

Jonathan G Palmer

List of Publications by Citations

Source: <https://exaly.com/author-pdf/5585568/jonathan-g-palmer-publications-by-citations.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

128
papers

7,122
citations

36
h-index

82
g-index

146
ext. papers

8,973
ext. citations

5.5
avg, IF

6.19
L-index

#	Paper	IF	Citations
128	SHCal13 Southern Hemisphere Calibration, 0-50,000 Years cal BP. <i>Radiocarbon</i> , 2013 , 55, 1889-1903	4.6	1309
127	The IntCal20 Northern Hemisphere Radiocarbon Age Calibration Curve (0-55 cal kBP). <i>Radiocarbon</i> , 2020 , 62, 725-757	4.6	1233
126	Continental-scale temperature variability during the past two millennia. <i>Nature Geoscience</i> , 2013 , 6, 339-346	8.9	787
125	SHCal20 Southern Hemisphere Calibration, 0-55,000 Years cal BP. <i>Radiocarbon</i> , 2020 , 62, 759-778	4.6	253
124	Unusual Southern Hemisphere tree growth patterns induced by changes in the Southern Annular Mode. <i>Nature Geoscience</i> , 2012 , 5, 793-798	18.3	172
123	Five centuries of Upper Indus River flow from tree rings. <i>Journal of Hydrology</i> , 2013 , 486, 365-375	6	105
122	A wiggle-match date for Polynesian settlement of New Zealand. <i>Antiquity</i> , 2003 , 77, 116-125	1	104
121	Dendroecological studies in New Zealand 1. An evaluation of tree age estimates based on increment cores. <i>New Zealand Journal of Botany</i> , 1987 , 25, 373-383	1	93
120	Drought variability in the eastern Australia and New Zealand summer drought atlas (ANZDA, CE 1500-2012) modulated by the Interdecadal Pacific Oscillation. <i>Environmental Research Letters</i> , 2015 , 10, 124002	6.2	92
119	Calibration of the Radiocarbon Time Scale for the Southern Hemisphere: Ad 1850-1950. <i>Radiocarbon</i> , 2002 , 44, 641-651	4.6	85
118	Revised calendar date for the Taupo eruption derived by 14C wiggle-matching using a New Zealand kauri 14C calibration data set. <i>Holocene</i> , 2012 , 22, 439-449	2.6	82
117	Evidence for a Medieval Warm Period in a 1,100 year tree-ring reconstruction of past austral summer temperatures in New Zealand. <i>Geophysical Research Letters</i> , 2002 , 29, 12-1-12-4	4.9	79
116	High-Precision Radiocarbon Measurements of Contemporaneous Tree-Ring Dated Wood from the British Isles and New Zealand: Ad 1850-1950. <i>Radiocarbon</i> , 2002 , 44, 633-640	4.6	77
115	14C Calibration in the Southern Hemisphere and the Date of the Last Taupo Eruption: Evidence from Tree-Ring Sequences. <i>Radiocarbon</i> , 1995 , 37, 155-163	4.6	77
114	Millennia-long tree-ring records from Tasmania and New Zealand: a basis for modelling climate variability and forcing, past, present and future. <i>Journal of Quaternary Science</i> , 2006 , 21, 689-699	2.3	75
113	Sea-level pressure variability around Antarctica since A.D. 1750 inferred from subantarctic tree-ring records. <i>Climate Dynamics</i> , 1997 , 13, 375-390	4.2	74
112	Disturbance and climate warming influences on New Zealand <i>Nothofagus</i> tree-line population dynamics. <i>Journal of Ecology</i> , 2001 , 89, 1061-1071	6	73

