DR. MUNAZZA K. ALAM

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RESEARCH INTERESTS

Observations of exoplanet atmospheres, protoplanetary disk modeling, planet formation and evolution

EMPLOYMENT

Space Telescope Science Institute, Assistant Astronomer 2023–
Carnegie Earth & Planets Laboratory, Carnegie EPL Postdoctoral Fellow 2021–2023
Harvard University, Postdoctoral Researcher 2021

EDUCATION

Harvard University 2016–2021
Ph.D., Astronomy and Astrophysics
Thesis: "Characterizing Distant Worlds: Atmospheric Reconnaissance of Giant Planets with *Hubble*"
A.M. (2018), Astronomy and Astrophysics

Macaulay Honors College at Hunter College, City University of New York (CUNY) 2012–2016
B.A., Physics and Astronomy – *Summa Cum Laude (Salutatorian)*

FELLOWSHIPS & GRANTS

National Geographic Young Explorers Grant 2015–
Kavli Frontiers of Science Fellow 2023–
NSF Graduate Research Fellowship 2017–2020
John P. and Carol J. Merrill Graduate Fellowship, Harvard University 2017
Judith and Stanley Zabar Graduate Scholarship, Hunter College 2016
John P. McNulty Scholarship, Hunter College 2014–2016
CUNY Macaulay Honors College full merit scholarship, Hunter College 2012–2016

SELECTED HONORS & AWARDS

Keck Principal Investigator Data Award, NExSci for NASA 2020, 2022
Rodger Doxsey Travel Prize, AAS 237th Meeting 2021
Nominated as one of the **40 Women to Watch in 2019**, The Tempest 2019
Derek Bok Center Certificate of Distinction in Teaching, Harvard University 2017, 2018
Awarded for teaching SPU 30 (Life as a Planetary Phenomenon), Spring 2017
Awarded for teaching AY 16 (Stellar & Planetary Astronomy), Spring 2018
Best Poster Award, IAC Winter School of Radiative Transfer in Stellar & Planetary Atmospheres 2017
Joseph A. Gillet Memorial Prize, Hunter College 2016
Award Citation: *"awarded to a member of the senior class who has, in the opinion of the department, the most thorough knowledge of general physics"*
Rosalyn S. Yalow Award, Hunter College 2016
Award Citation: *"presented to one of Hunter's finest science students"*

SELECTED OBSERVING PROPOSALS (AS PI)

Mining Metals: Constraining the Abundances of Refractory Species in Ultra-hot Jupiters, Magellan/MIKE 2023A semester, 2 nights, **PI: Alam**, Co-Is: Teske, Hoeijmakers, Welbanks, Line, Öberg

Mining Metals: Connecting the Refractory Abdundances in Ultra-hot Jupiters to Formation Location, Magellan/MIKE 2022B semester, 3 nights, **PI: Alam**, Co-Is: Teske, Hoeijmakers, Welbanks, Line

A Helium Search in Planets on the Edges of the Hot Neptune Desert and Warm Neptune Savana, Keck/NIRSPEC 2022B semester, 2 nights, **PI: Alam**, Co-Is: Bourrier, Kirk, dos Santos, Allart, López-Morales, Ehrenreich, Seidel, Attia, Jaziri, Guilluy, Dethier

A Sharper Look: Observing a Clear Atmosphere Exoplanet Simultaneously at Low & High Spectral Resolution, Magellan/MIKE + Magellan/IMACS 2021B semester, 1 night, **PI: Alam**, Co-Is: Teske, Gao

Probing Atmospheric Escape in Young Transiting Exoplanets, Keck II/NIRSPEC 2020B semester, 1.5 nights, **PI: Alam**, Co-Is: dos Santos, Kirk, López-Morales, Ehrenreich, Bourrier, Allart, Siedel, Lovis, Livingston, King, Oklopčić, Zhou

Investigating Giant Planet Origins with Elemental Abundances of Stellar Hosts, Keck I/HIRES 2020A semester, 0.25 nights, **PI: Alam**, Co-I: López-Morales

Investigating Giant Planet Origins: Stellar Host Elemental Abundances, Magellan/MIKE 2019A, 2020A, & 2020B semesters, 6.5 nights, **PI: Alam**, Co-Is: López-Morales, Buchhave

