

RESEARCH GRANTS AND FELLOWSHIPS

Research Operating Grants

Agency	Title	Holder	Period	\$/yr
CFI & BCKDF	State-of-the-Art MC-ICP-MS	Ahm*	2023	\$1,000,000
NSERC	Discovery Grant	Dyer	2021–2026	\$27,500
UVic	Start-up Grant	Dyer	2019–2023	\$25,000
NSF	Reconstructing last interglacial sea level based on models and observations from the Bahamas	Austermann*	2019–2022	\$207,209

—

*co-applicant

PUBLICATIONS AND PRESENTATIONS

HQP directly under my supervision are indicated with *

Articles in Revision

23. *van Wieren, C.S., **Dyer, B.**, Husson, J.M., Spatially heterogenous organic carbon remineralization as a driver for highly negative carbonate $\delta^{13}\text{C}$ excursions. *In Revision*. Earth and Planetary Science Letters.

Articles Published in Refereed Journals

22. *Edmondson, S., **Dyer, B.** Timing and magnitude of the Lomagundi-Jatuli carbon isotope excursion. (2026). Proceedings of the National Academy of Sciences, 123 (2) e2512767123.
21. *van Wieren, C.S., **Dyer, B.**, Husson, J.M., Correlative isotope excursions driven by transport, not global environmental change. (2026). Earth and Planetary Science Letters, 673, p. 119745.
20. *Edmondson, S., **Dyer, B.** A Bayesian framework for inferring regional and global change from stratigraphic proxy records. (2025). Geoscientific Model Development, 18(15), 4759-4788. *Selected as EGU Highlight Article*.
19. Jasper, C., **Dyer, B.**, Reilly, B., Williams, T., Hemming, S., Raymo, M. (2024). A 3.3-Million-Year Record of Antarctic Iceberg Rafted Debris and Ice Sheet Evolution Quantified by Machine Learning. *Paleoceanography and Paleoclimatology*. 39(9)
18. *van Wieren, C., Husson, J.M., **Dyer, B.** (2024). Chemostratigraphy of the Ediacaran Old Fort Point Formation in the southern Canadian Cordillera. *Precambrian Research*. 411
17. *Edmondson, S., Nadeau, M.D., Turner, A.C., Wu, Z., Geyman, E.C., Ahm, A.C., **Dyer, B.**, Oleynik, S., McGee, D., Stolper, D.A., Higgins, J.A., Maloof, A.C. (2024). Shallow carbonate geochemistry in the Bahamas since the last interglacial period. *Earth and Planetary Science Letters*. 627, 118566.

16. Richards, F. D., Coulson, S. L., Hoggard, M. J., Austermann, J., **Dyer, B.**, Mitrovica, J. X. (2023). Geodynamically corrected Pliocene shoreline elevations in Australia consistent with midrange projections of Antarctic ice loss. *Science Advances*, 9(46), eadg3035
15. Dumitru, O. A., **Dyer, B.**, Austermann, J., Sandstrom, M. R., Goldstein, S. L., D'Andrea, W. J., Cashman, M., Creel, R., Bolge, L., Raymo, M. E. (2023). Last interglacial global mean sea level from high-precision U-series ages of Bahamian fossil coral reefs. *Quaternary Science Reviews*, 318, 108287.
14. Barnett, R. L., Austermann, J., **Dyer, B.**, Telfer, M. W., Barlow, N. L., Boulton, S. J., Carr, A.S., Creel, R. C. (2023). Constraining the contribution of the Antarctic Ice Sheet to Last Interglacial sea level. *Science Advances*, 9(27), eadf0198.
13. Geyman, E.C., Wu, Z., Nadeau M.D., *Edmonson, S., Turner, A.C., Purkis, S., Howes, B., **Dyer, B.**, Ahm, A.C., Yao, N., Deutsch, C., Higgins, J.A., Stolper, D.A., Maloof, A.C. The origin of carbonate mud and implications for global climate. *Proceedings of the National Academy of Sciences*, 119 (43), e2210617119.
12. *Tawil-Morsink, K., Austermann, J., **Dyer, B.**, Dumitru, O-A., Precht, W.F., Cashman, M., Goldstein, S.L., Raymo, M.E. Probabilistic investigation of global mean sea level during MIS 5a based on observations from Cave Hill, Barbados. *Quaternary Science Reviews*, 295, 107783.
11. Creel, R. C., Austermann, J.A., Khan, N.S., D'Andrea, W.J., Balascio, N., **Dyer, B.**, Ashe, E., Menke, W., 2022. Postglacial relative sea level change in Norway. *Quaternary Science Reviews*, 282, p.107422.
10. **Dyer, B.**, Austermann, J., D'Andrea, W.J., Creel, R.C., W.J., Sandstrom, M.R., Cashman, M., Rovere, A., Raymo, M.E., 2021. Sea level trends across the Bahamas constrain peak Last Interglacial ice melt. *Proceedings of the National Academy of Sciences*, Aug 2021, 118 (33); DOI: 10.1073/pnas.2026839118.
9. Geyman, E. C., Maloof, A. C., **Dyer, B.** 2021. How is sea level change encoded in carbonate stratigraphy? *Earth and Planetary Science Letters*, 560, 11670.
8. **Dyer, B.**, Maloof, A.C., Purkis, S.J., Harris, P.M., 2018. Quantifying the Relationship Between Water Depth and Carbonate Facies, *Sedimentary Geology*, 373, pp 1-10.
7. Rovere, A., Casella, E., Harris, D.L., Lorscheid, T., Nandasena, N.A.K., **Dyer, B.**, Sandstrom, M.R., Stocchi, P., D'Andrea, W.J., Raymo, M.E. 2018. Reply to Hearty and Tormey: Use the scientific method to test geologic hypotheses, because rocks do not whisper., *Proceedings of the National Academy of Sciences*, 115 (13), pp.E2904-E2905.
6. Rovere, A., Casella, E., Harris, D.L., Lorscheid, T., Nandasena, N.A.K., **Dyer, B.**, Sandstrom, M.R., Stocchi, P., D'Andrea, W.J., Raymo, M.E. 2017. Giant boulders and Last Interglacial storm intensity in the North Atlantic, *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1712433114.