111	Rapid increase in cosmogenic ¹⁴ C in AD 775 measured in New Zealand kauri trees indicates short-lived increase in ¹⁴ C production spanning both hemispheres. <i>Earth and Planetary Science Letters</i> , 2015 , 411, 290-297	5.3	72
110	Comparing proxy and model estimates of hydroclimate variability and change over the Common Era. <i>Climate of the Past</i> , 2017 , 13, 1851-1900	3.9	71
109	Multi-centennial tree-ring record of ENSO-related activity in New Zealand. <i>Nature Climate Change</i> , 2012 , 2, 172-176	21.4	69
108	Testing solar forcing of pervasive Holocene climate cycles. <i>Journal of Quaternary Science</i> , 2005 , 20, 511-518	5.1	69
107	Monsoon drought over Java, Indonesia, during the past two centuries. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	64
106	Temporal variation in the interhemispheric ¹⁴ C offset. <i>Geophysical Research Letters</i> , 1998 , 25, 1321-1324	4.9	64
105	Tree rings reveal globally coherent signature of cosmogenic radiocarbon events in 774 and 993 CE. <i>Nature Communications</i> , 2018 , 9, 3605	17.4	64
104	Speleothem stable isotope records interpreted within a multi-proxy framework and implications for New Zealand palaeoclimate reconstruction. <i>Quaternary International</i> , 2008 , 187, 52-75	2	61
103	Reconstructed streamflow for Citarum River, Java, Indonesia: linkages to tropical climate dynamics. <i>Climate Dynamics</i> , 2011 , 36, 451-462	4.2	50
102	Holocene climatic change and past Irish societal response. <i>Journal of Archaeological Science</i> , 2006 , 33, 34-38	2.9	48
101	Global Peak in Atmospheric Radiocarbon Provides a Potential Definition for the Onset of the Anthropocene Epoch in 1965. <i>Scientific Reports</i> , 2018 , 8, 3293	4.9	44
100	Three centuries of Myanmar monsoon climate variability inferred from teak tree rings. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	44
99	The dendrochronology of <i>Callitris intratropica</i> in northern Australia: annual ring structure, chronology development and climate correlations. <i>Australian Journal of Botany</i> , 2008 , 56, 311	1.2	44
98	Little Ice Age wetting of interior Asian deserts and the rise of the Mongol Empire. <i>Quaternary Science Reviews</i> , 2016 , 131, 33-50	3.9	43
97	Dating ancient wood by high-sensitivity liquid scintillation counting and accelerator mass spectrometry: Pushing the boundaries. <i>Quaternary Geochronology</i> , 2006 , 1, 241-248	2.7	40
96	Variations of Radiocarbon in Tree Rings: Southern Hemisphere Offset Preliminary Results. <i>Radiocarbon</i> , 1998 , 40, 1153-1159	4.6	40
95	Extension of New Zealand kauri (<i>Agathis australis</i>) tree-ring chronologies into Oxygen Isotope Stage (OIS) 3. <i>Journal of Quaternary Science</i> , 2006 , 21, 779-787	2.3	39
94	The potential of New Zealand kauri (<i>Agathis australis</i>) for testing the synchronicity of abrupt climate change during the Last Glacial Interval (60,000–11,700 years ago). <i>Quaternary Science Reviews</i> , 2010 , 29, 3677-3682	3.9	38

