

DAFTAR PUSTAKA

- Almendros, J., Ibanez, J.M., Alguacil, G., Del Pezzo, E., dan Ortiz, R., 1997, Array tracking of the volcanic tremor source at Deception Island, Antarctica, *geophysical research letters*, vol 24, 3069-3072
- Andi, 2015, Strombolian eruption from Raung volcano East Java, *images.volcanodiscovery.com/*
- Aki, K., Fehler, M., & Das, S., 1977. Source mechanism of volcanic tremor: fluid-driven crack models and their application to the 1963 Kilauea eruption. *J. Volcanol. Geotherm. Res.* 2, 259-287
- Alaska Volcano Observatory, 2014, RSAM: Real-time seismic amplitude measurement, <https://www.avo.alaska.edu/rsam/>.
- Bath, M. ,1974, *Spectral analysis in geophysics*, Elsevier Scientific Publishing Company, Amsterdam .
- Benoit, J.P. and McNutt, S.R., 1997, New constraints on source processes of volcanic tremor at arenal volcano, costa rica, using broadband seismic data, *Geophysical research letters*, vol. 24, no.4, 449-452.
- Bertin, D., Lara, L. E., Basualto, D., Amigo, Á., Cardona, C., Franco, L., Gil, F., dan Lazo, J., 2015, High effusion rates of the Cordón Caulle 2011–2012 eruption (Southern Andes) and their relation with the quasi-harmonic tremor, *Geophysical research Letter*, Volume 42, Issue 17, 7054–7063.
- Brigham, E.O., 1988, *The Fast Fourier Transform and Its Applications.*: Prentice-Hall.Inc, New Jersey
- Brustle, W., 1991, *Signal characteristics of volcanic tremor during change from low to high activity*, Schick, R. dan Mugiono, *Volcanic tremor and magma flow*, Scientific series of the international bureau, volume 4, Forschungszentrum Julich GmbH.
- Budi-Santoso, A., Lesage, P., Dwiyono, S., Sumarti, S., Subandriyo, Surono, Jousset, P., and Metaxian, J.P., 2013, Analysis of the seismic activity associated with the 2010 eruption of Merapi Volcano, Java, *Journal of Volcanology and Geothermal Research*, 261, 153–170.
- Burg, J.P., 1975, Maximum Entropy Spectral Analysis. *Dissertation*, California: Stanford University.
- Chaudry, M.H., 2014, *Applied Hydraulic Transients (3rd Ed.)*, Springer, New York.
- Chouet, B., 1985. Excitation of a buried magmatic pipe: A seismic source model for volcanic tremor. *J. Geophys. Res.*, 90, 1881-1893.

- Chouet, B., 1996. Long-period volcano seismicity: its source and use in eruption forecasting. *Nature*, 380, 309–316.
- Chouet, B., 2003, Volcano Seismology, *Pure applied Geophysics*, 160, 739–788.
- Coppola, D., Piscopo, D., Staudacher, T., Cigolini, C., 2009, Lava discharge rate and effusive pattern at Piton de la Fournaise from MODIS data, *Journal of Volcanology and Geothermal Research*, 184, 174–192.
- Cruz-Atienza, V.M., Husker, A., Legrand, D., Caballero, E., and Kostoglodov, E., 2014, Non-volcanic tremor locations and mechanisms in Guerrero, Mexico, from energy-based and particle-motion polarization analysis, *Journal of Geophysical Research Solid Earth*, October 2014.
- Dobran, F., 2001, *Volcanic processes: Mechanism in material transport*, Springer Science, New York.
- Endo, E. & Murray, T., 1991, Real-time seismic amplitude measurement (RSAM): a volcano monitoring and prediction tool, *Bulletin of Volcanology*, 53, 533-545.
- Fadeli, A., 1987, Volcanic earthquakes at Merapi (central Java) during the lava dome building beginning in October 1986, *International workshop of volcanic seismology IAVCEI*, Capri, Italy, 3-8 October 1988.
- Fedotov, S.A., 1981, Magma rates in feeding conduits of different volcanic centres. *J. Volcanol. Geotherm. Res.* 9, 379-394.
- Fehler, M.C., 1983, Observations of volcanic tremor at Mt. St Helens volcano. *J. Geophys. Res.* 88, 3476-3484.
- Ferrick, M.G., Quamar, A., Lawrence, St., 1982, Source mechanism of volcanic tremor. *Journal Geophysical Research*, vol 87, 8675-8683.
- Fukao, Y., Fujita, E., Hori, S., & Kanjo, K., 1998. Response of a volcanic conduit to step-like change in magma pressure. *Geophys. Res. Lett.* 25, 105-108.
- Gunawan, H., 2008, Analisis data geofisika monitoring gunungapi berdasarkan pengembangan pemodelan analitik dan diskrit (bagian ii): contoh kasus koreksi instrumen dalam penentuan amplitudo seismogram digital, *Bulletin Vulkanologi dan Bencana Geologi*, Vol 3, 13-16.
- Gunawan, H., Indrastuti, N., & Mukijo, 2015, Aktivitas kegempaan tremor gunungapi Raung: krisis November 2014-Maret 2015, *Jurnal Riset Kebencanaan Indonesia*, vol 1, 11-15.
- Havskov, J. & Alguacil, G., *Instrumentation in earthquake seismology*, Springer, Dordrecht, Netherland.

