

**SUSAN L. BECK**  
**Professor**  
**Department of Geosciences**  
**University of Arizona**  
**Tucson, Arizona 85721 U.S.A.**  
**Phone (520) 621-8628**  
**slbeck@email.arizona.edu**

***Professional Experience***

Department of Geosciences, University of Arizona, Tucson, AZ

Professor (2001- present)

Associate Professor (1996-2001)

Assistant Professor (1990-1996)

Head, Department of Geosciences, University of Arizona, AZ (2000-2007)

Institute of Geophysics and Planetary Physics and Earth Sciences Department, Lawrence

Livermore National Laboratory, Postdoctoral Research Scientist (1988-1990)

University of Michigan, Graduate Teaching and Research Assistant (1982-1987)

Natural Gas Corporation of California, Denver, CO, Structural Geologist (Summer 1981 and 1982)

University of Utah, Graduate Teaching and Research Assistant (1979-1981)

***Education***

Ph.D., Seismology, University of Michigan, Ann Arbor, MI, 1987

M.S., Structural Geology, University of Utah, Salt Lake City, UT, 1982

B.S., Geology, University of Utah, Salt Lake City, UT, 1979

***Scholarships and Awards***

GSA Fellow, 2015

AGU Fellow, 2014

AGU Gutenberg Lecturer, Seismology Section, 2014

Department of Geosciences Advisory Board Outstanding Faculty Award, 2007

University of Arizona College of Science Outstanding Advising Award, 1996

Society of Exploration Geophysicists Scholarship, 1983-1987

Outstanding Student Research Award, University of Utah, 1982

Outstanding Student Teaching Award, University of Utah, 1981

Utah International Minority Scholarship, University of Utah, 1978-1979

Kennecott Meritorious Scholarship, University of Utah, 1977-1979

Athletic Scholarship, University of Utah, 1974-1978

***Service***

***National Service***

AGU Union Fellows Committee member (2017)

AGU Tectonophysics Nominations Committee Chair (2015-2017)

AGU Tectonophysics Nominations Committee member (2014-2015)

AGU Seismology Section Aki Early Career Award Committee Chair (2015-2016)

Seismological Society of America Reid Medal nominations subcommittee (2014-2017)

GSA Nominations Committee 2013-2016  
COACH (Committee on the Advancement of Women Chemists) International Member,  
National Science Foundation service  
    Committee for Decal Review Margins Program (2009)  
    Committee of Visitor for the Instrumentation and Facilities program (2007)  
    NSF EarthScope Advisory Committee (2006-2007)  
    Geophysics Review Panel (1998, 2004-2006)  
    Post-Doctoral Review Committee (1995, 1996)  
    Active Tectonics Coordinating Committee (1995-1997)  
    Review Committee for the Southern California Earthquake Center (SCEC) (1991-1992)  
Air Force Technical Applications Center, Seismic Review Panel (1998-2003)  
National Academy of Sciences  
    Committee on Seismology (1997-1999)  
    Panel on Basic Research Requirements in Support of Comprehensive Test Ban Monitoring  
    (1995-1997)  
IRIS Chair International Development Seismology Committee (2012-2014)  
IRIS International Development Seismology Committee (2008-2014)  
IRIS Advisory Committee for the NSF-MRI Chile project (2011-2015)  
IRIS Chair of the Board of Directors (2008-2010)  
Organized the IRIS response to the 2010 Maule Earthquake – aftershock deployment (2010)  
EarthScope Management Team (2008-2009)  
IRIS Planning Committee (2008-2012)  
EarthScope advisory committee (2007-2008)  
IRIS Executive Committee (2001-2004)  
IRIS Finance Committee (2001, Chair, 2002-2004)  
IRIS Nominating Committee (Chair 2004, 2005)  
IRIS International working group (2005-present)  
Co-Chair of IRIS Workshop 2002-03 (workshop for 250 people in June 2003, Yosemite CA)  
Co-Chair of IRIS Workshop 2005-06 (workshop for 200 people in June, 2006, Tucson AZ)  
IRIS Global Seismic Network Standing Committee (1996-1998)  
AGU Chairs & Heads Executive Committee (2004)  
External Department Review Committee, Geology and Geophysics, University of Utah (2004)

