**Data References**

* + Abers, G., 1992. Relationship Between Shallow- and Intermediate-Depth Seismicity in the Eastern Aleutian Subduction Zone, Geophys. Res. Letters, 19(20), pp. 2019-2022.
  + Agudelo, W., Ribodetti, A., Collot, J. Y., and Operto, S., 2009. Joint inversion of multichannel seismic reflection and wide-angle seismic data: Improved imaging and refined velocity model of the crustal structure of the north Ecuador-south Colombia convergent margin, J. Geophys. Res., 114, B02306, DOI:10.1029/2008JB005690.
  + Anderson, M., Alvarado, P., Zandt, G. and Beck, S., 2007. Geometry and brittle deformation of the subducting Nazca Plate, Central Chile and Argentina, Geophys. Jour. Int., 171: 419–434. doi: 10.1111/j.1365-246X.2007.03483.
  + Baba, T., Tanioka, Y., Cummins, P.R., and Uhira, K., 2002. The slip distribution of the 1946 Nankai earthquake estimated from tsunami inversion using a new plate model, Physics of the Earth and Planetary Interiors, Volume 132, Issues 1–3, 2002, Pages 59-73.
  + Baillard, C., et al. 2015. Seismicity and shallow slab geometry in the central Vanuatu subduction zone. Journal of Geophysical Research: Solid Earth 120.8, 5606-5623.
  + Barker, D. H. N., R. Sutherland, S. Henrys, and S. Bannister, 2009. Geometry of the Hikurangi subduction thrust and upper plate, North Island, New Zealand, *Geochem. Geophys. Geosyst.*, 10, Q02007, doi: 10.1029/2008GC002153.
  + Bécel, A., Shillington, D.J., Delescluse, M., Nedimović, M.R., Abers, G.A., Saffer, D.M., Webb, S.C., Keranen, K.M., Roche, P-H., Li, J., and Kuehn, H., 2017. T sunamigenic structures in a creeping section of the Alaska subduction zone, *Nat. Geo.* **10**, 609-613, http://dx.doi.org/10.1038/ngeo2990.
  + Biryol, C.B., Beck, S.L., Zandt, G., and Özacar, A.A., 2011. Segmented African lithosphere beneath the Anatolian region inferred from teleseismic P-wave tomography, Geophysical Journal International, Volume 184, Issue 3, Pages 1037–1057, <https://doi.org/10.1111/j.1365-246X.2010.04910.x>
  + Bohnhoff, M., Makris, J., Stavrakakis, G., and Papanikolaou, D., 2001. Crustal investigation of the Hellenic subduction zone using wide aperture seismic data, Tectonophysics, 343, pp. 239-262.
  + Brocher, T. M., W. J. Nokleberg, N. I. Christensen, W. J. Lutter, E. L. Geist, and M. A. Fisher, 1991. Seismic reflection/refraction mapping of faulting and regional dips in the Eastern Alaska Range, *J. Geophys. Res.*, 96(B6), 10233–10249, doi: 10.1029/91JB00905.
  + Calahorrano, A., Sallarès, V., Collota, J. Y., Sagea, F., and Raneroc, C. R., 2008. Nonlinear variations of the physical properties along the southern Ecuador subduction channel: Results from depth-migrated seismic data, Earth and Planetary Science Letters, 267, DOI:10.1016/j.epsl.2007.11.061, pp. 453-467.
  + Campos-Enriques, J. O., and Sanchez-Zamora, O., 2000. Crustal structure across southern Mexico inferred from gravity data, Journal of South American Earth Sciences, 13, pp. 479-489.
  + Cattin, R., and J. P. Avouac, 2000. Modeling mountain building and the seismic cycle in the Himalaya of Nepal, *J. Geophys. Res.*, 105(B6), 13389–13407, doi: 10.1029/2000JB900032.
  + Christensen, G. L., Mcintosh, K. D., Shipley, T. H., Flueh, E. R., and Goedde, H., 1999. Structure of the Costa Rica convergent margin, offshore Nicoya Peninsula, J. Geophys. Res., 104(B11), pp. 25, 443-25, 468.
  + Christeson, G. L., Bangs, N. L., Shipley, T. H., 2003. Deep structure of an island arc backstop, Lesser Antilles subduction zone, J. Geophys. Res., 108(B7), 2327, DOI:10.1029/2002JB002243.
  + Contreras‐Reyes, Eduardo, et al., 2011. Deep seismic structure of the Tonga subduction zone: Implications for mantle hydration, tectonic erosion, and arc magmatism." Journal of Geophysical Research: Solid Earth 116.B10.
  + Das, S., 2004. Seismicity gaps and the shape of the seismic zone in the Banda Sea region from relocated hypocenters, Journal of Geophysical Research: Solid Earth 109.B12.
  + DeShon, H. R., Schwartz S.Y., Bilek S.L., Dorman L. M., Gonzalez V., Protti J. M, Flueh E. R., and Dixon T. H., 2003. Seismogenic zone structure of the southern Middle America Trench, Costa Rica, J. Geophys. Res., 108(B10), 2491, DOI:10.1029/2002JB002294.
  + Divins, D.L., 2003. Total Sediment Thickness of the World's Oceans & Marginal Seas, NOAA National Geophysical Data Center, Boulder, CO.
