debrecht, Jonathan Carroll-Nellenback, Adam Frank, Eric G Blackman, Luca Fossati, John McCann, Ruth Murray-Clay, 2020, Effects of radiation pressure on the evaporative wind of HD 209458b, *Monthly Notices of the Royal Astronomical Society* 493 (1), 1292-1305
205. L Chamandy, EG Blackman, J Nordhaus, E Wilson, 2021, Successive Common Envelope Events from Multiple Planets, *Monthly Notices of the Royal Astronomical Society: Letters* 502 (1), L110-L114
206. Chien, Abraham; Gao, Lan; Zhang, Shu; Ji, Hantao; Blackman, Eric; Chen, Hui; Fiksel, Gennady; Hill, Kenneth; Nilson, Philip, 2021. Pulse width dependence of magnetic field generation using laser-powered capacitor coils. *Physics of Plasmas* 28. doi:10.1063/5.0044048
207. Xin Bian, Jessica K. Shang, Eric G. Blackman, Gilbert W. Collins, Hussein Aluie, 2021, Scaling of Turbulent Viscosity and Resistivity: Extracting a Scale-dependent Turbulent Magnetic Prandtl Number, *ApJ Letters*, 917, L3
208. Zhou, H., Blackman, E.G., 2021., On the shear-current effect: toward understanding why theories and simulations have mutually and separately conflicted, *MNRAS*, 507, 5732-5746
209. Zhou, H., Blackman, E.G., 2021, Generalized quenching of large-scale dynamos for helical and non-helical flows. *arXiv e-prints arXiv:1905.01256*,.
210. Anand, A., Carroll-Nellenback, J., Blackman, E.G., Tarduno, J.~A., 2021, Asteroid Magnetization from the Early Solar Wind., *MNRAS*, 509, 2957-2968
211. Guidarelli, G., Nordhaus, J., Carroll-Nellenback, J., Chamandy, L., Blackman, E.G., Frank, A., 2021. The Formation of Discs in the Interior of AGB Stars from the Tidal Disruption of Planets and Brown Dwarfs, *Monthly Notices of the Royal Astronomical Society* 511 (4), 5994-6000
212. H Zhou, EG Blackman, 2021, Influence of inhomogeneous stochasticity on the falsifiability of mean-field theories and examples from accretion disc modelling, *MNRAS* 507, 2735
213. Tarduno, J. A., Cottrell, R. D., Lawrence, K., Bono, R. K., Huang, W., Johnson, C. L., Blackman, E. G., Smirnov, A. V., Nakajima, M., Neal, C. R., Zhou, T., Ibanez-Mejia, M., Oda, H., & Crummins, B. 2021, Absence of a long-lived lunar paleomagnetosphere. *Science Advances*, 7(32).

214. Kastner, Joel H. ; Moraga, Paula ; Balick, Bruce ; Bublitz, Jesse ; Montez, Rodolfo, Jr. ; Frank, Adam ; Blackman, Eric Panchromatic HST/WFC3 Imaging Studies of Young, Rapidly Evolving Planetary Nebulae. I. NGC 6302., *Astrophysical Journal* 927 (1), 100
215. R.N. Markwick, A. Frank, J. Carroll-Nellenback, B. Liu, E.G. Blackman, S.V. Lebedev, P.M. Hartigan, Cooling Instabilities in Colliding Flows, *MNRAS*, 2021, 508, 2266-2278
216. Alex Debrecht, Jonathan Carroll-Nellenback, Adam Frank, Eric G Blackman, Luca Fossati, Ruth Murray-Clay, John McCann, 2022, Effects of charge exchange on the evaporative wind of HD 209458b, 2022, *MNRAS*, in press, <https://doi.org/10.1093/mnras/stac112>.
