

# CURRICULUM VITAE

## AMY E. LOWITZ

### CONTACT

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### EDUCATION

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**PhD** University of Wisconsin Madison, 2016, Physics  
Dissertation: *Kinetic Inductance Detectors for CMB Polarimetry at 100 GHz*  
Advisor: Prof. Peter Timbie  
**MS** University of Wisconsin - Madison, 2012, Physics  
**ScB** Brown University, 2009, Physics

### APPOINTMENTS

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**The University of Chicago and Argonne National Laboratory** Mar 2017 - Present

*Kavli Institute for Cosmological Physics and High Energy Physics Division*

Postdoctoral Scholar with the South Pole Telescope collaboration and CMB-S4, working on:

- South Pole Telescope winterover hiring, training, and support.
- Field maintenance and deployment of telescope receiver instrumentation.
- Developed a low-parasitic bolometer readout to reduce device crosstalk and noise.
- Digital frequency multiplexed TES readout testing, integration, and optimization.
- Supervised and trained students.

**South Pole Telescope** Jan 2016 - Nov 2016

*South Pole, Antarctica (for the University of Chicago)*

Winter telescope operator

- Maintained and operated a complex, highly-integrated telescope at a remote field site
- Communicated and collaborated with team members back at the University to optimize telescope operation and solve problems as they arose.

**University of Wisconsin - Madison** 2011-2017

*Timbie Laboratory; Madison, WI*

Graduate student working on:

- Kinetic inductance detectors for cosmic microwave background polarimetry.
- Nanofabrication material- and process- development.
- Supervision of undergraduate students.
- Wrote and received NASA graduate research grant, administered grant, managed budget.

**MIT Lincoln Laboratory** 2009-2010

*Missile Defense Systems Integration group; Lexington, MA*

Radar Engineer working on:

- Feature-based classifier algorithm development.
- Computer vision algorithm development and validation.
- Statistical validation of simulations.

**Brown University** 2008-2009

*Dell'Antonio Laboratory; Providence, RI*

Undergraduate honors thesis: "Photometric Redshifts for Galaxies in a Lensing Survey"

**Princeton University**

Summers 2007 - 2008

*Gravity Group; Princeton, NJ*

Recombination spectrum distortion detection, cryostat construction.  
 Cryogenic system repair/commissioning for the ABS telescope.

**Brown University**

2008

*Tucker Laboratory; Providence, RI*

Pointing system rebuild for the BLAST telescope.

**Brown University**

2006-2007

*Valles Laboratory; Providence, RI*

Paramecium response to altered-gravity environments

**LANGUAGES**

English, American Sign Language, French  
 MATLAB, Python

**SERVICE AND OUTREACH**

Education and Public Outreach Committee, Member, CMB-S4 Collaboration	2019-present
Junior Scientist Advancement Committee, Member, CMB-S4 Collaboration	2018-present
88th Compton Lecturer, Enrico Fermi Institute at the University of Chicago	Fall 2018
NASA grant review panel	201X
Adler Planetarium Astronomy Conversations Lecturer, Chicago, IL	2017-present
Women and Gender Minorities in Physics, Founding Member, UW Madison	2015-2017
Chairperson, IEEE CSC Student and Recent Graduate Outreach Committee	2013-2014
Wonders of Physics/Physics Fair: Science outreach event, UW-Madison	2011-2015
Expand Your Horizons: Girls' Science Day, UW-Madison	2010-2013
Women in Science and Engineering (WiSE), Brown University	
Member	2005-2009
Peer-mentor	2007-2009
Founder and chairperson of physicsWiSE	2007-2009

**HONORS**

Antarctica Service Medal	2016
NASA Space Technology Research Fellow	2012-2015
IEEE Council on Superconductivity Fellow	2012
Wisconsin Space Grant Fellow	2011-2012
Van Vleck Fellow, University of Wisconsin - Madison	2010
Bachelor of Science with Honors, Brown University	2009

**TEACHING**

88th Compton Lecturer, public lecture series	Enrico Fermi Institute at the University of Chicago	Fall 2018
Introductory Physics, private tutor	Madison, WI	2011-2015
General Physics, teaching assistant	UW Madison	Spring 2011
Physics in the Arts, teaching assistant	UW Madison	Fall 2010
MATCH School AP Calculus, volunteer tutor	Boston, MA	2009-2010
Introductory calculus, tutor	Brown University	2007-2009
Introductory physics, tutor	Brown University	2007-2009
Sophia Academy, volunteer math tutor	Providence, RI	2007-2008

**PUBLICATIONS**

**AE Lowitz**, AN Bender, P Barry, TW Cecil, CL Chang, R Divan, MA Dobbs, AJ Gilbert, SE Kuhlmann, M Lisovenko, J Montgomery, V Novosad, S Padin, JE Pearson, G Wang, V Yefremenko, J Zhang, **“Performance of a low-parasitic frequency-domain multiplexing readout.”** *J. Low Temp. Phys.* (submitted) arXiv:1907.09035

N Huang, L E Bleem, B Stalder, P A R Ade, S W Allen, A J Anderson, J E Austermann, J S Avva, J A Beall, A N Bender, B A Benson, F Bianchini, S Bocquet, M Brodwin, J E Carlstrom, C L Chang, H C Chiang, R Citron, C Corbett Moran, T M Crawford, A T Crites, T de Haan, M A Dobbs, W Everett, B Floyd, J Gallicchio, E M George,