93	Tree-ring records from New Zealand: long-term context for recent warming trend. <i>Climate Dynamics</i> , 1998 , 14, 191-199	4.2	37
92	The New Zealand Kauri (<i>Agathis Australis</i>) Research Project: A Radiocarbon Dating Intercomparison of Younger Dryas Wood and Implications for IntCal13. <i>Radiocarbon</i> , 2013 , 55, 2035-2048	4.6	36
91	Dendroclimatic interpretation of tree-rings in <i>Agathis australis</i> (kauri): 2. Evidence of a significant relationship with ENSO. <i>Journal of the Royal Society of New Zealand</i> , 2000 , 30, 277-292	2	36
90	The late Holocene kauri chronology: assessing the potential of a 4500-year record for palaeoclimate reconstruction. <i>Quaternary Science Reviews</i> , 2014 , 90, 128-142	3.9	34
89	The reconstructed Indonesian warm pool sea surface temperatures from tree rings and corals: Linkages to Asian monsoon drought and El Niño Southern Oscillation. <i>Paleoceanography</i> , 2006 , 21,		34
88	Tree Rings Show Recent High Summer-Autumn Precipitation in Northwest Australia Is Unprecedented within the Last Two Centuries. <i>PLoS ONE</i> , 2015 , 10, e0128533	3.7	33
87	Pacific and Indian Ocean climate signals in a tree-ring record of Java monsoon drought. <i>International Journal of Climatology</i> , 2008 , 28, 1889-1901	3.5	32
86	Extension of the New Zealand kauri (<i>Agathis australis</i>) chronology to 1724 BC. <i>Holocene</i> , 2006 , 16, 188-198		32
85	Climate change and tree-ring relationships of <i>Nothofagus menziesii</i> tree-line forests. <i>Canadian Journal of Forest Research</i> , 2001 , 31, 1981-1991	1.9	31
84	A 250-year periodicity in Southern Hemisphere westerly winds over the last 2600 years. <i>Climate of the Past</i> , 2016 , 12, 189-200	3.9	30
83	Six centuries of Upper Indus Basin streamflow variability and its climatic drivers. <i>Water Resources Research</i> , 2018 , 54, 5687-5701	5.4	28
82	A global environmental crisis 42,000 years ago. <i>Science</i> , 2021 , 371, 811-818	33.3	28
81	A multi-millennial palaeoclimatic resource from <i>Lagarostrobos colensoi</i> tree-rings at Oroko Swamp, New Zealand. <i>Global and Planetary Change</i> , 2002 , 33, 209-220	4.2	27
80	Climatic Implications of Macro- and Microfossil Assemblages from Late Pleistocene Deposits in Northern New Zealand. <i>Quaternary Research</i> , 1993 , 39, 107-119	1.9	27
79	Dendroclimatic interpretation of tree-rings in <i>Agathis australis</i> (kauri). 1. Climate correlation functions and master chronology.. <i>Journal of the Royal Society of New Zealand</i> , 2000 , 30, 263-276	2	26
78	Climate change and tree-ring relationships of <i>Nothofagus menziesii</i> tree-line forests. <i>Canadian Journal of Forest Research</i> , 2001 , 31, 1981-1991	1.9	26
77	Decadally Resolved Lateglacial Radiocarbon Evidence from New Zealand Kauri. <i>Radiocarbon</i> , 2016 , 58, 709-733	4.6	26
76	Reconstruction of New Zealand climate indices back to AD 1731 using dendroclimatic techniques: Some preliminary results. <i>International Journal of Climatology</i> , 1994 , 14, 1135-1149	3.5	25

75	High-Precision Radiocarbon Measurements of Tree-Ring Dated Wood from New Zealand: 195 BcAd 995. <i>Radiocarbon</i> , 2011 , 53, 529-542	4.6	24
74	Towards a Radiocarbon Calibration for Oxygen Isotope Stage 3 Using New Zealand Kauri (<i>Agathis Australis</i>). <i>Radiocarbon</i> , 2007 , 49, 447-457	4.6	24
73	Karakorum temperature out of phase with hemispheric trends for the past five centuries. <i>Climate Dynamics</i> , 2016 , 46, 1943-1952	4.2	23
72	Punctuated Shutdown of Atlantic Meridional Overturning Circulation during Greenland Stadial 1. <i>Scientific Reports</i> , 2016 , 6, 25902	4.9	22
71	The dendroclimatic potential of conifers from northern Pakistan. <i>Dendrochronologia</i> , 2011 , 29, 77-88	2.8	21
70	Experimental reconstruction of monsoon drought variability for Australasia using tree rings and corals. <i>Geophysical Research Letters</i> , 2008 , 35, n/a-n/a	4.9	21
69	Chronology development and climate response analysis of different New Zealand pink pine (<i>Halocarpus biformis</i>) tree-ring parameters. <i>Canadian Journal of Forest Research</i> , 1998 , 28, 566-573	1.9	21
68	A 426-year floating tree-ring chronology from <i>Phyllocladus trichomanoides</i> buried by the Taupo eruption at Pureora, central North Island, New Zealand. <i>Journal of the Royal Society of New Zealand</i> , 1988 , 18, 407-415	2	21
67	A dendrometer band study of the seasonal pattern of radial increment in kauri (<i>Agathis australis</i>). <i>New Zealand Journal of Botany</i> , 1983 , 21, 121-125	1	21
66	Tropical forcing of increased Southern Ocean climate variability revealed by a 140-year subantarctic temperature reconstruction. <i>Climate of the Past</i> , 2017 , 13, 231-248	3.9	20
65	Bayesian Evaluation of the Southern Hemisphere Radiocarbon Offset during the Holocene. <i>Radiocarbon</i> , 2009 , 51, 1165-1176	4.6	20
64	Reconstruction of New Zealand Temperatures Back to AD 1720 Using <i>Libocedrus bidwillii</i> Tree-Rings 2000 , 45, 339-359		20
63	High-precision dating and correlation of ice, marine and terrestrial sequences spanning Heinrich Event 3: Testing mechanisms of interhemispheric change using New Zealand ancient kauri (<i>Agathis australis</i>). <i>Quaternary Science Reviews</i> , 2016 , 137, 126-134	3.9	20
62	Archaeology: progress and pitfalls in radiocarbon dating. <i>Nature</i> , 2006 , 443, E3; discussion E4	50.4	19
61	Does the El Niño/Southern Oscillation control the interhemispheric radiocarbon offset?. <i>Quaternary Research</i> , 2007 , 67, 174-180	1.9	18
60	Investigating the Interhemispheric 14C Offset in the 1st Millennium AD and Assessment of Laboratory Bias and Calibration Errors. <i>Radiocarbon</i> , 2009 , 51, 1177-1186	4.6	17
59	Structure and composition of the subalpine forest on Mount Hauhungatahi, North Island, New Zealand, during the Holocene. <i>Holocene</i> , 1997 , 7, 13-23	2.6	17
58	Anomalous mid-twentieth century atmospheric circulation change over the South Atlantic compared to the last 6000 years. <i>Environmental Research Letters</i> , 2016 , 11, 064009	6.2	17