217. Blackman, E.G. 2022, Pre-planetary nebulae: a context for principles, progress, and questions on how binaries and magnetic fields produce jets, invited review, *Proceedings of the International Astronomical Union* 16 (S366), 281-300; *IAU Symposium 366: "The Origin of Outflows in Evolved Stars"*; L. Decin, A.A. Zijlstra and C. Gielen, editors
218. Zou, Y., Chamandy, L., Carroll-Nellenback, J., Blackman, E.G., Frank, A., 2022., Jets from main sequence and white dwarf companions during common envelope evolution. *Monthly Notices of the Royal Astronomical Society* 514 (2), 3041-3057
219. RN Markwick, A Frank, J Carroll-Nellenback, EG Blackman, PM Hartigan, SV Lebedev, DR Russell, JWD Halliday, LG Suttle, 2022, Morphology of shocked lateral outflows in colliding hydrodynamic flows, *Physics of Plasmas*, 29, 102901
220. EG Blackman, SV Lebedev, 2022, Persistent mysteries of jet engines, formation, propagation, and particle acceleration: Have they been addressed experimentally?, *New Astronomy Reviews*, 95, 101661
221. Orsola De Marco, Muhammad Akashi, Stavros Akras, Javier Alcolea, Isabel Aleman, Philippe Amram, Bruce Balick, Elvire De Beck, Eric G Blackman, et al., 2022, The messy death of a multiple star system and the resulting planetary nebula as observed by JWST, *Nature Astronomy*, 6, 1421
222. Abraham Chien, Lan Gao, Shu Zhang, Hantao Ji, Eric G. Blackman et al., 2023, Non-thermal electron acceleration from magnetically driven reconnection in a laboratory plasma, 2023, *Nature Physics* 19, 254
223. S Zhang, A Chien, L Gao, H Ji, EG Blackman, R Follett, DH Froula, J Katz, 2023, Ion and Electron Acoustic Bursts during Anti-Parallel Reconnection Driven by Lasers, *Nature Physics*, 19, 909–916
224. V Valenzuela-Villaseca, LG Suttle, F Suzuki-Vidal, JWD Halliday, S Merlini, DR Russell, ER Tubman, JD Hare, JP Chittenden, ME Koepke, EG Blackman, SV Lebedev, 2023, Characterization of Quasi-Keplerian, Differentially Rotating, Free-Boundary Laboratory Plasmas, *Phys. Rev. Letters*, **130**. doi:10.1103/PhysRevLett.130.195101

225. K Kotorashvili, EG Blackman, JE Owen, 2023, Why the observed spin evolution of older-than-solar like stars might not require a dynamo mode change, *MNRAS*, 522 (1), 1583-1590
226. Chamandy, L., Carroll-Nellenback, J., Blackman, E.G., Frank, A., Tu, Y., Liu, B., 2024, How negative feedback and the ambient environment limit the influence of recombination in common envelope evolution *Monthly Notices of the Royal Astronomical Society* **528**, 234. doi:10.1093/mnras/stae036.
227. Balick, B., Borchert, L., Kastner, J.H., Frank, A., Blackman, E., Nordhaus, J., Moraga Baez, P., 2023, NGC 6302: The Tempestuous Life of a Butterfly, *Astrophysical Journal* **957**, 54. doi:10.3847/1538-4357/acf5ea.
228. Yin, H., Shang, J.K., Blackman, E.G., Collins, G.W., Aluie, H., 2023, Energy transfer and scale dynamics in 2D and 3D laser-driven jets. *Physics of Plasmas* 30. doi:10.1063/5.0161028
229. R N Markwick, A Frank, E G Blackman, J Carroll-Nellenback, S V Lebedev, D R Russell, J W D Halliday, L G Suttle, P M Hartigan, Cooling and Instabilities in Colliding Radiative Flows with Toroidal Magnetic Fields, *Monthly Notices of the Royal Astronomical Society*, 2024;, stae312,
230. Hongzhe Zhou and Eric G. Blackman, 2024, Helical dynamo growth and saturation at modest versus extreme magnetic Reynolds numbers *Phys. Rev. E* **109**, 015206
231. Preeti Kharb, Eric G Blackman, Eric Clausen-Brown, Mousumi Das, Daniel A Schwartz, Aneta Siemiginowska, Smitha Subramanian, Sravani Vaddi, 2024, Relativistic Jet Motion in the Radio-quiet LINER Galaxy KISSR872 2024, in press, *Astrophysical Journal*

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### **Other Papers, Preprints, and Selected Conference Proceedings/Abstracts**

232. Ebrahimi, F., Blackman, E.G., 2021. Minimalist large scale dynamo from shear-driven inhomogeneity, arXiv e-prints arXiv:1902.04737
233. Necessity of ventilation for mitigating virus transmission quantified simply, EG Blackman, G Ghoshal arXiv preprint arXiv:2006.11651
234. E.G. Blackman, 2001, "Some Consequences of Magnetic Fields in High Energy Sources," Invited Review, Proceedings of First KIAS Astrophysics Conference: *Explosive Phenomena in Astrophysical Compact Objects*, Edited by H.Y. Cheng C.H. Li, M. Rho, I. Yi.
