

CURRICULUM VITAE

Name: Thomas M. Bania **Address:** Department of Astronomy
Born: 28 July 1949 Boston University
Citizenship: U.S.A. 725 Commonwealth Ave.
Marital Status: Married Boston, MA 02215
Phone: (617) 353 - 3652 **E-mail:** bania@bu.edu INTERNET

Education: A.B., Physics, Brown University (1971)
M.Sc., Astronomy, University of Virginia (1973)
Ph.D., Astronomy, University of Virginia (1977)

Thesis: “*Carbon Monoxide in the Galactic Center and Other Studies in Galactic Structure*”, Professor W.B. Burton, Advisor

Areas of Specialization: Radiospectroscopy; Galactic Structure; Interstellar Medium

Languages: German

Computer Languages: UNIX, FORTRAN, C, IDL

Employment:

Teaching Assistant, University of Virginia, 1971-1973.

Participant, N.R.A.O. Summer Student Research Program, 1973-1974.

Junior Research Associate, National Radio Astronomy Observatory (N.R.A.O.), 1975-1976.

Research Associate, Arecibo Observatory, National Astronomy and Ionosphere Center (N.A.I.C.), 1976-1978.

Research Associate and Lecturer, Astronomy Department, Cornell University, 1978-1980.

Visiting Assistant Professor, Department of Astronomy, University of Virginia, 1980-1981.

Navy/A.S.E.E. Summer Faculty Research Fellow, Naval Research Laboratory, 1982.

Assistant Professor, Department of Astronomy, Boston University, 1981-1987.

Visiting Associate Scientist, National Radio Astronomy Observatory, 1985.

Associate Professor, Department of Astronomy, Boston University, 1987-1993.

Visiting Senior Scientist, National Astronomy and Ionosphere Center, 1988.

Harlow Shapley Lecturer, American Astronomical Society, 1988-

Visiting Senior Scientist, Sterrewacht Leiden, 1989.

Trustee, Northeast Radio Observatory Corporation (NEROC), 1989-

Acting Chairman, Department of Astronomy, Boston University, 1990-1991.

Professor, Department of Astronomy, Boston University, 1993-

Member of Visiting Committee, Associated Universities, Inc., National Radio Astronomy Observatory, 1997-2000.

Professional Societies:

International Astronomical Union

International Union of Radio Science

American Astronomical Society

American Association for the Advancement of Science

Consulting:

- Consultant, IBM Thomas J. Watson Research Center, 1981–1982. Participated in a Joint Agreement with IBM entitled “Numerical Simulations of the Interstellar Medium (ISM)”.
- Telescope Referee, National Radio Astronomy Observatory, 1983–
- Member, National Astronomy and Ionosphere Center Arecibo Scientific Advisory Committee (ASAC), 1984–1986.
- Selection Committee, Jefferson Scholars Program, University of Virginia, Charlottesville, VA, 15 February 1985.
- Member, National Radio Astronomy Observatory Committee Studying the Requirements for a New Spectral Processor for the NRAO 43-meter Telescope, 1985–92.
- National Radio Astronomy Observatory Millimeter Array Committee Member (Low-Z Extragalactic Working Group), 1985–1992
- Member, National Radio Astronomy Observatory Users’ Committee, 1986–1988.
- Member, Staff Selection Committee, American Museum-Hayden Planetarium, New York, NY, 1987-95.
- Five College Radio Astronomy Observatory Telescope Allocation Committee, 1989–1991.
- Boston University Trustee of Northeast Radio Observatory Consortium (NEROC), 1989–
- Member of National Science Foundation Site Visit Committee which evaluated the millimeter-wave interferometers operated by the California Institute of Technology and the University of California at Berkeley, July 1990.
- Member of Proposal Review Committee for NASA Exobiology Program for the Search for Extraterrestrial Intelligence (SETI), November 1990.
- Member, Technical/Scientific Advisory Group, Arecibo Observatory Upgrading Project, 1990–1995
- Member, Green Bank Telescope Scientific Advisory Committee, 1990–2002
- Member, N.R.A.O. Millimeter Array Advisor Group, 1994–1998
- Member, N.A.I.C. Arecibo Observatory, AOSAC (Arecibo Observatory Scientific Advisory Committee), 1996–1998
- Member, N.R.A.O. Visiting Committee, 1997-2000. Chairman (2000).
- Chair, NSF Distinguished Astrophysical Postdoctoral Fellowship Panel, January 2005
- Chair, NSF University Radio Observatories (URO) Panel, August 2005

Theses and Dissertations:**Undergraduate Senior Theses for Distinction:**

- Mr. David Barnaby, “*Modelling of 21cm HI Galactic Spectra*”, May 1981, unpublished.
- Ms. Christine Duke, “*Open Clusters and the Galactic Disk of the Milky Way*”, April 1986, unpublished.
- Mr. Michael Abegg, “*Astrophysical Studies of Cool Atomic Hydrogen Clouds in the Milky Way*”, May 1987, unpublished.
- Mr. Stanley Howe, “*Theoretical Models of the HI Distribution in the Milky Way*”, May 1987, unpublished.
- Mr. James Ingalls, “*Numerical Modelling of Interstellar Plasmas*”, May 1991, unpublished.
- Mr. Ronak Y. Shah, “*Pressure Constraints on Photodissociation Region Models via Carbon Radio Recombination Lines*”, unpublished.

Master's Theses:

- Mr. Joel Gendler, “*Astronomical Interpretation of Events in Homer’s Iliad and Odyssey*”, February 1985, unpublished.
- Mr. Marc Pound, “*A Two-Color CCD Photometric Study of the Globular Cluster NGC 288*”, 1987, *Astron. J.*, **94**, 1185.
- Ms. Maureen L. Savage, “*The Nature of the Submillimeter Emission from the Barnard 5 Molecular Cloud*”, 1996.
- Ms. Valerie Coffey, “*Properties of Hydrogen Self-Absorption Features Detected by the Boston University-Arecibo Galactic HI Survey*”, 1998.

Ph. D. Dissertations:

- Mr. Thomas Kuchar, “*The Boston University–Arecibo Galactic HI Survey: The Galaxy at 4 Arcminute Resolution*”, 1 July 1992.
- Mr. Dana Balsler, “*The Abundance of 3-He in the Interstellar Medium*”, 29 July 1994.
- Mr. James Ingalls, “*Atomic Carbon Studies of Galactic High Latitude Clouds*”, 17 November 1998.
- Mr. Maohai Huang, “*Atomic Carbon Studies of Southern Hemisphere Galactic HII Regions*”, 13 December 2000.
- Mr. Loren Anderson, “*Galactic H II Regions: Evolution and Galactic Structure*”, August 2009.

BIBLIOGRAPHY

- Burton, W.B., & Bania, T.M. 1974a, *Astr. Ap.*, **33**, 425: A Kinematic Investigation of Spiral Structure.
- Burton, W.B., & Bania, T.M. 1974b, *Astr. Ap.*, **34**, 75: On the Interpretation of the Kinematics of the Local Interstellar Hydrogen as Indicative of a Separate Subsystem.
- Burton, W.B., Gordon, M.A., Bania, T.M., & Lockman, F.J. 1975, *Ap. J.*, **202**, 30: Observations of Carbon Monoxide in the Plane of the Galaxy.
- Sanders, R.H., & Bania, T.M. 1976, *Ap. J.*, **204**, 341: The Observational Effects of Explosions in the Nuclei of Spiral Galaxies.
- Bania, T.M. 1977, *Ap. J.*, **216**, 381: Carbon Monoxide in the Inner Galaxy.
- Payne, H.E., & Bania, T.M., 1979, *Astron. J.*, **84**, 611: HI Emission-Absorption Measurements of the Radio Source CL4.
- Bania, T.M. 1979, “Carbon Monoxide and the 3 kpc Arm Feature”, in **The Large-Scale Characteristics of the Galaxy**, ed. W.B. Burton, *Proc. I.A.U. Symposium No. 84*, D. Reidel, Dordrecht, North-Holland, p. 351.
- Bania, T.M., & Lyon, J.G. 1980, *Ap. J.*, **239**, 173–192: OB Stars and the Structure of the Interstellar Medium: Cloud Formation and Effects of Different Equations of State.
- Giguere, P.T., Huebner, W.F., & Bania, T.M. 1980, *Astron. J.*, **85**, 1276: Radio Observations of Comet Meier (1978f) in 18-cm OH Lines.
- Bania, T.M. 1980, *Ap. J.*, **242**, 95: Carbon Monoxide in the Inner Galaxy: The 3 kpc Arm & Other Expanding Features.
- Liszt, H.S., Burton, W.B., & Bania, T.M. 1981, *Ap. J.*, **246**, 74–85: Some Observational Consequences of Residual HI in Galactic Molecular Clouds.
- Bania, T.M. 1981, “Numerical Simulations of the Interstellar Medium”, in **The Phases of the Interstellar Medium**, ed. J.M. Dickey, Proceedings of a Workshop held at the National Radio Astronomy Observatory, Green Bank, WV, p. 7.
- Bania, T. M. 1982, “Carbon Monoxide in the Inner Galaxy” in **The Milky Way: Structure, Kinematics, and Dynamics**, ed. W. Shuter, D. Reidel, Dordrecht.
- Rickard, L.J., Bania, T.M., & Turner, B.E. 1982, *Ap. J.*, **252**, 147: Hydroxyl Absorption Toward Galactic Nuclei.
- Dressel, L.D., Bania, T.M., & O’Connell, R.O. 1982a, “A Search for HI in Elliptical Galaxies with Nuclear Radio Sources”, in **Extragalactic Radio Sources**, eds. D.S. Heeschen and C.M. Wade, *Proc. I.A.U. Symp. No. 97*, D. Reidel, Dordrecht, North-Holland, p. 309.
- Dressel, L.D., Bania, T.M., & O’Connell, R.O. 1982b, *Ap. J.*, **259**, 55: Neutral Hydrogen in Elliptical Galaxies with Nuclear Radio Sources and Optical Emission Lines.
- Dressel, L.D., Bania, T.M., & Davis, M.M. 1983, *Ap. J. (Letters)*, **266**, L97: NGC315: High-Velocity Clouds in an Active Elliptical Galaxy?

- Bania, T.M. 1983, *Astron. J.*, **88**, 1222–1227: Cool Neutral Hydrogen in the Direction of an Anonymous OB Association.
- Wilson, T. L., Rood, R. T., & Bania, T. M. 1983, “*Detection of the 3.46 cm Line of Interstellar $^3\text{He}^+$: ($^3\text{He}^+/\text{H}^+$) Ratios*”, in **ESO Workshop on Primordial Helium**, eds. P. A. Shaver, D. Kunth, & D. Kjar, Garsching bei München, West Germany, pp. 379–384.
- Rood, R.T., Bania, T.M., & Wilson, T.L. 1983, *Ap. J.*, **280**, 629: The 8.7 GHz Hyperfine Line of $^3\text{He}^+$ in Galactic HII Regions.
- Bania, T.M., & Lockman, F.J. 1983, *Ap. J. Suppl.*, **54**, 513–545: A Survey of the Latitude Structure of Galactic HI on Small Angular Scales.
- Wilson, T. L., Rood, R. T., & Bania, T. M. 1984, “*Measurements of the 3.46 cm Line of $^3\text{He}^+$* ”, in **Frontiers of Astronomy and Astrophysics**, ed. R. Pallavicini, Italian Astronomical Society, Florence, Italy, pp. 217–226.
- Rood, R. T., Bania, T. M., & Wilson, T. L. 1984, “ *$^3\text{He}^+$ in Galactic HII Regions: Possible Evidence for Non-Convective Mixing in Low Mass Stars*”, in **Observational Tests of the Stellar Evolution Theory**, eds. A. Maeder & A. Renzini, *Proc. I.A.U. Symp. No. 105*, D. Reidel, Dordrecht, pp. 567–570.
- Bania, T.M. 1985, “*The Carbon Monoxide Distribution in the Inner Galaxy*”, in **The Milky Way Galaxy**, eds. H. van Woerden, W.B. Burton, R.J. Allen, *Proc. I.A.U. Symp. No. 106*, D. Reidel, Dordrecht, North-Holland, pp. 207–208.
- Bania, T.M., & Lockman, F.J. 1985, “*The Vertical Distribution of Galactic HI: The Arecibo-Green Bank Survey*”, in **The Milky Way Galaxy**, eds. H. van Woerden, W.B. Burton, & R.J. Allen, *Proc. I.A.U. Symp. No. 106*, D. Reidel, Dordrecht, North-Holland, p. 173.
- Blitz, L., Bloemen, J. B. G. M., Hermsen, W. & Bania, T. M. 1985, *Astr. Ap.*, **143**, 267: The Gamma-Ray Deficit Toward the Galactic Center.
- Bania, T. M. 1986, *Ap. J.*, **308**, 868: A Latitude Survey of Carbon Monoxide Emission Near the Galactic Center.
- Bania, T. M. & Stark, A. A. 1986a, *Ap. J. (Letters)*, **306**, L17: Clump 2: An Inner Spiral Arm?
- Bania, T. M., Stark, A. A., & Heiligman, G. 1986, *Ap. J.*, **307**, 350: Clump 1: An Unusual Molecular Cloud Complex Near the Galactic Center.
- Rood, R. T., Bania, T. M., & Wilson, T. L. 1987, in **Proceedings of the 13th Texas Symposium on Relativistic Astrophysics**, ed. M. Ulmer, (Singapore: World Scientific), p. 180: Groping for the Cosmological 3-Helium Abundance.
- Bania, T. M. 1987, in **Proceedings of the Arecibo Upgrading Workshop**, ed. M. M. Davis & J. Taylor, Cornell University, p. 107: Mapping the Galaxy at 21 cm Wavelength.
- Bania, T. M. 1987, in **Proceedings of the Arecibo Upgrading Workshop**, ed. M. M. Davis & J. Taylor, Cornell University, p. 115: Measuring the 3-Helium Abundance in the Interstellar Medium.
- Bania, T. M., Rood, R. T., & Wilson, T. L. 1987, *Ap. J.*, **323**, 30: Measurements of the ^3He Abundance in the Interstellar Medium.