57	Redating the earliest evidence of the mid-Holocene relative sea-level highstand in Australia and implications for global sea-level rise. <i>PLoS ONE</i> , 2019 , 14, e0218430	3.7	16
56	Non-uniform interhemispheric temperature trends over the past 550 years. <i>Climate Dynamics</i> , 2010 , 35, 1429-1438	4.2	16
55	ATMOSPHERIC RADIOCARBON FOR THE PERIOD 1950-2019. <i>Radiocarbon</i> , 1-23	4.6	16
54	The scientific value and potential of New Zealand swamp kauri. <i>Quaternary Science Reviews</i> , 2018 , 183, 124-139	3.9	15
53	The paleoclimate context and future trajectory of extreme summer hydroclimate in eastern Australia. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 12820-12838	4.4	15
52	Problems with identifying the 8200-year cold event in terrestrial records of the Atlantic seaboard: a case study from Dooagh, Achill Island, Ireland. <i>Journal of Quaternary Science</i> , 2007 , 22, 65-75	2.3	15
51	Evidence for suppressed mid-Holocene northeastern Australian monsoon variability from coral luminescence. <i>Paleoceanography</i> , 2014 , 29, 581-594		14
50	Is there any Evidence for Regional Atmospheric 14C Offsets in the Southern Hemisphere?. <i>Radiocarbon</i> , 2013 , 55, 2029-2034	4.6	14
49	Robust Radiocarbon Dating of Wood Samples by High-Sensitivity Liquid Scintillation Spectroscopy in the 50-10 kyr Age Range. <i>Radiocarbon</i> , 2007 , 49, 379-391	4.6	14
48	Seven centuries of reconstructed Brahmaputra River discharge demonstrate underestimated high discharge and flood hazard frequency. <i>Nature Communications</i> , 2020 , 11, 6017	17.4	14
47	Intensification of Southern Hemisphere westerly winds 2000-1000 years ago: evidence from the subantarctic Campbell and Auckland Islands (52-80°S). <i>Journal of Quaternary Science</i> , 2016 , 31, 12-19	2.3	14
46	Reconstructing atmospheric circulation over southern New Zealand: Establishment of modern westerly airflow 5500 years ago and implications for Southern Hemisphere Holocene climate change. <i>Quaternary Science Reviews</i> , 2017 , 159, 77-87	3.9	13
45	Rapid global ocean-atmosphere response to Southern Ocean freshening during the last glacial. <i>Nature Communications</i> , 2017 , 8, 520	17.4	13
44	A palynological study of Polynesian and European effects on vegetation in Coromandel, New Zealand, showing the variability between four records from a single swamp. <i>Journal of the Royal Society of New Zealand</i> , 2002 , 32, 507-531	2	13
43	Trans-Tasman Sea climate variability since ad 1740 inferred from middle to high latitude tree-ring data. <i>Climate Dynamics</i> , 2000 , 16, 603-610	4.2	13
42	Palaeoclimate potential of New Zealand <i>Manoao colensoi</i> (silver pine) tree rings using Blue-Intensity (BI). <i>Dendrochronologia</i> , 2020 , 60, 125664	2.8	12
41	Wiggle-match radiocarbon dating of the Taupo eruption. <i>Nature Communications</i> , 2019 , 10, 4669	17.4	12
40	Progress in refining the global radiocarbon calibration curve using New Zealand kauri (<i>Agathis australis</i>) tree-ring series from Oxygen Isotope Stage 3. <i>Quaternary Geochronology</i> , 2015 , 27, 158-163	2.7	11

