

BRIAN S. MASON

<https://orcid.org/0000-0002-8472-836X>

Address:

Brian S. Mason
520 Edgemont Rd
Charlottesville, VA 22902

Contact Info:

Phone: +1(434)202-4056
Fax: +1(434)296-0278
email: bmason@nrao.edu

Employment

2014– Scientist, National Radio Astronomy Observatory (Charlottesville)
2009–2014 Associate Scientist, National Radio Astronomy Observatory (Charlottesville)
2006–2009 Associate Astronomer, National Radio Astronomy Observatory (Charlottesville)
2004–2006 Associate Astronomer, National Radio Astronomy Observatory (Green Bank)
2002–2004 Assistant Astronomer, National Radio Astronomy Observatory (Green Bank)
1999–2002 Postdoctoral Scholar, California Institute of Technology (Advisor: A.C.S. Readhead)
1994–1999 Teaching & Research Assistantships, University of Pennsylvania

Education

1999 Ph.D. in Physics and Astronomy, University of Pennsylvania
Thesis: “An Improved Measurement of the Hubble Constant from the Sunyaev-Zeldovich Effect” (Advisor: Steven T. Myers)
1994 B.S. with High Honors, Physics, College of William and Mary

Research Interests

- Sunyaev-Zel’dovich Effect measurements & related cluster studies
- Instrument Development
- Measurements of CMB anisotropies in intensity and polarization
- CMB Foregrounds
- Data Processing & Machine Learning Algorithms for radio astronomy

Selected Publications ($h = 30$, $i_{10} = 86$)

1. “Confirmation of Enhanced Long Wavelength Dust Emission in OMC 2/3”, **B. Mason**, S. Dicker, S. Sadavoy, S. Stanchfield, T. Mroczkowski, C. Romero, R. Friesen, C. Sarazin, J. Sievers, T. Stanke, M. Devlin, 2020 ApJ 893, 13M
2. “Direct detection of quasar feedback via the Sunyaev-Zeldovich effect”, M. Lacy, **B. Mason**, C. Sarazin, S. Chatterjee, K. Nyland, A. Kimball, G. Rocha, B. Rowe, J. Surace 2018, MNRAS 283, L22 (*First direct detection of the SZE in a QSO outflow*)
3. “Implications of a High Angular Resolution Image of the Sunyaev-Zel’dovich Effect in RXJ1347-1145” **B.S. Mason** et al., 2010 ApJ 716, 739 (*69 citations; highest resolution image of the SZ to date*)

4. “The Detection of Anomalous Dust Emission in the Nearby Galaxy NGC 6946”, E.J. Murphy, G. Helou, J.J. Condon, E. Schinnerer, J.L. Turner, R. Beck, **B.S. Mason**, R.R. Chary, & L. Armus, 2010 ApJ 709, L108. (*76 citations - first extragalactic detection of “spinning dust”; used GBT 31 GHz receiver & CCB*)
5. “A Deep Search for Extended Radio Continuum Emission from Dwarf Spheroidal Galaxies: Implications for Particle Dark Matter” K. Spekkens, **B.S. Mason**, J. Aguirre, & B. Nhan 2013 ApJ 773, 61. (*42 citations*)
6. “A 31 GHz Survey of Low-Frequency Selected Radio Sources” **B.S. Mason**, *et al.*, 2009 ApJ 704, 1433. (*34 citations*)
7. “A Limit on the Polarization of Anomalous Microwave Emission in Lynds 1622”, **B.S. Mason**, T. Robishaw, D. Finkbeiner, C. Heiles, & C. Dickinson, 2009 ApJ 697, 1187 (*25 citations*)
8. “Extended Mosaic Observations with the Cosmic Background Imager”, A.C.S. Readhead, **B.S. Mason**, *et al.*, 2004 ApJ v.609 p.498. (*331 citations*)
9. “The Anisotropy of the Microwave Background to $l = 3500$: Deep Field Observations with the Cosmic Background Imager”, **B.S. Mason**, *et al.*, 2003, ApJ 591, 540. (*331 citations*)
10. “An Improved Measurement of the Hubble Constant from the Sunyaev-Zel’dovich Effect,” **B.S. Mason**, S.T. Myers, & A.C.S. Readhead, 2001, ApJ 555, L11. (*101 citations*)
11. “X-Ray Mass Models and Sunyaev-Zeldovich Effect Predictions for a Sample of 22 Nearby Galaxy Clusters,” **B.S. Mason** & S.T. Myers, 2000, ApJ 540, 614. (*28 citations*)
12. “An Absolute Flux Density Measurement of the Supernova Remnant Cassiopeia A at 32 GHz,” **B.S. Mason**, E.M. Leitch, S.T. Myers, J.K. Cartwright, & A.C.S. Readhead, 1999, AJ 118, 2908. (*45 citations*)

Key Research Collaborations

- NSF-Simons CosmicAI Institute (founding member & senior personnel; 2024-)
- MUSTANG-2 Instrument & Science Team member (2017-)

Observatory Service

- **NGVLA Total Power Working Group (Chair); NGVLA Short Baseline Array (lead scientist); & NGVLA Configuration and Imaging Science Team (member)**
- **ALMA Data Reduction Manager** (Dec. 2018 -)
 - **North American and ALMA Lead DRM** (Apr. 2022 - Aug. 2024)
- **Cognizent Lead, ALMA Calibration & Source Catalog Working Groups** (Dec. 2018 -)
- **Team Lead, North American ALMA Software Support** (Nov. 2015 - Oct. 2018)
- **ALMA Support Scientist, North American ALMA Science Center** (Dec. 2012 - Nov. 2015)
 - **ALMA Extension & Optimization Campaign** (commissioning) shift (Aug. 2014)
- **Project Scientist, MUSTANG-2** (2012-2017)
 - **MUSTANG-2 Support Scientist (2017 - 2022) & Instrument team Member** (2017-)

- **Project Manager** (2002-2008) / **Project Scientist** (2002-2014), **MUSTANG**
- **GBT Observer Support** (2006-2020)
- **Project Manager/Project Scientist, Caltech Continuum Backend (GBT)** (2002 - 2007)
- **Project Scientist, 1cm Receiver & Millimeter IF Converter projects (GBT)** (2002 - 2006)
- **GBT High Frequency Project Scientist** (2002 - 2006)

Skills & Experience

- Matrix-managed North American ALMA Software Support team whose activities included: research & prototyping algorithms for radio astronomical calibration and imaging, leading to formal software requirements; requirements management; coordinating & conducting validation testing of CASA and the pipeline. Team comprised up to 9 members, mostly astronomers, ranging from recent college graduates to tenured senior scientists.
- Managed two successful, geographically distributed, interdisciplinary instrument development projects. Two day formal project management training workshop in 2007.
- Extensive experience commissioning radio telescopes & instrumentation (ALMA, CBI, OVRO 1.5-m, OVRO 40-m, and on GBT: Ka band receiver+CCB, MUSTANG). Observing Experience: single-dish radio (OVRO 5m/40m/1.5m; GBT); aperture synthesis (Cosmic Background Imager; VLA; ALMA); x-ray imaging & spectroscopy (ROSAT, Chandra).
- Significant programming experience in IDL, C, python & MATLAB, and with version control (CVS & SVN). Extensive experience with CASA.
- Developed data analysis algorithms for new instrumentation on the Green Bank Telescope; implemented & maintained user calibration & data analysis package. Extensive practical experience with fourier methods, analysis of time series, numerical linear algebra, robust estimation, statistics, and Bayesian maximum likelihood.
- Lab experience characterizing radio receivers, digital backends, and SQUID-multiplexed bolometer arrays.

