

HARM J.A. VAN AVENDONK

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EDUCATION

1993: B.Sc. Geophysics, Utrecht University, Utrecht, The Netherlands.
 1998: Ph.D. Earth Sciences, University of California, San Diego.

EMPLOYMENT

2008-present: Research Scientist, University of Texas at Austin, Institute for Geophysics
 2002-2008: Research Associate, University of Texas at Austin, Institute for Geophysics
 1998-2002: Postdoctoral research fellow, Department of Geology and Geophysics,
 University of Wyoming. Postdoctoral supervisor: W. Steven Holbrook.
 1993 - 1998: Graduate student, Scripps Institution of Oceanography, University of
 California, San Diego. Graduate advisors: John Orcutt and Alistair Harding.

RESEARCH INTERESTS

- Structural evolution of rifted margins
- Role of fluids on geological processes in oceanic subduction zones
- Mountain building processes in continental collision
- Seafloor spreading at mid-ocean ridges
- Seismic inversion techniques

FIELD EXPERIENCE

2015 (April): Co-chief scientist on Cayseis cruise, OBS seismic refraction study of the Cayman Trough on the FS Meteor.
 2014 (Sep-Oct): Co-chief scientist, Short-period OBS deployment and recovery for GeoPRISMS/ENAM community seismic experiment offshore North Carolina.
 2010 (Sep-Dec): Chief scientist, OBS seismic refraction study in the Gulf of Mexico on board the R/V Iron Cat.
 2009 (May-Jul): OBS deployments and recovery for TAIGER geophysical study.
 2008 (Sep): Land seismic deployment of refteks for STEEP project, southern Alaska.
 2008 (Jan-Mar): Co-chief scientist during first R/V Marcus Langseth seismic reflection and OBS refraction cruise in Caribbean Sea. Deployment of land seismometers in Costa Rica.
 2006 (July-Aug.): Co-chief scientist during marine geophysical survey of the Chukchi Borderlands and Mendeleev Ridge on board USCGC Healy. Chief scientist Lawrence Lawver.
 2005 (Oct.): Scouting for land seismic refraction study TAIGER. Lead PI Francis Wu.
 2005 January-February 2005 and July 2005: Land explosion refraction study of the Cordillera Central and Cordillera Guanacaste, Costa Rica. Lead-PI Steven Holbrook.
 2004 (June-July): Fieldwork in preparation of explosion seismic refraction study in Costa Rica. Principal investigator Steven Holbrook.

- 2001 (May-June): Recovery of 16 broadband instruments in northwest Wyoming. Principal investigator Kenneth Dueker. 2000 (Sept.-Oct.): A 3-D seismic reflection study at the Blake Ridge on board the R/V Maurice Ewing. Principal investigator Steven Holbrook.
- 2000 (Jul.-Aug.): A seismic refraction and reflection study of the Newfoundland basin (SCREECH) on board the R/V Maurice Ewing. Principal investigators Brian Tucholke and Steven Holbrook.
- 1997 (Sept.-Oct.): A 3-D seismic refraction and reflection experiment on the northern East Pacific Rise (ARAD) on board the R/V Maurice Ewing. Principal investigator Graham Kent.
- 1996 (Mar.-May): An investigation of the Austral Islands using multichannel seismics, bathymetry mapping and dredging, on board the R/V Maurice Ewing. Principal investigator Marcia McNutt.
- 1994 (Nov.-Dec.): A seismic refraction study of the Australian-Antarctic Discordance Zone on board the R/V Roger Melville. Principal investigator John Orcutt.
- 1994 (June): A marine tilt/passive seismic experiment at the Juan de Fuca Ridge on board the R/V Wecoma. Principal investigator Steven Constable.

TEACHING EXPERIENCE

- 2015 (Spring): Week-long short course on seismic refraction data analysis.
- 2011 (Spring): Co-teaching Physics of the Earth, JSG, University of Texas
- 2010 (Spring): Co-teaching Global Geophysics course, JSG, University of Texas
- 2009 (Spring): Co-teaching of Tectonics I course, JSG, University of Texas.
- 2006-2008 (Spring): Co-teaching of marine tectonics course, JSG, University of Texas.
- 2000 (Spring): Quantitative Seismology, University of Wyoming.
- 1992-1993: Teaching assistant in undergraduate mathematics and physics courses.