235. J.C. Lee, N.S. Schulz, C.S. Reynolds, A.C. Fabian, & E.G. Blackman, 2001, "Chandra- ASCA-RXTE observations of the micro-quasar GRS 1915+105," ASP Conf. Ser. 234: *X-ray Astronomy 2000*, 231

236. E.G. Blackman & G.B. Field, 2001, "Mean Field Dynamo Saturation: Toward Understanding Conflicting Results," in *Highlights of Astronomy* vol 12, as presented at the XXIVth General Assembly of the IAU - 2000 Edited by H. Rickman. San Francisco, CA: Astronomical Society of the Pacific
237. J.C. Lee, C.S. Reynolds, R. Remillard, N.S. Schulz, E.G. Blackman, & A.C. Fabian, 2002, "The Chandra HETGS and RXTE view of GRS 1915+105" in *New Views on MICROQUASARS, the Fourth Microquasars Workshop*, Institut d'Etudes Scientifiques de Cargèse, Corsica, France 2002 Eds. Ph. Durouchoux, Y. Fuchs, and J. Rodriguez. Published by the Center for Space Physics: Kolkata (India), p. 311.
238. J.H. Thomas, E.G. Blackman, A. Frank, H.M. van Horn, J.A. Markiel, "Dynamos in AGB Stars and Mag. Shaping of Planetary Nebulae," in *Magnetic Fields Across the Hertzsprung- Russell Diagram*, ASP Conference Proceedings Vol. 248. Edited by G. Mathys, S. K. Solanki, and D. T. Wickramasinghe. ISBN: 1-58381-088-9. San Francisco: Astronomical Society of the Pacific, 2001, p.439
239. E.G. Blackman, 2002, "New Developments in Magnetic Dynamo Theory", Invited Review for Springer-Verlag Lecture Notes in Physics (LNP) Textbook, based on July 2001, Paris Meeting *Magnetohydrodynamic Turbulence in Astrophysics: Recent Achievements and Perspectives*, Edited by E. Falgarone and T. Passot.
240. E.G. Blackman & S.A. Hartnoll, 2002, "Emission Lines from Different Accretion Engine Geometries" in *Active Galactic Nuclei: from Central Engine to Host Galaxy* Edited by S. Collin, F. Combes.
241. A. Brandenburg & E.G. Blackman, 2002, "Magnetic helicity and the solar dynamo" in *Solar variability: from core to outer frontiers. The 10th European Solar Physics Meeting*, 2002, Ed. A. Wilson. ESA SP-506, Vol. 2. Noordwijk: ESA Publications Division, p. 805-810
242. A. Brandenburg, E.G. Blackman, 2002, "Helical Surface Structures," in proceedings of IAU meeting 210: *Modeling of Stellar Atmospheres* (Uppsala, Sweden), astro-ph/0212019
243. E.G. Blackman, 2002, "On Magnetic Field Amplification in Gamma-Ray Burst Sources", First Niels Bohr Summer Institute, *Beaming and Jets in Gamma Ray Bursts*, Edited by R. Ouyed, J. Hjorth and A. Nordlund.
244. A. Y. Poludnenko, A. Frank, E.G. Blackman, 2002, in "Mass outflow in Active Galactic Nuclei:" New Perspectives, eds. D.M. Crenshaw, S.B. Kraemer, I.M. George, ASP Conference Series, 255, 285.
245. A. Y. Poludnenko, A. Frank, E.G. Blackman, 2003, in "Planetary Nebulae, Their Evolution and Role in the Universe," eds. S. Kwok, M. Dopita, R. Sutherland, IAU Proceedings ASP 209, 201.
246. T.A. Gardiner, A. Frank, E.G. Blackman, S.V. Lebedev, J.P. Chittenden, D. Ampleford, S.N. Bland, A. Ciardi, M. Sherlock, M.G. Haines, 2003, "MHD Models and Laboratory Experiments of Jets," *Astrophysics and Space Science*, 287, 69
247. A. Brandenburg & E.G. Blackman, 2004, "Ejection of bi-helical fields from the sun," in *Magnetic field and Helicity in the Sun and the Heliosphere*, eds: D. Rust & B. Schmieder, ASP Conference Series, XXV JD3, astro-ph/0312543

248. S. Matt, A. Frank, & E. Blackman, 2004, "The Last Hurrah: PPN Formation by a Magnetic Explosion," in "Asymmetrical Planetary Nebulae III" editors M. Meixner, J. Kastner, N. Soker, & B. Balick (ASP Conf. Series 313) p449.