  + Fisher, M. A., Geist, E. L., Sliter, R. W., Wong, F. L., Reiss, C., and Mann, D., 2007. Preliminary analysis of the earthquake (Mw 8.1) and tsunami of April 1, 2007, in the Solomon Islands, southwestern Pacific Ocean, Geological Society of America, 39 (6), pp. 157.
  + Flueh, E. R., Fisher, M. A., Bialas, J., Childs, J. R., Klaeschen, D., Kukowski, N., Parsons, T., Scholl, D. W., Brink, U., Tre'hu, A. M., and Vidal, N., 1998. New seismic images of the Cascadia subduction zone from cruise SO108 -ORWELL, Tectonophysics, 293, pp. 69-84.
  + Franke, D., Schnabel a, M., Ladage, Tappin, D. R., Neben, S., Djajadihardja, Y. S., Müller, C., Kopp, H., and Gaedicke, C., 2008. The great Sumatra-Andaman earthquakes -Imaging the boundary between the ruptures of the great 2004 and 2005 earthquakes, Earth and Planetary Science Letters, 269, pp. 118-130.
  + Fuenzalida, A., et al., 1998. High-resolution relocation and mechanism of aftershocks of the 2007 Tocopilla (Chile) earthquake. Geophysical Journal International 194.2, 1216-1228.
  + Fuis, G. S., Moore, T. E., Plafker, G., Brocher, T. M., Fisher, M. A., Mooney, W. D., Nokleberg, W. J., Page, R. A., Beaudoin, B. C., Christensen, N. I., Levander, A. R., Lutter, W. J., Saltus, R. W., and Ruppert, N. A., 2008. Trans-Alaska Crustal Transect and continental evolution involving subduction underplating and synchronous foreland thrusting, Geology, 36, pp. 267-270.
  + Gailler, A., Charvis, P., and Flueh, E. R., 2007. Segmentation of the Nazca and South American plates along the Ecuador subduction zone from wide angle seismic profiles, Earth and Planetary Science Letters, 260, DOI:10.1016/j.epsl.2007.05.045.
  + The GEBCO\_2014 Grid, version 20141103, http://www.gebco.net.
  + Gerdom, M., Tre'hu, A. M., Flueh, E. R., Klaeschen, D., 2000. The continental margin off Oregon from seismic investigations, Tectonophysics, 329, pp. 79-97.
  + Graindorge, D., Calahorrano, A., Charvis, P., Collot, J. Y., and Bethoux, N., 2004. Deep structures of the Ecuador convergent margin and the Carnegie Ridge, possible consequence on great earthquakes recurrence interval, Geophys. Res. Letters, 31, L04603, DOI:10.1029/2003GL018803.
  + Grevemeyer, I., and Tiwari, V. M., 2006. Overriding plate controls spatial distribution of megathrust earthquakes in the Sunda-Andaman subduction zone, Earth and Planetary Science Letters, 251, DOI:10.1016/j.epsl.2006.08.021.
  + Gutscher, M. A., Malod, J., Rehault, J. P., Contrucci, I., Klingelhoefer, F., Mendes-Victor, L., and Spakman, W., 2002. Evidence for active subduction beneath Gibraltar, Geology, 30, pp. 1071-1074.
  + Haberland, C., Rietbrock, A., Lange, D., Bataille, K., and Dahm, T., 2009. Structure of the seismogenic zone of the southcentral Chilean margin revealed by local earthquake traveltime tomography, J. Geophys. Res., 114, B01317.
  + Haberland, C., Rietbrock, A., Lange, D., Bataille, K., and Hofmann, S., 2006. Interaction between forearc and oceanic plate at the south-central Chilean margin as seen in local seismic data, Geophys. Res. Letters, 33, L23302.
  + Haeussler, P.J., et al., 2015. Focused exhumation along megathrust splay faults in Prince William Sound, Alaska, Quaternary Science Reviews **113**, 8-22, http://dx.doi.org/10.1016/j.quascirev.2014.10.013.
  + Hampel, A., Kukowski, N., Bialas, J., Huebscher, C., and Heinbockel, R., 2004. Ridge subduction at an erosive margin: The collision zone of the Nazca Ridge in southern Peru, J. Geophys. Res., 109, B02101, DOI:10.1029/2003JB002593.
  + Hayes, D., and Lewis, S., 1984. A Geophysical Study of the Manila Trench, Luzon, Philippines, Crustal Structure, Gravity, and Regional Tectonic Evolution, J. Geophys. Res., 89(B11), pp. 9171-9195.
  + Hayes, G. P., Bergman, E., Johnson, K. L., Benz, H. M., Brown, L., & Meltzer, A. S., 2013. Seismotectonic framework of the 2010 February 27 Mw 8.8 Maule, Chile earthquake sequence. Geophys. Jour. Int., ggt238, 10.1093/gji/ggt238.
  + Hayes, G. P., D. J. Wald, and R. L. Johnson, 2012. Slab1.0: A three-dimensional model of global subduction zone geometries, J. Geophys. Res., 117, B01302, doi:10.1029/2011JB008524.
  + Hayes, G.P., and Wald, D.J., 2009. Developing framework to constrain the geometry of the seismic rupture plane of subduction interface a priori - a probabilistic approach, Geophys. Jour. Int., 176, 951-964.