- Hayes, M.H., 1996, *Statistical Digital Signal Processing and Modeling*, John Wiley & Sons Inc., New York.
- Hellweg, M., 1999, Seismic signals from lascar volcano, *Journal South America Earth Science*, 12, 123-133.
- Hotovec, A.J., Prejean, S.G., Vidale, J.E., & Gomberg, J., 2013, Strongly gliding harmonic tremor during the 2009 eruption of Redoubt Volcano, *Journal of Volcanology and Geothermal Research*, 259, 89–99.
- James, M.R., Lane, S.J., & Houghton, B.F., 2012, *Unsteady explosive activity: strombolian eruption*, Fagents, S.A., Gregg, T., & Lopes, R., *Modeling Volcanic Processes The Physics and Mathematics of Volcanism*, Cambridge University Press, New York.
- Jaupart, C., 1999, *Magma ascent at shallow levels*, Sigurdsson, Houghton, Rymer, Stix, dan McNutt, *Encyclopedia of Volcanoes*, Academic Press, San Diego.
- Jellinek, A.M. & Bercovici, D., 2011, Seismic tremors and magma wagging during explosive volcanism. *Nature*, 470, 522-525.
- Jousset, P., Budi-Santoso, A., Jolly A.D., Boichu, M., Surono, Dwiyono, S., Sumarti, S., Hidayati, S., Thierry P., 2013, Signs of magma ascent in LP and VLP seismic events and link to degassing: An example from the 2010 explosive eruption at Merapi volcano, Indonesia, *Journal of Volcanology and Geothermal Research*, 261, 171–192.
- Jousset, P., Neuberg, J., & Sturton, S., 2003, Modelling the time-dependent frequency content of low-frequency volcanic earthquakes, *Journal of Volcanology and Geothermal Research*, 128, 201-223.
- Julian, B.R., 1994. Volcanic tremor: Nonlinear excitation by fluid flow. *J. Geophys. Res.* 99, 11859-11877.
- Jurkevics, A. ,1988, Polarization Analysis of Three-component Array Data, *Bulletin of the Seismological Society of America*, 78, 1725-1743.
- Kedar, S., Sturtevant, B., Kanamori, H., 1996. The origin of harmonic tremor at Old Faithful geyser. *Nature* 379, 708-711.
- Kementrian ESDM, 2011, *Data Dasar Gunung Api Indonesia (Edisi Kedua)*, Kementian Energi dan Sumber Daya Mineral, Bandung.
- Kedar, S., Sturtevant, B., Kanamori, H., 1996. The origin of harmonic tremor at Old Faithful geyser. *Nature* 379, 708-711.
- Kieffer, S.W., 1977, Sound speed in liquid-gas mixtures' water-air and water-steam, *journal of geophysical research*, 82, 2895-2904