- A Gilbert, M D Gladders, S Guns, N Gupta, N W Halverson, N Harrington, J W Henning, G C Hilton, G P Holder, W L Holzzapfel, J D Hrubes, J Hubmayr, K D Irwin, G Khullar, L Knox, A T Lee, D Li, **A Lowitz**, M McDonald, J J McMahon, S S Meyer, L M Mocanu, J Montgomery, A Nadolski, T Natoli, J P Nibarger, G Noble, V Novosad, S Padin, S Patil, C Pryke, C L Reichardt, J E Ruhl, B R Saliwanchik, A Saro, JT Sayre, K K Schaffer, K Sharon, C Sievers, G Smecher, A A Stark, K T Story, C Tucker, K Vanderlinde, T Veach, J D Vieira, G Wang, N Whitehorn, W L K Wu, V Yefremenko, **“Galaxy Clusters Selected via the Sunyaev-Zel’dovich Effect in the SPTpol 100-Square-Degree Survey.”** *Astrophysical Journal (submitted)* (2019) arXiv:1907.09621
- S Raghunathan, S Patil, E Baxter, B A Benson, L E Bleem, T M Crawford, G P Holder, T McClintock, C L Reichardt, T N Varga, N Whitehorn, P A R Ade, S Allam, A J Anderson, J E Austermann, S Avila, J S Avva, D Bacon, J A Beall, A N Bender, F Bianchini, S Bocquet, D Brooks, D L Burke, J E Carlstrom, J Carretero, F J Castander, C L Chang, H C Chiang, R Citron, M Costanzi, A T Crites, L N da Costa, S Desai, H T Diehl, J P Dietrich, M A Dobbs, P Doel, S Everett, A E Evrard, C Feng, B Flaugher, P Fosalba, J Frieman, J Gallicchio, J Garcia-Bellido, E Gaztanaga, E M George, T Giannantonio, A Gilbert, R A Gruendl, J Gschwend, N Gupta, G Gutierrez, T de Haan, N W Halverson, N Harrington, J W Henning, G C Hilton, D L Hollowood, W L Holzzapfel, K Honscheid, J D Hrubes, N Huang, J Hubmayr, K D Irwin, T Jeltema, M Carrasco Kind, L Knox, N Kuropatkin, O Lahav, A T Lee, D Li, M Lima, **A Lowitz**, M A G Maia, J L Marshall, J J McMahon, P Melchior, F Menanteau, S S Meyer, R Miquel, L M Mocanu, J J Mohr, J Montgomery, C Corbett Moran, A Nadolski, T Natoli, J P Nibarger, G Noble, V Novosad, R L C Ogando, S Padin, A A Plazas, C Pryke, D Rapetti, A K Romer, A Roodman, A Carnero Rosell, E Roza, J E Ruhl, E S Rykoff, B R Saliwanchik, E Sanchez, JT Sayre, V Scarpine, K K Schaffer, M Schubnell, S Serrano, I Sevilla-Noarbe, C Sievers, G Smecher, M Smith, M Soares-Santos, A A Stark, K T Story, E Suchyta, M E C Swanson, G Tarle, C Tucker, K Vanderlinde, T Veach, J De Vicente, J D Vieira, V Vikram, G Wang, W L K Wu, V Yefremenko, Y Zhang, **“A Detection of CMB-Cluster Lensing using Polarization Data from SPTpol.”** *Physical Review Letters (submitted)* (2019) arXiv:1907.08605
- N Gupta, C L Reichardt, P A R Ade, A J Anderson, M Archibley, J E Austermann, J S Avva, J A Beall, A N Bender, B A Benson, F Bianchini, L E Bleem, J E Carlstrom, C L Chang, H C Chiang, R Citron, C Corbett Moran, T M Crawford, A T Crites, T de Haan, M A Dobbs, W Everett, C Feng, J Gallicchio, E M George, A Gilbert, N W Halverson, N Harrington, J W Henning, G C Hilton, G P Holder, W L Holzzapfel, Z Hou, J D Hrubes, N Huang, J Hubmayr, K D Irwin, L Knox, A T Lee, D Li, **A Lowitz**, D Luong-Van, D P Marrone, A Manzotti, J J McMahon, S S Meyer, M Millea, L M Mocanu, J J Mohr, J Montgomery, A Nadolski, T Natoli, J P Nibarger, G I Noble, V Novosad, Y Omori, S Padin, S Patil, C Pryke, J E Ruhl, B R Saliwanchik, JT Sayre, K K Schaffer, E Shirokoff, C Sievers, G Smecher, Z Staniszewski, A A Stark, K T Story, E R Switzer, C Tucker, K Vanderlinde, T Veach, J D Vieira, G Wang, N Whitehorn, R Williamson, W L K Wu, V Yefremenko, L Zhang **“Fractional Polarisation of Extragalactic Sources in the 500-square-degree SPTpol Survey.”** *Monthly Notices of the Royal Astronomical Society (submitted)* (2019) arXiv:1907.02156
- W L K Wu, L M Mocanu, P A R Ade, A J Anderson, J E Austermann, J S Avva, J A Beall, A N Bender, B A Benson, F Bianchini, L E Bleem, J E Carlstrom, C L Chang, H C Chiang, R Citron, C Corbett Moran, T M Crawford, A T Crites, T de Haan, M A Dobbs, W Everett, J Gallicchio, E M George, A Gilbert, N Gupta, N W Halverson, N Harrington, J W Henning, G C Hilton, G P Holder, W L Holzzapfel, Z Hou, J D Hrubes, N Huang, J Hubmayr, K D Irwin, L Knox, A T Lee, D Li, **A Lowitz**, A Manzotti, J J McMahon, S S Meyer, M Millea, J Montgomery, A Nadolski, T Natoli, J P Nibarger, G I Noble, V Novosad, Y Omori, S Padin, S Patil, C Pryke, C L Reichardt, J E Ruhl, B R Saliwanchik, JT Sayre, K K Schaffer, C Sievers, G Simard, G Smecher, A A Stark, K T Story, C Tucker, K Vanderlinde, T Veach, J D Vieira, G Wang, N Whitehorn, V Yefremenko, **“A Measurement of the Cosmic Microwave Background Lensing Potential and Power Spectrum from 500 deg<sup>2</sup> of SPTpol Temperature and Polarization Data.”** *Astrophysical Journal (in review)* (2019) arXiv:1905.05777
- A Mennella, P Ade, G Amico, D Auguste, J Aumont, S Banfi, G Barbaran, P Battaglia, E Battistelli, A Bau, B Belier, D Bennett, L Berge, J P Bernard, M Bersanelli, M Bigot Sazy, N Bleurvacq, J Bonaparte, J Bonis, E Bunn, D Burke, D Buzi, A Buzzelli, F Cavaliere, P Chianial, C Chapron, R Charlassier, F Columbro, G Coppi, A Coppolecchia, R D’Agostino, G D’Alessandro, P De Bernardis, G De Gasperis, M De Leo, M De Petris, A Di Donato, L Dumoulin, A Etchegoyen, A Fasciszewski, C Franceschet, M Miguel Gamboa Lerena, B Garcia, X Garrido, M Gaspard, A Gault, D Gayer, M Gervasi, M Giard, Y Giraud Heraud, M Gomez Berisso, M Gonzalez, M Gradziel, L Grandsire, E Guerard, J C Hamilton, D Harari, V Haynes, S Versille, D T Hoang, N Holtzer, F Incardona, E Jules, J Kaplan, A Korotkov, C Kristukat, L Lamagna, S Loucatos, T Louis, **A E Lowitz**, V Lukovic, R Luterstein, B Maffei, S Marnieros, S Masi, A Mattei, A May, M McCulloch, M Medina, L Mele, S J Melhuish, L Montier, L Mousset, L Mundo, J Murphy, J Murphy, C O’Sullivan, E Olivieri, A Paiella, F Pajot, A Passerini, H Pastoriza, A Pelosi, C Perbost, M Perciballi, F Pezzotta, F Piacentini, M Piat, L Piccirillo, G Pisano, G Polenta, D Prele, R Puddu, D Rambaud, P Ringegni, G E Romero, M Salatino, A Schillaci, C G Scoccola, S P Scully, S Spinelli, G Stankowiak, M Stolpovskiy, F Suarez, A Tartari, J P Thermeau, P Timbie, M Tomasi, S Torchinsky, M Tristram, C Tucker, G Tucker, S Vanneste, D Vignano,