Outreach & Teaching Experience

- Public Lectures on Radio astronomy (2019 - Charlottesville Astronomical Society; 2021 - Richmond Astronomical society)
- Informal Technical Lectures to NAASC Data Analysts
- Lecturer, NRAO Synthesis Imaging Summer School
- Lecturer, NRAO/NAIC Single Dish Summer School
- Governor's School Mentor (NRAO-GB summer program)

Selected Colloquia, Conference Presentations & Public Talks

May 1999	AAS Chicago (thesis talk)
November 1999	Berkeley Astronomy Dept. Colloquium
December 1999	Caltech Astronomy Dept. Tea Talk

June 2000 Marcel Grossman Conference on General Relativity & Cosmology (Rome)
 December 2000 Texas Symposium on Relativistic Astrophysics
 May 2001 NRAO Charlottesville & Green Bank colloquia
 January 2002 Washington DC AAS
 March & April 2002
 –Rencontres de Moriond (conference presentation)
 –MPE Garching (colloquium)
 –MPIfR Bonn (colloquium)
 –Oxford (colloquium)
 April 2003 Vancouver BC “Millimeter Wave Mapping Workshop”
 May 2003 Nashville TN AAS
 June 2003 Mykonos Multi-wavelength Cosmology
 September 2003 GBT High Frequency Science Workshop (Green Bank, WV)
 January 2004 URSI (Boulder)
 October 2004 Appearance on WVMR’s “Mountain Radio Astronomy”
 (local radio program)
 March 2005 Ohio University (Invited Seminar)
 March 2006 NRAO CV (Invited Colloquium)
 November 2006 University of Chicago (Invited Colloquium)
 June 2007 NRAO 50th Anniversary Symposium (Two Posters)
 June 2007 Inaugural INSACAF meeting, Manchester UK
 January 2008 Aspen Cosmology Workshop
 July 2008 Cosmic Microwave Foregrounds and Backgrounds, Pasadena CA (Invited Talk)
 August 2008 URSI-GA, Chicago
 November 2008 UPenn astro seminar
 January 2009 URSI
 March 2009 Saint Mary’s University (invited colloquium)
 April 2009 SZ Cluster Cosmology Workshop (Perimeter Institute)
 May 2009 Millimeter and Sub-Millimeter Astronomy at High Resolution (ASIAA, Taipei Taiwan)
 September 2009 Virginia Amateur Astronomical Society/Charlottesville Astronomical Society
 September 2009 ALMA NAASC Workshop IV (Charlottesville, VA)
 October 2009 ALMA Band 1 Workshop (Manchester, UK)
 October 2009 Invited Colloquium (Socorro, NM)
 June 2010 CLJ2010 + 0628 Galaxy Cluster Meeting (IPMU, Kashiwa, Japan)
 July 2010 Chautauqua Lecture (small college teachers)
 December 2010 WVU Physics Dept. Colloquium (invited)
 Feb 2011 U.T. Austin (invited colloquium)
 May 2011 Caltech (invited colloquium)
 September 2011 SZ/X Huntsville (invited presentation)
 June 2012 AAS (Contributed Talk / Special Session Organizer)
 August 2014 Colloquium (Joint ALMA Office, Santiago)
 March 2015 Snowcluster (invited presentation)
 September 2015 GBT High Frequency Science Workshop (invited presentation)
 January 2016 Next Generation VLA Workshop (AAS, invited presentation)
 January 2017 ALMA Band 1 Science Workshop (invited presentation, Taipei Taiwan)
 October 2018 ESO Intra-cluster Medium workshop (invited presentation, Garching, Germany)
 August 2019 Orion Uncovered (invited presentation, Leiden NL)
 March 2021 GBT20 (invited presentation, zoom)

Committee & Other Service Activities

- ALMA Compact Array Spectrometer development project: 2019 CDMR (panel member) & 2021 PAI (panel member)
- ALMA Ambassadors reviewer (2021)
- NRAO Algorithms Research & Development Group Steering Committee (2018-)
- GBO Laser Metrology Advisory Committee (2018-)
- NRAO Science Review Panel recruiter (2017-)
- NRAO Science Performance Review Committee (2017-2021)
- Search & Recruitment Committees: NGVLA Calibration Lead (2021); NAASC Data Analyst (2020); SRDP Operations Manager (2018); NAASC multi-position scientist search (2016, **chair**); GB Scientist (2015); Head of GBT Science Operations (2008); GBT Project Manager (2007)
- North American ALMA Science Center: CASA testing; face to face visitor support; expert helpdesk support.
- NASA Technical, Management & Cost review committee (2016; 2 weeks' paid consulting position)
- NASA Proposal & Fellowship Review Panels (2007, 2009, 2014, 2015, 2018)
- GBT High Frequency Science Workshop SOC (2015)
- VLA Sky Survey (2014, scientific reviewer)
- NRAO/NAIC Single Dish Summer School (SOC, lecturer, hands-on project leader) - 2003 (SOC), 2007/2009/2011/2013/2015 (lecturer, student project lead)
- NRAO Synthesis Imaging Summer School (invited lecturer, 2014, 2016)
- Promotion Reviews (South African NRF & ESO, 2014)
- NSF Panel Review (January 2013)
- Arecibo observing proposal review panel (2012-2014)
- "Future & High Angular Resolution SZE" Special Session organizer, June 2012 AAS (Anchorage, AK)
- Governor's School Mentor (2009, 2010, 2012, 2013)
- UVa Astronomy Graduate Admissions Committee (Spring 2007)
- NRAO-GB Strategic Planning & Process Improvement Committee (2007)
- Organized "GBT High Frequency Workshop" in September of 2003, which drew 50 participants from across the US (Chair of SOC).
- NRAO-GB Safety Committee June 2002-December 2006
- Refereeing Services for ApJ, MNRAS, Advances in Astronomy, Arecibo Observatory, GMRT, & the Netherlands Organization for Scientific Research

Students Supervised & Mentored

- Kyle Massingill (Grad. summer intern, 2020)
- Ian Lowe (UPenn Ph.D. Student, 2019-2022)
- Ryan Parziale (REU, 2018)
- Sara Stanchfield (UPenn grad student, 2014-2019)
- Charles Romero (UVA Ph.D. Student, primary thesis advisor 2009-2015; postdoc at IRAM -; U.Penn)
- Paul Ries (UVa Ph.D. Student, 2008-2012)
- Alex Young (UPen Grad student, 2010-2015)
- Larry Weintraub (Caltech Ph.D. candidate and GBT student, Dec 2005- Dec 2008)
- Phillip Korngut (NRAO Scientific Associate on the MUSTANG project, July 2005-2007; subsequently UPenn grad. student)
- Bang Nhan (UCSB → Boulder, Summer 2010)
- Vincent Pereira (RET, Summer 2005)
- Cristobal Achermann (Graduate Student Intern, June - Nov 2004)
- Regina Flores (REU student, Summer 2003)

Full Bibliography

Refereed Papers (75 refereed papers; 19 first or second author; $h = 30$, $i_{10} = 86$)

1. “Neutral Gas within 20,000 Schwarzschild radii of Sagittarius A*”, Elena Murchikova, Tianshu Wang, **Brian Mason**, Roger Blandford, *submitted to ApJ, Dec. 2021*
2. “An ACA 1mm survey of HzRGs in the ELAIS-S1: survey description and first results”, Hugo Messias, Evanthia Hatziminaoglou, Pascale Hibon, Tony Mroczkowski, Israel Matute, Mark Lacy, **Brian Mason**, Sergio Martín, José M. Afonso, Edward Fomalont, Stergios Amarentidis, Sonia Antón, Ricardo Demarco, Marie-Lou Gendron-Marsolais, Andrew M. Hopkins, Rüdiger Kneissl, Cristian Lopez, David Rebolledo, Chentao Yang, *MNRAS in press*
3. “A high-resolution view of the filament of gas between Abell 399 and Abell 401 from the Atacama Cosmology Telescope and MUSTANG-2”, Adam D. Hincks, Federico Radicon, Charles Romero, Mathew S. Madhavacheri, Tony Mroczkowski, Jason E. Austerman, Eleonora Barbavar, Nicholas Battagli, Elia Battistell, J. Richard Bon, Erminia Calabres, de Paolo Bernardi, Mark J. Devlin, Simon R. Dicker, Shannon M. Duf, Adriaan J. Duivenvoorde, Jo Dunkle, Rolando Dünne, Patricio A. Gallard, Federica Hill, J. Colin Govon, Matt Hildo, Johannes Hubmay, John P. Hughe, Luca Lamagn, Martine Lokke, Silvia Mas, **Brian S. Mason**, Jeff McMahon, Kavilan Moodley, Matteo Murgia, Sigurd Naes, Lyman Pag, Francesco Piacentin, Maria Salatin, Craig L. Sarazi, Alessandro Schillac, Jonathan L. Siever, Cristóbal Sifó, Suzanne Stagg, Joel N. Ullo, Valentina Vacc, Van Alexander Engele, Michael R. Visser, Edward J. Wollack, and Zhilei Wu, 2022, *MNRAS* 510, 3335H

