

List of publications in 2012 due to GEF equipment loans

Journal Articles

1. Agurto, H., Rietbrock, A., Ryder, I. and Miller, M., **2012**, Seismic-afterslip characterization of the 2010 MW 8.8 Maule, Chile, earthquake based on moment tensor inversion, *Geophysical Research Letters*, 39, L20303, doi: 10.1029/2012GL053434 (Loan No:922)
2. Barlow, J., Lim, M., Rosser, N.J., Petley, D.N., Brain, M.J., Norman, E.C. and Geer, M., **2012**, Modelling cliff erosion using negative power law scaling of rockfalls, *Geomorphology*, 139, pp416-424 (Loan No:879)
3. Bartholomew, I., Nienow, P., Sole, A., Mair, D., Cowton, T. and King, M., **2012**, Short-term variability in Greenland Ice Sheet motion forced by time-varying meltwater inputs: implications for the relationship between subglacial drainage system behaviour and ice velocity, *Journal of Geophysical Research*, 117, doi: 10.1029/2011JF002220 (Loan No:868)
4. Bennett, R., Welham, K., Hill, R.A. and Ford, A.L.J., **2012**, The application of vegetation indices for the prospection of archaeological features in grass-dominated environments, *Archaeological Prospection*, 19(3), pp209-218 (Loan No:920)
5. Bennett, R., Welham, K., Hill, R.A. and Ford, A.L.J., **2012**, A comparison of visualisation techniques for models created from airborne laser scanned data, *Archaeological Prospection*, 19, pp41-48 (Loan No:920)
6. Bondo-Medhus, A., Balling, N., Jacobsen, B.-H., Weidle, C., Voss, P., England, R., Kind, R. and Thybo, H., **2012**, Upper mantle structure beneath the Southern Scandes Mountains and the Northern Tornquist Zone revealed by P-wave travel time tomography, *Geophysical Journal International*, 189, pp1315-1334, doi: 10.1111/j.1365-246X.2012.05449.x (Loan No:783)
7. Booth, A.D., Clark, R.A., Kulesa, B., Murray, T., Carter, J., Doyle, S. and Hubbard, A., **2012**, Thinlayer effects in glaciological seismic amplitude versus angle (AVA) analysis: implications for characterising a subglacial till unit, *Cryosphere*, 6, pp909-922, doi: 10.5194/tc-6-909-2012 (Loan No:876)
8. Brasington, J., Vericat, D. and Rychkov, I., **2012**, Modeling river bed morphology, roughness, and surface sedimentology using high resolution terrestrial laser scanning, *Water Resources Research*, 48, W11519, doi: 10.1029/2012WR012223 (Loan No:892)
9. Brisbane, A., **2012**, How to store and share geophysical data, *Astronomy and Geophysics*, 53(4), pp19-20, doi: 10.1111/j.1468-4004.2012.53419.x
10. Burrough, S.L., Thomas, D.S.G., Bailey, R.M. and Davies, L., **2012**, From landform to process: Morphology and formation of lake-bed barchan dunes, Makgadikgadi, Botswana, *Geomorphology*, 161-162, pp1-14, doi: 10.1016/j.geomorph.2012.03.027 (Loan No:897)
11. Ebbing, J., England, R., Lauritsen, T., Olsen, O., Stratford, W. and Weidle, C., **2012**, Structure of the Scandes lithosphere from surface to depth, *Tectonophysics*, 536-537, pp1-24, doi: 10.1016/j.tecto.2012.02.016 (Loan No:783;833)
12. England, R.W. and Ebbing, J., **2012**, Crustal structure of central Norway and Sweden from integration of a teleseismic receiver function profile and modelling of the gravity anomaly, *Geophysical Journal International*, 191(1), pp1-11, doi: 10.1111/j.1365-246X.2012.05607.x (Loan No:783)
13. Harmon, N., Henstock, T., Tilmann, F., Rietbrock, A. and Barton, P., **2012**, Shear velocity structure across the Sumatran Forearc-Arc, *Geophysical Journal International*, 189, pp1306-1314, doi: 10.1111/j.1365-246X.2012.05446.x

