Raul A. Monsalve

Curriculum Vitae (Rev. August 2017)

Contact information:
Center for Astrophysics and Space Astronomy (CASA)
University of Colorado Boulder
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Main research interests: experimental cosmology – statistical data analysis – radio astronomy

Education:

Ph.D. in Physics, University of Miami — June 2012
Thesis: *"Calibrations and Observations with the QUIET Radiotelescope"*,
Advisor: Joshua Gundersen

B.S. in Electronics Engineering, University of Concepcion — February 2007
Thesis: *"Study and Design of Radiofrequency Power Supply for Excitation of CO2 Laser"*,
Advisor: Sergio Torres

Employment:

Postdoctoral Associate, Center for Astrophysics and Space Astronomy (CASA), University of Colorado Boulder	January 2016 – present
Visiting Researcher, School of Earth and Space Exploration (SESE), Arizona State University	July 2016 – present
Postdoctoral Associate, School of Earth and Space Exploration (SESE), Arizona State University	July 2012 – June 2016
Teaching Assistant, Department of Physics, University of Miami	January – June 2012
Research Assistant, Department of Physics, University of Miami	July 2007 – June 2012
Research Assistant, Department of Electrical Engineering, University of Concepcion	March 2006 – May 2007
Research Assistant, Department of Physics, University of Concepcion	March 2006 – May 2007

Current and past projects:

Network for Exploration and Space Sciences (NESS) – PI: Jack O. Burns, University of Colorado Boulder
Dark Ages Radio Explorer (DARE) – PI: Jack O. Burns, University of Colorado Boulder
Experiment to Detect the Global EoR Signature (EDGES) – PI: Judd D. Bowman, Arizona State University
Medidor Autonomo de Radio Interferencia (MARI) – PI: Ricardo Bustos, Universidad Catolica Santisima Concepcion
Q/U Imaging ExperimenT (QUIET) – PI: Bruce Winstein, University of Chicago

Research grants awarded:

(Co-PI) QUIMAL project 130005, National Commission of Scientific and Technological Research (CONICYT, Chile), *"First step towards the construction of a Low-Frequency Telescope: RFI site-testing with MARI-UCSC"*, 2013-2015, USD $106,000

Courses, workshops, and summer schools attended:

"Keysight RF Simulation Back to Basics Workshop", Chandler, AZ	April 2015
"14th NRAO Synthesis Imaging Workshop", NRAO – New Mexico Tech	May 2014
"Penn State University Summer School in Statistics for Astronomers", Pennsylvania State University	June 2013
"Sixth NAIC/NRAO Summer School on Single Dish Radio Astronomy", NRAO – Green Bank Telescope	July 2011
Course *"Fundamentals of Industrial Lasers: Applications and Safety"*, CICESE Monterrey	September 2006

Courses taught:

PHY 208, University Physics Laboratory, University of Miami — Spring Semester 2012

Work visits:

Analysis of data from RFI survey in the Atacama desert, Department of Electrical Engineering, UC Santisima Concepcion	December 2015
Analysis of data from RFI survey in the Atacama desert with MARI, Department of Electrical Engineering, UC Santisima Concepcion	January 2015
Return loss measurements for the QUIET W-band feedhorn array, Department of Physics, Princeton University	June 2008
Pre-assembly and optical alignment of the QUIET radio telescope, Department of Astronomy, Caltech	May 2008
Development of stabilizer for Mach-Zender interferometer, Department of Experimental Physics, University of Sao Paulo	June 2007
Development of 100-W RF power supply at 100 MHz, CICESE Monterrey	August – December 2006

Astronomical observation experience:

Sky brightness observations with EDGES	2013 – 2017
Pulsar observations with LWA, 1 day remotely	2014
Extragalactic observation with Arecibo, 1 day remotely	2011
CMB polarization observations with QUIET, 115 days on site	2008 – 2011

Awards, memberships, peer review:

