**Jessica M. Johnson**

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**EDUCATION**

**Doctor of Philosophy,** Earth and Planetary Sciences, University of New Mexico, Albuquerque, NM*,* Anticipated graduation May 2023

Advisor: Dr. Adrian Brearley

**Master of Science,** Earth and Planetary Sciences, University of New Mexico,Albuquerque, NM, completed November 2018

Advisor: Dr. Adrian Brearley

**Bachelor of Science**, Earth Sciences, Central Connecticut State University, New Britain, CT, concentration in Geology, minors in Astronomy and Mathematics, completed May 2016

Advisor/Mentor: Dr. Kristine Larsen

**TEACHING & MENTORING EXPERIENCE**

**Teaching:**

**Instructor of Record – GEOL 1110 – Physical Geology,** Department of Earth and Planetary Sciences, University of New Mexico, *Fall 2020*

* Designed and instructed a remote classroom during the COVID-19 pandemic.

**Teaching Assistant – EPS 319 – Field Camp,** Department of Earth and Planetary Sciences, University of New Mexico, *Summer 2019, Summer 2020, Summer 2021*

* Summer 2020 was remote instruction due to the COVID-19 pandemic. Developed assignment for a self-guided pace and compass exercise, graded, and created introductory presentations for the field area students would map using Arc-GIS.

**Teaching Assistant – EPS 322L - Igneous and Metamorphic Petrology Lab***,* Department of Earth and Planetary Sciences, University of New Mexico, *Spring 2019, Spring 2020, Spring 2021*

* Developed an additional lab exercise for understanding fractional crystallization. Spring 2020 aided in converting petrology lab to an online learning platform due to COVID-19 pandemic. Mentored a new teaching assistant and two undergraduate teaching fellows.

**Teaching Assistant – EPS 302L – Mineralogy Lab,** Department of Earth and Planetary Sciences, University of New Mexico, *Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2021*

**Guest Lecturer – EPS 322 – Igneous and Metamorphic Petrology Lecture,** Department of Earth and Planetary Sciences, University of New Mexico, *Spring 2019*, *Spring 2020, Spring 2021*

**Guest Lecturer – EPS 302 – Mineralogy Lecture,** Department of Earth and Planetary Sciences, University of New Mexico, *Fall 2019, Fall 2018, Fall 2017*

**Mentoring:**

**UNM Research Coaching Fellow**, University of New Mexico,

*Spring 2020- Fall 2020*

Mentored two undergraduate students in conducting research.

**RESEARCH EXPERIENCE**

**Research Assistant**, Department of Earth and Planetary Sciences, University of New Mexico, *Spring 2017, Summer 2017, Spring 2018, Summer 2018, Summer 2019, Summer 2020*

**Summer Research Intern,** Lunar & Planetary Institute & Johnson Space Center, Houston, TX, May-August 2015

**Publications:**

* **Johnson, J.M.,** and Brearley, A.J., (in prep 2022), Insights into fluid-rock interactions on the CV3 carbonaceous chondrite asteroid: The complex record in the Allende-like CV3 chondrite, Northwest Africa 2364.

**Conference Presentations:**

* Brearley, A.J., **Johnson, J.M.,** Ash, R.D., and Sutton, S.R., 2020, Complex evolution of a lithic inclusion from the Northwest Africa 2364 CV3OxA chondrite: further insights from LA-ICP-MS trace element analysis and Cr, Ti, and V valence state measurements by XANES: Houston, Texas, Lunar and Planetary Science Institute, Lunar and Planetary Science Conference, abstract 1892.
* **Johnson, J.M**. and Brearley, A.J., 2019, Complex behavior of fluid-mobile elements in a lithic inclusion from the Northwest Africa NWA 2364 CV3OxA Chondrite: evidence for extensive fluid-rock interaction and metasomatism on the CV3 chondrite parent body: Houston, Texas, Lunar and Planetary Science Institute, Lunar and Planetary Science conference L, abstract 1926.
* **Johnson, J.M**. and Brearley, A.J., 2018, Porous, Ca-Rich aggregates and complex minor element data of chondrule phenocrysts in the NWA 2364 CV3OxA chondrite and its lithic inclusion: Evidence of fluid-rock interactions: Houston, Texas, Lunar and Planetary Science Institute, Lunar and Planetary Science conference XL IX, abstract 2674.
* **Johnson, J.M.,** Ziegler, K., and Brearley, A.J., 2017, The intriguing interaction between the Northwest Africa NWA 2364 CV3OxA chondrite and its lithic inclusion: Implications for post emplacement parent body aqueous alteration: Santa Fe, New Mexico, Meteoritical Society Annual Meeting, abstract 6279.
* **Johnson, J.M.** and Brearley, A.J., 2017, Alteration history of a large lithic inclusion in the Northwest Africa NWA 2364 CV3OxA chondrite: evidence for hydration followed by fluid-assisted thermal metamorphism: Houston, Texas, Lunar and Planetary Science Institute, Lunar and Planetary Science XLVIII, abstract 2459.
* **Johnson, J.M**., and Larsen, K.M., 2017, BY Draconis stars: the search continues: AAVSO annual meeting, Ontario, CA.
* **Johnson, J.M**., Zolensky, M., Chan, Q., and Kring, D., 2016, Intriguing dehydrated phyllosilicates found in an unusual clast in the LL3.15 chondrite North West Africa 6925: Houston, Texas, Lunar and Planetary Science Institute, Lunar and Planetary Science XL VII, abstract 1608.

