

# Michael P. Eddy

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Purdue University  
Earth, Atmospheric, and Planetary Sciences Department  
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## Positions Held

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Assistant Professor – Purdue University	2019-present
Postdoctoral Research Associate – Princeton University	2016-2019
Research Assistant, Massachusetts Institute of Technology	2011-2016
Teaching Assistant, Massachusetts Institute of Technology	2011-2016

## Education

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### **Massachusetts Institute of Technology**, Cambridge MA

Ph.D., Geology, Geochemistry, and Geobiology January 2017

Thesis: “High-resolution temporal records of magmatism, sedimentation, and faulting at evolving plate boundaries”

Advisers: Samuel A. Bowring and Oliver Jagoutz

### **Princeton University**, Princeton, NJ

B.A., Geosciences, May 2011

Thesis: “U-Pb Geochronology from the Pimple Hills near Ogdensburg, NJ: implications for the tectonic history of the Losee-Wanaque Composite Arc”

Adviser: Blair Schoene

## Teaching Experience

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Instructor of Record: Earth Materials II – Purdue University	S2023
Instructor of Record: Subduction Zones – Purdue University	S2022
Instructor of Record: Planet Earth – Purdue University	F2019, F2020, F2021, F2022
Laboratory Instructor: Natural Disasters – Princeton University	S2017
Teaching Assistant: Terrascope – MIT	F2015
Teaching Assistant: Analytical Techniques in Geochemistry – MIT	S2015
Teaching Assistant: Terrascope – MIT	F2014
Teaching Assistant: Earth, Energy, and the Environment – MIT	F2013
Teaching Assistant: Structural Geology – MIT	F2012

## Awards and Honors

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Outstanding Contributions to Teaching by an Asst. Professor – Purdue University COS	2022
EAPS Teaching Honor Roll – Purdue University	F2019, F2020, F2021, S2022, F2022
Excellence in Teaching Award – MIT	2016
Bruce L. “Biff” Reed Scholarship Award – GSA	2015
Kerr Fellowship – MIT	2011
Arthur F. Buddington Award – Princeton University	2011
Phi Beta Kappa	2011
<i>Cum laude</i> academic honors – Princeton University	2011
Member of All-American 4x400m relay team – Princeton University	2011
Varsity Track and Field Team Captain – Princeton University	2009-2011

## Publications

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Miller, RB, Umhoefer, PJ, **Eddy, MP**, and Tepper, JH, *in review*, Upper plate response to ridge subduction and oceanic plateau accretion, Washington Cascades and surrounding region: implications for plate tectonic evolution of the Pacific Northwest (U.S.A. and SW Canada) in the Paleogene: *Geosphere*.

Klein, BZ, and **Eddy, MP**, *in press*, What’s in an age? Calculation and interpretation of ages and durations from U-Pb zircon geochronology of igneous rocks: *GSA Bulletin*.

Donaghy, EE, Umhoefer, PJ, **Eddy, MP**, Miller, RB, and LaCasse, T, 2022, Stratigraphy, age, and provenance of the Eocene Chumstick basin, Washington Cascades: implications for paleogeography, regional tectonics, and development of strike-slip basins: Reply: *GSA Bulletin*, v. 134, p. 2172-2176.

Pamukçu, AS, Schoene, B, Deering, C, Keller, CB, and **Eddy, MP**, 2022, Volcano-pluton connections at the Lake City magmatic center (Colorado, USA): *Geosphere*, v. 18, p. 1435-1452.

**Eddy, MP**, Pamukçu, AS, Schoene, B, Steiner-Leach, T, and Bell, EA, 2022, Constraints on the timescales and processes that led to high-SiO<sub>2</sub> rhyolite production in the Searchlight Pluton, NV, USA: *Geosphere*, v. 18, p. 1000-1019.

Miller, RB, Bryant, KI, Doran, B, **Eddy, MP**, Raviola, F, Sylva, NL, and Umhoefer, PJ, *in press*, Eocene dike orientations across the Washington Cascades in response to a major strike-slip faulting episode and ridge-trench interaction: *Geosphere*.

O’Connor, L, Szymanowski, D, **Eddy, MP**, Samperton, KM, and Schoene, B, *in press*, A red bole record of cryptic silicic volcanism in the Deccan Traps, India: *Geology*.

