

Curriculum Vitae  
**Dr. Crystal L. Brogan**

National Radio Astronomy Observatory  
520 Edgemont Rd  
Charlottesville, VA 22903 USA

Email: [cbrogan@nrao.edu](mailto:cbrogan@nrao.edu)  
Webpage: <http://www.cv.nrao.edu/~cbrogan>  
Phone: Office (434-296-0260), Cell (808-345-1962)

**Current Professional Positions**

- 2006-present Tenured Astronomer, National Radio Astronomy Observatory (NRAO) /  
North American ALMA Science Center (NAASC)  
North American ALMA Program Scientist (2019 to present)  
North American ALMA Development Program Coordinator (2019 to present)  
Subsystem Scientist for the 2nd Generation ALMA Correlator  
Subsystem Scientist for the ALMA Band 6 Version 2 Upgrade
- 2006-present Visiting or Adjunct Faculty, University of Virginia Astronomy Department

**Previous Professional Positions**

- 2016-2020 ALMA Interferometric Imaging Pipeline Heuristics Leader
- 2013-2019 Deputy ALMA North American Program Scientist  
Lead of NAASC ALMA Imaging Team 2011-2013  
Group Lead for Scientific Software Support at the NAASC
- 2010-2011 Group Lead for User Support at the NAASC (June 2010 to Feb. 2011)
- 2007-2019 ALMA CASA subsystem scientist
- 2006-2008 Tenure-track Assistant Astronomer NRAO/NAASC
- 2003-2006 James Clerk Maxwell Telescope Fellow, Institute for Astronomy, University of Hawaii
- 2000-2003 Jansky Postdoctoral Fellow, National Radio Astronomy Observatory, Socorro
- 1996-2000 Research Assistant, Department of Physics & Astronomy, University of Kentucky  
1999 National Radio Astronomy Observatory Graduate Summer Student (Socorro)
- 1993-1996 Teaching Assistant, Department of Physics & Astronomy, University of Kentucky

**Education**

- 1993-2000 Ph.D., University of Kentucky, Department of Physics and Astronomy (July 2000)  
“*Observational Study of the Role of Magnetic Fields in Star Formation*”,  
Supervisor: Dr. Thomas H. Troland
- 1989-1993 B.S., James Madison University, Harrisonburg, VA (Major: Physics)

**Professional Committees and Review Panels**

- 2021 SOFIA NASA Senior Review Blue Team, Chair
- 2021 JWST Cycle 1 TAC member
- 2018 Origins Space Telescope Milky Way, ISM, and Nearby Galaxies Working Group
- 2018-present M2O - International Maser Monitoring Organization
- 2018 SOFIA Cycle 7 TAC member
- 2017 NASA Astrophysics Probes Mission Concept Studies Panel
- 2016-2018 Member-At-Large AAS Laboratory Astrophysics Division Committee
- 2015 NSF Astronomy and Astrophysics Grant Review Panel
- 2014 SOFIA Cycle 3 TAC member

- 2013 Hubble Fellowship selection committee
- 2013 CONICYT ALMA Fund for Development of Chilean Astronomy selection committee
- 2013 European Research Council Consolidator Grant 2013 reviewer
- 2012 SOFIA Cycle 1 TAC member
- 2011-2014 Virtual Astronomy Observatory Science Council
- 2011 Natural Sciences and Engineering Research Council of Canada Discovery Grant
- 2011 NSF/AST University Radio Observatories Reviewer
- 2010 NASA Origins Grant Proposal Review Committee
- 2009-2010 Astro2010 Program Prioritization Panel for Radio, Millimeter, and Submillimeter
- 2009 NASA post-doctoral selection committee
- 2009 CONICYT ALMA Fund for Development of Chilean Astronomy selection committee
- 2008 University of Virginia Astronomy Department Graduate Student Selection Committee
- 2008 Reviewer for the National Science Foundation - AST Radio Spectrum Management
- 2008 Reviewer for the Natural Sciences and Engineering Research Council of Canada
- 2005-2007 ALMA North American Science Advisory Committee