4. “Observations of compact sources in galaxy clusters using MUSTANG2”, Simon R Dicker, Elia S. Battistelli, Tanay Bhandarkar, Mark J. Devlin, Shannon M. Duff, Gene Hilton, Matt Hilton, Adam D. Hincks, Johannes Hubmayr, Kevin Huffenberger, John P. Hughes, Luca Di Mascolo, **Brian S. Mason**, J. A. B. Mates, Jeff McMahon, Tony Mroczkowski, Sigurd Naess, John Orłowski-Scherer, Bruce Partridge, Federico Romero, Charles Radiconi, Craig L. Sarazin, Neelima Sehgal, Jonathan Sievers, Cristóbal Sifón, Joel Ullom, Leila R. Vale, Michael R. Vissers, and Zhilei Wu 2021, MNRAS 508, 2600
5. “Radio and X-ray observations of the luminous Fast Blue Optical Transient AT2020xnd”, Joe S. Bright, Raffaella Margutti, David Matthews, Daniel Brethauer, Deanne Coppejans, Mark H. Wieringa, Brian D. Metzger, Lindsay DeMarchi, Tanmoy Laskar, Charles Romero, Kate D. Alexander, Assaf Horesh, Giulia Migliori, Ryan Chornock, E. Berger, Michael Bietenholz, Mark J. Devlin, Simon R. Dicker, W. V. Jacobson-Galán, **Brian S Mason**, Dan Milisavljevic, Sara E. Motta, Tony Mroczkowski, Enrico Ramirez-Ruiz, Lauren Rhodes, Craig L. Sarazin, Itai Sfaradi, and Jonathan Sievers, *submitted to ApJ*
6. “A study of 90 GHz dust emissivity on molecular cloud and filament scales”, Ian Lowe, **Brian Mason**, Tanay Bhandarkar, S. E. Clark, Mark Devlin, Simon R. Dicker, Shannon M. Duff, Rachel Friesen, Alvaro Hacar, Brandon Hensley, Tony Mroczkowski, Sigurd Naess, Charles Romero, Sarah Sadavoy, Maria Salatino, Craig Sarazin, John Orłowski-Scherer, Alessandro Schillaci, Jonathan Sievers, Thomas Stutz, Amelia Stanke, and Zhilei Xu, *submitted to ApJ*
7. “Active gas features in three HSC-SSP CAMIRA clusters revealed by high angular resolution analysis of MUSTANG-2 SZE and XXL X-ray observations”, Nobuhiro Okabe, Simon Dicker, Dominique Eckert, Tony Mroczkowski, Fabio Gastaldello, Yen-Ting Lin, Mark Devlin, Charles E. Romero, Mark Birkinshaw, Craig Sarazin, Cathy Horellou, Tetsu Kitayama, Keiichi Umetsu, Mauro Sereno, **Brian S. Mason**, John A. ZuHone, Ayaka Honda, Hiroki Akamatsu, I. -Non Chiu, Kotaro Lin, Kai-Yang Kohno, Elinor Medezinski, Satoshi Miyazaki, Ikuyuki Mitsuishi, Atsushi J. Nishizawa, Masamune Oguri, Naomi Ota, Florian Pacaud, Marguerite Pierre, Jonathan Sievers, Vernesa Smolčić, Sara Stanchfield, Keigo Tanaka, Ryoichi Yamamoto, Chong Yang, and Atsushi Yoshida, 2021 MNRAS 501, 1701
8. “The Massive and Distant Clusters of WISE Survey. X. Initial Results from a Sunyaev-Zeldovich Effect Study of Massive Galaxy Clusters at $z > 1$ Using MUSTANG2 on the GBT”, Simon R. Dicker, Charles E. Romero, Luca Di Mascolo, Tony Mroczkowski, Jonathan Sievers, Emily Moravec, Tanay Bhandarkar, Mark Brodwin, Thomas Connor, Bandon Decker, Mark Devlin, Anthony H. Gonzalez, Ian Lowe, **Brian S. Mason**, Craig Sarazin, Spencer A. Stanford, Daniel Stern, Khunanon Thongkham, Dominika Wylezalek, and Fernando Zago 2020, ApJ 902 144D
9. “Pressure Profiles and Mass Estimates Using High-resolution Sunyaev-Zeldovich Effect Observations of Zwicky 3146 with MUSTANG-2”, Charles Romero, Jonathan Sievers, Vittorio Ghirardini, Simon Dicker, Simona Giacintucci, Tony Mroczkowski, **Brian S. Mason**, Craig Sarazin, Mark Devlin, Massimo Gaspari, Nicholas Battaglia, Matthew Hilton, Esra Bulbul, Ian Lowe, Sara Stanchfield, 2020 ApJ 891, 90R
10. “Auto-multithresh: A General Purpose Automasking Algorithm”, Amanda Kepley, Takahiro Tsutsumi, Crystal Brogan, Remy Indebetouw, Ilsang Yoon, **Brian Mason**, Jennifer Donovan Meyer, 2020 PASP 132 4505k
11. “The Massive and Distant Clusters of WISE Survey. IX. High Radio Activity in a Merging Cluster”, Emily Moravec, Anthony H. Gonzalez, Simon Dicker, Stacey Alberts, Mark Brodwin, Tracy E. Clarke, Thomas Connor, Bandon Decker, Mark Devlin, Peter R. M. Eisenhardt, **Brian S. Mason**, Wenli Mo, Tony Mroczkowski, Alexandra Pope, Charles E. Romero, Craig Sarazin, Jonathan Sievers, Spencer A. Stanford, Daniel Stern, Dominika Wylezalek, and Fernando Zago, 2020 ApJ 898 145M