Donaghy, EE, Umhoefer, PJ, **Eddy, MP**, Miller, RB, and LaCasse, T, 2021, Stratigraphy, age, and provenance of the Eocene Chumstick basin, Washington Cascades: implications for

- paleogeography, regional tectonics, and development of strike-slip basins: *GSA Bulletin*, v. 133, p. 2418-2438.
- Schaen, AJ, Schoene, B, Dufek, J, Singer, BS, **Eddy, MP**, Jicha, BR, and Cottle, JM, 2021, Transient rhyolite melt extraction to produce a shallow granitic pluton: *Science Advances*, v. y, eabf0604.
- Schoene, B, **Eddy, MP**, Keller, CB, and Samperton, KM, 2021, An evaluation of Deccan Traps eruption rates using geochronologic data: *Geochronology*, v. 3, p. 181-198.
- Martin, CR, Jagoutz, O, Upadhyay, R, Royden, LH, **Eddy, MP**, Bailey, EEG, Nichols, CIO, and Weiss, BP, 2020, Paleocene latitude of the Kohistan-Ladakh arc indicates multi-stage India-Eurasia collision: *PNAS*, v. 117, p. 29487-29494.
- Keller, G, Mateo, P, Monkenbusch, J, Thibault, N, Punekar, Uk, Spangenberg, JE, Abramovich, S, Ashckenazi-Polivoda, S, Schoene, BM, **Eddy, MP**, Samperton, KM, Khadri, SFR, and Adatte, T, 2020, Mercury Linked to Deccan Traps Volcanism, Climate Change and the End-Cretaceous Mass Extinction: *Global and Planetary Change*, v. 194, 103312.
- Chambers, M, Memeti, V, **Eddy, MP**, and Schoene, BM, 2020, Half a million years of magmatic history recorded in a K-feldspar megacryst of the Tuolumne Intrusive Complex, California: *Geology*, v. 48, p. 400-404.
- Tasistro-Hart, A, Maloof, A, Schoene, BM, and **Eddy, MP**, 2020, Astronomically forced hydrology of the Late Cretaceous sub-tropical Potosí Basin, Bolivia: *GSA Bulletin*, v. 132, p. 1931-1952.
- Eddy, MP**, Schoene, BM, Samperton, KM, Keller, G, Adatte, T., and Khadri, SFR, 2020, U-Pb zircon age constraints on the earliest eruptions of the Deccan Large Igneous Province, Malwa Plateau, India: *Earth and Planetary Science Letters*, v. 540, 116249.
- MacLennan, SA, **Eddy, MP**, Merschat, AJ, Mehra, AKG, Crockford, PP, Maloof, AC, Southworth, CS, and Schoene, BM, 2020, Geologic evidence for an icehouse Earth prior to the Sturtian global glaciation: *Science Advances*, v. 6.
- Eddy, MP**, Ibañez-Mejía, M, Burgess, SD, Coble, MA, Cordani, UG, DesOrmeau, JW, Gehrels, GE, Li, X, MacLennan, SG, Pecha, M, Sato, K, Schoene, BM, Valenica, VA, Vervoort, JD, and Wang, T, 2019, GHR1 - a new Eocene natural reference material for in situ U-Pb Geochronology and Hf isotopic analysis of zircon: *Geostandards and Geoanalytical Research*, v. 43, p. 113-132.
- Schoene, B, **Eddy, MP**, Samperton, KM, Keller, CBK, Keller, G, Adatte, T, and Khadri, SFR, 2019, U-Pb constraints on pulsed eruption of the Deccan Traps across the end-Cretaceous mass extinction: *Science*, v. 363, p. 862-866.