- N Vittorio, F Voisin, R Watson, F Wicek, M Zannoni, A Zullo, **“QUBIC: Exploring the Primordial Universe with the Q&U Bolometric Interferometer”** *Universe* 5(2) 2019
- W Everett, P A R Ade, Z Ahmed, A J Anderson, J E Austermann, J S Avva, R Basu Thakur, A N Bender, B A Benson, J E Carlstrom, F W Carter, T Cecil, C L Chang, J F Cliche, A Cukierman, E V Denison, T de Haan, J Ding, M A Dobbs, D Dutcher, A Foster, R N Gannon, A Gilbert, J C Groh, N W Halverson, A H Harke-Hosemann, N L Harrington, J W Henning, G C Hilton, W L Holzapfel, N Huang, K D Irwin, O B Jeong, M Jonas, T Khaire, A M Kofman, M Korman, D Kubik, S Kuhlmann, C L Kuo, A T Lee, **A E Lowitz**, S S Meyer, D Michalik, J Montgomery, A Nadolski, T Natoli, H Nguyen, G I Noble, V Novosad, S Padin, Z Pan, J Pearson, C M Posada, A Rahlin, J E Ruhl, L J Saunders, J T Sayre, I Shirley, E Shirokoff, G Smecher, J A Sobrin, A A Stark, K T Story, A Suzuki, Q Y Tang, K L Thompson, C Tucker, L R Vale, K Vanderlinde, J D Vieira, G Wang, N Whitehorn, V Yefremenko, K W Yoon, M R Young, **“Design and Bolometer Characterization of the SPT-3G First-Year Focal Plane.”** *Journal of Low Temperature Physics* 193 (2018)
- V Yefremenko, P Ade, Z Ahmed, A Anderson, J Austermann, J Avva, R Thakur, A N Bender, B A Benson, J Carlstrom, F Carter, T Cecil, C Chang, J F Cliche, A Cukierman, E Denison, T de Haan, J Ding, R Divan, M Dobbs, D Dutcher, W Everett, A Foster, R Gannon, A Gilbert, J Groh, N Halverson, A Harke-Hosemann, N Harrington, J Henning, G Hilton, W Holzapfel, N Huang, K Irwin, O Jeong, M Jonas, T Khaire, A Kofman, M Korman, D Kubik, S Kuhlmann, C-L Kuo, A Lee, **A E Lowitz**, S Meyer, D Michalik, C Miller, J Montgomery, A Nadolski, T Natoli, H Nguyen, G Noble, V Novosad, S Padin, Z Pan, J Pearson, C Posada, A Rahlin, J Ruhl, L. J. Saunders, J Sayre, I Shirley, E Shirokoff, G Smecher, J Sobrin, L Stan, A Stark, K Story, A Suzuki, Q Tang, K Thompson, C Tucker, L Vale, K Vanderlinde, J Vieira, G Wang, N Whitehorn, K W Yoon, M Young, **“Impact of Electrical Contacts Design and Materials on the Stability of Ti Superconducting Transition Shape.”** *Journal of Low Temperature Physics*, 193 (2018)
- J A Sobrin, P A R Ade, Z Ahmed, A J Anderson, J S Avva, R Basu Thakur, A N Bender, B A Benson, J E Carlstrom, F W Carter, T W Cecil, C L Chang, J F Cliche, A Cukierman, T de Haan, J Ding, M A Dobbs, D Dutcher, W Everett, A Foster, J Gallicchio, A Gilbert, J C Groh, S T Guns, N W Halverson, A H Harke-Hosemann, N L Harrington, J W Henning, W L Holzapfel, N Huang, K D Irwin, O B Jeong, M Jonas, T S Khaire, A M Kofman, M Korman, D L Kubik, S Kuhlmann, C L Kuo, A T Lee, **A E Lowitz**, S S Meyer, D Michalik, J Montgomery, A Nadolski, T Natoli, H Nguyen, G I Noble, V Novosad, S Padin, Z Pan, J Pearson, C M Posada, W Quan, A Rahlin, J E Ruhl, J T Sayre, E Shirokoff, G Smecher, A A Stark, K T Story, A Suzuki, K L Thompson, C Tucker, K Vanderlinde, J D Vieira, G Wang, N Whitehorn, V Yefremenko, K W Yoon, M Young, **“Design and characterization of the SPT-3G receiver.”** *SPIE Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 10708 (2018)
- P de Bernadis, G Amico, D Aguste, J Aumont, S Banfi, G Barbaran, P Battaglia, E Battistelli, A Bau, B Belier, D Bennett, L Berge, JP Bernard, M Bersanelli, M Bigot-Sazy, N Bleurvacq, J Bonaparte, J Bonis, B Bordier, E Breille, E Bunn, D Burke, D Buzi, A Buzzelli, F Cavaliere, P Chanial, C Chapron, R Charlassier, F Columbro, G coppi, A Coppolecchia, F Couchot, R D’Agostino, G D’Alessandro, G De Gasperis, M De Leo, M De Petris, A Di Donato, L Dumoulin, A Etchegoyen, A Fasciszewski, C Francheschet, M Gamboa Larena, B Garcia, X Garrido, M Gaspard, A Gault, D Gayer, M Gervasi, M Giard, Y Giraud-Heraud, M Gomez Berisso, M Gonzalez, M Gradziel, L Gradshire, E Guerrard, JC Hamilton, D Harari, V Haynes, S Henrot-Versille, D Hoang, F Incardona, E Jules, J Kaplan, A Korotkov, C Kristukat, L Lamanga, S Loucatos, T Louis, **A Lowitz**, V Lukovic, R Luterstein, B Maffei, S Marnieros, S Masi, A Mattei, A May, M McCulloch, MC Medina, L Mele, S Melhuish, A Mennella, L Montier, L Mundo, JA Murphy, JD Murphy, E Olivieri, C O’Sullivan, A Paiella, F Pajot, A Passerini, H Pastoriza, A Pelosi, C Perbost, O Perdereau, F Pezzotta, F Piacentini, M Piat, L Piccirillo, G Pisano, G Polenta, D Prele, R Puddu, D Rambaud, P Ringegni, GE Romero, M Salatino, A Schillaci, C Scoccola, S Scully, S Spimelli, M Stolpovskiy, F Suarez, A Tartari, JP Thermeau, P Timbie, S Torchinsky, M Tristram, V Troungcanh, G Tucker, C Tucker, S Vanneste, D Vigano, N Vittorio, F Voisin, B Watson, F Wicek, M Zannoni, A Zullo, **“QUBIC: Measuring CMB polarization from Argentina.”** *Boletin de la Asociacion Argentina de Astronomia La Plata Argentina*, 60 (2018)
- A E Lowitz**, A N Bender, M A Dobbs, A J Gilbert, **“Digital frequency multiplexing with sub-Kelvin SQUIDS.”** *Proc. SPIE 10708: Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 107081D (2018)
- D Dutcher, P A R Ade, Z Ahmed, A J Anderson, J S Avva, R Basu Thakur, A N Bender, B A Benson, J E Carlstrom, F W Carter, T W Cecil, C L Chang, J F Cliche, A Cukierman, T de Haan, J Ding, M A Dobbs, W Everett, A Foster, J Gallicchio, A Gilbert, J C Groh, A H Harke-Hosemann, S T Guns, N W Halverson, N L Harrington, J W Henning, W L Holzapfel, N Huang, K D Irwin, O B Jeong, M Jonas, T S Khaire, A M Kofman, M Korman, D L Kubik, S Kuhlmann, C-L Kuo, **A E Lowitz**, A T Lee, S S Meyer, D Michalik, J Montgomery, A Nadolski, T Natoli, H Nguyen, G I Noble, V Novosad, S Padin, Z Pan, J Pearson, C M Posada, W Quan, A Rahlin, J E Ruhl, J T Sayre, E Shirokoff, G Smecher,