12. “The MUSTANG Galactic Plane Survey (MGPS90) Pilot”, Adam Ginsburg, L. D. Anderson, Simon Dicker, Charles Romero, Brian Svoboda, Mark Devlin, Roberto Galván-Madrid, Remy Indebetouw, Haoyu Baobab Liu, **Brian Mason**, Tony Mroczkowski, W. P. Armentrout, John Bally, Crystal Brogan, Natalie Butterfield, Todd R. Hunter, Erik D. Reese, Erik Rosolowsky, Craig Sarazin, Yancy Sievers, Jonathan Shirley, and Sara Stanchfield, 2020 ApJS 248, 24G
13. “Confirmation of Enhanced Long Wavelength Dust Emission in OMC 2/3”, **B. Mason**, S. Dicker, S. Sadavoy, S. Stanchfield, T. Mroczkowski, C. Romero, R. Friesen, C. Sarazin, J. Sievers, T. Stanke, M. Devlin, 2020 ApJ 893, 13M
14. “An ALMA+ACA measurement of the shock in the Bullet Cluster”, Luca Di Mascolo, Tony Mroczkowski, Eugene Churazov, Maxim Markevitch, Kaustuv Basu, Tracy E. Clarke, Mark Devlin, **Brian S. Mason**, Scott W. Randall, Erik D. Reese, Rashid Sunyaev, Daniel R. Wik, 2019 A&A 628, 100D
15. “The MESAS Project: Long-wavelength Follow-up Observations of Sirius A”, Jacon Aaron White, J. Aufdenberg, A.C. Boley, M. Devlin, S. Dicker, P. Hauschildt, A.G. Hughes, A.M. Hughes, **B. Mason**, B. Matthews, A. Moór, T. Mroczkowski, C. Romero, J. Sievers, S. Stanchfield, F. Tapia, D. Wilner, 2019, ApJ 875 55
16. “Dust opacity variations in the pre-stellar core L1544”, A. Chacón-Tanarro, J.E. Pineda, P. Caselli, L. Bizzocchi, R.A. Gutermuth, **B.S. Mason**, A.I. Gómez-Ruiz, J. Harju, M. Devlin, S.R. Dicker, T. Mroczkowski, C.E. Romero, J. Sievers, S. Stanchfield, S. Offner, D. Sánchez-Argüelles, 2019 A&A 623 118
17. “Direct detection of quasar feedback via the Sunyaev-Zeldovich effect”, M. Lacy, **B. Mason**, C. Sarazin, S. Chatterjee, K. Nyland, A. Kimball, G. Rocha, B. Rowe, J. Surace 2018, MNRAS 283, L22
18. “The Next-Generation Very Large Array: a technical overview”, R. Selina, E. Murphy, M. McKinnon, A. Beasley, B. Butler, C. Carilli, B. Clark, A. Erickson, W. Grammer, J. Jackson, B. Kent, **B. Mason**, M. Morgan, O. Ojeda, W. Shillue, S. Sturgis, D. Urban 2018, Proc. SPIE 10700.
19. “Anomalous microwave emission from spinning nanodiamonds around stars”, J. Greaves, A. Scaife, D. Frayer, D. Green, **B. Mason**, A. Smith 2018, Nature Astronomy 2, 662.
20. “Galaxy Cluster Pressure Profiles as Determined by Sunyaev Zel’dovich Effect Observations with MUSTANG and Bolocam II: Joint Analysis of Fourteen Clusters”, Charles Romero, **Brian Mason**, Jack Sayers, Tony Mroczkowski, Craig Sarazin, Megan Donahue, Alessandro Baldi, Tracy E. Clarke, Alexander Young, Jonathan Sievers, Simon Dicker, Erik Reese, Nicole Czakon, Mark Devlin, Phillip Korngut, Sunil Golwala 2017, ApJ 838, 86 (arXiv:1608.03980)
21. “Frontier Fields Clusters: Deep Chandra Observations of the Complex Merger MACS J1149.6+2223” G. A. Ogrean, R. J. van Weeren, C. Jones, W. Forman, W. A. Dawson, N. Golovich, F. Andrade-Santos, S. S. Murray, P. Nulsen, E. Roediger, A. Zitrin, E. Bulbul, R. Kraft, A. Goulding, K. Umetsu, T. Mroczkowski, A. Bonafede, S. Randall, J. Sayers, E. Churazov, L. David, J. Merten, M. Donahue, **B. Mason**, P. Rosati, A. Vikhlinin, H. Ebeling 2016, ApJ 813, 113
22. “Dust emissivity in the star-forming filament OMC 2/3” S. I. Sadavoy, A. M. Stutz, S. Schnee, **B. S. Mason**, J. Di Francesco, R. K. Friesen 2016, A&A 588, A30
23. “Development of a Microwave SQUID-Multiplexed TES Array for MUSTANG-2” S. Stanchfield, P. Ade, J. Aguirre, J. Brevik, H. Cho, R. Datta, M. Devlin, S. Dicker, B. Dober, D. Egan, P. Ford, G. Hilton, J. Hubmayer, K. Irwin, P. Marganian, **B. Mason**, J. Mates, J. McMahon, M. Mello, T. Mroczkowski, C. Romero, C. Tucker, L. Vale, S. White, M. Whitehead, A. Young 2016, JLTP 184, 460.

24. “The Discovery of Lensed Radio and X-Ray Sources behind the Frontier Fields Cluster MACS J0717.5+3745 with the JVLA and Chandra” R. J. van Weeren, G. A. Ogrean, C. Jones, W. R. Forman, F. Andrade-Santos, A. Bonafede, M. Brüggen, E. Bulbul, T. E. Clarke, E. Churazov, L. David, W. A. Dawson, M. Donahue, A. Goulding, R. P. Kraft, **B. Mason**, J. Merten, T. Mroczkowski, S. S. Murray, P. E. J. Nulsen, P. Rosati, E. Roediger, S. W. Randall, J. Sayers, K. Umetsu, A. Vikhlinin, A. Zitrin 2016, *ApJ* 817, 98
25. “Detailed study of the microwave emission of the supernova remnant 3C 396” A. Cruciani, E. Battistelli, E. Carretti, P. de Bernardis, R. Genova-Santos, S. Masi, **B. Mason**, D. Perera, F. Piacentini, B. Reach, J. Rubino-Martin 2016, *MNRAS* 459, 4224
26. “Frontier Fields Clusters: Chandra and JVLA View of the Pre-Merging Cluster MACS J0416.1-2403” G. Ogrean, R. van Weeren, C. Jones, T. Clarke, J. Sayers, A. Mroczkowski, P.E.J. Nulsen, W. Forman, S. Murray, M. Pandey-Pommier, S. Randall, E. Churazov, A. Bonafede, R. Kraft, L. David, F. Andrade-Santos, J. Merten, A. Zitrin, K. Umetsu, A. Goulding, E. Roediger, J. Bagchi, E. Bulbul, M. Donahue, H. Ebeling, M. Johnston-Hollitt, **B. Mason**, P. Rosati, & A. Vikhlinin 2015, *ApJ* 812, 153.
27. “The 2014 ALMA Long Baseline Campaign: An Overview”, by The ALMA Partnership (E. Fomalont et al.), 2015, *ApJ* 808, L1.
28. “Galaxy Cluster Pressure Profiles, as Determined by Sunyaev-Zeldovich Effect Observations with MUSTANG and Bolocam. I. Joint Analysis Technique” C. Romero, **B. Mason**, J. Sayers, A. Young, A. Mroczkowski, T. Clarke, C. Sarazin, J. Sievers, S. Dicker, E. Reese, N. Czakon, M. Devlin, P. Korngut, & S. Golwala 2015, *ApJ* 807, 121
29. “Measurements of the Sunyaev-Zel’dovich Effect in MACS J0647.7+7015 and MACS J1206.2-0847 at High Angular Resolution with MUSTANG” A. Young, A. Mroczkowski, C. Romero, J. Sayers, I. Balestra, T. Clarke, N. Czakon, M. Devlin, S. Dicker, C. Ferrari, M. Girardi, S. Golwala, H. Intema, P. Korngut, **B. Mason**, A. Mercurio, M. Nonio, E. Reese, P. Rosati, C. Sarazin & K. Umetsu 2015, *ApJ* 809, 185
30. “Evidence for large grains in the star-forming filament OMC 2/3” S. Schnee, **B. Mason**, J. Di Francesco, R. Friesen, D. Li, S. Sadavoy, T. Stanke 2014, *MNRAS* 444, 2303.
31. “The Dearth of Neutral Hydrogen in Galactic Dwarf Spheroidal Galaxies” K. Spekkens, N. Urbanic, **B. Mason**, B. Willman, & J. Aguirre 2014, *ApJ* 795, L5.
32. “Bounds on Dark Matter Properties from Radio Observations of Ursa Major II using the Green Bank Telescope”, A. Natarajan, J. Peterson, T. Voytek, K. Spekkens, **B. Mason**, J. Aguirre, B. Willman 2013, *Phys.Rev.D* 88, 8
33. “A Deep Search for Extended Radio Continuum Emission from Dwarf Spheroidal Galaxies: Implications for Particle Dark Matter” K. Spekkens, **B. Mason**, J. Aguirre, & B. Nhan 2013 *ApJ* 773, 61.
34. “Constraints on Free-Free Emission from Anomalous Microwave Emission Sources in the Perseus Molecular Cloud” CT Tibbs, R Paladini, C Dickinson, **B.S. Mason**, S Casassus, K Cleary, RD Davies, RJ Davis, RA Watson, 2013 *ApJ* 770, 122.
35. “The Star Formation in Radio Survey: GBT 33 GHz Observations of Nearby Galaxy Nuclei and Extranuclear Star-forming Regions” E.J. Murphy, J. Bremseth, **B.S. Mason**, J.J. Condon, E. Schinnerer, G. Aniano, L. Armus, G. Helou, J.L. Turner, & T.H. Jarret, 2012 *ApJ* 761, 2
36. “The First Hyper-luminous Infrared Galaxy Discovered by WISE” P.R.M. Eisenhardt et al. 2012 *ApJ* 755, 2