39	Tipping elements and amplified polar warming during the Last Interglacial. <i>Quaternary Science Reviews</i> , 2020 , 233, 106222	3.9	11
38	Lack of cool, not warm, extremes distinguishes late 20th Century climate in 979-year Tasmanian summer temperature reconstruction. <i>Environmental Research Letters</i> , 2018 , 13, 034041	6.2	11
37	Pleistocene glacial history of the New Zealand subantarctic islands. <i>Climate of the Past</i> , 2019 , 15, 423-448	5.9	10
36	A comparison of some simple methods used to detect unstable temperature responses in tree-ring chronologies. <i>Dendrochronologia</i> , 2018 , 48, 52-73	2.8	10
35	Obliquity-driven expansion of North Atlantic sea ice during the last glacial. <i>Geophysical Research Letters</i> , 2015 , 42, 10,382	4.9	10
34	Multidecadal variations in Southern Hemisphere atmospheric 14C: Evidence against a Southern Ocean sink at the end of the Little Ice Age CO2 anomaly. <i>Global Biogeochemical Cycles</i> , 2016 , 30, 211-218	5.9	9
33	The Influence of Calibration Curve Construction and Composition on the Accuracy and Precision of Radiocarbon Wiggle-Matching of Tree Rings, Illustrated by Southern Hemisphere Atmospheric Data Sets from AD 1500-1950. <i>Radiocarbon</i> , 2019 , 61, 1265-1291	4.6	8
32	Extreme wet conditions coincident with Bronze Age abandonment of upland areas in Britain. <i>Anthropocene</i> , 2016 , 13, 69-79	3.9	8
31	The discovery of New Zealand's oldest shipwreck: possible evidence of further Dutch exploration of the South Pacific. <i>Journal of Archaeological Science</i> , 2014 , 42, 435-441	2.9	8
30	A 1700-year <i>Athrotaxis selaginoides</i> tree-ring width chronology from southeastern Australia. <i>Dendrochronologia</i> , 2017 , 45, 90-100	2.8	8
29	Cold Tropical Pacific Sea Surface Temperatures During the Late Sixteenth-Century North American Megadrought. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 11,307-11,320	4.4	8
28	Tropical and mid-latitude forcing of continental Antarctic temperatures. <i>Cryosphere</i> , 2015 , 9, 2405-2415	5.5	7
27	Climate/Growth Correlations of tree Species in the Indus Basin of the Karakorum Range, North Pakistan. <i>IAWA Journal</i> , 2012 , 33, 51-61	2.3	7
26	RADIOCARBON PROTOCOLS AND FIRST INTERCOMPARISON RESULTS FROM THE CHRONOS 14CARBON-CYCLE FACILITY, UNIVERSITY OF NEW SOUTH WALES, SYDNEY, AUSTRALIA. <i>Radiocarbon</i> , 2021 , 63, 1003-1023	4.6	7
25	A new method for dating tree-rings in trees with faint, indeterminate ring boundaries using the Itrax core scanner. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2018 , 497, 234-243	2.9	6
24	Potential for tree rings to reveal spatial patterns of past drought variability across western Australia. <i>Environmental Research Letters</i> , 2018 , 13, 024020	6.2	6
23	Changes in El Niño Southern Oscillation (ENSO) conditions during the Greenland Stadial 1 (GS-1) chronozone revealed by New Zealand tree-rings. <i>Quaternary Science Reviews</i> , 2016 , 153, 139-155	3.9	6
22	Stratigraphy, pollen and 14C dating of Johnston's Gum Hole, a late Quaternary fossil kauri (<i>Agathis australis</i>) site, Northland, New Zealand. <i>Journal of Quaternary Science</i> , 2009 , 24, 47-59	2.3	6