- JA Sobrin, AA Stark, KT Story, A Suzuki, KL Thompson, C Tucker, K Vanderlinde, JD Vieira, G Wang, N Whitehorn, V Yefremenko, KW Yoon, MR Young, **“Characterization and performance of the second-year SPT-3G focal plane.”** *Proc. SPIE 10708: Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 107081Z (2018)
- AN Bender, PAR Ade, Z Ahmed, A Anderson, J Austermann, J Avva, P Barry, R Basu Thakur, B Benson, L Bleem, K Byrum, JE Carlstrom, F Carter, T Cecil, C Chang, H-M Cho, J-F Cliche, T Crawford, A Cukierman, E Denison, T de Haan, J Ding, M Dobbs, D Dutcher, W Everett, A Foster, R Gannon, A Gilbert, J Groh, N Halverson, A Harke-Hosemann, N Harrington, J Henning, G Hilton, G Holder, W Holzapfel, N Huang, K Irwin, O Jeong, M Jonas, T Khaire, L Knox, A Kofman, M Korman, D Kubik, S Kuhlmann, C-L Kuo, A Lee, E Leitch, **A Lowitz**, S Meyer, D Michalik, J Montgomery, A Nadolski, T Natoli, H Ngyuen, G Noble, V Novosad, S Padin, Z Pan, J Pearson, C Posada, A Rahlin, C Reichardt, J Ruhl, L Saunders, J Sayre, I Shirley, E Shirokoff, G Smecher, J Sobrin, A Stark, K Story, A Suzuki, Q-Y Ting, K Thompson, C Tucker, L Vale, K Vanderlinde, J Vieira, G Wang, N Whitehorn, V Yefremenko, KW Yoon, M Young, **“Year 2 instrument status from the SPT-3G cosmic microwave background receiver.”** *Proc. SPIE 10708: Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 1070803 (2018)
- A J May, C Chapron, G Coppi, G D’Alessandro, P de Bernardis, S Masi, S Melhuish, M Piat, L Piccirillo, A Schillaci, J-P Thermeau, P Ade, G Amico, D Auguste, J Aumont, S Banfi, G Barbarn, P Battaglia, E Battistelli, A Ba, B Blier, D Bennett, L Berg, J-Ph Bernard, M Bersanelli, M-A Bigot-Sazy, N Bleurvacq, J Bonaparte, J Bonis, G Bordier, E Brelle, E Bunn, D Burke, D Buzi, A Buzzelli, F Cavaliere, P Chaniel, R Charlassier, F Columbro, A Coppolecchia, F Couchot, R D’Agostino, G De Gasperis, M De Leo, M De Petris, A Di Donato, L Dumoulin, A Etchegoyen, A Fasciszewski, C Franceschet, M M Gamboa Lerena, B Garca, X Garrido, M Gaspard, A Gault, D Gayer, M Gervasi, M Giard, Y Giraud-Hraud, M Gmez Berisso, M Gonzlez, M Gradziel, L Grandsire, E Guerrard, J-Ch Hamilton, D Harari, V Haynes, S Henrot-Versill, D T Hoang, F Incardona, E Jules, J Kaplan, A Korotkov, C Kristukat, L Lamagna, S Loucatos, T Louis, **A Lowitz**, V Lukovic, R Luterstein, B Maffei, S Marnieros, A Mattei, M A McCulloch, M C Medina, L Mele, A Mennella, L Montier, L M Mundo, J A Murphy, J D Murphy, C O’Sullivan, E Olivieri, A Paiella, F Pajot, A Passerini, H Pastoriza, A Pelosi, C Perbost, O Perdereau, F Pezzotta, F Piacentini, G Pisano, G Polenta, D Prle, R Puddu, D Rambaud, P Ringegni, G E Romero, M Salatino, C G Scccola, S Scully, S Spinelli, M Stolpovskiy, F Suarez, A Tartari, P Timbie, S A Torchinsky, M Tristram, V Truongcanh, C Tucker, G Tucker, S Vanneste, D Vigan, N Vittorio, F Voisin, B Watson, F Wicek, M Zannoni, A Zullo, **“Thermal architecture for the QUBIC cryogenic receiver.”** *SPIE Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 10708 (2018)
- C O’Sullivan, P Ade, G Amico, D Auguste, J Aumont, S Banfi, G Barbarn, P Battaglia, E Battistelli, A Ba, B Blier, D Bennett, L Berg, J-Ph Bernard, M Bersanelli, M-A Bigot-Sazy, N Bleurvacq, J Bonaparte, J Bonis, G Bordier, E Brelle, E Bunn, D Burke, D Buzi, A Buzzelli, F Cavaliere, P Chaniel, C Chapron, R Charlassier, F Columbro, G Coppi, A Coppolecchia, F Couchot, R D’Agostino, G DAlessandro, P de Bernardis, G de Gasperis, M De Leo, M De Petris, A Di Donato, L Dumoulin, A Etchegoyen, A Fasciszewski, C Franceschet, M M Gamboa Lerena, B Garca, X Garrido, M Gaspard, A Gault, D Gayer, M Gervasi, M Giard, Y Giraud-Hraud, M Gmez Berisso, M Gonzlez, M Gradziel, L Grandsire, E Guerrard, J-Ch Hamilton, D Harari, V Haynes, S Henrot-Versill, D T Hoang, F Incardona, E Jules, J Kaplan, A Korotkov, C Kristukat, L Lamagna, S Loucatos, T Louis, **A Lowitz**, V Lukovic, R Luterstein, B Maffei, S Marnieros, S Masi, A Mattei, A May, M McCulloch, M C Medina, L Mele, S Melhuish, A Mennella, L Montier, L M Mundo, J A Murphy, J D Murphy, E Olivieri, A Paiella, F Pajot, A Passerini, H Pastoriza, A Pelosi, C Perbost, O Perdereau, F Pezzotta, F Piacentini, M Piat, L Piccirillo, G Pisano, G Polenta, D Prle, R Puddu, D Rambaud, P Ringegni, G E Romero, M Salatino, A Schillaci, C G Scccola, S Scully, S Spinelli, M Stolpovskiy, F Suarez, A Tartari, J-P Thermeau, P Timbie, S A Torchinsky, M Tristram, V Truongcanh, C Tucker, G Tucker, S Vanneste, D Vigan, N Vittorio, F Voisin, B Watson, F Wicek, M Zannoni, A Zullo, **“QUBIC: the Q and U bolometric interferometer for cosmology.”** *SPIE Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 10708 (2018)
- C O’Sullivan, D Burke, D Gayer, J D Murphy, S Scully, M De Leo, M De Petris, A Mattei, A Zullo, A Mennella, M Zannoni, N Bleurvacq, C Chapron, J-Ch Hamilton, M Piat, P Ade, G Amico, D Auguste, J Aumont, S Banfi, G Barbarn, P Battaglia, E Battistelli, A Ba, B Blier, D Bennett, L Berg, J-Ph Bernard, M Bersanelli, M-A Bigot-Sazy, J Bonaparte, J Bonis, G Bordier, E Brelle, E Bunn, D Buzi, A Buzzelli, F Cavaliere, P Chaniel, R Charlassier, F Columbro, G Coppi, A Coppolecchia, F Couchot, R D’Agostino, G DAlessandro, P de Bernardis, G De Gasperis, A Di Donato, L Dumoulin, A Etchegoyen, A Fasciszewski, C Franceschet, M M Gamboa Lerena, B Garca, X Garrido, M Gaspard, A Gault, M Gervasi, M Giard, Y Giraud-Hraud, M Gmez Berisso, M Gonzlez, M Gradziel, L Grandsire, E Guerrard, D Harari, V Haynes, S Henrot-Versill, D T Hoang, F Incardona, E Jules, J Kaplan, A Korotkov, C Kristukat, L Lamagna, S Loucatos, T Louis, **A Lowitz**, V Lukovic, R Luterstein, B Maffei, S Marnieros, S Masi, A May, M McCulloch, M C Medina, L Mele, S Melhuish, L Montier, L M Mundo, J A Murphy, E Olivieri, A Paiella, F Pajot, A

