

## **2009 Publications by Global Change Primary Members**

- Abdul-Hamid, H. and **M. Mencuccini**, 2009, Age- and size-related changes in physiological characteristics and chemical composition of *Acer pseudoplatanus* and *Fraxinus excelsior* trees, *Tree Physiology*, v 29, Is 1, p. 27-38.
- Allen, R., **M. J. Siegert** and Payne, A.J., 2009, Reconstructing glacier-based climates of LGM Europe and Russia - Part 1: Numerical modelling and validation methods, *Climate of the Past*, v 4, Is 4, p. 235-248.
- Allen, R. **M. J. Siegert** and Payne, A.J., 2009, Reconstructing glacier-based climates of LGM Europe and Russia - Part 2: A dataset of LGM precipitation/temperature relations derived from degree-day modelling of palaeo glaciers, *Climate of the Past*, v 4, Is 4, p. 249-263.
- Allen, R., **M. J. Siegert** and Payne, A.J., 2009, Reconstructing glacier-based climates of LGM Europe and Russia - Part 3: Comparison with previous climate reconstructions, *Climate of the Past*, v 4, Is 4, p. 265-280.
- Alton, P., Fisher, R., Los, S. and **M. Williams**, 2009, Simulations of global evapotranspiration using semiempirical and mechanistic schemes of plant hydrology, *Global Biogeochemical Cycles*, v 23, Article no GB4023.
- Ammon, K., **T. J. Dunai**, **F. M. Stuart**, Meriaux, A.S., 2009, Altitude dependence of the production rates of terrestrial cosmogenic Nuclides, 19th Annual VM Goldschmidt Conference, June 21, Davos, Switzerland, *Geochimica ET Cosmochimica Acta*, v 73, Is 13, p. A37.
- Arola, A., Kazadzis, S. , **A. Lindfors**, Krotkov, N. Kujanpää, J., Tamminen, A., Bais, A. di Sarra, J. M. Villaplana, C. Brogniez, A. M. Siani, M. Janouch, P. Weihs, A. Webb, T. Koskela, N. Kouremeti, D. Meloni, V. Buchard, F. Auriol, I. Ialongo, M. Staneck, S. Simic, A. Smedley, and S. Kinne., 2009, A new approach to correct for absorbing aerosols in OMI UV. *Geophysical Research Letters*, 36:22805.
- Ascough, P. L., Cook, G. T., **A. J. Dugmore**, 2009, North Atlantic marine C-14 reservoir effects: Implications for late-Holocene chronological studies, *Quaternary Geochronology*, v 4, Is 3, p. 171-180.
- Attal**, M. and Lavé, J. , 2009, Pebble abrasion during fluvial transport: experimental results and implications for the evolution of the sediment load along rivers. *Journal of Geophysical Research*, 114, F04023, doi:10.1029/2009JF001328.

- Attal, M.**, 2009, Rivers split as mountains grow. *Nature Geoscience – News and views*, 2, 747-748, doi:10.1038/ngeo675
- Ault, T.R., Cole, J.E., Evans, M.N., Barnett, H., Abram, N.J., **A. W. Tudhope**, Linsley, B.K., 2009, Intensified decadal variability in tropical climate during the late 19th century, *Geophysical Research Letters*, v 36, Article No L08602.
- Baraka-Lokmane, S., **I. G. Main, B.T. Ngwenya**, Elphick, S.C., Jones, C., Hamilton, S.A., 2009, Correlation Between Microstructure and Flow Behavior in Porous Sandstones, *Petroleum Science And Technology*, v 27, Is 5, p. 511-529.
- Baraka-Lokmane, S., **I. G. Main, B. T. Ngwenya**, Elphick, S.C., 2009, Application of complementary methods for more robust characterization of sandstone cores, *Marine And Petroleum Geology*, v 26, Is 1, p. 39-56.
- Barkley, M. P., P. I. Palmer**, De Smedt, I, Karl, T, Guenther, A, Van Roozendaal, M, 2009 Regulated large-scale annual shutdown of Amazonian isoprene emissions?, *Geophysical Research Letters*, v 36, Article Number L04803.
- Bingham, R.G. and **M. J. Siegert**, Quantifying subglacial bed roughness in Antarctica: implications for ice-sheet dynamics and history, *Quaternary Science Reviews*, v 28, Is 3-4, p. 223-236.
- Binnie, SA, **T. J. Dunai**, Schnabel, C., Wilcken, KM, 2009, Production rates of cosmogenic Cl-36 on Ca and K., 19th Annual VM Goldschmidt Conference, 19th Annual VM Goldschmidt Conference, June 21, Davos, Switzerland, *GEOCHIMICA ET COSMOCHIMICA ACTA*, v 73, Is 13, p.A125.
- Binnie, S.A., Phillips, W.M., **M. A. Summerfield**, Fifield, L.K., Spotila, J.A., 2009, Patterns of denudation through time in the San Bernardino Mountains, California: Implications for early-stage orogenesis, *Earth and Planetary Science*, v 276, Is 1-2, p. 62-72.
- Black, K., Byrne, K.A., **M. Mencuccini**, Tobin, B., Nieuwenhuis, M., Reidy, B., Bolger, T., Saiz, G., Green, C., Farrell, E.T., Osborne, B.,A, 2009, Carbon stock and stock changes across a Sitka spruce chronosequence on surface-water gley soils, *Forestry*, v 82, Is 3, p.. 255-272.
- Bo, S., **M. J. Siegert, S. M. Mudd, D. Sugden**, Fujita, S., Cui, X.B., Jiang, Y.Y., Tang, X.Y., Li, Y.S., 2009, The Gamburtsev mountains and the origin and early evolution of the Antarctic Ice Sheet, *Nature*, v 459, p. 690-693.
- Boe, J.L., **A. Hall**, and Qu, X. , 2009, September sea-ice cover in the Arctic Ocean projected to vanish by 2100, *Nature Geoscience*, v 2, Is 5, p. 341-343.