- Liu, T., Janes, K.A., Bania, T.M., & Phelps, R.L. 1987, *Astron. J.*, **95**, 1122: Stellar and Molecular Radial Velocities for Six Young Open Clusters.
- Bania, T. M. 1988, “*The Outer Galaxy*”, in **Lecture Notes in Physics, 306**: Proceedings of a Symposium in Honor of Frank J. Kerr, eds. F. J. Lockman & L. Blitz, Springer-Verlag: New York, p. 89: Mapping the Galaxy at 21 cm Wavelength: The Boston University-Arecibo Galactic HI Survey.
- Bania, T. M. 1989, in **Large-Scale Surveys of the Sky** eds. J. J. Condon & F. J. Lockman, NRAO Workshop No. 20, Green Bank, WV, p. 97: The Arecibo Spectral Mapping Pipeline.
- Liu, T., Janes, K.A., & Bania, T.M. 1989, *Astron. J.*, **98**, 626: Radial Velocity Measurements in 20 Open Clusters.
- Pound, M.W., Bania, T.M., & Wilson, R.W. 1990, *Ap. J.*, **351**, 165: Sub-Parsec Clumping in the Nearby Molecular Cloud MBM12.
- Kuchar, T.A. & Bania, T.M. 1990, *Ap. J.*, **352**, 192-206: HI Emission–Absorption Experiments Toward Galactic HII Regions.
- Bania, T.M., Marscher, A.P., & Barvainis, R. 1991, *Astron. J.*, **101**, 2147-2150: Observations of Local Interstellar CO toward Four Compact Extragalactic Radio Sources.
- Liu, T., Janes, K.A., & Bania, T.M. 1991, *Ap. J.*, **377**, 141-149: Radial Velocity Measurements in the Pleiades.
- Lo, K.-Y., Stark, A. A., Bally, J., Wilson, R. W., Bania, T. M., & Lane, A. P. 1991, in **The Magellanic Clouds**, eds. R. Haynes & D. Milne, *Proc. I.A.U. Symp. No. 148*, (Dordrecht: Kluwer), p. 112-113: AST/RO and Submillimeter-wave Observations of the Magellanic Clouds From the South Pole.
- Marscher, A.P., Bania, T.M., & Wang, Z. 1991, *Ap. J. (Letters)*, **371**, L77–L80: Detection of Local Interstellar CO Absorption toward BL Lacertae.
- Marscher, A.P., Bania, T.M., & Wang, Z. 1991, in **Proceedings of the Third Haystack Observatory Conference, Atoms, Ions and Molecules: New Results in Spectral Line Astrophysics** eds. A.D. Haschick & P.T.P. Ho (San Francisco: Astronomical Society of the Pacific), *Astronomical Society of the Pacific Conference Series*, **16**, pp. 79–82: Detection of Local CO Absorption toward BL Lac: A Probe of AU-Scale Structure in Molecular Clouds.
- Burton, W.B., Bania, T.M., Hartmann, D., & Yuan, T. 1992, in **Proceedings of the Center for Theoretical Study: Workshop No. 1, Evolution of Interstellar Matter and Dynamics of Galaxies**, eds. J. Palous, W.B. Burton, & P.O. Lindblad (Cambridge University Press), in the press: Anomalous–Velocity H I Structures Associated with Infrared Cirrus.
- Peimbert, M., Rodriguez, L.F., Bania, T.M., Rood, R.T., & Wilson, T.L. 1992, *Ap. J.*, **395**, 484–487: Determination of the He^+/H^+ Ratio from α , β , and γ Radio Recombination Lines.
- Rood, R.T., Bania, T.M., & Wilson, T.L. 1992, *Nature*, **355**, 618–620: Detection of Helium-3 in a Planetary Nebula.

- Kuchar, T.A., & Bania, T.M. 1993, *Ap. J.*, **414**, 664–671: The Structure of the Interstellar Medium Surrounding the Rosette Nebula.
- Bania, T.M., Rood, R.T., & Wilson, T.L. “The Helium-3 Abundance in HII Regions and Planetary Nebulae,” 1993, in *Origin and Evolution of the Elements*, ed. N. Prantzos, E. Vangioni-Flam, & M. Casse, (Cambridge: Cambridge University Press), pp. 107–111.
- Rood, R. T., Bania, T. M., Balser, D. S., & Wilson, T. L. 1993, “The Primordial Abundance of 3-Helium and Deuterium,” in *Texas/PASCOS 92: Relativistic Astrophysics and Particle Cosmology*, ed. C. W. Akerlof, M. A. Srednicki (New York: New York Academy of Sciences), pp. 751–756.
- Bania, T.M., & Rood, R.T. “Search for Interstellar Beacons at the 3He+ Hyperfine Transition Frequency,” 1993, in *Third Decennial US-USSR Conference on SETI*, Astronomical Society of the Pacific Conference Series vol. 47, ed. G.S. Shostak, (San Francisco: Astron. Soc. Pac.), pp. 357–365.
- Marscher, A.P., Bania, T.M., & Wang, Z. 1993, in **Sub-arcsecond Radio Astronomy**, eds. P.J. Davis & R.S. Booth (Cambridge: U. Press), pp. 84–85: Probing the Millarcsecond-Scale Structure of Molecular Clouds.
- Marscher, A.P., Moore, E.M., & Bania, T.M. 1993, *Ap. J. (Letters)*, **419**, L101–L104: Detection of AU-Scale Structure in Molecular Clouds
- Hüttemeister, S., Wilson, T.L., Bania, T.M., & Martin-Pintado, J. 1993, *Astr. Ap.*, **280**, 255–267: Ammonia in Galactic Center Molecular Clouds
- Bania, T.M. 1993, in **Workshop on Databases for Galactic Structure**, eds. A.G. Davis Philip, B. Hauck, & A.R. Uppgren (Schenectady: L. Davis Press), pp. 189–190: Galactic Scale Surveys at Centimeter through Submillimeter Wavelengths
- Balser, D.S., Bania, T.M., Brockway, C.J., Rood, R.T., & Wilson, T.L. 1994, *Ap. J.*, **430**, 667–681: The Cosmic Abundance of 3-Helium III: Improved Line Parameters for Selected Sources
- Stark, A. A., Lane, A. P., Balm, S., Rumitz, M., Bania, T., Chamberlin, R., Huang, M., Ingalls, J., Jackson, J., Castro, E., Wilson, R. W., Mumma, D., Wright, G., Bally, J., Lo, K.-Y., Engargiola, G., Schieder, R., Stutzki, J., & Staguhn, J. 1994, *Antarctic J. U.S.*, **XXIX(5)**, 344–345: Pre-Deployment Tests of the AST/RO Instrument
- Ingalls, J.G., Bania, T.M., & Jackson, J.M. 1994, *Ap. J. (Letters)*, **431**, L139–142: Atomic Carbon in the High Latitude Molecular Cloud MBM 12.
- Ingalls, James G., Bania, T. M., & Jackson, James M. 1994, in *Clouds, Cores, and Low Mass Stars* A.S.P. Conference Series, **65**, eds. D. P. Clemens & R. Barvainis, 77–80: Atomic Carbon in the High Latitude Molecular Cloud MBM 12
- Rood, R.T., Bania, T.M., Wilson, T.L., & Balser, D.S. 1995, in *ESO/EIPC Workshop on the Light Elements*, ed. P. Crane (Heidelberg: Springer), 201–214: The Quest for the Cosmic Abundance of ³He
- Balser, D.S., Bania, T.M., Rood, R.T., & Wilson, T.L. 1995, *Ap. J. Suppl.*, **100**, 371–388: The Continuum Structure of 11 Galactic H II Regions

- Mauersberger, R., Wilson, T.L., Rood, R.T., Bania, T.M., Hein, H., & Linhart, A. 1996, *Astr. Ap.*, **306**, 141–144: SETI at the spin flip line frequency of positronium
- Balser, D.S., Bania, T.M., Rood, R.T., & Wilson, T.L. 1995, “The Cosmic Abundance of ^3He : Constraints to Standard Big Bang Nucleosynthesis”, in *Clusters, Lensing, and the Future of the Universe*, A.S.P. Conf. Ser., ed. Virginia Trimble (San Francisco: A.S.P.), **88**, 259–262.
- Balser, D.S., Bania, T.M., Rood, R.T., & Wilson, T.L. 1997a, “High Sensitivity Radio Observations of the 8.665 GHz $^3\text{He}^+$ Hyperfine Line Emission from Planetary Nebulae”, in *High Sensitivity Radio Astronomy*, eds. N. Jackson & R. Davies (Cambridge: Cambridge Univ. Press), 53–56.
- Bania, T.M., Balser, D.S., Rood, R.T., & Wilson, T.L. 1997, “Quest for the 3cm Spectral Limit: High Sensitivity Measurements of $^3\text{He}^+$ Emission from Galactic H II Regions”, in *High Sensitivity Radio Astronomy*, eds. N. Jackson & R. Davies (Cambridge: Cambridge Univ. Press), 93–96.
- Stark, A.A., Bolatto, A.D., Chamberlin, R.A., Lane, A.P., Bania, T.M., Jackson, J.M., & Lo, K.-Y. 1997, *Ap. J. (Letters)*, **480**, L59–L62: “First Detection of 492 GHz [CI] Emission from the Large Magellanic Cloud”
- Ingalls, J.G., Chamberlin, R.A., Bania, T.M., Jackson, J.M., Lane, A.P., & Stark, A.A. 1997, *Ap. J.*, **479**, 296–302: “Atomic Carbon in Southern Hemisphere High-Latitude Clouds”
- Balser, D.S., Bania, T.M., Rood, R.T., & Wilson, T.L. 1997b, *Ap. J.*, **483**, 320–334: “The ^3He Abundance in Planetary Nebulae”
- Bania, T.M., Balser, D.S., Rood, R.T., Wilson, T.L., & Wilson, T.A. 1997, *Ap. J. Suppl.*, **113**, 353–366: “ $^3\text{He}^+$ in the Milky Way Interstellar Medium: Summary of Relevant Observations”
- Huang, M., Baum, S.P., Bania, T.M., Bolatto, A., Chamberlin, R.A., Ingalls, J.G., Jackson, J.M., Lane, A.P., Rumitz, M.R., Stark, A.A., & Wilson, R.W. 1998, “Atomic Carbon in Galactic H III Regions”, in *Astrophysics from Antarctica*, A.S.P. Conf. Ser., ed. G. Novak & R.H. Landsberg (San Francisco: A.S.P.), **141**, 192–195.
- Ingalls, J.G., Bania, T.M., Chamberlin, R.A., Jackson, J.M., Lane, A.P., Rumitz, M.R. & Stark, A.A. 1998, “AST/RO Observations of Southern Hemisphere High-Latitude Clouds”, in *Astrophysics from Antarctica*, A.S.P. Conf. Ser., ed. G. Novak & R. Landsberg (San Francisco: A.S.P.), **141**, 200–204.
- Bolatto, A.D., Balm, S., Bania, T.M., Chamberlin, R.A., Huang, M., Ingalls, J.G., Jackson, J.M., Lane, A.P. & Stark, A.A. 1998, “Neutral Carbon in the Magellanic Clouds: Probing the Metal-Poor Interstellar Medium”, in *Astrophysics from Antarctica*, A.S.P. Conf. Ser., ed. G. Novak & R. Landsberg (San Francisco: A.S.P.), **141**, 196–199.
- Jackson, J.M., Lane, A.P., Stark, A.A., & Bania, T.M., 1998, “AST/RO Observations of Neutral Atomic Carbon”, in *Astrophysics from Antarctica*, A.S.P. Conf. Ser., ed. G. Novak & R. Landsberg (San Francisco: A.S.P.), **141**, 146–153.
- Rood, R. T., Bania, T. M., Balser, D. S., Wilson, T. L. 1998, “3-Helium: Status and Prospects”, in *Primordial Nuclei and Their Galactic Evolution*, eds. N. Prantzos, M. Tosi, & R. von Steiger (Kluwer: Dordrecht), Space Science Series of ISSI, 4, 185–198. (refereed)