- Passerini, H Pastoriza, A Pelosi, C Perbost, O Perdereau, F Pezzotta, F Piacentini, L Piccirillo, G Pisano, G Polenta, D Prle, R Puddu, D Rambaud, P Ringegni, G E Romero, M Salatino, A Schillaci, C G Scoccola, S Spinelli, M Stolpovskiy, F Suarez, A Tartari, J-P Thermeau, P Timbie, S A Torchinsky, M Tristram, V Truongcanh, C Tucker, G Tucker, S Vanneste, D Vigan, N Vittorio, F Voisin, B Watson, F Wicek, **“Simulations and performance of the QUBIC optical beam combiner.”** *SPIE Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 10708 (2018)
- M Salatino, B Belier, C Chapron, D T Hoang, S Maestre, S Marnieros, W Marty, L Montier, M Piat, D Prele, D Rambaud, J P Thermeau, S A Torchinsky, S Henrot-Versille, F Voisin, P Ade, G Amico, D Auguste, J Aumont, S Banfi, G Barbaran, P Battaglia, E Battistelli, A Ba, D Bennett, L Berge, J-Ph Bernard, M Bersanelli, M-A Bigot-Sazy, N Bleurvacq, J Bonaparte, J Bonis, G Bordier, E Breelle, E Bunn, D Burke, D Buzi, A Buzzelli, F Cavaliere, P Chanial, R Charlassier, F Columbro, G Coppi, A Coppolecchia, F Couchot, R D’Agostino, G DAlessandro, P de Bernardis, G De Gasperis, M De Leo, M De Petris, A Di Donato, L Dumoulin, A Etchegoyen, A Fasciszewski, C Franceschet, M M Gamboa Lerena, B Garcia, X Garrido, M Gaspard, A Gault, D Gayer, M Gervasi, M Giard, Y Giraud-Hraud, M Gomez Berisso, M Gonzlez, M Gradziel, L Grandsire, E Guerrard, J-Ch Hamilton, D Harari, V Haynes, F Incardona, E Jules, J Kaplan, A Korotkov, C Kristukat, L Lamagna, S Loucatos, T Louis, **A Lowitz**, V Lukovic, R Luterstein, B Maffei, S Masi, A Mattei, A J May, M A McCulloch, M C Medina, L Mele, S Melhuish, A Mennella, L M Mundo, J A Murphy, J D Murphy, C O’Sullivan, E Olivieri, A Paiella, F Pajot, A Passerini, H Pastoriza, A Pelosi, C Perbost, O Perdereau, F Pezzotta, F Piacentini, L Piccirillo, G Pisano, G Polenta, R Puddu, P Ringegni, G E Romero, A Schillaci, C G Scoccola, S Scully, S Spinelli, M Stolpovskiy, F Suarez, A Tartari, P Timbie, M Tristram, V Truongcanh, C Tucker, G Tucker, S Vanneste, D Vigan, N Vittorio, B Watson, F Wicek, M Zannoni, A Zullo, **“Performance of NbSi transition-edge sensors readout with a 128 MUX factor for the QUBIC experiment.”** *SPIE Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 10708 (2018)
- A Nadolski, AM Kofman, JD Vieira, PAR Ade, Z Ahmed, AJ Anderson, JS Avva, R Basu Thakur, AN Bender, BA Benson, JE Carlstrom, FW Carter, TW Cecil, CL Chang, JF Cliche, A Cukierman, T de Haan, J Ding, MA Dobbs, D Dutcher, W Everett, A Foster, J Fu, J Gallichio, A Gilbert, JC Groh, ST Guns, R Guyser, NW Halverson, AH Harke-Hosemann, NL Harrington, JW Henning, WL Holzapfel, N Huang, KD Irwin, OB Jeong, M Jonas, A Jones, TS Khaire, M Korman, DL Kubik, S Kuhlmann, C-L Kuo, AT Lee, **AE Lowitz**, SS Meyer, D Michalik, J Montgomery, T Natoli, H Nguyen, GI Noble, V Novosad, S Padin, Z Pan, J Pearson, CM Posada, W Quan, A Rahlin, JE Ruhl, JT Sayre, E Shirokoff, G Smecher, JA Sobrin, AA Stark, KT Story, A Suzuki, KL Thompson, C Tucker, K Vanderlinde, G Wang, N Whitehorn, V Yefremenko, KW Yoon, MR Young, **“Broadband anti-reflective coatings for cosmic microwave background experiments.”** *Proc. SPIE 10708, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy IX*, 1070843 (2018)
- AJ Anderson, PAR Ade, Z Ahmed, JE Austermann, JS Avva, PS Barry, R Basu Thakur, AN Bender, BA Benson, LE Bleem, K Byrum, JE Carlstrom, FW Carter, T Cecil, CL Chang, HM Cho, JF Cliche, TM Crawford, A Cukierman, EV Denison, T de Haan, J Ding, MA Dobbs, D Dutcher, W Everett, A Foster, RN Gannon, A Gilbert, JC Groh, NW Halverson, AH Harke-Hosemann, NL Harrington, JW Henning, GC Hilton, GP Holder, WL Holzapfel, N Huang, KD Irwin, OB Jeong, M Jonas, T Khaire, L Knox, AM Kofman, M Korman, D Kubik, S Kuhlmann, N Kuklev, CL Kuo, AT Lee, EM Leitch, **AE Lowitz**, SS Meyer, D Michalik, J Montgomery, A Nadolski, T Natoli, H Nguyen, GI Noble, V Novosad, S Padin, Z Pan, J Pearson, CM Posada, A Rahlin, CL Reichardt, JE Ruhl, LJ Saunders, JT Sayre, I Shirley, E Shirokoff, G Smecher, JA Sobrin, AA Stark, KT Story, A Suzuki, QY Tang, KL Thompson, C Tucker, LR Vale, K Vanderlinde, JD Vieira, G Wang, N Whitehorn, V Yefremenko, KW Yoon, MR Young, **“SPT-3G: A multichroic receiver for the South Pole Telescope.”** *Journal of Low Temperature Physics*, 193. (2018)
- J Ding, PAR Ade, Z Ahmed, AJ Anderson, JE Austermann, JS Avva, R Basu Thakur, AN Bender, BA Benson, JE Carlstrom, FW Carter, T Cecil, CL Chang, JF Cliche, A Cukierman, EV Denison, T de Haan, R Divan, MA Dobbs, D Dutcher, W Everett, A Foster, RN Gannon, A Gilbert, JC Groh, NW Halverson, AH Harke-Hosemann, NL Harrington, JW Henning, GC Hilton, WL Holzapfel, N Huang, KD Irwin, OB Jeong, M Jonas, T Khaire, AM Kofman, M Korman, D Kubik, S Kuhlmann, CL Kuo, AT Lee, **AE Lowitz**, SS Meyer, D Michalik, CS Miller, J Montgomery, A Nadolski, T Natoli, H Nguyen, GI Noble, V Novosad, S Padin, Z Pan, J Pearson, CM Posada, A Rahlin, JE Ruhl, LJ Saunders, JT Sayre, I Shirley, E Shirokoff, G Smecher, JA Sobrin, L Stan, AA Stark, KT Story, A Suzuki, QY Tang, KL Thompson, C Tucker, LR Vale, K Vanderlinde, JD Vieira, G Wang, N Whitehorn, V Yefremenko, KW Yoon, MR Young, **“Thermal Links and Microstrip Transmission Lines in SPT-3G Bolometers.”** *Journal of Low Temperature Physics*, 1-8. (2018)
- CM Posada, PAR Ade, Z Ahmed, AJ Anderson, JE Austermann, JS Avva, R Basu Thakur, AN Bender, BA Benson, JE Carlstrom, FW Carter, T Cecil, CL Chang, JF Cliche, A Cukierman, EV Denison, T de Haan, J Ding, R Divan, MA Dobbs, D Dutcher, W Everett, A Foster, RN Gannon, A Gilbert, JC Groh, NW Halverson, AH Harke-Hosemann, NL Harrington, JW Henning, GC Hilton, WL Holzapfel, N Huang, KD Irwin, OB Jeong, M Jonas, T Khaire, AM