Referee, The Astrophysical Journal	2013 – present
Referee, Monthly Notices of the Royal Astronomical Society	2016 – present
Full member, American Physical Society (APS)	2015 – present
Full member, Institute of Electrical and Electronics Engineers (IEEE)	2014 – present
Full member, American Astronomical Society (AAS)	2010 – present
Award, Enrique Molina Garmendia scholarship, Universidad de Concepcion	2000
Award, Padre Hurtado scholarship, Universidad Catolica de Chile (declined)	2000

Software knowledge:

Python, C, IDL, MATLAB, Mathcad, Mathematica, Latex

Mentoring:

Kent Ritchie, undergraduate research Department of Astrophysical and Planetary Sciences, University of Colorado at Boulder	May 2017 – August 2017
Katherine Pellicore, undergraduate research and thesis project Department of Astrophysical and Planetary Sciences, University of Colorado at Boulder	March 2016 – April 2017
Alexandra Suarez, undergraduate thesis project, Department of Physics, University of Concepcion	March 2014 – January 2016

Outreach:

Expositor, STEM Open House Events, School of Earth and Space Exploration, Arizona State University	2012 – 2015
Interviewee, TV Channel Telemundo Arizona	2014 – 2015
Appearances, Chilean newspapers in relation to the MARI-UCSC project	2013 – 2014

Future conferences and workshops:
Conference, Science at Low Frequencies IV, University of Sydney, Sydney, December 12-15, 2017
Conference, 231st American Astronomical Society, Washington, DC, January 8-12, 2018
Conference, CosmoAndes 2018, Universidad Catolica de Chile, Santiago, January 15-19, 2018

Past talks and posters:
Invited Talk, Radio Synchrotron Background Conference, University of Richmond, Richmond, Virginia, July 2017
"Synchrotron Radiation as a Foreground to the Global Redshifted 21-cm Measurement by EDGES"
Talk, NASA Exploration Science Forum, NASA Ames, Mountain View, California, July 2017
"Preparing for the Dark Ages Radio Explorer (DARE) through Ground-Based Observations"
Talk, Radio Astronomy Laboratory Seminar, UC Berkeley, Berkeley, California, July 2017
"Current Developments and Constraints of Redshifted 21-cm Models by EDGES"
Astronomy Tea Talk, California Institute of Technology, Pasadena, California, April 2017
"Constraints on Cosmic Dawn and the EoR from Global 21-cm Observations"
Talk, 229th American Astronomical Society Conference, Grapevine, Texas, USA, January 2017
"The Properties of Primordial Stars and Galaxies Measured from the 21-cm Global Spectrum using the Dark Ages Radio Explorer (DARE)"
Poster, 229th American Astronomical Society Conference, Grapevine, Texas, USA, January 2017
"Instrumental and Calibration Advancements for the Dark Ages Radio Explorer"
Talk, URSI-NRSM Conference, University of Colorado, Boulder, USA, January 2017
"Precision Cosmological Measurements with DARE and EDGES"
Talk, Science at Low Frequencies III, Caltech, Pasadena, USA, December 2016
"Constraining the Global Redshifted 21-cm Signal with EDGES in the Range 14.8 > z > 6.5"
Invited Talk, AeroSpace Ventures Day, LASP, Boulder, Colorado, October 27, 2016
"The Dark Ages Radio Explorer (DARE)"
Invited Colloquium Talk, ITC-CfA Harvard University, Cambridge, Massachusetts, September 8, 2016
"Constraining the Global 21-cm Signal from the Early Universe with EDGES and DARE"
Invited Luncheon Talk, ITC-CfA Harvard University, Cambridge, Massachusetts, September 8, 2016
"Polarization in the Foregrounds for Global 21-cm Measurements"
Conference Talk, NASA Exploration Science Forum, NASA Ames, Mountain View, California, July 2016
"The EDGES and DARE Precision Cosmology Experiments"
Talk, KIPAC Tea Talk, SLAC, Stanford University, Palo Alto, California, July 2016
"Probing the large-scale evolution of the early Universe (z > 6) with the global redshifted 21-cm line"
Invited Conference Talk, CMB Spectral Distortions from Cosmic Baryon Evolution, RRI India, July 2016,
"Constraining the Global Redshifted 21-cm Signal with EDGES"
Talk, The Reionization Epoch: New Insights and Future, Aspen Center for Physics, March 2016,
"Latest Constraints on the Global Redshifted 21-cm EoR Signal from the EDGES Experiment"
Talk, URSI Conference, University of Colorado, Boulder, USA, January 2016,
"Preliminary Measurements with the EDGES Low-Band Instrument"
Talk, Science at Low Frequencies II, University of New Mexico, Albuquerque, USA, December 2015,
"Characterizing Cosmic Dawn with the Low-Band EDGES Instrument"
Talk, APS 4 Corners Section Meeting, Arizona State University, Tempe, USA, October 2015,
"Characterization of Cosmic Dawn through Observations of the Redshifted 21-cm Line"
Talk, Astrophysics Lunch Seminar, University of Colorado Boulder, Boulder, USA, September 2015,
"Characterization of Cosmic Dawn through Observations of the Redshifted 21-cm Line with EDGES"
Poster, IAU XXIX General Assembly, Honolulu, August 2015,
"EDGES: Experiment to Detect the Global EoR Signature"
Talk, Physics Colloquium, University of British Columbia, Vancouver, Canada, July 2015,
"The EDGES Experiment: Calibrations and Status"
Talk, IEEE APS/URSI North American Conference, Vancouver, Canada, July 2015,
"Characterization of the EDGES Receiver and its Capability for Constraining the EoR"
Talk, Physics Colloquium, University of Miami, Miami, USA, January 2015,
"Characterizing Cosmic Dawn through Observations of the 21-cm line"
Talk, Astrophysics Seminar, Florida State University, Tallahassee, USA, January 2015,
"Characterizing Cosmic Dawn through Observations of the 21-cm line"

