
Publications

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In Preparation

1. Shroyer, J., *et al.* (2022) “A Scalable LED Module for KID Array Addressing.” *Rev. Sci. Instrum.*, to be submitted.
2. Johnson, B. R., *et al.* (2022) “A physical optics study of instrument-induced systematic errors in millimeter-wave polarimeters.” *MNRAS*, in preparation.
3. Walters, L., *et al.* (2022) “Large-Diameter Lens for Millimeter-Wave Instruments Based on Composites.” *Rev. Sci. Instrum.*, in preparation.

Submitted

4. Healy, E., *et al.* (2022) “The Simons Observatory 220 and 280 GHz Focal-Plane Module: Design and Initial Characterization.” *J. Low Temp. Phys.*, submitted. arXiv:2201.04507
5. McCarrick, H., *et al.* (2022) “The 90 and 150 GHz universal focal-plane modules for the Simons Observatory.” *J. Low Temp. Phys.*, submitted. arXiv:2112.01458
6. Huber, Z., *et al.* (2022) “The Simons Observatory: Magnetic Shielding Measurements for the Universal Multiplexing Module.” *J. Low Temp. Phys.*, submitted. arXiv:2111.11495
7. Wang, Y., *et al.* (2022) “Simons Observatory Focal-Plane Module: In-lab Testing and Characterization Program.” *J. Low Temp. Phys.*, submitted. arXiv:2111.11301

Refereed Publications

8. Crowley, K. D., Dow, P., Shroyer, J. E., Johnson, B. R., *et al.* (2022) “The Simons Observatory: A large-diameter truss for a refracting telescope cooled to 1 K.” *Rev. Sci. Instrum.*, **93**, 055106.
9. Hensley, B. S., *et al.* (2022) “The Simons Observatory: Galactic Science Goals and Forecasts.” *ApJ*, **929**, 166.
10. The CMB-S4 Collaboration, *et al.* (2022) “CMB-S4: Forecasting Constraints on Primordial Gravitational Waves.” *ApJ*, **926**, 54.
11. Chesmore, G., *et al.* (2021) “Simons Observatory HoloSim-ML: machine learning applied to the efficient analysis of radio holography measurements of complex optical systems.” *Appl. Opt.*, **60(29)**, 9029–9035.
12. McCarrick, H., *et al.* (2021) “The Simons Observatory microwave SQUID multiplexing detector module design.” *ApJ*, **922**, 38.
13. Zhu, N., *et al.* (2021) “The Simons Observatory Large Aperture Telescope Receiver.” *ApJS*, **256**, 23.
14. Abitbol, M., *et al.* (2021) “The Simons Observatory: Bandpass and polarization-angle calibration requirements for B-mode searches.” *J. Cosmol. Astropart. Phys.*, **5**, 032.
15. Meinke, J., *et al.* (2020) “Planar Self-similar Antennas for Broadband Millimeter-Wave Measurements.” *J. Low Temp. Phys.*, **199**, 281.
16. Didier, J., *et al.* (2019) “Intensity-coupled Polarization in Instruments with a Continuously Rotating Half-Wave Plate.” *ApJ*, **876**, 54.

17. The EBEX Collaboration, *et al.* (2018) “The EBEX Balloon-borne Experiment - Optics, Receiver, and Polarimetry.” *ApJS*, **239**, 7.
18. The EBEX Collaboration, *et al.* (2018) “The EBEX Balloon Borne Experiment - Detectors and Readout.” *ApJS*, **239**, 8.
19. The EBEX Collaboration, *et al.* (2018) “The EBEX Balloon-Borne Experiment - Gondola, Attitude Control, and Control Software.” *ApJS*, **239**, 9.
20. Johnson, B. R., Flanigan, D., *et al.* (2018) “Development of Dual-Polarization Multi-Chroic MKIDs for CMB Studies.” *J. Low Temp. Phys.*, **193**, 103.
21. Abitbol, M. H., Johnson, B. R., *et al.* (2018) “Constraining the Anomalous Microwave Emission Mechanism in the S140 Star Forming Region with Spectroscopic Observations Between 4 and 8 GHz at the Green Bank Telescope.” *ApJ*, **864**, 97.
22. Nagarajan, A., *et al.* (2018) “Weak-lensing mass calibration of the Sunyaev–Zel’dovich effect using APEX-SZ galaxy clusters.” *MNRAS*, **488**(2), 1728–1759.
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24. McCarrick, H., Jones, G., Johnson, B. R., *et al.* (2018) “Design and performance of dual-polarization lumped-element kinetic inductance detectors for millimeter-wave polarimetry.” *A&A*, **610**, A45.
25. Johnson, B. R., Columbro, F., Araujo, D., *et al.* (2017) “A Large-Diameter Hollow-Shaft Cryogenic Motor Based on a Superconducting Magnetic Bearing for Millimeter-Wave Polarimetry.” *Rev. Sci. Instrum.*, **88**, 105102.
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30. Bender, A. N., *et al.* (2016) “Galaxy Cluster Scaling Relations Measured with APEX-SZ.” *MNRAS*, **460**(4), 3432–3446.
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32. Abitbol, M., Hill, C., and Johnson, B. R. (2016) “Foreground-induced biases in CMB polarimeter self-calibration.” *MNRAS*, **457**(2), 1796–1803.
33. Kaufman, J., Keating, B., and Johnson, B. R. (2016) “Precision Tests of Parity Violation Over Cosmological Distances.” *MNRAS*, **455**(2), 1981–1988. *Buchalter Cosmology Prize (Second Prize) paper.*
34. McCarrick, H., Flanigan, D., Jones, G., Johnson, B. R., *et al.* (2016) “A Titanium Nitride Absorber for Reducing Optical Cross-Talk in Horn-Coupled Aluminum LEKIDs for Millimeter Wavelengths.” *J. Low Temp. Phys.*, **184**, 154.

35. Bryan, S., *et al.* (2016) “WSPEC: A waveguide filter-bank focal plane array spectrometer for millimeter wave astronomy and cosmology.” *J. Low Temp. Phys.*, **184**, 114.
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37. McCarrick, H., Flanigan, D., Jones, G., Johnson, B. R., *et al.* (2014) “Horn-Coupled, Commercially-Fabricated Aluminum Lumped-Element Kinetic Inductance Detectors for Millimeter Wavelengths.” *Rev. Sci. Instrum.*, **85**, 123117.
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White Papers and Design Studies

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Ph.D. Thesis

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