- Kofman, M Korman, D Kubik, S Kuhlmann, CL Kuo, AT Lee, **AE Lowitz**, SS Meyer, D Michalik, CS Miller, J Montgomery, A Nadolski, T Natoli, H Nguyen, GI Noble, V Novosad, S Padin, Z Pan, J Pearson, A Rahlin, JE Ruhl, LJ Saunders, JT Sayre, I Shirley, E Shirokoff, G Smecher, JA Sobrin, L Stan, AA Stark, KT Story, A Suzuki, QY Tang, KL Thompson, C Tucker, LR Vale, K Vanderlinde, JD Vieira, G Wang, N Whitehorn, V Yefremenko, KW Yoon, MR Young, **“Fabrication of Detector Arrays for the SPT-3G Receiver.”** *Journal of Low Temperature Physics*, 193. (2018)
- Z Pan, PAR Ade, Z Ahmed, AJ Anderson, JE Austermann, JS Avva, R Basu Thakur, AN Bender, BA Benson, JE Carlstrom, FW Carter, T Cecil, CL Chang, J-F Cliche, A Cukierman, EV Denison, T de Haan, J Ding, MA Dobbs, D Dutcher, W Everett, A Foster, RN Gannon, A Gilbert, JC Groh, NW Halverson, AH Harke-Hosemann, NL Harrington, JW Henning, GC Hilton, WL Holzappel, N Huang, KD Irwin, OB Jeong, M Jonas, T Khaire, AM Kofman, M Korman, D Kubik, S Kuhlmann, CL Kuo, AT Lee, **AE Lowitz**, SS Meyer, D Michalik, J Montgomery, A Nadolski, T Natoli, H Nguyen, GI Noble, V Novosad, S Padin, J Pearson, CM Posada, A Rahlin, JE Ruhl, LJ Saunders, JT Sayre, I Shirley, E Shirokoff, G Smecher, JA Sobrin, AA Stark, KT Story, A Suzuki, QY Tang, KL Thompson, C Tucker, LR Vale, K Vanderlinde, JD Vieira, G Wang, N Whitehorn, V Yefremenko, Ki Won Yoon, MR Young, **“Optical Characterization of the SPT-3G Camera.”** *Journal of Low Temperature Physics*, 193. (2018)
- D Burke, D Gayer, E Kalinauskaite, C O’Sullivan, J D Murphy, S P Scully, M De Petris, M De Leo, A Mennella, S A Torchinsky, M Zannoni, G Amico, D Auguste, J Aumont, S Banfi, G Barbarn, P Battaglia, E Battistelli, A Ba, B Blier, D G Bennett, L Berg, J-Ph Bernard, M Bersanelli, M-A Bigot-Sazy, N Bleurvac, J Bonaparte, J Bonis, G Bordier, E Brelle, EF Bunn, D Buzi, A Buzzelli, F Cavaliere, P Chaniel, C Chapron, R Charlassier, F Columbro, G Coppi, A Coppolecchia, F Couchot, G DAlessandro, R D’Agostino, P de Bernardis, G De Gasperis, A Di Donato, A-A Drilien, Louis Dumoulin, A Etchegoyen, A Fasciszewski, C Franceschet, M Gamboa-Lerena, B Garca, X Garrido, M Gaspard, A Gault, M Gervasi, M Giard, Y Giraud-Hraud, M Gmez Berisso, M Gonzlez, M L Gradziel, L Grandsire, E Guerrard, J-Ch Hamilton, D Harari, V Haynes, S Henrot-Versill, D T Hoang, N Holtzer, F Incardona, E Jules, J Kaplan, A L Korotkov, C Kristukat, L Lamagna, J Lande, S Loucatos, T Louis, **A Lowitz**, V Lukovic, R Luterstein, Bruno Maffei, S Marnieros, S Masi, A Mattei, A J May, M A McCulloch, M C Medina, L Mele, S J Melhuish, L Mundo, L Montier, J A Murphy, D Nel, E Olivieri, A Paiella, F Pajot, A Passerini, H Pastoriza, A Pelosi, C Perbost, O Perdereau, F Pezzotta, F Piacentini, M R Piat, L Piccirillo, G Pisano, G Polenta, D Prle, R Puddu, D Rambaud, O Rigaut, P Ringegni, G E Romero, M Salatino, A Schillaci, C G Sccola, S M Spinelli, M Stolpovskiy, F Suarez, A Tartari, J-P Thermeau, PT Timbie, M Tristram, V Truongcanh, G S Tucker, C E Tucker, D Vigan, N Vittorio, F Voisin, B Watson, F Wicek, A Zullo **“Optical modeling and analysis of the Q and U bolometric interferometer for cosmology.”** *SPIE Terahertz, RF, Millimeter, and Submillimeter-Wave Technology and Applications XI*, 10531 (2018)
- FW Carter, PAR Ade, Z Ahmed, AJ Anderson, JE Austermann, JS Avva, R Basu Thakur, AN Bender, BA Benson, JE Carlstrom, T Cecil, CL Chang, JF Cliche, A Cukierman, EV Denison, T de Haan, J Ding, R Divan, MA Dobbs, D Dutcher, W Everett, A Foster, RN Gannon, A Gilbert, JC Groh, NW Halverson, AH Harke-Hosemann, NL Harrington, JW Henning, GC Hilton, WL Holzappel, N Huang, KD Irwin, OB Jeong, M Jonas, T Khaire, AM Kofman, M Korman, D Kubik, S Kuhlmann, CL Kuo, V Kutepova, AT Lee, **AE Lowitz**, SS Meyer, D Michalik, CS Miller, J Montgomery, A Nadolski, T Natoli, H Nguyen, GI Noble, V Novosad, S Padin, Z Pan, J Pearson, CM Posada, A Rahlin, JE Ruhl, LJ Saunders, JT Sayre, I Shirley, E Shirokoff, G Smecher, JA Sobrin, L Stan, AA Stark, KT Story, A Suzuki, QY Tang, KL Thompson, C Tucker, LR Vale, K Vanderlinde, JD Vieira, G Wang, N Whitehorn, V Yefremenko, KW Yoon, MR Young, **“Tuning SPT-3G Transition-Edge-Sensor Electrical Properties with a Four-Layer Ti-Au-Ti-Au Thin-Film Stack.”** *Journal of Low Temperature Physics*, 193. (2018)
- JS Avva, PAR Ade, Z Ahmed, AJ Anderson, JE Austermann, R Basu Thakur, D Barron, AN Bender, BA Benson, JE Carlstrom, FW Carter, T Cecil, CL Chang, JF Cliche, A Cukierman, EV Denison, T de Haan, J Ding, MA Dobbs, D Dutcher, T Elleflot, W Everett, A Foster, RN Gannon, A Gilbert, JC Groh, NW Halverson, AH Harke-Hosemann, NL Harrington, M Hasegawa, K Hattori, JW Henning, GC Hilton, WL Holzappel, Y Hori, N Huang, KD Irwin, OB Jeong, M Jonas, T Khaire, AM Kofman, M Korman, D Kubik, S Kuhlmann, CL Kuo, AT Lee, **AE Lowitz**, SS Meyer, J Montgomery, A Nadolski, T Natoli, H Nguyen, H Nishino, GI Noble, V Novosad, S Padin, Z Pan, J Pearson, CM Posada, A Rahlin, K Rotermund, JE Ruhl, LJ Saunders, JT Sayre, I Shirley, E Shirokoff, G Smecher, JA Sobrin, AA Stark, KT Story, A Suzuki, QY Tang, KL Thompson, C Tucker, LR Vale, K Vanderlinde, JD Vieira, G Wang, N Whitehorn, V Yefremenko, KW Yoon, MR Young, **“Design and Assembly of SPT-3G Cold Readout Hardware.”** *Journal of Low Temperature Physics*, 1-9. (2018)
- JW Henning, JT Sayre, C L Reichardt, PAR Ade, AJ Anderson, JE Austermann, JA Beall, AN Bender, BA Benson, LE Bleem, JE Carlstrom, CL Chang, HC Chiang, H-M Cho, R Citron, C Corbett Moran, TM Crawford, AT Crites, T de Haan, MA Dobbs, W Everett, J Gallicchio, EM George, A Gilbert, NW Halverson, N Harrington, GC Hilton, GP Holder, WL Holzappel, S Hoover, Z Hou, JD Hrubes, N Huang, J Hubmayr, KD Irwin, R Keisler, L Knox, AT Lee, EM Leitch, D Li, **A Lowitz**, A Manzotti, JJ McMahon, SS Meyer, L Mocanu, J Montgomery, A Nadolski, T