- Boulton, G. S. M.**Hagdorn, Maillot, PB., Zatsepin, S., 2009 m, Drainage beneath ice sheets: groundwater-channel coupling, and the origin of esker systems from former ice sheets, *Quaternary Science Reviews*, v 28, is 7-8, p. 621-638.
- Breuer, E.R., Law, G.T.W., **C. Woulds, G. L., Cowie**, Shimmield, G.B., Peppe, O., Schwartz, M., McKinlay, S., 2009, Sedimentary oxygen consumption and microdistribution at sites across the Arabian Sea oxygen minimum zone (Pakistan margin), *Deep-Sea Research Part II-Topical Studies in Oceanography*, v 56, Is 6-7, p. 296-304.
- Buckland, P.C., **E. Panagiotakopulu**, and Sveinbjarnardottir, G., 2009, A failed invader in the North Atlantic, the case of *Aglenus brunneus* Gyll. (Col., Colydiidae), a blind flightless beetle from Iceland, *Biological Invasions*, v 11, Is 6, p. 1239-1245.
- Buckland, P.C., Edwards, K.J., **E. Panagiotakopulu**, Schofield, J.E., 2009, Palaeoecological and historical evidence for manuring and irrigation at Gardar (Igaliku), Norse Eastern Settlement, Greenland, v 19, Is 1, p. 105-116.
- Carter, S.P., Blankenship, .D.,D, Young, D.A., Peters, M.E., Holt, J.W., **M. J. Siegert**, 2009, Dynamic distributed drainage implied by the flow evolution of the 1996-1998 Adventure Trench subglacial lake discharge, *Earth and Planetary Science Letters*, v 283, Is 1-4, p. 24-37.
- Clark , R.M. and **R. Thompson** (In Press) 2009, Predicting the impact of global warming on the timing of spring flowering. *International Journal of Climatology*. DOI 10.1002/JOC.2004
- Clement, R. J.**, Burba, G.G., Grelle, A., Anderson, D.J., **J. B. Moncrieff**, 2009, Improved trace gas flux estimation through IRGA sampling optimization, *Agricultural And Forest Meteorology*, v 149, Is 3-4, p. 623-638.
- Cloy, J M., J. G. Farmer, M. C. Graham**, MacKenzie, A.B., 2009, Retention of As and Sb in Ombrotrophic Peat Bogs: Records of As, Sb, and Pb Deposition at Four Scottish Sites, *Environmental Science & Technology*, v 43, Is 6, p. 1756-1762.
- Cochard, H., Herbette, S., Hernandez, E., Holttta, T., **M Mencuccini**, 2009, The effects of sap ionic composition on xylem vulnerability to cavitation, *Journal of Experimental Botany*, v 61, Is 1, p. 275-285.
- Cochard, H., Holttta, T., Herbette, S., Delzon, S., **M Mencuccini**, 2009, New Insights into the Mechanisms of Water-Stress-Induced Cavitation in Conifers, *Plant Physiology*, v 151, Is 2, p. 949-954.
- Cowie, G.L.**, Levin, L. A., 2009, Benthic biological and biogeochemical patterns and processes across an oxygen minimum zone (Pakistan margin, NE Arabian