5. Lee, C.T. A, Caves, J., Jiang, H., Cao, W., Lenardic, A., McKenzie, N.R., Shorttle, O., Yin, Q.Z., **Dyer, B.**, 2017. Deep mantle roots and continental emergence: implications for whole-Earth elemental cycling, long-term climate, and the Cambrian explosion, *International Geology Review*, 1-18.
4. **Dyer, B.**, Higgins, J.A., Maloof, A.C. 2017. A probabilistic analysis of meteorically altered $\delta^{13}\text{C}$ chemostratigraphy from Late Paleozoic Ice Age carbonate platforms, *Geology*, 45(2), 135-138, doi: <https://doi.org/10.1130/G38513.1>.
3. **Dyer, B.**, Maloof, A.C., Higgins, J.A. 2015. Glacioeustasy, meteoric diagenesis, and the carbon cycle during the middle Carboniferous, *Geochemistry, Geophysics, Geosystems*, 16, doi:10.1002/2015GC006002.
2. **Dyer, B.**, Maloof, A.C. 2015. Physical and chemical stratigraphy suggest small or absent glacioeustatic variation during formation of the Paradox Basin cyclothems, *Earth and Planetary Science Letters*, 419: 63-70.
1. **Dyer, B.**, Lee, C. T. A., Leeman, W. P., Tice, M. 2011. Open-system behavior during pluton wall-rock interaction as constrained from a study of endoskarns in the Sierra Nevada Batholith, California, *J. Petrology* 52 (10): 1987-2008.

Invited Presentations at Conferences or Institutions

Upcoming presentations are denoted by *italics*.

20. **Dyer, B.**, National Academy of Sciences Frontiers of Science, 06 March 2026
19. **Dyer, B.**, UVic SEOS Department Seminar, 28 October 2025
18. **Dyer, B.**, Dartmouth EARS Department Seminar Series, 16 October 2025
17. **Dyer, B.**, Closing keynote at the WARMCOASTS Conference, Venice, Italy, 18 June 2025
16. **Dyer, B.**, University of South Carolina Department Seminar, 26 March 2021
15. **Dyer, B.**, Chevron Climate Energy and Environment Webinar Series, 10 June 2020
14. **Dyer, B.**, Dartmouth College, 13 May 2019
13. **Dyer, B.**, Harvard Earth and Planetary Sciences, 11 Mar 2019
12. **Dyer, B.**, University of Victoria School of Earth and Ocean Sciences, 07 Feb 2019
11. **Dyer, B.**, University of Houston, Earth and Atmospheric Sciences, 31 Jan 2019
10. **Dyer, B.**, Princeton Geosciences Solid Earth Brownbag, 12 Oct 2018
9. **Dyer, B.**, UBC Earth, Ocean, and Atmospheric Sciences, 10 Apr 2018
8. **Dyer, B.**, MIT COG³ Seminar, 06 Apr 2018