- Kant, LB, Tepper, JH, **Eddy, MP**, and Nelson, BK, 2018, The Eocene Basalt of Summit Creek, Central Cascades, Washington: magmatism associated with Farallon slab breakoff: *Lithosphere*, v. 10, p. 792-805.
- Eddy, MP**, Umhoefer, PJ, Miller, RB, Donaghy, EE, Gunerson, M, and Senes, FI, 2017, Sedimentary, Volcanic, and Structural Processes during Triple-Junction Migration: Insights from the Paleogene Record in Central Washington, *in* Haugerud, R.A., and Kelsey, H.M., eds., From the Puget Lowland to East of the Cascade Range: Geologic Excursions in the Pacific Northwest: *Geological Society of America Field Guide*, v. 49, p. 143-174.
- Eddy, MP**, Clark, KP, Polenz, M, 2017, Age and Volcanic Stratigraphy of Siletzia in Washington and Vancouver Island: *Lithosphere*, v. 9, p. 652-664.
- Eddy, MP**, Jagoutz, O, Ibanez-Mejia, M, 2017, Timing of initial seafloor spreading in the Newfoundland-Iberia rift: *Geology*, v. 45, p. 527-530.
- Bucholz, CE, **Eddy, MP**, Jagoutz, O, Bowring, SA, Schmidt, MW, Sambuu, O., 2017, Constraining the timescales of magmatic differentiation with U-Pb zircon geochronology: *Geology*, v. 45, p. 11-14.
- Eddy, MP**, Bowring, SA, Miller, RB, Tepper, JF, 2016, Rapid assembly and crystallization of a fossil, large-volume, silicic magma chamber: *Geology*, v. 44, p. 331-334.
- Eddy, MP**, Bowring, SA, Umhoefer, PJ, Miller, RB, McLean, NM, Donaghy, EE, 2016, High-resolution temporal and stratigraphic record of Siletzia's accretion and ridge-trench interaction from nonmarine sedimentary basins in central and western Washington: *GSA Bulletin*, v. 128, p. 425-441.
- Dragovich, JD, Mahan, SA, Anderson, ML, MacDonald Jr., JH, Schilter, JF, Frattali, CL, Koger, CJ, Smith, DT, Stoker, BA, DuFrane, SA, **Eddy, MP**, Cakir, R, and Sauer, KB, Geologic map of the Lake Roesiger 7.5-minute quadrangle, Snohomish County, Washington: Washington Division of Geology and Earth Resources Map Series 2015-01, 1 sheet, scale 1:24,000, 47 p. text.
- Bindi, L, Yao, N, Lin, C., Hollister, LS, Andronicos, CL, Distler, VV, **Eddy, MP**, Kostin, A, Kryachko, V, MacPherson, GJ, Steinhardt, WM, Yudovskaya, M, Steinhardt, PJ, 2015, Decagonite,  $Al_{71}Ni_{24}Fe_5$ , a quasicrystal with decagonal symmetry from the Khatyrka CV3 carbonaceous chondrite: *American Mineralogist*, v. 100, p. 2340-2343.
- Bindi, L, Yao, N, Lin, C, Hollister, LS, Andronicos CL, Distler, VV, **Eddy, MP**, Kostin, A, Kryachko, V., MacPherson, GJ, Steinhardt, WM, Yudovskaya, M., Steinhardt, P.J., 2015, Natural quasicrystal with decagonal symmetry: *Scientific Reports*, v. 5.
- Schoene, B, Samperton, KM, **Eddy, MP**, Keller, G, Adatte, T, Bowring, SA, Khadri, SFR, Gertsch, B., 2015, U-Pb geochronology of the Deccan Traps and relation to the end-Cretaceous mass extinction: *Science*, v. 347, p. 182-184.