- Balser, D.S., Bania, T.M., Rood, R.T., & Wilson, T.L. 1999, *Ap. J.*, **510**, 759–783: “ ^3He in the Milky Way Interstellar Medium: Abundance Determinations”
- Huang, M., Bania, T.M., Bolatto, A., Chamberlin, R.A., Ingalls, J.G., Jackson, J.M., Lane, A.P., Stark, A.A., Wilson, R.W., & Wright, G.A. 1999, *Ap. J.*, **517**, 282–291: “Atomic Carbon Observations of Southern Hemisphere H II Regions”
- Balser, D. S., Rood, R. T., & Bania, T. M. 1999, “The ^3He Abundance in the Planetary Nebula NGC 3242”, *Ap. J.*, **522**, L73–L76.
- Clemens, D., Jackson, J., Bania, T., & Heyer, H. 1999, “Galactic Star Formation and Galactic Structure: The BU-FCRAO Milky Way Galactic Ring Survey (GRS)”, in **Infrared Astrophysics with Surveys: A Prelude to SIRTf**, ASP Conference Series **177**, ed. M. Bica, C.A. Beichman, R.M. Cutri, & B.F. Madore (San Francisco: ASP), pp. 340–346.
- Wilson, T.L., Rood, R.T., Bania, T.M., & Balser, D. 1999, “Isotope Ratios in the Interstellar Medium”, in *Nuclei in the Cosmos V*, eds. N. Prantzos & S. Harissopulos (Editions Frontières: Gif-sur-Yvette) pp. 10–16.
- Ingalls, J.G., Bania, T.M., Lane, A.P., Rumitz, M., & Stark, A.A. 2000, *Ap. J.*, **535**, 211–226: Physical State of Molecular Gas in High Galactic Latitude Translucent Clouds
- Bania, T.M., *et al.* 2000, Associated Universities Incorporated, 1–40: “2000 Report of the National Radio Astronomy Observatory Visiting Committee to Associated Universities Incorporated”
- Stark, A. A., Bally, J., Balm, S. P., Bania, T. M., Bolatto, A. D., Chamberlin, R. A., Engargiola, G., Huang, M., Ingalls, J. G., Jacobs, K., Jackson, J. M., Kooi, J. W., Lane, A. P., Lo, K.-Y., Marks, R. D., Martin, C. L., Mumma, D., Ojha, R., Schieder, R., Staguhn, J., Stutzki, J., Walker, C. K., Wilson, R. W., Wright, G. A., Zhang, X., Zimmermann, P., & Zimmermann, R. 2001, *Publ. Astron. Soc. Pacific*, **113**, 567–585: The Antarctic Submillimeter Telescope and Remote Observatory (AST/RO)
- Ojha, R., Stark, A. A., Hsieh, H. H., Lane, A. P., Chamberlin, R. A., Bania, T. M., Bolatto, A. D., Jackson, J. M., & Wright, G. A. 2001, *Ap. J.*, **548**, 253–257: AST/RO Observations of Atomic Carbon near the Galactic Center
- Simon, R., Jackson, J. M., Clemens, D. P., Bania, T. M., & Heyer, M. H. 2001, *Ap. J.*, **551**, 747–763: The Structure of Four Molecular Cloud Complexes in the BU-FCRAO Milky Way Galactic Ring Survey
- Rood, R.T., Bania, T.M., & Balser, D.S. 2001, in *Cosmic Evolution on the occasion of the 60-th birthdays of Jean Audouze and James Truran*, Institut d’Astrophysique de Paris, E. Vangioni-Flam, R. Ferlet, & M. Lemoine, eds., (World Scientific: London), 71–77: The Origin and Evolution of ^3He
- Bania, T.M., Rood, R.T., & Balser, D.S. 2002, *Nature*, **415**, 54–57: The cosmological density of baryons from observations of $^3\text{He}^+$ in the Milky Way
- Rood, R. T., Bania, T. M., & Balser, D. S. 2002, *Science*, **295**, 804–805: “Perspective: The Saga of ^3He ”

- Jackson, J.M., Bania, T.M., Simon, R., Kolpak, M., Clemens, D.P., & Heyer, M. 2002, *Ap. J.*, **566**, L81—L84: H I Self-Absorption and the Kinematic Distance Ambiguity: The Case of the Molecular Cloud GRSMC 45.6+0.3
- McQuinn, K.B.W., Simon, R., Law, C.J., Jackson, J.M., Bania, T.M., Clemens, D.P., & Heyer, M.H. 2002, *Ap. J.*, **576**, 274—284: A Comparison of ^{13}CO and CS Emission in the Inner Galaxy
- Kolpak, M.A., Jackson, J.M., Bania, T.M., & Dickey, J.M. 2002, *Ap. J.*, **578**, 868–876: The Radial Distribution of Cold Atomic Hydrogen in the Galaxy
- Ingalls, J.G., Reach, W.T., & Bania, T.M. 2002, *Ap. J.*, **579**, 289–303: Photoelectric Heating and [C II] Cooling of High Galactic Latitude Translucent Clouds
- Kolpak, M. A., Jackson, J. M., Bania, T. M., Clemens, D. P., & Dickey, J. M. 2003, *Ap. J.*, **582**, 756–769: Resolving the Kinematic Distance Ambiguity toward Galactic H II Regions
- Kraemer, K. E., Jackson, J. M., Kassis, M., Deutsch, L. K., Hora, J. L., Simon, R., Hoffmann, W. F., Fazio, G. G., Dayal, A., Bania, T. M., Clemens, D. P., & Heyer, M. H. 2003, *Ap. J.*, **588**, 918–930: Five Star-forming Cores in the Galactic Ring Survey: A Mid-Infrared Study
- Benjamin, R. A., Churchwell, E., Babler, B. L., Bania, T. M., *et al.* 2003, *Publ. Astron. Soc. Pacific*, **115**, 953–964: GLIMPSE. I. An SIRTf Legacy Project to Map the Inner Galaxy
- Whitney, B. A., Indebetouw, R., Babler, B. L., Meade, M. R., Watson, C., Wolff, M. J., Wolfire, M. G., Clemens, D. P., Bania, T. M., *et al.* 2004, *Ap. J. Suppl.*, **154**, 315–321: A GLIMPSE of Star Formation in the Giant H II Region RCW 49
- Churchwell, E., Whitney, B. A., Babler, B. L., Indebetouw, R., Meade, M. R., Watson, C., Wolff, M. J., Wolfire, M. G., Bania, T. M., *et al.* 2004, *Ap. J. Suppl.*, **154**, 322–327: RCW 49 at Mid-Infrared Wavelengths: A GLIMPSE from the Spitzer Space Telescope
- Mercer, E. P., Clemens, D. P., Bania, T. M., *et al.* 2004, *Ap. J. Suppl.*, **154**, 328–332: Discovery of a Distant Star Formation Region using GLIMPSE
- Bania, T.M., Jackson, J.M., Clemens, D.P., Heyer, M.H., Simon, R., Shah, R. & Rathborne, J. 2004, in *How Does the Galaxy Work? A Galactic Tertulia with Dox Cox and Ron Reynolds*, E.J. Alfaro, E. Pérez & J. Franco, eds., v. **315 Astrophysics and Space Science Library**, (Kluwer: Dordrecht), 39–42: The BU-FCRAO Galactic Ring Survey
- Kobulnicky, H.A., Monson, A.J., Buckalew, B.A., Darnel, J.M., Uzpen, B., Meade, M.R., Babler, B.L., Indebetouw, R., Whitney, B.A., Watson, C., Churchwell, E., Wolfire, M.G., Wolff, M.J., Clemens, D.P., Shah, R., Bania, T.M., Benjamin, R.A., Cohen, M., Dickey, J.M., Jackson, J.M., Marston, A.P., Mathis, J.S., Mercer, E.P., Stauffer, J.R., Stolovy, S.R., Norris, J.P., Kutyrev, A., Canterna, R. & Pierce, M.J. 2005, *Astron. J.*, **129**, 239–250: Discovery of a New Low-Latitude Milky Way Globular Cluster Using GLIMPSE
- Indebetouw, R., Mathis, J.S., Babler, B.L., Meade, M.R., Watson, C., Whitney, B.A., Wolff, M.J., Wolfire, M.G., Cohen, M., **Bania, T.M.**, Benjamin, R.A., Clemens, D.P., Dickey, J.M., Jackson, J.M., Kobulnicky, H.A., Marston, A.P., Mercer, E.P., Stauffer, J.R., Stolovy, S.R. & Churchwell, E. 2005, *Ap. J.*, 931–938: The Wavelength Dependence of Interstellar Extinction from 1.25 to 8.0 μm Using GLIMPSE Data

- Roshi, D.A., Balser, D.S., Bania, T.M., Goss, W.M., & De Pree, C.G. 2005, *Ap. J.*, 625, 181–193: An 8.5 GHz Arecibo Survey of Carbon Recombination Lines toward Ultracompact H II Regions: Physical Properties of Dense Molecular Material
- Uzpen, B., Kobulnicky, H.A., Olsen, K.A.G., Clemens, D.P., Laurance, T.L., Meade, M.R., Babler, B.L., Indebetouw, R., Whitney, B.A., Watson, C., Wolfire, M.G., Wolff, M.J., Benjamin, R.A., **Bania, T.M.**, Cohen, M., Devine, K.E., Dickey, J.M., Heitsch, F., Jackson, J.M., Marston, A.P., Mathis, J.S., Mercer, E.P., Stauffer, J.R., Stolovy, S.R., Backman, D.E., & Churchwell, E. 2005, *Ap. J.*, 629, 512–525: Identification of Main-Sequence Stars with Mid-Infrared Excesses Using GLIMPSE: β Pictoris Analogs?
- Rogers, A.E.E., Dudevoir, K.A., Carter, J.C., Fanous, B.J., Kratzenberg, E., & Bania, T.M. 2005, *Ap. J.*, 630, L41–L44: Deuterium Abundance in the Interstellar Gas of the Galactic Anticenter from the 327 MHz Line
- Benjamin, R. A., Churchwell, E., Babler, B.L., Indebetouw, R., Meade, M.R., Whitney, B.A., Watson, C., Wolfire, M.G., Wolff, M.J., Ignace, R., **Bania, T.M.**, Bracker, S., Clemens, D.P., Chomiuk, L., Cohen, M., Dickey, J.M., Jackson, J.M., Kobulnicky, H.A., Mercer, E.P., Mathis, J.S., Stolovy, S.R., & Uzpen, B. 2005, *Ap. J.*, 630, L149–L152: First GLIMPSE Results on the Stellar Structure of the Galaxy
- Mercer, E.P., ... Bania, T.M., ... (20 co-authors) 2005, *Ap. J.*, 635, 560–569: New Star Clusters Discovered in the GLIMPSE Survey
- Balser, D.S., Goss, W.M., Bania, T.M., & Rood, R.T. 2006, *Ap. J.*, 640, 360–368: Detection of $^3\text{He}^+$ in a Planetary Nebula Using the VLA
- Jackson, J.M., ... Bania, T.M., ... (11 co-authors) 2006, *Ap. J. Suppl.*, 163, 145–159: The Boston University-Five College Radio Astronomy Observatory Galactic Ring Survey
- Quireza, C., Rood, R.T., Balser, D.S., & Bania, T.M. 2006, *Ap. J. Suppl.*, 165, 338–359: Radio Recombination Lines in Galactic H II Regions
- Balser, D.S., Bania, T.M., Rood, R.T., & Goss, W.M. 2006, in *Chemical Abundances and Mixing in Stars in the Milky Way and its Satellites*, S. Randich & L. Pasquini, eds., **ESO Astrophysics Symposia**, (Springer: Berlin), 35–36: Observations of ^3He in Planetary Nebulae
- Bania, T.M., Rood, R.T., Balser, & Quireza, C. 2006, in *Chemical Abundances and Mixing in Stars in the Milky Way and its Satellites*, S. Randich & L. Pasquini, eds., **ESO Astrophysics Symposia**, (Springer: Berlin), 349–350: First Epoch Observations of ^3He with the Green Bank Telescope
- Churchwell, E., Povich, M.S., ... Bania, T.M., ... (13 co-authors) 2006, *Ap. J.*, 649, 759–778: The Bubbling Galactic Disk
- Quireza, C., Rood, R.T., Bania, T.M., Balser, D.S., & Maciel, W.J. 2006, *Ap. J.*, 653, 1226–1240: The Galactic Electron Temperature Gradient
- Mercer, E.P., ... Bania, T.M., ... (20 co-authors) 2007, *Ap. J.*, 656, 242–247: A GLIMPSE of the Southern Jellyfish Nebula and Its Massive YSO
- Rogers, A.E.E., Dudevoir, K.A., & Bania, T.M. 2007, *Astron. J.*, 133, 1625–1632: Observations of the 327 MHz Deuterium Hyperfine Transition

