

Alan Levander

List of Publications by Year in descending order

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139
papers

6,060
citations

76196

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79541

73
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147
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147
times ranked

3595
citing authors

#	ARTICLE	IF	CITATIONS
1	Overlapping slabs: Untangling subduction in NW South America through finite-frequency teleseismic tomography. <i>Earth and Planetary Science Letters</i> , 2022, 577, 117253.	1.8	16
2	Sedimentary and crustal structure of the US Gulf Coast revealed by Rayleigh wave and teleseismic P coda data with implications for continent rifting. <i>Earth and Planetary Science Letters</i> , 2022, 577, 117257.	1.8	4
3	The rise of the academic science humble brag. <i>Matter</i> , 2022, 5, 766-767.	5.0	3
4	Moho depth map of northern Venezuela based on wide-angle seismic studies. <i>Journal of South American Earth Sciences</i> , 2021, 107, 103088.	0.6	6
5	Subcretionary tectonics: Linking variability in the expression of subduction along the Cascadia forearc. <i>Earth and Planetary Science Letters</i> , 2021, 556, 116724.	1.8	24
6	Seismic Evidence of Bottomâ€Up Crustal Control on Volcanism and Magma Storage Near Mount St. Helens. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL090612.	1.5	2
7	Caribbean Slab Segmentation Beneath Northwest South America Revealed by 3â€ Finite Frequency Teleseismic Pâ€Wave Tomography. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009431.	1.0	8
8	Potential Pitfalls in the Analysis and Structural Interpretation of Seismic Data from the Mars <i>InSight</i> Mission. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2982-3002.	1.1	42
9	Autocorrelation Reflectivity of Mars. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089630.	1.5	27
10	Local Source <i>V_p</i> and <i>V_s</i> Tomography in the Mount St. Helens Region With the iMUSH Broadband Array. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008888.	1.0	26
11	Constraining Crustal Properties Using Receiver Functions and the Autocorrelation of Earthquakeâ€Generated Body Waves. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 8981-8997.	1.4	24
12	Upper Crustal Structure and Magmatism in Southwest Washington: <i>V_p</i> , <i>V_s</i> , and <i>V_p</i> / <i>V_s</i> Results From the iMUSH Activeâ€Source Seismic Experiment. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 7067-7080.	1.4	5
13	Lithospheric Structure of Northwestern Venezuela From Wideâ€Angle Seismic Data: Implications for the Understanding of Continental Margin Evolution. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 13124-13149.	1.4	11
14	Focusing of melt near the top of the Mount St. Helens (USA) magma reservoir and its relationship to major volcanic eruptions. <i>Geology</i> , 2018, 46, 775-778.	2.0	36
15	Fluid Controls on the Heterogeneous Seismic Characteristics of the Cascadia Margin. <i>Geophysical Research Letters</i> , 2018, 45, 11,021.	1.5	48
16	Lithospheric structure of <i>Iberia</i> and <i>Morocco</i> using finiteâ€frequency <i>R</i> - <i>ayleigh</i> wave tomography from earthquakes and seismic ambient noise. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 1824-1840.	1.0	57
17	Magma reservoirs from the upper crust to the Moho inferred from high-resolution <i>V_p</i> and <i>V_s</i> models beneath Mount St. Helens, Washington State, USA. <i>Geology</i> , 2016, 44, 411-414.	2.0	94
18	A compressive sensing approach to the high-resolution linear Radon transform: application on teleseismic wavefields. <i>Geophysical Journal International</i> , 2016, 207, 811-822.	1.0	7

