## Michael B. Zemcov

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## **Professional Experience**

2009 Dec. – Present	Assistant Professor, The Rochester Institute of Technology, Rochester, NY Affiliate Scientist, Jet Propulsion Laboratory, Pasadena, CA
2009 Dec. – 2015 Jul.	Senior Postdoctoral Fellow, The California Institute of Technology, Pasadena, CA
2006 Nov. – 2009 Nov.	NASA Postdoctoral Fellow, Jet Propulsion Laboratory, Pasadena, CA

# 2006 Nov. – 2009 Nov. Visiting Postdoctoral Scholar, The California Institute of Technology, Pasadena, CA

## **Education**

Ph.D. in Physics, Cardiff University, Cardiff, United Kingdom, November 2006

Thesis title: Measurement of the Temperature and Polarization Anisotropies in the Cosmic Microwave Background with QUaD, Advisers: Profs. Walter Gear & Philip Mauskopf

B.Sc. with Honors in Physics, University of British Columbia, Vancouver, Canada, May 2003

Thesis title: Measuring the Sunyaev-Zeldovich Increment in Massive Galaxy Clusters, Adviser: Prof. Mark Halpern

## **Research Experience**

Current member of the Center for Detectors and School of Physics and Astronomy at RIT. Over a decade of research experience in experimental astrophysics and cosmology, with specialization in multi-wavelength studies of the extra-galactic infra-red background, the cosmic microwave background radiation including polarization and the Sunyaev-Zeldovich effect, and reionization. Experienced in instrument design, integration, data analysis, and the scientific interpretation of results. Extensive scientific and project management experience including a wide range of team sizes and platforms from ground based to sub-orbital and space observatories.

#### • **CSTARS** (2015 - Present)

Principle Investigator of the Cryogenic Star Tracking Attitude Regulation System, an undergraduate-led research program to build a small star tracking camera for sounding rocket payloads.

#### • **SPHEREx** (2014 - Present)

Co-Investigator of the Spectro-PHotometer for the Extragalactic structure, Reionization and Ices eXplorer, an NASA small explorer (SMEX) which recently completed a Phase A study. If this program is selected, will lead the data analysis and extragalactic background measurement studies.

## **Research Experience (continued)**

#### • **CIBER-2** (2013 - Present)

Co-Investigator on the continuation of the CIBER series of sounding rocket payloads investigating the near infra-red background. Responsible for a variety of hardware and software deliverables, and for science extraction

#### • **TIME** (2012 - Present)

Co-Investigator of the Tomographic Ionized-Carbon Mapping Experiment (TIME), leading instrument simulation and science work packages, and lead roles in data acquisition and data analysis software development.

## • **LAMP** (2012 - Present)

Principle Investigator of the Lyman Alpha Mapping Project (LAMP). Responsible for major work packages including hardware specification and design, observation strategy, and data analysis development.

## • Herschel-SPIRE/Ground-Based Submillimeter (2008 - Present)

Leadership roles in instrument data analysis and science interpretation. Associate Scientist in the SPIRE Guaranteed Time team, an Instrument Team working member, a co-Investigator in the key program galaxy cluster survey, and the Principle Investigator of several ongoing data analysis programs. Lead designer and coordinator for a 10-node, 36 TB, 160 core computer cluster for Herschel data storage and analysis.

Co-Investigator of both the SCUBA-2 Cosmology Legacy Survey and the SCUBA-2 lensing cluster survey. Led various studies with Z-Spec, including the first high-resolution spectral measurement of the SZ effect. Various science projects involving Bolocam and AzTEC data analysis. Assisted commissioning MUSIC, a four-band trans-millimetric KID-based camera.

## • **CIBER** (2006 - 2015)

CIBER's lead postdoctoral scholar with key roles in all aspects of the project. Major contributions include leading the instrument design, integration, commissioning and fielding, data analysis, and scientific interpretation efforts.

#### • **QUaD** (2003 - 2008)

Assisted with cryogenic commissioning, system integration, and testing of optical, electronic and cryogenic components. Performed early simulation of data analysis pipeline leading to a major involvement in the data analysis effort. Key roles in instrument characterization, systematic error identification and control, calibration, and scientific output.

## • Technology Development (Ongoing)

Leading a number of technology development programs including optimization of HAWAII-2 HgCdTe arrays for demanding space applications and new photon-counting CMOS-based detectors for optical applications.