- Kieffer, S.W., 1984. Seismicity at Old Faithful geyser: An isolated source of geothermal noise and possible analogue of volcanic seismicity. *J. Volcanol. Geotherm. Res.* 22, 59-95.
- Kilmas, R.D.D., 2014, Karakteristik tremor gunung raung berdasarkan analisis spektral dan gerakan partikel, *Skrpsi*, UPN “Veteran” Yogyakarta, Yogyakarta
- Kirbani, S.B., 1990, Analysis of Volcanic Tremor at mount merapi (Central java, Indonesia) in order to understand internal magma flow, *Disertasi*, Program Pascasarjana FMIPA UGM, Yogyakarta.
- Kirbani, S.B., 1991, *Volcanic tremor observed during various stages of magma dome building activity on merapi (central Java, Indonesia)*, Schick, R. dan Mugiono, *Volcanic tremor and magma flow*, Scientific series of the international bureau, volume 4, Forschungszentrum Julich GmbH.
- Konstantinou, K. & Schlindwein, V., 2002, Nature, wavefield properties and source mechanism of volcanic tremor: a review, *Journal of Volcanology and Geothermal Research*, 119, 161-187.
- Koopmans, L., 1995, *The Spectral analysis of time series*, Academic Press Inc, San Diego.
- Kubotera, A., 1974. *Volcanic tremors at Aso volcano*, Civetta, L., Gasparini, P., Luongo, G., Rapolla, A., *Physical Volcanology*. Elsevier, Amsterdam.
- Lay, T. & Wallace, T., 1995, *Modern global seismology*, Academic Press Inc, Massachusetts.
- Lees, J.M. , Johnson, J.B., Ruiz, M., Troncoso, L. & Welsh, M., 2008, Reventador Volcano 2005: Eruptive activity inferred from seismo-acoustic observation, *Journal of Volcanology and Geothermal Research*, 176, 179–190.
- Leet, R.C., 1988. Saturated and subcooled hydrothermal boiling in groundwater flow channels as a source of harmonic tremor. *J. Geophys. Res.* 93, 4835-4849.
- Lesage, P., Mora, M.M., Alvarado, G.E., Pacheco, J. & Métaixian, J.P., 2006, Complex behavior and source model of the tremor at Arenal volcano, Costa Rica. *Journal of Volcanology and Geothermal Research*, 157, 49–59.
- Lesage, P., 2009, Interactive Matlab software for the analysis of seismic volcanic signals, *Computers & Geosciences* 35, 2137–2144
- Maryanto, S., Iguchi, M., & Tameguri, T. 2008. Constraints on the source mechanism of harmonic tremors based on seismological, ground

- deformation, and visual observations at Sakurajima volcano, Japan. *Journal of Volcanology and Geothermal Resources*, vol 170, 198-217.
- Matthews, A.J., Barclay, J., and Johnstone J.E., 2009, The fast response of volcano-seismic activity to intense precipitation: Triggering of primary volcanic activity by rainfall at Soufrière Hills Volcano, Montserrat, *Journal of Volcanology and Geothermal Research*, 184, 405–415.
- McNutt, S.R., 1992, Volcanic Tremor, *Encyclopedia of Earth System Science*, vol. 4, Academic Press Inc, Massachusetts.
- McNutt, S.R., 1994, Volcanic tremor amplitude correlated with volcano explosivity and its potential use in determining ash hazard to aviation, U.S Geological Survey Bulletin, vol 2047, 377-385.
- Minakami, T., 1974, *Seismology of volcano in Japan*, Civetta, L., Gasparini, P., Luongo, G., dan Rapolla, A., *Physical Volcanology*, Elsevier, Amsterdam, 127-131.
- Neuberg, J. dan Wahyudi, P.S., 1991, *Study on characteristic and origin volcanic seismic*, Schick, R. dan Mugiono, *Volcanic tremor and magma flow*, Scientific series of the international bureau, volume 4, Forschungszentrum Julich GmbH.
- Nishimura, T. & Iguchi, M., 2011, *Volcanic Earthquakes and Tremors in Japan*, Kyoto University Press, Kyoto.
- Praja, I., 2014, Menggapai kesejatan Raung 3344 mdpl. Ihwalpraja.blogspot.com/2014/05/menggapai-kesejatan-raung-3344-mdpl.html
- Rabiner, L.R., & R.W. Schafer, 1978, *Digital Processing of Speech Signals*, Prentice-Hall, New Jersey.
- Scherbaum, F., 2001, *Of zeros and poles* (2nd Ed.), Kluwer academic publisher, Munich.
- Schick, R., dan Riuscetti, M., 1973, An analysis of volcanic tremor at south-Italian volcanoes, *Journal Geophys*, 39, 262-274.
- Schlindwein, V., Wasserman, J., & Scherbaum, F., 1995, Spectral analysis of harmonic tremor signals at Mt. Semeru volcano, Indonesia. *Geophysical research letters*, vol 22, No 13, 1685-1688
- Seidl, D. dan Hellweg, M., 1991, *Volcanic tremor recordings: polarization analysis*, Schick, R. dan Mugiono, *Volcanic tremor and magma flow*, Scientific series of the international bureau, volume 4, Forschungszentrum Julich GmbH.