### **NRAO Committees**

- 2018-present Reber pre-doctoral Fellowship committee
- 2016-2017 Member of NRAO/NAASC Scientist job search committee
- 2016-2017 Member 2016 NAASC scientist search committee
- 2016 Climate for Women at NRAO Committee
- 2016 Member ngVLA Project Scientist search committee
- 2015 Chair, tenure-track NRAO/NAASC job search committee
- 2014-present NRAO Astronomer Performance Review Committee
- 2014-present NRAO/UVa Colloquium Committee
- 2013 Committee to Revise NRAO Scientific Staff Policy Manual
- 2012-2013 NRAO Observatory Science & Technical Council
- 2012 Member search committee for Head of North American ALMA Operations
- 2011 Data Management Review Committee
- 2010 Member NRAO/NAASC Scientific Staff Selection Committee
- 2007-2008 Jansky Prize Lecturer Selection Committee
- 2006-2007 Member NRAO Strategic Planning Committee

**Refereed Articles (number: 126, *h*-index: 45, citations: 6944, acknowledgments: 54)**

### **Recent Papers (2020-2022)**

1. Cyganowski, C.J., Ilee, J. D., Brogan, C. L., et al. 2022, ApJL, in press, arXiv: 2204.09163
2. Remijan, A., Xue, C., Margulès, L., Belloche, A., Motiyenko, R. A., Carder, J., Codella, C., Balucani, N., Brogan, C. L., et al. (2022), A&A, in press, arXiv: 2112.03356
3. Bayandina, O. S., Brogan, C. L., et al. (2022), AJ, 163, 83
4. Towner, A. P. M., Brogan, C. L., Hunter, T. R., and Cyganowski, C. J. (2022), ApJ, 923, 263
5. Williams, G. M., C. J. Cyganowski, C. L. Brogan, T. R. Hunter, J. D. Ilee, P. Nazari, J. M. D. Kruijssen, R. J. Smith, and I. A. Bonnell (2022), MNRAS, 509, 748
6. Costa, A. H., K. E. Johnson, R. Indebetouw, M. K. Finn, C. L. Brogan, and A. Reines (2021), ApJ, 918, 76
7. Hunter, T. R., C. L. Brogan, J. M. De Buizer, A. P. M. Towner, C. D. Dowell, G. C. MacLeod, B. Stecklum, C. J. Cyganowski, S. J. El-Abd, and B. A. McGuire (2021), ApJL, 912, L17

