

RESUME

STEPHEN R. McNUTT

BIRTH DATE: December 21, 1954, Hartford, Connecticut

CITIZENSHIP: U.S.

BUSINESS ADDRESS: School of Geosciences
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EDUCATION: Ph.D., Volcanology, Columbia University, N.Y., NY, 1985
M.Phil., Geological Sciences, Columbia University, N.Y., NY, 1984
M.A., Geological Sciences, Columbia University, N.Y., NY, 1982
B.A., Earth Science, Wesleyan University, Middletown, CT, 1977

PH.D. DISSERTATION:

McNutt, S.R., 1985, The Eruptive Activity, Seismicity, and Velocity Structure of Pavlof Volcano, Eastern Aleutians. Columbia University, N.Y., NY, 202 pp.

SCIENTIFIC RESEARCH:

Source processes of volcanic tremor from 160 volcanic areas worldwide.

Volcanic lightning.

Details of volcanic earthquakes at Pavlof, Shishaldin, Mt. Spurr, Augustine, and Redoubt, Alaska, and Arenal, Costa Rica.

Volcanic hazards assessment and mitigation in Alaska, Central America, and Long Valley, California.

Volcanic activity and seismicity of Central America during 1973-1993, and 2012-2013.

Volcanic earthquake sequence of Mount St. Helens, March - May 1980.

Sedimentation in the Pacific Ocean basin and marginal seas.

EMPLOYMENT:

August 2012-present	Professor, Volcano Seismology, Univ. of South Florida
November 1991-August 2012	Research Professor, Volcano Seismology Coordinating Scientist for Alaska Volcano Observatory, Geophysical Institute, University of Alaska, Fairbanks,
October 1984-October 1991	Senior Seismologist, Volcanology-Seismology, and Project Manager California Division of Mines and Geology, Sacramento, California
September 1979-September 1984	Graduate Research Assistant, Geophysics Lamont-Doherty Geological Observatory of Columbia University
September 1977-September 1979	Research Assistant, Lamont-Doherty Geological Observatory of Columbia University
June 1977-August 1977	Research Assistant, Woods Hole Oceanographic Inst.

PROFESSIONAL ACTIVITIES:

Memberships in Professional Societies:

American Geophysical Union (since 1980)

International Association of Volcanology and Chemistry of the Earth's
Interior (IAVCEI), Secretary-General, 1999-2007

U.S. National Committee for IUGG, 1996-1999, 2007-present

U.S. National Committee for PSA, 2000-2007

IAVCEI Commission on Volcano Geophysics, Secretary 1991-1993

International Society for the Prevention and Mitigation of Natural Hazards
(since 1989)

Japan-US Science and Technology Council, Working Group on Volcano
Seismology, co-leader, US side, 1993-1995

Seismological Society of America (since 1982)

Sigma Xi (since 1985)

Volcanological Society of Japan (since 1996)

EDITORSHIPS:

Senior Editor, "The Loma Prieta (Santa Cruz Mountains) Earthquake of 17 October 1989," Special Publication 104, Calif. Division of Mines and Geology, 1990

Guest Editor, Special Issue on "Internal Structure of Volcanoes and Geophysical Precursors of Eruptions," Journal of Volcanology and Geothermal Research, v. 61, no. III-IV, 1994

Guest Editor, Special Issue on "Earthquake Generation Processes: Environmental Aspects and Physical Modelling," Tectonics, v. 277, nos. 1-3, 1997

Associate Editor, Encyclopedia of Volcanoes, Academic Press (October 1999)

Associate Editor, Encyclopedia of Volcanoes, 2nd Edition, Elsevier (March 2015)

AWARDS AND FELLOWSHIPS:

Donald L. Brown Full-Tuition Scholarship (Pratt & Whitney Aircraft, Inc.), 1973-1977

Ampco Metal, Inc. Scholarship, 1973-1977

Smithsonian Institution 10-week Graduate Student Fellowship, awarded 1983 (unable to participate)

Japan Society for the Promotion of Science Fellowship, February-March, 1996, Tohoku University, Sendai, Japan

National Performance Review (Hammer Award) to Alaska Volcano Observatory, 1996

Terrence and Katrina Moore Prize, UAF Geophysical Institute, 2001

21st Century College of Excellence Fellowship, May-June 2006, Tohoku University, Sendai, Japan

EXTERNAL REVIEW PANELS:

Global Volcanism Program, Smithsonian Institution, Washington, DC (with Jon Fink (chair) and James Quick), spring 2008 check

Pebble Mine Baseline Environmental Document, Independent Review Panel (coordinated by Keystone xxx) fall 2012

Seismic Research Unit, University of the West Indies, Trinidad, (with Chris Newhall, Barbara, xx), April 2014

MANAGEMENT TRAINING:

Leadership: A Commitment to Mastery, April 1988
Administering the State Disciplinary Process, June 1988
Leadperson Training, September 1988
Managing the Service Contract Process, October 1989
Planning & Managing Projects & Operations, October 1990
Basic Supervision I, February 1991

GRADUATE STUDENTS SUPERVISED:

John Benoit, Ph.D., 1998
Arthur Jolly, Ph.D., 2000
John Sanchez, M.S., 2000; Ph.D. 2005
Tanja Petersen, Ph.D., 2006
Aaron Pearson, M.S., 2000
Ellen Wilson, Ph.D., 2003 (withdrew)
Katrina Jacobs, M.S., 2008
Branden Christensen, M.S. 2010
Nicole DeRoin, Ph.D. 2012
Alexandra Farrell, Ph.D. (current)
Heather McFarlin, Ph.D. (current)
Cassandra Smith, M.S. 2015, Ph.D. (current)

Committee member for 14 other students, 1992-present

POST-DOCTORAL INVESTIGATORS SUPERVISED:

Milton Garces, September 1995 - September 1997
Glenn Thompson, March 1998 -January 2000
Jacqueline Caplan-Auerbach, January 2001-December 2002
Silvio DeAngelis, September 2004-September 2006
Sonja Behnke, April 2013-April 2015

GRADUATE COURSES TAUGHT:

Spring 1995	-	Volcano Seismology (GEOS 692)
Spring 1997	-	Volcano Seismology (GEOS 671)
Fall 1997	-	Seminar on Deformation (GEOS 691) (with J. Freymueller)
Fall 1998	-	Seminar on Subduction Zones (GEOS 692C)
Spring 1999	-	Volcano Seismology (GEOS 671)
Fall 2000	-	Integrated Case Studies of Volcanic Eruptions (GEOS 672)(with J.Gardner)
Spring 2002	-	Volcano Seismology (GEOS 671)
Spring 2004	-	Volcano Seismology (GEOS 671)
Spring 2006	-	Volcano Seismology (GEOS 671)
Spring 2008	-	Volcano Seismology (GEOS 671)
Spring 2010	-	Volcano Seismology (GEOS 671)
Spring 2012	-	Volcano Seismology (GEOS 671)
Fall 2013	-	Fundamentals of Seismology (GLY 6739a)
Spring 2014	-	Volcano Seismology (GLY 6739b)
Fall 2014	-	Fundamentals of Seismology (GLY 6739a)
Spring 2015	-	Volcano Seismology (GLY 6739b)

PUBLICATIONS (refereed journals):

1.
Ludwig, W.J., and R.E. Houtz, (map preparation by Delach, M., and S. McNutt),
Isopach map of sediments in the Pacific Ocean Basin and Marginal
Sea Basins, Amer. Assoc. Petrol. Geol., 1980.
2.
McNutt, S.R. and R.J. Beavan, Volcanic earthquakes at Pavlof Volcano correlated with
the solid earth tide, Nature, 294, 5842, 515-618, 1981.
3.
Beavan, R.J., E. Hauksson, S.R. McNutt, R. Bilham, and K.H. Jacob, Tilt and seismicity
changes in the Shumagin Seismic Gap, Sci., 222, 322-325, 1983.
4.
McNutt, S. and R.J. Beavan, Correlation of the solid earth tide with volcanic
earthquakes at Pavlof Volcano, Alaska, Proc. 9th Intl. Symp. Earth Tides, New York,
703-713, 1983.
- 5.

McNutt, S.R. and D.H. Harlow, Seismicity at Fuego, Pacaya, Izalco, and San Cristobal Volcanoes, *Bull. Volcanol.*, 46, 283-297, 1983.

6.

McNutt, S.R. and R.J. Beavan, Patterns of earthquakes and the effect of solid earth and ocean load tides at Mount St. Helens prior to the May 18, 1980, eruption, *J. Geophys. Res.*, 89, 3075-3086, 1984.

7.

Yuan, A., S. McNutt, and D. Harlow, Seismicity and eruptive activity of Fuego Volcano, Guatemala: February 1975 - January 1977, *J. Volcanol. Geoth. Res.*, 21, 277-296, 1984.

8.

McNutt, S.R., Observations and analysis of B-type earthquakes, explosions, and volcanic tremor at Pavlof Volcano, Alaska, *Bull. Seis. Soc. Amer.*, 76, 153-175, 1986.

9.

McNutt, S.R. and K.H. Jacob, Determination of large-scale velocity structure of the crust and upper mantle in the vicinity of Pavlof Volcano, Alaska, *J. Geophys. Res.*, 91, 5013-5022, 1986.

10.

McNutt, S. and R. Martin, Volcanic hazards monitoring in California and preliminary analysis of NEWT system performance. In: Keller and Folsom (eds.), *Mount St. Helens; 5 years later*, 388-394, 1986.

11.

McNutt, S.R., Eruption characteristics and cycles at Pavlof Volcano, Alaska, and their relation to regional earthquake activity, *J. Volcanol. Geoth. Res.*, 31, 239-267, 1987.

12.

McNutt, S.R., Volcanic Tremor at Pavlof Volcano, Alaska, October 1973 - April 1986. *PAGEOPH*, 125, 1051-1077, 1987.

13.

McNutt, S.R. and R.J. Beavan, Eruptions of Pavlof Volcano and their possible modulation by ocean load and tectonic stresses, *J. Geophys. Res.*, 92, 11,509-11,523, 1987.

14.

McNutt, S.R., Some seismic precursors to eruptions at Pavlof Volcano, Alaska, October 1973 - April 1986. In: Latter, J.H. (ed.), *IAVCEI Proc. Volcanol.*, 1, 463-485, 1989.

15.

Hill, D.P., W.L. Ellsworth, M.J.S. Johnston, J.O. Langbein, D.H. Oppenheimer, A.M. Pitt, P.A. Reasenber, M.L. Sorey, and S.R. McNutt, The 1989 earthquake swarm beneath Mammoth Mountain, California: An initial look at the 4 May through 30 September activity. *Bull. Seis. Soc. Amer.*, 80, 325-339, 1990.

16.

McNutt, S.R., T. Miller, and J.J. Taber, Pavlof Volcano: seismological and geological evidence of increased explosivity during the 1986 eruptions. *Bull. Volcanol.*, 53, 86-98, 1991.

17.

McNutt, S.R., Volcanic Tremor. *Encyclopedia of Earth System Science*, Academic Press, San Diego, California, 417-425, 1992.

18.

Alaska Volcano Observatory, Spurr Erupts. *EOS Trans. Amer. Geophys. Un.*, 74, 217, 221-222, 1993.

19.

Hill, D., P. Gasparini, S. McNutt, and H. Rymer, Preface, Special Issue, Internal structure of volcanoes and geophysical presursors of eruptions, *J. Volcanol. Geotherm. Res.*, 61, III-IV, 1994.

20.

Lu, Z., M. Wyss, G. Tytgat, S. McNutt, and S. Stihler, Aftershocks of the 13 May 1993 Shumagin Alaska Earthquake. *Geophys. Res. Lett.*, 21, 497-500, 1994.

21.

McNutt, S.R., Volcanic Tremor Amplitude Correlated with Eruption Explosivity and its Potential Use in Determining Ash Hazards to Aviation. *U.S.G.S. Prof. Paper*, 2047, 377-385, 1994.

22.

McNutt, S.R., Volcanic Tremor from Around the World: 1992 Update. *Acta Vulcanol.*, 5, 197-200, 1994.

23.

McNutt, S.R., Volcanic tremor amplitude correlated with the volcano explosivity index and its potential use in determining ash hazards to aviation. *Acta Vulcanol.*, 5, 193-196, 1994.

24.

Aramaki, S., F. Barberi, T. Casadevall, and S. McNutt, Report of the IAVCEI Subcommittee for Reviewing the Safety of Volcanologists, *Bull. Volcanol.*, 56, 2, 151-154, 1994.

25.

McNutt, S., G. Tytgat, and J. Power, Preliminary Analyses of Volcanic Tremor Associated with the 1992 Eruptions of Crater Peak, Mt. Spurr, Alaska. U.S.G.S Bull., 2139, 161-177, 1995.

26.

Power, J.A., A.D. Jolly, R.A. Page, and S.R. McNutt, Seismicity and Forecasting of the 1992 Eruptions of Crater Peak Vent, Mt. Spurr, Alaska: An Overview. U.S.G.S Bull., 2139, 149-159, 1995.

27.

Benoit, J.P. and S.R. McNutt, Global Volcanic Earthquake Swarm Database and Preliminary Analysis of Volcanic Earthquake Swarm Duration. Ann. Geofi., XXXIX, 221-229, 1996.

28.

McNutt, S.R., Seismic monitoring of volcanoes: A review of the state-of-the-art and recent trends. In: Scarpa, R. and R. Tilling (eds.), Monitoring and Mitigation of Volcano Hazards, Chapter 3, Springer-Verlag, Berlin, 99-146, 1996.

29.

Benoit, J.P. and S.R. McNutt, New Constraints on Source Processes of Volcanic Tremor at Arenal Volcano, Costa Rica, Using Broadband Seismic Data, Geophys. Res. Lett., 24, 449-452, 1997.

30.

Cramer, C.H. and S.R. McNutt, Spectral Analysis of Earthquakes in the 1989 Mammoth Mountain Swarm near Long Valley, California, Bull. Seis. Soc. Amer., 87, 1454-1462, 1997.

31.

Garces, M.A. and S.R. McNutt, Theory of the Airborne Sound Field Generated in a Resonant Magma Conduit, J. Volcanol. Geotherm. Res., 78, 155-178, 1997.

32.

Matsu'ura, M., C.J. Marone, S.R. McNutt, M. Takeo, I.G. Main, and J.B. Rundle, Preface to Special Issue on "Earthquake Generation Processes: Environmental Aspects and Physical Modeling," Tecton., 277, 1-3, vii-viii, 1997.

33.