AWARDS AND HONORS

- 2012-2014: UTIG Director's Circle of Excellence
- Fall 2012 – Spring 2013: GeoPRISMS Distinguished Lecturer.
- Fall 2011 – Spring 2012: GeoPRISMS Distinguished Lecturer.

COMMUNITY SERVICE OUTSIDE UT AUSTIN

- 2013-present: GeoPRISMS Science Oversight Committee Member.
- 2013: Co-convener IRIS Ocean-Bottom Seismometer workshop (Oct. 2013, Los Angeles, CA).
- 2012-present: US OBS Instrument Pool Oversight Committee member.
- 2011 (Fall): NSF MARGINS Panel member.
- 2010: Co-convener NSF GeoPRISMS SCD workshop (Jan. 2011, Austin TX).
- 2007: Guest Editor AGU Books.
- 2006 (Fall): NSF-MGS Panel member.
- 2006 (Spring): NSF-MGS Panel member.

SERVICE IN THE JACKSON SCHOOL OF GEOSCIENCES

- 2013-present: JSG Solid Earth Theme Executive Committee
- 2013-present: UTIG Seminar Committee
- 2010-2013: UTIG Fellowship Committee
- 2009-2011: JSG Equipment Committee (Chair)
- 2009-2010: UTIG ad hoc Technical Support Committee
- 2008: UTIG Seismology hire Committee (Chair)
- 2007-2009: JSG Hires in Crust, Mantle and Core Dynamics Committee.
- 2005-2006: JSG Equipment Committee

2003-2011: UTIG OBS Committee (Chair)
 2003-2006: UTIG Seminar Committee
 2002-2005: UTIG Library Committee

STUDENTS and POSTDOCS

Graduate students supervised: Sanjay Sood (MSc) 2004-2007; Drew Eddy (PhD) 2010-2014; Mark Duncan (MSc) 2011-2013; Jennifer Harding (PhD) 2014-present.

Current graduate student committees: Anna Svartman (PhD, UT Austin), Baiyuan Gao (PhD, UT Austin), Rodrigo Lima (PhD, UT Austin).

Past graduate student committees: Chaoshun Hu (PhD 2008, UT Austin), Lindsay Worthington (PhD 2010, UT Austin), Ryan Lester PhD 2013, UT Austin), Max Garnier (MSc 2012, Univ. Wyoming), Dan Eakin (PhD 2014, UT Austin).

Postdocs supervised: Matthew Hornbach, 2005-2006; Peggy Vermeesch, 2006-2008.

MEMBERSHIPS PROFESSIONAL ORGANIZATIONS

AGU and GSA.

FUNDING

NSF-OCE1356895: Ultraslow crustal accretion at the Mid-Cayman Spreading Center: Mantle exhumation or magmatism? Award: \$699,076. Start/end dates: 03/15/2014 - 02/28/2017.

NSF-OCE1348454. Eastern North America Community Seismic Experiment (GeoPRISMS). Award: \$150,842. Start/end dates: 08/15/2013-07/31/2016.

NSF-EAR1010642: TAIGER's Tale: Tectonics of Subduction to Collision. Award: \$408,360. Start/end dates: 10/01/2010-09/30/2012.

NSF-EAR1009986. St. Elias Erosion and Tectonics Project (renewal). Award: \$356,600. Start/end dates: 10/01/2010-01/31/2014.

ExxonMobil. Seismic refraction study of the northern Gulf of Mexico (industry funding). Award \$3,267,636. Start/end dates 01/01/2009-12/31/2012.

NSF-OCE0405556. Seismic measurements of magma flux, arc composition, and lower-plate serpentinization in the Central American subduction factory. \$363,314 Start/end dates 10/15/2004-10/31/2010.

GXT NigeriaSpan: Seismic reflection and refraction study of the Gulf of Guinea (industry funding). \$468,583. Start/end dates 10/01/2004-09/30/2006.

NSF-EAR0408584. Integrated Investigation of the Geodynamics of the Taiwan Orogeny (TAIGER). Award: \$814,928. Start/end dates 09/01/2004-08/31/2011.

NSF-EAR, ST. Elias Erosion/tectonics Project (STEEP). Award: \$769,119. Start/end dates 08/01/2004-08/31/2011.

NSF-PLR0327626, Integrated geophysical and geologic investigation of the crustal structure of western Canada Basin, Chukchi Borderland and Mendeleev Ridge, Arctic Ocean. Award: \$904,071. Start/end dates 05/01/2004-12/31/2008.

INVITED SEMINARS

May 2015: TGS, Houston. Structure and Early Evolution of the northern Gulf of Mexico: Constraints from Marine Seismic Refraction Data

October 2014: UT Austin, Department of Geosciences, iPGST seminar. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica.

April 2014: Anton de Kom Universiteit van Suriname, Paramaribo, Suriname. Global plate tectonics and the relevance to hydrocarbon reserves in the Guyana-Suriname basin.

- March 2014: University of Guyana, Georgetown, Guyana. Global plate tectonics and the relevance to hydrocarbon reserves in the Guyana-Suriname basin.
- March 2014: University of the West Indies, St. Augustine, Trinidad and Tobago. Global plate tectonics and the relevance to hydrocarbon reserves in the Guyana-Suriname basin.
- February 2013: Northern Illinois University, DeKalb, IL. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica (GeoPRISMS DLP technical lecture).
- February 2013: Carnegie Science Center, Pittsburgh, PA. The life cycle of the margins of continents (GeoPRISMS DLP public lecture).
- February 2013: California University of Pennsylvania, California, PA. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica (GeoPRISMS DLP technical lecture).
- February 2013: Louisiana State University, Baton Rouge, LA. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica (GeoPRISMS DLP technical lecture).
- October 2012: University of Texas, El Paso, TX. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica (GeoPRISMS DLP technical lecture).
- August 2012: Cornell University, NY. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica.
- August 2012: Cornell University, NY. Extension of continental crust at the eastern Grand Banks, Newfoundland.
- April 2012: University of Massachusetts, Amherst, MA. Extension of continental crust at the eastern Grand Banks, Newfoundland (GeoPRISMS DLP technical lecture).
- February 2012: University of Hawaii, Honolulu, HI. Extension of continental crust at the eastern Grand Banks, Newfoundland (GeoPRISMS DLP technical lecture).
- November 2011: University of Memphis, Memphis, TN. Extension of continental crust at the eastern Grand Banks, Newfoundland (GeoPRISMS DLP technical lecture).
- November 2011: Pink Palace Planetary Museum, Memphis, TN. The life cycle of rifted margins (GeoPRISMS DLP public lecture).
- September 2011: University of Texas, Arlington, TX. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica.
- October 2010: University of Wyoming, Laramie, WY. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica.
- October 2010: UTIG, Austin, TX. A seismic refraction study of the Cocos plate offshore Nicaragua and Costa Rica.
- October 2009: Bureau of Economic Geology, University of Texas, Austin, TX. Extension of continental crust at the eastern Grand Banks, Newfoundland.
- September 2009: NSF MARGINS Subduction Factory TEI key note address: Seismic detection of fluids in the Central America arc system.
- September 2009: Rice University, Houston, TX. Seismic detection of fluids in the Central America arc system.
- May 2009: On board vessel YY2, National Taiwan Ocean University. High-frequency seismic reflections from the slab-interface between the Cocos plate and the mantle wedge beneath Costa Rica.
- January 2009: Baylor University, Waco TX. Extension of continental crust at the eastern Grand Banks, Newfoundland.
- January 2009: University of Texas at Dallas. High-frequency seismic reflections from the slab-interface between the Cocos plate and the mantle wedge beneath Costa Rica .
- October 2008: Lamont-Doherty Earth Observatory, New York. Extension of continental crust at the eastern Grand Banks, Newfoundland.
- October 2008: Lamont-Doherty Earth Observatory, New York. High-frequency seismic reflections from the slab-interface between the Cocos plate and the mantle wedge beneath Costa Rica.

- September 2008: UTIG, Austin, Texas. High-frequency seismic reflections from the slab-interface between the Cocos plate and the mantle wedge beneath Costa Rica.
- May 2008: ExxonMobil, Houston. Extension of continental crust at the eastern Grand Banks, Newfoundland.
- May 2008: Caltech, Pasadena. High-frequency seismic reflections from the slab-interface between the Cocos plate and the mantle wedge beneath Costa Rica.
- April 2006: University of Trieste, Italy. Structure and Composition of the Central Aleutian Arc from a Sparse Wide-Angle Seismic Data Set.
- November 2005: Department of Geological Sciences, UT Austin. Seismic velocity structure of the rifted margin of the eastern Grand Banks of Newfoundland.
- September 2004: Department of Geological Sciences, UT Austin. Structure and composition of the Central Aleutian Arc from a sparse wide-Angle Seismic Data Set.
- May 2004: Lamont-Doherty Earth Observatory, New York. Structure and composition of the Central Aleutian Arc from a sparse wide-angle seismic data set.
- November 2003: UTIG. Constraints on the crustal structure of the Aleutian island arc from wide-angle seismic data: Inference and assessment using an SVD approach.
- October 2001: UTIG. A crustal mass balance for the Southern Alps, South Island, New Zealand.
- January 2001: IPG Paris, France. A crustal mass balance for the Southern Alps, South Island, New Zealand
- March 2000: Woods Hole Oceanographic Institution. A crustal mass balance for the Southern Alps, South Island, New Zealand
- January 2000: Otago University, New Zealand. Seismic velocity and wide-angle reflectivity structure of the Australian-Pacific plate boundary, South Island, New Zealand.
- January 2000: Victoria University, New Zealand. Seismic velocity and wide-angle reflectivity structure of the Australian-Pacific plate boundary, South Island, New Zealand.
- June 1999: Utrecht University, The Netherlands. Seismic velocity and reflectivity structure of South Island, New Zealand.
- March 1999: University of Wyoming. Seismic velocity and reflectivity structure of South Island, New Zealand
- January 1997: Utrecht University, The Netherlands. Contrast in thermal structure across the Clipperton transform, East Pacific Rise.

PEER-REVIEWED PUBLICATIONS. Graduate students supervised by Van Avendonk are underlined.

In preparation:

- Eddy, D.R., H.J.A. Van Avendonk, Christeson, G.L., I.O. Norton, 2015, Deep crustal structure of the north-central Gulf of Mexico: insights from the GUMBO Line 2 marine seismic transect, *in preparation for Geosphere*.
- Eakin, D.H., K.D. McIntosh, and H.J.A. Van Avendonk, Along-strike variability of prism architecture in the intra-oceanic subduction domain offshore southern Taiwan, *in preparation for Tectonophysics*.
- Everson, E.D., W.S. Holbrook, D. Lizarralde, H.J.A. Van Avendonk, and P. Denyer, 2015, Seismic structure of the Costa Rican subduction system from active-source onshore-offshore seismic data, *in preparation for J. Geophys. Res. Solid Earth*.
- Everson, E.D., W.S. Holbrook, D. Lizarralde, H.J.A. Van Avendonk, and P. Denyer, 2014, Seismic imaging of the Middle American Trench offshore Costa Rica: Impact of bending-related faulting on upper mantle serpentinitization, *in revision for G-Cubed*.

Submitted:

- St. Clair, J., W.S. Holbrook, H.J.A. Van Avendonk, D. Lizarralde, 2015, Along-strike structure of the Costa Rican convergent margin from seismic a refraction/reflection survey: Evidence for underplating beneath the inner forearc, *submitted to G-Cubed*.
- Van Avendonk, H.J.A., K.D. McIntosh, H. Kuo-Chen, L.L. Lavier, D.A. Okaya, F.T. Wu, C.Y. Wang, C.-S. Lee, and C.-S. Liu, 2015, A lithospheric profile across northern Taiwan: From arc-continent collision to extension, *submitted to Geophysical Journal International*.

Published:

44. Enkelmann, E., P.O. Koons, T. Pavlis, B. Hallet, A. Barker, G. Pavlis, J. Elliott, J.I. Garver, S. Gulick, R. Headley, K. Ridgway, N. Ruppert, H. van Avendonk, 2015, Cooperation of tectonic and surface process produces Earth's highest coastal mountains, *Geophys. Res. Lett.*, *Geophys. Res. Lett.*, 42, 5838–5846, doi:10.1002/2015GL064727.
43. Van Avendonk, H.J.A., G.L. Christeson, I.O. Norton, and D.R. Eddy, 2015, Continental rifting and sediment infill in the northwestern Gulf of Mexico, *Geology*, 43, 631-634, doi:10.1130/G36798.1.
42. Eakin, D.H., K.D. McIntosh, H.J.A. Van Avendonk, and L.L. Lavier, 2015, New geophysical constraints on the structure and potential evolution of the Gagua Ridge and Huatung Basin, *Geochem. Geophys. Geosyst.*, 16, 380-400, doi:10.1002/2014GC005548.
41. Van Avendonk, H.J.A., H. Kuo-Chen, K.D. McIntosh, L.L. Lavier, D.A. Okaya, F.T. Wu, C.Y. Wang, C.S. Lee, and C.S. Liu, 2014, Deep crustal structure of an arc-continent collision: Constraints from seismic travel times in central Taiwan and the Philippine Sea, *J. Geophys. Res. Solid Earth*, 119, 8397-8416, doi:10.1002/2014JB011327.
40. McIntosh, K., L. Lavier, H. Van Avendonk, R. Lester, D. Eakin, C.-S. Liu, 2014, Crustal structure and inferred rifting processes in the northeast South China Sea, *Mar. Petrol. Geol.*, 58, Part B, 612–626, doi:10.1016/j.marpetgeo.2014.03.012.
39. Eddy, D.R., H.J.A. Van Avendonk, Christeson, G.L., I.O. Norton, G.D. Karner, C.A. Johnson, and J.W. Snedden, 2014, Deep crustal structure of the northeastern Gulf of Mexico: implications for rift evolution and seafloor spreading, *J. Geophys. Res. Solid Earth*, 119, 6802-6822, doi:10.1002/2014JB011311.
38. Christeson, G.L., H.J.A. Van Avendonk, I.O. Norton, J.W. Snedden, D.R. Eddy, G.D. Karner, and C.A. Johnson, 2014, Deep crustal structure in the eastern Gulf of Mexico, *J. Geophys. Res. Solid Earth*, 119, 6782-6801, doi:10.1002/2014JB011045.
37. Walton, M.A.L., S.P.S. Gulick, R.S. Reece, G.A. Barth, G. Christeson, H. Van Avendonk, 2014, Dynamic response to strike-slip tectonic control on the deposition and evolution of the Baranof Fan, Gulf of Alaska, *Geosphere*, 10, 680-691, doi:10.1130/GES01034.1.
36. Lester, R., H.J.A. Van Avendonk, K.D. McIntosh, L.L. Lavier, C.-S. Liu, T.K. Wang, F. Wu, 2014, Rifting and magmatism in the northeastern South China Sea from wide-angle tomography and seismic reflection imaging, *J. Geophys. Res. Solid Earth*, 119, 2305-2323, doi:10.1002/2013JB010639.
35. Eakin, D.H., K.D. McIntosh, H.J.A. Van Avendonk, R. Lester, L. Lavier, 2014, Crustal-scale seismic profiles across the Manila subduction zone: The transition from intra-oceanic subduction to incipient collision, *J. Geophys. Res. Solid Earth*, 119, 1-17, doi:10.1002/2013JB010395.
34. Christeson, G.L., H.J.A. Van Avendonk, S.P.S. Gulick, R.S. Reece, G.L. Pavlis, and T.L. Pavlis, 2013, Moho interface beneath Yakutat Terrane, southern Alaska, *J. Geophys. Res. Solid Earth*, 118, 5084-5097, doi:10.1002/jgrb.50361.
33. Van Avendonk, H.J.A., S.P.S. Gulick, G.L. Christeson, L.L. Worthington, T.L. Pavlis, and K.D. Ridgway, 2013, Subduction and accretion of sedimentary rocks in the Yakutat