249. E.G. Blackman, 2004, "Dynamo-Driven Outflows in Pre-Planetary Nebulae," in "Asymmetrical Planetary Nebulae III" editors M. Meixner, J. Kastner, N. Soker, & B. Balick (ASP Conf. Series 313) p. 401
250. A. Frank, E.G. Blackman, A. Cunningham, S.V Lebedev, D. Ampleford, A. Ciardi, S.N. Bland, J.P. Chittenden, M.G. Haines, 2005 "A HED Laboratory Astrophysics Test-bed Comes of Age: JET Deflection via Cross Winds", *Astrophysics and Space Science*, 298, 107
251. Varnière, P., Blackman, E., & Muno, M. 2005, American Institute of Physics Conference Series, 797, 631, X-ray Modulation from Non-Axisymmetric Structures in Accretion Disks
252. Frank, A., Lebedev, S., Blackman, E., & Ciardi, A. 2005, AIP Conf. Proc. 784: Magnetic Fields in the Universe: From Laboratory and Stars to Primordial Structures, 784, 205, Springs and Flings: Magneto-rotation Driven Outflows in Laboratory Experiments
253. Ciardi, A.; Lebedev, S. V.; Frank, A.; Blackman, E. G.; Ampleford, D. J.; Jennings, C. A.; Chittenden, J. P.; Lery, T.; Bland, S. N.; Bott, S. C.; Hall, G. N.; Rapley, J.; Suzuki Vidal, F. A.; Marocchino, A. 2006, *Astrophysics and Space Science*, 307,17, 3D MHD Simulations of Laboratory Plasma Jets
254. Lebedev, S. V.; Ciardi, A.; Ampleford, D.; Bland, S. N.; Bott, S. C.; Chittenden, J. P.; Hall, G.; Rapley, J.; Frank, A.; Blackman, E. G., 2006, SUPERSTRONG FIELDS IN PLASMAS: Third International Conference on Superstrong Fields in Plasmas. AIP Conference Proceedings, 827, p.329. Laboratory Experiments with Supersonic Radiatively Cooled Jets: Jet Deflection via Crosswinds and Magnetic Tower Outflows
255. Moortgat, J., Blackman, E. G., Ren, C., Kong, X., & Yan, R. 2007, in Proceedings of the final open meeting of the RTN 'GRBs, and enigma and tool': '070228 - The Next Decade of GRB afterglows, "Particle-in-cell simulations of fast collisionless reconnection in gamma-ray burst outflows"
256. Nordhaus J., Blackman, E. G. 2007, in proceedings of "Asymmetric Planetary Nebulae IV," R. L. M. Corradi, A. Manchado, N. Soker eds, (arXiv:0708.3792) "The Bipolar Engines of post-AGB stars: Transient Dynamos and Common Envelopes"
257. E.G. Blackman, J. Nordhaus, 2007, in proceedings of "Asymmetric Planetary Nebulae IV," R. L. M. Corradi, A. Manchado, N. Soker eds (arXiv:0708.4199) "Planetary Nebulae Principles & NAParadigms: Binaries, Accretion, Magnetic Fields"
258. A. Frank, O. DeMarco, E. Blackman, B. Balick 2007, in proceedings of "Asymmetric Planetary Nebulae IV," R. L. M. Corradi, A. Manchado, N. Soker eds "A Grand Challenge for PNe"
259. E.G. Blackman, 2008, Institute for Defense Analyses, Defense Science Study Group Paper, "Improving Traumatic Brain Injury Protection Measures and Standards for Helmets
260. Nordhaus, J., & Blackman, E. G. 2008, in AIP Conf: Evolution and Nucleosynthesis in AGB Stars, 1001, 306, "Dynamos and Chemical Mixing in Evolved Stars"



261. Blackman, E. G. 2009, in proceedings of IAU Symposium 259: "Cosmic Magnetic Fields: from Planets, to Stars and Galaxies," edited by K.G. Strassmeier, A.G. Kosovichev, J. Beckmann; Magnetic Fields in Paradigms of Planetary Nebulae and Related MHD Frontiers, p35-46
262. Huarte Espinosa, M., Frank, A., Balick, B., De Marco, O., Kastner, J.H., Sahai, R., and Blackman, E.G.: 2010, ArXiv e-prints, arXiv:1011.4312, To appear in the proceedings of the conference "Asymmetric Planetary Nebulae V", eds. Zijlstra, et al., From Bipolar to Elliptical: Morphological Changes in the Temporal Evolution of PN
263. de Marco, O., Frank, A., Kastner, J., Sahai, R., Balick, B., Blackman, E. et al., 2010, To appear in the proceedings of the conference "Asymmetric Planetary Nebulae V", eds. Zijlstra, et al., The Rochester White Paper: A Roadmap for Understanding Aspherical Planetary Nebulae