# Johnson, J.M, Zolensky, M., Chan, Q., and Kring, D., 2015, Striking Graphite Bearing Clasts found in Two Ordinary Chondrite Samples; NWA6169 and NWA8330: *Geological Society of America National Meeting: Abstracts with Programs, abstract # 210-51.* Poster Presentation.

# Johnson, J.M., Zolensky, M., Chan, Q., and Kring, D., 2015, A Mineralogic and Petrographic Investigation of Unique Foreign Clasts in 3 Ordinary Chondrite Samples: Lunar and Planetary Institute Summer Intern Conference Abstracts and Presentations: Abstract will be available on Lunar and Planetary Institute website. Oral presentation.

* Luna, M., **Johnson, J.M**., Larsen, K.M., and Oyewumi, O., 2015, Assessing Student Understanding in an Environmental Geoscience Class: *Geological Society of America Northeast Regional Sectional Meeting; Abstracts with Programs* 47(3): 88. Poster presentation.
* **Johnson, J.M**., and Piatek, J., 2015, A Virtual Field Experience on Mars via Earth Analog Outcrops and GigaPixel Imagery: *Geological Society of America Northeast Regional Sectional Meeting: Abstracts with Programs* 47(3): 48. Oral presentation.
* **Johnson, J.M**., and Piatek, J., 2014, The GigaPan Guide to Mars: Using a Virtual Field Trip to Compare Earth and Mars: *Geological Society of America Northeast Regional Sectional Meeting: Abstracts with Programs* 46(2): 6. Poster Presentation.
* **Johnson, J.M**., and Larsen, K.M., 2015, The Quest for Identifying BY Draconis Stars within a Data Set of 3,548 Candidate Cepheid Variable Stars; *Journal of American Association of Variable Star Observers Annual Fall Meeting 44*. Oral presentation.
* **Johnson, J.M**., and Larsen, K.M., 2014, Discovery of Five Previously Misidentified BY Draconis Stars in ASAS Data: *Journal of the American Association of Variable Star Observers Annual Fall Meeting* 43(1). Poster Presentation.
* Larsen, K.M., and **Johnson, J.M**., 2014, Identification of BY Draconis Variable Stars in ASAS Data:American Astronomical Society, AAS Meeting #223, #156.04. Poster Presentation.
* **Johnson, J.M**., and Larsen, K.M., 2013, Identification of BY Draconis Stars Among ASAS Cepheid Candidates: Journal of the American Association of Variable Star Observers *Annual Fall Meeting* 42(1). Poster Presentation.
* **Johnson, J.M**., and Piatek, J.L., “A Virtual Field Experience on Mars via Earth Analog Outcrops and GigaPixel Imagery.” *Geological Society of America Abstracts with Programs* 47(3): 48, 2015. Available at <https://gsa.confex.com/gsa/2015NE/webprogram/Paper252706.html>. Oral presentation.
* Luna, M., **Johnson, J.M**., Larsen, K.M., and Oluyinka Oyewumi, “Assessing Student Understanding in an Environmental Geoscience Class.” *Geological Society of America Abstracts with Programs* 47(3): 88, 2015. Available at <https://gsa.confex.com/gsa/2015NE/webprogram/Paper252118.html>. Poster presentation.

**EDUCATIONAL & COMMUNITY OUTREACH**

**Ongoing Earth Science Outreach Blog:** [**https://backyardgeology.com/**](https://backyardgeology.com/)

**Expanding Your Horizons (EYH) Workshop,** Albuquerque, NM

* **January 2020** - Facilitated “Shake, Rattle, and Roll” workshop.
* **January 2019**- Facilitated “Seeing the Sun in a Different Light” workshop.
* **February 2018**- Facilitated “Impacts and Explosions” workshop.