### ***University of Arizona Service***

College of Science Applied Math Director Search Committee (2014-2016)  
College of Science Promotion and Tenure Committee (2011-2012; 2013-2014)  
UA Institute for the Environment Advisory Committee (2009-2012)  
UA Koffler Prize Committee (2007-2009)  
UA Provost Search Committee (2007-2008)  
Computer Science Department Head Search Committee (2007-2008)  
NSF ADVANCE grant working group (2006-2007)  
Physics Department Head Search Committee (2004-2005)  
Earth Science and Environmental Programs Focus Study Team (2003-2004)  
Earth Surface Processes Research Institute (ESPRI) Co-director with John Sutter (2001-2005)  
College of Science, Chair, Associate Dean Search Committee (2003)  
College of Science Millennium Committee (diversity issues) (2003-2004)

Provost's Research Career Development Fund Committee (2002-2003)  
Faculty Fellows (1999-2001)  
Search Committee for the Dean of the College of Science (2000)  
Five-Year Administrative Review of the Head of the Department Planetary Sciences and the Lunar and Planetary Laboratory (2000)  
Five-Year Administrative Review of the Dean of the College of Science Committee (1997-1998)  
Sabbatical Evaluation Committee (1995 - 1998)  
Committee for International Studies Curriculum (1994-1996)  
Committee to Recruit and Retain Women in Science (1992-1994)

***UA Department of Geosciences Service***

Director of Graduate Studies (2014-present)  
Geophysics Faculty Search Committee Chair (2014-2016)  
Graduate Admissions Committee (2013-2014; 1996-2000)  
Chair, Geoscience Department Head Search Committee (2012)  
Chair, Graduate Policy Committee (2008-2012)  
Graduate Policy Committee (2007-2008)  
Department Head (2000-2007)  
Promotion and Tenure Committee (2007, 2011)  
Dept. of Geosciences Academic Program Review committee (2006-2007)  
Geomorphology Search Committee (1998-1999)  
Promotion and Tenure Committee (1996-1997)  
Field Camp Committee (1995-present)  
Department Head Advisory Committee (1995-1996)  
Undergraduate Policy Committee (1995)  
Faculty Performance Evaluation Committee (1992, 1996)  
Geophysics Program Committee (1990-present)

***Service and Capacity Building in South America***

Ecuador Ramp deployment - May 2016 – co-lead a broadband seismic deployment with collaborators at IG-ENP in Quito, Ecuador after the April 26, 2016 Ecuador earthquake to collect aftershock data that is open to the community. Funded by the NSF Rapid program.  
MIMOSA Ambient Noise workshop - Jan. 2016 – Organized a 8 day workshop on ambient noise for Latin America students and staff, and University of Arizona students and postdocs. Funded by NSF Geophysics.  
National Geophysical Networks in Latin America Workshop - May 2015 in Santiago, Chile – co-organized workshop with IRIS and University of Chile, 90 participants from Latin America.  
Advanced Studies Institute, July 2014, in Bogota Colombia, organized and participated in workshop with ~40 Latin America attendees on earthquake locations and moment tensor inversions.  
Chile RAMP Deployment – March 2010 - Organized the US component of an international aftershock deployment following the 2010 Maule Earthquake (M=8.8) with the University of Chile. The US component deployed 65 stations for 9 months and made the data open immediately to the scientific community.

### **Professional Organizations**

Incorporated Research Institutions for Seismology (IRIS), University of Arizona Representative  
American Geophysical Union  
Geological Society of America  
Seismological Society of America

### **Field Work and Broadband Data Collected and Archived at IRIS DMC**

BANJO/SEDA, Bolivia & Chile, 1994-1995, 18 stations  
CHARGE, Argentina, 2000-2002, 20 stations  
NAF, Turkey, 2006-2008, 40 stations  
SIEMBRA, Argentina, 2007-2009, 40 stations  
LaBarge, Wyoming, 2008-2009, 65 stations  
IMAD – CHAMP, Chile, 2010, 60 stations  
CAUGHT, Peru & Bolivia, 2010-2012, 50 stations  
PULSE, Peru, 2010-2013, 40 stations  
CD-CAT, Turkey, 2013-2015, 70 stations  
Ecuador RAMP, Ecuador, 2016-2017, data archive to date

### **Current Grants**

Variations Along a Continental Convergent Margin: Seismic imaging of the western margin of South America (with G. Zandt), National Science Foundation, Geophysics Program, \$374,998, 2014-2017.  
Collaborative Research: Central Anatolian Tectonics: Surface to mantle dynamics during collision to escape (with Stuart Thomson at UA), National Science Foundation, Continental Dynamics Program, \$825,836 (UA Budget), 7/1/11–6/30/16.  
Collaborative Research: Subduction Dynamics, Mantle structure and Tectonic Evolution of South America (with Peter DeCelles at UA) and L. Liu at University of Illinois, National Science Foundation, CSEDI \$289,883. (UA budget), 08/01/2016 – 07/31/2019.