SELECTED INVITED TALKS

Kavli Frontiers of Science, *Astrobiology in the Era of JWST*	Mar 2023
University of Maryland, *A Simple Static Disk Condensation Model to Connect Refractory Abundances in Ultra-hot Jupiters with Formation Location*	Feb 2023
241st AAS Meeting, *JWST Transiting Exoplanet Early Release Science: A Transmission Spectrum of WASP-39b with NIRSpec G395H*	Jan 2023
Johns Hopkins University, *Mining Metals: Connecting Refractory Abundances in Ultra-hot Jupiter to Formation Location*	Nov 2022
University of Pennsylvania, *Characterizing Exoplanets with HST and JWST*	Sept 2022
Geological Society of Washington, *Exotic Exoplanets and How to Find Them*	May 2022
American University, *Exoplanet Exploration with Hubble*	Feb 2022
NASA ExoExplorers, *The First Near-Infrared Transmission Spectrum of HIP 41378 f, a Low-Mass Temperate Jovian World in a Multi-Planet System*	Jan 2022
Carnegie EPL, *A NIR Transmission Spectrum for HIP 41378 f*	Dec 2021
University of Windsor, *Exotic Exoplanets and How to Find Them*	Nov 2021
American University, *Exotic Exoplanets and How to Find Them*	Oct 2021
Oberlin College, *Characterizing Exoplanet Atmospheres with Hubble*	Oct 2021
University of Michigan, *A Cloud-Free Atmosphere for WASP-62b*	Oct 2020
NASA Jet Propulsion Laboratory, *A Clear Atmosphere for WASP-62b, the Only Known Gas Giant in the JWST Continuous Viewing Zone*	Sept 2020
UC Berkeley & UCLA, *Characterizing Giant Planet Atmospheres with Hubble*	Sept 2020
University of Chicago, *Characterizing Giant Planet Atmospheres with Hubble and Large Ground-based Telescopes*	Aug 2020
University of Exeter, *Characterizing Giant Planet Atmospheres with HST*	Aug 2020
University of Hawaii Institute for Astrophysics, *Characterizing Giant Planet Atmospheres*	Feb 2020
Seminar Columbia University, *The HST PanCET Program: Characterizing the Atmospheres of Inflated Hot Jupiters*	Apr 2019
Geneva Observatory, *Precise Optical Transmission Spectra for a Hot Jupiter and a Nearby Super-Earth*	Sept 2018
Pontificia Universidad Católica, *An Optical Transmission Spectrum for WASP-52b*	Aug 2018
Smithsonian Board of Regents Meeting, *Through the Looking Glass: Next Generation Telescopes and the Future of Astronomy*	Apr 2018

SELECTED CONTRIBUTED TALKS

Conference From Clouds to Planets II, *Mining Metals: Connecting Refractory Abundances in Ultra-hot Jupiters to Formation Location*	Oct 2022
Talk Exo-Webb Summer Series, *Evidence of a Clear Atmosphere for WASP-62b, the Only Known Transiting Gas Giant in the JWST Continuous Viewing Zone*	Jul 2020
Conference Cloud Academy I, *An Optical Transmission Spectrum for WASP-52b*	Sept 2018
Conference Exoplanets II, *An Optical Transmission Spectrum of the Inflated Hot Jupiter WASP-52b*	Jul 2018
Conference Boston Area Exoplanet Science Meeting 2, *Precise Optical Transmission Spectra for a hot Jupiter and a nearby super-Earth*	Mar 2018
Conference CfA Stars & Planets Science Extravaganza 2, *A Tale of Two Planets*	Oct 2017
Conference Keele University Transiting Exoplanets, *Characterizing HD 21934b, the Nearest Transiting Rocky Planet*	Jul 2017

SELECTED PUBLIC TALKS

Public talk Virginia Living Museum, *Weather on Other Worlds* — Apr 2021
Assembly speaker Nightingale-Bamford School, *My Journey as an Astronomer* — Jan 2020
Public talk National Geographic Explorer Nights, *Exploring the Universe* — Apr 2019
Public talk National Geographic Student Matinee, *Keep Looking Up: My Journey in Astronomy* — Mar 2019
Public talk CfA Observatory Night, *Weather on Other Worlds: Studying Exoplanet Atmospheres* — Feb 2019
Keynote speaker Virginia Association of Science Teachers, *Building Stronger Classrooms* — Nov 2018
Keynote speaker Virginia Science Education Leadership Association, *Diversify & Strengthen Science for All* — Nov 2018
Public talk Macaulay Honors College Professional Lunch Series, *My Path to Astronomy* — Oct 2018
Public talk National Geographic Young Explorers Grants Program Workshop at Yale University, *Brown Dwarfs: The Cool Neighbors* — Apr 2016