14. Harmon, N., Henstock, T.J., Srokosz, M.A., Tilmann, F., Rietbrock, A. and Barton, P., **2012**, Infragravity wave source regions determined from ambient noise correlation, *Geophysical Research Letters*, doi: 10.1029/2011GL050414
15. Hicks, S.P., Rietbrock, A., Haberland, C.A., Ryder, I., Simons, M. and Tassara, A., **2012**, The 2010 Mw 8.8 Maule, Chile earthquake: Nucleation and rupture propagation controlled by a subducted topographic high, *Geophysical Research Letters*, 39(19), doi: 10.1029/2012GL053184 (Loan No:922)
16. Kelson, K., Witter, R., Tassara, A., Ryder, I., Ledezma, C., Montalva, G., Frost, D., Sitar, N., Moss, R. and Johnson, L., **2012**, Patterns of Geologic Deformation During the 2010 Maule Earthquake and Influences on Damage to Engineered Facilities, *Earthquake Engineering Research Institute Special Publication on the Maule Earthquake*, 28(S1), S39-S54 (Loan No:922)
17. Knapmeyer-Endrun, B., Kruger, F., Legendre, C.P., Geissler, W.H. and PASSEQ Working Group, **2012**, Tracing the influence of the Trans-European Suture Zone into the mantle transition zone, *Earth and Planetary Science Letters*, 363, pp73-87, doi: 10.1016/j.epsl.2012.12.028 (Loan No:814)
18. Kovacs, I., Falus, G., Hegedus, E., Posgay, K., Zilahi-Sebess, L., Hidas, K., Szabo, C., Stuart, G. and Flower, M.F.J., **2012**, Seismic anisotropy and deformation patterns in upper mantle xenoliths from the central Carpathian-Pannonian region: Asthenospheric flow as a driving force for Cenozoic extension and extrusion?, *Tectonophysics*, 514-517, pp168-179, doi: 10.1016/j.tecto.2011.10.022 (Loan No:883)
19. Los, S.O., Rosette, J.A.B., Kljun, N., North, P.R.J., Chasmer, L., Suñer, J.C., Hopkinson, C., Hill, R.A., van Gorsel, E., Mahoney, C. and Berni, J.A.J., **2012**, Vegetation height and cover fraction between 60° S and 60° N from ICESat GLAS data, *Geoscientific Model Development*, 5, pp413-432, doi: 10.5194/gmd-5-413-2012 (Loan No:933)
20. Luckman, A., Jansen, D., Kulesa, B., King, E.C., Sammonds, P. and Benn, D.I., **2012**, Basal crevasses in Larsen C Ice Shelf and implications for their global abundance, *Cryosphere*, 6, pp113-123, doi: 10.5194/tc-6-113-2012 (Loan No:905)
21. McMillan, M., Shepherd, A., Gourmelen, N., Park, J.-W., Nienow, P., Rinne, E. and Leeson, A., **2012**, Mapping ice-shelf flow with interferometric synthetic aperture radar stacking, *Journal of Glaciology*, 58, pp265-277, doi: 10.3189/2012JoG11J072 (Loan No:881)
22. Minshull, T.A., Westbrook, G.K., Weitemeyer, K.A., Sinha, M.C., Goswami, B.K. and Marsset, B., **2012**, Leaking methane reservoirs offshore Svalbard, *EOS, Transactions, AGU*, 93(42), p413, doi: 10.1029/2012EO420001
23. Moreno, M., Melnick, D., Rosenau, M., Baez, J., Klotz, J., Oncken, O., Tassara, A., Chen, J., Bataille, K., Bevis, M., Socquet, A., Bolte, J., Vigny, C., Brooks, B., Ryder, I., Grund, V., Smalley, B., Carrizo, D., Bartsch, M. and Hase, H., **2012**, Toward understanding tectonic control on the Mw 8.8 2010 Maule Chile earthquake, *Earth and Planetary Science Letters*, 321-322, pp152-265, doi: 10.1016/j.epsl.2012.01.006 (Loan No:922)
24. Murray, T., James, T.D., Macheret, Y., Lavrentiev, I., Glazovsky, A. and Sykes, H., **2012**, Geometric changes in a tidewater glacier in Svalbard during its surge cycle, *Arctic, Antarctic and Alpine Research*, 44(3), pp359-367 (Loan No:798)
25. Parks, M.M., Biggs, J., England, P., Mather, T.A., Nomikou, P., Palamartchouk, K., Papanikolaou, X., Paradissis, D., Parsons, B., Pyle, D.M., Raptakis, C. and Zacharis, V., **2012**, Evolution of Santorini Volcano dominated by episodic and rapid fluxes of melt from depth, *Nature Geoscience*, doi: 10.1038/ngeo1562 (Loan No:952)
26. Pawlak, A., Eaton, D.W., Darbyshire, F., Lebedev, S. and Bastow, I.D., **2012**, Crustal anisotropy beneath Hudson Bay from ambient-noise tomography: evidence for post-orogenic