McNutt, S.R., Y. Ida, B.A. Chouet, P. Okubo, J. Oikawa, and G. Saccorotti, Kilauea Volcano Provides Hot Seismic Data for Joint Japanese-U.S. Experiment, EOS Trans. Amer. Geophys. Un., 78, 105, 111, 1997.

34.

Wiemer, S. and S.R. McNutt, Variations in the Frequency-Magnitude Distribution with Depth in Two Volcanic Areas: Mount St. Helens, Washington, and Mt. Spurr, Alaska, *Geophys. Res. Lett.*, 24, 189-192, 1997.

35.

Wiemer, S., S.R. McNutt, and M. Wyss, Temporal and Three-Dimensional Spatial of the Frequency-Magnitude (FMD) Distribution Near Long Valley Caldera, California, *Geophys. J. Intl.*, 134, 409-421, 1998.

36.

Jolly, A.D. and S.R. McNutt, Relationship Between b-values and Maximum Depths of Seismicity at Martin and Mageik volcanoes, Katmai National Park, Alaska; July 1995-December 1997, *J. Volcanol. Geotherm. Res.*, 93, 173-190, 1999.

37.

McNutt, S.R., Eruptions of Pavlof Volcano, Alaska, and their Possible Modulation by Ocean Load and Tectonic Stresses: Re-evaluation of the Hypothesis based on New Data from 1984-1998, *PAGEOPH*, 155, 701-712, 1999.

38.

Dehn, J. and S.R. McNutt, Volcanic Materials in Commerce and Industry, Chapter 78 of *Encyclopedia of Volcanoes*, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Academic Press, San Diego, CA, 1273-1284, 2000.

39.

Garces, M.A., S.R. McNutt, R.A. Hansen, and J.C. Eichelberger, Application of Wave-Theoretical Seismoacoustic models to the Interpretation of Explosion and Eruption Tremor Signals Radiated by Pavlof Volcano, Alaska. *J. Geophys. Res.* 105, 3039-3058, 2000.

40.

Lu, Z., C. Wicks, D. Dzurisin, W. Thatcher, J.T. Freymueller, S.R. McNutt, and D. Mann, Aseismic Inflation of Westdahl Volcano, Alaska, Revealed by Satellite Radar Interferometry, *Geophys. Res. Lett.*, 27, 1567-1570, 2000.

41.

McNutt, S.R., Volcanic Seismicity, Chapter 63 of *Encyclopedia of Volcanoes*, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Academic Press, San Diego, CA, 1015-1033, 2000.

42.

McNutt, S.R., Seismic Monitoring, Chapter 68 of *Encyclopedia of Volcanoes*, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Academic Press, San Diego, CA, 1095-1119, 2000.

43.

McNutt, S.R. and C.M. Davis, Lightning Associated with the 1992 Eruptions of Crater Peak, Mount Spurr Volcano, Alaska, *J. Volcanol. And Geotherm. Res.*, v.102, p.45-65, 2000.

44.

McNutt, S.R., H. Rymer, and J. Stix, Synthesis of Volcano Monitoring, Chapter 71 of *Encyclopedia of Volcanoes*, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Academic Press, San Diego, CA, 1167-1185, 2000.

45.

Power, J.A., S.C. Moran, S.R. McNutt, S.D. Stihler, and J.J. Sanchez, Seismic Response of the Katmai Volcanoes to the December 6, 1999 Magnitude 7.0 Karluk Lake Earthquake, Alaska, *Bull. Seis. Soc. Amer.*, v.91, p.57-63, 2001.

46.

Roach, A.L., J.P. Benoit, K.G. Dean, and S.R. McNutt, The Combined Use of Satellite and Seismic Monitoring During the 1996 Eruption of Pavlof Volcano, Alaska, *Bull. Volcanol.*, v.62, p.385-399, 2001.

47.

Dean, K., J. Dehn, S. McNutt, C. Neal, R. Moore, and D. Schneider, The 2001 Eruptions of Mt. Cleveland, Chuginadak Island, Alaska, *Eos Trans. Amer. Geophys. Union*, v.83, no. 22, p.243, 246-247, 2002.

48.

McNutt, S.R., Volcano Seismology, Chapter 25 of *International Handbook of Earthquake and Engineering Seismology*, Lee, W.H.K., H. Kanamori, and P.C. Jennings (eds.), v. 81A, p. 383-406, IASPEI, Palo Alto, CA, 2002.

49.

Thompson, G., S.R. McNutt, and G. Tytgat, Three Distinct Regimes of Volcanic Tremor Associated with Eruptions of Shishaldin Volcano, Alaska, April 1999. *Bull. Volcanol.*, 10.1007/s00445-002-0228-z, 2002.

50.

Nye, C.J., T.E.C. Keith, J.C. Eichelberger, T.P. Miller, S.R. McNutt, S. Moran, D.J. Schneider, J. Dehn, and J.R. Schaefer, The 1999 eruption of Shishaldin Volcano, Alaska: monitoring a distant eruption. *Bull. Volcanol.*, DOI: 10.1007/s00445-002-0225-2, 2002.

51.

Benoit, J.P., S.R. McNutt, and V. Barboza, The Duration-Amplitude Distribution of Volcanic Tremor, *J. Geophys. Res.*, 108 (B3), 2146, DOI: 10.1029/2001JB001520, 2003.

52.

Caplan-Auerbach, J., and S.R. McNutt, New Insights into the 1999 Eruptions of Shishaldin Volcano Based on Acoustic Data. *Bull. Volcanol.*, DOI: 10.1007/s00445-002-0267-5, 2003.

53.

Caplan-Auerbach, J., S.C. Moran, G. Tytgat, T.A. Plucinski, S.R. McNutt, and J.F. Paskievitch, Seismic Explorations in the Eastern Aleutians, Alaska, *Seis. Res. Lettr.*, v.75, p.8-21, 2004.

54.

McNutt, S.R., Volcanic tremor and its use in estimating eruption parameters. *Proceedings of the 2nd International Conference on Volcanic Ash and Aviation Safety*, U.S. Dept. of Commerce, NOAA, section 2, p. 49-50, 2004.

55.

McNutt, S.R., and W. Marzocchi, Simultaneous earthquake swarms and eruption in Alaska, Fall 1996: Statistical Significance and Inference of a Large Aseismic Slip Event. *Bull. Seis. Soc. Amer.*, v.94, p.1831- 1841, 2004.

56.

Sanchez, J.J., M. Wyss, and S.R. McNutt, Temporal-Spatial Variations of Stress at Redoubt Volcano, Alaska, Inferred from Inversion of Fault Plane Solutions. *J. Volcanol. Geotherm. Res.*, 130/1-2, p. 1-29, 2004.

57.

Sanchez, J.J., S.R. McNutt, J.A. Power, and M. Wyss, Spatial variations in the frequency-magnitude distribution of earthquakes at Mount Pinatubo Volcano. *Bull. Seis. Soc. Amer.*, v.94, p.430-438, 2004.

58.

Sanchez, J.J. and S.R. McNutt, Intermediate-term declines in seismicity at Mt. Wrangell and Mt. Veniaminof volcanoes, Alaska, following the November 3, 2002, Mw 7.9 Denali Fault earthquake. *Bull. Seis. Soc. Amer.*, 94, 6B, S370-S383, 2004.

59.

Williams, E.R. and S.R. McNutt, Total water contents in volcanic eruption clouds and implications for electrification and lightning. *Proceedings of the 2nd International Conference on Volcanic Ash and Aviation Safety*, U.S. Dept. of Commerce, NOAA, section 2, p. 67-71, 2004.

60.

Sanchez, J.J. and S.R. McNutt, Unexpected response of Mount Wrangell volcano, Alaska, to the shaking from a large regional earthquake: A puzzle for intermediate-term earthquake-volcanoes interactions. *Earth Sciences Research Journal*, v.8, 1, p.34-44, 2004.

61.

McNutt, S.R., A Review of Volcanic Seismology. Annual Reviews of Earth and Planetary Sciences, v. 33, p. 461-491 doi: 10.1146/annurev.earth.33.092203.122459, 2005.

62.

West, M., J.J. Sanchez, and S.R. McNutt, Periodically-triggered seismicity at Mt. Wrangell volcano following the Sumatra-Andaman Islands earthquake. Science, v. 308, p. 1144-1146, 2005.

63.

De Angelis, S. and S.R. McNutt, Degassing and hydrothermal activity at Mt. Spurr, Alaska during the summer of 2004 inferred from the complex frequencies of long-period events. Geophys. Res. Lettr., v.32, L12312, Doi: 10.1029/2005GL022618, 2005.

64.

Williams, E.R. and S.R. McNutt, Total water contents in volcanic eruption clouds and implications for electrification and lightning. Research Signpost, Recent Progress in Lightning Physics, 2005: ISBN: 81-308-0016-0, Ed.: C. Pontikis, 13p., 2005.

65.

Wilson, C.R., J.V. Olson, C.A.L. Szuberla, S. McNutt, G. Tytgat, and D.P. Drob, Infrasonic Array Observations at I53US of the 2006 Augustine Volcano Eruptions. Inframatics, No. 13, March 2006, P. 11-25.

66.

Petersen, T., J. Caplan-Auerbach, and S.R. McNutt, Sustained long-period seismicity at Shishaldin volcano, Alaska. J. Volcanol. and Geotherm. Res., v. 151, p. 365-381, 2006.

67.

Petersen, T., S. De Angelis, G. Tytgat, and S.R. McNutt, Local Infrasound Observations of Large Ash Explosions at Augustine Volcano, Alaska, During January 11-28, 2006. Geophys. Res. Lett., v.33, L12303, doi:10.1029/2006GL026491, 2006.

68.

Petersen, T. and S.R. McNutt, Seismo-acoustic signals associated with degassing explosions recorded at Shishaldin Volcano, Alaska, 2003-2004. Bull. Volcanol., doi: 10.1007/s00445-006-0088-z, 2007.

69.

Jolly, A.D., S.C. Moran, S.R. McNutt, and D. B. Stone, Three-dimensional P-wave velocity structure derived from local earthquakes at the Katmai group of volcanoes, Alaska. J. Volcanol. and Geotherm. Res., v. 159, p. 326-342, doi: 10.1016/j.volgeores.2006.06.022., 2007.

70.

Thomas, R.J., P.R. Krehbiel, W. Rison, G. Aulich, H. Edens, S.R. McNutt, G. Tytgat, and E. Clark, Electrical activity during the 2006 Mount St. Augustine volcanic eruptions. *Science*, v. 315, p. 1097, 2007.

71.

De Angelis, S. and S.R. McNutt, Observations of volcanic tremor during The January-February 2005 eruption of Mt. Veniaminof, Alaska. *Bull. Volcanol.*, v. 69, p. 927-940, DOI 10.1007/s00445-007-0119-4, 2007.

72.

Benson, C., R. Motyka, S. McNutt, M. Luthi, and M. Truffer, Glacier-Volcano Interactions in the North Crater of Mt Wrangell, Alaska. *Annals of Glaciology*, v.45, p. 48-57, 2007.

73.

Waythomas, C.F., S.G. Prejean, and S.R. McNutt, August-September, 2007 Eruption of Pavlof Volcano, Alaska. *Eos Trans. Amer. Geophys. Union*, v. 89, no. 23, 3 June 2008.

74.

Sparks, R.S.J., C. B. Folkes, M. C.S. Humphreys, D.N. Barfod, J. Clavero, M. C.Sunagua, S.R. McNutt, and M. E. Pritchard, UTURUNCU VOLCANO, BOLIVIA: VOLCANIC UNREST DUE TO MID-CRUSTAL MAGMA INTRUSION, *Amer. J. Science*, v. 308, p. 727-769, DOI: 10.2475/06.2008.01, June 2008.

75.

McNutt, S.R. and Nishimura, T., Volcanic Tremor During Eruptions: Temporal Characteristics, Scaling and Estimates of Vent Radius, *J. Volcanol. Geotherm. Res.*, v. 178, p. 10-18, 2008.

76.

Larsen, J., C. Neal, P. Webley, J. Freymueller, M. Haney, S. McNutt, D. Schneider, S. Prejean, J. Schaefer, R. Wessels, Eruption of Alaska Volcano Breaks Historic Pattern, *Eos, Trans. Amer. Geophys. Union*, v. 90, p. 173-174, 2009.

77.

Lu, Z., D. Dzurisin, J. Biggs, C. Wicks, and S. McNutt, Ground surface deformation patterns, magma supply, and magma storage at Okmok volcano, Alaska, from InSAR analysis: I. Inter-eruption deformation, 1997-2008. *J. Geophys. Res.*, v.115, B00B02, doi:10.1029/2009JB006969, 2010

78.

McNutt, S.R. and E.R. Williams, Volcanic Lightning: Global observations and constraints on source mechanisms. *Bull. Volcanol.*, v. 72, no. 10, p. 1153, doi: 10.1007/s00445-010-0393-4, 2010

79.

Arnoult, K.M., J.V. Olson, and C.A.L. Szuberla, S.R. McNutt, M.A. Garcès, D. Fee, M.A.H. Hedlin, Infrasound Observations of the 2008 Explosive Eruptions of Okmok and Kasatochi Volcanoes, Alaska. *J. Geophys. Res.*, v.115, D00115, doi:10.1029/2010JD013987, 2010

80.

Jacobs, K.M., and S.R. McNutt, Using Seismic b-values to Interpret Seismicity Rates and Physical processes During the Augustine 2005-2006 Pre-eruptive Earthquake Swarm. USGS Prof. Paper 1769, 2010.

81.

McNutt, S.R., G. Tytgat, S. Estes, and S. Stihler, A Parametric Study of the January 2006 Explosive Eruptions of Augustine Volcano, Alaska, using seismic, infrasonic, and lightning data. USGS Prof. Paper 1769, 2010.

82.

Sentman, D., S.R. McNutt, H.C. Stenbaek-Nielsen, G. Tytgat and N. DeRoin, Imaging observations of hot thermal emissions from Augustine Volcano using a small astronomical camera, USGS Prof. Paper 1769, 2010.

83.

Thomas, R.J., S.R. McNutt, P. Krehbiel, W. Rison, G. Aulich, H. Edens, G. Tytgat, and E. Clark, Lightning and Electrical Activity During the Eruptions of Augustine Volcano. USGS Prof. Paper 1769, 2010.

84.

McNutt, S.R., Volcanic tremor wags on, *Nature*, v.470, p.471-472, 2011.

85.

De Angelis, S., S.R. McNutt and P.W. Webley, Evidence of atmospheric gravity waves during the 2008 eruption of Okmok volcano from seismic and remote sensing observations. *Geophys. Res. Lett.*, v.38, doi:10.1029/2011GL047144, 2011.

86.