264. Huarte-Espinosa, M., Frank, A., Balick, B., de Marco, O., Kastner, J.H., Sahai, R., and Blackman, E.G., 2010, To appear in the proceedings of the conference "Asymmetric Planetary Nebulae V", eds. Zijlstra, et al., "Sphericalization" of mature PN
265. Huarte-Espinosa, M., Frank, A., and Blackman, E.: 2011, IAU Symposium 275, 87 Modelling magnetically dominated and radiatively cooling jets
266. Huarte-Espinosa, M., Frank, A., and Blackman, E.: 2011, to appear in the proceedings of the "Magnetic Fields in the Universe III" meeting, Zakopane, PL, Modeling Poynting flux vs. kinetic-energy dominated jets
267. M. Huarte-Espinosa, A. Frank, & E. Blackman, 2011, arXiv:1111.4223, proceedings of the "Magnetic Fields in the Universe III" meeting, Zakopane, PLLaboratory experiments and simulations on jets
268. Montez R., Kastner J.H., Balick B., et al., 2012, IAUS, 283, 450 Early results from ChanPLaNS: Mystery of hard X-ray emitting CSPNe
269. Suzuki-Vidal, F.; Bocchi, M.; Lebedev, S.V.; Skidmore, J.; Swadling, G.; Burdiak, G.; Harvey-Thompson, A.J.; de Grouchy, P.; Bland, S.N.; Hall, G.N.; Khoory, E.; Pickworth, L.; Suttle, L.; Chittenden, J.P.; Krishnan, M.; Wilson-Elliot, K.; Madden, R.; Ciardi, A.; Frank, A. 2012, EAS Publications Series, 58, 127, Jet-ambient interaction of a supersonic, radiatively-cooled jet in laboratory experiments
270. Huarte-Espinosa M., Blackman E.G., Hubbard A., Frank A., 2013, arXiv, arXiv:1301.7081 Mass loading and knot formation in AGN jets by stellar winds
- 271., Frank A., Carroll J., Blackman E.G., Heitsch F., Lebedev S., 2013, HEDP, 9, 341, Molecular clouds, colliding flows and HEDLA experiments: Star formation with the AstroBEAR AMR code
272. Huarte-Espinosa M., Frank A., Blackman E.G., Ciardi A., Hartigan P., Lebedev S.V., Chittenden J.P., 2013, HEDP, 9, 264, Comparing Poynting flux dominated magnetic tower jets with kinetic-energy dominated jets
273. Li S., Frank A., Blackman E.G., 2013, HEDP, 9, 132, Interaction between shocks and clumps with self-contained magnetic fields
274. Huarte-Espinosa M., Blackman E.G., Hubbard A., Frank A., 2013, Memorie della Societa Astronomica Italiana, 84, 725, Mass loading and knot formation in AGN jets by stellar winds

275. Bennett, M. J.; Lebedev, S. V.; Hall, G. N.; Suttle, L.; Burdiak, G.; Suzuki-Vidal, F.; Hare, J.; Swadling, G.; Patankar, S.; Bocchi, M.; Chittenden, J. P.; Smith, R.; Frank, A.; Blackman, E.; Drake, R. P.; Ciardi, A., et al., 2014, AIPC, 1639, Rotating plasma disks in dense Z-pinch experiments
276. Ueta, T.; Ladjal, D.; Exter, K. M.; Otsuka, M.; Szczerba, R.; Siódmiak, N.; Aleman, I.; van Hoof, P. A. M.; Kastner, J. H.; Montez, R.; McDonald, I.; Wittkowski, M.; Ramstedt, S.; De Marco, O.; Villaver, E.; Chu, Y.-H.; Sandin, C.; Vlemmings, W.; Izumiura, H.; Sahai, R.; Lopez, J. A.; Balick, B.; Zijlstra, A.; Tielens, A. G. G. M.; Rattray, R. E.; Behar, E.; Blackman, E. G.; Hebden, K.; Hora, J. L.; Murakawa, K.; Nordhaus, J.; Nordon, R. (26); Yamamura, I., 2014, Asymmetric Planetary Neb. .conf, VI, 106, Herschel Planetary Nebula Survey (HerPlaNS)
277. Huarte-Espinosa M., Carroll-Nellenback J., Nordhaus J., Frank A., Blackman E., 2014, Asymmetric Planetary Neb. .conf, VI, 40, Modeling the Formation and Evolution of Wind-Capture Disks In Binary Systems
278. Bennett, M. J.; Lebedev, S. V.; Hall, G. N.; Suttle, L.; Burdiak, G.; Suzuki-Vidal, F.; Hare, J.; Swadling, G.; Patankar, S.; Bocchi, M.; Chittenden, J. P.; Smith, R.; Frank, A.; Blackman, E.; Drake, R. P.; Ciardi, A., 2014. Rotating plasma disks in dense Z-pinch experiments. \ American Institute of Physics Conference Series 1639, 71-75.