  + Hayes, G.P., Wald, D.J., and Keranen, K., 2009. Advancing techniques to constrain the geometry of the seismic rupture plane on subduction interfaces a priori - higher order functional fits, Geochem. Geophys. Geosyst., 10, Q09006, doi:10.1029/2009GC002633.
  + Hirose, F., J. Nakajima, and A. Hasegawa, 2008. Three‐dimensional seismic velocity structure and configuration of the Philippine Sea slab in southwestern Japan estimated by double‐difference tomography, *J. Geophys. Res.*, 113, B09315, doi: 10.1029/2007JB005274.
  + Hino, R., Ito S., Shiobara, H., Shimamura, H., Sato T., Kanazawa, T., Kasahara, J., and Hasegawa, A., 2000. Aftershock distribution of the 1994 Sanriku-oki earthquake (Mw 7.7) revealed by ocean bottom seismographic observation, J. Geophys. Res., 105(B9), 21697-21710.
  + Holbrook, W. S., Lizarraled, D., McGeary, S., Bangs, N., and Diebold, J., 1999. Structure and composition of the Aleutian island arc and implications for continental crustal growth, Geology, 27, pp. 31-34.
  + Hubbard, J., Almeida, R., Foster, A., Sapkota, S.N., Bürgi, P., and Tapponnier, P., 2016. Structural segmentation controlled the 2015 Mw 7.8 Gorkha earthquake rupture in Nepal. *Geology* ; 44 (8): 639–642. doi: <https://doi.org/10.1130/G38077.1>
  + Iwasaki, T., Shiobara, H., Nishizawa, A., Kanazawa, T., Suyehiro, K., Hirata, N., Urabe, T., and Shimamura, H., 1989. A detailed subduction structure in the Kurit trench deduced from ocean bottom seismographic refraction studies, Tectonophysics, 165, pp. 315-336.
  + Jin, Y. K., Kim, Y., Nam, S. H., Lee, D. K., and Lee, K., 1997. Gravity models for the South Shetland Trench and the Shackleton Fracture Zone, Antarctica, Geosciences Journal, 1 (2), DOI: 10.1007/BF02910480.
  + Kido, Y., Tsuru, T., Park, J-O., Higashikata, T., Kaneda, Y., and Kono, Y., 2001. Three-dimensional overview of the Japan Trench - an example of using the Frontier database system, Computers & Geosciences, 27(1), DOI: 10.1016/S0098-3004(00)00064-9.
  + Kim, Y., M. S. Miller, F. Pearce, and R. W. Clayton, 2012. Seismic imaging of the Cocos plate subduction zone system in central Mexico, Geochem. Geophys. Geosyst., 13, Q07001, doi:[10.1029/2012GC004033](http://dx.doi.org/10.1029/2012GC004033).
  + Kim, YoungHee, et al., 2014. Alaska Megathrust 2: Imaging the megathrust zone and Yakutat/Pacific plate interface in the Alaska subduction zone. Journal of Geophysical Research: Solid Earth 119.3, p. 1924-1941.
  + Kimura, H., Kasahara, K., and Takeda, T., 2009. Subduction process of the Philippine Sea Plate off the Kanto district, central Japan, as revealed by plate structure and repeating earthquakes, Tectonophysics, 472, pp. 18-27.
  + Kita, Saeko, et al., 2010. Anomalous deepening of a seismic belt in the upper-plane of the double seismic zone in the Pacific slab beneath the Hokkaido corner: Possible evidence for thermal shielding caused by subducted forearc crust materials. Earth and Planetary Science Letters 290.3, p 415-426.
  + Klaeschen D., Belykj, I., Gnibidenko, H., Patrikeyev, S., and von Huene, R., 1994. Structure of the Kuril Trench from seismic reflection records, J. Geophys. Res., 99, B12, pp. 24, 173-24, 188.
  + Kodaira, S., Iwasaki, T., Urabe, T., Kanazawa, T., Egloff, F., Makris, J., and Simamura, H., 1996. Crustal structure across the middle Ryukyu trench obtained from ocean bottom seismographic data, Tectonophysics, 263, pp. 39-60.
  + Kodaira, S., Nakanishi, A., Park, J-O., Takahashi, N., and Kaneda, Y., 2003. What control segmentations of mega-thrust earthquakes in the Nankai seismogenic zone; a review of high-resolution wide-angle seismic surveys, Bulletin of the Earthquake Research Institute, 78(2), pp. 175-183.
  + Kodaira, S., Takahashi, N., Nakanishi, A., Miurs, S., and Kaneda, Y., 2000. Subducted Seamount Imaged in the Rupture Zone of the 1946 Nankaido Earthquake, Science, 289, 5476, pp. 104-106.
  + Kodaira, Shuichi, et al., 2002. Structural factors controlling the rupture process of a megathrust earthquake at the Nankai trough seismogenic zone. Geophysical Journal International 149.3, p. 815-835.
  + Kopp, C., Fruehn, J., Flueh, E. R., Reichert, C., Kukowski, N., Bialas, J., and Klaeschen, D., 2000. Structure of the Makran subduction zone from wide-angle and reflection seismic data, Tectonophysics, 329, pp. 171-191.