Fee, D., S.R. McNutt, T. Lopez, K.M. Arnoult, C.A.L. Szuberla, J.V. Olson, Combining Local and Remote Infrasound Recordings from the 2009 Redoubt Volcano Eruption. *J. Volcanol. Geotherm. Res.*, doi:10.1016/j.volgeores.2011.09.012, 2011.

87.

Peterson, C.L., S.R. McNutt, and D.H. Christensen, Non-volcanic tremor in the Aleutian Arc (short note). *Bull. Seis. Soc. Amer.*, v.101, doi: 10.1785/0120100241, 2011.

88.

DeRoin, N., S.R. McNutt, D. Sentman, and C. Reyes, Seismicity of Block-and-Ash Flows Occurring During the 2006 Eruption of Augustine Volcano, Alaska. *J. Volcanol. Geotherm. Res.*, v. 213-214, p. 14-26, 2012.

89.

DeRoin N. and S.R. McNutt, Rockfalls at Augustine Volcano, Alaska: The Influence of Eruption Precursors and Seasonal Factors on Occurrence Patterns 1997-2009. *J. Volcanol. Geotherm. Res.*, v. 211-212, p. 61-75, 2012.

90.

Jay, J., M.E. Pritchard, M.E. West, D. Christensen, M. Haney, E. Minaya, M. Sunagua, S.R. McNutt, M. Zabala, Shallow seismicity, triggered seismicity, and ambient noise tomography at the long-dormant Uturuncu volcano, Bolivia. *Bull. Seis. Soc. Amer.*, doi:10.1007/s00445-011-0568-7, 2011.

91.

Behnke, S.A., R.J. Thomas, S.R. McNutt, D.J. Schneider, P.R. Krehbiel, W. Rison, and H.E. Edens, Observations of Volcanic Lightning during the 2009 Eruption of Redoubt Volcano. *J. Volcanol. Geotherm. Res.*, doi:10.1016/j.jvolgeores.2011.12.010, 2012.

92.

Behnke, S.A., R.J. Thomas, P.R. Krehbiel, S.R. McNutt, Spectacular Lightning Revealed in 2009 Mount Redoubt Eruption. *EOS, Trans. Amer. Geophys. Un.*, v. 93, no. 20, p. 193-194, 2012.

93.

McNutt, S.R., G. Thompson, M.E. West, D. Fee, S. Stihler, E. Clark, Local seismic and infrasound observations of the 2009 explosive eruptions of Redoubt Volcano, Alaska. *J. Volcanol. Geotherm. Res.*, <http://dx.doi.org/10.1016/j.jvolgeores.2013.03.016>, 2013.

94.

Behnke, S.A. and S.R. McNutt, Using Lightning Observations as a Volcano Monitoring Tool, *Bull. Volcanol.*, 76: 847, DOI 10.1007/s00445-014-0847-1, 2014.

95.

IAEA, Other Phenomena (Atmospheric Phenomena) (Costa, A., S.R. McNutt, T. Wilson), IAEA-TECDOC-VHA, in press July 2014.

96.

IAEA, Volcano Monitoring (McNutt, S.R.) IAEA-TECDOC-VHA, in press July 2014.

97.

Rodgers, M., D.C. Roman, H. Geirsson, P. LaFemina, S.R. McNutt, A. Munoz, V. Tenorio, Stable and unstable phases of elevated seismic activity at the persistently restless Telica Volcano, Nicaragua. *J. Volcanol. Geotherm. Res.*, v. 290, p. 63-74, 2015.

98.

DeRoin, N., S.R. McNutt, and G. Thompson, Duration-Amplitude Relationships of Volcanic Tremor and Earthquake Swarms Preceding and During the 2009 Eruption of Redoubt Volcano, Alaska. *J. Volcanol. Geotherm. Res.*, v. 292, p. 56-69, 2015.

99.

Genareau, K., J.B Wardman, T.M Wilson, S.R. McNutt, P. Izbekov, Lightning-Induced Volcanic Spherules. *Geology*, 2015, doi:10.1130/G36255.1.

100.

McNutt, S.R. and D. Roman, Volcanic Seismicity, Chapter 59 of *Encyclopedia of Volcanoes*, 2nd Edition, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Elsevier, London, p. 1011-1034, 2015.

101.

McNutt, S.R. and R.J. Thomas, Volcanic Lightning. Chapter 62 of *Encyclopedia of Volcanoes*, 2nd Edition, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Elsevier, London, p. 1059-1076, 2015.

102.

McNutt, S.R., G. Thompson, J. Johnson, S. De Angelis, and D. Fee, Seismic and Infrasonic Monitoring, Chapter 63 of *Encyclopedia of Volcanoes*, 2nd Edition, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Elsevier, p.1071-1099, 2015.

103.

Pallister, J. and S.R. McNutt, Synthesis of Volcano Monitoring, Chapter 66 of *Encyclopedia of Volcanoes*, 2nd Edition, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Elsevier, p. 1151-1171, 2015.

104.

Dehn, J. and S.R. McNutt, Volcanic Materials in Commerce and Industry, Chapter 74 of *Encyclopedia of Volcanoes*, 2nd Edition, Sigurdsson, H., B. Houghton, S.R. McNutt, H. Rymer, and J. Stix (eds.), Elsevier, London, p. 1285-1294, 2015.

105.

Hill, D.P., M.M. Mangan, and S.R. McNutt, Volcanic Unrest and Hazard Communication in Long Valley Caldera, California. in press, Springer-Verlag book

SUBMITTED PAPERS:

106.

Waythomas, C.F., and S.R. McNutt, Spatter Construct, Ice Interaction and Lahar Generation: An Example from Pavlof Volcano, Alaska. in review: J. Volcanol. Geotherm. Res., Nov 2014.

107.

Olson, J.V., C.R. Wilson, C.A.L. Szuberla, S.R. McNutt, G. Tytgat, and D.P. Drob, Infrasonic Observations of the 2006 Augustine Volcano Observations at I53US. withdrawn, USGS Prof. Paper 1769.

108.

Benoit, J.P. and S.R. McNutt, Use of a Global Database of Volcanic Earthquake Swarms During the 1996 Seismo-Volcanic Crisis at Akutan Volcano, Alaska, under revision for J. Volcanol. Geotherm. Res.

109.

McNutt, S.R., S. Wiemer and M. Wyss, The Role of Mean Depth of Background Seismicity in Rupture Initiation for Moderate and Major Earthquakes in California, to be submitted to Bull. Seis. Soc. Amer.

PUBLICATIONS (reports):

r1.

McNutt, S., Seismic monitoring of volcanoes in the Aleutians, Volcano News, 11, 7, 1982.

r2.

McNutt, S., NEWT System: Preliminary analysis, California Geol., 39, 51-55, 1986.

r3.

Berger, J., M.S. Reichle, and S.R. McNutt, Seismic system design concepts for a California Rapid Earthquake Assessment Program. California Div. Mines and Geol. Open-File Rpt. 89-26, 82, 1989.

r4.

McNutt, S.R., Analysis of earthquake spectra from Long Valley, California, using the NEWT seismic system. California Div. Mines and Geol. Open-File Rpt. 89-6, 46, 1989.

r5.

McNutt, S.R., A Bibliography of volcanic tremor and related phenomena. California Div. Mines and Geo. Open-File Rpt. 89-14, 141, 1989.

r6.

McNutt, S., Medicine Lake Highland September 1988 earthquake swarm. California Geol., 42, 51-52, 1989.

r7.

McNutt, S., Loma Prieta earthquake, October 17, 1989, Santa Cruz County, California. *California Geol.*, 43, 3-7, 1990.

r8.

McNutt, S.R., Overview of damage and losses caused by the Loma Prieta earthquake. *California Div. Mines and Geol. Special Publ. 104*, 131-138, 1990.

r9.

McNutt, S.R. and R.H. Sydnor, Introduction. *California Div. Mines and Geol. Special Publ. 104*, vii-x, 1990.

r10.

McNutt, S.R. and T.R. Toppozada, Seismology of the 17 October 1989 earthquake. *California Div. Mines and Geol. Special Publ. 104*, 11-27, 1990.

r11.

Hill, D.P., M.J.S. Johnston, J.O. Langbein, S.R. McNutt, C.D. Miller, C. Mortensen, A.M. Pitt, and S. Rojstaczer, Response plans for volcanic hazards in the Long Valley Caldera and Mono Craters area, California. *U.S.G.S. Open File Report 91-270*, 65, 1991.

r12.

McNutt, S., W. Bryant, and R. Wilson, The Mono Lake earthquake of October 23, 1990. *California Geol.*, 44, 27-32, 1991.

r13.

McNutt, S.R., Eruptions of Pavlof Volcano, Alaska, and their possible modulation by ocean load and tectonic stresses: Re-evaluation of the hypothesis based on new data from 1984-1992. In: Scholl, D., S. Kirby, and G. Bebout (eds.), *SUBCON, An interdisciplinary conference on the subduction process*, U.S. Geological Survey Open-File Report, 5p., 1994.

r14.

McNutt, S.R., Can We Predict Volcanic Eruptions? *Geophys. Inst. Biennial Report 1993-1994*, University of Alaska Fairbanks, p. 14-18, 1995.

r15.

Benoit, J.P. and S.R. McNutt, Global Volcanic Earthquake Swarm Database 1979-1989. *U.S.G.S. Open-File Report 96-69*, 334 p., 1996.

r16.

Nishimura, T. and S.R. McNutt, Characteristics of Volcanic Tremor During Eruptions. in: Akiyama, M. (ed.) *Dynamics of Vapor Explosions*. Final Report. March 1998. The

Ministry of Education, Science, Sports and Culture, Grant-in-Aid for Scientific Research on Priority Areas, Tokyo, Japan, pp. 71-76.

r17.

Moran, S.C., K.G. Dean, S.R. McNutt, and D.J. Schneider, The Eruptions of Pavlof (1996) and Shishaldin (1999): Lessons Learned from the Monitoring of Two Remote Alaskan Volcanoes, U.S. Geological Survey Circular, in press.

r18.

Lu, Z. C. Wicks, D. Dzurisin, W. Thatcher, J.T. Freymueller, S.R. McNutt, and D. Mann, Watching Magma from Space. *Geotimes*, 45 (11), 36-37, 2000.

r19.

Sparks, R.S.J. and S.R. McNutt, Message from the new President and Secretary-General of IAVCEI. *Bull. Volc.*, 62 (1), 5-7, 2000.

r20.

Jolly, A.D., S.D. Stihler, J.A. Power, J.C. Lahr, J. Paskievitch, G. Tytgat, S. Estes, A.B. Lockhart, S.C. Moran, S.R. McNutt, and W.R. Hammond, Catalog of Earthquake Hypocenters at Alaskan Volcanoes: January 1, 1994 through December 31, 1999, U.S. Geological Survey Open-File Report 01-189, Online version 1.0, 2001.

r21.

Dixon, J.P., S.D. Stihler, J.A. Power, G. Tytgat, S. Estes, S.C. Moran, J. Paskievitch, and S.R. McNutt, Catalog of earthquake hypocenters at Alaskan volcanoes: January 1, 2000 through December 31, 2001, US Geol. Survey Open-File Report 02-342, 56 p., 2002.

r22.

Dixon, J.P., S.D. Stihler, J.A. Power, G. Tytgat, S.C. Moran, J. Sanchez, S. Estes, S.R. McNutt, and J. Paskievitch, Catalog of earthquake hypocenters at Alaskan volcanoes: January 1 through December 31, 2002, US Geol. Survey Open-File Report 03-267, 58 p., 2003.

r23.

M. Hamburger, S.R. McNutt, D. Dzurisin, J. Fink, D. Hill, C. Meertens, C. Newhall, S. Owen, J. Power, EarthScoping the Inner Workings of Magmatic Systems. *Eos Trans. Amer. Geophys. Union*, v. 84, no. 25, p. 235, 2003.

r24.

Dixon, J. P., Stihler, S. D., Power, J. A., Tytgat, G., Moran, S. C., Sanchez, J. J., McNutt, S. R., Estes, S., and Paskievitch, J., 2004, Catalog of earthquake hypocenters at Alaskan volcanoes: January 1 through December 31, 2003: U.S. Geological Survey Open-File Report 2004-1234. [available on the World Wide Web at <http://pubs.usgs.gov/of/2004/1234/>].

r25.

Dixon, J. P., Stihler, S. D., Power, J. A., Tytgat, G., Estes, S., Prejean, S., Sanchez, J. J., Sanches, R., McNutt, S. R., and Paskievitch, J., 2005, Catalog of earthquake hypocenters at Alaskan volcanoes: January 1 through December 31, 2004: U.S. Geological Survey Open-File Report 2005-1312, 74p. [available on the World Wide Web at <http://pubs.usgs.gov/of/2005/1312/>].

r26.

Grunder, A. and S. McNutt, Volcanology, Geochemistry, and Petrology: Assembly Focuses on Volcanism and Societal Impacts. *Eos Trans. Amer. Geophys. Un.*, v. 86, no. 18, 2005.

r27.

Dixon, J. P., Stihler, S. D., Power, J. A., Tytgat, G., Estes, S., McNutt, S. R., Catalog of earthquake hypocenters at Alaskan volcanoes: January 1 through December 31, 2005: U.S. Geological Survey Open-File Report 2006-1264, 78p. [available on the World Wide Web at <http://pubs.usgs.gov/of/2006/1264/>].

r28.

Dixon, J. P., Stihler, S. D., Power, J. A., Tytgat, G., Estes, S., McNutt, S. R., Catalog of earthquake hypocenters at Alaskan volcanoes: January 1 through December 31, 2006: U.S. Geological Survey Open-File Report 2007-xxxx, 78p. [available on the World Wide Web at <http://pubs.usgs.gov/of/2007/xxxx/>].

r29.

McNutt, S.R., J. Dehn, K. Dean, J. Beget, J. Freymueller, J. Larsen, P. Izbekov, M. West, and G. Tytgat, Final Technical Report, Central Aleutian Volcano Monitoring, May 1, 2003-April 30, 2008. U.S. Geological Survey, 19 p., 2008.

r30.

McNutt, S.R., J. Dehn, K. Dean, J. Beget, J. Freymueller, J. Larsen, P. Izbekov, M. West, and G. Tytgat, Final Technical Report, Cook Inlet Volcano Monitoring, May 18, 2003-May 17, 2008. U.S. Geological Survey, 26 p., 2008.

r31.