8. Chibueze, J. O., G. C. MacLeod, J. M. Vorster, T. Hirota, C. L. Brogan, T. R. Hunter, and R. van Rooyen (2021), *ApJ*, 908, 175
9. Stecklum, B., V. Wolf, H. Linz, A. Caratti o Garatti, S. Schmidl, S. Klose, J. Eislöffel, C. Fischer, C. Brogan, R. A. Burns, O. Bayandina, C. Cyganowski, M. Gurwell, T. Hunter, N. Hirano, K.-T. Kim, G. MacLeod, K. M. Menten, M. Olech, G. Orosz, A. Sobolev, T. K. Sridharan, G. Surcis, K. Sugiyama, J. van der Walt, A. Volvach, and Y. Yonekura (2021), *A&A*, 646, A161
10. Hull, C. L. H., P. C. Cortes, V. J. M. L. Gouellec, J. M. Girart, H. Nagai, K. Nakanishi, S. Kamenno, E. B. Fomalont, C. L. Brogan, G. A. Moellenbrock, R. Paladino, and E. Villard (2020), *PASP*, 132, 094501
11. Ligterink, N. F. W., S. J. El-Abd, C. L. Brogan, T. R. Hunter, A. J. Remijan, R. T. Garrod, and B. M. McGuire (2020), *ApJ*, 901, 37
12. Ginsburg, A., L. D. Anderson, S. Dicker, C. Romero, B. Svoboda, M. Devlin, R. Galván-Madrid, R. Indebetouw, H. B. Liu, B. Mason, T. Mroczkowski, W. P. Armentrout, J. Bally, C. Brogan, N. Butterfield, T. R. Hunter, E. D. Reese, E. Rosolowsky, C. Sarazin, Y. Shirley, J. Sievers, and S. Stanchfield (2020), *ApJS*, 248, 24
13. Margulès, L., B. A. McGuire, R. A. Motiyenko, C. Brogan, T. Hunter, A. Remijan, and J. C. Guillemin (2020), *A&A*, 638, A3
14. Kepley, A. A., T. Tsutsumi, C. L. Brogan, R. Indebetouw, I. Yoon, B. Mason, and J. Donovan Meyer (2020), *PASP*, 132, 024505
15. Chen, X., A. M. Sobolev, S. L. Breen, Z.-Q. Shen, S. P. Ellingsen, G. C. MacLeod, B. Li, M. A. Voronkov, J. F. Kaczmarek, J. Zhang, Z.-Y. Ren, J. Wang, H. Linz, T. R. Hunter, C. Brogan, K. Sugiyama, R. A. Burns, K. Menten, A. Sanna, B. Stecklum, T. Hirota, K.-T. Kim, J. Chibueze, and S. van den Heever (2020), *ApJL*, 890, L22
16. Chen, X., A. M. Sobolev, Z.-Y. Ren, S. Parfenov, S. L. Breen, S. P. Ellingsen, Z.-Q. Shen, B. Li, G. C. MacLeod, W. Baan, C. Brogan, T. Hirota, T. R. Hunter, H. Linz, K. Menten, K. Sugiyama, B. Stecklum, Y. Gong, and X. Zheng (2020), *NatAs*, 4, 1170
17. Burns, R. A., K. Sugiyama, T. Hirota, K.-T. Kim, A. M. Sobolev, B. Stecklum, G. C. MacLeod, Y. Yonekura, M. Olech, G. Orosz, S. P. Ellingsen, L. Hyland, A. Caratti o Garatti, C. Brogan, T. R. Hunter, C. Phillips, S. P. van den Heever, J. Eislöffel, H. Linz, G. Surcis, J. O. Chibueze, W. Baan, and B. Kramer (2020), *NatAs*, 4, 506
18. Burns, R. A., G. Orosz, O. Bayandina, G. Surcis, M. Olech, G. MacLeod, A. Volvach, G. Rudnitskii, T. Hirota, K. Immer, J. Blanchard, B. Marcote, H. J. van Langevelde, J. O. Chibueze, K. Sugiyama, K.-T. Kim, I. Val` tts, N. Shakhvorostova, B. Kramer, W. A. Baan, C. Brogan, T. Hunter, S. Kurtz, A. M. Sobolev, J. Brand, and L. Volvach (2020), *MNRAS*, 491, 4069
19. Melosso, M., L. Dore, F. Tamassia, C. L. Brogan, T. R. Hunter, and B. A. McGuire (2020), *JPCA*, 124, 240

### Telescope Proposal Review Panels

- 2021 JWST Cycle 1 Proposal Review Committee
- 2019 SOFIA Cycle-7 Proposal Review Committee
- 2014 SOFIA Cycle-3 Proposal Review Committee
- 2012 SOFIA Cycle-1 Proposal Review Committee
- 2008 Spitzer Cycle-5 Proposal Review Committee
- 2006 James Clerk Maxwell Telescope Referee
- 2003-2006 VLA/VLBA Proposal Referee

## Professional Memberships

2004-present International Union of Radio Science  
1998-present American Astronomical Society  
2015-present American Astronomical Society Laboratory Astrophysics Division

## Mentoring

### *Thesis Advisor*

2018-present Samer El Abd (University of Virginia)  
2014-2020 Allison Towner (University of Virginia)  
2009-2014 Bill Dirienzo, Co-advisor Remy Indebetouw (University of Virginia)  
2006-2010 Claudia Cyganowski, Co-advisor Ed Churchwell (University of Wisconsin)

### *Thesis Committee member*

2018-present Renato Mazzei (University of Virginia)  
2019-2021 Mengyao Liu (University of Virginia)  
2015-2018 Lauren Bittle (University of Virginia)  
2009-2013 Amy Reines (University of Virginia)  
2001-2004 Ian Hoffman (University of New Mexico)

### *Post-doctoral mentor or supervisor*

2018-2020 Ryan Loomis, Jansky Fellow (NRAO)  
2016-2019 Laura Fissel, Jansky Fellow (NRAO)  
2009-2012 Rachel Friesen, NAASC Fellow (NRAO)