### **Grants since 2008**

Collaborative Research: Study of the Peruvian Flat Slab and Its Effects on the Continental Lithosphere (with University of North Carolina and Yale University), National Science Foundation, Geophysics Program, \$287,972 (UA seismology budget), 7/1/10–6/30/15.  
Collaborative Research: Analysis of Seismicity Associated with the Mw=8.8 2010 Maule Earthquake and Implications for Subduction Processes, National Science Foundation, Geophysics Program \$168,265 (UA budget), 1/1/2011–12/31/2014.  
Lithospheric structure and deformation of the flat slab region of Argentina, NSF Geophysics Program, \$504,278, 2005-2010.  
Continental Lithospheric Deformation Along a Major Strike-Slip Fault Zone: The Central North Anatolian Fault Zone, Turkey, NSF Geophysics Program, \$484,381, 2003-2009.  
Upgrade of Computing Facilities for Global Seismology at The University of Arizona, NSF Instrumentation and Facilities Program, \$75,000, 2007-2010.  
Pre-Disaster Mitigation (PDM), Seismic Hazard Update for the State of Arizona, FEMA, \$39,000, 2008-2011.  
La Barge Passive Seismic Experiment, (with G. Zandt) ExxonMobil, \$572,488, 2008-20012.  
COSA, ExxonMobil (PI Peter DeCelles), seismology budget, \$150,000, 2010-2013.

Collaborative Research: CAUGHT: Central Andean Uplift and the Geodynamics of High Topography (with George Zandt, Mihai Ducea, and Jay Quade, co-PIs), National Science Foundation, Continental Dynamics Program, \$688,633 (UA Seismology Budget), 6/1/09–9/31/14.

## **Publications**

### ***Refereed Journal Articles***

- Scire, Alissa, George Zandt, Susan Beck, Maureen Long and Lara Wagner, 2017, The deforming Nazca slab in the mantle transition zone and lower mantle: Constraints from teleseismic tomography on the deeply subducted slab between 6° and 32°S, in revision, *Geosphere*.
- Delph, J. R., Ward, K. M., Zandt, G., Ducea, M. N., Susan L. Beck, 2017, Imaging a large magma plumbing system from MASH Zone to magma reservoir, *Earth and Planetary Science Letters*, 457, p. 313-324, [10.1016/j.epsl.2016.10.008](https://doi.org/10.1016/j.epsl.2016.10.008).
- Ward, K. M., Zandt G., Beck S. L., Wagner, L. S., Tavera, H, 2016, Lithospheric Structure Beneath the Northern Central Andean Plateau from the Joint Inversion of Ambient Noise and Earthquake Generated Surface Waves, *Journal of Geophysical Research*, 121, 8217–8238, doi:10.1002/2016JB013237.
- Ryan, J., S. L. Beck, G. Zandt, L. S. Wagner, and E. Minaya, 2016, Central Andean crustal structure from receiver function analysis, *Tectonophysics*, 682, doi:10.1016/0040-1951(96)00024-8
- Long, M., C. B. Biryol, C. M. Eakin, S. L. Beck, L. S. Wagner, G. Zandt, E. Minaya and H. Tavera, 2016, Overriding plate, mantle wedge, slab, and sub-slab contributions to seismic anisotropy beneath the northern Central Andean Plateau, *Geochemistry, Geophysics, Geosystems*, 17, 2556-2575, doi:10.1029/2016GC006316.
- Perkins, Jonathan P., Kevin M. Ward, Shanaka L. de Silva, George Zandt, Susan L. Beck, and Noah J. Finnegan, 2016, Surface uplift in the Central Andes driven by growth of the Altiplano Puna Magma Body, *Geoscience Communication*, 7, doi:10.1038/ncomms13185.
- Antonijevic, S. K., Wagner, L. S., Beck, S. L., Long, M. D., Zandt, G., Tavera, H., 2016. Effects of change in slab geometry on the mantle flow and slab fabric in southern Peru, *Journal of Geophysical Research*, 121, doi:10.1029/2016JB013064.
- Kumar, Abhash, Lara S Wagner, Susan L Beck, Maureen D Long, George Zandt, Bissett Young, Hernando Tavera, Estella Minaya, 2016, Geometry and state of stress in the central and southern Peruvian flat slab, *Earth and Planetary Science Letters*, 441, p.71-80.
- Delph, Jonathan R., George Zandt, Susan L. Beck, 2015, A new approach to obtaining a 3D shear wave velocity model of the crust and upper mantle: An application to eastern Turkey, *Geophys. J. Inter.*, doi:10.1016/j.tecto.2015.09.031.
- Eakin, C.M., Long, M.D., Scire, A., Beck, S.L., Wagner, L.S., Zandt, G., Tavera, H., 2016, Deformation within the subducted Nazca slab from seismic anisotropy, *Nature Geoscience*, 9, 56–59, doi:10.1038/ngeo2592.
- Antonijevic, S., Wagner, L.S., Abhash Kumar, Beck, S.L., Long, M.D., Zandt, G., & Tavera, H., Cristobal Condori, 2015, The Role of Slab Buoyancy in the Formation of Flat Slabs, *Nature Geoscience*, 524, doi:10.1038/nature14648.
- Scire A., George Zandt, Susan Beck, Maureen Long, Lara Wagner, Estela Minaya, Hernando Tavera, 2015, Imaging the transition from flat to normal subduction: Variations in the structure of the Nazca slab and upper mantle under southern Peru and northwestern Bolivia, *Geophysical J. Inter.*, 204, p. 457-479, doi: 10.1093/gji/ggv452.