Schaefer, J.R. (ed.), K. Bull, C. Cameron, M. Coombs, A. Diefenbach, T. Lopez, S. McNutt, C. Neal, A. Payne, J. Power, D. Schneider, W. Scott, S. Snedigar, G. Thompson, K. Wallace, C. Waythomas, P. Webley, and C. Werner, The 2009 Eruption of Redoubt Volcano, Alaska. DGGs Report of Investigations 2011-5, 45 p., 2012.

r32.

Williams, E.R. and S.R. McNutt, Scientific Motivation for UAV Measurements Inside Volcanic Eruptions. MIT Workshop, November 2014.

r33.

Aster , R. and M. Simons (Co-Editors), Future Geophysical Facilities Required to Address Grand Challenges in the Earth Sciences. A Community Report to the National Science Foundation, September 2015.

PUBLICATIONS (abstracts):

a1.

McNutt, S., Volcanic earthquakes correlated with earth tides at Pavlof Volcano, EOS Trans. Amer. Geophys. Un., 61, 6, 68, 1980.

a2.

McNutt, S., Preliminary calculations of Mount St. Helens b-values, EOS Trans. Amer. Geophys. Un., 62, 6, 62, 1981.

a3.

McNutt, S.R., Short term patterns of seismicity at Pavlof Volcano and the solid earth tides, IAVCEI Symp. on Arc Volcanism, Abst. Volume, IAVCEI and Volc. Soc. Japan, Tokyo, Hakone, 1981.

a4.

McNutt, S. and D. Harlow, Nano-earthquake swarms in Guatemala observed prior to the February 4, 1976 earthquake, EOS Trans. Amer. Geophys. Un., 62, 7, 323, 1981.

a5.

McNutt, S., Analysis of volcanic tremor from Pavlof, Fuego, Pacaya, San Cristobal, Masaya, and Poas Volcanoes, EOS Trans. Amer. Geophys. Un., 63, 18, 459, 1982.

a6.

Yuan, A., S. McNutt, and D. Harlow, Seismicity and eruptive activity of Fuego Volcano, Guatemala: February 1975 - January 1977, EOS Trans. Amer. Geophys. Un., 63, 18, 459, 1982.

a7.

Beavan, J., R. Bilham, E. Hauksson, K. Jacob, and S. McNutt, Episodic slip beneath the Shumagin Islands, Alaska, presented at IUGG, Hamburg, Germany, August 1983, 1983.

a8.

McNutt, S., Analysis of volcanic tremor from Pavlof, Fuego, Pacaya, San Cristobal, and Masaya Volcanoes (extended abstract with figures), Bol. De Volcanol., Heredia, Costa Rica, 14, 54-58, 1983.

a9.

McNutt, S., Seismic and eruptive activity of Pavlof Volcano, 1973-1983, related to Shumagin Gap?, EOS Trans. Amer. Geophys. Un., 64, 258, 1983.

a10.

McNutt, S., A review of volcano seismicity (invited), EOS Trans. Amer. Geophys. Un., 64, 265, 1983.

a11.

McNutt, S., Analysis of volcanic earthquakes at Pavlof Volcano, Alaska, and Poas Volcano, Costa Rica, Program and Abstracts, Seis. Soc. Amer. Eastern Sect. 55th Annual Meeting, 1983.

a12.

McNutt, S., and Mori, J., Analysis of b-type earthquakes and explosions at Pavlof Volcano, EOS Trans. Amer. Geophys. Un., 64, 45, 1983.

a13.

Luckman, M.A. and S.R. McNutt, Large-scale velocity structure of the crust and upper mantle in the vicinity of Pavlof Volcano, Alaska, EOS Trans. Amer. Geophys. Un., 65, 1002, 1984.

a14.

McNutt, S.R., Eruption characteristics, cycles, and the state of stress at Pavlof Volcano, eastern Aleutians, as inferred from seismicity, Earthquake Notes, 55, 12, 1984.

a15.

McNutt, S., Eruption cycles and characteristics, and the state of stress at Pavlof Volcano, eastern Aleutians, EOS Trans. Amer. Geophys. Un., 65, 242-243, 1984.

a16.

McNutt, S.R. and R.J. Beavan, Periodic eruptions at Pavlof Volcano, Alaska: The effects of sea level and an aseismic slip event, EOS Trans. Amer. Geophys. Un., 65, 1149, 1984.

a17.

Taber, J.J. and S.R. McNutt, Temporal and spatial changes in seismicity associated with subduction near the Shumagin Islands, Alaska, EOS Trans. Amer. Geophys. Un., 65, 987, 1984.

a18.

McNutt, S., Volcanic tremor: Basic facts and perspective, EOS Trans. Amer. Geophys. Un., 66, 1152, 1985.

a19.

McNutt, S.R. and R.J. Beavan, Periodic eruptions at Pavlof Volcano, Alaska: The effects of sea level and an aseismic slip event, Abstracts Volume, IAVCEI 1985 Scientific Assembly Giardini-Naxos (Italy), 23, 1985.

a20.

McNutt, S.R., Seismic precursors to eruptions at Pavlof Volcano, Alaska, Abstracts Volume, 1986 Intl. Volcanol. Congress, New Zealand, 257, 1985.

a21.

McNutt, S.R., Seismic monitoring of volcanoes, (invited) EOS Trans. Amer. Geophys. Un., 67, 397, 1986.

a22.

McNutt, S.R., Analysis of earthquake spectra from Long Valley, California using an automatic, near-real-time computer system, EOS Trans. Amer. Geophys. Un., 68, 1363, 1987.

a23.

McNutt, S.R., Volcanic tremor at Pavlof Volcano, Alaska, 1973-1986. Abstracts volume, Hawaii Symp. on "How Volcanoes Work", Hilo, Hawaii, 172, 1987.

a24.

McNutt, S.R., Performance of the NEWT System, 1984-1986. Seismol. Res. Lett., 58, 1, 12, 1987.

a25.

McNutt, S.R., Analysis of Long Valley spectral data using the NEWT system (extended abstract with figures) Long Valley Caldera Symp., March 17-18, 1987 Lawrence Berkeley Laboratory, 1987.

a26.

Smith, D. and S.R. McNutt, Comparison of foreshocks to aftershocks from the July 1986 Chalfant Valley earthquake sequence. Seismol. Res. Lett., 58, 1, 21, 1987.

a27.

McNutt, S.R., and MacLean, J., Analysis of time-varying earthquake spectra from the Long Valley, California, region using data from the NEWT seismic system, EOS Trans. Amer. Geophys. Un., 69, 1301, 1988.

a28.

McNutt, S.R., Volcanic tremor from around the world. In: Continental Magmatism, Abstracts. Bull. 131, New Mexico Bureau of Mines and Mineral Resources Socorro, New Mexico, 183, 1989.

a29.

McNutt, S.R., Volcanic tremor from around the world, (invited) EOS Trans. Amer. Geophys. Un., 70, 1189, 1989.

a30.

McNutt, S.R. and C.H. Cramer, Spectral analyses of earthquakes in the Mammoth Mountain swarm, May to August, 1989, EOS Trans. Amer. Geophys. Un., 70, 1190,1989.

a31.

Taber, J.J., S.R. McNutt, and T.P. Miller, Seismological and geological activity of Pavlof Volcano, Alaska, 1986-1989, EOS Trans. Amer. Geophys. Un., 70, 1190,1989.

a32.

McNutt, S.R., Volcanic tremor amplitude correlated with eruption explosivity and its potential application for a volcanic ash warning system. In: Casadevall and others, U.S.G.S. Circular 1065, 32, 1991.

a33.

McNutt, S.R., Problems with automated seismic monitoring of volcanic areas, using examples from Long Valley caldera and elsewhere. Abstracts volume, Napoli 1991 Intl. Conf. on Active Volcanoes and Risk Mitigation, Naples, Italy, 220, 1991.

a34.

Melson, W.G., V. Barboza, and S.R. McNutt, Correlations between eruptive mode, acoustics, seismicity and petrology of some 1991 eruptions of Arenal Volcano, Costa Rica, EOS Trans. Amer. Geophys. Un., 72, 44 suppl., 567, 1991.

a35.

McNutt, S.R., Problems with Automated Seismic Monitoring of Volcanic Areas. Seismol. Res. Lett., 63, 1, 53, 1992.

a36.

McNutt, S.R. and J.A. Power, Volcanoes, Earthquakes, and Tsunamis in Alaska and the Aleutians. AAAS 43rd Arctic Sci. Conf., Prog. and Proc. Volume, 139-140, 1992.

a37.

McNutt, S.R., Eruptions of Pavlof Volcano, Alaska, and their Possible Modulation by Ocean Load and Tectonic Stresses: Implications for the Shumagin Seismic Gap. Wadati Conf. on Great Subduction Earthquakes, Abst. Volume, 153, 1992.

a38.

Alaska Volcano Observatory Staff, Seismological Aspects of the 1992 Eruptions of Mt. Spurr Volcano, Alaska. Wadati Conf. on Great Subduction Earthquakes, Abst. Volume, 68-72, 1992.

a39.

Miller, T.P., J.A. Power, J.C. Eichelberger, S.R. McNutt, and J.N. Davies, The 1989-90 Redoubt and 1992 Mt. Spurr Volcanic Eruptions: Response Procedures of the Alaska Volcano Observatory. EOS Trans. Amer. Geophys. Un., 73, 43, suppl., 68, 1992.

a40.

Miller, T.P., S.R. McNutt, J.C. Eichelberger, and C.A. Neal, The 1992 Eruptions of Mt. Spurr Volcano, Alaska: An Overview. EOS Trans. Amer. Geophys. Un., 73, 43, suppl., 342, 1992.

a41.

Power, J.A., A.D. Jolly, S.D. Stihler, R.A. Page, J.C. Lahr, C.D. Stephens, B.A. Chouet, S.R. McNutt, J.N. Davies, and G.D. March, Precursory Seismicity and Forecasting of the 1992 Eruptions of Mount Spurr, Alaska. EOS Trans. Amer. Geophys. Un., 73, 43, suppl., 342, 1992.

a42.

Tytgat, G. and S.R. McNutt, Volcanic Tremor Prior to and During the 1992 Eruptions of Mt. Spurr Volcano, Alaska. EOS Trans. Amer. Geophys. Un., 73, 43, suppl., 342, 1992.

a43.

McNutt, S.R., The Geobuoy: An Air-deployable Seismometer for Monitoring Active, EOS Trans. Amer. Geophys. Un., 73, 43, suppl., 377, 1992.

a44.

McNutt, S.R. and G. Tytgat, Amplitude Ratios, Spectra, and Temporal Patterns as Diagnostics of Source Processes for Volcanic Tremor at Mt. Spurr, Alaska. EOS Trans. Amer. Geophys. Un., 74, 43, suppl., 648, 1993.

a45.

Davis, C.M. and S.R. McNutt, Lightning Associated with the 1992 Eruptions of Mt. Spurr, Alaska. EOS Trans. Amer. Geophys. Un., 74, 43, suppl., 649, 1993.

a46.

Benoit, J.P. and S.R. McNutt, Volcanic Earthquake Swarm Durations. EOS Trans. Amer. Geophys. Un., 74, 43, suppl., 648, 1993.

a47.

McNutt, S., Seismological Aspects of the 1992 Eruptions of Mt. Spurr Volcano, Alaska. Proc. Workshop on Volcanic Disaster Prevention, Japan-US Sci. and Technol. Council Workshop, Menlo Park, CA, 8-12 March 1993, 11-14, 1993.

a48.

McNutt, S.R., Volcanic Tremor Amplitude Correlated with Eruption Explosivity and its Potential Use in Determining Ash Hazards to Aviation. Abstracts Volume, Intl. Workshop on Galeras Volcano, Pasto, Colombia, January 1993, 11 (extended abstract with figures), 1993.

a49.

McNutt, S.R. and G. Tytgat, Volcanic Tremor and Seismicity at Mt. Spurr, 1992. Abst. Volume, Colima Volcano Fourth Intl. Meeting, January 24 -28,1994, 126, 1994.

a50.

Davis, C.M. and S.R. McNutt, Volcanic Lightning at Mt. Spurr, 1992. Abst. Volume, Colima Volcano Fourth Intl. Meeting, January 24-28, 1994, 112,1994.

a51.

McNutt, S.R. and G. Tytgat, Volcanic Tremor During Eruptions. Seis. Res. Lett., 65, 55, 1994.

a52.

McNutt, S.R., Eruptions of Pavlof Volcano, Alaska, and Their Possible Modulation by Ocean Load and Tectonic Stresses: Implications for the Shumagin Seismic Gap. Abst. Volume, SUBCON, June 12-17, 1994, Avalon, CA, 3, 1994.

a53.

Benoit, J.P. and S.R. McNutt, A Volcanic Earthquake Swarm Database. European Seismol. Commission, Workshop on "Seismic Signals on Active Volcanoes: Possible Precursors of Volcanic Eruptions." September 21-25, 1994, Nicolosi, Italy, 4.,1994.

a54.

McNutt, S.R. and G. Tytgat, Volcanic Tremor During Eruptions. EOS. Trans. Amer. Geophys. Un., 75, 44, suppl., 715, 1994.

a55.

Benoit, J.B. and S.R. McNutt, Factors Affecting the Duration of Volcanic Earthquake Swarms. EOS Trans. Amer. Geophys. Un., 75, 44, suppl., 715, 1994.

a56.

Jolly, A.D., J.C. Lahr, J.A. Power, S.D. Stihler, P.L. Ward, and S.R. McNutt, Velocity Models for Locations of Shallow Seismicity Along the Northeastern Portion of the Aleutian Arc. EOS Trans. Amer. Geophys. Un., 75, 44, suppl., 422-423, 1994.

a57.

McNutt, S.R., Volcanic Tremor During Eruptions. IUGG XXI General Assembly, and the Environ., Abst. Week A, Boulder Colorado, A353, 1995.

a58.

McNutt, S.R. and J.P. Benoit, Generic Volcanic Earthquake Swarm Model. IUGG XXI General Assembly, Geophys. Environ., Abst. Week A, Boulder CO, A64, 1995.

a59.

Benoit, J.P. and S.R. McNutt, The Relationship of Volcanic Eruptions to Volcanic Earthquake Swarm Duration and Earthquake Magnitude. IUGG XXI General Assembly, Geophys. and the Environ., Abst. Week A, Boulder, CO, A51-52, 1995.

a60.

McNutt, S.R., Seismological Evidence Concerning Aleutian Arc Magma Systems. Abst. with Prog., GSA 91st Annual Cordilleran Sect. Meeting, Fairbanks, AK, 64, 1995.

a61.

McNutt, S.R., Volcanic Tremor During Eruptions. Proc. 1995 Intl. Workshop on Volcanoes Commemorating the 50th Anniversary of Mt. Showa-Shinzan, Short papers and abst. volume, Hokkaido, Japan, 87, 1995.

a62.