- Sea).Deep-Sea Research Part II-Topical Studies in Oceanography, v 56, Is 6-7, p. 261-270.
- Cowie, G.L.**, Mowbray, S., Lewis, M., Matheson, H., McKenzie, R., 2009, Carbon and nitrogen elemental and stable isotopic compositions of surficial sediments from the Pakistan margin of the Arabian Sea, Deep-Sea Research Part II-Topical Studies in Oceanography, v 56, is 6-7, p. 271-282.
- Crampin, S.**, 2009, Comments on 'Global anisotropic phase velocity maps for higher mode Love and Rayleigh waves' by Visser, Trampert & Kennett, Geophysical Journal International. v 177, Is 1, p. 93-98.
- Curtis, C.J., Juggins, S., Clarke, G., Battarbee, R.W., Kernan, M., Catalan, J., **R. Thompson**, Posch, M., 2009, Regional influence of acid deposition and climate change in European mountain lakes assessed using diatom transfer functions, Freshwater Biology, v 54, Is 12, p. 2555-2572.
- Curtis, A.**, Nicolson, H., Halliday, D., Trampert, J., Baptie, B., 2009, Virtual seismometers in the subsurface of the Earth from seismic interferometry, Nature Geoscience, v 2,Is 10, p. 700-704.
- Daly, E., Palmroth, S., **P. Stoy**, Siqueira, M., Oishi, A.C., Juang, J.Y., Oren, R., Porporato, A., Katul, G.G., 2009, The effects of elevated atmospheric CO<sub>2</sub> and nitrogen amendments on subsurface CO<sub>2</sub> production and concentration dynamics in a maturing pine forest, Biogeochemistry, v 94, Is 3, p. 271-287.
- Darling K., S. Kasemann**, Ellen Thomas, Christopher W. Smart, H., Sears and C. M. Wade, 2009, Surviving mass extinction by bridging the benthic/planktic divide, Proceedings National Academy Science 106 (31): 12629–12633.
- D'Arrigo, R., Jacoby, G., Buckley, B., Sakulich, J., Frank, D., Wilson, R., **A. Curtis**, Anchukaitis, K.,2009, Tree growth and inferred temperature variability at the North American Arctic treeline, Global & Planetary Change, v 65, Is 1-2, p. 71-82.
- Davies, G.M. and **C. J. Legg**, 2009, The effect of traditional management burning on lichen diversity, Applied Vegetation Science, v 11, Is 4, p. 529-538.
- De Moel, H., Ganssen, G.M., Peeters, F.J.C., **S J A. Jung, D. Kroon**, Brummer, G.J.A., Zeebe, R.E., 2009, Planktic foraminiferal shell thinning in the Arabian Sea due to anthropogenic ocean acidification?, Biogeosciences, v 6, Is 9, p. 1917-1925.
- Denis, D., Crosta, X., Schmidt, S., Carson, DS., **R S. Ganeshram**, Renssen, H., Crespin, J., Ther, O., Billy, I., Giraudeau, J.,2009, Holocene productivity changes off Adelie Land (East Antarctica, Paleoceanography, v 24, no. PA3207.