- Ammirati, Jean-Baptiste, Patricia Alvarado, Susan Beck, 2015, A lithospheric velocity model for the flat slab region of Argentina from joint inversion of Rayleigh wave phase velocity dispersion and teleseismic receiver functions, *Geophys. J. Inter.*, 202, 224-241, doi: 10.1093/gji/ggv140.
- Delph, Jonathan R., C. Berk Biryol, Susan L. Beck, George Zandt, Kevin M. Ward, 2015, Shear-wave velocity structure of the Anatolian Plate: Anomalously slow crust in southwestern Turkey, *Geophys. J. Inter.*, 202, 261-276, doi: 10.1093/gji/ggv141.
- DeCelles, P.G., G. Zandt, S.L. Beck, C.A. Currie, M.N. Ducea, P. Kapp, G.E. Gehrels, B. Carrapa, J. Quade, L.M. Schoenbohm, 2015, Cyclical Orogenic Processes in the Cenozoic Central Andes, in DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P., eds., *Geodynamics of a Cordilleran Orogenic System: The Central Andes of Argentina and Northern Chile: Geological Society of America Memoir 212*.
- Beck, S. L., Zandt, G., Ward, K.M., and A. Scire, 2015, Multiple styles and scales of lithospheric foundering beneath the Puna Plateau, Central Andes, in DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P., eds., *Geodynamics of a Cordilleran Orogenic System: The Central Andes of Argentina and Northern Chile: Geological Society of America Memoir 212*, p.43-60.
- Scire, Alissa, C. Berk Biryol, George Zandt, and Susan Beck, 2015, Imaging the Nazca slab and surrounding mantle to 700 km depth beneath the Central Andes, in DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P., eds., *Geodynamics of a Cordilleran Orogenic System: The Central Andes of Argentina and Northern Chile: Geological Society of America Memoir 212*.
- Eakin, C.M., Long, M.D., Wagner, L.S., Beck, S.L., Tavera, H., 2015, Upper mantle anisotropy beneath Peru from SKS splitting: Constraints on flat slab dynamics and interactions with the Nazca Ridge, *Earth and Planetary Science Letters*, 412, 152-162, doi:10.1016/j.epsl.2014.12.015.
- Eichelberger, N., McQuarrie, N., Ryan, J., Karimi, B., Beck, S., & Zandt, G., 2015. Evolution of crustal thickening in the central Andes, Bolivia, *Earth Planet. Sci. Lett.*, **426**, 191-203, doi:10.1016/j.epsl.2015.06.035
- Beck, S., A. Rietbrock, F. Tilmann, S. Barrientos, A. Meltzer, O. Oncken, K. Bataille, S. Roecker, J-P. Vilotte, R. M. Russo, 2014, Advancing Subduction Zone Science After a Big Quake, *EOS*, 95, issue 23, p. 193-194, doi:10.1002/2014E0230001.
- Eakin, C.M., Long, M.D., Beck, S.L., Wagner, L.S., Tavera, H., Condori, C., 2014, Response of the Mantle to Flat Slab Evolution: Insights from Local S Splitting beneath Peru, *Geophysical Research Letters*, 41, 3438-3446, doi: 10.1002/2014GL059943.
- Ward, K. M., G. Zandt, S. L. Beck, D. H. Christensen, H. McFarlin, 2014, Seismic Imaging of the Magmatic Underpinnings Beneath the Altiplano-Puna Volcanic Complex from the Joint Inversion of Surface Wave Dispersion and Receiver Functions, *Earth and Planetary Science Letters*, 404, 43-53, DOI: 10.1016/j.epsl.2014.07.022.
- Ward, K. M., Porter, R. C., Zandt, G., Beck, S. L., Wagner, L. S., Minaya, E., and Tavera, H., 2014, Erratum: Ambient noise tomography across the central Andes: *Geophysical Journal International*, v. 196, p. 1264–1265, doi:10.1093/gji/ggt429.
- Ward, Kevin M., Ryan Porter, George Zandt, Susan Beck, Lara Wagner, Estela Minaya, and Hernando Tavera, 2013, Ambient Noise Tomography Across the Central Andes, *Geophys. J. Int.*, doi: 10.1093/gji/ggt166.
- Warren, L., S. Beck, C. B. Berk, G. Zandt, A. Ozacar, Y. Yang, 2013, Crustal Velocity Structure of Central and Eastern Turkey from Ambient Noise Tomography, *Geophys. J. Int.*, doi:1093/gji/ggt210.