37. “A Multi-Wavelength Study of the Sunyaev-Zel’Dovich Effect in the Triple-Merger Cluster MACSJ0717.5+3745 with MUSTANG and BOLOCAM” T. Mroczkowski, S. Dicker, J. Sayers, E.D. Reese, **B. Mason**, N. Czakon, C. Romero, A. Young, M.J. Devlin, S. Golwala, P. Korngut, C. Sarazin, J.J. Bock, P.M. Koch, Kai-Yang Lin, S.M. Molnar, E. Pierpaoli, K. Umetsu, M. Zemcov, 2012 ApJ 761, 47.
38. “Confirming the Primarily Smooth Structure of the Vega Debris Disk at Millimeter Wavelengths” A.M. Hughes, D.J. Wilner, **B. Mason**, J.M. Carpenter, R. Plambeck, H-F. Chiang, S.M. Andrews, J.P. Williams, A. Hales, K. Su, E. Chiang, S.R. Dicker, P. Korngut, M.J. Devlin, 2012 ApJ 750, 1
39. “Debris Discs at Centimetre Wavelengths: Planetesimal Populations in Young Extrasolar Kuiper Belts” J.S. Greaves, A.S. Hales, **B.S. Mason**, B.C. Matthews 2012 MNRAS 423, L70
40. “Discovery of the Correspondence between intra-cluster Radio Emission and a High Pressure Region detected through the Sunyaev-Zel’dovich Effect” C. Ferrari, H.T. Intema, E. Orru, F. Govoni, M. Murgia, **B. Mason**, H. Bourdin, K.M. Asad, P. Mazzotta, M.W. Wise, T. Mroczkowski, J.H. Croston 2011 A&A 534, L12
41. “The Cosmic Background Imager 2” A.C. Taylor, M.E. Jones, J.R. Allison, E. Angelakis, J.R. Bond, L. Bronfman, R. Bustos, R.J. Davis, C. Dickinson, J. Leech, **B.S. Mason**, S.T. Myers, T.J. Pearson, A.C.S. Readhead, R. Reeves, M.C. Shepherd, J.L. Sievers 2011 MNRAS 418, 2720
42. “Holographic Measurement and Improvement of the Green Bank Telescope Surface” T.R. Hunter, F.R. Schwab, S.D. White, J.M. Ford, F.D. Ghigo, R.J. Maddalena, **B.S. Mason**, J.D. Nelson, R.M. Prestage, J. Ray, P. Ries, R. Simon, S. Srikanth 2011 PASP 123, 1087
43. “Field Scanner Design for MUSTANG of the Green Bank Telescope” J. Cheng, Y. Li, X. Li, **B. Mason** 2011 Science China 54, 2091.
44. “The Radio-2mm Spectral Index of the Crab Nebula Measured with GISMO” R.G. Arendt, J.V. George, J.G. Staguhn, D.J. Benford, S.R. Dicker, D.J. Fixsen, K.D. Irwin, C.A. Jhabvala, P.M. Korngut, A. Kovacs, S.F. Maher, **B.S. Mason**, T.M. Miller, S.H. Moseley, S. Navarro, A. Sievers, J.L. Sievers, E. Sharp, E.J. Wollack 2011 734, 54.
45. “Measuring and Correcting Wind-Induced Pointing Errors of the Green Bank Telescope Using an Optical QUadrant Detector” P. Ries, T.R. Hunter, K.T. Constantinescu, J.J. Brandt, F.D. Ghigo, **B.S. Mason**, R. Prestage, J. Ray, F.R. Schwab 2011 PASP 123, 682
46. “High Resolution Sunyaev-Zel’dovich Effect Imaging in the Cores of Four Galaxy Clusters”, P. Korngut, S. Dicker, E. Reese, **B. Mason**, M. Devlin, T. Mroczkowski, C. Sarazin, & M. Sun 2011 ApJ 734, 10.
47. “MUSTANG 3.3 Millimeter Continuum Observations of Class 0 Protostars”, Y. Shirley, **B. Mason**, J. Mangum, D. Bolin, M. Devlin, S. Dicker, & P. Korngut, 2011 AJ 141, 39
48. “Implications of a High Angular Resolution Image of the Sunyaev-Zel’dovich Effect in RXJ1347-1145” **B.S. Mason**, S.R. Dicker, P.M. Korngut, M.J. Devlin, W.D. Cotton, P.M. Koch, S.M. Molnar, J.L. Sievers, J.E. Aguirre, D. Benford, J.G. Staguhn, H. Moseley, K.D. Irwin, P.A.R. Ade 2010 ApJ 716, 739.
49. “The Detection of Anomalous Dust Emission in the Nearby Galaxy NGC 6946”, E.J. Murphy, G. Helou, J.J. Condon, E. Schinnerer, J.L. Turner, R. Beck, **B.S. Mason**, R.R. Chary, & L. Armus, 2010 ApJ 709, L108.
50. “A 31 GHz Survey of Low-Frequency Selected Radio Sources” **B.S. Mason**, L. Weintraub, J. Sievers, J.R. Bond, S.T. Myers, T.J. Pearson, A.C.S. Readhead, M.C. Shepherd, 2009 ApJ 704, 1433.