- Bania, T.M., Rood, R.T., & Balser, D.S. 2007, *Space Sciences Series of ISSI*, **27**, G. Gloeckler, G. Mason, & R. von Steiger, eds. (Springer: Berlin), 12pp, 87–97: The Milky Way 3-Helium Abundance
- Uzpen, B., . . . Bania, T.M., . . . (30 co-authors) 2007, *Ap. J.*, 658, 1264-1288: “The Frequency of Mid-Infrared Excess Sources in Galactic Surveys”
- Bania, T.M., Balser, D.S., & Rood, R.T. 2007, “The Milky Way 3-Helium Abundance,” *Space Science Reviews*, Vol. 130, Issue 1-4, 53–62
- Bania, T. M., 2007, “The Saga of 3-Helium,” in *But it Was Fun: the first forty years of radio astronomy at Green Bank*, eds. F. J. Lockman, F. D. Ghigo, & D. S. Balser (Green Bank: NRAO), 384–395
- Rood, R. T., Bania, T. M., & Balser, D. S., 2007, “An Old Dog’s Last Hunt: The Last Observations of the NRAO Green Bank 140 Foot Radio Telescope,” in *But it Was Fun: the first forty years of radio astronomy at Green Bank*, eds. F. J. Lockman, F. D. Ghigo, & D. S. Balser (Green Bank: NRAO), 450–454
- Ingalls, J.G., Reach, W.T., Bania, T.M., & Carpenter, J.M. 2007, “Molecular Cloud Structure from a CO Spectral Line: Interferometric Observations of MBM-12,” in *SINS - Small Ionized and Neutral Structures in the Diffuse Interstellar Medium*, ASP Conference Series **365**, ed. M. Haverkorn & W. M. Goss (San Francisco: ASP), pp. 201–+.
- Bania, T.M., Balser, D.S., Rood, R.T., Wilson, T.L., & LaRocque, J.M. 2007, *Ap. J.*, 664, 915-927: ^3He in the Milky Way Interstellar Medium: Ionization Structure
- Balser, D. S., Rood, R. T., & Bania, T. M. 2007, *Science*, 317, 1170: Comment on “Deep Mixing of ^3He : Reconciling Big Bang and Stellar Nucleosynthesis”
- Rood, R. T., Quireza, C., Bania, T. M., Balser, D. S., & Maciel, W. J. 2007, in *From Stars to Galaxies: Building the pieces to build up the Universe*, ASP Conference Series, 374, A. Vallenari, R. Tantaló, L. Portinari & A. Moretti, eds. (San Francisco: Astron. Soc. Pacific), 169-176: The Abundance Gradient in Galactic H II Regions
- Anderson, L.D., Bania, T.M., & Snowden, S.L., 2009, in *The Local Bubble and Beyond II*, AIP Conference Proceedings, 1156, Kuntz, K.D., Smith, R.K., & Snowden, S.L. eds., (AIP: Melville) pg. 29-33: Mapping the Hot ISM Using X-Ray Shadowing Towards Infrared Dark Clouds
- Anderson, L.D., & Bania, T.M. 2009, *Ap. J.*, 690, 706-719: Resolution of the Distance Ambiguity for Galactic H II Regions
- Koo, B-C., Gibson, S.J., Kang, J-h., Douglas, K.A., Park, G., Peek, J.E.G., Korpela, E.J., Heiles, C.E. & Bania, T.M., 2009, arXiv:0912.2388: I-GALFA: The Inner-Galaxy ALFA Low-Latitude H I Survey
- Anderson, L. A., Bania, T. M., Jackson, J. M., Clemens, D. P., Heyer, M., Simon, R., Shah, R. Y., & Rathborne, J. 2009, *Ap. J. Suppl.*, 181, 255-271: The Molecular Properties of Galactic H II Regions
- Bania, T.M., Rood, R.T., & Balser, D.S., 2010, in *Light Elements in the Universe*, Proceedings IAU Symposium No. 268, eds. C. Charbonnel, M. Tosi, F. Primas, & C. Chiappini, (Cambridge: CUP), 81-90: Measurements of 3-He in Galactic H II Regions and Planetary Nebulae

- Balser, D. S., Rood, R. T., & Bania, T. M. 2010, in *Light Elements in the Universe, IAU Symposium 268*, eds. C. Charbonnel, M. Tosi, F. Primas, & C. Chiappini, (Cambridge: CUP), 101-106: “ ^4He Abundances: Optical versus Radio Recombination Line Measurements”
- Bania, T.M., Anderson, L.D., Balser, D.S., & Rood, R.T. 2010, *Ap. J. (Letters)*, 718, L106-L111: The Green Bank Telescope H II Region Discovery Survey
- Anderson, L.D., Snowden, S.L., & Bania, T.M. 2010, *Ap. J.*, 721, 1319-1328: X-ray Shadowing Experiments Toward Infrared Dark Clouds
- Anderson, L.D., Bania, T.M., Balser, D.S., & Rood, R.T. 2010, *Ap. J. Suppl.*, in the press: The Green Bank Telescope H II Region Discovery Survey II. The Source Catalog
- Balser, D.S., Rood, R.T., Bania, T.M., & Anderson, L.D. 2010, *Ap. J.*, in the press: H II Region Metallicity Distribution in the Milky Way Disk
- Ingalls, J.G., Bania, T.M., Boulanger, F., Draine, B.T., Falgarone, E., & Hily-Blant, P. 2010, *Ap. J.*, in the press: Spitzer IRS Detection of Molecular Hydrogen Rotational Emission Towards Translucent Clouds

TECHNICAL MEMORANDA AND SCIENTIFIC REPORTS

- Stark, A.A., and Bania, T.M. "AST/RO Logistical Requirements", AST/RO Technical Memorandum #2, March 1990.
- Stark, A.A., Bally, J., Wilson, R.W., Bania, T.M., Lane, A.P., and Lo, K.-Y. "Instrument Interface for a Small Far-IR Telescope", AST/RO Technical Memorandum #4, July 1990.
- Stark, A.A., Lane, A.P., Bania, T.M., Chamberlin, R., Ingalls, J., Jackson, J., Huang, M., Wilson, R.W., Mumma, D., Wright, G., and Bally, J. "Summary of Preliminary Tests of the AST/RO Instrument", AST/RO Technical Memorandum #14, May 1993.
- Stark, A.A., Lane, A.P., Balm, S., Rumitz, M., Bania, T.M., Chamberlin, R., Huang, M., Ingalls, J., Jackson, J., Castro, E., Wilson, R.W., Mumma, D., Wright, G., Bally, J., Lo, K.-Y., Engargiola, G., Stutzki, J., and Staguhn, J. "Summary of 1994 Tests of the AST/RO Instrument", AST/RO Technical Memorandum #19, July 1994.
- Bania, T.M., *et al.* 2000, Associated Universities Incorporated, 1–40: "2000 Report of the National Radio Astronomy Observatory Visiting Committee to Associated Universities Incorporated"
- Bania, T.M., and GALFA Consortium, 2003, National Astronomy and Ionosphere Center, 1–74: "Galactic Astronomy with the Arecibo L-band Feed Array (ALFA)"

PUBLISHED ABSTRACTS OF SCIENTIFIC MEETING TALKS

- Bania, T. M., & Burton, W. B. 1973, *Bull. American Astr. Soc.*, **5**, 8: “Comparison of Stellar and Neutral Hydrogen Galactic Kinematics” at 139th AAS Meeting, Las Cruces, NM, 9-12 Jan. 1973.
- Burton, W. B., & Bania, T. M. 1974, *Bull. American Astr. Soc.*, **6**, 344: “An Interpretation of the Kinematics of the Local Interstellar Neutral Hydrogen” at 143rd AAS Meeting, Rochester, NY, 20-23 Aug. 1974.
- Bania, T. M. 1975, *Bull. American Astr. Soc.*, **7**, 514: “Observations of Carbon Monoxide in the Inner Galaxy”, at 147th AAS Meeting, Chicago, IL, 8-10 Dec. 1975.
- Bania, T. M. 1976, *Bull. American Astr. Soc.*, **8**, 334–335: “Carbon Monoxide Kinematics in the Inner Galaxy” at 148th AAS Meeting, Haverford, PA, 21-25 June 1976.
- Bania, T. M. 1977, *Bull. American Astr. Soc.*, **9**, 353: “The Galactic Center Molecular Ring” at 150th AAS Meeting, Atlanta, GA, 12-15 June 1977.
- Bania, T. M., & Lyon, J. G. 1978, *Bull. American Astr. Soc.*, **10**, 465: “B Stars and the Structure of the Interstellar Medium” at 152nd AAS Meeting, Madison, WI, 26-28 June 1978.
- Giguere, P. T., Huebner, W. F., & Bania, T. M. 1979, in **Summary of a Workshop on Experimental Approaches to Comets**, 11–13 Sept. 1978, Houston, TX, *Lunar and Planetary Institute Contribution No. 361*, ed. J. Oro, pp. 26–27: “Radio Observation of Comet Meier (1978f) in 18-cm OH Lines”
- Bania, T. M. 1979, *Bull. American Astr. Soc.*, **11**, 707: “Carbon Monoxide in the Inner Galaxy” at 155th AAS Meeting, San Francisco, CA, 13-18 Jan. 1980.
- Rickard, L. J., Bania, T. M., & Turner, B. E. 1979, *Bull. American Astr. Soc.*, **11**, 719: “Hydroxyl Absorption in Late-Type Galaxies” at 155th AAS Meeting, San Francisco, CA, 13-18 Jan. 1980.
- Bania, T. M., & Lyon, J. G. 1980, *Bull. American Astr. Soc.*, **12**, 460: “Numerical Simulations of the Interstellar Medium: OB Stars and the Formation and Destruction of Diffuse Clouds”, at 156th AAS Meeting, College Park, MD, 15-18 June 1980.
- Bania, T. M., & Lockman, F. J. 1980, *Bull. American Astr. Soc.*, **12**, 859–860: “The Arecibo Survey of the Vertical Distribution of Galactic HI” at 157th AAS Meeting, Albuquerque, NM, 11-14 Jan. 1981.
- Lockman, F. J., & Bania, T. M. 1980, *Bull. American Astr. Soc.*, **12**, 860: “The Structure of Galactic HI on 4 arcmin Angular Scales: Preliminary Results from the Arecibo Survey” at 157th AAS Meeting, Albuquerque, NM, 11-14 Jan. 1981.
- Lockman, F. J., & Bania, T. M. 1981, *Bull. American Astr. Soc.*, **13**, 538: “On the Vertical Structure of Galactic Rotation” at 158th AAS Meeting, Calgary, Ontario, Canada, June 1981.
- Bania, T. M., Rood, R. T., & Wilson, T. L. 1982, *Bull. American Astr. Soc.*, **14**, 913: “Detections of the 8.6 GHz Hyperfine Line of $^3\text{He}^+$ in HII Regions”, at 161st AAS Meeting, Boston, MA, 10-12 Jan. 1983.