Involved in design studies for next-generation low- and medium-resolution sub-mm spectrometric technologies, which are driven by the need for kilo-pixel or larger sub-mm arrays to measure line emission from the epoch of reionization, high redshift star forming galaxies, and other extragalactic science cases.

Principle investigator of a NASA CubeSat program proposed to test long-life power generation technologies in the space environment.

## **Teaching & Outreach Experience**

## • The Rochester Institute of Technology (2015 – Present)

Member of the School of Physics and Astronomy, and the Astrophysical Sciences and Technology Graduate Program. Secondary instructor of PHYS-315 "Experiments in Modern Physics", primary instructor of ASTP-615 "Radiative Processes for Astrophysical Sciences".

## **Teaching Experience (continued)**

Astrophysical Sciences and Technology Program research mentor for: Ms. C. Nguyen (Ph.D. candidate), Ms. V. Butler (Ph.D. candidate), and Ms. M. Liu (M.S. candidate). Astrophysical Sciences and Technology Program Thesis Committee member for Alexander Rasskazov (Ph.D. candidate).

Center for Detectors past Co-Op Program mentor for Mr. J. Hill (Microsystems Engineering). Current Co-Op Program mentor for: Ms. Poppy Immel (Computer Science), Mr. K. Kruse (Electrical Engineering), Mr. C. Pape (Mechanical Engineering), and Mr. H. Won (Business Administration). Past research supervisor for Mr. P. Linden (Mechanical Engineering). Current research supervisor for: Mr. S. Bag (Computer Engineering, M.S.), Mr. B. Bondor (Electrical Engineering), and Mr. M. Delfavero (Physics).

## • The California Institute of Technology (2006 – 2015)

Graduate student research mentoring/co-supervision of: A. Lanz, J. Smidt, K. Mitchell-Wynne, M. Weiss, K. Tsumura, T. Arai, M.-G. Kim, I. Sullivan.

Undergraduate student research mentoring/supervision of: A. Lam, A. Meek, N. Fruitwala, T. Taak, T. Wood.

### • **Cardiff University** (2003 – 2006)

School of Physics and Astronomy Teaching Assistant.

## **Select Outreach Activities**

Current RIT Fast Forward Program research mentor for incoming Freshman Mr. K. Evans.

Current research mentor for local high school student Mr. D. Zsentis.

Regular contributor to the "Titanium Physicists" Podcast on which topics in modern physics are presented to the general public, http://titaniumphysicists.brachiolopemedia.com (rated 5 stars on iTunes).

Faculty mentor, Astrophysical Sciences and Technology Imagine RIT booth, May 2016.

Invited speaker, "Science Cafe Rochester" http://sciencecaferochester.blogspot.com, an interactive public lecture event involving face-to-face conversations with leading scientists discussing current research in the Rochester, NY area, April 2016.

Contributor to the "RIT Space Exploration" student group podcast, March 2016.

Featured on CFOX Vancouver Radio, February 2016.

Featured on Canadian Broadcasting Corporation's weekly science show "Quirks & Quarks", November 2014.

Grand Prize Judge, Intel ISEF Science Fair Competition, May 2014.

## **Professional Service**

Member/Chair of various NASA Review Panels.

Frequent Referee/Reviewer, *The Astrophysical Journal, The Astronomical Journal, Astronomy & Astrophysics*, and *Monthly Notices of the Royal Astronomical Society*.

RIT Astrophysical Sciences and Technology Program Colloquium Organizer, Current

Chair, 227th Meeting of the American Astronomical Society Intensity Mapping Special Session, January 2016

Member, NSRPO Committee on Water Recovery of Sub Orbital Payloads, 2015 - Present

Chair, NASA "Astronomy with New Horizons" Preparation Committee, 2015 - Present

Member of RIT School of Physics and Astronomy Capstone Project Committee, 2015 – Present

Member of RIT Astrophysical Sciences and Technology Curriculum Committee, 2015 - Present

Scientific Organizing Committee Member for NIRB2015 Workshop, June 2015.