- Dengel, S.**, Aeby, D., **J. Grace**, 2009, A relationship between galactic cosmic radiation and tree rings, *New Phytologist*, v 184, Is 3, p. 545-551.
- Dobbie, K.E., **K. V. Heal**, Aumônier, J., **K. A. Smith**, Johnston, A., Younger, P.L., 2009, Evaluation of iron ochre from mine drainage treatment for removal of phosphorus from wastewater, *Chemosphere*, v 75, Is 6, p. 795-800.
- Doherty, R.** and Barnhurst, K.G., 2009, Controlling Nature: Weathercasts on Local Television News, *Journal of Broadcasting & Electronic Media*, v 53, Is 2, p. 211-226.
- Doherty, R.**, **M. Heal**, P. Wilkinson, S. Pattenden, **M. Vieno**, B. Armstrong, R. Atkinson, Z. Chalabi, S. Kovats, A. Milojevic, **D.S. Stevenson**, 2009, Impacts of Future Environmental Change on Climate and Air Pollution Mediated Human Health, *Environmental Health*, 8 (Suppl 1):S8 doi:10.1186/1476-069X-8-S1-S8.
- Doherty, R. M.**, Heal, M.R., Wilkinson, P., Pattenden, S., **M. Vieno** Armstrong, B., Atkinson, R., Chalabi, Z., Kovats, S., Milojevic, A., **D. S. Stevenson**, 2009. Current and future climate- and air pollution-mediated impacts on human health. *Environmental Health* 8.
- Donlon, C.J., Casey, K.S., Robinson, I.S., Gentemann, C.L., Reynolds, R.W., Barton, I., Arino, O., Stark, J., Rayner, N., Leborgne, P., Poulter, D., Vazquez-Cuervo, J., Armstrong, E., Beggs, H., Llewellyn-Jones, D., Minnett, P.J., **C. J. Merchant**, Evans, R., 2009, The Godae High-Resolution Sea Surface Temperature Pilot Project, *Oceanography*, v 22, Is 3, p. 34-45.
- Dufour, G., Szopa, S., **M. P. Barkley**, Boone, C.D., Perrin, A. **P. I. Palmer**, Bernath, PF, 2009 Global upper-tropospheric formaldehyde: seasonal cycles observed by the ACE-FTS satellite instrument, *Atmospheric Chemistry & Physics*, v 9, is 12, p. 3893-3910.
- Dugmore, A.J.**, Keller, C., McGovern, T.H., Casely, A.F. and Smiarowski, K. 2009, Norse Greenland settlement and limits to adaptation' *In* W. N. Adger, I. Lorenzoni and K. O'Brien, eds. *Adapting to Climate Change: Thresholds, Values, Governance* C.U.P., Cambridge 96-113.
- Dugmore, A.J.**, Gísladóttir, G., Simpson, I.A. and Newton A.J. 2009, Conceptual models of 1,200 years of Icelandic soil erosion reconstructed using tephrochronology, *Journal of the North Atlantic* 2, p. 1-18.
- Dugmore, A.J.** and **Newton A.J.**, 2009 'Tephrochronology' *In* V. Gornitz (ed.) *Encyclopedia of Palaeoclimatology and Ancient Environments* Springer, Dordrecht 937-8
- Eke, P. E., **M. Naylor**, **S. Haszeldine** and **A. Curtis**, 2009. CO<sub>2</sub>-Brine Surface Dissolution and Injection: CO<sub>2</sub> Storage Enhancement, Publication SPE 124711,

Sept. 2009, Proceedings of the 2009 SPE Offshore Europe Oil & Gas Conference & Exhibition, Aberdeen, UK, 8–11.

**Elliot, M.**, Welsh, K., **C. Chilcott**, McCulloch, M., Chappell, J., Ayling, B., 2009, Profiles of trace elements and stable isotopes derived from giant long-lived *Tridacna gigas* bivalves: Potential applications in paleoclimate studies, *Palaeogeography Paleoclimatology Palaeroecology*, v 280, Is 1-2, p. 132-142.

**Essery, R. L. H.**, N Rutter, J Pomeroy, R Baxter, M Stähli, D Gustafsson, A Barr, P Bartlett and K Elder, 2009. SnowMIP2: An evaluation of forest snow process simulations. *Bulletin of the American Meteorological Society*, 90, p. 1120-1135.

**Farmer, J. G.** and Jarvis, R., 2009, Strategies for improving human health in contaminated situations: a review of past, present and possible future approaches, *Environmental Geochemistry and Health* 31, p. 227-238.

**Farmer, J.G.**, Anderson, P., **J M. Cloy**, **M C. Graham**, MacKenzie, A.B., Cook, G.T., 2009, Historical accumulation rates of mercury in four Scottish ombrotrophic peat bogs over the past 2000 years, *Science of the Total environment*, v 407, Is 21, p. 5578-5588.

Feng, L., **P. I. Palmer**, Bosch, H., Dance, S., 2009, Estimating surface CO<sub>2</sub> fluxes from space-borne CO<sub>2</sub> dry air mole fraction observations using an ensemble Kalman Filter, *Atmospheric Chemistry and Physics*, v 9, Is 8, p. 2619-2633.

