

Roger O'Brient's Publication List

PAPERS

ACCEPTED/ IN PREP

- 1) BICEP2/Keck Collaboration: Ade, P., Aiken, R.,..., **O'Brient, R.**, ... Yoon, K.W. *New Bounds on Anisotropies of Cosmic Polarization Rotation and Implications for Axion-Like Particle and Primordial Magnetic Fields*, in prep.

REFEREED

PUBLICATIONS

- 1) BICEP2/Keck Collaboration: Ade, P., Aiken, R.,..., **O'Brient, R.**, ... Yoon, K.W. *Measurement of Gravitational Lensing from Large-scale B-mode Polarization* *ApJ* 833, 228 (2016)
- 2) BICEP2/Keck Collaboration: Ade, P.; Aiken, R.; ... **O'Brient, R.**; ... Yoon, K.W. *Matrix Based E/B Separation Applied to BICEP2 and the Keck Array* *ApJ* 825, 66 (2016).
- 3) *BICEP2/Keck Collaboration: Ade, P.; Ahmed, Z.; ... O'Brient, R.; ... Yoon, K.W. BICEP2/ Keck Array VI: Improved Constraints On Cosmology and Foregrounds When Adding 95 GHz Data From Keck Array Phys. Rev. Lett.* 116, 031302 (2016).
- 4) *Wu, K.; ... O'Brient, R.;... Yoon, K.W. Initial Performance of BICEP3: A Degree Angular Scale 95GHz Band Polarimeter JLTP Vol 184,3. pp765-771. (2016)*
- 5) *Hailey-Dunsheath, S.; ... O'Brient, R.;... Zmuidzinas, J. Low Noise Titanium Nitride KIDs for SuperSpec: A Millimeter-Wave On-Chip Spectrometer JLTP Vol 184,1. pp180-187. (2016)*
- 6) *BICEP2/Keck Collaboration: Ade, P.; Aiken, R.; ... O'Brient, R.; ... Yoon, K.W. Measurements of B-mode Polarization at Degree Angular Scales and 150 GHz by Keck Array. BICEP2 and Keck Array V ApJ 811,126 (2015).*
- 7) *BICEP2/Keck/ SPIDER Collaborations: Ade, P.; Aiken, R.; ... O'Brient, R.; ... Yoon, K.W. Antenna-coupled TES bolometers for degree-scale polarimeters used in BICEP2, Keck Array, and SPIDER, accepted by ApJ for publication ApJ 812, 176 (2015). Corresponding author*
- 8) *BICEP2/Keck Array Collaboration: Ade, P.; Aiken, R.; ... O'Brient, R.; ... Yoon, K.W. BICEP2 and Keck Array IV: Optical Characterization and Performance of the BICEP2 and Keck Array Experiments, ApJ 806, 2 (2015)*
- 9) *BICEP/Keck and Planck Collaborations: Ade, P.; Aiken, R.; ... O'Brient, R.; ... Yoon, K.W. A Joint Analysis of BICEP2/Keck Array and Planck Data., PRL 114, 101301 (2015).*
- 10) *BICEP2/Keck Collaboration: Ade, P.; Aiken, R.; ... O'Brient, R.; ... Yoon, K.W. Instrumental Systematics, ApJ 814, 110 (2015).*

- 11) *BICEP2 Collaboration: Ade, P.; Aiken, R; ... O'Brient, R.; ... Yoon, K.W. Detection of B-mode polarization at degree angular scales., PRL 112, 241101 (2014).*
- 12) *BICEP2 Collaboration: Ade, P.; Aiken, R; ... O'Brient, R.; ... Yoon, K.W. BICEP2 II: Experiment and three-year data set, ApJ 792, 62 (2014).*
- 13) *Shirokoff, E; Barry, P.; ... O'Brient, R.; ... Zmuidzinas, J. Design and performance of SuperSpec: an on-chip, KID-based, mm-wavelength spectrometer, JLTP 176, 657 (2014).*
- 14) *Staniszewski, Z.; Bock, J.; ... O'Brient, R.;... Zemcov, M. The TIME imaging spectrometer, JLTP 176, 767S (2014).*
- 15) *O'Brient, R.; et al. A Dual-polarized Broadband Planar Antenna and Channelizing Filter Bank for Millimeter Wavelengths, Appl. Phys. Lett.102, 063506 (2013)*
- 16) *O'Brient, R. ; et al. Suppressing Beam Systematics in Antenna-Coupled TES Bolometers for CMB Polarimetry, JLTP, 167, issue 3-4, pp. 497-503 (2012)*
- 17) *Bonetti, J.; Turner, A.; ... O'Brient, R; ... Trangsrud, A. Characterization and Fabrication of the TES Arrays for the Spider, Keck and BICEP2 CMB Polarimeters, JLTP 167, issue 3-4, pp 146-151. (2013).*
- 18) *Edwards, J.; O'Brient, R; Lee, A.T.; Rebeiz; A.T., Dual-Polarized Sinuous Antennas on Extended Hemispherical Silicon Lenses, IEEE Trans. Antenna Propag., Vol 60, Issue 9, 4082-4091 (2012).*
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- 1) Grayson, J.; ... **O'Brient, R.**;... Yoon, K.W. *BICEP3 performance overview and planned Keck Array upgrade*, Proc SPIE, Volume 9914. arXiv:1607.04668 (June 2016)
- 2) Karkare, K.; ... **O'Brient, R.**;... Yoon, K.W. *Optical Characterization of the BICEP3 CMB Polarimeter at the South Pole*, Proc SPIE, Volume 9914. arXiv:1607.04567 (June 2016)
- 3) Hui, H.; ... **O'Brient, R.**;... Yoon, K.W. *BICEP3 focal plane design and detector performance*, Proc SPIE, Volume 9914. arXiv:1607.06861 (June 2016)
- 4) **O'Brient, R.**, et al. *Lithographed spectrometers for tomographic line mapping of the Epoch of Reionization*, Proc SPIE, Volume 9153, 91530F-91530F-11 (June 2014.)
- 5) Karkare, K.; ... **O'Brient, R.**;... Yoon, K.W. *Keck Array and BICEP3: spectral characterization of 5000+ detectors*, Proc SPIE, Volume 9153, id. 91533B (June 2014.)
- 6) Buder, I.; ... **O'Brient, R.**;... Yoon, K.W. *Keck Array and BICEP3: upgrades and improved beam characterization*, Proc SPIE, Volume 9153, id. 915312 (June 2014.)
- 7) Hailey-Dunsheath, S.; ... **O'Brient, R.**;... Zmuidzinas, J. *Status of SuperSpec: A Broadband, On-Chip Millimeter-Wave Spectrometer*, Proc SPIE, Volume 9153, id. 915312 (June 2014.)
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- 10) Gandilo, N.; ... **O'Brient, R.**; ... Young, E.Y.. *BICEP3: a 95GHz refracting telescope for degree-scale CMB polarization*. Proc SPIE, Vol. 9145, 91452U. (June 2014)
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