- Biryol, C. B., G. Leahy, G. Zandt, S. Beck, 2013, Imaging the shallow crust with local and regional earthquake tomography, *J. Geophys. Res.*, 118, 2289–2306.
- Porter, R., H. Gilbert, G. Zandt, S. Beck, L. Warren, J. Calkins, P. Alvarado, M. Anderson, 2012, Shear wave velocities in the Pampean flat-slab region from Rayleigh wave tomography: Implications for slab and upper mantle hydration, *J. Geophys. Res.*, v. 117, B11301, doi:10.1029/2012JB009350.
- Lange, D., F. Tilmann, S. Barrientos, E. Contreras-Reyes, P. Methe, M. Moreno, B. Heit, H. Agurto, P. Bernard, J. Vilotte, S. Beck, 2012, Aftershock seismicity of the 27 February 2010  $M_w$  8.8 Maule earthquake rupture zone, *Earth and Planetary Science Letters*, V. 317-318, p. 413-425, doi:10.1016/j.epsl.2011.11.034.
- Cevikbilen, Seda Yolsal, C. Berk Biryol, S.L. Beck, G. Zandt, T. Taymaz, H.E. Adiyaman, A. Arda Ozacar, 2012, 3-D Crustal structure along the North Anatolian Fault Zone in North Central Anatolia revealed by local earthquake tomography, *Geophys. J. Int.*, 188(3), 819-849.
- Gans, C.R., S.L. Beck, G. Zandt, H. Gilbert, P. Alvarado, M. Anderson, L. Linkimer, 2011, Continental and oceanic crustal structure of the Pampean flat slab region, western Argentina, using receiver function analysis: New high-resolution results, *Geophys. J. Int.*, GJI-S-0703, doi: 10.1111/j.1365-246X.2011.05023.x.
- Biryol, C. Berk, S. L. Beck, G. Zandt, A. Arda Ozacar, 2011, Segmented African lithosphere beneath the Anatolian region inferred from teleseismic P-wave tomography, *Geophys. J. Int.*, 184, 1037-1057; doi: 10.1111/j.1365-246X.2010.04910.x.
- Biryol, C.B., Zandt, G., Beck, S. L., Ozacar, A. A., Adiyaman, H. E., and Gans, R. C., 2010, Shear wave splitting along a nascent plate boundary: The North Anatolian Fault Zone. *Geophys. J. Int.*, 181, 1201-1213; doi: 10.1111/j.1365-246X.2010.04576.x.
- Ozacar, A. Arda, G. Zandt, H. Gilbert, S.L. Beck, 2010, Seismic images of crustal variations beneath the East Anatolian Plateau (Turkey) from teleseismic receiver functions, *Geol. Soc., London, Spec. Pub.* 340, 485-496; doi:10.1144/SP340.21.
- Linkimer, L., S. L. Beck, S. Y. Schwartz, G. Zandt, and V. Levin, 2010, Nature of crustal terranes and the Moho in northern Costa Rica from receiver function analysis, *Geochem. Geophys. Geosyst.*, 11, Q01S19, doi:10.1029/2009GC002795.
- Gans, C. R., Beck, S. L., Zandt, G., Biryol, C. B. and Ozacar, A. A., 2009, Detecting the limit of slab break-off in central Turkey: new high-resolution Pn tomography results, *Geophys. J. Int.*, 179, 1566–1572. doi:10.1111/j.1365-246X.2009.04389.x
- Alvarado, Patricia, Mario Pardo, Hersh Gilbert, Silvia Miranda, Megan Anderson, Mauro Saez, and Susan Beck, 2009, Flat-slab Subduction and Crustal Models for the Seismically Active Sierras Pampeanas Region of Argentina, in *Backbone of the Americas: Shallow Subduction, Plateau Uplift, and Ridge and Terrane Collision*, edited by Suzanne Mahlburg Kay, Víctor A. Ramos, and William R. Dickinson, GSA Memoir 204.
- Alvarado, Patricia, Sergio Barrientos, Mauro Saez, Maximiliano Astroza, Susan Beck, 2008, Source Study and Tectonic Implications of the Historic 1958 Las Melosas Crustal Earthquake, Chile, Compared to Earthquake Damage, *PEPI*.
- Jeanloz, R. S. L. Beck, M. Lisowski, J. M. Lorenzo, C. I. Mora, J. D. Rimstidt, S. B. Shirey, S. Stein, and K. Wirth, 2008, Earth Science Instrumentation and Facilities Program Review, *EOS*.
- Wagner, L., M. Anderson, J. Jackson, S. Beck, G. Zandt, 2008, Seismic evidence for orthopyroxene enrichment in the continental lithosphere, *Geology*. 36, 935-938, doi:10.1120/G25108A.1.