- Natoli, JP Nibarger, V Novosad, S Padin, C Pryke, JE Ruhl, BR Saliwanchik, KK Schaffer, C Sievers, G Smecher, AA Stark, KT Story, C Tucker, K Vanderlinde, T Veach, JD Vieira, G Wang, N Whitehorn, WLK Wu, V Yefremenko, **“Measurements of the Temperature and E-Mode Polarization of the CMB from 500 Square Degrees of SPTpol Data.”** *The Astrophysical Journal* 852(2), p. 97 (2018).
- J Aumont, S Banfi, P Battaglia, ES Battistelli, A Bau, B Belier, D Bennett, L Berge, JPh Bernard, M Bersanelli, MA Bigot-Sazy, N Bleurvacq, G Bordier, J Brossard, EF Bunn, D Buzi, A Buzzelli, D Cammilleri, F Cavaliere, P Chaniel, C Chapron, G Coppi, A Coppolecchia, F Couchot, R D’Agostino, G D’Alessandro, P de Bernardis, G De Gasperis, M De Petris, T Decourcelle, F Del Torto, L Dumoulin, A Etchegoyen, C Franceschet, B Garcia, A Gault, D Gayer, M Gervasi, A Ghribi, M Giard, Y Giraud-Heraud, M Gradziel, L Grandsire, JCh Hamilton, D Harari, V Haynes, S Henrot-Versille, N Holtzer, J Kaplan, A Korotkov, L Lamagna, J Lande, S Loucatos, **A Lowitz**, V Lukovic, B Maffei, S Marnieros, J Martino, S Masi, A May, M McCulloch, MC Medina, S Melhuish, A Mennella, L Montier, A Murphy, D Neel, MW Ng, C O’Sullivan, A Paiella, F Pajot, A Passerini, A Pelosi, C Perbost, O Perdereau, F Piacentini, M Piat, L Piccirillo, G Pisano, D Prele, R Puddu, D Rambaudo, O Rigaut, GE Romero, M Salatino, A Schillaci, S Scully, M Stolpovskiy, F Suarez, A Tartari, P Timbie, M Tristram, G Tucker, D Vigano, N Vittori, F Voisin, B Watson, M Zannoni, A Zullo, **“QUBIC Technical Design Report.”** *arXiv preprint arXiv:1609.04372* (2016).
- AE Lowitz**, **“Kinetic Inductance Detectors for CMB Polarimetry at 100 GHz”**. PhD Thesis. Defense Dec 2016.
- S Scully, D Burke, C O’Sullivan, D Gayer, M Gradziel, JA Murphy, M De Petris, D Buzi, M Zannoni, A Mennella, M Gervasi, A Tartari, B Maffei, J Aumont, S Banfi, P Battaglia, ES Battistelli, A Bau, B Belier, D Bennet, L Berge, J-Ph Bernard, M Bersanelli, M-A Bigot-Sazy, N Bleurvacq, G Bordier, J Brossard, EF Bunn, D Cammilleri, F Cavaliere, P Chaniel, C Chapron, A Coppolecchia, F Couchot, G D’Alessandro, P De Bernardis, T Decourcelle, F Del Torto, L Dumoulin, C Franceschet, A Gault, A Ghribi, M Giard, Y Giraud-Heraud, L Grandsire, JC Hamilton, V Haynes, S Henrot-Versille, N Holtzer, J Kaplan, A Korotkov, J Lande, **A Lowitz**, S Marnieros, J Martino, S Masi, Mark McCulloch, Simon Melhuish, L Montier, D Neel, MW Ng, F Pajot, A Passerini, C Perbost, O Perdereau, F Piacentini, M Piat, L Piccirillo, G Pisano, D Prele, R Puddu, D Rambaudo, O Rigaut, M Salatino, A Schillaci, M Stolpovskiy, P Timbie, M Tristram, G Tucker, D Vigano, F Voisin, B Watson, **“Optical design and modelling of the QUBIC instrument, a next-generation quasi-optical bolometric interferometer for cosmology.”** *Proc. SPIE 9914, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy VIII*, 99142S (2016); doi:10.1117/12.2231717
- AE Lowitz**, AD Brown, and TR Stevenson, PT Timbie, and EJ Wollack, **“Design, fabrication, and testing of a TiN/Ti/TiN trilayer KID array for 3 mm CMB observations.”** Proceedings of the 16th International Workshop on Low Temperature Detectors, Grenoble, FR, July 2015. *Journal of Low Temperature Physics*, 184 (2016).
- A Tartari, J Aumont, S Banfi, P Battaglia, ES Battistelli, A Bau, B Belier, D Bennett, L Berge, J Ph Bernard, M Bersanelli, MA Bigot-Sazy, N Bleurvacq, G Bordier, J Brossard, EF Bunn, D Buzi, D Cammilleri, F Cavaliere, P Chaniel, C Chapron, A Coppolecchia, G DAlessandro, P De Bernardis, T Decourcelle, F Del Torto, M De Petris, L Dumoulin, C Franceschet, A Gault, D Gayer, M Gervasi, A Ghribi, M Giard, Y Giraud-Heraud, M Gradziel, L Grandsire, J Ch Hamilton, V Haynes, N Holtzer, J Kaplan, A Korotkov, J Lande, **A Lowitz**, B Maffei, S Marnieros, J Martino, S Masi, M McCulloch, S Melhuish, A Mennella, L Montier, A Murphy, D Neel, MW Ng, C OSullivan, F Pajot, A Passerini, C Perbost, F Piacentini, M Piat, L Piccirillo, Giampaolo Pisano, D Prle, D Rambaudo, O Rigaut, M Salatino, A Schillaci, S Scully, MM Stolpovskiy, P Timbie, G Tucker, D Vigano, F Voisin, B Watson, M Zannoni, **“QUBIC: a Fizeau interferometer targeting primordial B-modes.”** Proceedings of the 16th International Workshop on Low Temperature Detectors, Grenoble, FR, July 2015. *Journal of Low Temperature Physics*, 184 (2016).
- AE Lowitz**, AD Brown, and TR Stevenson, PT Timbie, and EJ Wollack, **“Design, fabrication, and testing of lumped element kinetic inductance detectors for 3 mm CMB Observations,”** *Proc. SPIE 9153, Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy VII*, 91532R (2014); doi:10.1117/12.2057102.
- AE Lowitz**, EM Barrentine, SR Golwala, and PT Timbie, **“A Comparison of Fundamental Noise in Kinetic Inductance Detectors and Transition Edge Sensors for Millimeter-wave Applications,”** Proceedings of the 15th International Workshop on Low Temperature Detectors, Pasadena, CA, June 2013. *Journal of Low Temperature Physics*, 176 (2014). DOI 10.1007/s10909-014-1133-5. arXiv1403.3601.
- A Ghribi, J Aumont, ES Battistelli, A Bau, L Berge, J-Ph Bernard, M Bersanelli, M-A Bigot-Sazy, G Bordier, ET Bunn, F Cavaliere, P Chaniel, A Coppolecchia, T Decourcelle, P De Bernardis, M De Petris, A-A Drilien, L Dumoulin, MC Falvella, A Gault, M Gervasi, M Giard, M Gradziel, L Grandsire, D Gayer, J-Ch Hamilton, V Haynes, Y Giraud-Heraud, N Holtzer, J Kaplan, A Korotkov, J Lande, **A Lowitz**, B Maffei, S Marnieros, J Martino, S Masi, A Mennella, L Montier, A Murphy, MW Ng, E Olivieri, F Pajot, A Passerini, F Piacentini, M Piat, L Piccirillo, G Pisano, D Prele, D Rambaudo, O Rigaut, C Rosset, M Salatino, A Schillaci, S Scully, C O’Sullivan, A Tartari, P Timbie, G Tucker,