51. "Observations of M87 and Hydra A at 90 GHz", W.D. Cotton, **B.S. Mason**, S. Dicker, P.Korngut, M. Devlin, J.Aguirre, D. Benford, H. Moseley, J. Staguhn, K. Irwin, & P. Ade, 2009 ApJ 701, 1872
52. "90 GHz and 150 GHz Observations of the Orion M42 Region: A Sub-Millimeter to Radio Analysis", S.R. Dicker, **B.S. Mason**, P.M. Korngut, W.D. Cotton, M. Compiègne, M.J. Devlin, P.G. Martin, P.A.R. Ade, D.J. Benford, K.D. Irwin, R.J. Maddalena, J.P. McMullin, D.S. Shepherd, J.G. Staguhn, and C. Tucker, 2009 ApJ 705, 226
53. "A Limit on the Polarization of Anomalous Microwave Emission in Lynds 1622", **B.S. Mason**, T. Robishaw, D. Finkbeiner, C. Heiles, & C. Dickinson 2009, ApJ v697, 1187
54. "Anomalous Microwave Emission from the HII region RCW175", C. Dickinson, R.D. Davies, J.R. Allison, J.R. Bond, S. Casassus, K. Cleary, R.J. Davis, M.E. Jones, **B.S. Mason**, S.T. Myers, T.J. Pearson, A.C.S. Readhead, J.L. Sievers, A.C. Taylor, M. Todorovic, G. White, P.N. Wilkinson, 2009 ApJ 690, 1585.
55. "Implications of the Cosmic Background Imager Polarization Data", J.L. Sievers, C. Achermann, J.R. Bond, L. Bronfman, R. Bustos, C.R. Contaldi, C. Dickinson, P.G. Ferreira, M.E. Jones, A.M. Lewis, **B.S. Mason**, J. May, S.T. Myers, S. Padin, T.J. Pearson, M. Pospieszalski, A.C.S. Readhead, R. Reeves, A.C. Taylor, S. Torres, 2007 ApJ 660, 976.
56. "Interferometric Polarimetry of the CMB: Methodology", S.T. Myers, J.L. Sievers, J.R. Bond, C.R. Contaldi, **B.S. Mason**, T.J. Pearson, A.C.S. Readhead, 2006, New Astronomy Reviews v.50, p.951.
57. "CMB observations from the CBI and VSA: A comparison of coincident maps and parameter estimation methods", N. Rajguru et al., 2005 MNRAS, v363 p.1125.
58. "Polarization Observations with the Cosmic Background Imager", A. C. S. Readhead, S. T. Myers, T. J. Pearson, J. L. Sievers, **B. S. Mason**, C. R. Contaldi, J. R. Bond, R. Bustos, P. Altamirano, C. Achermann, L. Bronfman, J. E. Carlstrom, J. K. Cartwright, S. Casassus, C. Dickinson, W. L. Holzappel, J. M. Kovac, E. M. Leitch, J. May, S. Padin, D. Pogosyan, M. Pospieszalski, C. Pryke, R. Reeves, M. C. Shepherd, S. Torres, 2004 Science, v306, pp 836-844.
59. "The Radio Source Population at High Frequency: follow-up of the 15 GHz 9C survey", R.C.Bolton, G.Cotter, G.G.Pooley, J.M.Riley, E.M.Waldrum, C.J. Chandler,**B.S. Mason**, T.J. Pearson, A.C.S. Readhead, 2004 MNRAS 354 485.
60. "Vela X at 31 GHz", A. S. Hales, S. Casassus, H. Alvarez, J. May, L. Bronfman, A. C. Readhead, T. J. Pearson, **B. S. Mason**, R. Dodson, 2004 ApJ 613, 977.
61. "Extended Mosaic Observations with the Cosmic Background Imager", A.C.S. Readhead, **B.S. Mason**, C. Contaldi, T. J. Pearson, J. R. Bond, S. T. Myers, S. Padin, J. L. Sievers, J. K. Cartwright, M. C. Shepherd, D. Pogosyan, S. Prunet, P. Altamirano, R. Bustos, L. Bronfman, S. Casassus, W. L. Holzappel, J. May, U.-L. Pen, S. Torres, & P. S. Udomprasert, 2004 ApJ v.609 p.498.
62. "An Unbiased Measurement of H_0 through Cosmic Background Imager Observations of the Sunyaev-Zel'dovich Effect in Nearby Galaxy Clusters", P.S. Udomprasert, **B.S. Mason**, A.C.S. Readhead, & T.J. Pearson, 2004 ApJ v.615 p.63.
63. "The Anisotropy of the Microwave Background to $l = 3500$: Deep Field Observations with the Cosmic Background Imager", **B.S. Mason**, T. J. Pearson, A. C. S. Readhead, M. C. Shepherd, J. L. Sievers, P. S. Udomprasert, J. K. Cartwright, A. J. Farmer, S. Padin, S. T. Myers, J. R. Bond, C. R. Contaldi, U.-L. Pen, S. Prunet, D. Pogosyan, J. E. Carlstrom, J. Kovac, E. M. Leitch, C. Pryke, N. W. Halverson, W. L. Holzappel, P. Altamirano, L. Bronfman, S. Casassus, J. May, & M. Joy, 2003, ApJ 591, 540.

64. “ The Anisotropy of the Microwave Background to $l = 3500$: Mosaic Observations with the Cosmic Background Imager”, T. J. Pearson, **B. S. Mason**, A. C. S. Readhead, M. C. Shepherd, J. L. Sievers, P. S. Udomprasert, J. K. Cartwright, A. J. Farmer, S. Padin, S. T. Myers, J. R. Bond, C. R. Contaldi, U.-L. Pen, S. Prunet, D. Pogosyan, J. E. Carlstrom, J. Kovac, E. M. Leitch, C. Pryke, N. W. Halverson, W. L. Holzapfel, P. Altamirano, L. Bronfman, S. Casassus, J. May, & M. Joy, 2003, ApJ 591, 556.
65. “Cosmological Parameters from Cosmic Background Imager Observations and Comparisons with BOOMERANG, DASI, and MAXIMA”, J. L. Sievers, J. R. Bond, J. K. Cartwright, C. R. Contaldi, **B. S. Mason**, S. T. Myers, S. Padin, T. J. Pearson, U.-L. Pen, D. Pogosyan, S. Prunet, A. C. S. Readhead, M. C. Shepherd, P. S. Udomprasert, L. Bronfman, W. L. Holzapfel, J. May, 2003, ApJ 591, 599.
66. “A Fast Gridded Method for the Estimation of the Power Spectrum of the Cosmic Microwave Background from Interferometer Data with Application to the Cosmic Background Imager”, S. T. Myers, C. R. Contaldi, J. R. Bond, U.-L. Pen, D. Pogosyan, S. Prunet, J. L. Sievers, **B. S. Mason**, T. J. Pearson, A. C. S. Readhead, & M. C. Shepherd, 2003, ApJ 591, 575.
67. “The Sunyaev-Zeldovich effect in CMB-calibrated theories applied to the Cosmic Background Imager anisotropy power at $l > 2000$ ”, J. R. Bond, C. R. Contaldi, U.-L. Pen, D. Pogosyan, S. Prunet, M. I. Ruetalo, J. W. Wadsley, P. Zhang, **B. S. Mason**, S. T. Myers, T. J. Pearson, A. C. S. Readhead, J. L. Sievers, P. S. Udomprasert, ApJ v.626 p.12
68. “The Cosmic Background Imager”, S. Padin, M.C. Shepherd, J.K. Cartwright, R.G. Keeney, **B.S. Mason**, T.J. Pearson, A.C.S. Readhead, W.A. Schaal, J. Sievers, P.S. Udomprasert, J.K. Yamasaki, W.L. Holzapfel, J.E. Carlstrom, M. Joy, S.T. Myers, & A. Otarola, 2002, PASP 114, 83.
69. “DASI First Results: A Measurement of the Cosmic Microwave Background Angular Power Spectrum” N. W. Halverson, E. M. Leitch, C. Pryke , J. Kovac , J. E. Carlstrom , W. L. Holzapfel, M. Dragovan, J. K. Cartwright , **B. S. Mason** , S. Padin, T. J. Pearson, M. C. Shepherd , & A. C. S. Readhead, 2002, ApJ 568, 38.
70. “ Experiment Design and First Season Observations with the Degree Angular Scale Interferometer” E. M. Leitch , C. Pryke , N. W. Halverson , J. Kovac , G. Davidson , S. LaRoque , E. Schartman , J. Yamasaki , J. E. Carlstrom , W. L. Holzapfel , M. Dragovan , J. K. Cartwright , **B. S. Mason** , S. Padin , T. J. Pearson , M. C. Shepherd , & A. C. S. Readhead, 2002, ApJ 568, 28.
71. “An Improved Measurement of the Hubble Constant from the Sunyaev-Zel’dovich Effect,” **B.S. Mason**, S.T. Myers, & A.C.S. Readhead, 2001, ApJ 555, L11.
72. “First Intrinsic Anisotropy Observations with the Cosmic Background Imager,” S. Padin, J.K. Cartwright, **B.S. Mason**, T.J. Pearson, A.C.S. Readhead, M.C. Shepherd, J. Sievers, P.S. Udomprasert, W.L. Holzapfel, S.T. Myers, J.E. Carlstrom, E.M. Leitch, M. Joy, L. Bronfman & J. May, 2001, ApJ 549, L1.
73. “The Bright Gamma-Ray Burst 991208 - Tight Constraints on Afterglow Models from Observations of the Early-Time Radio Evolution,” T. J. Galama, M. Bremer, F. Bertoldi, K.M. Menten, U. Lisenfeld, D. S. Shepherd, **B. Mason**, F. Walter, G. G. Pooley, D. A. Frail, R. Sari, S. R. Kulkarni, E. Berger, J.S. Bloom, A. J. Castro-Tirado, & J. Granot 2000, ApJ 541, L45.
74. “X-Ray Mass Models and Sunyaev-Zeldovich Effect Predictions for a Sample of 22 Nearby Galaxy Clusters,” **B.S. Mason** & S.T. Myers, 2000, ApJ 540, 614.
75. “An Absolute Flux Density Measurement of the Supernova Remnant Cassiopeia A at 32 GHz,” **B.S. Mason**, E.M. Leitch, S.T. Myers, J.K. Cartwright , & A.C.S. Readhead, 1999, AJ 118, 2908.