- Bindi, L, Yao, N, Lin, C, Hollister, LS, MacPherson, GJ, Poirier, GR, Andronicos, CL, Distler, VV, **Eddy, MP**, Kostin, A, Kryachko, V., Steinhardt, WM, Yudovskaya, M., 2014, Steinhardtite, a new body-centered-cubic allotropic form of aluminum from the Khatyrka CV3 carbonaceous chondrite: *American Mineralogist*, v.99, p. 2433-2436.
- Ibanez-Mejia, M., Gehrels, GE, Ruiz, J. Vervoort, JD, **Eddy, MP**, Li, C., 2014, Small-volume baddeleyite (ZrO<sub>2</sub>) U-Pb geochronology and Lu-Hf isotope geochemistry by LA-ICP-MS: techniques and applications: *Chemical Geology*, v. 384, p. 149-167.
- Hollister, LS, Bindi, L, Yao, N, Poirier, GR, Andronicos, CL, MacPherson, GJ, Lin, C, Distler, VV, **Eddy, MP**, Kostin, A, Kryachko, V, Steinhardt, WM, Yudovskaya, M., Eiler, JM, Guan, Y, Clarke, JJ, Steinhardt, PJ, 2014, Impact-induced shock and the formation of natural quasicrystals in the early solar system: *Nature Communications*, v. 5.
- MacPherson, GJ, Andronicos, CL, Bindi, L, Distler, VV, **Eddy, MP**, Eiler, JM, Guan, Y, Hollister, LS, Kostin, A, Kryachko, V., Steinhardt, WM, Yudovskaya, M, Steinhardt, PJ, 2013, Khatyrka: a new CV3 find from the Koryak Mountains, eastern Russia: *Meteoritics and Planetary Science*, v. 48, p. 1499-1514.
- Maloof, AC, Porter, SM, Moore, JL, Dudas, F., Bowring, SA, Higgins, JA, Fike, DA, **Eddy, MP**, 2010, The earliest Cambrian record of animals and ocean geochemical change: *GSA Bulletin*, v. 122, p. 1731-1774.

## Meeting Abstracts

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- Klein, B, and **Eddy, MP**, 2022, What's in an age? Calculation of ages and durations from U-Pb zircon geochronology of igneous rocks: Abstract V32C-0084 presented at 2022 Fall Meeting, AGU, Chicago, IL, 12-16 Dec.
- Eddy, MP**, Donaghy, EE, and Miller, RB, 2022, Eocene triple-junction migration in the Pacific Northwest and its relationship to terrane transport: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.
- Klein, B\*, and **Eddy, MP**, 2022, What's in an age? Calculation of ages and durations from U-Pb zircon geochronology of igneous rocks: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.
- Gordon, SM, Miller, RB, **Eddy, MP**, Kylander-Clark, ARC, and Langdon-Lassagne, E, 2022, Tracking the collapse and exhumation of a continental magmatic arc: the record from zircon depth profiling analyses of North Cascades metasedimentary rocks: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.
- Miller, RB, **Eddy, MP**, and Gordon, S, 2022, What happens to large displacements on Paleogene strike-slip faults in central British Columbia and Alaska to the south?: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.

- Donaghy, EE, **Eddy, MP**, Ibañez-Mejia, M, and Moreno, F, 2022, Increased accuracy and precision in detrital zircon geochronology using CA-LA-ICP-MS: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.
- Donaghy, EE, and **Eddy, MP**, 2022, New high-precision geochronology of the Cenozoic sedimentary peripheral rock sequence, northern Olympic Peninsula, WA: implications for basin formation following oceanic plateau collision: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.
- Okhai, D, **Eddy, MP**, DesOrmeau, J, and Pamukçu, A, 2022, Magma emplacement and differentiation in the Oligocene IXL pluton, Nevada: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.
- Okhai, D, and **Eddy, MP**, 2022, Insights in the size and frequency of magmatic increments emplaced into upper-crustal silicic magmatic systems: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.
- Lewis, M, and **Eddy, MP**, 2022, Effects of a caldera-forming eruption on the conditions of magma storage: Poco Canyon caldera system, Nevada: *Geological Society of America Abstracts with Programs*, v. 54, n. 5.
- Regier, N, Donaghy, EE, and **Eddy, MP**, 2021, Stratigraphic and structural characterization of the Eocene Blue Mountain unit, Olympic Peninsula, WA: implications for basin formation and volcanism following Siletzia's accretion: *Geological Society of America Abstracts with Programs*, v. 53, n. 6.
- Donaghy, EE, and **Eddy, MP**, 2021, Revisiting stratigraphic of the Eocene to Miocene sedimentary peripheral rocks on the Olympic Peninsula, Washington: *Geological Society of America Abstracts with Programs*, v. 53, n. 6.
- Donaghy, EE, Umhoefer, PJ, **Eddy, MP**, and Miller, RB, 2021, The structural and depositional evolution of pull-apart: an example from the Eocene Chumstick basin, central Washington: *Geological Society of America Abstracts with Programs*, v. 53, n. 6.
- Miller, RB, Umhoefer, PJ, **Eddy, MP**, and Tepper, J, 2021, Upper plate response to ridge-trench interaction and oceanic plateau accretion, Washington Cascades and surrounding region: implications for Paleogene plate tectonic evolution of the Pacific Northwest: *Geological Society of America Abstracts with Programs*, v. 53, n. 6.
- Adatte, T, **Eddy, MP**, Schoene, B, Keller, G, and Khadri, S, 2020, Late Maastrichtian global warming triggered by Deccan dykes and sills, evidence from Malwa and Mandla regions, central India: *EGU General Assembly 2020*, Online, 4-8 May 2020, EGU2020-4201.

