

## RESEARCH INTERESTS:

Meteoritics and impact cratering mechanics; high-resolution exoplanet atmosphere characterization (optical and NIR); planetary dynamics; probabilistic methods for exoplanet detection

## EDUCATION

Yale University, New Haven, CT PhD candidate in department of Astronomy	2018 - Present
University of Cambridge, Cambridge, UK MASt Astrophysics <i>Pass with Merit</i>	2017 - 2018
Princeton University, Princeton, NJ A.B. Astrophysical Sciences; Certificate in Applications of Computing <i>magna cum laude</i> ; Elected to Sigma Xi Society	2013 - 2017

## RESEARCH FELLOWSHIPS AND AWARDS

Yale University Astronomy Dept., Tinsley Award for Best Graduate Student Paper	2021
Yale University, Nathan Hale Associates Fellow	2019 - Present
University of Cambridge Institute of Astronomy, Summer Studentship	2018
Princeton University, Summer USRP	2014, 2015, 2016
University of Massachusetts Amherst, FCAD Summer REU	2011, 2012, 2013

## REFEREED PUBLICATIONS

## FIRST AUTHOR PUBLICATIONS

7. TOI-1518b: A Misaligned Ultra-hot Jupiter with Iron in its Atmosphere  
**Cabot, S.**; Bello-Arufe, A.; Mendonça, J.; Tronsgaard, R; et al. (2021 AJ 162 218C)  
[Featured in NASA Article](#)
6. EXPRES II. Searching for Planets around Active Stars  
**Cabot, S.**; Roettenbacher R.; Henry, G.; Zhao, L.; et al. (2021 AJ 161 26C)
5. Lunar Exploration as a Probe of Ancient Venus  
**Cabot, S.**; Laughlin, G. (2020 PSJ 1 66C)  
[BBC Coverage](#), [Yale University Press Release](#)
4. Detection of Neutral Atomic Species in the Ultra-hot Jupiter WASP-121b  
**Cabot, S.**; Madhusudhan, N.; Welbanks, L.; Piette, A.; Gandhi, S. (2020 MNRAS 494 1)  
[WASP Collaboration Coverage](#)
3. Robustness of High-Resolution Exoplanet Spectroscopy  
**Cabot, S.**; Madhusudhan, N.; Hawker, G.; Gandhi, S. (2019 MNRAS 482 4)
2. C IV and He II Line Emission of Lyman  $\alpha$  Blobs: Powered by Shock-Heated Gas  
**Cabot, S.**; Cen, R.; Zheng, Z. (2016 MNRAS 462 1)
1. XMM-Newton/RGS detection of the Missing Interstellar O VII  $K\alpha$  Absorption Line  
**Cabot, S.**; Wang, Q.; Yao, Y. (2013 MNRAS 431 1)

## SECOND AND THIRD AUTHOR PUBLICATIONS

7. EXPRES. III. Revealing the Stellar Activity Radial Velocity Signature of  $\epsilon$  Eridani  
Roettenbacher, R.; et al. (2<sup>th</sup> author, **Cabot, S.**) (Accepted AJ)  
[Heising-Simons Coverage](#), [Yale University Press Release](#)
6. Constraints on the Occurrence of 'Oumuamua-Like Objects  
Levine, W.; et al. (2<sup>th</sup> author, **Cabot, S.**) (Accepted ApJ)
5. On the Spin Dynamics of Elongated Minor Bodies  
Seligman, D.; et al. (3<sup>th</sup> author, **Cabot, S.**) (2021 ApJ 920 28S)
4. Assessing telluric correction methods for Na detections  
Langeveld, A.; et al. (3<sup>th</sup> author, **Cabot, S.**) (2021 MNRAS 502 4392L)
3. Neutral Cr and V in the Atmosphere of Ultra-hot Jupiter WASP-121 b  
Ben-Yami, M.; et al. (3<sup>th</sup> author, **Cabot, S.**) (2020 ApJL, 897L, 5B)  
[AAS Nova Coverage](#)
2. High-resolution Transmission Spectroscopy of MASCARA-2 b with EXPRES  
Hoeijmakers, H.; et al. (2<sup>nd</sup> author, **Cabot, S.**) (2020 A&A 641A, 120H)  
[Yale University Press Release](#)
1. Evidence for Multiple Molecular Species in the Hot Jupiter HD 209458b  
Hawker, G.; et al. (3<sup>rd</sup> author **Cabot, S.**) (2018 ApJL 863 1)