## Honors, Awards, Professional Memberships

NASA Achievement Award for CIBER, 2014

NASA Achievement Award for Herschel-SPIRE Commissioning, 2010

NASA Postdoctoral Fellowship, 2006 – 2009

Antarctic Service Medal, 2006, 2007

Cardiff University Scholarship, 2003 – 2006

Royal Astronomical Society Student Grant, 2006

Fellow of the Royal Astronomical Society

Member of the American Astronomical Society

## **Invited Talks**

"Measuring the Largest Structures in the Universe with the Smallest Telescopes in Space" *Astrophysics, Gravitation, and Cosmology Seminar*, University of Illinois Urbana-Champaign, IL, March 2016

"When Foregrounds Attack" Opportunities and Challenges in Intensity Mapping Workshop, Stanford University, CA, March 2016

"Statistical Measurements of Reionizing Sources with Emission Line Intensity Mapping" *The Reionization Epoch:* New Insights and Future Prospects, Aspen, CO, March 2016

"Recent Results from Broad-Band Intensity Mapping of Large Scale Cosmic Structure" 227<sup>th</sup> AAS Meeting Special Session "Opening a New Window on Cosmic Structure with Intensity Mapping", Kissimmee, FL, January 2016

"Status of the Cosmic Infra-Red Background Experiment-2" NASA UV-Vis PI Annual Meeting, Washington, D.C., September 2015

"Near-IR Background Fluctuation Results from the Cosmic Infra-Red Background Experiment" *NIRB2015 Workshop* (Invited Talk), Max-Planck-Institut fr Astrophysik, June 2015

"Near-IR Background Fluctuation Results from the Cosmic Infra-Red Background Experiment" *KICP Seminar*, University of Chicago, IL, March 2015

"CIBER, Fluctuations in the Near IR Background, and the Intra-halo Light" *Cosmology on the Slopes*, Aspen, CO, March 2015

"Near-IR Background Fluctuation Results from the Cosmic Infra-Red Background Experiment" *Cosmology Seminar*, Arizona State University, AZ, November 2014

"Rocket Experiment Finds Missing Light from the Universe" NASA Editorial Board Meeting, Washington, D.C., October 2014

"New Results from the Cosmic Infra-Red Background Experiment" *NASA UV-Vis PI Annual Meeting*, Washington, D.C., September 2014

"The Near IR Background and the Cosmic Infra-Red Background Experiment" *Deciphering the Cosmic Infra-Red Background Workshop*, Banyuls, France, October 2012

"Measurement of the Sunyaev-Zel'dovich Effect Increment with Large Aperture Sub-mm Telescopes" 220<sup>th</sup> AAS Meeting Special Session "High Angular Resolution Sunyaev-Zel'dovich Effect", Anchorage, AK, June 2012

"Measuring Light from the Epoch of Reionization with the Cosmic Infra-Red Background Experiment" *The Near Infra-Red Background and the Epoch of Reionization Workshop*, Austin, TX, May 2012

#### **Invited Talks (continued)**

"Measuring Light from the Epoch of Reionization with the Cosmic Infra-Red Background Experiment" *NASA Sounding Rocket Working Group*, Washington, D.C., September 2011

"Measuring Light from the Epoch of Reionization with the Cosmic Infra-Red Background Experiment" *Cosmic Radiation Fields - Sources in the Early Universe Workshop*, Hamburg, Germany, November 2010

"Measuring Light from the Epoch of Reionization with CIBER" *Stanford Cosmology Seminar*, Stanford University, CA, May 2008

"Measuring the Polarization of the Cosmic Microwave Background with QUaD" *Astronomy Colloquium*, Oxford University, UK, July 2007

"First Year CMB Temperature and Polarization Results from QUaD" *JPL Astronomy Seminar*, Jet Propulsion Laboratory, CA, June 2007

"QUaD: Measurement of the CMB Polarization from the South Pole" *Observational Cosmology Seminar*, California Institute of Technology, CA, March 2006

"Measuring the Polarization of the Cosmic Microwave Background with QUaD" *Astronomy Colloquium*, The University of Colorado Boulder, CO, June 2005

## **Publication List**

Harzing's Publish or Perish<sup>1</sup> reports an h-index of 43 for 13 years since first publication, based on published papers, and Google Scholar indicates an i10-index of 87 over the same time period. Publications are listed in reverse chronological order and the author lists have been truncated after the first three names.