L Vibert, F Voisin, B Watson, M Zannoni, “**Latest Progress on the QUBIC Instrument,**” Proceedings of the 15th International Workshop on Low Temperature Detectors, Pasadena, CA, June 2013. *Journal of Low Temperature Physics*, 176 (2014). doi:10.1007/s10909-013-1024-1. arXiv1307.5701.

## INVITED TALKS

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- “*Measuring the Cosmic Microwave Background with SPT-3G and Beyond,*” **Illinois Institute of Technology**, Chicago, IL, 4 April 2019 (academic colloquium)
- “*Cosmology at the End of the Earth: How and Why We Study the Universe from the South Pole,*” **Ethical Humanist Society of Chicago**, Chicago, IL, 17 March 2019 (public lecture)
- “*Nuts and Bolts Cosmology,*” **University of Chicago, Enrico Fermi Institute**, Chicago, IL, Fall 2018 (Public eight-lecture series)
- “*Detector and Readout Architectures for mm-wave Cosmology with SPT3g and Beyond,*” **Cornell University Department of Physics**, Ithaca, NY, 26 Feb 2018 (academic seminar)
- “*Kinetic Inductance Detectors for 100 GHz CMB Polarimetry,*” **UCSD Department of Physics**, La Jolla, CA, 31 July 2017 (academic seminar)
- “*Kinetic Inductance Detectors for 100 GHz CMB Polarimetry,*” **UIUC Department of Astronomy**, Champaign, IL, 9 June 2017 (academic seminar)
- “*Kinetic Inductance Detectors for 100 GHz CMB Polarimetry,*” **Kavli Institute for Cosmological Physics**, University of Chicago, Chicago, IL, 17 Mar 2017. (academic seminar)
- “*The Cosmic Microwave Background,*” **Amundsen-Scott South Pole Station Summer Science Lecture Series**, South Pole, Antarctica, 6 Nov 2016. (public lecture)
- “*Detecting the Cosmic Microwave Background,*” **Madison Astronomical Society**, Madison, WI, 21 Feb 2015. (public lecture)
- “*The Cosmic Microwave Background,*” **Madison Astronomical Society**, Madison, WI, 10 January, 2014. (public lecture)
- “*A Comparison of Fundamental Noise Limits in TESs and MKIDs,*” **Keck Institute for Space Studies**, 2nd Superconducting Nitride Detector Workshop. Pasadena, CA, 21 February 2012. (conference talk)

## OTHER TALKS AND PRESENTATIONS

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- “*Performance of a low-parasitic frequency-domain multiplexing readout.*”, 18th International Workshop on Low Temperature Detectors. Milan, Italy, 23 Jul 2019. (conference poster)
- “*Digital frequency multiplexing with sub-Kelvin SQUIDs.*” SPIE Astronomical Telescopes and Instrumentation conference, Austin, TX, 14 Jun 2018. (conference talk)
- “*Kinetic Inductance Detectors for CMB Polarimetry at 100 GHz.*” 17th International Workshop on Low Temperature Detectors. Kurume, Japan, Jul 2017. (conference poster)
- “*Design, fabrication, and testing of a TiN/Ti/TiN trilayer KID array for 3 mm CMB observations.*” 16th International Workshop on Low Temperature Detectors. Grenoble, France, July 2015. (conference poster)
- “*Design, fabrication, and testing of lumped element kinetic inductance detectors for 3 mm CMB Observations.*” SPIE Astronomical Telescopes and Instrumentation conference. Montreal, QC, June 2014. (conference poster)
- “*A Comparison of Fundamental Noise in Kinetic Inductance Detectors and Transition Edge Sensors for Millimeter-wave Applications.*” 15th International Workshop on Low Temperature Detectors. Pasadena, CA, July 2013. (conference poster)