McNutt, S.R. and J.P. Benoit, Generic Volcanic Earthquake Swarm Model. Per. Mineral., 64, 229-230, 1995.

a63.

Benoit, J.P., S. McNutt, W. Melson, V. Barboza, and J. Barquero, Spectral Polarization Analysis of Broadband Recordings of Volcanic Tremor at Arenal Volcano, Costa Rica. EOS Trans. Amer. Geophys. Un., Suppl., 76, 45, 349-350, 1995.

a64.

McNutt, S.R. and S.J. Parmley, Preliminary Magnitude Estimation from Clipped Coda Signal Duration for Alaska. EOS Trans. Amer. Geophys. Un., Suppl., 76, 45, 427, 1995.

a65.

Allmann, A., J. Benoit, D. Christensen, S. Estes, J. Freymueller, R. Hansen, H. Fletcher, K. Lindquist, S. McNutt, L. Rao, C. Rowe, G. Tytgat, S. Wiemer, M. Wyss, B. Hammond, K.A. Fogleman, J.C. Lahr, N. Macgregor-Scott, C.D. Stephens, and R. Combellick, The Tatlina River, Alaska, Earthquake of October 6, 1995. EOS Trans. Amer. Geophys. Un., suppl., 77, 1996.

a66.

Benoit, J.P. and S.R. McNutt, Amplitude Scaling of Volcanic Tremor at Mt. Spurr, Pavlof, Redoubt, Karkar, Arenal, and Kilauea Volcanoes, EOS Trans. Amer. Geophys. Un., Suppl., 77, 46, F514, 1996.

a67.

Jolly, A.D., S.R. McNutt, S. Wiemer, and J.C. Lahr, An Evaluation of b-value Spatial Mapping Techniques Based on an Analysis of Seismicity at Mt. Spurr, Alaska, and Synthetic Data, EOS Trans. Amer. Geophys. Un., Suppl., 77, 46, F514, 1996.

a68.

McNutt, S.R. and S. Wiemer, Variations in the Frequency-Magnitude Distribution with Depth at Mount St. Helens and Mt. Spurr, EOS Trans. Amer. Geophys. Un., Suppl., 77, 46, F514, 1996.

a69.

Benoit, J.P. and S.R. McNutt, New Constraints on Source Processes of Volcanic Tremor at Arenal Volcano, Costa Rica, Using Broadband Seismic Data, Abstracts Volume, IAVCEI General Assembly, Puerto Vallarta, Mexico, January 1997, 79, 1997.

a70.

Benoit, J.P. and S.R. McNutt, Amplitude Scaling of Volcanic Tremor at Mt. Spurr, Redoubt, Pavlof, Ulawun, Karkar, Arenal, and Kilauea Volcanoes, Abst. Volume, IAVCEI General Assembly, Puerto Vallarta, Mexico, January 1997, 79, 1997.

a71.

Benoit, J.P., S.R. McNutt, M.A. Garces, and N. Husen, Volcanic Tremor and Ground-Coupled Airwave Observations During the 1996 Eruptions of Pavlof Volcano, Alaska, and Their Implications for Source Locations, EOS Trans. Amer. Geophys. Un., Suppl., 78, 46, F430, 1997.

a72.

Jolly, A.D., S.R. McNutt, M.L. Coombs, S.D. Stihler, and J. Paskievitch, Seismicity in the Vicinity of the Katmai Group of Volcanoes, Katmai National Park, Alaska; July 1995-March 1997, EOS Trans. Amer. Geophys. Un., Suppl., 78, 46, F442, 1997.

a73.

McNutt, S.R., Seismic Monitoring of the September-December 1996 Eruptions of Pavlof Volcano by the Alaska Volcano Observatory, EOS Trans. Amer. Geophys. Un., Suppl., 78, 17, S47, 1997.

a74.

McNutt, S.R. and J.P. Benoit, Use of the Global Volcanic Earthquake Swarm Database during the March 10-14, 1996 Akutan, Alaska, Seismo-volcanic Crisis, Abst. Volume, IAVCEI General Assembly, Puerto Vallarta, Mexico, January 1997, 145, 1997.

a75.

McNutt, S.R., J. Benoit, D. Christensen, S. Estes, G. Tytgat, S. Stihler, S. Wiemer, A. Jolly, M. Robinson, R. Hansen, K. Lindquist, M. Garces, J. Lahr, R. Hammond, J. Paskievitch, and J. Power, Broadband Seismology at the Alaska Volcano Observatory, 1993-1997, EOS Trans. Amer. Geophys. Un., Suppl., 78, 46, F429, 1997.

a76.

McNutt, S.R. and T. Nishimura, Temporal Characteristics of Volcanic Tremor During Eruptions and a Kinetic Source Model, Abst. Volume, IAVCEI General Assembly, Puerto Vallarta, Mexico, January 1997, 79, 1997.

a77.

Jolly, A.D. and S.R. McNutt, Analyses of b-value Changes and Earthquake Depth Migration at Martin and Mageik Volcanoes, Alaska, July 1995 to April 1997, Abst. Volume, Colima Volcano Fourth Intl. Meeting, January 26-30, 1998, x, 1998.

a78.

McNutt, S.R. and T. Nishimura, Characteristics of the Eruption Tremor and a Kinetic Source Model, Abst. of Intl. Seis. Volcanic Workshop on Kamchatka - Aleutian Subduction Proc., July 1-9, 1998, Petropavlovsk-Kamchatsky, 79-80, 1998.

a79.

Jolly, A.D. and S.R. McNutt, Relationship Between b-values and Maximum Depths of Seismicity at Martin and Mageik Volcanoes, Katmai National Park, Alaska, Abst. of Intl. Seis. Volcanic Workshop on Kamchatka ñ Aleutian Subduction Processes, July 1-9, 1998, Petropavlovsk-Kamchatsky, 77-78, 1998.

a80.

Wiemer, S., M. Wyss, and S. McNutt, Mapping Magma Chambers Based on Anomalously Small Mean Earthquake Magnitude, Abstracts of Intl. Seis. Volcanic Workshop on Kamchatka - Aleutian Subduction Proc., July 1-9, 1998, Petropavlovsk-Kamchatsky, suppl., 1998.

a81.

Wiemer, S., M. Wyss, and S. McNutt, Mapping the frequency-magnitude distribution in volcanic areas, Japan Earth and Planetary Sci. Joint Meeting, Abst. Volume, V-37, 1998.

a82.

Wiemer, S., S.R. McNutt, and M. Wyss, Temporal and three-dimensional spatial analyses of the frequency-magnitude distribution near Long Valley caldera, California, EOS Trans. Amer. Geophys. Un., Suppl., 79, 45, F962, 1998.

a83.

Wilson, E.K. and S.R. McNutt, Parameters of the Generic Volcanic Earthquake Swarm Model, EOS Trans. Amer. Geophys. Un., Suppl., 79, 45, F962, 1998.

a84.

Wiemer, S., M. Wyss, and S. McNutt, The frequency-magnitude distribution in volcanic areas, Japanese Geophys. Soc., Abst. Volume, x, 1998.

a85.

McNutt, S.R., Actions taken and lessons learned from seismology in volcanic crises in Alaska, 1989-1998, EOS Trans. Amer. Geophys. Un., Suppl., 79, 45, F973, 1998.

a86.

Benoit, J.P., G. Thompson, K. Lindquist, R. Hansen, and S.R. McNutt, Near-real-time WWW-based monitoring of Alaskan volcanoes: The Iceweb system, EOS Trans. Amer. Geophys. Un., Suppl., 79, 45, F957, 1998.

a87.

Jolly, A.D., S.C. Moran, and S.R. McNutt, P-wave tomography at Katmai National Park, Alaska Peninsula, Alaska, EOS. Trans. Amer. Geophys. Un., Suppl., 79, 45, F621, 1998.

a88.

McNutt, S.R. and G. Tytgat, Volcanic tremor during eruptions, Seis. Res. Lett., 70, 218, 1999.

a89.

McNutt, S.R., Eruptions of Pavlof volcano, Alaska, and their possible modulation by ocean load and tectonic stresses: Re-evaluation of the hypothesis based on new data from 1984-1998, IUGG 99 Birmingham Abst., B.174, 1999.

a90.

McNutt, S.R., Seismology during volcanic crises in Alaska, 1989-1998, IUGG 99 Birmingham Abst., B.158, 1999.

a91.

McNutt, S.R., Volcanic lightning, IUGG 99 Birmingham Abst., A.75, 1999.

a92.

McNutt, S.R., S. Wiemer, and M. Wyss, Temporal and three-dimensional spatial analyses of the frequency-magnitude distribution near Long Valley caldera, California, IUGG 99 Birmingham Abst., B.101, 1999.

a93.

Thompson, G., S.R. McNutt, D. Mann, and G. Bower, Monitoring and Analysis of Volcanic Tremor Reduced Displacement and Spectra Associated with Eruptions of Shishaldin Volcano, April 1999, EOS. Trans. Amer. Geophys. Un., Suppl., 80, 46, F1146, 1999.

a94.

McNutt, S.R., Periodic Eruptions of Pavlof Volcano, Alaska, (Abstracts Volume), 1999 UNAVCO Volcano Geodesy Workshop, September 16-18, Jackson, WY, 26, 1999.

a95.

Dehn, J., K.G. Dean, J.C. Eichelberger, S.R. McNutt, R.A. Hansen, K.G. Lindquist, E. Suleimani, N. Ratchkovski, and R. Smith, Monitoring of North Pacific Volcanoes, Earthquakes, and Tsunamis, Hawaii, October 2000.

a96.

Hausback, B.P. and S.R. McNutt, Volcano Calendar 1992-2001, EOS. Trans. Amer. Geophys. Un., Suppl., 81, 46, F287, 2000.

a97.

Jolly, A.D. and S.R. McNutt, Three-Dimensional Attenuation Structure at the Volcanoes of Katmai National Park, Alaska Peninsula, Alaska, EOS. Trans. Amer. Geophys. Un., Suppl., 81, 46, F1375, 2000.

a98.

McNutt, S.R., J. Dehn, and J. Gardner, Phreatic Explosions at Shishaldin Volcano, Alaska, September 1999 to August 2000, EOS. Trans. Amer. Geophys. Un., Suppl., 81, 46, F1376, 2000.

a99.

McNutt, S.R. and M. Murakami, Periodic Volcanic Eruptions and a Possible Mechanism Inferred from GPS Data, EOS. Trans. Amer. Geophys. Un., Suppl., 81, 46, F336, 2000.

a100.

McNutt, S.R. and J.J. Sanchez, Composite Focal Mechanisms at Four Alaskan Volcanoes, Seis. Res. Lett., 71, 250-251, 2000.

a101.

McNutt, S.R. and G. Thompson, Analyses of Volcanic Tremor During the 1999 Eruptions of Shishaldin Volcano, Alaska, Abstract and Addresses, IAVCEI General Assembly 2000, Exploring Volcanoes: Utilization of Their Resources and Mitigation of Their Hazards, Bali, Indonesia, July 18-22, 2000, 34, 2000.

a102.

Pearson, A.D., S.R. McNutt, and D.H. Christensen, The Three-Dimensional Structure of the Summit Magma Complex at Kilauea Volcano, Hawaii, from Travel Time CDI Tomography, EOS. Trans. Amer. Geophys. Un., Suppl., 81, 46, F1334, 2000.

a103.

Power, J.A., S.C. Moran, S.R. McNutt, S.D. Stihler, and J.J. Sanchez, Seismicity Beneath the Katmai Volcanoes Following the December 6, 1999 Magnitude 7.0 Katmai Lake Earthquake, Alaska, EOS. Trans. Amer. Geophys. Un., Suppl., 81, 46, F917, 2000.

a104.

Sanchez, J. and S.R. McNutt, New Composite Focal Mechanisms at Four Alaskan Volcanoes, Abst. Volume, Colima Volcano Seventh Intl. Meeting, March 6-10, 2000, 94, 2000.

a105.

Sanchez, J.J., M. Wyss, and S.R. McNutt, Inversion of Focal Mechanism Data for the Directions of Stress at Redoubt, EOS. Trans. Amer. Geophys. Un., Suppl., 81, 46, F1352, 2000.

a106.

Caplan-Auerbach, J., and S.R. McNutt, Pressure Sensor Reveals New Details of the 1999 Eruption of Shishaldin Volcano, Alaska. *Eos Trans. Amer. Geophys. Un., Suppl.*, 82, 47, F1326, 2001.

a107.

McNutt, S.R., A Review of Seismic Expressions of Magma Chambers. GSA Penrose Conference, Mammoth Lakes, CA, June 6-12, 2001.

a108.

McNutt, S.R. and M. Murakami, Periodic Volcanic Eruptions and a Possible Mechanism Inferred from GPS Data, Cities on Volcanoes II, Auckland, New Zealand, p.94, 12th-16th February 2001.

a109.

McNutt, S.R., W. Marzocchi, and J. Power, Simultaneous Earthquake Swarms and Eruptions in Alaska, Fall 1996. *Eos Trans. Amer. Geophys. Un., Suppl.*, 82, 47, F811, 2001.

a110.

Moran, S.C., J.F. Paskievitch, J.A. Power, G. Tytgat, S.R. McNutt, and S. Estes, Seismicity from a Decade of Recording by Alaska Volcano Observatory Seismic Networks in Alaskan National Parks. National Park Service Workshop, Anchorage, AK, January 2001.

a111.

Power, J., M. Johnston, J. Freymueller, M. Lisowski, T. Murray, Z. Lu, J. Eichelberger, D. Dzuris, S. McNutt, S. Moran, M. Wyss, D. Mann, C. Wicks, C. Nye, W. Thatcher, J.F. Larson, and P. Haeussler, Magmatic, Eruptive, and tectonic Processes in the Aleutian Arc, Alaska, submitted to Earthscope Workshop, Snowbird Utah, Oct. 2001.

a112.

Power, J.A., S.C. Moran, S.R. McNutt, S.D. Stihler, and J.J. Sanchez, Triggered Seismicity Beneath the Katmai Volcanoes Following the December 6, 1999 Magnitude 7.0 Karluk Lake Earthquake, Alaska. National Park Service Workshop, Anchorage, AK, January 2001.

a113.

Sanchez, J.J., S.R. McNutt, M. Wyss, and J.A. Power, Spatial Variations in the Frequency-magnitude Distribution of Earthquakes at Mount Pinatubo Volcano. *Eos Trans. Amer. Geophys. Un., Suppl.*, 82, 47, F14, 2001.

a114.