7. **Dyer, B.**, UCSB Earth Science faculty seminar, 09 Feb 2018
6. **Dyer, B.**, UCSB Earth Science (department seminar), 08 Feb 2018
5. **Dyer, B.**, Maloof, A. C., Purkis, S. J., and Harris, P. M., Extracting water depth change from carbonate stratigraphy with hidden markov models, GSA Annual Meeting, 22 Oct 2017
4. **Dyer, B.**, UCLA Earth and Planetary Sciences (department seminar), 29 Feb 2017
3. **Dyer, B.**, Penn State Geosciences Colloquium (department seminar), 14 Feb 2017
2. **Dyer, B.**, Columbia University LDEO BPE Seminar , 21 Nov 2016
1. **Dyer, B.**, Rutgers University EPS Colloquium (department seminar), 16 Nov 2016

Contributed Presentations

HQP directly under my supervision are indicated with *

39. Austermann, J., **Dyer, B.**, Rovere, A., Creel, R., Barlow, N., Dumitru, O., Cerrone, C., Pollard, O., Gomez, N., Chester, S., Hollyday, A., Dean, S., D'Andrea, W., Dutton, A., Raymo, M. Fingerprinting Melt Contributions During the Last Interglacial Period. AGU Fall Meeting 2025, PP51B-03.
38. Austermann, J., **Dyer, B.**, Rovere, A., Creel, R., Barlow, N., Dumitru, O., Cerrone, C., Pollard, O., Gomez, N., Chester, S., Hollyday, A., Dean, S., D'Andrea, W., Dutton, A., Raymo, M. Fingerprinting melt contributions during the Last Interglacial period. POLENET Glacial Isostatic Adjustment Workshop. June 2025
37. *Edmondson, S. and **Dyer, B.** Timing and magnitude of the Lomagundi excursion and its relationship with Earth's Great Oxidation. 3rd Geobiology Society Conference (Banff, Canada) May 2025. [Best Lightning Talk Award].
36. *Edmondson, S. and **Dyer, B.** New reconstruction of $\delta^{13}\text{C}$ constrains the relationship between the Lomagundi-Jatuli Excursion and the rise of oxygen. Geobiology Gordon Research Conference and Seminar. Jan 2024
35. *Tawil-Morsink, K., **Dyer, B.**, Coogan, L.A., Searching for a Positive $\delta^{13}\text{C}$ Excursion in Marine Carbonates from the Mid-Pacific Ocean at the Time of OAE2. AGU Fall Meeting 2024 (3), PP23G-03.
34. Dumitru, O., **Dyer, B.**, Austermann, J., D'Andrea, W., Creel, R., Bolge, L. Last Interglacial Sea Level from U-series Ages of Reefs in The Bahamas and Turks and Caicos Islands AGU Fall Meeting Abstracts 2024 (643), PP53B-0643.
33. Austermann, J., **Dyer, B.**, Rovere, A., Creel, R., Barlow, N., Dumitru, O., Pollard, O., Gomez, N., Raymo, M. Fingerprinting melt contributions during the Last Interglacial. PALSEA 2024