- Bania, T. M., & Lockman, F. J. 1983, *Bull. American Astr. Soc.*, **15**, 929: “A Survey of the Latitude Structure of Galactic HI on Small Angular Scales”, at 163rd AAS Meeting, Las Vegas, NV, 8-11 Jan. 1984.
- Bania, T. M. 1985, “A Symbiotic SETI Search”, Invited Talk at the 25th Anniversary Workshop on the Search for Extraterrestrial Intelligence, National Radio Astronomy Observatory, Green Bank, WV, May 1985.
- Bania, T. M. 1985, *Bull. American Astr. Soc.*, **17**, 561–562: “Kinematic Distances to Cool HI Clouds”, at 166th AAS Meeting, Charlottesville, VA, 3-7 June 1985.
- Bania, T. M. 1987, *Bull. American Astr. Soc.*, **19**, 692: “The Boston University-Arecibo Galactic HI Survey”, at 170th AAS/CAS Meeting, Vancouver, Canada, 14-18 June 1987.
- Kuchar, T. A., & Bania, T. M. 1987, *Bull. American Astr. Soc.*, **19**, 678: “BU-Arecibo HI Galactic Survey Progress Report” at 170th AAS/CAS Meeting, Vancouver, Canada, 14-18 June 1987.
- Kuchar, T. A., & Bania, T. M. 1989, *Bull. American Astr. Soc.*, **20**, 1027: “H I Absorption Toward Galactic H II Regions” at 173rd AAS Meeting, Boston, MA, 8-12 January 1989.
- Pound, M. W., Bania, T. M., & Wilson, R. W. 1989, *Bull. American Astr. Soc.*, **20**, 1031: “Sub-parsec Clumping in the Nearby Molecular Cloud MBM 12” at 173rd AAS Meeting, Boston, MA, 8-12 January 1989.
- Liu, T., Janes, K.A., & Bania, T.M. 1989, *Bull. American Astr. Soc.*, **20**, 963: “Radial Velocities of 20 Young Open Clusters” at 173rd AAS Meeting, Boston, MA, 8-12 January 1989.
- Puchalsky, R., Blitz, L., Bania, T., Kuchar, T., & Stark, A. A. 1990, *Bull. American Astr. Soc.*, **21**, 1181: “The Rosette GMC and Maddalena’s Cloud: A Study of Comparative GMC Evolution” at 175th AAS Meeting, Washington, DC, 9-13 January 1990.
- Kuchar, T.A., Bania, T.M., Blitz, L., & Stark, A.A. 1991, “Atomic and Molecular Observations of the Rosette Molecular Cloud”, in *The Formation and Evolution of Star Clusters, A.S.P. Conf. Ser.*, **13**, ed. K.A. Janes (Chelsea, MI: Astr. Soc. of Pacific), p. 151.
- Balser, D.S., Bania, T.M., & Lyon, J.G. 1991, “OB Stars and the Structure of the Interstellar Medium”, in *The Formation and Evolution of Star Clusters, A.S.P. Conf. Ser.*, **13**, ed. K.A. Janes (Chelsea, MI: Astr. Soc. of Pacific), p. 136.
- Kuchar, T.A., Bania, T.M., & Blitz, L. 1992, *Bull. American Astr. Soc.*, **23**, 1441: “An Expanding Shell Surrounding the Rosette Nebula”, at 179th AAS Meeting, Atlanta, GA, 12-16 January 1992.
- Marscher, A.P., Moore, E.M., & Bania, T.M. “Detection of AU-Scale Structure in Molecular Clouds,” 1993, *Bulletin of the American Astronomical Society*, **25**, 902. Poster paper exhibited at 175th American Astronomical Society Meeting, Berkeley, CA, June 6-10, 1993.
- Bania, T.M., Balser, D.S., & Rood, R.T. 1994, *Bull. American Astr. Soc.*, **25**, 1433: “Observations of $^3\text{He}^+$ Emission in the Milky Way”, at 183rd AAS Meeting, Washington, DC, 11-15 January 1994.

- Balser, D.S., Bania, T.M., Rood, R.T., & Wilson, T.L. 1994, *Bull. American Astr. Soc.*, **25**, 1433: “Improved ^3He Abundances in HII Regions”, at 183rd AAS Meeting, Washington, DC, 11-15 January 1994.
- Rood, R.T., Bania, T.M., & Balser, D.S. 1994, *Bull. American Astr. Soc.*, **25**, 1465: “Cosmological and Chemical Evolution Implications of New ^3He Abundances”, at 183rd AAS Meeting, Washington, DC, 11-15 January 1994.
- Ingalls, J.G., Chamberlin, R.A., Bania, T.M., Jackson, J.M., Stark, A.A., & Lane, A.P. 1996, *Bull. American Astr. Soc.*, **28**, 856: “Atomic Carbon in Southern Hemisphere High Latitude Clouds”, at 188th AAS Meeting, Madison, WI, 9-13 June 1996.
- Huang, M., Chamberlin, R.A., Bania, T.M., Stark, A.A., & Lane, A.P. 1996, *Bull. American Astr. Soc.*, **28**, 888: “Observations of Atomic Carbon in Southern Hemisphere H II Regions”, at 188th AAS Meeting, Madison, WI, 9-13 June 1996.
- Bolato, A.D., Chamberlin, R.A., Jackson, J.M., Stark, A.A., Lane, A.P., & Bania, T.M. 1996, *Bull. American Astr. Soc.*, **28**, 901: “First Submillimeter Neutral Carbon Observations of the Large Magellanic Cloud: Photodissociation Regions in a Metal Poor Environment”, at 188th AAS Meeting, Madison, WI, 9-13 June 1996.
- Clemens, D., Deutsch, L., Jackson, J., Bania, T., & Yelle, R. 1996, *Bull. American Astr. Soc.*, **28**, 906: “IMPP: The Far-Infrared IMaging Photometer and Polarimeter for SOFIA”, at 188th AAS Meeting, Madison, WI, 9-13 June 1996.
- Bania, T.M., Balser, D.S., Rood, R.T., & Wilson, T.L. 1996, *Bull. American Astr. Soc.*, **28**, 945: “The ^3He Abundance in Planetary Nebulae”, at 188th AAS Meeting, Madison, WI, 9-13 June 1996.
- Bania, T.M. 1997, in **Program and Abstracts for the 1997 URSI North American Radio Science Meeting**, 641: “Antarctic Submillimeter Telescope and Remote Observatory”, at 1997 URSI Meeting, Montreal, Canada, 13-18 July 1997.
- Bania, T.M., Bolatto, A.D., Huang, M., Ingalls, J.G., Jackson, J.M., Wright, G.W., Lane, A.P., Rumitz, M., Wilson, R.W., Stark, A.A., & Zhang, X. 1998, *Bull. American Astr. Soc.*, **30**, 904: “AST/RO CO(4-3) Observations of the Central Kiloparsec of the Milky Way”, at 192nd AAS Meeting, San Diego, CA, 8-11 June 1998.
- Ojha, R., Stark, A.A., Lane, A.P., Rumitz, M., Wilson, R.W., Chamberline, R.A., Wright, G., Bania, T.M., Bolatto, A.D., Huang, M., Ingalls, J.G., & Jackson, J.M. 1998, *Bull. American Astr. Soc.*, **30**, 904: “AST/RO Observations of Atomic Carbon in the Galactic Center”, at 192nd AAS Meeting, San Diego, CA, 8-11 June 1998.
- Ingalls, J.G., Bania, T.M., Jackson, J.M., Chamberlin, R.A., Lane, A.P., Rumitz, M., & Stark, A.A., 1998, *Bull. American Astr. Soc.*, **30**, 904: “AST/RO Studies of Carbon Gas in High-Latitude Clouds”, at 192nd AAS Meeting, San Diego, CA, 8-11 June 1998.
- Bolato, A.D., Jackson, J.M., Bania, T.M., Huang, M., Ingalls, J.G., Chamberlin, R.A., Wright, G.W., Balm, S.P., Lane, A.P., Rumitz, M., Wilson, R.W., & Stark, A.A., 1998, *Bull. American Astr. Soc.*, **30**, 904: “AST/RO Observations of Photodissociation Regions in a Metal-Poor Environment”, at 192nd AAS Meeting, San Diego, CA, 8-11 June 1998.

- Jackson, J.M., Bania, T.M., Bolatto, A.D., Huang, M., Ingalls, J.G., Chamberlin, R.A., Wright, G.W., Lane, A.P., Rumitz, M., Wilson, R.W., & Stark, A.A., 1998, *Bull. American Astr. Soc.*, **30**, 905: “AST/RO CI and CO 4-3 Observations of the NGC 6334 Star Forming Region”, at 192nd AAS Meeting, San Diego, CA, 8-11 June 1998.
- Huang, M., Bania, T.M., Bolatto, A.D., Chamberlin, R.A., Ingalls, J.G., Jackson, J., Stark, A.A., Lane, A.P., Rumitz, M., Wilson, R.W., & Wright, G., 1998, *Bull. American Astr. Soc.*, **30**, 905: “AST/RO Observations of [CI] in Galactic HII Regions”, at 192nd AAS Meeting, San Diego, CA, 8-11 June 1998.
- Bania, T.M., Rood, R.T., & Balsaer, D.S., 1999, *Bull. American Astr. Soc.*, **31**, 888: “3-Helium in Obscure HII Regions” at 194th AAS Meeting, Chicago, IL, 30 May – 3 June 1999.
- Simon, R., Jackson, J.M., Clemens, D.P., Bania, T.M., Kolpak, M., & Heyer, M.H. 1999, *Bull. American Astr. Soc.*, **31**, 970: *The BU-FCRAO Milky Way Galactic Ring Survey I. The first two Square Degrees* at 194th AAS Meeting, Chicago, IL, 30 May – 3 June 1999.
- Kolpak, M., Simon, R., Jackson, J.M., Clemens, D.P., Bania, T.M., Heyer, M.H., Egan, M.P., & Price, S.D. 1999, *Bull. American Astr. Soc.*, **31**, 970–971: *The BU-FCRAO Milky Way Galactic Ring Survey II. Kinematics and Correlation with the Optical and Infrared* at 194th AAS Meeting, Chicago, IL, 30 May – 3 June 1999.
- Clemens, D., Jackson, J.M., Bania, T.M., & Deutsch, L. 1999, Proceedings of the SOFIA Star Formation Workshop, July 12–17, 1999, Santa Cruz, CA: “IMPP: A Far-Infrared IMaging Photometer and Polarimeter for SOFIA” (electronic abstract see www.astro.ucla.edu/meetings/SOFIA_Star_Formation99/PosterList.htm)
- Jackson, J.M., Bania, T.M., Kolpak, M., Simon, R., Clemens, D.P., & Heyer, M.H. 2000, *Bull. American Astr. Soc.*, **32**, 708: “The BU-FCRAO Galactic Ring Survey: Resolving the Near-Far Kinematic Distance Ambiguity” at 196th AAS Meeting, Rochester, NY, 4–8 June 2000.
- Simon, R., Jackson, J.M., Bania, T.M., Clemens, D.P., & Heyer, M.H. 2000, *Bull. American Astr. Soc.*, **32**, 708: “The BU-FCRAO Galactic Ring Survey: Structure and Equilibrium of four Molecular Clouds”
- Law, C.J., Simon, R., Bania, T.M., Clemens, D.P., Heyer, M.H., Jackson, J.M., & Kolpak, M. 2000, *Bull. American Astr. Soc.*, **32**, 709: “The BU-FCRAO Galactic Ring Survey: Comparison of CS with 13CO Emission”
- Kolpak, M., Simon, R., Bania, T.M., Clemens, D.P., Jackson, J.M., Law, C.J., Heyer, M.H., Egan, M.P., & Price, S.D. 2000, *Bull. American Astr. Soc.*, **32**, 709: “The BU-FCRAO Galactic Ring Survey: Determining the Distances to Infrared Point Sources”
- Huang, M., Bania, T. M., Bolatto, A., Chamberlin, R. A., Ingalls, J. G., Jackson, J. M., Wright, G. W., Lane, A. P., Stark, A. A., Wilson, R. W., & Zhang, X. 2000, *Bull. American Astr. Soc.*, **197**, 4310: “AST/RO Mapping Observations of HII Regions in CI”

