



## Bernardita Ried Guachalla

Ph.D. Student in Physics, admitted Autumn 2022

### Publications

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#### PUBLICATIONS

- **Data Release 1 of the Dark Energy Spectroscopic Instrument** *ASTRONOMICAL JOURNAL*  
Karim, M., Adame, A. G., Aguado, D., Aguilar, J., Ahlen, S., Alam, S., Aldering, G., Alexander, D. M., Alfarsy, R., Allen, L., Prieto, C., Alves, O., Anand, et al  
2026; 171 (5)
- **Probing cosmic velocities with the pairwise kinematic Sunyaev-Zel'dovich signal in DESI Bright Galaxy Sample DR1 and ACT DR6** *PHYSICAL REVIEW D*  
Hadzhiyska, B., Gong, Y., Hsu, Y., Gallardo, P. A., Aguilar, J., Ahlen, S., Alonso, D., Bean, R., Bianchi, D., Brooks, D., Castander, F. J., Claybaugh, T., Cole, et al  
2026; 113 (6)
- **Disentangling the halo: joint model for measurements of the kinetic Sunyaev-Zeldovich effect and galaxy-galaxy lensing** *MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY*  
Sunseri, J., Amon, A., Dunkley, J., Battaglia, N., Ferraro, S., Hadzhiyska, B., Guachalla, B., Schaan, E.  
2026; 546 (2)
- **The Atacama Cosmology Telescope: DR6 constraints on extended cosmological models** *JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS*  
Calabrese, E., Hill, J., Jense, H. T., La Posta, A., Abril-Cabezas, I., Addison, G. E., Ade, P. A. R., Aiola, S., Alford, T., Alonso, D., Amiri, M., An, R., Atkins, et al  
2025
- **Backlighting extended gas halos around luminous red galaxies: Kinematic Sunyaev-Zel'dovich effect from DESI Y1 and ACT data** *PHYSICAL REVIEW D*  
Guachalla, B., Schaan, E., Hadzhiyska, B., Ferraro, S., Aguilar, J. N., Ahlen, S., Battaglia, N., Bianchi, D., Bond, R., Brooks, D., Claybaugh, T., Coulton, W. R., De La Macorra, et al  
2025; 112 (10)
- **The Atacama Cosmology Telescope: DR6 maps** *JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS*  
Naess, S., Guan, Y., Duivenvoorden, A. J., Hasselfield, M., Wang, Y.  
2025
- **The Atacama Cosmology Telescope: DR6 power spectra, likelihoods and  $\Lambda$ CDM parameters** *JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS*  
Louis, T., La Posta, A., Atkins, Z., Jense, H. T., Atacama Cosmology Telescope Collaboration  
2025
- **Measurements of the thermal Sunyaev-Zel'dovich effect with ACT and DESI luminous red galaxies** *PHYSICAL REVIEW D*  
Liu, R., Ferraro, S., Schaan, E., Zhou, R., Aguilar, J., Ahlen, S., Battaglia, N., Bianchi, D., Brooks, D., Claybaugh, T., Cole, S., Coulton, W. R., de la Macorra, et al  
2025; 112 (8)

- **The Atacama Cosmology Telescope: DR6 power spectrum foreground model and validation** *JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS*  
Beringue, B., Surrao, K. M., Hill, J., Atkins, Z., Battaglia, N., Bolliet, B., Calabrese, E., Choi, S. K., Clark, S. E., Duivenvoorden, A. J., Dunkley, J., Giardiello, S., Goldstein, et al  
2025
- **The Atacama Cosmology Telescope: Large-scale velocity reconstruction with the kinematic Sunyaev-Zel'dovich effect and DESI LRGs** *JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS*  
McCarthy, F., Battaglia, N., Bean, R., Bond, J., Cai, H., Calabrese, E., Coulton, W. R., Devlin, M. J., Dunkley, J., Ferraro, S., Gluscevic, V., Guan, Y., Hill, et al  
2025
- **Informed total-error-minimizing priors: Interpretable cosmological parameter constraints despite complex nuisance effects** *ASTRONOMY & ASTROPHYSICS*  
Ried Guachalla, B., Britt, D., Gruen, D., Friedrich, O.  
2025; 693
- **Bounds on galaxy stochasticity from halo occupation distribution modeling** *ASTRONOMY & ASTROPHYSICS*  
Britt, D., Gruen, D., Friedrich, O., Yuan, S., Guachalla, B.  
2024; 689
- **Velocity reconstruction in the era of DESI and Rubin/LSST. II. Realistic samples on the light cone** *PHYSICAL REVIEW D*  
Hadzhiyska, B., Ferraro, S., Guachalla, B., Schaan, E.  
2024; 109 (10)
- **Velocity reconstruction in the era of DESI and Rubin/LSST. I. Exploring spectroscopic, photometric, and hybrid samples** *PHYSICAL REVIEW D*  
Guachalla, B., Schaan, E., Hadzhiyska, B., Ferraro, S.  
2024; 109 (10)