32. Dumitru, O., **Dyer, B.**, Austermann, J., D'Andrea, W.J., Creel, R., Bolge, L., Goldstein, S.L., Raymo, M.E., Timing and magnitude of last interglacial sea level derived from U-series dated fossil corals of the Turks and Caicos Islands. PALSEA 2024.
31. Sandstrom, M., Poirier, R., Dumitru, O., Goldstein, S., **Dyer, B.**, Cashman, M., Precht, W., Raymo, M. The Long-Term Uplift History of Barbados: Implications for Coastal Communities and Sea Level Reconstructions Geological Society of America Abstracts 56, 398435 2024.
30. Dumitru, O., **Dyer, B.**, Austerman, J., D'Andrea, W., Creel, R., Goldstein, S., Raymo, M. High-precision U-Th ages of corals from Turks and Caicos Islands: implications for the timing and evolution of Last Interglacial sea level. GU Fall Meeting 2023
29. Jasper, C., Raymo, M., **Dyer, B.**, Reilly, B., Williams, T. Early Pleistocene Antarctic Iceberg Rafting Events Quantified by Convolutional Neural Networks AGU Fall Meeting Abstracts 2023 (1319), PP21C-1319.
28. Creel, R., Austermann, J., **Dyer, B.**. Delayed Laurentide ice sheet melt during the Last Interglacial causes Sea level oscillation due to Glacial Isostatic Adjustment. AGU Fall Meeting Abstracts 2023 (1167), C13E-1167.
27. Richards, F., Coulson, S., Hoggard, M., Austermann, J., **Dyer, B.**, Mitrovica, J. Can Correcting for Mantle Dynamics Reconcile Divergent Plio-Pleistocene Sea-Level Estimates? EGU General Assembly Conference Abstracts, EGU-16368 2023.
26. Dumitru, O., **Dyer, B.**, Austerman, J., D'Andrea, W., Creel, R., Goldstein, S., Raymo, M. New Evidence of Last Interglacial Sea Level from Stratigraphic Analysis and U-Th Ages of Fossil Corals from Turks and Caicos Islands. Geological Society of America Abstracts 55, 393321 2023.
25. Jasper, C., Raymo, M., Tessler, M., **Dyer, B.**. Pleistocene Antarctic Iceberg History at IODP Sites U1536 and U1537 Quantified by Convolutional Neural Networks. AGU Fall Meeting Abstracts 2022, C56A-07.
24. Austermann, J., Barnett, R., **Dyer, B.**, Telfer, M., Barlow, N., Carr, A., Creel, R. (2022, December). Antarctic contribution to Last Interglacial sea level from observations in northwest Europe. In Fall Meeting 2022. AGU.
23. Dumitru, O. A., **Dyer, B.**, Austermann, J., Sandstrom, M. R., Goldstein, S. L., D'Andrea, W. J., Raymo, M. E. (2022, December). Antarctic and Greenland Ice-sheet Contributions to Last Interglacial Global Sea-level: Evidence from Stratigraphic Analysis and U-Th Ages of Fossil Corals from the Bahamas. In Fall Meeting 2022. AGU.
22. *van Wieren, C., Husson, J.M., **Dyer, B.** Lateral controls on Basin Scale Carbon Isotopic Excursions in Ediacaran Marine Carbonates of the Canadian Rockies. GAC-MAC Virtual Meeting 2022.

21. Dumitru, O-A., **Dyer, B.**, Austermann, J., Sandstrom, M.R., Cashman, M., Goldstein, S.L., D'Andrea, W.J., Creel, R. and Raymo, M.E. New Constraints on Last Interglacial Sea Level from Fossil Coral Reefs of the Bahamian Islands. AGU Fall Meeting 2021, PP52B-04.
20. Creel, R., Austermann, J., **Dyer, B.**, D'Andrea, W. J., Cashman, M., Dumitru, O. A., Sandstrom, M. R., Goldstein, S. L., Raymo, M. E. Last Interglacial Sea Level: Stratigraphic analysis and chronological constraints from the Crooked-Acklins platform, Bahamas. AGU Fall Meeting 2021, EP053-0005.
19. *van Wieren, C., Husson, J.M., **Dyer, B.** Lateral controls on Basin Scale Carbon Isotopic Excursions in Ediacaran Marine Carbonates of the Canadian Rockies. GSA Fall Meeting 2021. 87-6.
18. Dumitru, O-A., **Dyer, B.**, Austermann, J., Sandstrom, M.R., Cashman, M., Goldstein, S.L., D'Andrea, W.J., Creel, R. and Raymo, M.E. U-Th Chronology of Bahamas Corals: Implications for Timing and Magnitude of Last Interglacial Sea-level. GSA Fall Meeting 2021. 139-6.
17. Creel, R., Austermann, J., D'Andrea, W. J., Khan, N., Balascio, N., **Dyer, B.**, Ashe, E. L. Improving reconstructions of Northern European and Arctic Holocene Relative Sea Level: a data-model synthesis. AGU Fall Meeting 2020, PP014-05.
16. *Tawil-Morsink, K., **Dyer, B.**, Austermann, J., Precht, W. F., Raymo, M. E. Paleocological Investigation of Sea Level during Marine Isotope Stage 5a at Cave Hill, Barbados. AGU Fall Meeting, 2019, PP31CC-1648.
15. Jasper, C. E., **Dyer, B.**, Raymo, M. E., García, M., Williams, T., Reilly, B. T., Weber, M. Early Pleistocene Record of Antarctic Ice Discharge Events Quantified by Ice-Rafted Debris at Site U1537, IODP Expedition 382. AGU Fall Meeting, 2019, PP53C-1462.
14. Raymo, M. E., Jasper, C. E., Mintz, M., **Dyer, B.**, Meyers, S. R., Lisiecki, L. E., Warnock, J., Hernández-Almeida, I., Williams, T., Weber, M. The Mid-Pleistocene Transition: The Inevitable Result of Long-term Evolution of the East Antarctic Ice Sheet? AGU Fall Meeting, 2019, PP22B-02.
13. Sandstrom, M. R., **Dyer, B.**, Poirier, R. K., Cashman, M., Precht, W. F., Goldstein, S. L., Raymo, M. E. Revisiting the tectonic uplift history of Barbados: implications for sea level reconstructions. AGU Fall Meeting, 2018.
12. **Dyer, B.**, Harvard Earth and Planetary Sciences informal seminar, 04 Apr 2018
11. **Dyer, B.**, D'Andrea, W. J., Sandstrom, R. M., Austermann, J. , Rovere, A., Raymo, M. E. The history of sea level and isostatic adjustment recorded in Bahamian geomorphology, PALSEA2: PALeo constraints on SEA level rise 06 Nov 2017
10. **Dyer, B.**, D'Andrea, W. J., Sandstrom, R. M., Rovere, A., Lorscheid, T., Casella, E., Raymo, M. E. Extracting Past Climate and Local Sea Level Change from the Geologic Record of Coastal Sediment Transport in The Bahamas. AGU fall Meeting, 2016, PP51B-2310.