- Alvarado, P., Beck S. L., Zandt G., 2007, Crustal Structure of the South-Central Andes Cordillera and Backarc Region from Regional Waveform Modeling, *Geophys. J. Int.*, doi:10.1111/j.1365-246X.2007.03452.x.
- Anderson, M., P. Alvarado, G. Zandt, S.L. Beck, 2007, Geometry and brittle deformation of the subducting Nazca plate, central Chile and Argentina, *Geophys. J. Int.*, doi:10.1111/j.1365-246X.2007.03483.x, 2007.
- Frassetto, A., H. Gilbert, G. Zandt, S. L. Beck, M. J. Fouch, 2006, Support of high elevations in the southern Basin and Range based on the composition and architecture of the crust in the Basin and Range and Colorado Plateau, *EPSL*, 249, 62–73.
- Fromm, R., P. Alvarado, S. L. Beck, G. Zandt, 2006, The April 9, 2001 Juan Fernandez Ridge outer-rise earthquake (Mw 6.7) and its aftershock sequence, *J. of Seismology*, 10.1007/s10950-006-9013-3.
- Gilbert, H., S. Beck, G. Zandt, 2006, Lithospheric and upper mantle structure of central Chile and Argentina; influences of a flat slab, *Geophys. J. Int.*, 165, 383–398.
- Alvarado P. and Beck S., 2006, Source characterization of the San Juan (Argentina) crustal earthquakes of 15 January 1944 (Mw 7.0) and 11 June 1952 (Mw 6.8). *Earth and Planetary Science Letters*. doi:10.1016/j.epsl.2006.01.015.
- Calkins, J.A., G. Zandt, H.J. Gilbert, and S.L. Beck, 2006, Crustal images from San Juan, Argentina, obtained using high frequency local event receiver functions. *Geophys. Res. Lett.*, L07309, doi:10.1029/2005GL025516.
- Wagner, L. S. Beck, G. Zandt, M. Ducea, 2006, Depleted lithosphere, cold, trapped asthenosphere, and frozen melt puddles above the flat slab in central Chile and Argentina, *Earth and Planetary Science Letters*, 245 289–301.
- Lay, T., H. Kanamori, C. Ammon, M. Nettles, S. Ward, R. Aster, S. Beck, S. Bilek, M. Brudxinski, R. Butler, H. DeShon, G. Ekstrom, K. Satake, S. Sipkin, 2005, The Great Sumatra-Andaman Earthquake of 26, December 2004, *Science*, 308,1127- 1133.
- Alvarado, P., Castro de Machuca, B. and Beck, S., 2005, Comparative crustal seismic study of the Western and Eastern Sierras Pampeanas region, Argentina, (31°S). *Revista de la Asociación Geológica Argentina*, Vol. 60 (4), 787-796.
- Alvarado, P., Beck S., Zandt G., Araujo M., and Triep E., 2005, Crustal deformation in the south-central Andes back-arc as viewed from regional broad-band seismic waveform modeling, *Geophys. J. Intl.*, doi: 10.1111/j.1365-246X.2005.02759.
- McQuarrie, N., Brian K. Horton, George Zandt, Susan Beck, Peter G. DeCelles, 2005, Lithospheric evolution of the Andean fold–thrust belt, Bolivia, and the origin of the central Andean plateau, *Tectonophysics*, 399, 15-37.
- Wagner, L., S. L. Beck, G. Zandt, 2005, Upper mantle structure in the South Central Chilean subduction zone, *J. Geophys. Res.*, 110, B01308, doi:10.1029/2004JB003238.
- Anderson, M., G. Zandt, E. Triep, M. Fouch, S. L. Beck, 2004, Anisotropy and mantle flow in the Chile-Argentina subduction zone from shear wave splitting analysis, *Geophys. Res. Lett.*, 31, L23608, doi:10.1029/2004GL020906.
- Ozacar, A. A., and S. L. Beck, 2004, The 2002 Denali fault and 2001 Kunlun fault earthquakes: complex rupture processes of two large strike-slip events, *Bull. Seism. Soc. Am. Special Issue on the 2002 Denali fault earthquakes*, Alaska.
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- Geológicos en Homenaje al Ing. Fernando Séptimo Volponi. EFU. Editorial Universidad Nacional de San Juan, Argentina. ISBN 950-605-340-5 (In press).
- Fromm, R., G. Zandt, and S. L. Beck, 2004, Crustal thickness beneath the Andes and Sierra Pampeanas at 30°S inferred from Pn apparent phase velocities, *Geophys. Res. Lett.*, 31, L06625, doi:10.1029/2003GRL19231.
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- Beck S. L. and G. Zandt, 2002, Nature of orogenic crust in the central Andes, *J. Geophys. Res.*, 107, NO. B10, 2230, doi:10.1029/2000JB000124.
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- Beck, Susan, Patricia Alvarado, Lara Wagner, Megan Anderson, Hersh Gilbert , George Zandt, 2008, Flat Slab Subduction Beneath the Sierras Pampeanas in Argentina, ISAG meeting, Nice, France.