- 1. Nguyen, H. T., Zemcov, M., Battle, J., et al., 2016. "Spatial and Temporal Stability of Airglow Measured in the Meinel Band Window at 1191.3 nm." *Proceedings of the Astronomical Society of the Pacific*, 128, 9, p. 094504.
- 2. Geach, J. E., Dunlop, J. S., Halpern, M., et al., 2016. "The SCUBA-2 Cosmology Legacy Survey: 850um maps, catalogues and number counts." *Submitted to MNRAS, appears as ArXiv e-print astro-ph/1607.03904*.
- 3. Gong, Y., Cooray, A., Mitchell-Wynne, K., et al., 2016. "Axion Decay and Anisotropy of Near-IR Extragalactic Background Light." *The Astrophysical Journal*, 825, 104.
- 4. Zemcov, M., Crill, B., Ryan, M., et al., 2016. "An Algorithm for Real-Time Optimal Photocurrent Estimation Including Transient Detection for Resource-Constrained Imaging Applications." *Journal of Astronomical Instrumentation*, 5, 1650007.
- 5. Adam, R., Bartalucci, I., Pratt, G. W., et al., 2016. "Mapping the kinetic Sunyaev-Zel'dovich effect toward MACS J0717.5+3745 with NIKA." *Submitted to A&A, appears as ArXiv e-print astro-ph/1606.07721*.
- 6. Doré, O., Werner, M. W., Ashby, M., et al., 2016. "Science Impacts of the SPHEREx All-Sky Optical to Near-Infrared Spectral Survey: Report of a Community Workshop Examining Extragalactic, Galactic, Stellar and Planetary Science." *Community white paper, appears as ArXiv e-print astro-ph/1606.07039*.
- 7. Sayers, J., Zemcov, M., Glenn, J., et al., 2016. "Peculiar Velocity Constraints from Five-band SZ Effect Measurements toward RX J1347.5-1145 with MUSIC and Bolocam from the CSO." *The Astrophysical Journal*, 820, 101.

<sup>1</sup>http://www.harzing.com/resources.htm\#/pop.htm

8. Marchetti, L., Vaccari, M., Franceschini, A., et al., 2016. "The HerMES submillimetre local and low-redshift luminosity functions." *Monthly Notices of the Royal Astronomical Society*, 456, pp. 1999–2023.

- 9. Cooray, A., Bock, J., Burgarella, D., et al., 2016. "Cosmic Dawn Intensity Mapper." *Mission description paper, appears as ArXiv e-print astro-ph/1602.05178*.
- 10. Bradford, M., Crites, A., Hunacek, J., et al., 2016. "Probing the Epoch of Reionization via CII Tomography with TIME-Pilot." In "American Astronomical Society Meeting Abstracts," volume 227 of *American Astronomical Society Meeting Abstracts*. p. 426.07.
- 11. Zemcov, M. B., 2016. "Recent Results from Broad-Band Intensity Mapping Measurements of Cosmic Large Scale Structure." In "American Astronomical Society Meeting Abstracts," volume 227 of *American Astronomical Society Meeting Abstracts*. p. 426.02.
- 12. Zemcov, M. B., 2016. "Near-IR Extragalactic Background Results from the Cosmic Infrared Background Experiment (CIBER)." In "American Astronomical Society Meeting Abstracts," volume 227 of *American Astronomical Society Meeting Abstracts*. p. 412.02.
- 13. Lanz, A. E., Arai, T., Battle, J., et al., 2016. "Intensity Mapping of the History of Stellar Emission with the Cosmic Infrared Background ExpeRiment-2." In "American Astronomical Society Meeting Abstracts," volume 227 of *American Astronomical Society Meeting Abstracts*. p. 335.03.
- 14. Zemcov, M. B. and the SPHEREx Science Team, 2016. "SPHEREx: Understanding the Origin and Evolution of Galaxies Through the Extragalactic Background Light." In "American Astronomical Society Meeting Abstracts," volume 227 of *American Astronomical Society Meeting Abstracts*. p. 147.04.
- 15. Viero, M. P., Moncelsi, L., Quadri, R. F., et al., 2015. "HerMES: Current Cosmic Infrared Background Estimates Can be Explained by Known Galaxies and Their Faint Companions at z > 4." The Astrophysical Journal Letters, 809, L22.
- 16. Wang, L., Viero, M., Ross, N. P., et al., 2015. "Co-evolution of black hole growth and star formation from a cross-correlation analysis between quasars and the cosmic infrared background." *Monthly Notices of the Royal Astronomical Society*, 449, pp. 4476–4493.
- 17. Arai, T., Matsuura, S., Bock, J., et al., 2015. "Measurements of the Mean Diffuse Galactic Light Spectrum in the  $0.95 1.65 \mu m$  Band from CIBER." *The Astrophysical Journal*, 806, 69.
- 18. Doré, O., Bock, J., Ashby, M., et al., 2014. "Cosmology with the SPHEREX All-Sky Spectral Survey." *Mission description paper, appears as ArXiv e-print astro-ph/1412.4872*.
- 19. Zemcov, M., Smidt, J., Arai, T., et al., 2014. "On the Origin of Near-Infrared Extragalactic Background Light Anisotropy." *Science*, 346, p. 6210.
- 20. Gralla, M. B., Crichton, D., Marriage, T. A., et al., 2014. "A measurement of the millimetre emission and the Sunyaev-Zel'dovich effect associated with low-frequency radio sources." *Monthly Notices of the Royal Astronomical Society*, 445, pp. 460–478.
- 21. Wang, L., Viero, M., Clarke, C., et al., 2014. "HerMES: point source catalogues from Herschel-SPIRE observations II." *Monthly Notices of the Royal Astronomical Society*, 444, pp. 2870–2883.
- 22. Crites, A. T., Bock, J. J., Bradford, C. M., et al., 2014. "The TIME-Pilot intensity mapping experiment." In "Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series," volume 9153 of Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series. p. 1.