9. **Dyer, B.**, D'Andrea, W.J., Sandstrom, M., Rovere, A., Lorscheid, T., Casella, E., Raymo, M.E., Inferring environmental change from the Bahamian stratigraphic record, ALSEA2: PALeo constraints on SEA level rise 19 Sep 2016.
8. **Dyer, B.**, Higgins, J. A., Maloof, A. C. A Probabilistic Perspective on the C and Ca Isotope Stratigraphic Expression of Meteoric Diagenesis During the Late Paleozoic Ice Age, Northeastern Geobiology Symposium (Harvard) 29 Apr 2016
7. **Dyer, B.**, Maloof, A. C., Higgins, J. A., Glacioeustasy, meteoric diagenesis, and the carbon cycle during the mid-Carboniferous, GSA Annual Meeting, 04 Nov 2015.
6. **Dyer, B.**, Higgins, J. A., Maloof, A. C., How much time is missing at parasequence boundaries? Subaerial exposure and meteoric diagenesis of cyclic carbonates. GSA Annual Meeting, 03 Nov 2015.
5. **Dyer, B.**, Maloof, A. C., Higgins, J. A., Meteoric Diagenesis of Platform Carbonates during the Mid-Carboniferous, Goldschmidt Conference 2015.
4. **Dyer, B.** Late Paleozoic climate constraints from platform carbonates, Northeastern Geobiology Symposium (Princeton), 07 Feb 2015.
3. **Dyer, B.** University of Copenhagen 14 Jan 2015
2. **Dyer, B.**, Maloof, A. C., Do Pennsylvanian Cyclothems Record Glacioeustacy? AAPG Annual Convention and Exhibition, 20 May 2013.
1. **Dyer, B.** Lee, C-T. A., Leeman, W. P., Continental arc subduction zone processes: insights from quartz-bearing high Mg# metasomatic selvages in mantle xenoliths, AGU Fall Meeting, 14 Dec 2007.

SERVICE AND PROFESSIONAL ACTIVITIES

Departmental Committees and Responsibilities

2025–present	SEOS Curriculum Chair
2019–present	SEOS Undergraduate Committee
2020–2021	SEOS Safety Committee
2019–2020	SEOS Honours thesis judge

Reviews for Journals, Book Reports, Published Commentaries

I have served as reviewer for the following journals:

Earth System Science Data
Nature Communications
GSA Today
Science Advances
Palaeogeography, Palaeoclimatology, Palaeoecology
Geology
Sedimentology
Geomorphology
Quaternary Science Reviews

OTHER INFORMATION/ACTIVITIES

2026, UVic News coverage of Stacey’s Lomagundi work: [link](#)
2023, Smithsonian Magazine article on field work and research in Hawaii: [link](#)
2021, Popular press articles on field work and research in the Bahamas: [link](#)
2018, Popular press article on field work that I organized in Barbados: [link](#)