NICOLE CLIZZIE

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EDUCATION

PhD Candidate in Earth Science *2020 to Present*
Institute of Geophysics & Planetary Physics, Scripps Institution of Oceanography
University of California San Diego
Committee: Catherine Constable (Chair), Jeffrey Gee, Matthias Morzfeld, Boris Krämer

B.S in Geoscience & Applied Mathematics *2019*
Boise State University, Boise, ID

A.A.S in Dental Assisting *2015*
Air University, Maxwell AFB, AL

PROFESSIONAL EXPERIENCE

Graduate Student Researcher *2020 to Present*
Scripps Institution of Oceanography, Institute of Geophysics & Planetary Physics

Research Intern *2019-2020*
New Mexico University, Earth & Planetary Sciences

SURGE Scholar *2019*
Stanford University, School of Earth, Energy and Environmental Science

Research Assistant *2017-2019*
Boise State University, Geoscience Department

AWARDS & SCHOLARSHIPS

Tribal Membership Initiative Fellowship *2020-Present*
Study of the Earth's Deep Interior Travel Award ($1360) *2024*
Competitive Edge Fellowship *2020*
National Science Foundation GeoScholar ($10,000) *2018-2019*
Navajo Nation Chief Manuelito Scholarship ($10,000) *2016-2020*
Whitlock Math and Science Scholarship *2018-2019*
Higher Education Research Council Fellowship *2018*

PUBLICATIONS

Clizzie, N., Constable, C. (2024). Reversal of drift direction during the Laschamp geomagnetic excursion. Physics of the Earth and Planetary Interiors, 347, 107143. `https://doi.org/10.1016/j.pepi.2024.107143`

MANUSCRIPTS IN PROGRESS

Clizzie, N., Constable, C. (in prep). Impact of meridional geomagnetic flux migration in the axial dipole decay during the Matuyama-Bruhnes Reversal

Clizzie, N., Constable, C. (in prep). How long is long enough to get statistics of the geomagnetic field?

FIELD WORK

Shipboard Scientist, Scripps Institution of Oceanography Research Cruise *2024*
Sub-bottom survey and vibracoring in the Southern California Bight on RV Sally Ride (10 days)

Student, Colorado School of Mines Geophysics Field Camp *2019*
Interpreted subsurface of Pagosa Springs, Colorado, using data collected from seismic, ground-penetrating radar, resistivity, and gravity surveys

Student member, Society of Exploration Geophysics Chapter *2018-2019*
Assisted in conducting ground-penetrating radar surveys at the Old Idaho Penitentiary to locate unmarked inmate graves

TALKS

Clizzie, N., Constable, C. (2024), Changes of zonal drift direction during the Laschamp excursion and the Matuyama-Brunhes reversal. *Magnetic NetworkZ* (Invited virtual presentation: `https://www.youtube.com/watch?v=CHq1ZZbfoJE&t=1145s`)

Clizzie, N., Constable, C. (2023), Changes in zonal core flow during the Laschamp geomagnetic excursion and the Matuyama-Brunhes reversal. *American Geophysical Union Fall Meeting*, San Francisco, CA. (Invited)

Clizzie, N., Constable, C. (2023), Recurrent eastward and westward drift in the paleomagnetic field for the past 100 kyr. *Scripps Student Symposium*, La Jolla, CA.

Clizzie, N., Constable, C. (2023), Recurrent eastward and westward drift in the paleomagnetic field for the past 100 kyr. *International Union of Geodesy and Geophysics Meeting*, Berlin, Germany.

Clizzie, N., Constable, C. (2020), Earth's Magnetic Field Over the Past 10,000 Years. *Edge Summer Research Symposium*, La Jolla, CA.

Clizzie, N., Lellouch, A., Biondi, B. (2019), Estimating Subsurface Parameters using Ambient Noise Recorded by Fiber Optic Cables. *Stanford Undergraduate Research in Geoscience and Engineering Research Symposium*, Stanford University, CA.

Clizzie, N., Mead, J., (2019), Cubic Splines to Evaluate Shear-Wave Velocity of the 1886 Charleston Earthquake Region. *Boise State University Undergraduate Research Conference*, Boise State University, Boise, ID.

POSTERS

Clizzie, N., Constable, C. (2024), Toy model for migrating magnetic flux patches across the core-mantle boundary. *Study of the Earth's Deep Interior Meeting*, Great Barrington, MA.

Clizzie, N., Constable, C. (2023), An assessment of zonal drift in the paleomagnetic field for the past 100 kyr. *Magnetics Information Consortium Workshop*, La Jolla, CA.

Clizzie, N., Constable, C. (2022), An Assessment of Long-Period Zonal Drift in the Paleomagnetic Field. *Modeling, Observing, and Understanding Flows and Magnetic Fields in the Earth's core and in the Sun Workshop at the Isaac Newton Institute for Mathematical Sciences.* Cambridge, UK.

Clizzie, N., Constable, C. (2021), Spectral Analyses of Paleomagnetic Secular Variation on Centennial to Multi-millennial Timescales. *American Geophysical Union Fall Meeting*, New Orleans, LA.

Clizzie, N., Constable, C. (2021), Investigating the Geodynamo Through Spectral Analyses of Paleomagnetic Models. *Scripps Student Symposium*, La Jolla, CA.

Clizzie, N., Liberty, L., St. Clair, J., (2019), Shear-Wave Velocity and Seismic Response Estimates from the Southern Isoseismal Region of the 1886 Charleston Earthquake: Results from a Seismic Land Streamer System. *Seismological Society of America*, Seattle, WA.

Clizzie, N., Mead, J., (2019), Cubic Splines to Estimate Shear-Wave Velocity. *Math Department Senior Thesis & Project Poster Session*, Boise State University, Boise, ID.

WORK EXPERIENCE

Dental Assistant, Idaho Air National Guard *2015-2020*
Work Study Tutor, Boise State Veteran Service Center *2017-2019*
Active Duty Dental Assistant, Air Force *2009-2015*

MENTORING

Undergraduate Research Mentor, Scripps-GEO *2024*
Aryo Kharrati
Application Mentor, Geoscience Education & Mentorship *2021-2023*
Grace Elias & Raina Shaw
Application Mentor, SIO-ASK *2022*
Vincent Ruiz
Peer Mentor, SIO department *2022*
Eliana Vargas-Huitzil

OUTREACH, SERVICE, & PROFESSIONAL DEVELOPMENT

Research Group Organizer, Magnetics & Math (MagMa) *2022 to present*
Participant, University of Florida's sediment magnetism reading group *2024 to present*
Volunteer, UCSD POWWOW *2025*
Student Lead, Paleomagnetism/Marine Geophysics Search Committee *2024*
Student, Institute for Rock Magnetism summer school *2024*
Student, 6th International Association of Geomagnetism & Aeronomy School *2023*
Geophysics Student Representative, Institute of Geophysics & Planetary Physics *2021-2023*
Member, Scripps Student Symposium Organizing Team *2023*
Python Instructor, First year review course *2022*
Student Member, Geophysics Research Scientist Search Committee *2021*