Fiore, A.M., Dentener, F.J., Wild, O., Cuvelier, C., Schultz, M.G., Hess, P., Textor, C., Schulz, M., **R. M. Doherty**, Horowitz, L.W., **I. A MacKenzie.**, Sanderson, M.G., Shindell, D.T., **D. S. Stevenson**, Szopa, S., Van Dingenen, R., Zeng, G., Atherton, C., Bergmann, D., Bey, I., Carmichael, G., Collins, W.J., Duncan, B.N., Faluvegi, G., Folberth, G., Gauss, M., Gong, S., Hauglustaine, D., Holloway, T., Isaksen, I.S.A., Jacob, D.J., Jonson, J.E., Kaminski, J.W., Keating, T.J., Lupu, A., Marnmer, E., Montanaro, V., Park, R.J., Pitari, G., Pringle, K.J., Pyle, J.A., Schroeder, S., Vivanco, M.G., Wind, P., Wojcik, G., Wu, S., Zuber, A., 2009, Multimodel estimates of intercontinental source-receptor relationships for ozone pollution, *Journal of Geophysical Research-Atmospheres*, v 114, Article No D04301.

Fletcher, C.G., Kushner, P.J., **A. Hall**, Qu, X., 2009, Circulation responses to snow albedo feedback in climate change, *Geophysical Research Letters*, v 36.

**Furley, Peter A.**, **Rees, Robert M.**, **Ryan, Casey M.**, Saiz, Gustavo, 2009, Savanna burning and the assessment of long-term fire experiments with particular reference to Zimbabwe, *Progress in Physical Geography*, Dec 2008, v 32, Is 6, p. 611-634.

- Fowler, D., Pilegaard, K., Sutton, M.A., Ambus, P., Raivonen, M., Duyzer, J., Simpson, D., Fagerli, H., Fuzzi, S., Schjoerring, J.K., Granier, C., Neftel, A., Isaksen, I.S.A., Laj, P., Maione, M., Monks, P.S., Burkhardt, J., Daemmgen, U., Neiryneck, J., Personne, E., Wichink-Kruit, R., Butterbach-Bahl, K., Flechard, C., Tuovinen, J.P., Coyle, M., Gerosa, G., Loubet, B., Altimir, N., Gruenhage, L., Ammann, C., Cieslik, S., Paoletti, E., Mikkelsen, T.N., Ro-Poulsen, H., Cellier, P., Cape, J.N., Horvath, L., Loreto, F., Niinemets, U., **P. I. Palmer**, Rinne, J., Misztal, P., Nemitz, E., Nilsson, D., Pryor, S., Gallagher, M.W., Vesala, T., Skiba, U., Brueggemann, N., Zechmeister-Boltenstern, S., Williams, J., O'Dowd, C., Facchini, M.C., de Leeuw, G., Flossman, A., Chaumerliac, N., Erisman, J.W., 2009, Atmospheric composition change: Ecosystems-Atmosphere interactions, *Atmospheric Environment*, v 43, Is 33, p. 5193-5267.
- Fox, A., **M. Williams**, Richardson, A.D., Cameron, D., Gove, J.H., Quaife, T., Ricciuto, D., Reichstein, M., Tomelleri, E., Trudinger, C.M., Van Wijk, M.T., 2009, The REFLEX project: Comparing different algorithms and implementations for the inversion of a terrestrial ecosystem model against eddy covariance data, *Agricultural and Forest Meteorology*, v 149, Is 10, p. 1597-1615.
- Gabet, E.J. and **S. M. Mudd**, 2009, A theoretical model coupling chemical weathering rates with denudation rates, *Geology*, v 37, Is 2, p. 151-154.
- Geibert, W.**, Gersonde, R., Kuhn, G., Martinez-Garcia, A., Masque, P., Rosell, A., van der Loeff, M. R., and Verdeny, E., 2009,. A map of recent terrigenous fluxes to Southern Ocean sediments: Application of Th-230(xs)-normalized Th-232 as a dust flux tracer. 19th Annual VM Goldschmidt Conference, June 21, Davos, Switzerland, *Geochimica Et Cosmochimica Acta* 73, A423-A423.
- Georgiou, S., Shepherd, A., McMillan, M. and **P. Nienow**, 2009. Determining the depth of supra-glacial lakes by their remotely sensed reflectance, *Annals of Glaciology*, 50(52), p. 95-100.
- Golledge, N.R., Hubbard, A.L. and **D. E. Sugden**, 2009, Mass balance, flow and subglacial processes of a modelled Younger Dryas ice cap in Scotland, *Journal of Glaciology*, v 55, Is 189, p. 32-42.
- Gooday, A. J., Levin, L. A., da Silva, A.A ., Bett, B. J., **G. L. Cowie**, Dissard, D., Gage, J. D., Hughes, D. J. Jeffreys, R., Lamont, P. A., Larkin, K. E., Murty, S. J., Schumacher, S., Whitcraft, C., **C. Woulds**, 2009, Faunal responses to oxygen gradients on the Pakistan margin: A comparison of foraminiferans, macrofauna and megafauna, *Deep-Sea Research Part II-Topical Studies in Oceanography*, v 56, Is 6-7, p. 488-502.
- Gosling, W.D., **F. E. Mayle**, Tate, N.J., Killeen, T.J., 2009, Differentiation between Neotropical rainforest, dry forest, and savannah ecosystems by their modern