- collision zone, St. Elias orogen, Gulf of Alaska, *Earth Planet. Sci. Lett.*, 381, 116-126, doi:10.1016/j.epsl.2013.08.049.
32. Lester, R., K. McIntosh, H.J.A. Van Avendonk, L. Lavier, C.-S. Liu and T.K. Wang, 2013, Crustal accretion in the Manila trench accretionary wedge at the transition from subduction to mountain-building in Taiwan, *Earth Planet. Sci. Lett.*, 375, 430-440, doi:10.1016/j.epsl.2013.06.007.
 31. McIntosh, K.D., H.J.A. Van Avendonk, L.L. Lavier, W.R. Lester, D. Eakin, F. Wu, C.S. Liu, and C.S. Lee, 2013, Inversion of a hyper-extended rifted margin in the southern Central Range of Taiwan, *Geology*, 41, p. 871-874, doi:10.1130/G34402.1.
 30. Eddy, D.R., H.J.A. Van Avendonk, and D.J. Shillington, 2013, Compressional and shear-wave velocity structure of the continent-ocean transition zone at the eastern Grand Banks, Newfoundland, *Geophys. Res. Lett.*, 40, 3014–3020, doi:10.1002/grl.50511.
 29. Shillington, D.J., H.J.A. Van Avendonk, M.D. Behn, P.B. Kelemen, and O. Jagoutz, 2013, Constraints on the composition of the Aleutian arc lower crust from V_P/V_S , *Geophys. Res. Lett.*, 40, 2579-2584, doi:10.1002/grl.50375.
 28. Reece, R., S. Gulick, G. Christeson, B. Horton, H. Van Avendonk, G. Barth, 2013, The role of farfield tectonic stress in oceanic intraplate deformation, Gulf of Alaska, *J. Geophys. Res.*, 118, 1862-1872, doi:10.1002/jgrb.50177.
 27. Hayes, J.L., W.S. Holbrook, D. Lizarralde, H.J.A. Van Avendonk, A.D. Bullock, M. Mora, S. Harder, G.E. Alvarado, and C. Ramírez, 2013, Crustal structure across the Costa Rican volcanic arc, *Geochem. Geophys. Geosyst.*, 14, 1087-1103, doi:10.1002/ggge.20079.
 26. Gulick, S.P.S., R.S. Reece, G.L. Christeson, H.J.A. Van Avendonk, L.L. Worthington, T.L. Pavlis, 2013, Transition Fault and the unstable Yakutat-Pacific-North American triple junction, *Geology*, 41, 571-574, doi:10.1130/G33900.1.
 25. Tan, E., L. L. Lavier, H. J. A. Van Avendonk, and A. Heuret, 2012, The role of frictional strength on plate coupling at the subduction interface, *Geochem. Geophys. Geosyst.*, 13, Q10006, doi:10.1029/2012GC004214.
 24. Lester, R., L. L. Lavier, K. McIntosh, H. J. A. Van Avendonk, and F. Wu, 2012, Active extension in Taiwan's pre-collision zone: A new model of plate-bending in continental crust, *Geology*, 40, 831-834, doi:10.1130/G33142.1.
 23. Worthington, L.L., H. J.A. Van Avendonk, S.P.S. Gulick, G.L. Christeson, T.L. Pavlis, 2012, Crustal structure of the Yakutat Terrane: New constraints for understanding the evolution of subduction and collision in southern Alaska, *J. Geophys. Res.*, 117, B01102, doi:10.1029/2011JB008493.
 22. Van Avendonk, H.J.A., W. S. Holbrook, D. Lizarralde, and P. Denyer, 2011, Structure and serpentinitization of the subducting Cocos plate offshore Nicaragua and Costa Rica, *Geochem. Geophys. Geosyst.*, 12, Q06009, doi:10.1029/2011GC003592.
 21. Christeson, G.L., S.P.S. Gulick, H.J.A. Van Avendonk, L. Worthington, R. Reece, T.L. Pavlis, 2010, The Yakutat Block: Dramatic change in crustal thickness across the Transition Fault, Alaska, *Geology*, 38, 895-898, doi:10.1130/G31170.1.
 20. Van Avendonk, H.J.A., W.S. Holbrook, D. Lizarralde, M.M. Mora, S. Harder, A.D. Bullock, G.E. Alvarado, C.J. Ramírez, 2010, Seismic evidence for fluids in fault zones on top of the subducting Cocos plate, Costa Rica, *Geophys. J. Int.*, 181, 997-1016.
 19. Van Avendonk, H.J.A., L.L. Lavier, D.J. Shillington, G. Manatschal, Extension of continental crust at the eastern Grand Banks, Newfoundland, 2009, *Tectonophysics*, 468, 131-148, doi:10.1016/j.tecto.2008.05.030.
 18. Hornbach, M.J., D.M. Saffer, W.S. Holbrook, H.J.A. Van Avendonk, A.R. Gorman, 2008, 3D seismic imaging of the Blake Ridge methane hydrate province: evidence for large concentrated zones of gas hydrate and morphologically-driven advection, *J. Geophys. Res.*, 113, B07101, doi:10.1029/2007JB005392.