Talk, Astronomy Seminar, University of Concepcion, Concepcion, Chile, January 2015,
"Characterizing Cosmic Dawn through Observations of the 21-cm line"
Talk, Engineering Seminar, UC de la Santisima Concepcion, Concepcion, Chile, January 2015,
"Characterizing Cosmic Dawn through Observations of the 21-cm line"
Invited Talk, Chilean Astronomy Web, UNAB, Santiago, Chile, December 2014,
"Characterizing the Cosmic Dawn through Observations of the 21-cm line"
Talk, Early Science with Low-Frequency Radio Telescopes, ASU, Tempe, USA, December 2014,
"Overview and Status of the EDGES Experiment"
Talk, URSI Conference, University of Colorado, Boulder, USA, January 2014,
"Global 21-cm-line Measurements with the EDGES Telescope"
Poster, NASA Lunar Science Virtual Forum, USA, July 2013,
"Advances on the Calibration of a Differential Front-End for the Dark Ages Radio Explorer (DARE)"
Talk, First AIUC Workshop, MRE, Santiago, Chile, November 2012,
"Opportunities and Challenges of Low Frequency Cosmology"
Talk, AAS 219th Conference, Austin, USA, January 2012,
"Measuring the CMB Polarization at 95 GHz with the QUIET Experiment"
Talk, AAS 216th Conference, Miami, USA, May 2010,
"Impact of the Q/U Imaging ExperimenT on CMB Polarization Science"
Talk, Miami Physics Conference, Ft. Lauderdale, USA, December 2009,
"CMB Studies with the QUIET Radiotelescope"

Journal papers in preparation:

2) … **Raul A. Monsalve**, Jordan Mirocha, Judd D. Bowman, Alan E. E. Rogers, Thomas J. Mozdzen, Steve Furlanetto
To be submitted to **The Astrophysical Journal**
"Results from EDGES High-Band: II. Constraining High-z Galaxy Evolution with the Global Sky Temperature Spectrum"

1) … **Raul A. Monsalve**, Judd D. Bowman, Alan E. E. Rogers, Thomas J. Mozdzen,
To be submitted to **The Astrophysical Journal**
"*Results from EDGES High-Band: IV. Absolute Antenna Temperature of Diffuse Sky Emission at 150 MHz*"

Journal papers accepted:

12) … **Raul A. Monsalve**, Alan E. E. Rogers, Judd D. Bowman, Thomas J. Mozdzen,
The Astrophysical Journal, accepted, August 2017,
"Results from EDGES High-Band: I. Constraints on Phenomenological Models for the Global 21 cm Signal"