23. O'Brient, R., Bock, J. J., Bradford, C. M., et al., 2014. "Lithographed spectrometers for tomographic line mapping of the Epoch of Reionization." In "Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series," volume 9153 of *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*. p. 0.

- 24. Lanz, A., Arai, T., Battle, J., et al., 2014. "Studying extragalactic background fluctuations with the Cosmic Infrared Background ExpeRiment 2 (CIBER-2)." In "Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series," volume 9143 of Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series.
- 25. Wardlow, J. L., Malhotra, S., Zheng, Z., et al., 2014. "Constraining the Ly $\alpha$  Escape Fraction with Farinfrared Observations of Ly $\alpha$  Emitters." *The Astrophysical Journal*, 787, 9.
- 26. Clements, D. L., Braglia, F. G., Hyde, A. K., et al., 2014. "Herschel Multitiered Extragalactic Survey: clusters of dusty galaxies uncovered by Herschel and Planck." *Monthly Notices of the Royal Astronomical Society*, 439, pp. 1193–1211.
- 27. Rawle, T. D., Egami, E., Bussmann, R. S., et al., 2014. "[C II] and <sup>12</sup>CO(1-0) Emission Maps in HLSJ091828.6+514223: A Strongly Lensed Interacting System at z = 5.24." *The Astrophysical Journal*, 783, 59.
- 28. Viero, M. P., Asboth, V., Roseboom, I. G., et al., 2014. "The Herschel Stripe 82 Survey (HerS): Maps and Early Catalog." *The Astrophysical Journal Supplement*, 210, 22.
- 29. Heinis, S., Buat, V., Béthermin, M., et al., 2014. "HerMES: dust attenuation and star formation activity in ultraviolet-selected samples from z 4 to 1.5." *Monthly Notices of the Royal Astronomical Society*, 437, pp. 1268–1283.
- 30. Dowell, C. D., Conley, A., Glenn, J., et al., 2014. "HerMES: Candidate High-redshift Galaxies Discovered with Herschel/SPIRE." *The Astrophysical Journal*, 780, 75.
- 31. Viero, M. P., Moncelsi, L., Quadri, R. F., et al., 2013. "HerMES: The Contribution to the Cosmic Infrared Background from Galaxies Selected by Mass and Redshift." *The Astrophysical Journal*, 779, 32.
- 32. Roseboom, I. G., Dunlop, J. S., Cirasuolo, M., et al., 2013. "The SCUBA-2 Cosmology Legacy Survey: demographics of the 450-μm population." *Monthly Notices of the Royal Astronomical Society*, 436, pp. 430–448.
- 33. Sayers, J., Mroczkowski, T., Zemcov, M., et al., 2013. "A Measurement of the Kinetic Sunyaev-Zel'dovich Signal Toward MACS J0717.5+3745." *The Astrophysical Journal*, 778, 52.
- 34. Boone, F., Clément, B., Richard, J., et al., 2013. "An extended Herschel drop-out source in the center of AS1063: a normal dusty galaxy at z = 6.1 or SZ substructures?" *Astronomy and Astrophysics*, 559, L1.
- 35. Hanson, D., Hoover, S., Crites, A., et al., 2013. "Detection of B-Mode Polarization in the Cosmic Microwave Background with Data from the South Pole Telescope." *Physical Review Letters*, 111, 14, 141301.
- 36. Ibar, E., Sobral, D., Best, P. N., et al., 2013. "Herschel reveals the obscured star formation in HiZELS H $\alpha$  emitters at z = 1.47." *Monthly Notices of the Royal Astronomical Society*, 434, pp. 3218–3235.
- 37. Calanog, J. A., Wardlow, J., Fu, H., et al., 2013. "HerMES: The Far-infrared Emission from Dust-obscured Galaxies." *The Astrophysical Journal*, 775, 61.
- 38. Korngut, P. M., Renbarger, T., Arai, T., et al., 2013. "The Cosmic Infrared Background Experiment (CIBER): The Narrow-Band Spectrometer." *The Astrophysical Journal Supplement*, 207, 34.

39. Tsumura, K., Arai, T., Battle, J., et al., 2013. "The Cosmic Infrared Background Experiment (CIBER): The Low Resolution Spectrometer." *The Astrophysical Journal Supplement*, 207, 33.

- 40. Bock, J., Sullivan, I., Arai, T., et al., 2013. "The Cosmic Infrared Background Experiment (CIBER): The Wide-field Imagers." *The Astrophysical Journal Supplement*, 207, 32.
- 41. Zemcov, M., Arai, T., Battle, J., et al., 2013. "The Cosmic Infrared Background Experiment (CIBER): A Sounding Rocket Payload to Study the near Infrared Extragalactic Background Light." *The Astrophysical Journal Supplement*, 207, 31.
- 42. Viero, M. P., Wang, L., Zemcov, M., et al., 2013. "HerMES: Cosmic Infrared Background Anisotropies and the Clustering of Dusty Star-forming Galaxies." *The Astrophysical Journal*, 772, 77.
- 43. Holder, G. P., Viero, M. P., Zahn, O., et al., 2013. "A Cosmic Microwave Background Lensing Mass Map and Its Correlation with the Cosmic Infrared Background." *The Astrophysical Journal Letters*, 771, L16.
- 44. Fu, H., Cooray, A., Feruglio, C., et al., 2013. "The rapid assembly of an elliptical galaxy of 400 billion solar masses at a redshift of 2.3." *Nature*, 498, pp. 338–341.
- 45. Geach, J. E., Chapin, E. L., Coppin, K. E. K., et al., 2013. "The SCUBA-2 Cosmology Legacy Survey: blank-field number counts of 450-μm-selected galaxies and their contribution to the cosmic infrared background." *Monthly Notices of the Royal Astronomical Society*, 432, pp. 53–61.
- 46. Gruppioni, C., Pozzi, F., Rodighiero, G., et al., 2013. "The Herschel PEP/HerMES luminosity function I. Probing the evolution of PACS selected Galaxies to z 4." *Monthly Notices of the Royal Astronomical Society*, 432, pp. 23–52.
- 47. Zemcov, M., Blain, A., Cooray, A., et al., 2013. "HerMES: A Deficit in the Surface Brightness of the Cosmic Infrared Background due to Galaxy Cluster Gravitational Lensing." *The Astrophysical Journal Letters*, 769, L31.
- 48. Symeonidis, M., Vaccari, M., Berta, S., et al., 2013. "The Herschel census of infrared SEDs through cosmic time." *Monthly Notices of the Royal Astronomical Society*, 431, pp. 2317–2340.
- 49. Wang, L., Farrah, D., Oliver, S. J., et al., 2013. "Connecting stellar mass and star-formation rate to dark matter halo mass out to z 2." *Monthly Notices of the Royal Astronomical Society*, 431, pp. 648–661.
- 50. Riechers, D. A., Bradford, C. M., Clements, D. L., et al., 2013. "A dust-obscured massive maximum-starburst galaxy at a redshift of 6.34." *Nature*, 496, pp. 329–333.
- 51. Heinis, S., Buat, V., Béthermin, M., et al., 2013. "HERMES: unveiling obscured star formation the far-infrared luminosity function of ultraviolet-selected galaxies at z 1.5." *Monthly Notices of the Royal Astronomical Society*, 429, pp. 1113–1132.
- 52. Wardlow, J. L., Cooray, A., De Bernardis, F., et al., 2013. "HerMES: Candidate Gravitationally Lensed Galaxies and Lensing Statistics at Submillimeter Wavelengths." *The Astrophysical Journal*, 762, 59.
- 53. Zemcov, M. B., Chapman, S., and Smail, I., 2013. "SCUBA-2 Surveys for Distant Galaxies: the SCUBA-2 Lensing Survey (S2LS)." In "American Astronomical Society Meeting Abstracts," volume 221 of *American Astronomical Society Meeting Abstracts*. p. #150.03.
- 54. Mroczkowski, T., Dicker, S., Sayers, J., et al., 2012. "A Multi-wavelength Study of the Sunyaev-Zel'dovich Effect in the Triple-merger Cluster MACS J0717.5+3745 with MUSTANG and Bolocam." *The Astrophysical Journal*, 761, 47.

55. Prokhorov, D. A., Million, E. T., Akahori, T., et al., 2012. "A high-resolution study of the X-ray emission and Sunyaev-Zel'dovich effect in the Bullet cluster (1E 0657-56)." *Monthly Notices of the Royal Astronomical Society*, 426, pp. 2291–2299.

- 56. Roseboom, I. G., Bunker, A., Sumiyoshi, M., et al., 2012. "FMOS near-IR spectroscopy of Herschelselected galaxies: star formation rates, metallicity and dust attenuation at z ~ 1." *Monthly Notices of the Royal Astronomical Society*, 426, pp. 1782–1792.
- 57. Xu, C. K., Shupe, D. L., Béthermin, M., et al., 2012. "Cosmic Evolution of Star Formation Enhancement in Close Major-merger Galaxy Pairs Since z = 1." *The Astrophysical Journal*, 760, 72.
- 58. Hilton, M., Conselice, C. J., Roseboom, I. G., et al., 2012. "Herschel observations of a z ~ 2 stellar mass selected galaxy sample drawn from the GOODS NICMOS Survey." *Monthly Notices of the Royal Astronomical Society*, 425, pp. 540–555.
- 59. Rawle, T. D., Rex, M., Egami, E., et al., 2012. "Discovery of "Warm Dust" Galaxies in Clusters at z ~ 0.3: Evidence for Stripping of Cool Dust in the Dense Environment?" *The Astrophysical Journal*, 756, 106.
- 60. Oliver, S. J., Bock, J., Altieri, B., et al., 2012. "The Herschel Multi-tiered Extragalactic Survey: HerMES." *Monthly Notices of the Royal Astronomical Society*, 424, pp. 1614–1635.
- 61. Cooray, A., Bock, J., Kawada, M., et al., 2012. "Cosmic Infrared Background ExpeRiment (CIBER): A probe of Extragalactic Background Light from reionization." In "IAU Symposium," volume 284 of *IAU Symposium*. pp. 482–488.
- 62. Dai, Y. S., Bergeron, J., Elvis, M., et al., 2012. "A Population of Dust-rich Quasars at z ~ 1.5." *The Astrophysical Journal*, 753, 33.
- 63. Mitchell-Wynne, K., Cooray, A., Gong, Y., et al., 2012. "HerMES: A Statistical Measurement of the Redshift Distribution of Herschel-SPIRE Sources Using the Cross-correlation Technique." *The Astrophysical Journal*, 753, 23.
- 64. Béthermin, M., Le Floc'h, E., Ilbert, O., et al., 2012. "HerMES: deep number counts at 250  $\mu$ m, 350  $\mu$ m and 500  $\mu$ m in the COSMOS and GOODS-N fields and the build-up of the cosmic infrared background." *Astronomy and Astrophysics*, 542, A58.
- 65. Page, M. J., Symeonidis, M., Vieira, J. D., et al., 2012. "The suppression of star formation by powerful active galactic nuclei." *Nature*, 485, pp. 213–216.
- 66. Zemcov, M., 2012. "Measurement of the Sunyaev-Zeldovich Effect Increment with Large Aperture Submm Telescopes." In "American Astronomical Society Meeting Abstracts #220," volume 220 of *American Astronomical Society Meeting Abstracts*. p. 111.08.
- 67. Zemcov, M., Aguirre, J., Bock, J., et al., 2012. "High Spectral Resolution Measurement of the Sunyaev-Zel'dovich Effect Null with Z-Spec." *The Astrophysical Journal*, 749, 114.
- 68. Rawle, T. D., Edge, A. C., Egami, E., et al., 2012. "The Relation between Cool Cluster Cores and Herscheldetected Star Formation in Brightest Cluster Galaxies." *The Astrophysical Journal*, 747, 29.
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