Selected Conference Proceedings, Book Chapters, Technical Memos, and Other Publications

76. “Array Configuration: Technical Requirements” **B. Mason**, C. Carilli, V. Rosero, B. Butler, E. Murphy (ngVLA CDR Document 020.23.00.00.00-0001-REQ, October 2021)
77. “Array Configuration: Design Description” C. Carilli, V. Rosero, **B. Mason**, B. Butler, J. Carilli, J. Wrobel, C. Walker (ngVLA CDR Document 020.23.00.00.00-002-DSN, January 2022)
78. “Configuration: Reference Design Rev D Description” C. Carilli, **B. Mason**, V. Rosero, B. Butler, J. Carilli, E. Murphy, R.C. Walker (ngVLA memo 92, Oct.2021)
79. “Imaging Evaluation of Two Mid Configurations” C. Carilli, R.C. Walker, **B. Mason**, J. Carilli (ngVLA memo 86, Feb.2021)
80. “Comparison of Alternative Configuratsions for the ngVLA Plains Subarray” V. Rosero, J. Carilli, C. Carilli, **B. Mason** (ngVLA memo 85, Oct.2020)
81. “A Notional Envelope Observing Program” J. Wrobel, **B. Mason**, E. Murphy (ngVLA document 020.10.15.05.10-0002-REP, October 2020).
82. “Configuration: Reference Design RevC.01 description” C. Carilli, J. Carilli, A. Erickson, E. Murphy, **B. Mason**, V. Rosero, B. Butler (ngVLA memo 82, August 2020)
83. “SBA Antenna Pointing Specification for the Conceptual Design”, **Brian Mason** (ngVLA Antenna memo 11, July 2021)
84. “Quasar Wind SZ imaging with the ngVLA” C. Carilli, M. Lacy, **B. Mason**, A. Chakraborty, S. Chatterjee (ngVLA memo 80, July 2020)
85. “Imaging Spatially Extended Objects with Interferometers: Mosaicking and the Short Spacing Correction” **B. Mason**, book chapter for forthcoming “Proceedings of the 14h NRAO Synthesis Imaging Summer School” (arXiv:2006.06549, posted June 2020)
86. “Demonstration and Analysis of ngVLA Short Baseline Array Extended Structure Imaging” **B. Mason** (ngVLA memo 67, Oct 2019)
87. “A High-resolution SZ View of the Warm-Hot Universe”, T. Mroczkowski et al., Astro2020 white paper
88. “Sunyaev Zel’dovich study of filamentary structures between galaxy clusters”, E. Battistelli et al., Astro2020 white paper
89. “Unsolved Problems in Modern Astrophysics: Anomalous Microwave Emission”, E. Murphy et al., Astro2020 white paper
90. “The Case for a Fully Funded Green Bank Telescope”, K. O’Neil et al., Astro2020 white paper
91. “The ngVLA Short Baseline Array” **B. Mason**, R. Selina, A. Erickson, & E. Murphy (ngVLA Memo 43, April 2018)
92. “ALMA Mosaic Imaging Issues Prior to Cycle 6” C. Brogan, R. Indebetouw, T. Hunter, J. Meyer, & **B. Mason** (ALMA internal technical investigation memo, September 2018)
93. “The Case for a Publicly Available, Well-Instrumented GBT Operating at 20-115 GHz”, J. Bally, G. Blake, A. Bolatto, C. Casey, S. Church, J. di Francesco, P. Goldsmith, A. Goodman, A. Harris, J. Jackson, A. Leroy, F. Lockman, A. Lovell, A. Marscher, D. Marrone, **B. Mason**, T. Mroczkowski, Y. Shirley, M. Yun, arXiv:1610.09014

94. “The National Science Foundation’s AST Portfolio Review of 2012 is Not Relevant to the Green Bank Telescope of 2017: A White Paper”, Felix J. Lockman, Ryan Lynch, David T. Frayer, **Brian S. Mason**, Scott M. Ransom, arXiv:1610.02329
95. “Cycle 4 Interferometric Imaging Pipeline Requirements” **Brian Mason**, John Hibbard, Crystal Brogan, Remy Indebetouw, Todd Hunter, + ALMA Pipeline Working Group. (ALMA project internal memo, March 2016)
96. “Benchmark Imaging and Simulations for Comparison with the C3R4 Pipeline”, Crystal Brogan, Remy Indebetouw, Todd Hunter, John Hibbard, **Brian Mason**, Amanda Kepley, Jennifer Donovan Meyer, Rachel Harrison, & Andrew McNichols. (ALMA project internal memo, March 2016)
97. “Green Bank Telescope Constraints on Dark Matter Annihilation in Segue I”, A. Natarajan, J. Aguirre, K. Spekkens, & **B. Mason**, arXiv:1507.03589
98. “Wide-Field Imaging II: Large-Scale Imaging & Short Spacing Corrections”, **B. Mason** (chapter in forthcoming Synthesis Imaging School volume)
99. “ALMA Cycle 3 Bandwidth Switching Test Observations Report” (ALMA EOC Memo 15, Sept 2014; sole author)
100. “Assessing and Improving Low SNR Calibration Solutions in Narrow-Bandwidth ALMA Spectral Windows” (NAASC memo, July 2014; lead author)
101. “ALMA Cycle 3 Bandwidth Switching Observing Mode Use Case and General Considerations” (ALMA EOC Memo 16, Sep. 2014; sole author)
102. “Band-Averaged MUSTANG-2 Aperture Illumination and Implications for Out of Focus Holography” (GBT Memo 287, **B.Mason**, Feb 2014)
103. “Parameter Uncertainties in IMFIT” (CASA technical note, March 2014; associated with CAS-3476; sole author)
104. ALMA Cycles 3 - 8 Technical handbook (contributor; lead author of imaging chapter from Cycle 5 - 7)
105. “MUSTANG 2: A Large Focal Plane Array for the 100 m Green Bank Telescope” S. Dicker et al., *JLTP* 2014, 82D.
106. “Relative Integration times for the ALMA 12-m, 7-m, and Total Power Arrays” (NAASC Memo 113/ALMA Memo 598, July 2013)
107. “The Continuum Sensitivity of GBT Receivers” (GBT Memo 282, May 2013)
108. “The Case for Building a Band 1 Receiver Suite for ALMA” J. DiFrancesco et al., arXiv:0910.1609 (rev.2012) and arXiv:1310.1604 (major revision in 2013)
109. “Technical Note: MUSTANG Sensitivities and MUSTANG-1.5 and -2 Sensitivity Projections”, **B. Mason** (Internal memo, Sept. 2012)
110. “Technical Note: High Angular Resolution SZE Sensitivities for MUSTANG, MUSTANG-2, & Other Instruments”, **B. Mason** (Internal memo, Sept. 2012)
111. “MUSTANG-2 Detector Noise and Saturation” **B.S. Mason**, S.R. Dicker, J. Brevik, & J. Hubmayer, GBT Memo 280 (2012)
112. “MUSTANG-2 Loading and Bandpass Calculations” **B.S. Mason**, GBT Memo 279 (2012)

