

# CURRICULUM VITAE

## BRYAN BUTLER

- Education**
- B.S. (double major - Computer Science; Electrical Engineering), Utah State University, 1989
  - B.S. minors: Math; Physics
  - Magna Cum Laude
  - M.S. (Planetary Science), California Institute of Technology, 1991
  - Ph.D. (Planetary Science), California Institute of Technology, 1994
  - Thesis: 3.5-cm Radar Investigation of Mars and Mercury: Planetological Implications
  - Ph.D. minor: Computer Science
- Awards and Honors**
- Utah State University Club Scholarship, 1983-1987
  - National Merit Scholarship, 1983-1987
  - Outstanding Sophomore Physics Student at USU, 1984
  - Collegiate Academic All-American, 1986-1988
  - E.C. Anthony Fellowship, Caltech, 1989
  - Outstanding Student Paper, 1989 Fall Meeting of the AGU, Planetology Section
  - Lewis A. Kingsley Fellowship, Caltech, 1991
- Professional Experience**
- Programmer, Center for Space Engineering at USU, 1986-1988
  - Graduate Teaching Assistant, Caltech, 1989-1992
  - Graduate Research Assistant, Caltech, 1988-1994
  - Member of the Technical Staff, Jet Propulsion Lab, 1991, 1992
  - National Radio Astronomy Observatory, 1994-present
    - Jansky Postdoc, 1994-1997
    - Assistant Scientist, 1997-2000
    - Associate Scientist, 2000-2003
    - Scientist, 2003-2005
    - Scientist, Continuing Appointment (NRAO tenure), 2005-present
  - positions/duties/groups:
    - Member of ALMA Science IPT, 1998-2004
    - Member of Data Management Science Working Group, 2000-2002
    - Head of ALMA Calibration Group, 2002-2004
    - EVLA Project Scientist for Software, 2004-2005
    - EVLA System Engineer for Software, 2005-2006
    - EVLA Computing Division Head, 2006-present
    - Member of NRAO SKA Working Group, 2007-present

**Professional Activities**      Member: AAS (and DPS), AGU, URSI, IAU  
Referee: Science, Icarus, JGR, Radio Sci., GRL, Ad.Sp.R, A&A  
Chaired sessions at national and international URSI, DPS  
and LPSC meetings.  
Reviewed proposals for Arecibo and JCMT telescope time.  
Reviewed proposals for NASA PG&G (panel member), LSSO  
(panel member), MFRP (panel member), PAST, and PIDDP  
programs; on committees to select participating scientists  
for MARSIS, Kepler, and LRO; on committees to select New  
Frontiers mission; PI, Co-I or Collaborator on many NASA  
grants; currently science Co-I on SAR instruments for  
Chandrayaan-1 and LRO missions (20% support).

### REFEREED JOURNAL ARTICLES

- Altenhoff, W.J., J.H. Biegling, B. Butler, & 18 others, Coordinated Radio Continuum Observations of Comets Hyakutake and Hale-Bopp from 22 to 860 GHz, *Astron. Astrophys.*, 348, 1020-1034, 1999
- Butler, B.J., D.B. Campbell, I. de Pater, & D.E. Gary, Solar System Science with SKA, *New Astron. Rev.*, 48, 1511-1535, 2004
- Butler, B.J., P.G. Steffes, S.H. Suleiman, M.A. Kolodner, & J.M. Jenkins, Accurate and Consistent Microwave Observations of Venus and their Implications, *Icarus*, 154, 226-238, 2001
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- Butler, B.J., D.O. Muhleman, & M.A. Slade, Mercury: Full Disk Radar Images and the Detection and Stability of Ice at the North Pole, *J. Geophys. Res.*, 98, 15003-15023, 1993
- de Pater, I., B.J. Butler, & 12 others, Jupiter's Radio Spectrum from 74 MHz up to 8 GHz, *Icarus*, 163, 434-448, 2003
- de Pater, I., & B.J. Butler, Low Frequency VLA Observations of Jupiter, *Icarus*, 163, 428-433, 2003
- de Pater, I., J.R. Forster, M. Wright, B.J. Butler, P. Palmer, J.M. Veal, M.F. A'Hearn, & L.E. Snyder, BIMA and VLA Observations of Comet Hale-Bopp at 22 – 115 GHz, *Astron. J.*, 116, 987-996, 1998