11) … Jack O. Burns, Richard Bradley, Keith Tauscher, Steven Furlanetto, Jordan Mirocha, **Raul Monsalve**, David Rapetti, William Purcell, David Newell, David Draper, Robert MacDowall, Judd Bowman, Bang Nhan, Edward J. Wollack, Anastasia Fialkov, Dayton Jones, Justin C. Kasper, Abraham Loeb, Abhirup Datta, Jonathan Pritchard, Eric Switzer, Michael Bicay,
The Astrophysical Journal, 844, 33, July 2017,
"A Space-Based Observational Strategy for Characterizing the First Stars and Galaxies Using the Redshifted 21-cm Global Spectrum"

10) … **Raul A. Monsalve**, Alan E. E. Rogers, Judd D. Bowman, Thomas J. Mozdzen,
The Astrophysical Journal, 835, 49, January 2017,
"Calibration of the EDGES High-Band Receiver to Observe the Global 21-cm Signature from the Epoch of Reionization"

9) … T. J. Mozdzen, J. D. Bowman, **R. A. Monsalve**, and A. E. E. Rogers,
Monthly Notices of the Royal Astronomical Society, 464, 4, February 2017,
"Improved Measurement of the Spectral Index of the Diffuse Radio Background Between 90 and 190 MHz"

8) … **Raul A. Monsalve**, Alan E. E. Rogers, Thomas J. Mozdzen, Judd D. Bowman,
IEEE Transactions on Microwave Theory and Techniques, 64, 8, August 2016
"One-Port Direct/Reverse Method for Characterizing VNA Calibration Standards"

7) … T. J. Mozdzen, J. D. Bowman, **R. A. Monsalve**, and A. E. E. Rogers,
Monthly Notices of the Royal Astronomical Society, 455, 4, February 2016,
"Limits on Foreground Subtraction from Chromatic Beam Effects in Global Redshifted 21 cm Measurements"

6) … QUIET Collaboration: T. M. Ruud, U. Fuskeland, I. K. Wehus, M. Vidal, D. Araujo, C. Bischoff, I. Buder, Y. Chinone, K. Cleary, R. N. Dumoulin, A. Kusaka, **R. Monsalve**, S. K. Næss, L. B. Newburgh, R. A. Reeves, J. T. L. Zwart, L. Bronfman, R. D. Davies, R. Davis, C. Dickinson, H. K. Eriksen, T. Gaier, J. O. Gundersen, M. Hasegawa, M. Hazumi, K. M. Huffenberger, M. E. Jones, C. R. Lawrence, E. M. Leitch, M. Limon, A. D. Miller, T. J. Pearson, L. Piccirillo, S. J. E. Radford, A. C. S. Readhead, D. Samtleben, M. Seiffert, M. C. Shepherd, S. T. Staggs, O. Tajima, K. L. Thompson,
The Astrophysical Journal, 811, 89, August 2015,
"The Q/U Imaging ExperimenT: Polarization Measurements of the Galactic Plane at 43 and 95 GHz"

5) … QUIET Collaboration: K. M. Huffenberger, D. Araujo, C. Bischoff, I. Buder, Y. Chinone, K. Cleary, A. Kusaka, **R. Monsalve**, S. K. Naess, L. B. Newburgh, R. Reeves, T. M. Ruud, I. K. Wehus, J. T. L. Zwart, C. Dickinson, H. K. Eriksen, T. Gaier, J. O. Gundersen, M. Hasegawa, M. Hazumi, A. D. Miller, S. J. E. Radford, A. C. S. Readhead, S. T. Staggs, O. Tajima, K. L. Thompson,
The Astrophysical Journal, 806, 1, June 2015,
"The Q/U Imaging ExperimenT: Polarization Measurements of Radio Sources at 43 and 95 GHz"

4) … A. E. E. Rogers, J. D. Bowman, J. Vierinen, **R. Monsalve**, T. Mozdzen,
Radio Science, 50, 2, February 2015,
"Radiometric Measurements of Electron Temperature and Opacity of Ionospheric Perturbations"