17. Fuis, G.S., M.D. Kohler, M. Scherwath, U. ten Brink, H.J.A. Van Avendonk, and J.M. Murphy, 2007, A comparison between the transpressional plate boundaries of the South Island, New Zealand, and Southern California, USA: The Alpine and San Andreas Fault Systems, in *A Continental Plate Boundary: Tectonics at South Island, New Zealand*, AGU Geophysical Monograph 175, edited by D. Okaya, T. Stern, F. Davey, Washington, DC, 47-74.
16. Davey, F.J., D. Eberhart-Phillips, M. Kohler, S. Bannister, G. Caldwell, S. Henrys, M. Scherwath, T. Stern and H. Van Avendonk, 2007, 3-D structure of the Southern Alps orogen, South Island, New Zealand, 2007, in *A Continental Plate Boundary: Tectonics at South Island, New Zealand*, AGU Geophysical Monograph 175, edited by D. Okaya, T. Stern, F. Davey, Washington, DC, 309-330.
15. Van Avendonk, H.J.A., W.S. Holbrook, G.T. Nunes, D.J. Shillington, B.E. Tucholke, K.E. Loudon, H.C. Larsen, J.R. Hopper, 2006, Seismic velocity structure of the rifted margin of the eastern Grand Banks of Newfoundland, Canada, *J. Geophys. Res.*, 111, B11404, doi:10.1029/2005JB004156.
14. Shillington, D.J., W.S. Holbrook, H.J.A. Van Avendonk, B.E. Tucholke, J.R. Hopper, K.E. Loudon, H.C. Larsen, and G.T. Nunes, 2006, Evidence for asymmetric nonvolcanic rifting and slow incipient oceanic spreading from seismic reflection data on the Newfoundland margin, *J. Geophys. Res.*, 111, B09402, doi:10.1029/2005JB003981.
13. Van Avendonk, H.J.A., Slowness-weighted diffraction stack for migrating wide-angle seismic data in laterally varying media, 2004, *Geophysics*, 69, 1046-1052.
12. Van Avendonk, H.J.A., W.S. Holbrook, D. Okaya, J. Austin, F. Davey, and T. Stern, 2004, Continental crust under compression: A seismic refraction study of SIGHT Transect I, South Island, New Zealand, *J. Geophys. Res.*, 109, doi:10.1029/2003JB002790.
11. Van Avendonk, H.J.A., D.J. Shillington, W.S. Holbrook, and M.J. Hornbach, 2004, Inferring crustal structure in the Aleutian arc from a sparse wide-angle seismic data set, *Geochem. Geophys. Geosyst.*, 5, doi:10.1029/2003GC000664.
10. Shillington, D.J., H.J.A. Van Avendonk, W.S. Holbrook, P.B. Kelemen, M.J. Hornbach, 2004, Composition and structure of the central Aleutian island arc from arc-parallel wide-angle seismic data, *Geochem. Geophys. Geosyst.*, 5, Q10006, doi:10.1029/2004GC000715.
9. Shillington, D.J., W.S. Holbrook, J.R. Hopper, B.E. Tucholke, K.E. Loudon, H.C. Larsen, H.J.A. Van Avendonk, S. Deemer, 2004, J. Hall, Data Report: Marine geophysical data on the Newfoundland nonvolcanic rifted margin around SCREECH transect 2, ODP Init. Rep., 210, 1-36.
8. Bazin, S. A.J. Harding, G.M. Kent, J.A. Orcutt, S.C. Singh, C.H. Tong, J.W. Pye, P.J. Barton, M.C. Sinha, R.S. White, R.W. Hobbs, H.J.A. Van Avendonk, 2003, A three-dimensional study of a low velocity region beneath the 9°03'N overlapping spreading center, *Geophys. Res. Lett.*, 30, 1039, doi:10.1029/2002GL015137.
7. Okaya, D., T. Stern, W.S. Holbrook, H. Van Avendonk, F. Davey, and S. Henrys, 2003, Imaging a plate boundary using double-sided onshore-offshore seismic profiling, *Leading Edge*, 22,256-260.
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