Tytgat, G., J. Caplan-Auerbach and S.R. McNutt, New Seismic Data From Okmok Volcano, Alaska, Using a Rapid Response Seismic Recording System. *Eos Trans. Amer. Geophys. Un., Suppl.*, 82, 47, F1375, 2001.

a115.

Caplan-Auerbach, J., S.R. McNutt, and S. Vergnolle, Acoustic recordings of Strombolian and Subplinian activity at Shishaldin volcano, Alaska. *Seis. Res. Lettr.*, v. 73, no. 2, p. 243, 2002.

a116.

Caplan-Auerbach, J., S.R. McNutt, S. Vergnolle, and M. Boichu, Acoustic recordings of Strombolian and Subplinian activity at Shishaldin volcano, Alaska. *Eos Trans. Amer. Geophys. Un.*, v. 83 (19), Spring Meeting Suppl., p. S386, 2002.

a117.

Caplan-Auerbach, J., T. Petersen, and S.R. McNutt, Unusual Hybrid Earthquakes at Shishaldin Volcano, Alaska. *Eos Trans. Amer. Geophys. Un.*, v. 83 (47), Fall Meeting Suppl., p. 1484, 2002.

a118.

McNutt, S.R., *Seismology: The State of Knowledge of the Aleutian Arc, 2002. 3rd Biennial Workshop on Subduction Processes emphasizing the Kurile-Kamchatka-Aleutian Arcs, Abstracts Volume, Fairbanks, Alaska, 2 p., June 2002.*

a119.

McNutt, S.R., Volcanic Tremor and its use in Estimating Eruption Parameters. *Eos Trans. Amer. Geophys. Un.*, v. 83 (47), Fall Meeting Suppl., p. F1500-F1501, 2002.

a120.

McNutt, S.R., Volcano Seismology GEOS 671, A graduate course at the University of Alaska Fairbanks, *Eos Trans. Amer. Geophys. Un.*, v. 83 (19), Spring Meeting Suppl., p. S382, 2002.

a121.

McNutt, S.R., and J. Caplan-Auerbach, Pressure Sensor Data Reveal New Details of the April 1999 Eruptions of Shishaldin Volcano, Alaska. *Mount Pelee 1902-2002, Explosive Volcanism in Subduction Zones, Martinique, 12-16 May 2002.*

a122.

McNutt, S.R., W. Marzocchi, and J. Power, Simultaneous Earthquake Swarms and Eruptions in Alaska, Fall 1996. *Mount Pelee 1902-2002, Explosive Volcanism in Subduction Zones, Martinique, 12-16 May 2002.*

a123.

McNutt, S.R., W. Marzocchi, and J. Power, Simultaneous Earthquake Swarms and Eruptions in Alaska, Fall 1996. *3rd Biennial Workshop on Subduction Processes emphasizing the Kurile-Kamchatka-Aleutian Arcs, Abstracts Volume, Fairbanks, Alaska, 2 p., June 2002.*

a124.

Murray, T.L., J.A. Power, J.T. Freymueller, G. Tytgat, J.F. Paskievitch, B.A. Pauk, S.C. Moran, M. Lisowski, M.J.S. Johnston, T.A. Plucinski, J. Caplan-Auerbach, S.R. McNutt, D. Mann, and T. Petersen, PBO-Style Instrumentation Deployed at Akutan Volcano and Okmok Caldera, Aleutian Arc, Alaska, *Eos Trans. Amer. Geophys. Un.*, v. 83 (47), Fall Meeting Suppl., p. F1329, 2002.

a125.

Petersen, T., J. Caplan-Auerbach, and S.R. McNutt, Temporal Distribution and Rates of Repetitive Low-frequency Earthquakes at Shishaldin Volcano, Alaska, *Eos Trans. Amer. Geophys. Un.*, v. 83 (47), Fall Meeting Suppl., p. F1484, 2002.

a126.

Sanchez, J.J., and S.R. McNutt, Search for a Possible Triggering Effect Between Tectonic Earthquakes and Swarms at Volcanoes. *Eos Trans. Amer. Geophys. Un.*, v. 83 (47), Fall Meeting Suppl., p. 1482, 2002.

a127.

Sanchez, J.J., M. Wyss, and S.R. McNutt, Temporal-Spatial Variations of Stress at Redoubt Volcano, Alaska, Inferred from Inversion of Fault Plane Solutions, submitted to VIIIth Colima International Volcanological Congress, Colima, Mexico, 2002.

a128.

J.A. Power, T.L. Murray, J. T. Freymueller, G. Tytgat, J.F. Paskievitch, B.A. Pauk, S.C. Moran, M. Lisowski, M.J.S. Johnston, T.A. Plucinski, J. Caplan-Auerbach, S.R. McNutt, D. Mann, T. Petersen. EarthScope/PBO - Style Geodetic and Seismic Instrumentation/Monitoring at Frequently-Active Aleutian Arc Volcanoes. Earthscope Workshop, Vancouver Washington, Oct. 31-Nov. 2, 2002.

a129.

McNutt, S.R., S.A. Estes, and N. Ratchkovski, Additional aftershocks after the Mw7.9 Denali Fault Earthquake. *Eos Trans. Amer. Geophys. Un.*, v. 83, Fall Meeting Late Breaking Session, p. 6, 2002.

a130.

McNutt, S.R., J.J. Sanchez, S.C. Moran, and J.A. Power, Intermediate-term declines in seismicity at two volcanoes in Alaska following the Mw7.9 Denali Fault earthquake. *Eos Trans. Amer. Geophys. Un.*, v. 83, Fall Meeting Late Breaking Session, p. 8, 2002.

a131.

Moran, S.C., J.J. Sanchez, J.A. Power, S.D. Stihler, and S.R. McNutt, Remotely triggered seismicity at Alaskan volcanoes following the Mw7.9 Denali Fault earthquake. *Eos Trans. Amer. Geophys. Un.*, v. 83, Fall Meeting Late Breaking Session, p. 7-8, 2002.

a132.

McNutt, S.R., Volcanic Hazards Monitoring in the Pacific Region. 20th Pacific Science Association Congress, Bangkok, March 17-21, 2003.

a133.

Caplan-Auerbach, J. and S.R. McNutt, Pressure sensor, seismic and satellite data needed to resolve details of the 1999 eruption of Shishaldin Volcano, Alaska. IUGG 2003 Abstracts Volume, Sapporo, Japan, p. A.543, 2003.

a134.

McNutt, S.R., and J.J. Sanchez, Intermediate-term declines in seismicity at two volcanoes in Alaska following the Mw7.9 Denali Fault earthquake. IUGG 2003 Abstracts Volume, Sapporo, Japan, p. A.219, 2003.

a135.

McNutt, S.R., A brief history of IAVCEI. IUGG 2003 Abstracts Volume, Sapporo, Japan, p. B.4, 2003.

a136

Jolly, A.D., S.C. Moran, and S.R. McNutt, Three-dimensional velocity structure from earthquakes at Katmai National Park, Alaska: Implications for earthquake relocations and spatial frequency-size distributions. IUGG 2003 Abstracts Volume, Sapporo, Japan, p. A.554, 2003.

a137.

McNutt, S.R., Anticipated Seismicity Preceding and Accompanying VEI=7 and 8 Volcanic Eruptions. 54th Arctic Science Conference, Fairbanks, Alaska, Sept. 22-24, 2003.

a138.

McNutt, S.R. and M.E. Pritchard, Seismic and geodetic unrest at Uturuncu Volcano, Bolivia. Eos Trans. Amer. Geophys. Un., v. 84 (46), Fall Meeting Suppl., Abstract V51J-0405, p. F1632, 2003.

a139.

Reyes, C.G. and S.R. McNutt, Quasi-periodic episodes of volcanic tremor at Okmok Volcano, Alaska. Eos Trans. Amer. Geophys. Un., v. 84 (46), Fall Meeting Suppl., Abstract V31B-03, p. F1543, 2003.

a140.

Sanchez, J.J. and S.R. McNutt, Intermediate-term declines in seismicity at Mt. Wrangell and Mt. Veniaminof volcanoes, Alaska, following the Mw 7.9 Denali Fault earthquake. Eos Trans. Amer. Geophys. Un., v. 84 (46), Fall Meeting Suppl., Abstract S12A-0375, p. F1000, 2003.

a141.

Sanchez, J.J. and S.R. McNutt, Drops in Seismicity at two volcanoes in Alaska after the Denali earthquake. AAAS Annual Meeting, Abstracts, February 12-16, 2004. Seattle, WA, p. A134, 2004.

a142.

Williams, E.R. and S.R. McNutt, Volcanic eruptions as thunderstorm ice factories. International Workshop on Lightning Physics, May 3-9, 2004. Guadeloupe, France, 2004.

a143.

McNutt, S.R., Volcanic tremor and its use in estimating eruption parameters. Conference Booklet, The 2nd International Conference on Volcanic Ash and Aviation Safety, June 21-24, 2004, Alexandria, Virginia, p. 5--40, 2004.

a144.

Williams, E.R. and S.R. McNutt, Volcanic eruptions as thunderstorm ice factories. Conference Booklet, The 2nd International Conference on Volcanic Ash and Aviation Safety, June 21-24, 2004, Alexandria, Virginia, p. 5--46, 2004.

a145.

McNutt, S.R., Volcanic tremor and its use in estimating eruption parameters. Abstracts volume, "Linkages among tectonics, seismicity, magma genesis, and eruption in volcanic arcs," IV International Biennial Workshop on Subduction Processes emphasizing the Japan-Kurile-Kamchatka-Aleutian Arcs, August 21-27, 2004, Petropavlovsk-Kamchatsky, p. 66-67, 2004.

a146.

Foulkes, C., M. Humphreys, R.S.J. Sparks, C. Annen, J. Clavero, S. Mayel, S. McNutt, and M. Pritchard, Magma generation at the restless Uturuncu dacite stratovolcano, Bolivia. IAVCEI General Assembly, "Volcanism and its impact on society," November 14-19, 2004, Pucon, Chile, 2004.

a147.

McNutt, S.R., Volcanic tremor and its uses and limitations for estimating eruption parameters. IAVCEI General Assembly, "Volcanism and its impact on society," November 14-19, 2004, Pucon, Chile, 2004.

a148.

McNutt, S.R., J.J. Sanchez, M.E. Pritchard, M. Sunagua, R. Muranca, C. Annen, M. Humphreys, A. le Friant, R.S.J. Sparks, and J. Clavero, Seismic and geodetic activity at Uturuncu volcano, Bolivia. IAVCEI General Assembly, "Volcanism and its impact on society," November 14-19, 2004, Pucon, Chile, 2004.

a149.

Reyes, C.G. and S.R. McNutt, The many faces of volcanic tremor at Okmok volcano, Alaska. IAVCEI General Assembly, "Volcanism and its impact on society," November 14-19, 2004, Pucon, Chile, 2004.

a150.

Sanchez, J.J. and S.R. McNutt, Constraints in the locations of earthquakes at Mount Veniaminof, Alaska. IAVCEI General Assembly, "Volcanism and its impact on society," November 14-19, 2004, Pucon, Chile, 2004.

a151.

Williams, E.R. and S.R. McNutt, Volcanic lightning: eruptions as thunderstorm ice factories. IAVCEI General Assembly, "Volcanism and its impact on society," November 14-19, 2004, Pucon, Chile, 2004.

a152.

Hafner, L.A., and S.R. McNutt, The apparent periodicity of felt reports in the Alaskan earthquake record. *Eos Trans. Amer. Geophys. Un.*, v. 85 (46), Fall Meeting Suppl., Abstract S31A-1038, p. F1345, 2004.

a153.

Kore, K.R., S.R. McNutt, and D.H. Christensen, Systematic search for background seismicity rate changes and correlations at Alaskan volcanoes. *Eos Trans. Amer. Geophys. Un.*, v. 85 (46), Fall Meeting Suppl., Abstract S24A-07, p. F1341, 2004.

a154.

McNutt, S.R., A review of frequency-magnitude relation studies at volcanoes. *Eos Trans. Amer. Geophys. Un.*, v. 85 (46), Fall Meeting Suppl., Abstract S22A-08, p. F1329, 2004.

a155.

Sanchez, J.J. and S.R. McNutt, Seismicity of Mt. Veniaminof, Alaska: implications for an active magmatic system. *Eos Trans. Amer. Geophys. Un.*, v. 85 (46), Fall Meeting Suppl., Abstract V14B-07, p. F1828, 2004.

a156.

Williams, E.R. and S.R. McNutt, Are large volcanic eruptions just dirty thunderstorms? *Eos Trans. Amer. Geophys. Un.*, v. 85 (46), Fall Meeting Suppl., Abstract AE23A-0842, p. F259, 2004.

a157.

McNutt, S.R., Volcanic tremor and its use in estimating eruption parameters. Conference Booklet, Proceedings of the 2nd International Conference on Volcanic Ash and Aviation Safety, U.S. Dept. of Commerce, NOAA, section 2, p. 49-50, 2004.

a158.

McNutt, S.R., Using data from drill holes to resolve issues in volcano seismology. International Workshop, Shimabara City, Japan, Feb. 27-28, 2005.

a159.

West, M., J.J. Sanchez, and S.R. McNutt, Periodically-triggered seismic events at Mt. Wrangell volcano following the Sumatra-Andaman Islands Earthquake. *Seis. Res. Lettr.*, v. 76, no. 2, p. 221, 2005.

a160.

McNutt, S.R., Volcano Seismology: A tool to monitor and understand explosive volcanism., IRIS-UNAVCO Joint Workshop, abstract volume p. 92, June 9-11, 2005.

a161.

De Angelis, S. and S.R. McNutt, Seismic monitoring of the January-February 2005 eruption of Mt. Veniaminof, Alaska. IRIS-UNAVCO Joint Workshop, abstract volume p. 39, June 9-11, 2005.

a162.

McNutt, S.R., Volcano seismology: Global status and the role of IAVCEI (International Association of Chemistry of the Earth's Interior). Workshop Program and Abstracts, IGOS Geohazards Workshop, BRGM, Orleans, France, June 27-29, 2005.

a163.

McNutt, S.R., Volcanic activity in Alaska and the Aleutian Islands, 1989-2005. Abstracts Volume, The 21st Century COE Program, International Symposium 2005 in Sendai, Japan, p. 190-192, 2005.

a164.

Petersen, T. and S.R. McNutt, Repeating Long-Period earthquakes at Shishaldin Volcano, Alaska. *Eos Trans. Amer. Geophys. Un.*, v. 86 (46), Fall Meeting Suppl., Abstract xx-xx, p. Fxx, 2005.

a165.