3) … QUIET Collaboration: C. Bischoff, A. Brizius, I. Buder, Y. Chinone, K. Cleary, R. N. Dumoulin, A. Kusaka, **R. Monsalve**, S. K. Naess, L. B. Newburgh, G. Nixon, R. Reeves, K. M. Smith, K. Vanderlinde, I. K. Wehus, M. Bogdan, R. Bustos, S. E. Church, R. Davis, C. Dickinson, H. K. Eriksen, T. Gaier, J. O. Gundersen, M. Hasegawa, M. Hazumi, C. Holler, K. M. Huffenberger, W. A. Imbriale, K. Ishidoshiro, M. E. Jones, P. Kangaslahti, D. J. Kapner, C. R. Lawrence, E. M. Leitch, M. Limon, J. J. McMahon, A. D. Miller, M. Nagai, H. Nguyen, T. J. Pearson, L. Piccirillo, S. J. E. Radford, A. C. S. Readhead, J. L. Richards, D. Samtleben, M. Seiffert, M. C. Shepherd, S. T. Staggs, O. Tajima, K. L. Thompson, R. Williamson, B. Winstein, E. J. Wollack, J. T. L. Zwart,
The Astrophysical Journal, 768, 9, April 2013,
"The Q/U Imaging ExperimentT Instrument"

2) … QUIET Collaboration: D. Araujo, C. Bischoff, A. Brizius, I. Buder, Y. Chinone, K. Cleary, R. N. Dumoulin, A. Kusaka, **R. Monsalve**, S. K. Næss, L. B. Newburgh, R. Reeves, I. K. Wehus, J. T. L. Zwart, L. Bronfman, R. Bustos, S. E. Church, C. Dickinson, H. K. Eriksen, T. Gaier, J. O. Gundersen, M. Hasegawa, M. Hazumi, K. M. Huffenberger, K. Ishidoshiro, M. E. Jones, P. Kangaslahti, D. J. Kapner, D. Kubik, C. R. Lawrence, M. Limon, J. J. McMahon, A. D. Miller, M. Nagai, H. Nguyen, G. Nixon, T. J. Pearson, L. Piccirillo, S. J. E. Radford, A. C. S. Readhead, J. L. Richards, D. Samtleben, M. Seiffert, M. C. Shepherd, K. M. Smith, S. T. Staggs, O. Tajima, K. L. Thompson, K. Vanderlinde, R. Williamson,
The Astrophysical Journal, 760, 145, November 2012,
"Second Season QUIET Observations: Measurements of the CMB Polarization Power Spectrum at 95 GHz"

1) … QUIET Collaboration: Bischoff, C., Brizius, A., Buder, I., Chinone, Y., Cleary, K., Dumoulin, R. N., Kusaka, A., **Monsalve, R.**, Næss, S. K., Newburgh, L. B., Reeves, R., Smith, K. M., Wehus, I. K., Zuntz, J. A., Zwart, J. T. L., Bronfman, L., Bustos, R., Church, S. E., Dickinson, C., Eriksen, H. K., Ferreira, P. G., Gaier, T., Gundersen, J. O., Hasegawa, M., Hazumi, M., Huffenberger, K. M., Jones, M. E., Kanglaslahti, P., Kapner, D. J., Lawrence, C. R., Limon, M., May, J., McMahon, J. J., Miller, A. D., Nguyen, H., Nixon, G. W., Pearson, T. J., Piccirillo, L., Radford, S. J. E., Readhead, A. C. S., Richards, J. L., Samtleben, D., Seiffert, M.,

Shepherd, M. C., Staggs, S. T., Tajima, O., Thompson, K. L., Vanderlinde, K., Williamson, R., & Winstein, B.,
The Astrophysical Journal, 741, 111, October 2011,
"First Season QUIET Observations: Measurements of CMB Polarization Power Spectra at 43 GHz in the Multipole Range 25 ≤ l ≤ 475"

Conference papers:

1) … **Raul A. Monsalve**,
Proc. SPIE 7741, San Diego, June 2010,
"Beam characterization for the QUIET Q-Band instrument using polarized and unpolarized astronomical sources"