  + Kopp, H., Flueh, E. R., Klaeschen, D., Bialas, J. and Reichert, C., 2001. Crustal structure of the central Sunda margin at the onset of oblique subduction, Geophys. J. Int., 147, pp. 449-474.
  + Kopp, H., Klaeschen, D., Flueh, E. R., Bialas, J., and Reichert, C., 2002. Crustal structure of the Java margin from seismic wide-angle and multichannel reflection data, J. Geophys. Res., 107 (B2), 2034, DOI:10.1029/2000JB000095.
  + Krabbenhoft, A., Bialas J., Kopp, H., Kukowski, N, and Hubscher, C., 2004. Crustal structure of the Peruvian continental margin from wide-angle seismic studies, Geophys. J. Int., 159, DOI: 10.1111/j.1365-246X.2004.02425.x, pp. 749-764.
  + Krawczyk, C. M., Mechie, J., Lüth, S., Tasarova, Z., Wigger, P., Stiller, M., Brasse, H., Echtler, H. P., Araneda, M., and Bataille, K., 2006. Geophysical Signatures and Active Tectonics at the South-Central Chilean Margin, The Andes, DOI: 10.1007/978-3-540-48684-8\_8.
  + Kyriakopoulos, C. A.V. Newman, A.M. Thomas, M. Moore-Driskell, and G.T. Farmer, 2015. A new seismically constrained subduction interface model for Central America, J. Geophys. Res., 120, doi:10.1002/2014JB011859.
  + Li, J., D. J. Shillington, A. Bécel, M. R. Nedimović, S. C. Webb, D. M. Saffer, K. M. Keranen, and H. Kuehn, 2015. Downdip variations in seismic reflection character: Implications for fault structure and seismogenic behavior in the Alaska subduction zone, J. Geophys. Res. Solid Earth, 120, 7883–7904, doi:10.1002/2015JB012338.
  + Li, J., G. A. Abers, Y. H. Kim, and D. Christensen, 2013. Alaska megathrust 1: Seismicity 43 years after the great 1964 Alaska megathrust earthquake, *J. Geophys. Res. Solid Earth*, 118, 4861–4871, doi:10.1002/jgrb.50358.
  + Li, X., Bock, G., Vafidis, A., Kind, R., Harjes, H.-P., Hanka, W., Wylegalla, K., Van Der Meijde, M. and Yuan, X., 2003. Receiver function study of the Hellenic subduction zone: imaging crustal thickness variations and the oceanic Moho of the descending African lithosphere. Geophys. Jour. Int., 155: 733–748. doi: 10.1046/j.1365-246X.2003.02100.x.
  + Liu, X., and Zhao, D., 2016. P and S wave tomography of Japan subduction zone from joint inversions of local and teleseismic travel times and surface-wave data, *Earth Planet. Sci. Lett.* **252**, 1-22, <https://doi.org/10.1016/j.pepi.2016.01.002>
  + Lizarralde, D., Holbrook, W. S., McGeary, S., Bangs, N. L., and Diebold, J. B., 2002. Crustal construction of a volcanic arc, wide-angle seismic results from the western Alaska Peninsula, J. Geophys. Res., 107(B8), 2164, DOI: 10.1029/2001JB000230.
  + Loreto, M. F., Tinivella, U., and Ranero, C. R., 2007. Evidence for fluid circulation, overpressure and tectonic style along the Southern Chilean margin, Tectonophysics, 429, DOI:10.1016/j.tecto.2006.09.016.
  + Lüschen, E., Müller, C., Kopp, H., Engels, M., Lutz. R., Planert, L., Shulgin, A., and Djajadihardja, L.S., 2011. Structure, Evolution and Tectonic Activity of the Eastern Sunda Forearc, Indonesia, from Marine Seismic Investigations, Tectonophysics, 508, pp. 6-21.
  + Magnani, M. B., Zelt, C. A., Levander, A., and Schmitz, M., 2009. Crustal structure of the South American-Caribbean plate boundary, J. Geophys. Res., 114, BO2312, DOI: 10.1029/2008JB005817.
  + McCrory, P. A., J. L. Blair, F. Waldhauser, and D. H. Oppenheimer, 2012. Juan de Fuca slab geometry and its relation to Wadati‐Benioff zone seismicity, *J. Geophys. Res.*, 117, B09306, doi:10.1029/2012JB009407.
  + McIntosh, K. D., Silver, E. A., Ahmed, I., Berhorst, A., Ranero, C. R., Kelly, R. K., and Flueh, E. R., 2007. The Nicaragua convergent margin; seismic reflection imaging of the source of a tsunami earthquake, MARGINS theoretical and experimental earth science series, Columbia University Press, United States (USA), pp. 257-287.
  + McNamara, D.E., et al., 2017. Source Modeling of the 2015 Mw 7.8 Nepal (Ghorka) earthquake sequence: Implications for geodynamics and earthquake hazards, Tectonophysics **714-715**, 21-30, <https://doi.org/10.1016/j.tecto.2016.08.004>
  + Melgar, D. and Perez-Campos, X., 2011. Imaging the Moho and Subducted Oceanic Crust at the Isthmus of Tehuantepec, Mexico, from Receiver Functions, Pure Appl. Geophys., 168, 1449–1460, doi:[10.1007/s00024-010-0199-5](http://dx.doi.org/10.1007/s00024-010-0199-5).