21	Frontal fault location and most recent earthquake timing for the Alpine Fault at Whataroa, Westland, New Zealand. <i>New Zealand Journal of Geology, and Geophysics</i> , 2018 , 61, 329-340	1.6	6
20	Two climate-sensitive tree-ring chronologies from Arnhem Land, monsoonal Australia. <i>Austral Ecology</i> , 2019 , 44, 581-596	1.5	5
19	Extending the observational record to provide new insights into invasive alien species in a coastal dune environment of New Zealand. <i>Applied Geography</i> , 2018 , 98, 100-109	4.4	5
18	Hydroclimate extremes in a north Australian drought reconstruction asymmetrically linked with Central Pacific Sea surface temperatures. <i>Global and Planetary Change</i> , 2020 , 195, 103329	4.2	5
17	Distribution of three Hieracium species in the Mt Possession area, mid Canterbury, New Zealand. <i>New Zealand Journal of Botany</i> , 1999 , 37, 469-477	1	4
16	A comparison of two tree-ring-index standardization techniques. <i>Canadian Journal of Forest Research</i> , 1992 , 22, 1922-1928	1.9	4
15	The potential for extending Intcal04 using OIS-3 New Zealand sub-fossil Kauri. <i>PAGES News</i> , 2006 , 14, 11-12		4
14	One Thousand Three Hundred Years of Variability in the Position of the South Pacific Convergence Zone. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL088238	4.9	4
13	Ring-width Variation in Sub-fossil Wood Samples as an Indicator of Short-term Solar Variability 2000 yr B.P.. <i>Publications of the Astronomical Society of Australia</i> , 1992 , 10, 68-70	5.5	3
12	An assessment of the potential for centennial-scale reconstruction of atmospheric circulation from selected New Zealand tree-ring chronologies. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2008 , 265, 238-254	2.9	2
11	Response to Comment on "A global environmental crisis 42,000 years ago". <i>Science</i> , 2021 , 374, eabi975633.3		2
10	Growth response of an invasive alien species to climate variations on subantarctic Campbell Island		2
9	Pleistocene glacial history of the New Zealand subantarctic islands		2
8	Evaluating the dendroclimatological potential of blue intensity on multiple conifer species from Tasmania and New Zealand. <i>Biogeosciences</i> , 2021 , 18, 6393-6421	4.6	1
7	Advances and limitations in establishing a contiguous high-resolution atmospheric radiocarbon record derived from subfossil kauri tree rings for the interval 6007 cal kyr BP. <i>Quaternary Geochronology</i> , 2021 , 68, 101251	2.7	1
6	A 250 year periodicity in Southern Hemisphere westerly winds over the last 2600 years		1
5	Do Southern Hemisphere tree rings record past volcanic events? A case study from New Zealand. <i>Climate of the Past</i> , 2022 , 18, 1169-1188	3.9	0
4	Reply to Comment on Drought variability in the eastern Australia and New Zealand summer drought atlas (ANZDA, CE 1500012) modulated by the Interdecadal Pacific Oscillation. <i>Environmental Research Letters</i> , 2017 , 12, 068002	6.2	

- 3 Response to Comment on "A global environmental crisis 42,000 years ago". *Science*, **2021**, 374, eabh36553.3
- 2 Decadally Resolved Lateglacial Radiocarbon Evidence from New Zealand Kauri CORRIGENDUM. *Radiocarbon*, **2016**, 58, 947-947 4.6
- 1 Kauri Tree-Ring Stable Isotopes Reveal a Centennial Climate Downturn Following the Antarctic Cold Reversal in New Zealand. *Geophysical Research Letters*, **2021**, 48, e2020GL090299 4.9