279. Blackman E., 2014, Asymmetric Planetary Neb. .conf, VI, 6, Constraining Engine Paradigms of Pre-Planetary Nebulae Using Kinematic Properties of their Outflows
280. Tarduno J., Blackman E., Huffman T., Watkeys M., Cottrell R., 2014, EGU General Assembly, 16, 11676, Antiquity of the South Atlantic Anomaly: Evidence for top-down influence on the geodynamo
281. Frank, A.; Lui, B.; Carroll-Nellenback, J.; Quillen, A. C.; Blackman, E. G.; Kasting, J.; Dobbs-Dixon, I., 2016, Young Stars & Planets Near the Sun, Proceedings of the International Astronomical Union, IAU Symposium, Volume 314, pp. 237-240 Planetary Evaporation and the Dynamics of Planet Wind/Stellar Wind Bow Shocks
282. Drake R.P., Hazak G., Keiter P.A., Davis J.S., Patterson C.R., Frank A., Blackman E., Busquet M., 2016, APS Division of Plasma Physics Meeting 2016, abstract #TO8.004, Design of laboratory experiments to study photoionization fronts
283. Hung D.-M.-H., Stemmley S., Caspary K., Gilson E., Sloboda P., Ji H., Blackman E., 2016, APS Division of Plasma Physics Meeting 2016, abstract #TP10.057 , Tethered mass-spring experiment in a quasi-Keplerian Taylor-Couette device
284. Stemmley S., Blackman E., Caspary K., Gilson E., Hung D., Ji H., Sloboda P., 2016, APS Division of Plasma Physics Meeting 2016, abstract #JP10.059, Hydrodynamic MagnetoRotational Instability Analog Experiment
285. Tarduno J., Cottrell R., Huffman T., Watkeys M., Grigsby M., Blackman E., 2016, EGU General Assembly 2016, held 17-22 April, 2016 in Vienna Austria, p.8363, An archeomagnetic record from southern Africa and its bearing on the history of the South Atlantic Anomaly
286. De Marco, Orsola; Reichardt, T.; Iaconi, R.; Hillwig, T.; Jacoby, G. H.; Keller, D.; Izzard, R. G.; Nordhaus, J.; Blackman, E. G, et al., 2017, arXiv, arXiv:1612.03515, Proceedings of the IAU Symposium 323, p213; Planetary Nebulae: Multiwavelength Probes of Stellar and Galactic Evolution Post-common envelope PN, fundamental or irrelevant?