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19	Seismic evidence for a cold serpentinized mantle wedge beneath Mount St Helens. <i>Nature Communications</i> , 2016, 7, 13242.	5.8	42
20	Role of arc magmatism and lower crustal foundering in controlling elevation history of the Nevadaplano and Colorado Plateau: A case study of pyroxenitic lower crust from central Arizona, USA. <i>Earth and Planetary Science Letters</i> , 2016, 439, 48-57.	1.8	43
21	PdS receiver function evidence for crustal scale thrusting, relic subduction, and mafic underplating in the Trans-Hudson Orogen and Yavapai province. <i>Earth and Planetary Science Letters</i> , 2015, 426, 13-22.	1.8	21
22	Upper mantle structure beneath southern African cratons from seismic finite-frequency P- and S-body wave tomography. <i>Earth and Planetary Science Letters</i> , 2015, 420, 174-186.	1.8	34
23	Lithospheric expression of cenozoic subduction, mesozoic rifting and the Precambrian Shield in Venezuela. <i>Earth and Planetary Science Letters</i> , 2015, 410, 12-24.	1.8	10
24	Finite-frequency Rayleigh wave tomography of the western Mediterranean: Mapping its lithospheric structure. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 140-160.	1.0	89
25	Crustal structure beneath the <i>Rif</i> <i>Ordillera</i> , <i>North Morocco</i> , from the <i>RIFSIS</i> wide-angle reflection seismic experiment. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 4712-4733.	1.0	26
26	Crustal thickness and velocity structure across the Moroccan Atlas from long offset wide-angle reflection seismic data: The SIMA experiment. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 1698-1717.	1.0	42
27	Piecewise delamination of Moroccan lithosphere from beneath the Atlas Mountains. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 975-985.	1.0	48
28	Subduction-driven recycling of continental margin lithosphere. <i>Nature</i> , 2014, 515, 253-256.	13.7	66
29	An introduction to the special issue of <i>Earth and Planetary Science Letters</i> on USArray science. <i>Earth and Planetary Science Letters</i> , 2014, 402, 1-5.	1.8	16
30	Similarities between the Th/U map of the western US crystalline basement and the seismic properties of the underlying lithosphere. <i>Earth and Planetary Science Letters</i> , 2014, 391, 243-254.	1.8	9
31	Ongoing lithospheric removal in the western Mediterranean: Evidence from Ps receiver functions and thermobarometry of Neogene basalts (PICASSO project). <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 1113-1127.	1.0	60
32	Moho depth and crustal composition in Southern Africa. <i>Tectonophysics</i> , 2013, 609, 267-287.	0.9	77
33	The Mohorovičić discontinuity beneath the continental crust: An overview of seismic constraints. <i>Tectonophysics</i> , 2013, 609, 353-376.	0.9	52
34	Three-dimensional Kirchhoff-approximate generalized Radon transform imaging using teleseismic P-to-S scattered waves. <i>Geophysical Journal International</i> , 2013, 192, 1196-1216.	1.0	14
35	A U.S. human resource challenge for Earth science education and energy exploration and exploitation. <i>The Leading Edge</i> , 2012, 31, 714-716.	0.4	0
36	Melting under the Colorado Plateau, USA. <i>Geology</i> , 2012, 40, 387-390.	2.0	36