**Eddy, MP**, Schoene, B, Samperton, KM, Keller, G, Adatte, T, and Khadri, SFR, 2019, U-Pb zircon geochronology of the southern Malwa Plateau Basalt: Deccan Traps, India: *Geological Society of America Abstracts with Programs*, v. 51, n. 5.

**Eddy, MP**, Pamukçu, AS, Schoene, B, and Steiner-Leach, TL, 2019, Chemostratigraphic evidence for differentiation within the Miocene Searchlight pluton, Nevada, USA: *Geological Society of America Abstracts with Programs*, v. 51, n. 5.

Memeti, V, Chambers, M, Oppenheim, L, Barnes, C, **Eddy, MP**, and Schoene, BM, 2019, Plagioclase and K-feldspar megacryst recycling in a large, prolonged magma mush, Tuolumne Intrusive Complex, California: *Goldschmidt Abstracts*.

Adatte, T, Keller, G, Font, E, Mateo, P, Punekar, J, Cujean, S, Lorenzo, V, Schoene, B, **Eddy, MP**, and Khadri, SFR, 2019, Timing and paleoenvironmental implications of Deccan volcanism relative to the K-Pg extinction: *Geological Society of America Abstracts with Programs*, v. 51, n. 5.

Schaen, A, Schoene, B, Singer, BS, Dufek, J, **Eddy, MP**, Jicha, BR, and Cottle, JM, 2019, Short duration of rhyolite melt extraction from petrochronologic modeling within a young Andean pluton: *Geological Society of America Abstracts with Programs*, v. 51, n. 5.

Keller, G, Mateo, P, Adatte, T, Punekar, J, Spangenberg, J, Schoene, B, Eddy, MP, Samperton, KM, Khadri, SFR, Monkenbush, J, and Thibault, N, 2019, Mercury links Deccan volcanism to climate change and the end-Cretaceous mass extinction: *Geological Society of America Abstracts with Programs*, v. 51, n. 5.

Memeti, V, Chambers, M, **Eddy, MP**, and Schoene, BM, 2019, Protracted magmatic K-feldspar megacryst growth revealed with CA-ID-TIMS-TEA U-Pb zircon geochronology in the Tuolumne Intrusive Complex, California: *Geological Society of America Abstracts with Programs*, v. 51, n. 5.

Schoene, B, Keller, CB, **Eddy, MP**, Samperton, KM, Keller, G, Adatte, T, and Khadri, SFR, 2019, Assessing the Deccan Traps eruption record from geochronology and evaluating the relationship to the K-Pg boundary: *Geological Society of America Abstracts with Programs*, v. 51, n. 5.

**Eddy, MP**, Mehra, A, Pamukcu, AS, DesOrmeau, JW, Schoene, BM, and Maloof, A, 2018, Using geochemical and textural evidence to assess crystal-liquid separation in a fossil large, silicic magma chamber: *Abstract V33D-0270 presented at 2018 Fall Meeting, AGU, Washington, DC, 10-14 Dec.*

**Eddy, MP**, Pamukcu, AS, Schoene, BM, and Miller, C, 2018, Temporal record of volcanism and plutonism in the Miocene Searchlight magmatic system (Nevada, USA): *Geological Society of America Abstracts with Programs*, v. 50, n. 6.