287. Tarduno, J. A.; O'Brien, T. M.; Blackman, E. G.; Smirnov, A. V., 2017, Magnetization of CV Meteorites in the Absence of a Parent Body Core Dynamo, 48th Lunar and Planetary Science Conference, 48, 2850
288. Chen, Zhuo; Frank, Adam; Blackman, Eric G.; Nordhaus, Jason; Carroll-Nellenback, Jonathan, 2017, Mass transfer in asymptotic-giant-branch binary systems, IAU Symposium, Volume 323, pp. 367
289. Frank, A; Chen, Z; Reichardt, T; De Marco, O; Blackman, E; Nordhaus, J; Planetary Nebulae Shaped By Common Envelope Evolution, To be published in proceedings of Aspherical Planetary Nebula 7, arXiv:1807.05925
290. The Magnetorotational Instability (MRI): Observation in a Mass/Spring System and the Effects of Conductive Boundaries on a Free Stewartson-Shercliff Layer as a Step Towards MRI ... E Gilson, E Blackman, K Caspary, D Choi, F Ebrahimi, J Goodman, ... Bulletin of the American Physical Society 2018
291. Particle acceleration in magnetically-driven reconnection using laser-powered capacitor coils A Chien, H Ji, L Gao, G Fiksel, E Blackman, Q Lu, K Hill, B Kraus, ... Bulletin of the American Physical Society 2018
292. Frank, A., Seager, S., Nakajima, M., Burrows, A., Collins, G., Zagoo, M., Gourdain, P., Blackman, E.G., Tarduno, J., and Sefkow, A. 2019, Exoplanets and High Energy Density Plasma Science, Bulletin of the American Astronomical Society 51, 36., Astro2020 Science White Paper pages 1-9, [https://baas.aas.org/wp-content/uploads/2019/05/036\\_frank.pdf](https://baas.aas.org/wp-content/uploads/2019/05/036_frank.pdf)
293. Hantao Ji, A Alt, S Antiochos, S Baalrud, S Bale, PM Bellan, M Begelman, A Beresnyak, EG Blackman, Y Chen, A Chien, D Craig, J Dahlin, W Daughton, E DeLuca, CF Dong, S Dorfman, J Drake, F Ebrahimi, J Egedal, K Fujimoto, L Gao, K Genestreti, S Gibson, M Goldstein, F Guo, M Hesse, M Hoshino, Q Hu, YM Huang, Major Scientific Challenges and Opportunities in Understanding Magnetic Reconnection and Related Explosive Phenomena throughout the Universe, Astro2020: Decadal Survey on Astronomy and Astrophysics, Bulletin of the AAS, vol 51, 5, pages 1-6, [https://baas.aas.org/wp-content/uploads/2019/05/005\\_ji.pdf](https://baas.aas.org/wp-content/uploads/2019/05/005_ji.pdf)
294. Alexander Debrecht, Adam Frank, Jonathan Carroll-Nellenback, Eric Blackman, John McCann, Ruth Murray-Clay, Luca Fossati, Photoevaporation of Planetary Atmospheres: 3-D Radiation-Hydro Simulations, 2019 Astrobiology Science Conference, AGU,
295. JH Kastner, J Bublitz, B Balick, R Montez Jr, A Frank, E Blackman, First Results from a Panchromatic WFC3 Imaging Study of the Young, Rapidly Evolving Planetary Nebulae NGC 7027 and NGC 6302, AAS 52, 307.03
296. Shock reflection in a magnetized, collisional laboratory plasma. Danny R Russell, Guy C Burdiak, Thomas Clayson, Jack WD Halliday, Jack D Hare, Lee G Suttle, Savva Theocharous, Sergey V Lebedev, Eric Blackman, Adam Frank, 2020, Bulletin of the American Physical Society,
297. A Practical Method for Extraction of Orbital Energy M Proctor, K Ji, E Gilson, E Blackman, H Ji, 2020, Bulletin of the American Physical Society,

298. Magnetised~ shock reflection in laboratory plasmas, Danny R Russell, Guy C Burdiak, Thomas Clayson, Jack WD Halliday, Jack D Hare, Lee G Suttle, Savva Theocharous, Sergey V Lebedev, Eric Blackman, Adam Frank, 2020, Bulletin of the American Physical Society
299. Accretion, Jets and Drag in Common Envelope Evolution. A Frank, C Luke, E Blackman, J Nordhaus, J Carroll, J Nordhaus, Zou, Amy, 2020, American Astronomical Society Meeting Abstracts# 235 235, 170.33
300. Exoplanet Photoevaporation and Mass Loss: Why Don't Theory and Observation Match? A Debrecht, J Carroll-Nellenback, A Frank, E Blackman, L Fossati, 2020, American Astronomical Society Meeting Abstracts# 235 235, 173.22
301. D Russell, G Burdiak, J Halliday, J Hare, S Merlini, L Suttle, APS Division of Plasma Physics Meeting Abstracts 2021, NO03. 005 Subcritical Shock Structure in a Highly Collisional Plasma
302. Shu Zhang, Abraham Chien, Hantao Ji, Lan Gao, Kenneth Hill, Eric Blackman, Russell Follett, Dustin Froula, Joseph Katz, William Daughton, Chikang Li, Andrew Birkel, Richard Petrasso, John Moody, Hui Chen, Study of electron exhaust jet and current-driven instabilities in kinetic magnetic reconnection using laser-powered capacitor coils, 2021, APS Division of Plasma Physics Meeting Abstracts.