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37	Asthenospheric flow and lithospheric evolution near the Mendocino Triple Junction. Earth and Planetary Science Letters, 2012, 323-324, 60-71.	1.8	41
38	<i>V_S</i> and density structure beneath the Colorado Plateau constrained by gravity anomalies and joint inversions of receiver function and phase velocity data. Journal of Geophysical Research, 2012, 117, .	3.3	31
39	Evolutionary aspects of lithosphere discontinuity structure in the western U.S.. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	118
40	Imaging crustal and upper mantle structure beneath the Colorado Plateau using finite frequency Rayleigh wave tomography. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	1.0	30
41	Mantle flow beneath northwestern Venezuela: Seismic evidence for a deep origin of the MÃ©rida Andes. Earth and Planetary Science Letters, 2011, 305, 396-404.	1.8	28
42	Continuing Colorado plateau uplift by delamination-style convective lithospheric downwelling. Nature, 2011, 472, 461-465.	13.7	258
43	Receiver function imaging in strongly laterally heterogeneous crust: Synthetic modeling of BOLIVAR data. Earthquake Science, 2011, 24, 45-54.	0.4	6
44	A localized waveform inversion at teleseismic distances: an application to the DÃ© region beneath the Cocos plate. Geophysical Journal International, 2010, 180, 1344-1352.	1.0	1
45	High-resolution transition zone structures of the Gorda Slab beneath the western United States: Implication for deep water subduction. Journal of Geophysical Research, 2010, 115, .	3.3	42
46	The Caribbean-South American plate boundary at 65Ã°W: Results from wide-angle seismic data. Journal of Geophysical Research, 2010, 115, .	3.3	9
47	Subduction in the southern Caribbean: Images from finite-frequency P wave tomography. Journal of Geophysical Research, 2010, 115, .	3.3	43
48	Mantle transition zone beneath the Caribbean-South American plate boundary and its tectonic implications. Earth and Planetary Science Letters, 2010, 289, 105-111.	1.8	11
49	Upper mantle structure beneath the Caribbean-South American plate boundary from surface wave tomography. Journal of Geophysical Research, 2009, 114, .	3.3	43
50	Crustal structure of the South American-Caribbean plate boundary at 67Ã°W from controlled source seismic data. Journal of Geophysical Research, 2009, 114, .	3.3	31
51	Seismic waveform tomography with multicomponent data at a groundwater contamination site. , 2009, , .		4
52	Three-dimensional seismic-reflection imaging of a shallow buried paleochannel. Geophysics, 2008, 73, B85-B98.	1.4	11
53	Characterizing the Caribbean-South American plate boundary at 64Ã°W using wide-angle seismic data. Journal of Geophysical Research, 2008, 113, .	3.3	41
54	Identification and tectonic implications of a tear in the South American plate at the southern end of the Lesser Antilles. Geochemistry, Geophysics, Geosystems, 2008, 9, .	1.0	38

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55	Crustal thickness variations in Venezuela from deep seismic observations. <i>Tectonophysics</i> , 2008, 459, 14-26.	0.9	20
56	Negligible convergence and lithospheric tearing along the Caribbean–South American plate boundary at 64°W. <i>Tectonics</i> , 2008, 27, .	1.3	13
57	Trans-Alaska Crustal Transect and continental evolution involving subduction underplating and synchronous foreland thrusting. <i>Geology</i> , 2008, 36, 267.	2.0	139
58	Crust and Lithospheric Structure – Active Source Studies of Crust and Lithospheric Structure. , 2007, , 247-288.		1
59	Crust and Lithospheric Structure - Active Source Studies of Crust and Lithospheric Structure. , 2007, , 479-511.		0
60	Waveform tomography at a groundwater contamination site: Surface reflection data. <i>Geophysics</i> , 2007, 72, G45-G55.	1.4	54
61	Receiver function study of the crustal structure of the southeastern Caribbean plate boundary and Venezuela. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	77
62	Evolution of the Southern Caribbean Plate Boundary. <i>Eos</i> , 2006, 87, 97.	0.1	25
63	3D seismic refraction travelttime tomography at a groundwater contamination site. <i>Geophysics</i> , 2006, 71, H67-H78.	1.4	76
64	Creation and preservation of cratonic lithosphere: Seismic constraints and geodynamic models. <i>Geophysical Monograph Series</i> , 2006, , 75-88.	0.1	15
65	Imag(in)ing the continental lithosphere. <i>Tectonophysics</i> , 2006, 416, 167-185.	0.9	37
66	Waveform tomography at a groundwater contamination site: VSP-surface data set. <i>Geophysics</i> , 2006, 71, H1-H11.	1.4	55
67	Using elastic wave seismic data to image an ultra-shallow buried paleo-channel. , 2006, , .		2
68	Listric thrust faulting in the Laramide front of north-central New Mexico guided by Precambrian basement structures. <i>Geophysical Monograph Series</i> , 2005, , 239-251.	0.1	5
69	Seismic investigation of the Yavapai-Mazatzal transition zone and the Jemez Lineament in northeastern New Mexico. <i>Geophysical Monograph Series</i> , 2005, , 227-238.	0.1	2
70	Crust and upper mantle velocity structure of the southern Rocky Mountains from the Jemez Lineament to the Cheyenne belt. <i>Geophysical Monograph Series</i> , 2005, , 293-308.	0.1	10
71	Synthesis of results from the CD-ROM Experiment: 4-D image of the lithosphere beneath the Rocky Mountains and implications for understanding the evolution of continental lithosphere. <i>Geophysical Monograph Series</i> , 2005, , 421-441.	0.1	18
72	The dynamic nature of the continental crust-mantle boundary: Crustal evolution in the southern Rocky Mountain region as an example. <i>Geophysical Monograph Series</i> , 2005, , 403-420.	0.1	8