- McQuinn, K. B., Simon, R., Jackson, J. M., & Bania, T. M. 2000, *Bull. American Astr. Soc.*, 197, 0511: “BU-FCRAO Galactic Ring Survey: Finding Near Molecular Clouds in the Galaxy”
- Simon, R., Heyer, M. H., Bensch, F. P., Jackson, J. M., Bania, T. M., & Clemens, D. P. 2000, *Bull. American Astr. Soc.*, 197, 0510: “The BU-FCRAO Milky Way Galactic Ring Survey: Principal Component and Delta-Variance Analysis of large scale spectral line images of clouds in the first Galactic quadrant”
- Kolpak, M. A., Jackson, J. M., Bania, T. M., Clemens, D. P., Simon, R., Heyer, M. H., & Dickey, J. M. 2000, *Bull. American Astr. Soc.*, 197, 0509: “The BU-FCRAO Galactic Ring Survey: Breaking the Near-Far Kinematic Distance Ambiguity”
- Kolpak, M., Simon, R., Bania, T.M., Clemens, D.P., Jackson, J.M., Law, C.J., Heyer, M.H., Egan, M.P., & Price, S.D. 2000, *Bull. American Astr. Soc.*, 198, 4135: “The BU-FCRAO Galactic Ring Survey: Determining the Distances to Infrared Point Sources”
- Rood, R. T., Bania, T. M., & Balser, D. S. 2001, *Bull. American Astr. Soc.*, **33**, 842: “An Old Dog’s Last Hunt”
- Balser, D. S., Rood, R. T., & Bania, T. M. 2001, *Bull. American Astr. Soc.*, **33**, 842: “Helium Isotopic Abundances in Galactic HII Regions”
- Bania, T. M., Rood, R. T., & Balser, D. S. 2001, *Bull. American Astr. Soc.*, **33**, 842: “Stalking the Cosmic 3-He Abundance: The 3-Helium Plateau”
- Kolpak, M., Jackson, J.M., & Bania, T.M. 2001, *Bull. American Astr. Soc.*, **33**, 1390: “The Radial Distribution of Cold HI in the Galaxy”
- Simon, R., Jackson, J.M., Bania, T.M., Clemens, D.P., Heyer, M.H., Egan, M.P., & Price, S.D. 2001, *Bull. American Astr. Soc.*, **33**, 1450: “Infrared Dark Clouds in the BU-FCRAO Milky Way Galactic Ring Survey”
- Jackson, J.M., Gatley, I., Bania, T.M., Tollestrup, E., & Dunham, T. 2001, *Bull. American Astr. Soc.*, **33**, 1466: “The Antarctic Infrared Observatory AIRO”
- Shah, R. Y., Simon, R., Flynn, E., Jackson, J. M., Bania, T. M., Clemens, D. P., Heyer, M. H., Johnson, A., Kolpak, M., McQuinn, K., Fox, O., Kubiszewski, I., Nero, D., Rogers, K., & Veach, T. 2002 *Bull. American Astr. Soc.*, **34**, 1283: *The BU-FCRAO Milky Way Galactic Ring Survey*
- Simon, R., Jackson, J. M., Bania, T. M., Clemens, D. P., & Heyer, M. H. 2002, *Bull. American Astr. Soc.*, **34**, 1282: *MSX Infrared Dark Clouds in the BU-FCRAO Galactic Ring Survey: A Galactic Ring Population*
- Flynn, E., Jackson, J. M., Simon, R., Shah, R. Y., Bania, T. M., & Wolfire, M. 2002, *Bull. American Astr. Soc.*, **34**, 1282: *H I Self-Absorption Toward Molecular Clouds: Theoretical Models*
- Jackson, J. M., Clemens, D. P., Bania, T. M., & Tollestrup, E. V. 2003, *Astronomy in Antarctica, 25th meeting of the IAU, Special Session 2, 18 July, 2003 in Sydney, Australia*, **2**: “AIRO: the Antarctic Infrared Observatory”
- Bania, T.M., Rood, R.T., Balser, D.S., & Quireza Campos, C. 2004, *Chemical Abundances and Mixing in Stars in the Milky Way and its Satellites, September 13-17 2004, Castiglione*

- della Pescaia (Grosseto), Tuscany, Italy, Jointly organized by INAF-Osservatorio Astrofisico di Arcetri and ESO, "First Epoch Observations of ^3He with the Green Bank Telescope"
- Balser, D.S., Bania, T.M., Rood, R.T., & Goss, W.M. 2004, *Chemical Abundances and Mixing in Stars in the Milky Way and its Satellites, September 13-17 2004, Castiglione della Pescaia (Grosseto), Tuscany, Italy, Jointly organized by INAF-Osservatorio Astrofisico di Arcetri and ESO, "Observations of ^3He in Planetary Nebulae"*
- Simon, R., Jackson, J.M., Shah, R., Rathborne, J., Bania, T.M., Clemens, D.P., & Heyer, M.H. 2004, *The Dense Interstellar Medium in Galaxies, "The BU-FCRAO Galactic Ring Survey"*, 199
- Simon, R., Jackson, J.M., Bania, T.M., Clemens, D.P., & Heyer, M.H. 2004, *The Dense Interstellar Medium in Galaxies, "The Distribution of MSX Dark Clouds in the Inner Milky Way"*, 229
- Flynn, E.S., Jackson, J.M., Bania, T.M., & Wolfire, M. 2004, *ASP Conf. Ser. 317: Milky Way Surveys: The Structure and Evolution of our Galaxy*, 317, 44: "HI Self-Absorption Toward Molecular Clouds: Theoretical Models"
- Jackson, J.M., Simon, R., Shah, R., Rathborne, J., Heyer, M.H., Clemens, D.P., & Bania, T.M. 2004, *AASP Conf. Ser. 317: Milky Way Surveys: The Structure and Evolution of our Galaxy*, 317, 49: "The Boston University-FCRAO Galactic Ring Survey"
- Rathborne, J.M., Shah, R.Y., Bania, T.M., Clemens, D.P., Johnson, A.M., Flynn, E., Bonaventura, N., Simon, R., & Meyer, M.H. 2004, *ASP Conf. Ser. 317: Milky Way Surveys: The Structure and Evolution of our Galaxy*, 317, 100: "Identifying Nearby Molecular Clouds"
- Shah, R.Y., Rathborne, J., Simon, R., Jackson, J.M., Bania, T.M., Clemens, D.P., Johnson, A.M., Flynn, E.S., & Heyer, M.H. 2004, *ASP Conf. Ser. 317: Milky Way Surveys: The Structure and Evolution of our Galaxy*, 317, 103: "The BU-FCRAO Galactic Ring Survey: Third Data Release"
- Simon, R., Shah, R.Y., Rathborne, J., Jackson, J.M., Bania, T.M., Clemens, D.P., & Heyer, M.H. 2004, *ASP Conf. Ser. 317: Milky Way Surveys: The Structure and Evolution of our Galaxy*, 317, 159: "MSX Infrared Dark Clouds in the BU-FCRAO Galactic Ring Survey: A Galactic Ring Population"
- Bania, T.M., Jackson, J.M., Clemens, D.P., Heyer, M.H., Simon, R., Shah, R., & Rathborne, J. 2004, *ASSL Vol. 315: How Does the Galaxy Work?*, 39: "The BU-FCRAO Galactic Ring Survey"
- Jackson, J.M., Rathborne, J.M., Shah, R.Y., Simon, R., Bania, T.M., *et al.* (10 total co-authors) 2005, in *Protostars and Planets V*, 1 page: "The Boston University-Five College Radio Astronomy Observatory Galactic Ring Survey"
- Mercer, E.P., Clemens, D.P., Jackson, J.M., Bania, T.M., Rathborne, J.M., Shah, R.Y. and the GLIMPSE Team 2005, *Bull. American Astr. Soc.*, **207**, 1 page: "GLIMPSEing the Galactic Horizon"

- Jackson, J.M., Rathborne, J.M., Shah, R.Y., Simon, R., Bania, T.M., *et al.* (11 total co-authors) 2005, *Bull. American Astr. Soc.*, **207**,1 page: “The Boston University-Five College Radio Astronomy Observatory Galactic Ring Survey”
- Simon, R., Jackson, J., Bania, T.M., Clemens, D.P. & Heyer, M.H. 2005, *Astronomische Nachrichten*, **326**,668: “The Distribution of MSX Infrared Dark Clouds in the inner Milky Way”
- Anderson, L.A., & Bania, T.M. 2008, *Bull. American Astr. Soc.*, **40**,212: “Milky Way H II Regions: From a GLIMPSE to a Stare”
- Anderson, L.A., & Bania, T.M. 2008, *Bull. American Astr. Soc.*, **40**,212: “Resolution of the Distance Ambiguity for Inner Galaxy H II Regions”
- Anderson, L.A., & Bania, T.M. 2009, *Bull. American Astr. Soc.*, **213**,604.09: “Discovering New Galactic H II Regions”
- Ingalls, J.G., & Bania, T.M., 2009, at *Reionization to Exoplanets: Spitzer’s Growing Legacy*, 26-28 Oct. 2009, Pasadena, CA: “Molecular Hydrogen Emission from Translucent Galactic Clouds”
- Shitanish, J., Balser, D.S., Bania, T.M., Rood, R.T., & Roshi, D.A. 2010, *Bull. American Astr. Soc.*, **41**,263: “Magnetic Fields in Photo-dissociation Regions”
- Bania, T.M., Anderson, L.D., Balser, D.S., & Rood, R.T. 2010, AAS Abstracts, **216**,309.02: The Green Bank Telescope Galactic HII Region Discovery Survey
- Anderson, L.D., Bania, T.M., Balser, D.S., & Rood, R.T. 2010, AAS Abstracts, **216**,424.02: First Results from the Green Bank Telescope HII Region Discovery Survey
- Koo, B-C., Gibson, S.J., Kang, J-h., Douglas, K.A., Park, G., Peek, J.E.G., Korpela, E.J., Heiles, C.E. & Bania, T.M., 2010, *Highlights of Astronomy*, **15**,788: : I-GALFA: The Inner-Galaxy ALFA Low-Latitute H I Survey
- Bania, T.M., Anderson, L.D., Balser, D.S., & Rood, R.T. 2011, *BAAS*, **43**,13203: The GBT Galactic HII Region Discovery Survey Source Catalog
- Anderson, L.D., Bania, T.M., Balser, D.S., & Rood, R.T. 2011, *BAAS*, **43**,13202: Galactic Structure as Probed by the GBT HRDS
- Balser, D.S., Rood, R.T., Bania, T.M., & Anderson, L.D. 2011, *BAAS*, **43**,13203: Metallicity Distribution in the Milky Way Disk
- Montet, B., Balser, D.S., Roshi, D.A., Shitanishi, J., Bania, T.M., & Rood, R.T. 2011, *BAAS*, **43**,25102: Magnetic Fields in Photodissociation Regions

INVITED TALKS AT MEETINGS, CONFERENCES, AND UNIVERSITIES

- Bania, T.M. (1976), “*Distribution of CO within 10° of the Galactic Center*” at Symposium sponsored by NASA’s Goddard Space Flight Center: **The Structure and Content of the Galaxy and Galactic Gamma Rays**, Greenbelt, MD, 2-4 June 1976.
- Received National Academy of Science grant to attend the XVIth General Assembly of the International Astronomical Union, Grenoble, France, 24 Aug. - 3 Sept. 1976.
- Colloquium, National Radio Astronomy Observatory, Charlottesville, VA, Nov. 1976: “Carbon Monoxide in the Inner Galaxy” (Dissertation Seminar)
- Colloquium, Five College Radio Astronomy Observatory, University of Massachusetts, Amherst, MA, March 1977: “The Distribution of Carbon Monoxide Near the Galactic Center”
- Colloquium, Center for Radiophysics and Space Research (CRSR) and Department of Astronomy, Cornell University, Ithaca, NY, April 1977: “Carbon Monoxide in the Inner Galaxy”
- Invited Paper: “*Theoretical Models of Interaction of Stars with the Interstellar Medium*” at Invitational Meeting on Self-Propagating Star Formation, IBM Thomas J. Watson Research Center, Yorktown Heights, New York, 15 Dec. 1978.
- Colloquium, National Radio Astronomy Observatory, Charlottesville, VA, Feb. 1979: “OB Stars and the Structure of the Interstellar Medium”
- Colloquium, CRSR, Cornell University, Ithaca, NY, March 1979: “The Structure of the Interstellar Medium”
- Bania, T. M. (1979), “*OB Stars and the Formation of Diffuse HI Clouds*” at XVII General Assembly of the International Astronomical Union, Montreal, Quebec, Canada, 14-23 Aug. 1979.
- Colloquium, Department of Physics and Astronomy, University of Minnesota, Minneapolis, MN, Dec. 1979: “The Ionization of the Interstellar Medium by Star Clusters”
- Colloquium, Department of Astronomy, University of Chicago, Chicago, IL, Apr. 1980: “Numerical Simulations of the Interstellar Medium”
- Colloquium, Department of Physics, University of North Carolina, Chapel Hill, NC, May 1980: “Hot Stars and the Structure of the Interstellar Medium”
- Attended Workshop on Giant Molecular Clouds at the Institute for Advanced Study, Princeton, NJ, Sept. 1980.
- Colloquium, Department of Astronomy, University of Virginia, Charlottesville, VA, March 1981: “Carbon Monoxide in the 3 Kpc Arm”
- Colloquium, Department of Astronomy, Indiana University, Bloomington, IN, Apr. 1981: “Numerical Simulations of the Effects of OB Stars on the Interstellar Medium”
- Colloquium, Physics Department, University of Cincinnati, Cincinnati, OH, Apr. 1981: “Numerical Simulations of the Interstellar Medium”
- Invited Speaker at NRAO Green Bank Workshop: “*Phases of the Interstellar Medium*”, Green Bank, WV, 10-13 May 1981: “Numerical Simulations of the Interstellar Medium”