  + Melhuish, A., Sutherland, R., Davey, F. J., Lamarche, G., 1999. Crustal structure and neotectonics of the Puysegur oblique subduction zone, New Zealand, Tectonophysics, 313, pp. 335-362.
  + Miura, S., Kodaira, S., Nakanishi, A., Tsuru, T., Takahashi, N., Hirata, N., & Kaneda, Y., 2003. Structural characteristics controlling the seismicity crustal structure of southern Japan Trench fore-arc region, revealed by ocean bottom seismographic data. Tectonophysics, 363(1), 79-102, doi:10.1016/S0040-1951(02)00655-8.
  + Miura, S., Suyehiro, K., Shinohara, M., Takahashib, N., Araki, E., and Taira, A., 2004. Seismological structure and implications of collision between the Ontong Java Plateau and Solomon Island Arc from ocean bottom seismometer airgun data, Tectonophysics, 389, pp. 191-220.
  + Miura, S., Takahashi, N., Nakanishi, A., Ito, A., Kodaira, S., Tsuru, T., & Kaneda, Y. 2001. Seismic velocity structure off Miyagi fore-arc region, Japan Trench, using ocean bottom seismographic data. Frontier Res. Earth Evolut, 1, 337-340.
  + Miura, S., Takahashi, N., Nakanishi, A., Tsuru, T., Kodaira, S., and Kaneda, Y., 2005. Structural characteristics off Miyagi forearc region, the Japan Trench seismogenic zone, deduced from a wide-angle reflection and refraction study, Tectonophysics, 407, pp. 165-188.
  + Nakajima, J., and A. Hasegawa, 2007. Subduction of the Philippine Sea plate beneath southwestern Japan: Slab geometry and its relationship to arc magmatism, *J. Geophys. Res.*, 112, B08306, doi:10.1029/2006JB004770.
  + Nakamura, M., 2014. Seismic structure of subducted oceanic crust near the slow-earthquake source region in the southern Ryukyu arc. Earth, Planets and Space, 66(1), 1-8, doi:10.1186/1880-5981-66-96.
  + Nakanishi, A., Smith, A. J., Miura, S., Tsuru, T., Kodaira, S., Obana, K., Takahashi, N., Cummins, P. R., and Kaneda, Y., 2004. Structural factors controlling the coseismic rupture zone of the 1973 Nemuro-Oki earthquake, the southern Kuril Trench seismogenic zone, J. Geophys. Res., 109, B05305, DOI:10.1029/2003JB002574.
  + Newman A. V., Schwartz, S.Y., Gonzalez, V., DeShon H. R., Protti, J. M., and Dorman, L. M., 2002, Along-strike variability in the seismogenic zone below Nicoya Peninsula, Costa Rica, Geophys. Res. Letters, 29(20), 1977, DOI:10.1029/2002GL015409.
  + Nishizawa, A., Kaneda, K., and Oikawa, M., 2009. Seismic structure of the northern end of the Ryukyu Trench subduction zone, southeast of Kyushu, Japan, Earth Planets Space, 61, pp. e37-e40.
  + Oakley, A. J., Taylor, B., and Moore, G. F., , 2008. Pacific Plate subduction beneath the central Mariana and Izu-Bonin fore arcs: New insights from an old margin, Geochem. Geophys. Geosystems, 9(6), DOI: 10.1029/2007GC001820.
  + Obana, K., Kodaira, S., and Kaneda, Y., 2009. Seismicity at the eastern end of the 1944 Tonankai earthquake rupture areas, Bull. Seismol. Soc. Am., 99, DOI: 10.1785/0120070236.
  + Obana, K., Kodaira, S., and Kaneda, Y., 2005. Seismicity in the incoming/subducting Philippine Sea plate off the Kii Peninsula, central Nankai trough, J. Geophys. Res., 110, B11311, DOI:10.1029/2004JB003487.
  + Obana, K., Kodaira, S., and Kaneda, Y., 2006. Seismicity related to heterogeneous structure along the western Nankai trough off Shikoku Island, Geophys. Res. Letters, 33, L23310, DOI:10.1029/2006GL028179.
  + Patzwahl, R., Mechie, J., Schulze, A., and Giese, P., 1999. Two-dimensional velocity models of the Nazca plate subduction zone between 19.5°S and 25°S from wide-angle seismic measurements during the CINCA95 project, J. Geophys. Res., 104 (B4), DOI:0148-0227/99/1999JB900008509.00.
  + Pegler, G., and Das, S., 1998. An enhanced image of the Pamir–Hindu Kush seismic zone from relocated earthquake hypocentres, *Geophysical Journal International*, Volume 134, Issue 2, Pages 573-595, <https://doi.org/10.1046/j.1365-246x.1998.00582.x>
  + Pesicek, J. D., C. H. Thurber, H. Zhang, H. R. DeShon, E. R. Engdahl, and S. Widiyantoro, 2010. Teleseismic double-difference relocation of earthquakes along the Sumatra-Andaman subduction zone using a 3-D model, J. Geophys. Res., 115, B10303, doi:[10.1029/2010JB007443](http://dx.doi.org/10.1029/2010JB007443).