- Seidl, D., Kirbani, S.B, & Brustle, W, 1990, Maximum entropy analysis of volcanic tremor using data from Etna (Sicily) and Merapi (central Java), *Bulletin volcanology*, 53, 460-477.
- Setiawan, A., 1993, Pengukuran Seismik Tiga Komponen Dan Analisis Polarisasi Kegiatan Seismik Gunung Merapi Pada Saat Pembentukan Kubah Lava Tahun 1992. *Tesis*. Program Pascasarjana FMIPA, UGM, Yogyakarta.
- Sholihah, F.M., 2010, Analisis energi kumulatif gempa gunungapi Merapi berdasarkan data real-time seismic amplitude measurement (RSAM) dan perbandingan terhadap data seismik periode Mei-Juni 2006, *Skripsi*, FMIPA, Universitas Sebelas Maret, Surakarta.
- Stoica, P. & Moses, R., 1997, *Introduction to Spectral Analysis*, Prentice-Hall, New jersey
- Sugianto, N., 2014, Analisis polarisasi gelombang seismik erupsi ledug kuwu menggunakan seisometer 3 komponen, *Tesis*, Program Pascasarjana FMIPA UGM, Yogyakarta.
- Sutawidjaja, I.S., Suparman, dan Sitorus, K., 1996, *Peta Geologi Gunungapi Raung, Jawa Timur*, Direktorat Vulkanologi, Bandung.
- Suyanto, I., 1993, Studi tentang tremor harmonik gunung Merapi (Jawa Tengah) sebelum pembentukan kubah lava tahun 1992, *Tesis*, , Program Pascasarjana FMIPA UGM, Yogyakarta.
- Tarraga, M., Carniel, R., Ortiz, R., & Garcia, A., 2008, *The Failure Forecast Method: Review and Application for the Real-Time Detection of Precursory Patterns at Reawakening Volcanoes*, Gottsman, J. & Marti, J., *Caldera volcanism: Analysis, modelling, and response*, Elsevier, Amsterdam
- Tarraga, M., Marti, J., Abella, R., Carniel, R., & Lopez, C., 2014, Volcanic tremors: Good Indicators of change in plumbing systems during volcanic eruptions, *Journal of Volcanology and Geothermal Research*, 273, 33-40.
- Tullis, J.P., 1989, *Hydraulics of Pipelines*, John Wiley & Son, New Jersey
- Ulrych, T. J., & Bishop, T. N. ,1975, Maximum Entropy Spectral Analysis and Autoregressive Decomposition, *Reviews of Geophysics and Space Physics*, 13, 183-200.

- Wildani, A., Maryanto, S., Gunawan, H., Triastuty, H., Hedrasto, M. 2013. Analisis non linier tremor vulkanik gunungapi raung jawa timur-indonesia. *Jurnal Neutrino*, Vol. 6, No. 1 Oktober 2013.
- Waluyo., 1996, *Seismologi*, Lab. Geofisika, Program Studi Teknik Geofisika, FMIPA, UGM, Yogyakarta.
- Waluyo., 2013, *Analisis Runtun Waktu*, Program Studi Teknik Geofisika, FMIPA, UGM, Yogyakarta
- Wu, N. ,1997,*The Maximum Entropy Method*, (diterjemahkan oleh T. S. Huang), Springer-Verlag, Berlin Heidelberg.