- Chambers, M, Memeti, V, **Eddy, MP**, Schoene, BM, and Paterson, S, 2018, Magma mush bodies and crystal recycling constrained by zircon dates from cores and rims of K-feldspar megacrysts from the Tuolumne Intrusive Suite: *Geological Society of America Abstracts with Programs*, v. 50, n. 6.
- Schoene, B, **Eddy, MP**, Samperton, KM, Keller, G, Adatte, T, and Khadri, SFR, 2018, The tempo of the Deccan Traps flood basalts relative to the end Cretaceous Mass Extinction: *Goldschmidt Abstracts*.
- Eddy, MP**, 2017, Evidence for the Siletzia Terrane's origin as a ridge-centered oceanic plateau: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.
- Eddy, MP**, and Ibañez-Mejia, M, 2017, GHR1 – A new Eocene natural reference material for U-Pb and Hf isotopic measurements in zircon: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.
- Tepper, JH, and **Eddy, MP**, 2017, The cause(s) of widespread Eocene magmatism in the Pacific Northwest: insights from geochemistry and geochronology of igneous rocks in Washington: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.
- Umhoefer, PJ, Donaghy, EE, **Eddy, MP**, and Miller, RB, 2017, Stratigraphic record of the middle Eocene fault-bend, strike-slip Chumstick basin, central Washington: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.
- Dragovich, JD, Tepper, JH, MacDonald, JH, DuFrane, SA, Anderson, ML, Koger, CJ, Mavor, S, Thompson, GT, and **Eddy, MP**, 2017, Granite Falls stock and the Hansen Lake rhyolite – a history of syn-tectonic Eocene magmatism and uplift in the Pilchuck River valley during regional transtension, Snohomish County, Washington: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.
- Miller, RB, Bryant, K, Doran, B, **Eddy, MP**, Sylva, N, Raviola, F, and Umhoefer, PJ, 2017, Eocene transtension and strain patterns from dike swarms and strike-slip faults in the Washington Cascades: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.
- Schoene, B, Cottle, J, and **Eddy, MP**, 2017, Speed dating!: sampling and applications for U-Th-Pb geochronology: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.
- Umhoefer, PJ, **Eddy, MP**, Miller, RB, Tepper, JH, and Skinner, LA, 2017, Upper plate response to ridge and plateau subduction, Washington Cascades, USA: Implications for plate tectonic evolution of the Pacific Northwest: *Geological Society of America Abstracts with Programs*, v.49, n. 6.
- Schoene, B, Samperton, KM, **Eddy, MP**, Keller, G, Adatte, T, and Khadri, SFR, 2017, Toward a high-resolution age model for the Deccan Traps by U-Pb zircon geochronology: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.



Adatte, T, Keller, G, Font, E, Bitchong, AM, Schoene, B, Samperton, KM, **Eddy, MP**, 2017, Near coincidence of maximum Deccan volcanism with the Cretaceous-Paleogene boundary revealed by mercury anomalies: *Geological Society of America Abstracts with Programs*, v. 49, n. 6.

Keller, G, Adatte, T, Spangenberg, JE, Mateo, P, Punekar, J, Schoene, B, Samperton, KM, and **Eddy, MP**, 2017, Mercury stratigraphy of Deccan Trap volcanism in marine sediments linked to climate change, biotic turnover, end-Cretaceous mass extinction, and delayed recovery: *Geological Society of America Abstracts with Programs*, v. 49, n.6.

**Eddy, MP**, 2016, Assessing *in situ* crystal-liquid separation in a fossil, large-volume, silicic, magma reservoir: Abstract V41E-01 presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.

Tsukui, K, Ramezani, J, Zhu, M, Maloof, AC, Porter, S, Moore, J, **Eddy, MP**, Bowring, SA, 2016, High-precision temporal calibration of the early Cambrian biotic and paleoenvironmental records: new U-Pb geochronology from eastern Yunnan, China: Abstract PP31A-2260 presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.

**Eddy, MP**, Clark, KP, and Polenz, M, 2016, Volcanic stratigraphy and tectonic setting of the Siletzia large igneous province in Washington and Vancouver Island: *Geological Society of America Abstracts with Programs*, v. 48, n7.

**Eddy, MP**, Bowring, SA, Tepper, JF, Miller, RB, 2015, Extremely High Magma Emplacement Rates Recorded in the Golden Horn Batholith, WA: Abstract V34B-04 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.

Kant, L, Tepper, JF, **Eddy, MP**, 2015, Basalt of Summit Creek: Eocene magmatism associated with Farallon slab break off: Abstract V23C-03 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.

Bucholz, CB, **Eddy, MP**, Jagoutz, O, Bowring, SA, 2015, Constraining timescales of magmatic differentiation with U-Pb zircon geochronology: Abstract V32B-06 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.