  + Pesicek, J.D., C. H. Thurber, S. Widiyantoro, H. Zhang, H. R. DeShon, E. R. Engdahl, 2010. Sharpening the tomographic image of the subducting slab below Sumatra, the Andaman Islands and Burma, Geophysical Journal International, Volume 182, Pages 433–453, <https://doi.org/10.1111/j.1365-246X.2010.04630.x>
  + Pesicek, J.D., Engdahl, E.R., Thurber, C.H., DeShon, H.R. ,and Lange, D., 2012. Mantle subducting slab structure in the region of the 2010 M8.8 Maule earthquake (30–40°S), Chile, Geophysical Journal International, Volume 191, Issue 1, p 317–324, <https://doi.org/10.1111/j.1365-246X.2012.05624.x>.
  + Pesicek, J.D., Zhang, H., and Thurber, C.H., 2014. Multiscale Seismic Tomography and Earthquake Relocation Incorporating Differential Time Data: Application to the Maule Subduction Zone, Chile. Bulletin of the Seismological Society of America ; 104 (2): 1037–1044 doi: <https://doi.org/10.1785/0120130121>
  + Phillips, K., & Clayton, R. W., 2014. Structure of the subduction transition region from seismic array data in southern Peru, Geophys. Jour. Int., 196(3), 1889-1905, 10.1093/gji/ggt504.
  + Porritt, R.W., Allen, R.M., and Pollitz, F.F., 2014. Seismic imaging east of the Rocky Mountains with USArray, Earth Planet. Sci. Lett. (402), 16-25, <https://doi.org/10.1016/j.epsl.2013.10.034>
  + Portner, D. E., S. Beck, G. Zandt, and A. Scire, 2017. The nature of subslab slow velocity anomalies beneath South America, *Geophys. Res. Lett.*, 44, 4747–4755, doi: 10.1002/2017GL073106.
  + Protti, Marino, et al., 2014. Nicoya earthquake rupture anticipated by geodetic measurement of the locked plate interface. Nature Geoscience 7.2, p117-121.
  + Ranero, C. R., and von Huene, E., 2000. Subduction erosion along the Middle America convergent margin, Nature, 404.
  + Ranero, C. R., Marone, C., Bilek, S., Barckhausen, U., Charvis, P., Collot, J-Y, DeShon, H., Di Toro, G., Dixon, T., Dorman, L., Galeotti, S., Grevenmeyer, I., Harris, R., Husen, S., Kastner, M., Kinoshita, M., Kuramoto, S., Matsumoto, T., McIntosh, K., Morgan, J., Morris, J., Mueller, C., Neben, S., Reichert, C., Scholl, D., Saito, S., Schwartz, S., Spiess, V., Suess, E., Vannucchi, P., Villinger, H., Vinciguerra, S., von Huene, R., Wallmann, W., CRISP Program B, 2006. The Transition from Stable to Unstable Slip at Erosional Convergent Plate Boundaries, IFM-GEOMAR.
  + Ranero, C., R. von Huene, E. Flueh, M. Duarte, D. Baca, and K. Mclntosh, 2000. A cross section of the convergent Pacific margin of Nicaragua, Tectonics, 19(2), pp. 335-357.
  + Rietbrock, A., Haberland, C., Bataille, K., Dahm, T., and Oncken, O., 2005. Studying the Seismogenic Coupling Zone with a Passive Seismic Array, EOS Transactions, AGU, 86(32), DOI: 10.1029/2005EO320001.
  + Robertson Maurice, S. D., Wiens, D. A., Shore, P. J., Vera, E., and Dorman, L. M, 2003. Seismicity and tectonics of the South Shetland Islands and Bransfield Strait from a regional broadband seismograph deployment, J. Geophys. Res., 108(B10), 2461, DOI:10.1029/2003JB002416.
  + Rubio, E., Torne, M., Vera, E., Diaz, A., 2000. Crustal structure of the southernmost Chilean margin from seismic and gravity data, Tectonophysics, 323, pp. 39-60.
  + Ryan, H. F., and Scholl, D. W., 1989. The Evolution of Forearc Structures Along an Oblique Convergent Margin, Central Aleutian Arc, Tectonics, 8(3), pp. 497-516.
  + Sage, F., Collot, J. Y., and Ranero, C. R., 2006. Interplate patchiness and subduction-erosion mechanisms: Evidence from depth-migrated seismic images at the central Ecuador convergent margin, Geological Society of America, 34 (12), DOI: 10.1130/G22790A.1.
  + Sallares, V. and Ranero, C. R., 2005. Structure and tectonics of the erosional convergent margin off Antofagasta, north Chile (23°30'S), J. Geophys. Res., 110, B06101, doi:10.1029/2004JB003418.
  + Sallares, V., and Danobeitia, J. J., 2001. Lithospheric structure of the Costa Rican Isthmus: Effects of subduction zone magmatism on an oceanic plateau, J. Geophys Res., 106(B1), pp. 621-643.
  + Sato, Hiroshi, et al.. 2005. Earthquake source fault beneath Tokyo, Science 309.5733, p. 462-464.