SELECTED MEDIA FEATURES

Podcast NPR The Takeaway, New Photos from JWST Bring Jupiter Into Focus — Aug 2022
Article Astrobites, Women's History Month: Dr. Munazza Alam — Mar 2022
Book National Geographic Kids, *No Boundaries* — Feb 2022
Book Millbrook Press, *Who is a Scientist?* — Oct 2021
Magazine *Harvard Gazette*, Quick, hand me my worm pick — Sept 2021
Magazine *Eos*, Munazza Alam: Searching for New Worlds — Sept 2021
Magazine *Smithsonian Magazine*, The Five Big Ways JWST Will Help Astronomers Understand the Universe — Aug 2021
Podcast *HMSC Science Connects!*, Pondering Distant Suns — Jun 2020
Book National Geographic Kids, *Absolute Expert: Space!* — Jun 2020
Magazine *National Geographic*, "Women: A Century of Change" — Mar 2020
Radio show RMWorldTravel with Robert & Mary Carey and Rudy Maxa — Aug 2019
Podcast KPCC Radio, *Tell Them, I Am* (Episode 20) — May 2019
Magazine *National Geographic Kids*, "Dare to Explore" — Mar 2019
Video Explorer Academy: The Truth Behind — Oct 2018
Television CUNY TV Study with the Best (Culture and Identity) — May 2018
Book *National Geographic Kids* Solve This!: Wild & Wacky Challenges for the Genius Engineer in You — Mar 2018
Book *National Geographic Kids* Explorer Almanac 2019 — May 2018
Article *National Geographic*, Woman of Impact in Science, Meet Munazza Alam: the woman searching for planet Earth's twin — Mar 2018
Article *National Geographic*, Finding Clarity in the Stars — Oct 2016

SELECTED OUTREACH & SERVICE

SOC Building Bridges Across Planetary-Related Sciences II — 2023
Organizer Carnegie EPL Astronomy Seminar — 2022
Referee ApJ, AJ, Nature — 2019–
Subject-matter expert reviewer NASA peer review — 2022
Postdoc representative Carnegie EPL Library Committee — 2021
Graduate student representative CfA Director Search Committee — 2021
Student representative Harvard Graduate Admissions Committee — 2021
Committee member Center for Astrophysics | Harvard & Smithsonian APS-IDEA — 2020−2021
Coordinator Harvard Astronomy Peer Mentoring Program — 2019−2021
Reviewer *Hubble Space Telescope* Proposal Review Committee, Cycles 26, 27, & 31 — 2019−2023
Co-founder Open Labs at Harvard — 2016−2019
Poster judge National Collegiate Research Conference — 2017, 2018

PUBLICATIONS

46 refereed or submitted papers, 7 first and second author (via NASA ADS).

FIRST & SECOND AUTHOR PUBLICATIONS

7. Dos Santos, L.A., **Alam, M.K.**, Espinoza, N., Visaapragada, S., *Observing atmospheric escape in sub-Jovian worlds with JWST*, The Astronomical Journal, 165, 6, pp.244-252 (2023).

6. **Alam, M.K.**, Kirk, J., Dressing, C.D., López-Morales, M., Ohno, K., Gao, P., Akinsanmi, B., Santerne, A., Grouffal, S., Adibekyan, V., Barros, S.C.C., Buchhave, L., Crossfield, I.J.M., Dai, F., Deleuil, M., Giacalone, S., Lillo-Box, J., Marley, M., Mayo, A.W., Mortier, A., Santos, N.C., Sousa, S.G., Turtelboom, E.V., Wheatley, P.J., Vanderburg, A.M. *The First Near-Infrared Transmission Spectrum of HIP 41378 f, a Low-Mass Temperate Jovian World in a Multi-Planet System*, The Astrophysical Journal Letters, 927, 1, pp.L5-L14 (2022).