113. “The Effects of Weather on MUSTANG Data Quality”, **B.S. Mason** & D. Perera, GBT Memo 269 (2010)
114. “Field Scanner Design for MUSTANG on the Green Bank Telescope”, J. Cheng, X. Li, Y. Li, & **B. Mason**, GBT Memo 268 (2010)
115. *GBT Observer’s Guide* (2008 and subsequent versions), contributing author.
116. “Understanding the State of the Intracluster Medium in Galaxy Clusters”, S. Golwala *et al.*, science white paper submitted to ASTRO2010 (contributing author)
117. “Superconducting Detector Arrays for Far-Infrared to mm-Wave Astrophysics”, J. Bock *et al.*, technology development white paper submitted to ASTRO2010 (co-signing author)
118. “Comets to Clusters: Wide-field Multi-pixel Camera Development for the GBT”, K. O’neil *et al.*, Program/RFI Paper for ASTRO2010 (contributing author)
119. “Cosmological Results from Five Years of 30 GHz CMB Intensity Measurements with the Cosmic Background Imager”, J. Sievers, **B.S. Mason**, L. Weintraub, C. Achermann, P. Altamirano, J.R. Bond, L. Bronfman, R. Bustos, C. Contaldi, C. Dickinson, M.E. Jones, J. May, S.T. Myers, N. Oyarce, S. Padin, T.J. Pearson, M. Pospieszalski, A.C.S. Readhead, R. Reeves, M.C. Shepherd, A.C. Taylor, S. Torres 2009, arXiv:0901.4540
120. “Ka-band/CCB Instrument Calibration”, **B. Mason**, GBT Memo 261 (2009)
121. “MUSTANG: 90 GHz science with the Green Bank Telescope”, S. R. Dicker, P. M. Korngut, **B. S. Mason**, P.A.R. Ade, J. Aguirre, T.J. Ames, D. J. Benford, T. C. Chen, J. A. Chervenak, W. D. Cotton, M. J. Devlin, E. Figueroa-Feliciano, K. D. Irwin, S. Maher, M. Mello, S. H. Moseley, D. J. Tally, C. Tucker, S.D. White 2008, in *Millimeter and Submillimeter Detectors and Instrumentation for Astronomy IV*, eds. W.D. Duncan, W.S. Holland, S. Withington, & J. Zmuidzinas, Proc. SPIE v.7020, p.702005.
122. “MUSTANG FITS file Format”, **B. Mason** & P. Marganian, GBT Software Project Note 29.1 (2008)
123. “Pseudo-Continuum Polarimetry with the GBT”, **B. Mason**, GBT Memo 253 (2007)
124. “Mustang Fall 2006 Engineering Run Results”, **B. Mason**, S. Dicker, P. Korngut, J. Aguirre. GBT Memo 252 (2007)
125. “A 90-GHz Bolometer Array for the Green Bank Telescope”, Dicker, S. R.; Abrahams, J. A.; Ade, P. A. R.; Ames, T. J.; Benford, D. J.; Chen, T. C.; Chervenak, J. A.; Devlin, M. J.; Irwin, K. D.; Korngut, P. M.; Maher, S.; **Mason, B. S.**; Mello, M.; Moseley, S. H.; Norrod, R. D.; Shafer, R. A.; Staguhn, J. G.; Talley, D. J.; Tucker, C.; Werner, B. A.; White, S. D. in *Proceedings of the SPIE*, v.6275, p.62751B (2006)
126. “New Results and Current Work with the Cosmic Background Imager”, **B.S. Mason** et al., in *Proceedings of the Mykonos Conference on Multiwavelength Cosmology* (2004)
127. “A 90-GHz Array for Use on the Green Bank Telescope”, S. Dicker, P. Ade, D. Benford, M. Devlin, K. Irwin, P. Jewell, **B. Mason**, S. Moseley, M. Supanich, and C. Tucker, in *Proceedings of the SPIE* v.5489 p.1221 (2004)
128. “Implementation and Analysis of Test Data for new GBT scan patterns”, **B.S. Mason**, NRAO Internal Memo (PTCS Project Note 34.1, 2004)

129. “New Scan Patterns for the GBT”, **B.S. Mason**, NRAO Internal Memo (PTCS Project Note 33.1 2003)
130. “New Results & Current Work with the CBI”, **B.S. Mason** et al., in *Proceedings of the Mykonos Conference on Multiwavelength Cosmology* (2003).
131. “Science with Bolometer Arrays on the GBT”, **B.S. Mason**, NRAO Internal Memo (June 2003 – GBT Memo 251).
132. “Correlation Radiometer Observing Modes & Calibration”, **B.S. Mason**, NRAO Internal Memo (August 2002).
133. “CMB observations with the Cosmic Background Imager (CBI) Interferometer”, C.R.Contaldi, J.R.Bond, D.Pogosyan, **B.S.Mason**, S.T.Myers, T.J.Pearson, U.L.Pen, S.Prunet, A.C.Readhead, M.I.Ruetalo, J.L.Sievers, J.W.Wadsley, P.J.Zhang, to appear in *Proceedings of the XVIII IAP Colloquium ‘On the nature of dark energy’, Paris, 1-5 July 2002*.
134. “The Cosmic Microwave Background & Inflation, Then & Now”, J.R. Bond, C.R. Contaldi, D. Pogosyan, **B.S. Mason**, S.T. Myers, T.J. Pearson, U.-L. Pen, S. Prunet, A.C.S. Readhead, J.L. Sievers, in *Theoretical Physics MRST 2002: A Tribute to George Libbrandt*.
135. “Measurements of the CMB Power Spectrum to $\ell = 3500$ with the CBI”, **B.S. Mason** et al., in *Proceedings of the XXXVIIth Moriond Astrophysics Meeting*.
136. “Cosmological Parameters from CMB measurements with the CBI”, C. R. Contaldi, J. R. Bond, D. Pogosyan, **B. S. Mason**, S. T. Myers, T. J. Pearson, U. L. Pen, S. Prunet, A. C. Readhead, M. I. Ruetalo, J. L. Sievers, J. W. Wadsley, P. J. Zhang, in *Proceedings of the XXXVIIth Moriond Astrophysics Meeting*.
137. “Determining H_0 with XMM-Newton and the Cosmic Background Imager”, P.S. Udomprasert, **B.S. Mason**, & A.C.S. Readhead, 2001, in *New Century of X-Ray Astronomy*, ASP Conference Proceedings Vol.251.
138. “First Results from the CBI”, **B.S. Mason**, T.J. Pearson, A.C.S. Readhead, M. Shepherd, J. Sievers, P. Udomprasert, J.K. Cartwright, & S. Padin, 2001, in *Proceedings of the 20th Texas Symposium on Relativistic Astrophysics*, AIP conference proceedings Vol 586.
139. “An Improved Measurement of H_0 from the Sunyaev-Zeldovich Effect,” **B.S. Mason**, S.T. Myers, & A.C.S. Readhead 2000, , to appear. in *Proc. 9th Marcel Grossman Meeting*.
140. “Preliminary Results from the Cosmic Background Imager,” **B.S. Mason et al.** 2000, *Proc. 9th Marcel Grossman Meeting*.
141. “The Sunyaev-Zel’dovich Effect with the Cosmic Background Imager,” P.S. Udomprasert, **B.S. Mason**, & A.C.S. Readhead 2000, to appear in *Constructing the Universe with Clusters of Galaxies*, ed. F. Duret & D. Gerbal.
142. “The Cosmic Background Imager”, T.J. Pearson, A.C.S. Readhead, S. Padin, J. Cartwright, **B.S. Mason**, S. Myers, M. Shepherd, J. Sievers, & P. Udomprasert, in *Proceedings of IAU Symposium number 201* (2000).
143. “An Improved Measurement of the Hubble Constant Using the Sunyaev-Zel’dovich Effect”, **B.S. Mason**, 1999 (Ph.D. Thesis, University of Pennsylvania).
144. “An Improved Measurement of the Hubble Constant from the SZE,” **B.S. Mason** & S.T. Myers 1999, American Astronomical Society Meeting 194, Abstract 19.04. (thesis presentation)

145. “Detection and Possible Flare of GM SGR at 29-34 GHz”, **B.S. Mason** *et al.* 1999, Astronomer’s Telegram #45.
146. “Solar Neutrino Oscillations in the Moon,” **B.S. Mason** & M. Sher 1994 , preprint WM-94-114 (hep-ph/9409400— undergraduate thesis).

References available upon request.

Last full Update: April, 2022