- lower-crustal flow?, *Journal of Geophysical Research*, 117, B08301, doi: 10.1029/2011JB009066 (Loan No:900)
27. Ren, Y., Stuart, G.W., Houseman, G.A., Dando, B., Ionescu, C., Hegedus, E., Radovanovi, S. and Shen, Y., **2012**, Upper mantle structures beneath the Carpathian-Pannonian region: Implications for the geodynamics of continental collision, *Earth and Planetary Science Letters*, 349-350, pp139-152, doi: 10.1016/j.epsl.2012.06.037 (Loan No:883)
 28. Rietbrock, A., Ryder, I., Hayes, G., Haberland, C., Comte, D., Roecker, S. and Lyon-Caen, H., **2012**, Aftershock seismicity of the 2010 Maule Mw= 8.8, Chile, earthquake: Correlation between co-seismic slip models and aftershock distribution?, *Geophysical Research Letters*, 39(8), L08310, doi: 10.1029/2012GL051308 (Loan No:922)
 29. Rychert, C.A., Hammond, J.O.S., Harmon, N., Kendall, J.-M., Keir, D., Ebinger, C., Bastow, I., Ayele, A., Belachew, M. and Stuart, G., **2012**, Volcanism in the Afar Rift sustained by decompression melting with minimal plume influence, *Nature Geoscience*, doi: 10.1038/NGEO1455 (Loan No:885)
 30. Rychkov, I., Brasington, J. and Vericat, D., **2012**, Computational and methodological aspects of terrestrial surface analysis based on point clouds, *Computers and Geosciences*, 42, pp64-70, doi: 10.1016/j.cageo.2012.02.011 (Loan No:892)
 31. Ryder, I., Rietbrock, R., Kelson, K. and Burgmann, R., **2012**, Large extensional aftershocks in the continental forearc triggered by the 2010 Maule earthquake, Chile, *Geophysical Journal International*, 188(3), pp879-890, doi: 10.1111/j.1365-246X.2011.05321.x (Loan No:922)
 32. Smith, A.M., Bentley, C.R., Bingham, R.G. and Jordan, T.A., **2012**, Rapid subglacial erosion beneath Pine Island Glacier, West Antarctica, *Geophysical Research Letters*, 39, L12501, doi: 10.1029/2012GL051651 (Loan No:887)
 33. Tang, G., Barton, P., McNeill, L.C., Henstock, T.J., Tilmann, F., Dean, S.M., Jusuf, M.D., Djajadihardja, Y.S., Permana, H., Klingelhoefer, F. and Kopp, H., **2012**, 3-D active source tomography around Simeulue Island offshore Sumatra: thick crustal zone responsible for earthquake segment boundary, *Geophysical Research Letters*, doi: 10.1029/2012GL054148
 34. White, R.S., Redfern, S.A.T. and Chien, S., **2012**, Episodicity of seismicity accompanying melt intrusion into the crust, *Geophysical Research Letters*, 39, L08306, doi: 10.1029/2012GL051392 (Loan No:842)
 35. Wright, T.J., Sigmundsson, F., Pagli, C., Belachew, M., Hamling, I., Brandsdottir, B., Keir, D., Pedersen, R., Ayele, A., Ebinger, C., Einarsson, P., Lewi, E. and Calais, E., **2012**, Geophysical constraints on the dynamics of spreading centres from rifting episodes on land, *Nature Geoscience*, 5(242-250), doi: 10.1038/NGEO1428 (Loan No:885)

Conference Papers/Proceedings

1. Cornwell, D.G., England, R.W. and Stuart, G.W., **2012**, Faroe-Islands Passive Seismic Experiment (FIPSE) Data characteristics and Preliminary results, *Petroleum Exploration Meeting, Faroe Islands, May 2012* (Loan No:918)
2. Cornwell, D.G., England, R.W. and Stuart, G.W., **2012**, Imaging continental break-up magmatism in the crust beneath the Faroe Islands, *American Geophysical Union, Fall Meeting 2012, San Francisco*, T43C2695 (Loan No:918)
3. Cowton T, Nienow, P., Sole, A., Wadham, J., Lis, G., Chandler, D., Bartholomew, I. and Mair, D., **2012**, Drainage system structure and evolution at a Greenland outlet glacier, *Geophysical Research Abstracts, EGU General Assembly*, 14, EGU2012-1030 (Loan No:868)