- Bania, T. M. (1982), “A New Survey of the Latitude Distribution of Carbon Monoxide Emission in the Inner Galaxy” at University of British Columbia Workshop: “**The Milky Way: Structure, Kinematics, and Dynamics**”, Vancouver, BC, Canada, June 1982.
- Colloquium, CRSR, Cornell University, Ithaca, NY, May 1983: “Measurements of 3-He in the Milky Way”
- Colloquium, Max Planck Institut für Radioastronomie, Bonn, West Germany, June 1983; “The 3-He Abundance in the Interstellar Medium”
- Colloquium, Sterrewacht, Leiden University, Leiden, The Netherlands, June 1983: “The Arecibo-Green Bank Survey of HI in the First Galactic Quadrant”
- Colloquium, Physics Department, Northeastern University, Boston, MA, Oct. 1983: “The Measurement of 3-He Abundances in the Interstellar Medium”
- Colloquium, Department of Astronomy, University of Texas at Austin, Austin, TX, Nov. 1983: “The Abundance of Low Mass Helium in the Galaxy: Cosmological Consequences”
- Colloquium, Star Formation Working Group, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, Nov. 1983: “HI Self-Absorption toward an Anonymous OB Association”
- Colloquium, National Radio Astronomy Observatory, Charlottesville, VA, Dec. 1983: “The Detection of 3-He+ Emission in Galactic HII Regions”
- Member, Local Organizing Committee for IAU Symposium No. **112: Search For Extraterrestrial Life – Recent Developments**, Boston, MA, 18-21 June 1984.
- Colloquium, Chemistry Department, Boston University, Boston, MA, Oct. 1984: “Molecules and Ions in the Interstellar Medium”
- NRAO User’s Committee Meeting, Charlottesville, VA, Nov. 1984.
- NAIC ASAC Meeting, San Juan, PR, Nov. 1984.
- Colloquium, Yerkes Observatory of the University of Chicago, Williams Bay, WI, Dec. 1984: “The Abundance of 3-He in the Interstellar Medium”
- Colloquium, National Radio Astronomy Observatory, Green Bank, WV, Mar. 1985: “Why Make Another HI Survey of the Milky Way?”
- Colloquium, Star Formation Working Group, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, March, 1985: “The Arecibo Survey of Galactic HI”
- Invited talk at the 25th Anniversary Workshop on the Search for Extraterrestrial Intelligence, National Radio Astronomy Observatory, Green Bank, WV, May 1985: “A Symbiotic SETI Search”
- Lectures on the Interstellar Medium, NRAO Summer Student Program, Charlottesville, VA, June 1985: “The Interstellar Medium” and “Kinematics of Galactic Structure”
- Colloquium, National Radio Astronomy Observatory, Charlottesville, VA, July, 1985: “Why Make Another HI Survey of the Milky Way?”
- Colloquium, National Radio Astronomy Observatory, Charlottesville, VA, Aug. 1985: “Clump 1: A Unique Giant Molecular Cloud”

- Invited Participant at Millimeter Array Workshop held by the National Radio Astronomy Observatory in Green Bank, WV, 1–3 Oct. 1985. (Member of the “Low-Z Extragalactic Working Group”)
- Colloquium, National Astronomy and Ionosphere Center, Arecibo Observatory, Arecibo, PR, Oct. 1985: “Tidally Disrupted Giant Molecular Clouds Near the Galactic Center”.
- NAIC Arecibo Scientific Advisory Committee (ASAC) Meeting, San Juan, PR, Oct. 1985.
- Colloquium, Five College Radio Astronomy Observatory, University of Massachusetts, Amherst, MA, Oct. 1985: “Clump 1: A Unique Molecular Cloud Near the Galactic Center”.
- Colloquium, NAIC Arecibo Observatory, Arecibo, PR, 1 July 1986: “Clump 1 Revisited via Clump 2”.
- Colloquium, NAIC Arecibo Observatory, Arecibo, PR, 3 July 1986: “Why Make Another Galactic HI Survey?”
- Invited Speaker, at “The Galaxy” a NATO Advanced Study Institute, Institute of Astronomy, Cambridge, UK, 4–15 Aug. 1986: “Molecular Cloud Complexes Towards the Centre” and “Measuring the 3-Helium Abundance in the Interstellar Medium”.
- Invited Speaker, at “Arecibo Gregorian Upgrading Program Science Workshop”, Cornell University, Ithaca, NY, 13–15 Oct. 1986: “Mapping the Galaxy at 21 cm Wavelength” and “Measuring the ^3He Abundance in the Interstellar Medium”.
- Colloquium, Boston University, Boston, MA, Sept. 1986: “The Boston University-Arecibo Galactic HI Survey”.
- NRAO User’s Committee Meeting, Green Bank, WV, 22–23 Oct. 1986.
- NAIC Arecibo Scientific Advisory Committee (ASAC) Meeting, Arecibo, PR, 10–12 Nov. 1986.
- Colloquium, Boston University, Boston, MA, Mar., 1987: “Star Formation and the Structure of the Interstellar Medium”.
- NRAO User’s Committee Meeting, Socorro, NM, 7–9 April 1987.
- Invited Speaker, at “The Outer Galaxy” A Symposium to honor the work of Frank Kerr, College Park, MD, 19–29 May 1987: “The Boston-Arecibo Galactic HI Survey”
- Attended “Interstellar Matter – A Symposium on Interstellar Molecules and Grains in Honor of Alan H. Barrett”, Cambridge, MA, 10–12 June 1987.
- Attended “Summer School on Millimetre and Submillimetre Astronomy”, Stirling, Scotland, UK, 21–27 June 1987: “The Boston University-Arecibo Survey: The CO Connection”
- Guest Lecturer at Green Bank Summer School for High School Science Teachers, Green Bank, WV, 27 July–7 August 1987: I gave a complete 3 credit course on introductory astronomy.
- Invited Speaker, at “Large-Scale Galactic Surveys”, a NRAO Workshop, Green Bank, WV, 28–30 Sept. 1987: “The Arecibo Spectral Mapping Pipeline”
- Participant, “Molecular Clouds in the Milky Way”, Symposium held at FCRAO, Univ. Massachusetts, Amherst, MA, 2-4 Nov. 1987.
- Participant, Cornell Astronomical Scientific Symposium, Cornell Univ., Ithaca, NY, 28-30 Apr. 1988.

- Chairman, NRAO User's Committee Meeting, Tucson, AZ, 23-25 May 1988.
- Attended NRAO Committee for Long-Range Planning Meeting, AUI Offices, Washington, DC, 2 August 1988.
- Guest Lecturer at Green Bank Summer School for High School Science Teachers, Green Bank, WV, 14-27 August 1988: I gave a complete 3 credit course on introductory astronomy.
- Seminar, Center for Astrophysics, Cambridge, MA, 21 Nov. 1988: "ASTRO: Antarctic Submillimeter Telescope and Remote Observatory"
- Harlow Shapley Lecturer, High Point College, High Point, NC, 5-6 Dec. 1988: "Limits to Growth: Interstellar Migration"
- Colloquium, NRAO Green Bank, 21 Dec. 1988: "ASTRO: Antarctic Submillimeter Telescope and Remote Observatory"
- Colloquium, University of Maryland, College Park, MD, 29 Mar. 1989: "ASTRO: Antarctic Submillimeter Telescope and Remote Observatory"
- Attended NEROC Visiting Committee Meeting as Boston University NEROC Trustee, Westford, MA, 17 May 1989.
- Guest Public Lecturer, American Museum-Hayden Planetarium, New York, NY, 6 June 1989: "Molecules in Space-The New Milky Way"
- Attended Symposium at Bartol Research Foundation, Newark, DL, 8-11 June 1989: "Astrophysics in Antarctica"
- Attended Symposium at Institute d'Astrophysique, Paris, France, 26-30 June 1989: "Interstellar Ages and Datations"
- Colloquium, Sterrewacht Leiden, Leiden, The Netherlands, 20 July 1989: "New HI and CO Studies of the Interstellar Medium"
- Colloquium, Sterrewacht Groningen, Groningen, The Netherlands, 24 July 1989: "What Do We REALLY Know About the Interstellar Medium?"
- Colloquium, Sterrewacht Leiden, Leiden, The Netherlands, 27 July 1989: "The AST/RO Project"
- Colloquium, Max Planck Institut fur Radioastronomie, Bonn, Federal Republic of Germany, 21 Aug. 1989: "What Do We REALLY Know About the Interstellar Medium?"
- Colloquium, National Radio Astronomy Observatory, Charlottesville, VA, 6 Mar. 1990: "AST/RO and CARA: Astronomy at the South Pole"
- Colloquium, National Radio Astronomy Observatory, Charlottesville, VA, 8 Mar. 1990: "MBM-12: The Nearest Molecular Cloud"
- Invited talk at the National Science Foundation, Washington, DC, 11 Apr. 1990: "Gas in Space: The New Milky Way"
- Colloquium, Astronomy Department, University of Wisconsin, Madison, WI, 25 Apr. 1990: "MBM-12: The Nearest Molecular Cloud"
- Harlow Shapley Lecture Visit, Lawrence University, Appleton, WI, 26-27 Apr. 1990: "Limits to Growth: Interstellar Colonization" (public lecture); "Molecules in Space: The New Milky Way" (seminar for undergraduate Physics majors)

- Harlow Shapley Lecture Visit, Randolph-Macon College, Ashland, VA, 2–4 Apr. 1991: “Limits to Growth: Interstellar Colonization” (public lecture); “Molecules in Space: The New Milky Way” (seminar for undergraduate Physics majors); “E. E. Barnard and the Discovery of Interstellar Matter” (class for undergraduate physics students).
- Invited Lecture to the American Chemical Society, Pensacola, FL, 9 Apr. 1991: “Limits to Growth: The Colonization of the Milky Way”
- Invited Lecture at USA-USSR Joint Conference on The Search for Extraterrestrial Intelligent Life, University of California, Santa Cruz, 6 Aug. 1991: “Search for Interstellar Beacons at the $^3\text{He}^+$ Hyperfine Transition Frequency”
- Colloquium, Max Planck Institut fur Radioastronomie, Bonn, Germany, 7 Nov. 1991: “OB Stars and the Interstellar Medium: The Effects of Star Clusters”
- Invited Presentation at NSF Site Visit Evaluation of the CARA (Center for Astrophysical Research in Antarctica) Science and Technology Center, Yerkes Observatory, Williams Bay, WI, 17 Feb. 1992: “The AST/RO Test Site at Boston University”
- Seminar, Boston University Astronomy Department, Boston, MA, 27 Apr. 1992: “Steps toward the Cosmic Abundance of 3-Helium: Discovery of a 3-He Source in the Planetary Nebula NGC 3242
- Invited Public Lecturer, Charles Hayden Planetarium at the Museum of Science, Boston, MA, 9 May 1992: “Limits to Growth: The Colonization of the Milky Way Galaxy”
- Seminar, International Symposium for the 60th Birthday of Hubert Reeves, *Origin and Evolution of the Elements*, Institut d’ Astrophysique de Paris, 22–25 June 1992: “The He-3 Abundance in H II Regions and Planetary Nebulae”
- Seminar, Workshop on Databases for Galactic Structure, Swarthmore College, PA, May 17–19, 1993: “Galactic Scale Surveys at Centimeter through Submillimeter Wavelengths”
- Seminar, Harvard/Smithsonian Center for Astrophysics, Cambridge, MA, 11 Feb. 1994: “Improved 3-Helium Abundances in the Interstellar Medium”
- Invited Talk at the ESO/EIPC Workshop on “The Light Element Abundances” held at the Elba International Physics Center, Marciana Marina, Elba, Italy, 22–28 May 1994: “Measurements of the 3-Helium Abundances in the Milky Way”
- Invited Lecture at the CSIC Workshop “The Formation of the Milky Way” held at the Palacio de Congresos, Grenada, Spain, 5–10 September 1994: “The Galactic Interstellar Medium”
- Colloquium, University of Canterbury, Christchurch, New Zealand “Installation of the AST/RO Instrument at the South Pole”, 17 February 1995.
- Colloquium, National Radio Astronomy Observatory, Green Bank, WV “Antarctic Submillimeter Telescope and Remote Observatory: Deployment of AST/RO at the South Pole — System Performance and Initial Scientific Results”, 17 August 1995.
- Invited Lecture at Thirtieth Anniversary Workshop for the 140 ft Telescope “The Saga of 3-Helium”, 28–29 September 1995.
- Colloquium, Cornell University, Ithaca, NY “First Scientific Results from the Antarctic Submillimeter Telescope and Remote Observatory” 12 October 1995.