303. Anand, A., Carroll-Nellenback, J., Blackman, E.G., Tarduno, J.A., 2022. Early Asteroid Magnetization from the Solar Wind. 53rd Lunar and Planetary Science Conference 2678.
304. Vicente Valenzuela-Villaseca, Lee Suttle, Francisco Suzuki-Vidal, Stefano Merlini, S Reza Mirfayzi, Jack Halliday, Danny Russell, Jeremy Chittenden, Jack Hare, Mark Koepke, Eric Blackman, Sergey Lebedev, 222, Bulletin of the American Physical Society, Increasing Angular Momentum in Pulsed-Power Driven quasi-Keplerian Rotating Plasma Experiments
305. Abigail Armstrong, Adam Reyes, Yingchao Lu, Edward Hansen, Eric Blackman, Anaya Mohapatra, Petros Tzeferacos, 2022, Driven-Turbulence Simulations of High-Energy-Density Plasmas, I Bulletin of the American Physical Society
306. Lherm, Victor, Miki Nakajima, and Eric Blackman. "Dynamo Simulations in a Basal Magma Ocean." In *Fall Meeting 2022*. AGU, 2022
307. Modelling the Possible Magnetic Field of (16) Psyche A Anand, J Carroll-Nellenback, E Blackman, J Tarduno - AAS/Division for Planetary Sciences Meeting Abstracts, 2023
308. The Effect of Heat Transport on Compressible Fluctuation Dynamo in Multi-temperature Plasma A Armstrong, A Reyes, E Hansen, A Mohapatra, E. Blackman, A.F. Bott, P. Tzeferacos, Bulletin of the American Physical Society, 2023
309. Hall-MHD implementation in driven turbulence FLASH simulations, Ananya Mohapatra, Ananya Mohapatra, Abigail Armstrong, Fernando Garcia Rubio, Edward Hansen, Kasper Moczulski, Archie Bott, Adam Reyes, Eric Blackman, Petros Tzeferacos, Bulletin of the American Physical Society, 2023
310. Zhou, T., Tarduno, J., Kodama, K. P., Blackman, E. G., Nimmo, F., Cottrell, R. D., & Bono, R. K. (2023). Evidence for a discontinuous geodynamo during the Ediacaran Period. *AGU23*.
311. Lherm, V., Nakajima, M., & Blackman, E. (2023). Thermal and Magnetic Evolution of Earth and Super-Earths with a Basal Magma Ocean. *AGU23*.

## Other Archived

1. R. Edgar, E.G. Blackman, A.C. Quillen, P. Varnière, A. Frank, arXiv0706.2801E, “Growth of Eccentricity and Mass Clearing in a Disc Interior to a Planet”
2. A. Poludnenko, E.G. Blackman, A. Frank, “Formation of Turbulent Bi-Conical Structures in Accreting Systems and Application to Broad Line Regions of Active Galactic Nuclei,” astroph/0201398
3. A. Quillen, D.E. Trilling, & E.G. Blackman, “The impact of a close stellar encounter on the Edgeworth-Kuiper Belt,” astro-ph/0401372
4. Uzdensky, D., Arons, J., Balbus, S., Blackman, E., Goodman, J., Medvedev, M., Spitkovsky, A., & Stone, J. 2009, arXiv:0902.3589, Life Cycles of Magnetic Fields in Stellar Evolution, white paper for NASA/Astrophysics decadal survey 2010
5. Sahai, R., Balick, B., Blackman, E.G. et al., 2009, arXiv:0903.2750, white paper for NAS/Astrophysics decadal survey 2010, Understanding Mass-Loss and the late Evolution of Intermediate Mass Stars: Jets, Disks, Binarity, Dust and Magnetic Fields.
6. Blackman E.G., 2009, arXiv:0904.2856, Incorporating Human Body Mass in Standards of Helmet Impact Protection against Traumatic Brain Injury
7. Blackman, E.G. Nauman, F., & Edgar, R.G. 2011, Quantifying the Imprecision of Accretion Theory and Implications for Multi-Epoch Observations of Protoplanetary Discs, submitted to MNRAS.
8. Kelley D.H., Blackman E.G., 2016, arXiv, arXiv:1605.04852, submitted to Physical Review Fluids, Vector cylindrical harmonics for low-dimensional convection models
9. F Ebrahimi, E Blackman, 2020, W Horton arXiv preprint arXiv:2011.09633, Turbulence and order in magnetized flowing plasmas
10. Improving TBI protection measures and standards for combat helmets, 2020, EG Blackman arXiv preprint arXiv:2003.07698