Memos:

Available on Haystack EDGES Memo Series webpage:
http://www.haystack.mit.edu/ast/arrays/Edges/EDGES_memos/EdgesMemo.html
2014/07/31, *"Characterization of RFI at the UNR Gund Ranch"*
2013/09/05, *"Effect of Error in the VNA Calibration Standards, on Measured Reflection Coefficient"*
2013/05/03, *"Sensitivity of EDGES Antenna Prototype to Different Perturbations"*
2012/12/13, *"Stability measurements of VNA, coaxial cable, and antenna with Roberts balun"*

Available on ASU Low-Frequency Cosmology Lab Memo webpage:
http://loco.lab.asu.edu/memos/
2017/08/24, *"Summary of Data Analysis: Low-Band 1"*
2017/08/16, *"Airline Measurements at the Input of the Low-Band 1 Receiver"*
2017/08/16, *"Reflection Coefficient of Internal Calibration Standards"*
2017/08/16, *"Comparison of Methods for Reflection Calibration at the Receiver Input"*
2017/08/01, *"Verification of 2015 and 2017 Parameters of the Low-Band 1 Front-End Network"*
2017/08/14, *"Cross-check between Calibrations of Two Benchtop Keysight/Agilent VNAs"*
2017/07/27, *"New Test Calibration of a Subset of Low-Band 1 Data"*
2017/06/15, *"Summary of Low-Band Residuals"*
2017/06/14, *"21-cm Parameter Estimation using Markov Chain Monte Carlo"*
2017/05/29, *"Nominal Calibration Data and Results for the Low Band 1 and 2 Receivers at 25degC"*
2017/05/27, *"S-parameters of the Front-end Network in the Low-Band 1 Receiver"*
2017/05/11, *"Progress in the Rejection of Physical Global 21 cm Models"*
2017/04/19, *"Lowband-2 Calibration Summary 2016"*
2017/03/05, *"Estimation of the Reflection Magnitude Accuracy with the Agilent E5061A VNA: Part 2"*
2017/03/05, *"Initial Calibration Results for Second EDGES Low-Band Receiver"*
2017/02/27, *"Estimation of the Reflection Magnitude Accuracy with the Agilent E5061A VNA at −30 dBm"*
2017/02/16, *"Rejection of Tanh Models for the Global 21-cm Signal: PART 4, chi^2 Sliding Window Approach (ongoing work)"*
2017/02/07, *"Rejection of Tanh Models for the Global 21-cm Signal from Simulated Data: PART3 Sliding Window Approach"*
2017/02/01, *"Rejection of Tanh Models for the Global 21-cm Signal from Simulated Data: PART2"*
2017/01/31, *"Rejection of Tanh Models for the Global 21-cm Signal from Simulated Data (ongoing work)"*
2016/12/13, *"Preliminary Rejection of Gaussian Models for the Global 21-cm with EDGES High-Band (ongoing work)"*
2016/11/23, *"Preliminary Rejection of Global 21-cm Models with EDGES High-Band (ongoing work)"*
2016/11/17, *"EDGES High-Band Average Spectrum (ongoing work)"*
2016/09/02, *"Measurements of Low- and High-band Antenna S11 at the MRO on August 30-31, 2016"*
2016/04/20, *"Spectral Index Comparisons Between GSM and EDGES High-Band Measurements"*
2016/07/20, *"Estimating the Accuracy of the Antenna S11 Measurements at the MRO"*
2016/03/16, *"Estimates for the Sky Polarization Intensity at ~150 MHz averaged over Wide Solid Angles"*
2015/12/10, *"Reflection Coefficient Measurements of the EDGES Low-Band BLADE Antenna Starting on 2015/12/08"*