**Eddy, MP**, Jagoutz, O, 2015, Temporal record of magmatism during the rift to drift transition along the Newfoundland-Iberia conjugate margins: *Geological Society of America Abstracts with Programs*, v. 47, n. 7, p. 864.

Umhoefer, PJ, Skinner, LA, Miller, RB, **Eddy, MP**, Bowring, SA, 2015, Eocene paleogeography of the Washington-Vancouver Island region during strike-slip faulting before and after a major 50 Ma transition: *Geological Society of America Abstracts with programs*, v. 47, n. 7, p. 444.

- Jagoutz, O, Bailey, E, Weiss, BP, **Eddy, MP**, Royden, LH, Tikoo, SM, 2015, New paleomagnetic results from Ladakh, western Himalaya support multi-stage collision scenario between India and Eurasia, *Geological Society of America Abstracts with Programs*, v. 47, n. 7, p. 39.
- Eddy, MP**, Bowring, SA, Umhoefer, PJ, Miller, RB, 2015, Precise temporal constraints on Eocene strike-slip faulting in Washington and its relationship to triple-junction migration and terrane transport: *Geological Society of America Abstracts with Programs*, v. 47, n. 4, p. 51.
- Miller, RB, **Eddy, MP**, Gordon, SM, Umhoefer, PJ, Sauer, K, 2015, Strike-slip in the southern Coast Mountains – Cascades Orogen: the Ross Lake fault system and implications for “Baja BC”: *Geological Society of America Abstracts with Programs*, v. 47, n. 4, p. 50.
- Schoene, B, Samperton, KS, **Eddy, MP**, Keller, G, Adatte, T, Bowring, SA, Khadri, SFR, Gertsch, B, 2015, U-Pb geochronology of the Deccan Traps and relation to the end-Cretaceous mass extinction: *Geophysical Research Abstracts*, v. 17, EGU2015, 8455, EGU General Assembly 2015.
- Eddy, MP**, Bowring, SA, Umhoefer, PJ, Miller, RB, McLean, NM, Donaghy, EE, 2014, Paleogene basin evolution in the Pacific Northwest: a window into ridge-trench interaction: *Geological Society of America Abstracts with Programs*, v. 46, n. 6, p. 34.
- Umhoefer, PJ, **Eddy, MP**, Miller, RB, Bowring, SA, Donaghy, EE, 2014, Major changes in early Eocene faulting and basins in central Washington: *Geological Society of America Abstracts with Programs*, v. 46, n. 6, p. 34.
- Tepper, JH, **Eddy, MP**, Nelson, BK, 2014, Origin and tectonic implications of the Eocene Golden Horn Batholith: a unique “A-Type” granite in the North Cascades, Washington: *Geological Society of America Abstracts with Programs*, v. 46, n. 6, p. 34.
- Eddy, MP**, Bowring, SA, Miller, RB, Tepper, JH, 2014, Rapid Emplacement of the Golden Horn Batholith: North Cascades, WA: *Geological Society of America Abstracts with Programs*, v. 46, n. 5, p. 75.
- Miller, RB, Gordon, SM, Bowring, SA, Whitney, DL, **Eddy, MP**, Fenning, NF, 2014, Crustal flow and a comparison of the Eocene evolution of the North Cascades Crystalline Core and Eocene metamorphic core complexes to the east: *Geological Society of America Abstracts with Programs*, v. 46, n. 5, p. 5.

## Invited Talks

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University of Arizona – Department Seminar  
 MIT – Department Seminar & Geology Seminar  
 UNC Chapel Hill – Department Seminar  
 California Institute of Technology – Department Seminar

January 2023  
 February 2022  
 September 2020  
 February 2020

Stanford University – Department Seminar & Special Seminar	February 2020
Yale University – Special Seminar	May 2019
Purdue University – Department Seminar	February 2018
City College of New York – Department Seminar	November 2017
AGU Fall Meeting – Session V036	December 2016
Johns Hopkins University – Bromery Lecture	October 2016
University of Rochester – Department Seminar	September 2016
UC Davis – Department Seminar & Special Seminar	March 2016
Harvard – BISSEPS Lecture	November 2015