#### OTHER CO-AUTHOR PUBLICATIONS

5. The obliquity and atmosphere of the ultra-hot Jupiter TOI-1431b  
Stangret, M.; et al. (co-author: **Cabot, S.**) (2021 A&A 654A 73S)
4. TOI-1431b/MASCARA-5b: A Highly Irradiated Ultra-Hot Jupiter  
Addison, B.; et al. (co-author: **Cabot, S.**) (Accepted AJ)
3. EXPRES I. HD 3651 an Ideal RV Benchmark  
Brewer, J.; et al. (co-author: **Cabot, S.**) (2020 AJ, 160, 67B)
2. A Pipeline for the Extreme Precision Spectrograph  
Petersburg, R.; et al. (co-author: **Cabot, S.**) (2020 AJ 159 5)
1. Performance Verification of the Extreme Precision Spectrograph  
Blackman, R.; et al. (co-author: **Cabot, S.**) (2020 AJ 159 5)

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#### OTHER WORKS

4. Black Holes and Bright Ideas  
Madjedi, K.; **Cabot, S.**; Gatinel, D. (July 2020 cover feature of [The Ophthalmologist](#))
3. Where are the Missing Baryons?  
**Cabot, S.**; Bahcall, N. (2017 Princeton Senior Thesis)
2. BPT Characterization of Star Forming Galaxies  
**Cabot, S.**; Cen, R. (2016 Princeton Fall Junior Paper)
1. Transverse Velocity Estimates of Q2237 + 0305: The Einstein Cross  
**Cabot, S.**; Goodman, J. (2016 Princeton Spring Junior Paper)

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#### SCIENTIFIC TALKS

Seminar Speaker, University of Chicago: Lunar Exploration as a Probe of Ancient Venus	2021
Speaker at TESS Science Team Meeting #24	2021
Seminar Speaker, University of Maryland: Skies of a Scorching Planet	2020
Seminar Speaker, Princeton University: Lunar Exploration as a Probe of Ancient Venus	2020
Guest Speaker, Williams College: Where are the Missing Baryons?	2017

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OBSERVING PROPOSALS

Interferometric Imaging of Sun-like Stars (6.0 Nights Awarded, Co-I)	2021
High-resolution Transit Spectroscopy (1.8 Nights Awarded, Co-I)	2021

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TEACHING AND OUTREACH

Yale Teaching Fellow: ASTR 130 (2018), ASTR 160 (2019), ASTR 130 (2020), ASTR 180 (2020)

Exoplanet Atmospheres: presentation to Lexington High School, MA	2021
Lunar Exploration as a Probe of Ancient Venus: presentation to Lexington High School, MA	2021
Berkshire School Tian Family Endowed Lecture Series	2020
Skies of a Scorching Planet: Yale Planetarium live webinar	2020
Yale Planetarium and Telescope: demo for Yale School of Management	2019
Gravity: presentation to Pine Cobble middle school, MA	2019
Story of a Satellite: presentation to Pine Cobble elementary school, MA	2019
Yale Planetarium and Telescope: demo for members of New Haven, CT community	2018
The Universe: presentation Sheffield, MA senior citizens center	2017
The Universe: presentation to D.C. elementary school	2016
Presentations at MA high-schools with supernova search team	2016

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Referee for *Astronomy and Computing*, *New Astronomy*

Extensive observing experience at *Lowell Discovery Telescope*, Flagstaff, AZ

Co-coordinator for Yale Exoplanet Seminar, 2018-2019