DeRoin, N., S.R. McNutt, and E. Williams, Seismic, webcam and satellite observations of eruptions at Veniaminof Volcano, Alaska, January-February 2005. *Eos Trans. Amer. Geophys. Un.*, v. 86 (46), Fall Meeting Suppl., Abstract xx-xx, p. Fxx, 2005.

a166.

Peterson, C., D.H. Christensen, and S.R. McNutt, Episodic Tremor In The Alaska/Aleutian Subduction Zone. *Eos Trans. Amer. Geophys. Un.*, v. 86 (46), Fall Meeting Suppl., Abstract xx-xx, p. Fxx, 2005.

a167.

Jacobs, K.M., and S.R. McNutt, Update of the Global Volcanic Earthquake Swarm Database: Search for eruption forecasting possibilities. Abstracts Volume, Fourth Conference Cities on Volcanoes, IAVCEI, Quito-Ecuador 23-27 Jan 2006, p.96, 2006.

a168.

Petersen, T. and S.R. McNutt, Seismo-acoustic signals associated with degassing explosions recorded at Shishaldin Volcano, Aleutian Islands, Alaska. Abstracts Volume, Fourth Conference Cities on Volcanoes, IAVCEI, Quito-Ecuador 23-27 Jan 2006, p.106, 2006.

a169.

DeRoin, N., S.R. McNutt, and E. Williams, Seismic, webcam and satellite observations of eruptions at Veniaminof Volcano, Alaska, January-February 2005. Abstracts Volume, Fourth Conference Cities on Volcanoes, IAVCEI, Quito-Ecuador 23-27 Jan 2006, p.89, 2006.

a170.

Reyes, C.G. and S.R. McNutt, Tremor source definition at Okmok Volcano, Alaska. Abstracts Volume, Fourth Conference Cities on Volcanoes, IAVCEI, Quito-Ecuador 23-27 Jan 2006, p.108, 2006.

a171.

De Angelis, S. and S.R. McNutt, Ash eruptions and low-frequency earthquake activity at Mt. Veniaminof, Alaska, during January-February 2005. Abstracts Volume, Fourth Conference Cities on Volcanoes, IAVCEI, Quito-Ecuador 23-27 Jan 2006, p.88, 2006.

a172.

De Angelis, S. and S. R. McNutt, Spectral analyses of long period earthquakes with extended coda recorded at Mt. Spurr, Alaska, by use of the Sompi method. Abstracts Volume, Fourth Conference Cities on Volcanoes, IAVCEI, Quito-Ecuador 23-27 Jan 2006, p.88, 2006.

a173.

Benson, C., M. Luthi, M. Truffer, R. Motyka, and S. McNutt, Glacier-Volcano Interactions on Mt. Wrangell, Alaska. Intl. Symposium on Earth and Planetary Ice-volcano Interactions, Reykjavik, Iceland, 19-23 June 2006.

a174.

McNutt, S.R., Seismic and Infrasound Monitoring of Eruptions at Augustine Volcano, December 2005-January 2006. GSA Anchorage 2006.

a175.

Peterson, C., D.H. Christensen, S.R. McNutt, and J.T. Freymueller, Episodic Tremor in the Alaska/Aleutian Subduction Zone. Chapman Conference on Active Tectonics and Seismic Potential of Alaska, Girdwood, Alaska, May 11-14, 2006.

a176.

Thomas, R. P. Krehbiel, W. Rison, S. McNutt, G. Tytgat, and E. Clark, Lightning Observations during Augustine Volcano Eruption of Jan 27, 2006 ñ Initial Results. Amer. Met. Soc. Annual Meeting, Feb. 2006, Atlanta, GA, 2006.

a177.

Wilson, C.R., S. McNutt, J.V. Olson, and G. Tytgat, Infrasonic wave observations at Fairbanks, AK, of Augustine Volcano eruptions during January 2006. Acoustical Society of America Meeting, Dec 2006.

a178.

McNutt, S.R., S.A. Estes, S. Stihler, S. De Angelis, T. Petersen, A Parametric Study of the Explosive Eruptions of Augustine Volcano, Alaska, January 11-28, 2006. 2006 Infrasonic Technology Workshop, 25-28 September, 2006, Program and Abstracts, Fairbanks, AK, p. 66-67, 2006.

a179.

Wilson, C.R., S. McNutt, J.V. Olson, Infrasonic wave observations at Fairbanks, AK, of Augustine Volcano eruptions during January 2006. 2006 Infrasonic Technology Workshop, 25-28 September, 2006, Program and Abstracts, Fairbanks, AK, p. 68, 2006.

a180.

DeRoin, N., S.R. McNutt, C. Reyes, D.D. Sentman, Rockfalls, Avalanches and Landslides at Augustine Volcano, 2003-2006. Eos Trans. Amer. Geophys. Un., v. 87 (52), Fall Meeting Suppl., Abstract V51C-1684, 2006.

a181.

Estes, S.A, S.R. McNutt, S. Stihler, S. De Angelis, T. Petersen, A Parametric Study of the Explosive Eruptions of Augustine Volcano, Alaska, January 11-28, 2006. Eos Trans. Amer. Geophys. Un., v. 87 (52), Fall Meeting Suppl., Abstract V41F-08, 2006.

a182.

Jacobs, K., S.R. McNutt, S. De Angelis, C. Reyes, Strong T-phases recorded in the Aleutian Arc following the April 20, 2006 Koryakia, Russia Mw=7.6 earthquake. Eos Trans. Amer. Geophys. Un., v. 87 (52), Fall Meeting Suppl., Abstract S53B-1342, 2006.

a183.

McNutt, S.R. and T. Nishimura, Volcanic Tremor During Eruptions: Temporal Characteristics, Scaling and Estimates of Vent Radius, Eos Trans. Amer. Geophys. Un., v. 87 (52), Fall Meeting Suppl., Abstract V31G-01, 2006.

a184.

Olson, J.V., C. R. Wilson, S. McNutt, G. Tytgat, Infrasonic Wave Observations of the January 2006 Augustine Volcano Eruptions. Eos Trans. Amer. Geophys. Un., v. 87 (52), Fall Meeting Suppl., Abstract V51C-1685, 2006.

a185.

Peterson, C., D. Christensen, S. McNutt, and J. Freymuller, Non-Volcanic tremor in the Alaska/Aleutian Subduction Zone and its relation to slow-slip event. *Eos Trans. Amer. Geophys. Un.*, v. 87 (52), Fall Meeting Suppl., Abstract T41A-1550, 2006.

a186.

Rison, W., P. Krehbiel, R. Thomas, H. Edens, G. Aulich, N. O'Connor, S. Kieft, S. McNutt, G. Tytgat, E. Clark, Lighting Observations During the Mt. Augustine Volcanic Eruptions With the Portable Lightning Mapping Stations. *Eos Trans. Amer. Geophys. Un.*, v. 87 (52), Fall Meeting Suppl., Abstract AE44A-08, 2006.

a187.

Sentman, D.D., S.R. McNutt, C. Reyes, H.C. Stenbaek-Nielsen, and N. DeRoin, Nighttime Near Infrared Observations of Augustine Volcano Jan-Apr, 2006 Recorded With a Small Astronomical CCD Camera. *Eos Trans. Amer. Geophys. Un.*, v. 87 (52), Fall Meeting Suppl., Abstract V42B-03, 2006.

a188.

Thomas, R.J., P. Krehbiel, W. Rison, G. Aulich, H. Edens, S. McNutt, G. Tytgat, and E. Clark, Lightning and electrical activity during the eruption of Mt. Augustine. *Eos Trans. Amer. Geophys. Un.*, v. 87 (52), Fall Meeting Suppl., Abstract V42B-01, 2006.

a189.

McNutt, S.R., State-of-the-Art Volcano Monitoring: A Parametric Study of the Explosive Eruptions of Augustine Volcano, Alaska, January 11-28, 2006. PSA General Assembly, Okinawa, Japan, June 2007.

a190.

McNutt, S.R., S. Estes, S. Stihler, S. De Angelis, T. Petersen, and G. Tytgat, A Geophysical Study of the Explosive Eruptions of Augustine Volcano, Alaska, January 11-28, 2006. IUGG General Assembly, Perugia, Italy, July 2007.

a191.

Thomas, R.J., P.R. Krehbiel, W. Rison, H. Edens, S.R. McNutt, and G. Tytgat, Lightning and Electrical Activity During the 2006 Eruption of Mt. Augustine. IUGG General Assembly, Perugia, Italy, July 2007.

a192.

Cahill, C.F., T.A. Cahill, J. Dehn, S. McNutt, P. Webley and K. Dean, Phreato-magmatic to Magmatic: The evolution of aerosol size and composition during the 2006 eruptions of Augustine Volcano. *Amer. Assoc. Aerosol Res.*, Reno, Nevada, September 2007.

a193.

Thomas, R.J., P.R. Krehbiel, W. Rison, H. Edens, S.R. McNutt, and G. Tytgat,

Monitoring Volcanic Activity by Real-Time Observations of Lightning and Electrical Activity. Cities on Volcanoes 5, Shimabara, Japan, Nov. 2007.

a194.

McNutt, S.R., The 2007 eruption of Pavlof Volcano, Alaska. Eos Trans. Amer. Geophys. Un., v. 88 (52), Fall Meeting Suppl., Abstract xxxx-yy, 2007.

a195.

Reyes, C.G and S.R. McNutt, Tremor source location at Okmok Volcano. Eos Trans. Amer. Geophys. Un., v. 88 (52), Fall Meeting Suppl., Abstract xxxx-yy, 2007.

a196.

DeRoin, N., S.R. McNutt, C. Reyes and D.D. Sentman, Rockfalls at Augustine Volcano, 2003-2006. Eos Trans. Amer. Geophys. Un., v. 88 (52), Fall Meeting Suppl., Abstract xxxx-yy, 2007.

a197.

Gardine, M. L. Burris and S.R. McNutt, Towards a logical distinction between swarms and aftershock sequences. Eos Trans. Amer. Geophys. Un., v. 88 (52), Fall Meeting Suppl., Abstract xxxx-yy, 2007.

a198.

Peterson, C., D. Christensen, and S. McNutt, Non-volcanic tremor in south-central Alaska and it relation to the 1998-2000 slow-slip event. Eos Trans. Amer. Geophys. Un., v. 88 (52), Fall Meeting Suppl., Abstract xxxx-yy, 2007.

a199.

Cervelli, P., M. West, and AVO staff, The 2006 eruption of Fourpeaked Volcano, Alaska. Eos Trans. Amer. Geophys. Un., v. 88 (52), Fall Meeting Suppl., Abstract xxxx-yy, 2007.

a200.

Dixon, J., S. McNutt, J. Power, and M. West, Twenty years of Alaska Volcano Observatory's contributions to seismology. SSA annual meeting, 2008.

a201.

McNutt, S.R. and K. Jacobs, Using Seismic b-values to interpret seismicity rates and processes during the 2006 eruption of Augustine Volcano, Alaska. IAVCEI General Assembly, Reykjavik, Iceland, August 18-25, 2008.

a202.

McNutt, S.R. and E.R. Williams, Volcanic Lightning: Global Observations and Constraints on Source Mechanisms. IAVCEI General Assembly, Reykjavik, Iceland, August 18-25, 2008.

a203.

McNutt, S.R., R.J. Thomas, P. Krehbiel, W. Rison, G. Aulich, H. Edens, G. Tytgat, and E. Clark. Lightning and electrical activity during the 2006 eruption of Augustine Volcano, Alaska. IAVCEI General Assembly, Reykjavik, Iceland, August 18-25, 2008.

a204.

McNutt, S.R. and C.F. Waythomas, Spatter Construct -- Ice Interaction and Lahar Generation: An Example from Pavlof Volcano, Alaska. IAVCEI General Assembly, Reykjavik, Iceland, August 18-25, 2008.

a205.

Arnoult, K., C.A. Szuberla, S.R. McNutt, M. Garces, Infrasound observations of the recent explosive eruptions of Okmok and Kasatochi volcanoes, Alaska. Eos Trans. Amer. Geophys. Un., v. 89 (52), Fall Meeting Suppl., Abstract A53x-yy, 2008.

a206.

Behnke, S.A., R.J. Thomas, P.R. Krehbiel, W. Rison, H.E. Edens, and S.R. McNutt, Lightning mapping observations of the 2006 eruption of Augustine Volcano, Alaska. Eos Trans. Amer. Geophys. Un., v. 89 (52), Fall Meeting Suppl., Abstract xxxx-yy, 2008.

a207.

Burris, L., B. Christensen, and S.R. McNutt, Swarms versus mainshock-aftershock sequences: A systematic study in terms of energy. Eos Trans. Amer. Geophys. Un., v. 89 (52), Fall Meeting Suppl., Abstract S53C-07, 2008.

a208.

Dixon, J., S. McNutt, J. Power, and M. West, Twenty years of Alaska Volcano Observatory's contributions to seismology. Eos Trans. Amer. Geophys. Un., v. 89 (52), Fall Meeting Suppl., Abstract V35x-yy, 2008.

a209.

McNutt, S.R. K. Arnoult, C.A. Szuberla, and S.D. Stihler, Preliminary seismic, infrasound and lightning observations of the July 2008 eruptions of Okmok volcano, Alaska. Eos Trans. Amer. Geophys. Un., v. 89 (52), Fall Meeting Suppl., Abstract A53x-yy, 2008.

a210.

McNutt, S.R. and K. Jacobs, Using Seismic b-values to interpret seismicity rates and processes during the 2006 eruption at Augustine Volcano. Eos Trans. Amer. Geophys. Un., v. 89 (52), Fall Meeting Suppl., Abstract V34x-yy, 2008.

a211.

Reyes, C.G. and S.R. McNutt, Comparing amplitude-based tremor locations from the July-August 2008 Okmok eruption to 2003-2005 non-eruptive tremor sequences. Eos Trans. Amer. Geophys. Un., v. 89 (52), Fall Meeting Suppl., Abstract A53x-yy, 2008.

a212.

Thomas, R.J., W. Rison, P.R. Krehbiel, J.B. Johnson, S.A. Behnke, and S.R. McNutt, Initial observations of lightning and electrical activity from the 2008 Chaiten eruption. *Eos Trans. Amer. Geophys. Un.*, v. 89 (52), Fall Meeting Suppl., Abstract V17x-yy, 2008.

a213.

Tytgat, G., J. Paskievitch, S.R. McNutt, and J.A. Power, Development of Alaska Volcano Observatory seismic networks, 1988-2008. *Eos Trans. Amer. Geophys. Un.*, v. 89 (52), Fall Meeting Suppl., Abstract V35x-yy, 2008.

a214.