5. **Alam, M.K.**, López-Morales, M., MacDonald, R., Nikolov, N., Kirk, J., Goyal, J., Sing, D.K., Wakeford, H.R., Rathcke, A.D., Deming, D.L., Sanz-Forcada, J., Lewis, N.K., Barstow, J.K., Mikal-Evans, T., Buchhave, L.A. *Evidence of a Clear atmosphere for WASP-62b, the Only Transiting Giant Planet in the JWST Continuous Viewing Zone*, The Astrophysical Journal Letters, 906, 2, pp.L10-L20 (2021).

4. **Alam, M.K.**, López-Morales, M., Nikolov, N., Sing, D.K., Henry, G.W., Baxter, C., Désert, J.M., Barstow, J.K., Mikal-Evans, T., Bourrier, V., Lavvas, P., Wakeford, H.R., Williamson, M.H., Sanz-Forcada, J., Buchhave, L., Cohen, O., García Muñoz, A. *The HST PanCET Program: An Optical to Infrared Transmission Spectrum of HAT-P-32Ab*, The Astronomical Journal, 160, 1, pp.51-70 (2020).

3. Kirk, J., **Alam, M.K.**, López-Morales, M., Zeng, Li. *Confirmation of WASP-107b's extended Helium atmosphere with Keck II/NIRSPEC*, The Astronomical Journal, 159, 3, pp.115-124 (2020).

2. **Alam, M.K.**, Nikolov, N., López-Morales, M., Sing, D.K., Goyal, J., Henry, G.W., Sanz-Forcada, J., Williamson, M.H., Evans, T.M., Wakeford, H.R., Bruno, G., Ballester, G.E., Stevenson, K.B., Lewis, N.K., Barstow, J.K., Bourrier, V., Buchhave, L.A., Ehrenreich, D., García Muñoz, A. *The HST PanCET Program: Detection of Na I & A Cloudy Atmosphere for the Inflated Hot Jupiter WASP-52b*, The Astronomical Journal, 156, 6, pp. 298-323 (2018).

1. Riedel, A.R., **Alam, M.K.**, Rice, E.L., Cruz, K.L., & Henry, T.J. *Young Stars with SALT*, The Astrophysical Journal, 840, 2, pp.87-106 (2017).

THIRD+ AUTHOR PUBLICATIONS

39. May, E.M., MacDonald, R., Bennett, K.A., Moran, S.E., Wakeford, H.R., Peacock, S., Lustig-Yaeger, J., Highland, A.N., Stevenson, K.B., Sing, D.K., Mayorga, L.C., Batalha, N.E., Kirk, J., López-Morales, M., Valenti, J.A., **Alam, M.K.**, Alderson, L., Fu, G., Gonzalez-Quiles, J., Lothringer, J.D., Rustamkulov, Z., Sotzen, K. *Double Trouble: Two Transits of Super-Earth GJ 1132 b Observed with JWST NIRSpec G395H*, submitted to ApJL (2023).

38. Powell, D., Feinstein, A.D., Lee, E.K.H., et al. (including **Alam, M.K.**) *Detection of SO_2 in the Mid-Infrared Transmission Spectrum of WASP-39b*, submitted to Nature (2023).

37. Esparza-Borges, E., López-Morales, M., Adams Redai, J.I, et al. (including **Alam, M.K.**), *Detection of Carbon Monoxide in the Atmosphere of WASP-39b Applying Standard Cross-Correlation Techniques to JWST NIRSpec G395H Data*, accepted to The Astronomical Journal (2023), arXiv DOI: 2309.00036.

36. McGruder, C.D., López-Morales, M., Kirk, J., Rackham, B.V., May, E., Ahrer, E.-M., King, G.W., **Alam, M.K.**, Allen, N.H., Ortiz-Ceballos, K., Espinoza, N., Gardner, T., Jordán, A., Meyer, K., Monnier, J.D., Osip, D.J., Wheatley, P.J. *ACCESS, LRG-BEASTS, & MOPSS: Featureless Optical Transmission Spectra of WASP-25b and WASP-124b*, accepted to The Astronomical Journal (2023), arXiv: 2308.06263.

35. Dos Santos, L.A., García Muñoz, A., Sing, D.K., López-Morales, M., **Alam, M.K.**, Bourrier, V., Ehrenreich, D., Henry, G.W., Lecavelier des Etangs, A., Nikolov, N.K., Sanz-Forcada, J., Wakeford, H.W. *Hydrodynamic atmospheric escape in HD 189733 b: Signatures of carbon and variable hydrogen measured with the Hubble Space Telescope*, accepted to The Astronomical Journal (2023), arXiv DOI: 2307.03058.