- Invited Lecture, “Quest for the 3 cm Spectral Limit: High Sensitivity Measurements of the $^3\text{He}^+$ Emission from Galactic H II Regions” at “High Sensitivity Radio Astronomy—A Conference to Celebrate the 50-th Anniversary of the First Radio Observations at Jodrell Bank”, Jodrell Bank, UK, 22-26 January 1996.
- Colloquium, National Radio Astronomy Observatory, Charlottesville, VA “First Scientific Results from the Antarctic Submillimeter Telescope and Remote Observatory”, 9 May 1996
- Colloquium, National Radio Astronomy Observatory, Green Bank, WV “Limits to Growth: The Colonization of the Milky Way”, 15 August 1996.
- Invited Talk, “The Future of Galactic HI Studies with the Upgraded Arecibo Telescope” at Workshop on “Hydrogen Spectroscopy With the Upgraded Arecibo”, National Astronomy and Ionosphere Center, Arecibo, PR, 23-24 August 1996.
- Colloquium, University of Puerto Rico, Mayaguez, PR “The Antarctic Submillimeter Telescope and Remote Observatory Project”, 27 August 1996.
- Colloquium, National Astronomy and Ionosphere Center, Arecibo, PR, “First Scientific Results from the Antarctic Submillimeter Telescope and Remote Observatory”, 28 August 1996
- Harlow Shapley Lecture Visit, Grenfell College of the Memorial University of Newfoundland, Corner Brook, Newfoundland, CA, 8–10 March 1997: “Limits to Growth: Interstellar Colonization” and “Astronomy from the South Pole” (public lecture).
- Colloquium, Queen Mary University, Halifax, Nova Scotia, CA, “Astronomy at -50C : Antarctic Submillimeter Telescope and Remote Observatory”, 11 March 1997
- Harlow Shapley Lecture Visit, Westfield State College, Westfield, MA, 5–7 May 1997: “Limits to Growth: Interstellar Colonization” (public lecture); Plus 2 lectures for undergraduate Physics & Astronomy Majors and 4 talks at Westfield High School.
- Invited Talk, European Center for Theoretical Studies (ECT*), Trento, Italy, 21 June – 4 July 1997, “The Abundance of 3-Helium in Galactic HII Regions”
- Colloquium, Arcetri Observatory, Florence, Italy, “The Abundance of 3-Helium in the Milky Way”, 7 July 1997.
- Paper, 1997 IEEE AP-S International Symposium and URSI North American Radio Science Meeting, Montreal, Quebec, CA, “Antarctic Submillimeter Telescope and Remote Observatory”, 18 July 1997.
- Invited Talk, Astronomical Society of Long Island, Five Towns College, Dix Hills, Long Island, NY, “Limits to Growth: Colonization of the Milky Way”, 20 Sept. 1997.
- Colloquium, University of Groningen, Groningen, The Netherlands, “The Cosmic Abundance of 3-Helium”, 11 March 1998.
- Colloquium, University of Leiden, Leiden, The Netherlands, “The Cosmic Abundance of 3-Helium”, 12 March 1998.
- Colloquium, University of Minnesota, Minneapolis, MN, “The Cosmic Abundance of 3-Helium”, 22 May 1998.
- Training Lecture, Science Teacher Workshop (Rare CATS), National Radio Astronomy Observatory, Green Bank, WV, “3-Helium”, 19 Aug. 1998.

- Shell Seminar Speaker, National Science Teacher's Association 1999 National Convention, Boston, MA, "Astronomy at 175 Kelvin: A Day in the Life of a South Pole Astronomer", 26 March 1999.
- Harlow Shapley Lecture Visit, Rowan University, Glassboro, NJ, 8-9 April 1999: "Limits to Growth: Interstellar Colonization" (public lecture) and "Astronomy from the South Pole" (class for non-science majors).
- Colloquium, National Radio Astronomy Observatory, Socorro, NM, 16 April 1999: "The BU—FCRAO Galactic Ring Survey"
- Invited Lecture, Silverlake Regional High School, Silverlake, MA, 19 May 1999: "Astronomy at 175 Kelvin: A Day in the Life of a South Pole Astronomer"
- Invited Lecture, "Imaging99 Conference", National Radio Astronomy Observatory, Tucson, AZ, 5 to 9 June 1999: "AST/RO: Antarctic Submillimeter Telescope and Remote Observatory"
- Invited Public Lecture at UNIVERSE '99, the weekend public event of the 111th Annual Meeting of the Astronomical Society of the Pacific, Toronto, Canada, 3 July 1999: "Astronomy at 175 Kelvin: A Day in the Life of a South Pole Astronomer"
- Lecture, Science Teacher Workshop (Rare CATS), National Radio Astronomy Observatory, Green Bank, WV, "Limits to Growth: The Colonization of the Milky Way", 10 July 1999
- Radio Interview/Discussion for "Mountain RadioAstronomy", WVMR radio, Frost, WV, "Astrophysics in Antarctica", 15 July 1999
- Colloquium, National Radio Astronomy Observatory, Green Bank, WV, 29 July 1999: "The BU—FCRAO Galactic Ring Survey"
- Colloquium, Institute for Astrophysical Research, Boston University, Boston, MA, 13 Sept. 1999: "The 3-Helium Problem"
- Invited Talk at IAU Symposium 198: "The Light Elements and Their Evolution" held in Natal, Brazil, 20 through 28 Nov. 1999: "The 3-Helium Plateau"
- Augur Scientific Lecture, The Hotchkiss School, Lakeville, Ct, 16 Nov. 1999: "Astronomy at 175 Kelvin: A Day in the Life of a South Pole Astronomer"
- Invited Talk at 60th Birthday Festschrift for Frank Drake, Charles Hotel, Cambridge, MA, 6 May 2000: "Frank Drake and SETI at Green Bank"
- Seminar at NSF Astronomy, Washington, DC, 11 July 2000: "The Galactic Ring Survey"
- Radio Interview/Discussion for "Mountain RadioAstronomy", WVMR radio, Frost, WV, 15 August 2000: "Astrophysics in Antarctica"
- Gave Invited Paper at an international conference on "Cosmic Evolution" honoring J. Audouze and J. Truran at the Institut d'Astrophysique in Paris, France, 14 through 17 November 2000.
- Invited attendee at a Workshop "21cm HI Surveys of the Milky Way" held at NRAO in Green Bank, WV, 20 May through 24 May 2001.

- Delivered a paper at the American Astronomical Society Meeting held in Pasadena, CA, 3 through 6 June 2001.
- Gave Invited Paper at an international conference on “Gaseous Matter in Galaxies and Intergalactic Space” held at the Institut d’Astrophysique in Paris, France, 15 through 23 June 2001.
- Invited attendee at an international conference, “Third International Workshop on Astrophysics at Dome C”, held in Hobart, Tasmania, 28 - 29 June 2001.
- Presented a poster at the University of California at Santa Cruz, CA, scientific workshop, “Star Formation in the Galactic Context,” 14 through 19 July 2001: “Small Scale Structure in the Nearest Molecular Cloud” by J.G. Ingalls, W.T. Reach, T.M. Bania, & J.M. Carpenter.
- Attended Infrared Astronomy from Antarctica Workshop, Boston University, Boston, MA, 5–6 March 2002.
- Gave an invited paper at an international conference on “The Cosmological Model” at the 37-th Moriond Workshop held in Les Arcs 1800, Savoie, France, 16–23 March 2002: “The Cosmic Helium-3 Abundance: Implications for Big Bang Nucleosynthesis, Stellar Evolution, and Galactic Chemical Evolution”
- Invited Talk at “Astrobiology/Search for Life Beyond Earth” Symposium, Tarrant County College Northeast Campus, Hurst, TX, 25–26 Apr. 2002: “Limits to Growth: The Colonization of the Milky Way”
- AAS Shapley Lecture, Sullivan County Community College, Loch Sheldrake, NY.
- Attended the 2002 Union of Radio Science International (URSI) General Assembly, Maastricht, Netherlands. 18–22 Aug. 2002 as an official representative of Commission J of the U.S. URSI organization. I was thus sent to the General Assembly by the U.S. National Academy of Science.
- Gave Invited Paper at Workshop on Pulsar Research with the ALFA Array, NAIC Arecibo Observatory, Arecibo, PR, 31 Oct. – 3 Nov. 2002: “Galactic HI Science Surveys with ALFA”
- Gave Invited Paper at Workshop on Galactic HI Research with the ALFA Array at first Galactic ALFA (GALFA) consortium meeting, Arecibo, PR, 20 Mar. – 23 Mar. 2003: “First Quadrant HI Surveys”
- Chair, Scientific Organizing Committee, “Milky Way Surveys: The Structure and Evolution of Our Galaxy, The 5th Boston University Astrophysics Conference”, 15 – 17 June 2003.
- Chair, Second GALFA Consortium Workshop, Boston University, 18 June 2003.
- Gave Invited paper at international conference: “How does the Galaxy work? A galactic tertulia with Don Cox and Ron Reynolds”, Grenada, Spain, 22 – 27 June 2003: “The BU-FCRAO Milky Way Galactic Ring Survey”
- Gave Invited talk at Second NRAO/NAIC Single Dish Summer School, Green Bank, WV, 21 – 23 August 2003: “Single Dish Radio Astronomy: Past, Present, and Future”
- Gave Invited paper at third GALFA consortium workshop, National Astronomy and Ionosphere Center, Arecibo, PR, 27 Aug 2004: “Low latitude HI Surveys with ALFA”

- Gave Invited paper at "Diffuse Matter in the Galaxy: Observations Confront Theory. A Meeting in Honor of the 65th Birthday of Carl Heiles", 28 August – 3 September 2004: "Resolving the Kinematic Distance Ambiguity with HI Self-Absorption"
- Consulted and gave demonstration of my GBT IDL software package at NRAO workshop for GBT data analysis, 29 April – 2 May 2005. Chaired the external advisory panel and wrote a summary report.
- Gave Invited paper at international conference: *Chemical Abundances and Mixing in Stars in the Milky Way and its Satellites*, September 13-17 2004, Castiglione della Pescaia (Grosseto), Tuscany, Italy, Jointly organized by INAF-Osservatorio Astrofisico di Arcetri and ESO: "First Epoch Observations of 3-He with the Green Bank Telescope"
- Consulted with NRAO, Green Bank, software group anent IDL data reduction package for the Green Bank Telescope, 14–17 October 2005.
- Shapley Lecture visit to Yeshiva University, New York, New York, 22–24 February 2005. Visit included giving an AAS Shapley Public Lecture, teaching an undergraduate class, and consulting with Yeshiva Provost.
- Gave Invited Paper at international conference: "Local Late Galactic Evolution", held at the International Space Science Institute (ISSI) in Bern, Switzerland, 20-21 October 2005: "New Determinations of the D and ^3He Abundance in the Galactic Interstellar Medium"
- Gave Colloquium at University of Massachusetts, Amherst, MA, 30 March 2006: "The 3-Helium Problem: Constraining the Chemical Evolution of the Milky Way"
- Gave Invited Talk at international conference: *Symposium on the Composition of Matter: Honoring Johanness Geiss on the occasion of his 80-th birthday*, Grindelwald, Switzerland, 11-15 September 2006: "The Milky Way 3-Helium Abundance"
- Gave Colloquium at Boston University, 28 November 2006: "The Cosmic Abundance of 3-Helium"
- Gave invited review talk at International Astronomical Union (IAU) Symposium. *Light Elements in the Universe*, Geneva, Switzerland, 6-15 November 2009: "Measurements of 3-He in Galactic H II Regions and Planetary Nebulae"
- Invited participant at international conference: "SETI@50: Celebrating the Search for ET" held at NRAO in Green Bank, WV, 11-15 Sept 2010. The conference celebrated the 50-th anniversary of Frank Drake's pioneering OZMA SETI search. I Chaired the panel "SETI and the Popular Imagination"
- Invited review at ESO Workshop: "The Spiral Structure of the Milky Way: Confronting Observations and Theory," 7-10 November 2010. The talk was to be "HII Region Radio Recombination Lines and Galactic Structure." At the last minute I could not attend the conference as I was under a "do not fly order" from my PCP. This order has since been recinded and all is now well.