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73	The role of chemical boundary layers in regulating the thickness of continental and oceanic thermal boundary layers. <i>Earth and Planetary Science Letters</i> , 2005, 230, 379-395.	1.8	97
74	Mapping the subducting Pacific slab beneath southwest Japan with Hi-net receiver functions. <i>Earth and Planetary Science Letters</i> , 2005, 239, 9-17.	1.8	76
75	Perspectives on array seismology and USArray. <i>Geophysical Monograph Series</i> , 2005, , 1-6.	0.1	6
76	Imaging teleseismic P to S scattered waves using the Kirchhoff integral. <i>Geophysical Monograph Series</i> , 2005, , 149-169.	0.1	20
77	Seismic velocity, Q, geological structure and lithology estimation at a ground water contamination site. , 2005, , .		3
78	Estimation of vertical stochastic scale parameters in the Earth's crystalline crust from seismic reflection data. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	1.5	20
79	Seismic constraints on the depth and composition of the mantle keel beneath the Kaapvaal craton. <i>Earth and Planetary Science Letters</i> , 2004, 224, 337-346.	1.8	58
80	The Yavapai-Mazatzal boundary: A long-lived tectonic element in the lithosphere of southwestern North America. <i>Bulletin of the Geological Society of America</i> , 2004, 116, 1137.	1.6	58
81	Origin of upper-mantle seismic scattering - evidence from Russian peaceful nuclear explosion data. <i>Geophysical Journal International</i> , 2003, 154, 196-204.	1.0	33
82	Structure and seismotectonics of the Mendocino Triple Junction, California. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	8
83	USArray design implications for wavefield imaging in the lithosphere and upper mantle. <i>The Leading Edge</i> , 2003, 22, 250-255.	0.4	15
84	Deep Probe: imaging the roots of western North America. <i>Canadian Journal of Earth Sciences</i> , 2002, 39, 375-398.	0.6	131
85	Depth image focusing in travelttime mapâ€based wideâ€angle migration. <i>Geophysics</i> , 2002, 67, 1903-1912.	1.4	14
86	Internal deformation of the southern Gorda plate: Fragmentation of a weak plate near the Mendocino triple junction. <i>Geology</i> , 2001, 29, 691.	2.0	26
87	Highâ€resolution 3â€ seismic investigations at a groundwater contamination site: Initial results. , 2001, , .		2
88	Lithospheric evolution in the wake of the Mendocino triple junction: structure of the San Andreas Fault system at 2â€fMa. <i>Geophysical Journal International</i> , 2000, 140, 233-247.	1.0	29
89	Impact of a complex overburden on analysis of bright reflections: A case study from the Mendocino Triple Junction. <i>Journal of Geophysical Research</i> , 2000, 105, 21711-21726.	3.3	7
90	Proposed project would give unprecedented look under North America. <i>Eos</i> , 1999, 80, 245-251.	0.1	25