34. Harada, C., Dressing, C.D., **Alam, M.K.**, Kirk, J., López-Morales, M., Ohno, K., Akinsanme, B., Barros, S., Buchhave, L., Collier Cameron, A., Crossfield, I., Dai, F., Gao, P., Giacalone, S., Grouffal, S., Lillo-Box, J., Mayo, A., Mortier, A., Santerne, A., Santos, N., Santos, S., Turtelboom, E., Vanderburg, A., Wheatley, P.. *Stability and detectability of exomoons orbiting HIP 41378 f, a temperate Jovian planet with an anomalously low apparent density*, accepted to the Astronomical Journal (2023), arXiv DOI: 2303.14294.

33. Moran, S.E., Stevenson, K.B, Sing, D.K., MacDonald, R.J., Kirk, J., Lustig-Yaeger, J., Peacock, S., Mayorga, L.C., Bennett, K.A., López-Morales, M., May, E.M., Rustamkulov, Z., Valenti, J.A., Adams Redai, J.I., **Alam, M.K.**, Batalha, N.E., Fu, G., Gonzalez-Quiles, J., Highland, A.N., Kruse, E., Lothringer, J.D., Ortiz Ceballos, K.N., Sotzen, K.S., Wakeford, H.R. *High Tide or Rip-Tide on the Cosmic Shoreline? A Water-Rich Atmosphere or Stellar Contamination for the Warm Super-Earth GJ 486b from JWST Observations*, The Astrophysical Journal Letters, 948, L11, pp.1-14 (2023).

32. Coulomb, L.-P., Benneke, B., et al. (including **Alam, M.K.**), *A broadband thermal emission spectrum of the ultra-hot Jupiter WASP-18b*, under review at Nature (2023), arXiv DOI: 2301.08192.

31. Lustig-Yaeger, J., Fu, G., May, E.M., Ortiz Ceballos, K. N., Moran, S.E., Peacock, S., Stevenson, K.B., López-Morales, M., MacDonald, R.J., Mayorga, L.C., Sing, D.K., Sotzen, K.S., Valenti, J.A., Adams, J., **Alam, M.K.**, Batalha, N.E., Bennett, K.A., Gonzalez-Quiles, J., Kirk, J., Kruse, E. , Lothringer, J.D. ; Rustamkulov, Z., Wakeford, H.R. *A JWST transmission spectrum of a nearby Earth-sized exoplanet*, under review at Nature Astronomy (2023), arXiv DOI: 2301.04191.

30. Grant, D.G., Wakeford, H.W., Lothringer, J.D., **Alam, M.K.**, et al. *Detection of carbon monoxide's fundamental band structure in WASP-39b's atmosphere with JWST*, accepted to The Astrophysical Journal Letters (2023), arXiv DOI: 2304.11994.

29. Tsai, S., Lee, E.K.H., et al. (including **Alam, M.K.**), *Direct Evidence of Photochemistry in an Exoplanet Atmosphere*, submitted to Nature (2023), arXiv DOI: 2211.10490.

28. Ahrer, E.-M., Stevenson, K.B., et al., (including **Alam, M.K.**), *Early Release Science of the exoplanet WASP-39b with JWST NIRCam*, Nature, 614, 7949, pp.653-658 (2023).

27. Feinstein, A., Radica, M., et al., (including **Alam, M.K.**), *JWST Early Release Science: Exoplanet transit spectroscopy with NIRISS-SOSS*, Nature, 614, 7949, pp.670-675 (2023).

26. Alderson, L., Wakeford, H.W., **Alam, M.K.**, et al. *JWST Early Release Science: Exoplanet Transit Spectroscopy with NIRSpec G395H*, Nature, 614, 7949, pp.664-669 (2023).

25. Rustamkulov, Z., Sing, D.K. et al., (including **Alam, M.K.**), *The Broadband Transmission Spectrum of WASP-39b from JWST NIRSpec PRISM Observations*, Nature, 614, 7949, pp.659-663 (2023).

24. JWST Transiting Exoplanet Community Early Release Science Team (**including Alam, M.K.**), *Identification of carbon dioxide in an exoplanet atmosphere*, Nature, 614, 7949, pp.649-652 (2023).