pollen spectra and implications for the fossil pollen record, *Review of Palaeobotany and Palynology*, v 153, Is 1-2, p. 70-85.

**Grace, J., P. Meir**, ED Wirth, C., Gleixner, G., Heimann, M., 2009, Tropical Rain Forests as Old-Growth Forests, *Old-Growth Forests: Function, Fate and Value*, p. 391-408.

**Guerrieri, M.R.**, Siegwolf, R.T.W., Saurer, M., Jaggi, M., Cherubini, P., Ripullone, F., Borghetti, M., 2009, Impact of different nitrogen emission sources on tree physiology as assessed by a triple stable isotope approach, *Atmospheric Environment*, v 43, Is 2, p. 410-418.

Guest, T. and **A. Curtis**, 2009, Iteratively constructive sequential design of experiments and surveys with nonlinear parameter-data relationships, *Journal of Geophysical Research Solid Earth*, v 114, Article Number: B04307.

Halliday, D. and **A. Curtis**, 2009, Generalized optical theorem for surface waves and layered media, *Physical Review*, v 79, Is 5. No. 056603.

Halliday, D., **A. Curtis**, 2009, Seismic interferometry of scattered surface waves in attenuative media, *Geophysical Journal International*, v 178, Is 1, p. 419-446.

Harris, C., Arenson, L.U., Christiansen, H.H., Etzelmüller, B., Frauenfelder, R., Gruber, S., Haeberli, W., Hauck, C., Hölzle, M., Humlum, O., Isaksen., K., Kääh, A., Kern-Lütschg, M.A., Lehning, M., Matsuoka, N., Murton, J.B., Nötzli, J., Phillips, M., **N. Ross**, Seppälä, M., Springman, S., Vonder Mühl, D., 2009,. Permafrost and climate in Europe: Monitoring and modelling thermal, geomorphological and geotechnical responses. *Earth Science Reviews*, v. 92, p. 117-171.

**Heal, K.V.**, Bray, R., Willingale, S.A.J., Briers, M., Napier, F., Jefferies, C., Fogg, P., 2009, Medium-term performance and maintenance of SUDS: a case-study of Hopwood Park Motorway Service Area, UK, *Water Science & Technology*, v 59, Is 12, p. 2485-2494.

**Hegerl, G.C.** and Solomon, S., 2009, Risks of Climate Engineering, *Science*, v 325, Is 5943, p. 955-956

**Hein, A.S., N. R. J. Hulton, T. J. Dunai**, Schnabel, C., Kaplan, M.R., Xu, S., 2009, Cosmogenic dating of 'old' glacial events in Patagonia, 19th Annual VM Goldschmidt Conference, June 21, 2009, Davos, Switzerland, *Geochimica et Cosmochimica Acta* v 73, Is 13, p. A513.

**Hein, A.S., N. R. J. Hulton, T. J. Dunai**, Schnabel, C., Kaplan, M.R., **Naylor, M.**, Xu, S., 2009, Middle Pleistocene glaciation in Patagonia dated by cosmogenic-nuclide measurements on outwash gravels, *Earth & Planetary Science Letters*, v 286, Is 1-2, p. 184-197.

- Henderson, S., **T. P. Dawson**, 2009, Alien invasions from space observations: detecting feral goat impacts on Isla Isabela, Galapagos Islands with the AVHRR, *International Journal of Remote Sensing*, v 30, Is 2, p. 423-433.
- Hernandez-Santana, V., **J. Martinez-Vilalta**, Martinez-Fernandez, J., **M. Williams**, 2009, Evaluating the effect of drier and warmer conditions on water use by *Quercus pyrenaica*, *Forest Ecology and Management*, v 258, Is 7, p. 1719-1730.
- Hilker, T., Lyapustin, A., Hall, F. G., