Michael B. Zemcov

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Research Interests

Experimental and observational cosmology from ground based, sub-orbital, and orbital platforms, including:

- Multi-wavelength studies of cosmological structure formation using statistical source population, intensity mapping, and tomographic measurements.
- The composition of the extragalactic background from both direct measurements and detailed studies of the sources that comprise it.
- Measurements of the cosmic microwave background radiation including the Sunyaev-Zel'dovich effect and polarization.
- Development of enabling detector technologies for astrophysics from the near infra-red to the millimeter.
- Astronomical instrumentation for space platforms.

Professional Experience

2015 Aug. – Present	Assistant Professor, The Rochester Institute of Technology, Rochester NY
2009 Dec. – 2015 Jul.	Senior Postdoctoral Fellow, The California Institute of Technology, Pasadena, CA
2009 Dec. – 2015 Jul.	Affiliate Scientist, Jet Propulsion Laboratory, 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, June 2007

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 infrared background, the cosmic microwave background radiation including polarization and the Sunyaev-Zeldovich effect, and reionization. Experienced in instrument design, integration, data analysis, and

Research Experience (continued)

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.

- **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.

- **CIBER & CIBER-2** (2006 - Present)

  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. Role as co-Investigator of the new CIBER-2 payload is a continuation of this program.

- **Herschel-SPIRE** (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.

- **Ground-Based Submillimeter** (2009 - Present)

  Co-Investigator of both the SCUBA-2 Cosmology Legacy Survey and the SCUBA-2 lensing cluster survey. Lead 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.

- **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.

- **SPHEREx** (2014 - Present)

  Co-Investigator and Instrument Scientist of the Spectro-PHotometer for the Extragalactic structure, Reionization and Ices eXplorer, an experiment concept to be proposed to the 2014 NASA small explorer (SMEX) call.

- **Technology Development**

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

  Involved in design studies for next-generation low- and medium-resolution sub-mm spectrometric technologies, 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.

Teaching & Outreach Experience

2015 – Present, Rochester Institute of Technology: Astrophysical Sciences and Technology Program Faculty, mentor for Ms. C. Nguyen. Center for Detectors, Co-Op Program mentor for Mr. J. Hill.

2006 – 2015, California Institute of Technology: Graduate student mentoring/co-supervision of: A. Lanz, J. Smidt, K. Mitchell-Wynne, M. Weiss, K. Tsumura, T. Arai, M.-G. Kim, I. Sullivan.

Teaching & Outreach Experience (continued)

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

2003 – 2006, Cardiff University: Physics teaching assistant.

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

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).

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

Service

Member/Chair of various NASA Review Panels

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

Scientific Organizing Committee Member for NIRB2015 Workshop, June 2015.

Chair, $227^{\rm th}$ Meeting of the American Astronomical Society Intensity Mapping Special Session

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

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

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

"Recent Results from Broad-Band Intensity Mapping of Large Scale Cosmic Structure" $227^{\rm th}$ *AAS Meeting Special Session "Opening a New Window on Cosmic Structure with Intensity Mapping"*, Kissimmee, Florida, January 2016 (Scheduled)

"Status of the Cosmic Infrared Background Experiment-2" *NASA UV-Vis PI Annual Meeting*, Washington, D.C., September 2015 (Scheduled)

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

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

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

Invited Talks (continued)

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

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

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

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

"Measurement of the Sunyaev-Zel'dovich Effect Increment with Large Aperture Sub-mm Telescopes" $220^{\rm th}$ *AAS Meeting Special Session "High Angular Resolution Sunyaev-Zel'dovich Effect"*, Anchorage, Alaska, June 2012

"Measuring Light from the Epoch of Reionization with the Cosmic Infrared Background Experiment" *The Near Infrared Background and the Epoch of Reionization Workshop*, Austin, Texas, May 2012

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

"Measuring Light from the Epoch of Reionization with the Cosmic Infrared 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, May 2008

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

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

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

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

Michael B. Zemcov – Publication List

Harzing's Publish or Perish[1] reports an h-index of 36 for 12 years since first publication, based on published papers, and Google Scholar indicates an $i10$-index of 71 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. 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.

2. 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.

3. Arai, T., Matsuura, S., Bock, J., et al., 2015. "Measurements of the Mean Diffuse Galactic Light Spectrum in the 0.95 – 1.65 μm Band from CIBER." *The Astrophysical Journal*, 806, 69.

4. Doré, O., Bock, J., Ashby, M., et al., 2014. "Cosmology with the SPHEREX All-Sky Spectral Survey." *ArXiv e-prints*.

5. Zemcov, M., Smidt, J., Arai, T., et al., 2014. "On the Origin of Near-Infrared Extragalactic Background Light Anisotropy." *Science*, 346, p. 6210.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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*.

11. Wardlow, J. L., Malhotra, S., Zheng, Z., et al., 2014. "Constraining the Lyα Escape Fraction with Far-infrared Observations of Lyα Emitters." *The Astrophysical Journal*, 787, 9.

12. 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.

[1] `http://www.harzing.com/resources.htm#/pop.htm`

13. Rawle, T. D., Egami, E., Bussmann, R. S., et al., 2014. "[C II] and ^{12}CO(1-0) Emission Maps in HLSJ091828.6+514223: A Strongly Lensed Interacting System at z = 5.24." *The Astrophysical Journal*, 783, 59.

14. 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.

15. 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.

16. Dowell, C. D., Conley, A., Glenn, J., et al., 2014. "HerMES: Candidate High-redshift Galaxies Discovered with Herschel/SPIRE." *The Astrophysical Journal*, 780, 75.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. Ibar, E., Sobral, D., Best, P. N., et al., 2013. "Herschel reveals the obscured star formation in HiZELS Hα emitters at z = 1.47." *Monthly Notices of the Royal Astronomical Society*, 434, pp. 3218–3235.

23. Calanog, J. A., Wardlow, J., Fu, H., et al., 2013. "HerMES: The Far-infrared Emission from Dust-obscured Galaxies." *The Astrophysical Journal*, 775, 61.

24. 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.

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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.

35. 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.

36. 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.

37. 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.

38. 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.

39. 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.

40. 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.

41. 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.

42. Roseboom, I. G., Bunker, A., Sumiyoshi, M., et al., 2012. "FMOS near-IR spectroscopy of Herschel-selected galaxies: star formation rates, metallicity and dust attenuation at z ˜ 1." *Monthly Notices of the Royal Astronomical Society*, 426, pp. 1782–1792.

43. 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.

44. 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.

45. 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.

46. 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.

47. 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.

48. 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.

49. 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.

50. Béthermin, M., Le Floc'h, E., Ilbert, O., et al., 2012. "HerMES: deep number counts at 250 μm, 350 μm and 500 μm in the COSMOS and GOODS-N fields and the build-up of the cosmic infrared background." *Astronomy and Astrophysics*, 542, A58.

51. 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.

52. Zemcov, M., 2012. "Measurement of the Sunyaev-Zeldovich Effect Increment with Large Aperture Sub-mm Telescopes." In "American Astronomical Society Meeting Abstracts #220," volume 220 of *American Astronomical Society Meeting Abstracts*. p. 111.08.

53. 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.

54. Rawle, T. D., Edge, A. C., Egami, E., et al., 2012. "The Relation between Cool Cluster Cores and Herschel-detected Star Formation in Brightest Cluster Galaxies." *The Astrophysical Journal*, 747, 29.

55. Roseboom, I. G., Ivison, R. J., Greve, T. R., et al., 2012. "The Herschel Multi-tiered Extragalactic Survey: SPIRE-mm photometric redshifts." *Monthly Notices of the Royal Astronomical Society*, 419, pp. 2758–2773.

56. Smith, A. J., Wang, L., Oliver, S. J., et al., 2012. "HerMES: point source catalogues from deep Herschel-SPIRE observations." *Monthly Notices of the Royal Astronomical Society*, 419, pp. 377–389.

57. Gong, Y., Cooray, A., Silva, M., et al., 2012. "Intensity Mapping of the [C II] Fine Structure Line during the Epoch of Reionization." *The Astrophysical Journal*, 745, 49.

58. Gong, Y., Cooray, A., Silva, M., et al., 2012. "Intensity Mapping of the [CII] Fine Structure Line during the Epoch of Reionization." In "American Astronomical Society Meeting Abstracts #219," volume 219 of *American Astronomical Society Meeting Abstracts*. p. 427.17.

59. Smidt, J., Arai, T., Battle, J., et al., 2012. "Fluctuations In The Cosmic Infrared Background Using the Cosmic Infrared Background ExpeRiment (CIBER)." In "American Astronomical Society Meeting Abstracts #219," volume 219 of *American Astronomical Society Meeting Abstracts*. p. 312.02.

60. Zemcov, M. B., Multi-tiered Extragalactic Survey (HerMES), H., and Lensing Survey (HLS), H., 2012. "Measurements of the Sunyaev-Zel'dovich Effect Increment with Herschel." In "American Astronomical Society Meeting Abstracts #219," volume 219 of *American Astronomical Society Meeting Abstracts*. p. 143.17.