2015/09/26, *"Pictures of the Low-band Receiver Assembly"*
2015/09/25, *"Stability of the Antenna Reflection Coefficient Measurements at the MRO"*
2015/09/22, *"Reflection Coefficient Measurements of the EDGES High-Band BLADE Antenna Starting on 2015/09/19"*
2015/08/04, *"Reflection Coefficient Measurements of the EDGES High-Band BLADE Antenna Starting on 2015/07/31"*
2015/06/11, *"Reflection Coefficient Measurements of the EDGES High-Band Fourpoint Antenna Starting on 2015/06/06"*
2015/06/04, *"Comparison of Alternatives for Calibration of the High-Band Receiver 2015 at 25oC"*
2015/05/13, *"Antenna S11 Measurements at MRO, April/May 2015"*
2015/03/05, *"Summary of Antenna S11 Measurements at MRO Starting on 2015/02/27"*
2015/02/19, *"Progress Toward a Full Uncertainty Propagation Machinery for EDGES: II"*
2015/02/12, *"Progress Toward a Full Uncertainty Propagation Machinery for EDGES"*
2014/12/11, *"Testing the Temperature Controller on 2014/12/11"*
2014/12/08, *"EDGES - Temperature Control Circuit"*
2014/12/08, *"Testing the Temperature Controller on 2014/12/08"*
2014/11/10, *"Antenna S11 Measured Between Nov 07 and 10"*
2014/11/05, *"S11 Measurements Before and During the EDGES Deployment of October 2014"*
2014/10/30, *"Developments at ASU for the EDGES Deployment of October 2014"*
2014/08/18, *"Characterization of SPDT RF Switch"*
2014/07/13, *"Studying the Forward-Reverse Method Through Simulations: II"*
2014/07/07, *"Studying the Forward-Reverse Method Through Simulations"*
2014/06/23, *"Choosing a Test Network for the Forward-Reverse Method of VNA Standard Characterization"*
2014/06/23, *"Comparison Between Global Sky Model and Haslam Map when Convolved with FEKO Beam"*
2014/06/11, *"Correction of EDGES Data using CST Beam"*
2014/05/30, *"First Look at Good-Quality EDGES Data"*
2014/05/12, *"Toward an Accurate Calibration of EDGES Using Temperature References: II"*
2014/05/02, *"Toward an Accurate Calibration of EDGES Using Temperature References"*
2014/01/13, *"EDGES-2 Base Plate Drawing"*
2013/11/27, *"Performance of Antenna Measurement Setup"*
2013/11/21, *"Linear Antenna Dependence on Temperature"*
2013/11/14, *"Quick Look at Antenna S11 Data Taken at Boolardy"*
2013/11/13, *"Status of the EDGES Antenna at the Site After Deployment of November 2013"*
2013/10/23, *"Correction of Reflection Coefficient of 6-dB Attenuator Measured with a FieldFox VNA"*
2013/10/23, *"Correction of Reflection Coefficient of 10-dB Attenuator Measured with a FieldFox VNA"*
2013/10/03, *"Cross-Check Between Short Standards"*
2013/10/02, *"Temperature Coefficients for DC Resistance of Match and Reference Attenuators"*
2013/09/28, *"Using a Labjack U3 with Python on Linux"*
2013/08/29, *"Effect of Error in Open and Short Standards on Measurement of Attenuator"*
2013/08/22, *"Ground Plane Test in the Softball Field"*
2013/08/15, *"Antenna Measurements in a Softball Field"*
2013/08/12, *"Cross-check of Short and Open Standards"*
2013/08/11, *"New Antenna Measurements With and Without the Shield"*
2013/08/07, *"Effect of Loss on VNA Calibration Standards"*
2013/08/01, *"VNA Accuracy Test 3"*
2013/08/01, *"Sensitivity of Antenna to Different Perturbations"*
2013/07/26, *"Heating and Cooling Test"*
2013/07/21, *"VNA Accuracy Test 2"*
2013/07/18, *"VNA Accuracy Test"*
2013/07/13, *"Revisiting the Calibration Method"*
2013/07/11, *"Measurement of Antenna (Aluminum Base)"*
2013/06/20, *"Quick Look at Changes in Antenna Reflection Coefficient When Applying Heat with Heat Guns"*
2013/05/22, *"Measurement of Antenna using Air-dielectric Adapters and No Teflon in Tuner"*
2013/05/14, *"First Measurement of Antenna using Mechanical Switch"*
2013/05/02, *"Propagation of Instrumental Errors to the Sky Temperature Measurement"*