

# JAKOB M. HELTON

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## CURRENT POSITION

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A first-year graduate student at the University of Arizona pursuing a Ph.D. in astronomy, with research interests in observational extragalactic astrophysics and cosmology. Member of the James Webb Space Telescope (JWST) Advanced Deep Extragalactic Survey (JADES).

## EDUCATION

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**University of Arizona**  
Degree: M.S. and Ph.D.  
Concentration: Astronomy

*August 2021 - Present*  
Cumulative GPA: 4.00  
Departmental GPA: 4.00

**Princeton University**  
Degree: Bachelor of Arts  
Concentration: Astrophysical Sciences

*September 2017 - May 2021*  
Cumulative GPA: 3.66  
Departmental GPA: 3.76

## PUBLICATIONS

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4. **J. M. Helton**, A. I. Zabludoff, K. D. French, et al., *The spatially resolved star formation histories of post-starburst galaxies in SDSS-IV MaNGA*, in preparation
3. **J. M. Helton**, A. L. Strom, J. E. Greene, et al., *The nebular properties of star-forming galaxies at intermediate redshift from the Large Early Galaxy Astrophysics Census*, ApJ, in review
2. **J. M. Helton**, S. D. Johnson, J. E. Greene, et al., *Discovery and origins of giant optical nebulae surrounding quasar PKS0454–22*, 2021, MNRAS, 505, 4
1. S. Aiola, E. Calabrese, et al., including **J. M. Helton**, *The Atacama Cosmology Telescope: DR4 Maps and Cosmological Parameters*, 2020, JCAP, 12, 047

## PRESENTATIONS

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6. *Discovery and origins of giant optical nebulae surrounding quasar PKS0454–22*. Poster presentation at the 237th American Astronomical Society Meeting (January 2021).
5. *Discovery and origins of giant optical nebulae surrounding quasar PKS0454–22*. Oral presentation at Princeton University's Galread (August 2020).
4. *The physical conditions in  $0.6 < z < 1.0$  galaxies from LEGA-C*. Poster presentation at the 235th American Astronomical Society Meeting (January 2020).
3. *On the extended line-emitting nebulae surrounding quasar-host galaxies*. Poster presentation at the Princeton University Research Day (May 2019).
2. *On the extended line-emitting nebulae surrounding quasar-host galaxies*. Poster presentation at the Stanford University Research Conference (April 2019).
1. *On the extended line-emitting nebulae surrounding quasar-host galaxies*. Oral presentation at Drexel University's Quasar Day Meeting (February 2019).

## TELESCOPE ALLOCATIONS

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**Keck/MOSFIRE**  
**Magellan/FIRE**  
**Magellan/IMACS**

Near-Infrared Spectroscopy, 0.5 Nights (Co-I)  
Near-Infrared Spectroscopy, 6.5 Nights (Co-I)  
Optical Spectroscopy, 2.0 Nights (Co-I)

## SKILLS

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<b>Programming Languages</b>	Python, IDL, Java, Javascript, HTML
<b>Software &amp; Tools</b>	Unix, Excel, L <sup>A</sup> T <sub>E</sub> X, TensorFlow, FIREHOSE
<b>Observing</b>	Keck/MOSFIRE, Magellan/IMACS, Magellan/LDSS3

## EXTRA-CURRICULARS

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<b>McGraw Center for Teaching and Learning</b>	January 2018 - May 2021
Head Tutor for Single-Variable Calculus, Multi-Variable Calculus, and Linear Algebra	

<b>Carnegie Observatories, Carnegie Institution for Science</b>	June 2020 - August 2020
Student Mentor for the Carnegie Astrophysics Summer Student Internship Program	

<b>Department of Astrophysical Sciences, Princeton University</b>	January 2020 - August 2020
Organizer for the department-wide Galread Extragalactic Discussion Group	

<b>Department of Physics, Princeton University</b>	January 2019 - January 2020
Undergraduate Teaching Assistant for Introductory Physics Labs (Mechanics and Electromagnetism)	

## REFERENCES

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Prof. Ann Zabludoff	University of Arizona	aiz@arizona.edu
Prof. Marcia Rieke	University of Arizona	mrieke@arizona.edu
Prof. Sean Johnson	University of Michigan	seanjoh@umich.edu
Prof. Jenny Greene	Princeton University	jgreene@astro.princeton.edu
Dr. Allison Strom	Princeton University	allison.strom@princeton.edu