**University of New Mexico STEM University Field Trip Instructor,** Albuquerque, NM

* **March 2019**- Led a geological trip for 15 UNM students to the Rio Puerco Volcanic Field/surrounding area, NM to collect mantle xenoliths and fossils.
* **February 2019** – Led a geological trip for 10 UNM students to Zuni Bandera Volcanic Field, NM to learn about the different kind of lava flows.
* **July 2018**- Led a geological trip for 15 UNM students to Kasha Katuwe Tent Rocks, NM to learn how geologists interpret volcanic deposits and eruptions.

**October 24th, 2019**- Student volunteer at IOM 75th anniversary, UNM, ABQ NM.

**October 4-6, 2019**- Organized and participated in tabled event at the Gem and Mineral Show, Albuquerque, NM.

**September 2019**- Organized tabled event for the NM state fair science day, Albuquerque, NM.

**September 2018-** Organized tabled event for the NM state fair science day, Albuquerque, NM.

**April 2018**- STEM Day at Atrisco Heritage High School- conducted geology activities, co-presented, Albuquerque NM.

**March 2018**- Geology Demonstration for Ms. Debbie Aragon’s 4th grade class at Hawthorne Elementary School, Albuquerque NM- Presented the rock cycle and how to identify rocks, co-presented.

**January 2018**- Volunteer judge for Amy Biehl High School Science Fair, Albuquerque NM.

**October 2017**- Outreach at the Annual Cosmic Carnival, Albuquerque Nature Center.

**INVITED TALKS & SEMINARS**

**Central Connecticut State University’s Geology & Planetary Sciences Dept. Brown Bag Seminar,** New Britain, April 5th 2019

* Presented research on a CV3 chondrite conducted as part of my Master’s work.

**Spring Field Telescope Maker’s Annual Stellafane Convention,** Springfield VT, July 25th, 2014 & August 14th & 15th 2015

* Presented a talk titled, “Breezy Hill Rocks”, on the local geology of the region.

**Central Connecticut State University’s Geology & Planetary Sciences Club Brown Bag Seminar,** New Britain, September 25th 2015

* Presented the research on ordinary chondrites conducted as an intern at the Lunar & Planetary Institute.

**LEADERSHIP & PROFESSIONAL DEVELOPMENT EXPERIENCE**

**International Association for Geoscience Diversity (The IAGD) -** Undergraduate Field Experiences Research Network (UFERN) Annual Meeting (upcoming, Jan 27-28, 2022) – “Meeting students where they are: fostering student-centered undergraduate field experiences” workshop.

**University of New Mexico’s Association of Geology Graduate Students,** Albuquerque, NM

President and graduate student faculty meeting representative of Organization 2018- Present

**Central Connecticut State University’s Geology & Planetary Sciences Club,** New Britain, CT

*President of Club,* September 2014—2016

**Connecticut State University’s Copernican Planetarium and Observatory,** New Britain, CT

*Volunteer at shows in Planetarium and Observatory*,December 2012—2014

**GRANTS, FELLOWSHIPS, & AWARDS**

**Grants:**

* NM Space Grant Consortium Recipient Fall 2019-Spring 2020-$5,000.00 per semester

**Fellowships:**

* Center for Teaching and Learning Remote Teaching Fellowship Spring 2021

**Awards:**

* Association of Women Geoscientists (AWG) Laramide Chapter GEOID Scholarship, 2021.
* Nominated for the University of New Mexico’s 2020 Susan Deese-Roberts, Outstanding Teaching Assistant Award.
* National Association of Geoscience Teachers (NAGT)-outstanding teaching assistant award 06/2019.
* Nominated for the University of New Mexico’s 2019 Susan Deese-Roberts Outstanding Teaching Assistant Award.
* Summer Earth and Planetary Sciences Department Graduate Student Award 2018-2019-$600.00.
* Outstanding Teaching Assistant Award- Department of Earth and Planetary Sciences 2018-2019.
* Association of Women Geoscientists (AWG) Outstanding Student Award, 2019.
* Honorable Mention of Outstanding Teaching Assistant Award-Department of Earth and Planetary Sciences, Academic Year of 2017-2018.
* Summer Earth and Planetary Sciences Department Graduate Student Award 2017-2018- $550.00.
* Central Connecticut State University’s President’s Citation Award, 2016.

**ORGANIZATION MEMBERSHIPS**

* Association of Women Geoscientists
* Mineralogical Society of America
* National Association of Geoscience Teachers
* Geological Society of America
* Society of Economic Geologists
* American Association of Variable Star Observers
* The Cloud Appreciation Society