4. Edwards, T., Shannon, S., Payne, A., Adalgeirsdottir, G., Bartholomew, I., Le Brocq, A., Mottram, R., Nienow, P., Rae, J., Shepherd, A., Sole, A., Sundal, A., van de Wal, R. and Fettweis, X., **2012**, New parameterisations for the Greenland contribution to sea level rise, *Geophysical Research Abstracts, EGU General Assembly*, 14, EGU2012-13457 (Loan No:868)
5. Fuenzalida, A., Lyon-Caen, H., Lancieri, M., Rietbrock, A. and Madariaga, R., **2012**, The 2010 Maule earthquake: How far south did it break?, *EGU, Vienna, EGU General Assembly*, 14, p10297 (Loan No:922)
6. Hart, J.K., Clayton, A., Edwards, L. and Martinez, K., **2012**, An investigation of active subglacial thrust glaciotectonics and stick-slip motion from Skalafellsjokull, Iceland, *British Branch of the Glaciological Society, University of Aberdeen, September 2012* (Loan No:862;935)
7. Hart, J.K., Clayton, A., Edwards, L. and Martinez, K., **2012**, An investigation of active subglacial thrust glaciotectonics and stick-slip motion from Skalafellsjokull, Iceland, *Cryospheric Geophysics meeting, London, February 2012, Geological Society of London* (Loan No:862;935)
8. Hart, J.K., Rose, K., Edwards, L., Burke, M., Clayton, A., Martinez, K. and Basford P, **2012**, An investigation of active subglacial thrust glaciotectonics and its role in stick-slip motion from Skalafellsjokull, Iceland, *American Geophysical Union, Fall Meeting 2012, San Francisco* (Loan No:862;935;961)
9. Hicks, S.P., Rietbrock, A., Ryder, I., Haberland, C. and Simons, M., **2012**, 3D seismic velocity structure in the rupture area of the Maule earthquake, *MARISCOS/IPOC/EurIMAD Meeting, GFZ Potsdam* (Loan No:922)
10. Mahoney, C., Hancock, S., Los, S.O., van Gersel, E. and Kljun, N., **2012**, Possible Shadowing Effects in Waveform LiDAR, *ForestSAT 2012, Oregon State University, Corvallis, USA, September 2012* (Loan No:933)
11. Mahoney, C., Kljun, N., Los, S.O., North, P.R.J., Chasmer, L., van Gersel, E., Hacker, J.M., Hopkinson, C. and Rosette, J., **2012**, Predicting Slope from Full Waveform LiDAR, *Silvilaser, Vancouver, Canada, September 2012* (Loan No:933)
12. Moreno, M., Haberland, C., Oncken, O., Rietbrock, A. and Heidbach, O., **2012**, Are seismic and aseismic slip patches influenced by the late-interseismic physical state of a megathrust? Results from the southern end of the 2010 Maule Chile earthquake, *EGU, Vienna, EGU General Assembly*, 14, p8185 (Loan No:922)
13. Nienow, P., Sole, A., Bartholomew, I., Mair, D., Cowton, T., Tedstone, A., King, M., Chandler, D. and Wadham, J., **2012**, Speed-up of a land-terminating margin of the Greenland Ice Sheet in contrasting melt years, *American Geophysical Union, Fall Meeting 2012, San Francisco*, C42B-01 (Loan No:868)
14. Rietbrock, A., **2012**, Structure, seismogenic properties, and aftershock distribution in the rupture area of the 2010 Maule, Chile, earthquake, *EGU, Vienna, EGU General Assembly*, 14, p14232 (Loan No:922)
15. Soudant, A., Loader, N.J., Helle, G., Kljun, N. and Lindroth, A., **2012**, High Resolution Analysis of $\delta^{13}C$ in Tree-rings - A Comparison of Two Laser Sampling Systems, *TRACE 2012, Potsdam and Eberswalde, Germany, May 2012* (Loan No:933)
16. Williams, R.D., Brasington, J., Vericat, D. and Hicks, D.M., **2012**, Quantifying braided river morphodynamics through a sequence of high-flow events, *European Geosciences Union General Assembly, Vienna, Austria, EGU General Assembly*, 14, p849 (Loan No:892)

PhD Theses

1. Bartholomew, I., **2012**, The hydrology and dynamics of a land-terminating Greenland outlet glacier, *University of Edinburgh*(Loan No:876)
2. Cuenca-Garcia, C., **2012**, The interface of geophysical & geochemical survey at Scottish archaeological sites : Exploring the potential of an integrated approach for archaeological prospection, *University of Glasgow*(Loan No:901)
3. Fyffe, C.L., **2012**, The hydrology of debris-covered glaciers, *University of Dundee*(Loan No:917)
4. Johnson, N.E., **2012**, Magnetotelluric studies of the crust and upper mantle in a zone of active continental breakup, Afar, Ethiopia, *University of Edinburgh*(Loan No:907)
5. Norman, E.C., **2012**, Microseismic monitoring of the controls of coastal rock cliff erosion, *University of Durham*(Loan No:879)
6. Thompson, D.A., **2012**, Seismic discontinuity structure beneath the Canadian Shield and the signature of continental roots, *University of Bristol*(Loan No:900)