61. Tsumura, K., Battle, J., Bock, J., et al., 2012. "The Cosmic Infrared Background Experiment (CIBER): The Low Resolution Spectrometer." *The Astrophysical Journal Supplement, Accepted; ArXiv e-prints astro-ph:1112:4217*.

62. Hinderks, J. R., Ade, P., Bock, J., et al., 2011. "Polarization Calibration of the QUaD Experiment." In P. Bastien, N. Manset, D. P. Clemens, and N. St-Louis, editors, "Astronomical Society of the Pacific Conference Series," volume 449 of *Astronomical Society of the Pacific Conference Series*. p. 63.

63. Gavazzi, R., Cooray, A., Conley, A., et al., 2011. "Modeling of the HerMES Submillimeter Source Lensed by a Dark Matter Dominated Foreground Group of Galaxies." *The Astrophysical Journal*, 738, pp. 125–+.

64. Culverhouse, T., Ade, P., Bock, J., et al., 2011. "The QUaD Galactic Plane Survey. II. A Compact Source Catalog." *The Astrophysical Journal Supplement*, 195, pp. 8–+.

65. Seymour, N., Symeonidis, M., Page, M. J., et al., 2011. "HerMES: SPIRE emission from radio-selected active galactic nuclei." *Monthly Notices of the Royal Astronomical Society*, 413, pp. 1777–1786.

66. Conley, A., Cooray, A., Vieira, J. D., et al., 2011. "Discovery of a Multiply Lensed Submillimeter Galaxy in Early HerMES Herschel/SPIRE Data." *The Astrophysical Journal Letters*, 732, pp. L35+.

67. Amblard, A., Cooray, A., Serra, P., et al., 2011. "Submillimetre galaxies reside in dark matter haloes with masses greater than 3×10^{11} solar masses." *Nature*, 470, pp. 510–512.

68. Frazer, C., Bock, J., Cooray, A., et al., 2011. "Imaging the Spatial Fluctuations in Cosmic IR Background from Reionization with CIBER." In "American Astronomical Society Meeting Abstracts #217," volume 43 of *Bulletin of the American Astronomical Society*. pp. 249.03–+.

69. Levenson, L. R., Battle, J., Bock, J. J., et al., 2011. "The Cosmic Infrared Background Experiment: Flight Characterization Of The Ciber Narrow Band Spectrometer." In "American Astronomical Society Meeting Abstracts #217," volume 43 of *Bulletin of the American Astronomical Society*. pp. 249.02–+.

70. Zemcov, M. B., Aguirre, J., Bock, J., et al., 2011. "Measurement Of The Null In The Sunyaev-zel'dovich Effect With Z-spec." In "American Astronomical Society Meeting Abstracts #217," volume 43 of *Bulletin of the American Astronomical Society*. pp. 244.02–+.

71. Lee, D. H., Kim, M. G., Tsumura, K., et al., 2010. "Analysis of Dark Data of the PICNIC IR Arrays in the CIBER." *Journal of Astronomy and Space Sciences*, 27, pp. 401–406.

72. Rigopoulou, D., Magdis, G., Ivison, R. J., et al., 2010. "HerMES: Herschel-SPIRE observations of Lyman break galaxies." *Monthly Notices of the Royal Astronomical Society*, 409, pp. L7–L12.

73. Buat, V., Giovannoli, E., Burgarella, D., et al., 2010. "Measures of star formation rates from infrared (Herschel) and UV (GALEX) emissions of galaxies in the HerMES fields." *Monthly Notices of the Royal Astronomical Society*, 409, pp. L1–L6.

74. Glenn, J., Conley, A., Béthermin, M., et al., 2010. "HerMES: deep galaxy number counts from a P(D) fluctuation analysis of SPIRE Science Demonstration Phase observations." *Monthly Notices of the Royal Astronomical Society*, 409, pp. 109–121.

75. Levenson, L., Marsden, G., Zemcov, M., et al., 2010. "HerMES: SPIRE Science Demonstration Phase maps." *Monthly Notices of the Royal Astronomical Society*, 409, pp. 83–91.

76. Hwang, H. S., Elbaz, D., Magdis, G., et al., 2010. "Evolution of dust temperature of galaxies through cosmic time as seen by Herschel." *Monthly Notices of the Royal Astronomical Society*, 409, pp. 75–82.

77. Brisbin, D., Harwit, M., Altieri, B., et al., 2010. "The Deep SPIRE HerMES Survey: spectral energy distributions and their astrophysical indications at high redshift." *Monthly Notices of the Royal Astronomical Society*, 409, pp. 66–74.

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