23. Ratchke, A.D., Buchhave, L.A., Mendonça, J.M., Sing, D.K., López-Morales, M., **Alam, M.K.**, Henry, G.W., Nikolov, N.K., García Muñoz, A., Mikal-Evans, T., Wakeford, H.R., Dos Santos, L.A. *HST PanCET Program: A Flat Optical Transmission Spectrum for the Hot Jupiter WASP-101b*, MNRAS, 522, 1, pp.582–594 (2023).

22. Gressier, A., Lecavelier des Etangs, A., Sing, D.K., López-Morales, M., **Alam, M.K.**, Barstow, J.K., Bourrier, V., Dos Santos, L.A., García Muñoz, A., Lothringer, J.D., Nikolov, N.K., Sotzen, K., Henry, G.W., Mikal-Evans, T. *The Hubble PanCET Program: The near-UV transmission spectrum of WASP-79b*, Astronomy & Astrophysics, 672, A34, pp.1-14 (2023).

21. Batalha, N.E., Wolfgang, A., Teske, J., **Alam, M.K.**, Alderson, L., Batalha, N.M., López-Morales, M., Wakeford, H.R. *The Importance of Accounting for Sample Selection in Exoplanet Atmosphere Population Studies*, The Astronomical Journal, 165, 1, pp.1-12 (2023).

20. Weaver, I.C., Osip, D., López-Morales, M., Diamond-Lowe, H., Espinoza, N., Rackham, B., **Alam, M.K.**, Allen, N., Apai, D., Berta-Thompson, Z., Ceballos, K., Jordán, A., Kirk, J., Lewis, N.K., McGruder, C.D. *ACCESS: An optical transmission spectrum of the high-gravity, hot Jupiter WASP-50b*, submitted to The Astronomical Journal (2022).

19. McGruder, C.D., López-Morales, M., Kirk, J., Espinoza, N., Rackham, B.V., **Alam, M.K.**, Allen, N., Nikolov, N., Weaver, I.C., Ortiz Ceballos, K., Osip, D.J., Apai, D., Jordán, A., Fortney, J.J. *ACCESS: Confirmation of a Clear Atmosphere for WASP-96b and a Comparison of Light Curve Detrending Techniques*, The Astronomical Journal, 164, 4, pp.134-170 (2022).

18. Kirk, J., Dos Santos, L.A., López-Morales, M., **Alam, M.K.**, Oklopčić, A., MacLeod, M., Zeng, L., Zhou, G. *A Keck/NIRSPEC detection and non-detection of He I in the atmosphere of two inflated hot Jupiters orbiting K dwarfs: WASP-52b and WASP-177b*, The Astronomical Journal, 164, 1, pp.24-38 (2022).

17. Wong, I., Chachan, Y., Knutson, H.A., Henry, G.W., Adams, D., Kataria, T., Benneke, B., Gao, P., Deming, D., López-Morales, M., Sing, D.K., **Alam, M.K.**, Ballester, G.E., Barstow, J.K., Buchhave, L.A., Dos Santos, L.A., Fu, G., García Muñoz, A., MacDonald, R.J., Mikal-Evans, T., Sanz-Forcada, J., Wakeford, H.R. *The Hubble PanCET Program: A Featureless Transmission Spectrum for WASP-29b and Evidence of Enhanced Atmospheric Metallicity on WASP-80b*, The Astronomical Journal 164, 30, pp.1-26 (2022).

16. Fu, G., Sing, D.K., Deming, D., Sheppard, K., Wakeford, H.R., Mikal-Evans, T., **Alam, M.K.**, Dos Santos, L.A., López-Morales, M. *The Hubble PanCET program: Emission spectrum of hot Jupiter HAT-P-41b*, The Astronomical Journal, 163, 4, pp.190-195 (2022).

15. Dos Santos, L.A., Vidotto, A.A., Vissapragada, S., **Alam, M.K.**, Allart, R., Bourrier, V., Kirk, J., Siedel, J.V., Ehrenreich, D. `p − winds`*: an open source Python code to model planetary winds and upper atmospheres*, Astronomy & Astrophysics, 659, A62, pp.1-12 (2022).