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91	High-resolution seismic survey over a near-surface contamination site. , 1999, , .		3
92	Crustal and uppermost mantle structure along the Deep Probe seismic profile. Rocky Mountain Geology, 1998, 33, 181-198.	0.4	78
93	Fluids in the lower crust following Mendocino triple junction migration: Active basaltic intrusion? Geology, 1998, 26, 171.	2.0	43
94	Is the Moho flat? Seismic evidence for a rough crust-mantle interface beneath the northern Basin and Range. Geology, 1997, 25, 451.	2.0	21
95	Estimation of crustal stochastic parameters from seismic exploration data. Journal of Geophysical Research, 1997, 102, 15269-15286.	3.3	37
96	Synthetic seismograms through synthetic Franciscan: Insights into factors affecting large-aperture seismic data. Geophysical Research Letters, 1997, 24, 3317-3320.	1.5	9
97	Deformation in the Lower Crust of the San Andreas Fault System in Northern California. Science, 1997, 278, 650-653.	6.0	101
98	Seismic images of crustal duplexing and continental subduction in the Brooks Range. Journal of Geophysical Research, 1997, 102, 20847-20871.	3.3	15
99	Modeling of the Acoustic Reverberation Special Research Program deep ocean seafloor scattering experiments using a hybrid wave propagation simulation technique. Journal of Geophysical Research, 1996, 101, 3085-3101.	3.3	4
100	A hybrid wave propagation simulation technique for ocean acoustic problems. Journal of Geophysical Research, 1996, 101, 11225-11241.	3.3	24
101	Incorporating "continuous connectivity" into stochastic models of crustal heterogeneity: Examples from the Lewisian gneiss complex, Scotland, the Franciscan formation, California, and the Hafafit Gneiss Complex, Egypt. Journal of Geophysical Research, 1996, 101, 8489-8501.	3.3	24
102	A deterministic and stochastic velocity model for the Salton Trough/Basin and Range transition zone and constraints on magmatism during rifting. Journal of Geophysical Research, 1996, 101, 27883-27897.	3.3	12
103	Wave-equation datuming for improving deep crustal seismic images. Tectonophysics, 1996, 264, 371-379.	0.9	20
104	Transition from slab to slabless: Results from the 1993 Mendocino triple junction seismic experiment. Geology, 1996, 24, 195.	2.0	48
105	Seismic images of the Brooks Range, Arctic Alaska, reveal crustal-scale duplexing. Geology, 1995, 23, 65.	2.0	21
106	A numerical study of seafloor scattering. Journal of the Acoustical Society of America, 1995, 97, 3532-3546.	0.5	16
107	A comparative study of free-surface boundary conditions for finite-difference simulation of elastic/viscoelastic wave propagation. , 1995, , .		7
108	Migration of wide-aperture onshore-offshore seismic data, central California: Seismic images of late stage subduction. Journal of Geophysical Research, 1995, 100, 22231-22243.	3.3	26