Olson, J.V., K. Arnoult, C.A.L. Szuberla, C. Wilson, M. Garces, M. Hedlin, and S. McNutt, IMS Infrasound Station Observations of the Recent Explosive Eruptions of Okmok and Kasatochi Volcanoes, Alaska. 2008 International Technical Workshop, Bermuda, 2008.

a215.

Christensen, B., S.R. McNutt and L. Burris, Swarms versus mainshock-aftershock sequences: A systematic study in terms of energy. Scientific Program and Abstracts, 6th Biennial Workshop on Japan-Kamchatka-Alaska Subduction Processes (JKASP-2009), p. 144, Fairbanks, Alaska, June 22-26, 2009.

a216.

J.P. DIXON, M. HANEY, S.R. MCNUTT, J.A. POWER, S.G. PREJEAN, C.K. SEARCY, S.D. STIHLER, M. WEST, Alaska Volcano Observatory Seismic Network Data Availability. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract U51C-31, 2009.

a217.

Christensen, B., L. Burris, and S.R. McNutt, Mainshock-Aftershock Sequences Versus Swarms: A Systematic Study Based on Energy. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract S43C-04, 2009.

a218.

Reyes, C.G., M.E. West and S.R. McNutt, The Waveform Suite: A robust platform for accessing and manipulating seismic waveforms in MATLAB. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract S11B-1704, 2009.

a219.

Arnoult, K., J. V. Olson, C. Szuberla, S.R. McNutt, M. Garces, D. Fee, and M.A.H.Hedlin, Infrasound Observations of the Recent Explosive Eruptions of Mt. Redoubt, Alaska. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract V43A-2214, 2009.

a220.

S. McNutt, K. Arnoult, J. Olson, C. Szuberla, M. West, E. Clark, Local Infrasound Observations of the Explosive Eruptions of Redoubt Volcano, Alaska, March-April 2009. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract V43A-2213, 2009.

a221.

Thomas, R.A., S.A. Behnke, P.R. Krehbiel, W. Rison, H.E. Edens, S.R. McNutt, B. Higman, R. Holzworth, J.N. Thomas, Lightning and electrical activity during the 2009 eruptions of Redoubt Volcano. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract V51F-05, 2009.

a222.

DeRoin, N. and S.R. McNutt, Rockfalls and Block-and-Ash Flows at Augustine Volcano, 2003-2009. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract V11B-1949, 2009.

a223.

Behnke, S.A., R.J. Thomas, P.R. Krehbiel, W. Rison, H.E. Edens, S.R. McNutt, Lightning and the evolution of electrical activity during the explosions of Mt. Redoubt. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract V43A-2216, 2009.

a224.

Krehbiel, P., S. Behnke, S., Thomas, R., Edens, H., Rison, W., McNutt, S., Higman, B., Holzworth, R., Thomas, J., Observations of the electrical activity of the Redoubt Volcano in Alaska. *Eos Trans. Amer. Geophys. Un.*, v. 90 (52), Fall Meeting Suppl., Abstract AE32A-05, 2009.

a225.

Matt E. Pritchard, Jennifer A. Jay, Mike E. West, Doug Christensen, Mayel Sunagua, Estela Minaya, Matt Haney, Scott T. Henderson, Steve R. McNutt, and Thomas J. Fournier, Geophysical evidence for current magma accumulation in the continental crust: Examples from the Andes, *British Geophysical Assoc., New Advances in Geophysics*, 11-12 Feb. 2010.

a226.

Reyes, C., M. West and S. McNutt, The Waveform Suite for MATLAB: A robust platform for accessing and manipulating seismic waveforms in MATLAB. *IRIS Workshop*, 2010.

a227.

Thomas, R.J., S.A Behnke, P.R. Krehbiel, W. Rison, H.R. Edens, S.R. McNutt, Observations of Volcanic Lightning. *Eos Trans. Amer. Geophys. Un.*, v. 91 (52), Fall Meeting Suppl., Abstract AE31A-01, 2010.

a228.

McNutt, S.R. and E.R. Williams, Volcanic Lightning: Review of Global Observations and the Role of Water. Eos Trans. Amer. Geophys. Un., v. 91 (52), Fall Meeting Suppl., Abstract AE31A-03, 2010.

a229.

Behnke, S.A., R.J. Thomas, P.R. Krehbiel, W. Rison, H.E. Edens, S.R. McNutt, The Life Cycle of Redoubt's Volcanic Lightning Storms. Eos Trans. Amer. Geophys. Un., v. 91 (52), Fall Meeting Suppl., Abstract AE33B-0281, 2010.

a230.

Christensen, D.H., Z.A. Chartrand, J. Jay, M.E. Pritchard, M.E. West, S.R. McNutt, Seismicity at Uturuncu Volcano, Bolivia: Volcano-Tectonic Earthquake Swarms Triggered by the 2010 Maule, Chile Earthquake and Non-triggered Background Activity. Eos Trans. Amer. Geophys. Un., v. 91 (52), Fall Meeting Suppl., Abstract G33A-0845, 2010.

a231.

McNutt, S.R., K. Arnoult, C. Szuberla, J.V. Olson, C.R. Wilson, Infrasound Studies of Alaskan Volcanoes. Eos Trans. Amer. Geophys. Un., v. 91 (52), Fall Meeting Suppl., Abstract S11A-1933, 2010.

a232.

Prejean, S., R. Murphy, C. Thurber, S. McNutt, S. Stihler, and E. Syracuse, Dense seismic array observations of renewed fluid movement at Trident and Novarupta volcanoes, Alaska. Seis. Soc. Amer. spring meeting, 2011

a233.

S. McNutt, K. Arnoult, J. Olson, C. Szuberla, M. West, Local Infrasound Observations of the Explosive Eruptions of Redoubt Volcano, Alaska, March-April 2009. IUGG, Melbourne, Australia, June 2011.

a234.

S. McNutt and E. Williams, Volcanic Lightning: Global observations and constraints on source mechanisms. IUGG, Melbourne, Australia, June 2011.

a235.

McNutt, S.R., K. Arnoult, C. Szuberla, J.V. Olson, C.R. Wilson, Infrasound Studies of Alaskan Volcanoes. GeoPRISMS Workshop, Portland, Oregon, Sept. 21-24, 2011.

a236.

McNutt, S.R., Long Swarms and Short Swarms, Eos Trans. Amer. Geophys. Un., v. 92 (52), Fall Meeting Suppl., Abstract V22A-08, 2011.

a237.

Behnke, S., R. Thomas, S.R. McNutt, P. Krehbiel, W. Rison, and H. Edens, Using VHF Lightning Observations to Monitor Explosive Volcanic Activity. *Eos Trans. Amer. Geophys. Un.*, v. 92 (52), Fall Meeting Suppl., Abstract V43F-05, 2011.

a238.

De Silva, S., S. McNutt, M. Pritchard, N. Finnegan, T. Feeley, M. Unsworth, PLUTONS: Monitoring Deep Active Intrusion Beneath Uturuncu Volcano in the Central Andes of SW Bolivia. AOGS-AGU, 2012.

a239.

Pritchard, M, S. Henderson, J. Jay, S. McNutt, M. West, D. Christensen, M. Haney, S. de Silva, M. Unsworth, N. Finnegan, R. del Potro, J. Gottsmann, D. Muir, J. Blundy, M. Sunagua, E. Minaya, T. Feeley, G. Michelfelder, J. Clavero, J. A. Naranjo, S. Barrientos, PLUTONS: Imaging Deep Active Magma Intrusions in the Central Andes, Congreso Geologico Chileno, August 2012.

a240.

Genareau, K., S.R. McNutt, Measuring ash properties that help to generate lightning in eruptive plumes. AGU Chapman Conference, Iceland, June 2012.

a241.

McNutt, S.R., M. West, D. Fee, S. De Angelis, G. Thompson, K. Arnoult, Infrasound observations of explosive volcanic eruptions in Alaska, 2006-2011. AGU Chapman Conference, Iceland, June 2012.

a242.

Unglert, K., A.M. Jellinek, S.R. McNutt, Towards a parameter space for volcanic tremor: Dependence of tremor amplitude on magma rheology. AGU Chapman Conference, Hawaii, July 2012.

a243.

Malservisi, R., T.H. Dixon, M. Protti, V. Gonzales, S.Y. Schwartz, A.V. Newman, S.R. McNutt, Co- and Post-seismic deformation after the 2012 Mw 7.6 Costa Rica earthquake from continuous GPS observations. AGU Meeting of the Americas, Cancun, Mexico, May 2013.

a244.

Pritchard, M.E., M.E. West, D.H. Christensen, R. Del Potro, J. Gottsman, M. Unsworth, E. Minaya, M. Sunagua, S.R. McNutt, J. Jay, S. Henderson, Q. Yu, A.K. Farrell, Combined geophysical constraints on magmatism in the continental crust of volcanic arcs: Focus on the PLUTONS project in the central Andes. IAVCEI 2013 Scientific Assembly, Kagoshima, Japan, July 2013.

a245.

McNutt, S.R., E. Venzke, E.R. Williams, Volcanic lightning: New global observations and constraints on source mechanisms. IAVCEI 2013 Scientific Assembly, Kagoshima, Japan, July 2013.

a246.

McNutt, S.R., Long swarms and short swarms. IAVCEI 2013 Scientific Assembly, Kagoshima, Japan, July 2013.

a247.

McNutt, S.R. and S.A. Behnke. Determining eruption onsets. Eos Trans. Amer. Geophys. Un., v. 94 (52), Fall Meeting Suppl., Abstract 2013

a248.

Farrell, A. and S.R. McNutt. Analysis of Amplitude Attenuation at Uturuncu. Eos Trans. Amer. Geophys. Un., v. 94 (52), Fall Meeting Suppl., Abstract 2013

a249.

Behnke, S.A., R.J. Thomas, S.R. McNutt, H. Edens, P.R. Krehbiel, W. Rison. Using volcanic lightning measurements. Eos Trans. Amer. Geophys. Un., v. 94 (52), Fall Meeting Suppl., Abstract 2013

a250.

McFarlin, H., D.H. Christensen, G. Thompson, S.R. McNutt. Receiver function analyses Uturuncu. Seis. Soc. Amer., Anchorage, AK, May 2014

a251.

Smith, C., and S.R. McNutt. Explosions at Pavlof Volcano during its 2007 Eruption. Seis. Soc. Amer., Anchorage, AK, May 2014

a252.

Thompson, G. and S.R. McNutt. Banded tremor. Seis. Soc. Amer., Anchorage, AK, May 2014

a253.

Farrell, A. and S. McNutt, Study of seismic attenuation and unusual phases at Uturuncu Volcano, Bolivia, Cong. Lat. Amer. Seis., Bogota, Colombia, July 2014.

a254.

Farrell, A., H. McFarlin and S.R. McNutt, Attenuation of the crust under Uturuncu Volcano, Bolivia. Eos Trans. Amer. Geophys. Un., v. 95 (52), Fall Meeting Suppl., Abstract 2014.

a255.

McFarlin, H., D. Christensen, G. Thompson, S. McNutt, J. Ryan, K. Ward, G. Zandt and M. West, Receiver function analyses of Uturuncu Volcano, Bolivia and

Lastarri/Cordon del Azufre Volcanoes, Chile. *Eos Trans. Amer. Geophys. Un.*, v. 95 (52), Fall Meeting Suppl., Abstract 2014.

a256.

McNutt, S.R., Volcanic lightning: New global observations and constraints on source mechanisms. *Eos Trans. Amer. Geophys. Un.*, v. 95 (52), Fall Meeting Suppl., Abstract 2014.

a257.

McNutt, S.R., Some recent USF studies at Volcanoes in Central America. (invited) *Eos Trans. Amer. Geophys. Un.*, v. 95 (52), Fall Meeting Suppl., Abstract 2014.

a258.

McNutt, S.R., Peak Rates and Largest Magnitude Events in Volcanic Earthquake Swarms. Eastern Section, Seis. Soc. Amer., Charleston, SC, 2-4 Nov. 2014.

a259.

McNutt, S.R., Timing of Peak Rates and Largest Magnitude Events in Volcanic Earthquake Swarms, 26th IUGG General Assembly, Prague, June 22-July 2, 2015.

a260.

Smith, C. M. and McNutt, S. R., Explosion Earthquakes during the 2007 Eruption of Pavlof Volcano, Alaska, 26th IUGG General Assembly, Prague, June 22-July 2, 2015.

a261.

DeRoin, N., S.R. McNutt, G. Thompson, Duration-Amplitude Relationships of Volcanic Tremor and Earthquake Swarms Before and During the 2009 Eruption of Redoubt Volcano, Alaska, 26th IUGG General Assembly, Prague, June 22-July 2, 2015.

a262.

McNutt, S. and S. Behnke, Determining eruption onsets from geophysical data: What we know and when we know it, 26th IUGG General Assembly, Prague, June 22-July 2, 2015.

a263.

McNutt, S., A. Farrell and H. McFarlin, Attenuation and Q-values in the crust and upper mantle beneath Uturuncu Volcano, Bolivia, 26th IUGG General Assembly, Prague, June 22-July 2, 2015.

a264.

McNutt, S. E.Venzke, and E Williams, Volcanic Lightning: Updated global observations and constraints on source mechanisms, 26th IUGG General Assembly, Prague, June 22-July 2, 2015.

a265.

McNutt, S.R. and C.B. Connor, Anticipated Seismicity Preceding and Accompanying VEI 7 and 8 Volcanic Eruptions, International Conference on Volcanoes, Climate, and Society (7 - 11 April 2015), Bern, Switzerland, 2015.

a266.

Behnke, S.A, xx, Eos Trans. Amer. Geophys. Un., v. 96 (52), Fall Meeting Suppl., Abstract 2015.

a267.

Edens, H., xx, Eos Trans. Amer. Geophys. Un., v. 96 (52), Fall Meeting Suppl., Abstract 2015.

a268.

Pritchard, M., xx, Eos Trans. Amer. Geophys. Un., v. 96 (52), Fall Meeting Suppl., Abstract 2015.

a269.

Smith, C.M., xx, Eos Trans. Amer. Geophys. Un., v. 96 (52), Fall Meeting Suppl., Abstract 2015.

a270.

Thomas, R., xx, Eos Trans. Amer. Geophys. Un., v. 96 (52), Fall Meeting Suppl., Abstract 2015.

a271.

Haney, M.M., H. Buurman and S.R. McNutt, Intermediate-depth long period seismicity prior to a shallow earthquake swarm at Little Sitkin Volcano, Alaska. SSA Meeting, Reno, Nevada, April 2016

a272.

Edens, H xx. EGU spring 2016.

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