14. Zeng, L., Jacobsen, S.B., Sasselov, D., Levi, A., Kirk, J., Damasso, M., Nava, C., Lacedelli, G., Piaulet, C., López-Morales, M., Petaev, M., **Alam, M.K.** *New Perspectives on Exoplanet Radius Gap from a* Mathematica *Tool and Visualized Water EOS*, The Astronomical Journal, 923, 2, pp.247-277 (2021).

13. Fu, G., Deming, D., May, E., Stevenson, K.B., Sing, D.K., Lothringer, J., Wakeford, H.R., Nikolov, N., Evans, T., Bourrier, V., Dos Santos, L., **Alam, M.K.**, Henry, G.W., García Muñoz, A., López-Morales, M. *The Hubble PanCET program: Transit and Eclipse Spectroscopy of the Hot Jupiter WASP-74b*, The Astronomical Journal, 162, 6, pp.271-294 (2021).

12. Rathcke, A.D., MacDonald, R.J., Barstow, J.K., Goyal, J.M., López-Morales, M., Mendo ça, J.M., Sanz-Forcada, J., Henry, G.W., Sing, D.K., **Alam, M.K.**, Lewis, N.K., Chubb, K.L., Taylor, J., Nikolov, N., Buchaave, L.A. *HST PanCET Program: A Complete Near-UV to Infrared Transmission Spectrum for the Hot Jupiter WASP-79b*, The Astronomical Journal, 162, 4, pp.138-158 (2021).

11. Weaver, I.C., López-Morales, M., **Alam, M.K.**, Espinoza, N., Rackham, B.V., Goyal, J.M., MacDonald, R.J., Lewis, N.K., Apai, D., Bixel, A., Jordán, A., Kirk, J., McGruder, C.D., Osip, D.J. *ACCESS: An optical transmission spectrum of the high-gravity, hot Jupiter HAT-P-23b*, The Astronomical Journal, 161, 6, pp.279-301 (2021).

10. McGruder, C.D., López-Morales, M., Espinoza, N., Rackham, B.V., Apai, D., Jordán, A., Osip, D.J., **Alam, M.K.**, Bixel, A., Fortney, J.J., Henry, G.W., Kirk, J., Lewis, N.K., Rodler, F., Weaver, I.C. *ACCESS: Confirmation of no potassium in the atmosphere of WASP-31b*, The Astronomical Journal, 160, 5, pp.230-252 (2020).

9. Carter, A.L., Nikolov, N., Sing, D.K., **Alam, M.K.**, Goyal, J.M., Mikal-Evans, T., Wakeford, H.R., Henry, G.W., Morell, S., López-Morales, M., Smalley, B., Lavvas, P., Barstow, J.K., García Muñoz, A., Wilson, P.A., Gibson, N.P. *Detection of Na, K, and H_2O in the hazy atmosphere of WASP-6b*, Monthly Notices of the Royal Astronomical Society, 494, 4, pp.5449-5472 (2020).

8. Bruno, G., Lewis, N.K., **Alam, M.K.**, López-Morales, M., Wakeford, H.R., Barstow, J.K., Sing, D.K., Ballester, G.E., Bourrier, V., Buchhave, L.A., Cohen, O., Evans, T.M., García Muñoz, A., Lavvas, P., Sanz-Forcada, J. *WASP-52b. The effect of starspot correction on atmospheric retrievals*, Monthly Notices of the Royal Astronomical Society, 491, 4, pp.5361-5375 (2020).

7. Weaver, I., López-Morales, M., Espinoza, N., Rackham, B.V., Osip, D.J., Apai, D., Jordán, A., Bixel, A., Fortney, J.J., Lewis, N.K., **Alam, M.K.**, Kirk, J., McGruder, C., Rodler, F., Fienco, J. *ACCESS: An Optical to Near-infrared Spectrum of the Hot Jupiter WASP-43b with Evidence of H_2O, and Stellar Surface Heterogeneity, but no evidence of Na or K*, The Astronomical Journal, 159, 1, pp.13-34 (2020).

6. Helling, C., Iro, N., Corrales, L., Samra, D., Ohno, K., **Alam, M.K.**, Steinrueck, M., Lew, B., Molaverdikhani, K., MacDonald, R.J., Herbort, O., Woitke, P., Parmentier, V. *Understanding the atmospheric properties and chemical composition of the ultra-hot Jupiter HAT-P-7b. I. Cloud and chemistry mapping*, Astronomy & Astrophysics, 631, 1, pp.A79-A108 (2019).

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