## Research Grants

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- 2022, NSF EAR-2151277, Title: *Testing the effects of cooling history and rheology on oceanic plateau accretion and their role in tectonic modification of convergent margins*, Amount \$253,031 (Awarded to Eddy).
- 2021, NSF OCE-2049848, Title: *Collaborative research: testing the timing and direction of mantle exhumation at the Iberia-Newfoundland margins with low-temperature thermochronology*, Amount \$46,149 (Awarded to Eddy).
- 2020, Evolving Earth Grant 41000712, Title: *The role of oceanic plateau collision in the growth of western North America: geologic connections between the Pacific Northwest, Alaska, and the Yellowstone hotspot*, Amount \$3000 (Awarded to Eddy).
- 2020, NSF EAR-1945260, Title: *Collaborative research: burning down the house: investigating the relationships between magmatic ‘flare-ups’, crustal rheology, and arc collapse*, Amount \$349,776 (Awarded to Eddy).
- 2020, NSF EAR-2006271, Title: *Collaborative research: investigating magmatic differentiation in a fossil upper-crustal silicic magma system: Stillwater Range, NV*, Amount \$289,249 (Awarded to Eddy).
- 2020, Purdue Instructional Equipment Program, Title: *Enabling active learning across the curriculum in EAPS with a tabletop electron microscope*, Amount \$100,000 (Awarded to a team of faculty within Purdue EAPS).
- 2018-2020: NSF EAR-1830937, Title: *How are rhyolites generated? Evaluating models for the volcanic-plutonic connection in the Searchlight magmatic system, Nevada*, Amount \$328,736 (Awarded to Schoene at Princeton University, Eddy co-wrote proposal).
- 2015-2016, April: GSA Student Research Grant, Title: *Testing the origin of the Siletzia LIP using high-precision U-Pb zircon geochronology*, Amount: \$2500 (Awarded to Eddy)

## Field Experience

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Yakutat Terrane, AK – Stratigraphy/Geochronology	2022
Stillwater Range, NV – Petrology	2018, 2020, 2021
Colorado Extensional Corridor, NV – Petrology	2017, 2019
Olympic Peninsula, WA – Tectonics	2014, 2015, 2020, 2022
North Cascades, WA – Tectonics/Petrology/Mapping	2012-2017, 2020, 2021, 2022
Deccan Traps, India – Sampling for U-Pb geochronology	2013, 2016, 2018, 2020
Mojave, CA – Mapping/Tectonics	2012
Chukotka, Russia – Mapping	2011
Pimple Hills, NJ – Mapping	2010
Katmai, AK – Field Volcanology School	2009

## University and Professional Service

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Purdue EAPS Petrology Search Committee	2023
Purdue EAPS Field Committee	2021, 2022
Purdue EAPS Undergraduate Committee	2021, 2022
Purdue EAPS Outreach Committee	2019, 2020, 2021
Purdue EAPS Graduate Committee	2019, 2020, 2021
Chaired Session T16 at the 2021 GSA Annual Meeting	2021
Outside Reviewer for Tectonics	2023
Outside Reviewer for Earth and Planetary Science Letters	2019, 2020, 2021, 2023
Outside Reviewer for Journal of Metamorphic Petrology	2022
Outside Reviewer for Geosphere	2022
Outside Reviewer for Earth Science Reviews	2022
Outside Reviewer for International Geology Review	2021
Outside Reviewer for Geology	2017, 2019, 2020, 2021
Outside Reviewer for NSF	2017, 2018, 2020, 2021
Outside Reviewer for Economic Geology	2020
Outside Reviewer for Geological Society of America Bulletin	2019, 2020
Outside Reviewer for Lithos	2020
Outside Reviewer for Geophysical Research Letters	2019
Outside Reviewer for Meteoritics and Planetary Sciences	2019
Outside Reviewer for Lithosphere	2016, 2018
Outside Reviewer for Contributions to Mineralogy and Petrology	2015, 2018
Chaired Session T232 at the 2017 GSA Annual Meeting	2017
Planned and Led Field Trip 423 at the 2017 GSA Annual Meeting	2017
Academic Fellow Princeton Men's Varsity Track and Field Team	2016, 2017
Outside Reviewer for Brazilian Journal of Geology	2016