***Teaching - Courses and Seminars Taught***

*Geologic Disasters and Society*

*Introduction to Global Seismology*

*Orogenic Systems*

*Geology Field Course*

*Physics of the Earth*

*Advanced Earthquake Sources*

*Active Tectonics*

*Structural Geology*

*Dynamics of Subduction Zones*

*Lithospheric Structure of High Plateaus*

*Tectonics of the Andes*

***Advised and Co-Advised Graduate Students and Postdocs***

*Current Graduate Students (advisor/co-advisor):* Kevin Ward (Ph.D.), Jamie Ryan (Ph.D)

Brandon Bishop (Ph.D.), Jonathan Delph (Ph.D.), Daniel Portner (Ph.D.), Dakota Issacs (M.S.).

*Current Postdocs:* Colton Lynner, Rob Poritt



*Former Postdocs:* C. Berk Biryol (Univ. of North Carolina), Linda Warren (St. Louis University),  
Hersh Gilbert (Purdue University)

*Former Graduate Students:*

Steve Myers (Ph.D.), Jennifer Swenson (M.S. & Ph.D.), Mark Tinker (M.S.), Barbara Schussler  
(M.S.), Merritt Smith (M.S.), Todd Shearer (M.S.), Lara Wagner (Ph.D.), Patricia Alvarado  
(Ph.D.), Arda Ozacar (Ph.D.), C. Berk Biryol (Ph.D.), Justin Woods (M.S.), Hande Tok (M.S.),  
Lepolt Linkimer (Ph.D.), Christine Gans (Ph.D.), Ryan Porter (Ph.D.), Mallory Morell (M.S.),  
Alicia Scire (Ph.D.).