- Edgett, K.S., B.J. Butler, J.R. Zimbelman, & V.E. Hamilton, Geologic Context of the Mars Radar "Stealth" Region in Southwestern Tharsis, *J. Geophys. Res.*, *102*, 21545-21568, 1997
- Graham, A.P., B.J. Butler, L. Kogan, P. Palmer, & V. Strel'nitski, Water Maser Emission from Comets, *Astron. J.*, *119*, 2465-2471, 2000
- Haldemann, A.F.C., D.O. Muhleman, B.J. Butler, & M.A. Slade, The Western Hemisphere of Venus: 3.5 cm Dual Circular-Polarization Radar Images, *Icarus*, *128*, 398-415, 1997
- Harmon, J.K., M.A. Slade, B.J. Butler, J.W. Head, M.S. Rice, & D.B. Campbell, Mercury: Radar images of the equatorial and midlatitude zones, *Icarus*, *187*, 374-405, 2007
- Hofstadter, M.D., & B.J. Butler, Seasonal Change in the Deep Atmosphere of Uranus, *Icarus*, *165*, 168-180, 2003
- Howell, E.S., A.J. Lovell, B.J. Butler, & F.P. Schloerb, Radio OH Observations of 9P/Tempel 1 Before and After Deep Impact, *Icarus*, *187*, 228-239, 2007
- Jenkins, J.M., M.A. Kolodner, B.J. Butler, S.H. Suleiman, & P.G. Steffes, Microwave Remote Sensing of the Temperature and Distribution of Sulfur Compounds in the Lower Atmosphere of Venus, *Icarus*, *158*, 312-328, 2002
- Kloosterman, J.L., Butler, B., & I. de Pater, VLA observations of synchrotron radiation at 15 GHz, *Icarus*, *193*, 644-648, 2008
- Muhleman, D.O., A.W. Grossman, & B.J. Butler, Radar Investigations of Mars, Mercury and Titan, *Ann. Rev. Earth and Plan. Sci.*, *23*, 337-374, 1995
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- Muhleman, D.O., A.W. Grossman, B.J. Butler, & M.A. Slade, Radar Reflectivity of Titan, *Science*, *248*, 975-980, 1990
- Slade, M.A., B.J. Butler, & D.O. Muhleman, Mercury Radar Imaging: Evidence for Polar Ice, *Science*, *258*, 635-640, 1992
- Wink, J.E., W.J. Altenhoff, J. Biegling, B. Butler, & 14 others, Coordinated Observations of Comet Hale-Bopp between 32 and 860 GHz, *Earth, Moon, & Planets*, *77*, 165-165, 1997

## CONFERENCE PROCEEDINGS, BOOK CHAPTERS, AND WHITE PAPERS

- Butler, B.J., Long Wavelength Observations of Extrasolar Planets, in *From Clark Lake to the Long Wavelength Array: Bill Erickson's Radio Science*, ed. N.E. Kassim, M.R. Perez, W. Junor, P.A. Henning, pp. 495-498, ASP Conference Series, 345, 2005
- Butler, B.J., Long Wavelength Planetary Radar, in *From Clark Lake to the Long Wavelength Array: Bill Erickson's Radio Science*, ed. N.E. Kassim, M.R. Perez, W. Junor, P.A. Henning, pp. 167-170, ASP Conference Series, 345, 2005
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- Butler, B.J., & M.A. Gurwell, Solar System Science with ALMA, in *Science with the Atacama Large Millimeter Array*, ed. A.W. Wootten, pp. 225-228, ASP Conference Series, 235, 2001
- Butler, B.J., 22 GHz Water Vapor Radiometry at the VLA, in *Imaging at Radio through Submillimeter Wavelengths*, ed. J.G. Mangum, & S.J.E. Radford, pp. 338-339, ASP Conference Series, 217, 2000
- Butler, B.J., & T.S. Bastian, Solar System Objects, in *Synthesis Imaging in Radio Astronomy II*, ed. G.B. Taylor, C.L. Carilli, & R.A. Perley, pp. 625-656, ASP Conference Series, 180, 1999
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- Gurwell, M.A., D.O. Muhleman, & B.J. Butler, Planetary Atmospheric Science with ALMA, in *Science with the Atacama Large Millimeter Array*, ed. A.W. Wootten, pp. 229-232, ASP Conference Series, 235, 2001
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- Wootten, A., B. Butler, A. Hales, S. Corder, R. Brown & D. Wilner, Investigations of the Formation and Evolution of Planetary Systems, submitted as a white paper to the 2010 decadal review process, 2009

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- Butler, B., & R. Perley, Accuracy Requirements for EVLA Meteorological Measurements, EVLA Memo 126, 2008
- Butler, B., How close to the Sun should we observe with the VLA?, EVLA Test Memo 236, 2004
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- Butler, B.J., An Antenna Location Mask for Configuration Designs for ALMA, ALMA Memo 364, 2001
- Butler, B., S. Radford, & A. Otárola, The Best Sites for the Compact ALMA Configuration, ALMA Memo 338, 2000
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- Butler, B., Precipitable Water at the VLA – 1990-1998, VLA Scientific Memo 176, 1998

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## ABSTRACTS

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- Butler, B.J., M.R. Chizek, M.A. Slade, A.F.C. Haldemann, D.O. Muhleman, & T.F. Mao, Goldstone/VLA 3.5cm Mars Radar Observations - "Stealths" and South Polar Regions, *BAAS*, 38, 619, 2006
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- Butler, B.J., D.O. Muhleman, & M.A. Slade, Goldstone/VLA Imaging of Mars and Mercury, IAU 22nd General Assembly, 1994
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