  + Scherwath, M., Contreras-Reyes, E., Flueh, E. R., Grevemeyer, I., Krabbenhoeft, A., Papenberg, C., Petersen, C. J., and Weinrebe, R. W., 2009. Deep lithospheric structures along the southern central Chile margin from wide-angle P-wave modelling, Geophys. J. Int., 179, DOI: 10.1111/j.1365-246X.2009.04298.x.
  + Scherwath, M., Flueh, E., Grevenmeyer, I., Tilmann, F., Contreras-Reyes, E., and Weinrebe, W., 2006. Investigating Subduction Zone Processes in Chile, EOS, Transactions, AGU, 87 (27), pp. 265-272.
  + Schmandt, B., and Lin. F.‐C., 2014. *P* and *S* wave tomography of the mantle beneath the United States, *Geophys. Res. Lett.*, 41, 6342–6349, doi: 10.1002/2014GL061231.
  + Schnurle, P. , Lallemand, S. E., von Huene, R., and Klaeschen, D., 1995. Tectonic regime of the southern Kurile Trench as revealed by multichannel seismic lines, Tectonophysics, 241, pp. 259-277.
  + Schurr, B., et al., 2006. Evidence for lithospheric detachment in the central Andes from local earthquake tomography. Tectonophysics 415.1, p. 203-223.
  + Schurr, B., G. Asch, M. Rosenau, R. Wang, O. Oncken, S. Barrientos, P. Salazar, and J.-P. Vilotte, 2012. The 2007 M7.7 Tocopilla northern Chile earthquake sequence: Implications for along-strike and downdip rupture segmentation and megathrust frictional behavior, J. Geophys. Res., 117, B05305, doi:[10.1029/2011JB009030](http://dx.doi.org/10.1029/2011JB009030).
  + Scire, A., Biryol, C.B., Zandt, G., and Beck, S., 2015. Imaging the Nazca slab and surrounding mantle to 700 km depth beneath the central Andes (18°S to 28°S), in DeCelles, P.G., Sucea, M.N., Carrapa, B., and Kapp, P.A., eds., Geodynamics of a Cordilleran System: The Central Andes of Argentina and Northern Chile: Geol. Soc. Amer. Mem. 212, p 23;41, doi:10.1130/2015.1212(02).
  + SE Caribbean OBS Cruise Report April 19th-June 2, 2004 IFM-GEOMAR
  + Shillington, D.J., Bécel, A., Nedimović, M.R., Kuehn, H., Webb, S.C., Abers, G.A., Keranen, K.M., Li, J., Delescluse, M. and Mattei-Salicrup, G.A., 2015. Link between plate fabric, hydration and subduction zone seismicity in Alaska. Nature Geoscience, 8(12), 961-964, doi:10.1038/ngeo2586.
  + Shipley, T. H., Moore, G. F., Bangs, N. L., Moore, J. C., Stoffa, P. L., 1994. Seismically inferred dilatancy distribution, northern Barbados Ridge decollment: Implications for fluid migration and fault strength, Geology, 22, pp. 411-414.
  + Shulgin, A., Kopp, H., Mueller, C., Lueschen, E., Planert, L., Engels, M., Flueh, E. R., Krabbenhoeft, A., and Djajadihardja, Y., 2009. Sunda-Banda arc transition: Incipient continent-island arc collision (northwest Australia), Geophys. Res. Letters, 36, L10304, DOI:10.1029/2009GL037533.
  + Simoes, M., Avouac, J. P., Cattin, R., and Henry, P., 2004. The Sumatra subduction zone: A case for a locked fault zone extending into the mantle, J Geophys. Res., 109, B10402, DOI:10.1029/2003JB002958.
  + Sippl, C., et al., 2013, Geometry of the Pamir-Hindu Kush intermediate-depth earthquake zone from local seismic data, J. Geophys. Res. Solid Earth, 118, 1438–1457, doi:10.1002/jgrb.50128.
  + Sodoudi, F., Brüstle, A., Meier, T., Kind, R., Friederich, W., and EGELADOS working group, 2015. Receiver function images of the Hellenic subduction zone and comparison to microseismicity, Solid Earth, 6, 135–151, doi:10.5194/se-6-135-2015.
  + Sutherland, R., Stagpoole, V., Uruski, C., Kennedy, C., Bassett, D., Henrys, S., Scherwath, M., Kopp, H., Field, B., Toulmin, S., Barker, D., Bannister, S., Davey, F., Stern, T., Flueh, E. R., 2009. Reactivation of tectonics, crustal underplating, and uplift after 60 Myr of passive subsidence, Raukumara Basin, Hikurangi-Kermadec fore arc, New Zealand: Implications for global growth and recycling of continents, Tectonics, 28, TC5017, DOI:10.1029/2008TC002356.
  + Syracuse, E. M., Abers, G. A., Fischer, K., MacKenzie, L., Rychert, C., Protti, M., Gonzalez, V., and Strauch, W., 2008. Seismic tomography and earthquake locations in the Nicaraguan and Costa Rican upper mantle, Geochem. Geophys. Geosystems, 9, Q07S08, DOI:10.1029/2008GC001963.
  + Takahashi, N., Kodaira, S., Nakanishi, A., Park, J-O., Miura, S., Tsuru, T., Kaneda, Y., Suyehiro, K., and Kinoshita, H., 2002. Seismic structure of western end of the Nankai trough seismogenic zone, J. Geophys. Res., 107(B10), 2212, DOI: 10.1029/2000JB000121.