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109	Structure and seismic response of extended continental crust: Stochastic analysis of the Strona-Ceneri and Ivrea zones, Italy. <i>Geology</i> , 1994, 22, 79.	2.0	40
110	Seismic structure of gneissic/granitic upper crust: geological and petrophysical evidence from the Strona-Ceneri Zone (northern Italy) and implications for crustal seismic exploration. <i>Geophysical Journal International</i> , 1994, 119, 497-510.	1.0	33
111	Stochastic characterization and seismic response of upper and middle crustal rocks based on the Lewisian gneiss complex, Scotland. <i>Geophysical Journal International</i> , 1994, 119, 243-259.	1.0	42
112	Layer-stripping reverse-time migration1. <i>Geophysical Prospecting</i> , 1994, 42, 211-227.	1.0	1
113	Modal fields: A new method for characterization of random seismic velocity heterogeneity. <i>Geophysical Research Letters</i> , 1994, 21, 493-496.	1.5	80
114	Seismic images of the Brooks Range fold and thrust belt, Arctic Alaska, from an integrated seismic reflection/refraction experiment. <i>Tectonophysics</i> , 1994, 232, 13-30.	0.9	24
115	Some attributes of wavefields scattered from Ivrea-type lower crust. <i>Tectonophysics</i> , 1994, 232, 267-279.	0.9	49
116	The crust as a heterogeneous "optical" medium, or "crocodiles in the mist". <i>Tectonophysics</i> , 1994, 232, 281-297.	0.9	86
117	Lower crustal reflectivity modeled by rheological controls on mafic intrusions. <i>Geology</i> , 1994, 22, 367-370.	2.0	33
118	Structure and seismic response of extended continental crust: Stochastic analysis of the Strona-Ceneri and Ivrea zones, Italy. <i>Geology</i> , 1994, 22, 79-1082.	2.0	3
119	Crustal structure of the offshore southern Santa Maria Basin and transverse ranges, southern California, from deep seismic reflection data. <i>Journal of Geophysical Research</i> , 1993, 98, 8335-8348.	3.3	5
120	Stochastic modeling of the reflective lower crust: Petrophysical and geological evidence from the Ivrea Zone (northern Italy). <i>Journal of Geophysical Research</i> , 1993, 98, 11967-11980.	3.3	80
121	Migration moveout analysis and depth focusing. <i>Geophysics</i> , 1993, 58, 91-100.	1.4	68
122	Numerical Scattering Results for a Rough, Unsedimented Seafloor. , 1993, , 215-220.		3
123	A stochastic view of lower crustal fabric based on evidence from the Ivrea Zone. <i>Geophysical Research Letters</i> , 1992, 19, 1153-1156.	1.5	139
124	Sensitivity of the lateral correlation function in deep seismic reflection data. <i>Geophysical Research Letters</i> , 1992, 19, 2263-2266.	1.5	24
125	Small-scale heterogeneity and large-scale velocity structure of the continental crust. <i>Journal of Geophysical Research</i> , 1992, 97, 8797-8804.	3.3	70
126	Wide-angle seismic reflections from two-dimensional random target zones. <i>Journal of Geophysical Research</i> , 1991, 96, 10251-10260.	3.3	34

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127	Deep crustal reflection profiling offshore southern central California. Journal of Geophysical Research, 1991, 96, 6475-6491.	3.3	26
128	Shear velocity structure of the northern California lithosphere. Journal of Geophysical Research, 1990, 95, 19773-19784.	3.3	10
129	Apparent layering in commonâ€midpoint stacked images of twoâ€dimensionally heterogeneous targets. Geophysics, 1990, 55, 1466-1477.	1.4	33
130	Seismic scattering near the earth's surface. Pure and Applied Geophysics, 1990, 132, 21-47.	0.8	36
131	Fast and accurate dynamic raytracing in heterogeneous media. Bulletin of the Seismological Society of America, 1990, 80, 1284-1296.	1.1	5
132	Upper crustal structure of the accreted Chugach Terrane, Alaska. Journal of Geophysical Research, 1989, 94, 4457-4466.	3.3	11
133	Finite-difference forward modeling in seismology. , 1989, , 410-431.		25
134	Lower crustal reflectivity patterns in wideâ€angle seismic recordings. Geophysical Research Letters, 1988, 15, 617-620.	1.5	51
135	Fourthâ€order finiteâ€difference P-SV seismograms. Geophysics, 1988, 53, 1425-1436.	1.4	1,340
136	Modeling and processing of scattered waves in seismic reflection surveys. Geophysics, 1988, 53, 466-478.	1.4	61
137	Finite difference calculations of dispersive Rayleigh wave propagation. Tectonophysics, 1985, 113, 1-30.	0.9	11
138	Use of the telegraphy equation to improve absorbing boundary efficiency for fourth-order acoustic wave finite difference schemes. Bulletin of the Seismological Society of America, 1985, 75, 1847-1852.	1.1	26
139	S-wave observations in the Franciscan terrane, central California. Bulletin of the Seismological Society of America, 1981, 71, 1863-1874.	1.1	3