  + Takahashi, N., Suyehiro, K., and Shinohara, M., Implications from the seismic crustal structure of the northern Izu-Bonin arc, 1998. The Island Arc, 7, pp. 383-394.
  + Takahashi, Narumi, et al., 2004. Seismic structure and seismogenesis off Sanriku region, northeastern Japan, Geophysical Journal International 159.1, p 129-145.
  + Tang, G., et al., 2013. 3‐D active source tomography around Simeulue Island offshore Sumatra: Thick crustal zone responsible for earthquake segment boundary." Geophysical Research Letters 40.1, p. 48-53.
  + Tilmann, F., Grevemeyer, I., Suwargadi, B., Kopp, H., and Flueh, E., 2008. The updip seismic/aseismic transition as seen by aftershocks of the 28 March 2005 Nias and 26 December 2004 Aceh-Andaman earthquakes, Geophysical Research Abstracts, 10, EGU2008-A-02802.
  + Tsuru, T., Park. J-O., Miura, S., Kodaira, S., Kido, Y., Hayashi, T., 2002. Along-arc structural variation of the plate boundary at the Japan, Trench margin: Implication of interplate coupling, J. Geophys. Res., 107(B12), 2357, DOI:10.1029/2001JB001664.
  + Vanneste L. E., and Larter, R. D., 2002. Sediment subduction, subduction erosion, and strain regime in the northern South Sandwich forearc, J. Geophys. Res., 107 (B7), 2149, DOI:10.1029/2001JB000396.
  + von Huene, E., Ranero, C. R., and Watts, P., 2004. Tsunamigenic slope failure along the Middle America Trenchin two tectonic settings, Marine Geology, 203, DOI:10.1016/S0025-3227(03)00312-8.
  + von Huene, R., Corvalan, J., Flueh, E. R., Hinz, K., Korstgard, J., Ranero, C. R., Weinrebe, W., and the CONDOR Scientists, 1997. Tectonic control of the subducting Juan Fernandez Ridge on the Andean margin near Valparaiso, Chile, Tectonics, 16 (3), pp. 474- 488.
  + Von Huene, R., Miller, J. J., and Weinrebe, W., 2012. Subducting plate geology in three great earthquake ruptures of the western Alaska margin, Kodiak to Unimak. Geosphere, 8(3), 628-644, doi:10.1130/GES00715.1.
  + Walther, C. H. E., Flueh, E. R., Ranero, C. R., von Huene, R., and Strauch, W., 2000. Crustal structure across the Pacific margin of Nicaragua: evidence for ophiolitic basement and a shallow mantle sliver, Geophys. J. Int., 141, pp. 759-777.
  + Wang, T. K., McIntosh, K., Nakamura, Y., Liu, C-S., and Chen, H-W., 2001. Velocity-Interface Structure of the Southwestern Ryukyu Subduction Zone from EW9509-1 OBS/MCS Data, Marine Geophysical Researches, 22, pp. 265-287.
  + Wang, Tan K., et al., 2004. Crustal structure of the southernmost Ryukyu subduction zone: OBS, MCS and gravity modelling. Geophysical Journal International 157.1, p. 147-163.
  + Weinzierl, W. Kopp, H. Flueh, E., Klaeschen, D., 2009. and THALES Working Group, A seismic wide angle profile across the Lesser Antilles Arc south of Guadeloupe, Geophysical Research Abstracts, 11.
  + Whittaker, Joanne, Alexey Goncharov, Simon Williams, R. Dietmar Müller, German Leitchenkov, 2013. Global sediment thickness dataset updated for the Australian-Antarctic Southern Ocean, Geochemistry, Geophysics, Geosystems. [DOI: 10.1002/ggge.20181](http://dx.doi.org/10.1002/ggge.20181)
  + Williams, Charles A., et al., 2013. Revised interface geometry for the Hikurangi subduction zone, New Zealand, Seismological Research Letters 84.6, p. 1066-1073.
  + Wu, J., J. Suppe, R. Lu, and R. Kanda, 2016. Philippine Sea and East Asian plate tectonics since 52 Ma constrained by new subducted slab reconstruction methods, *J. Geophys. Res. Solid Earth*, 121, 4670–4741, doi: 10.1002/2016JB012923.
  + Yamamoto, Y., Obana, K., Takahashi, T., Nakanishi, A., Kodaira, S., & Kaneda, 2013. Y. Imaging of the subducted Kyushu-Palau Ridge in the Hyuga-nada region, western Nankai Trough subduction zone. Tectonophysics, 589, 90-102, doi:10.1016/j.tecto.2012.12.028.
  + Ye, S., Bialas, J., Flueh, E. R., Stavenhagen, A., and von Huene, R., 1996. Crustal structure of the Middle American Trench off Costa Rica from wide-angle seismic data, Tectonics, 15(5), pp. 1006-1021.
  + Ye, S., Flueh, E. R., Klaeschen, D., and von Huene, R., 1997. Crustal structure along the EDGE transect beneath the Kodiak shelf off Alaska derived from OBH seismic refraction data, Geophys. J. Int., 130, pp. 283-302.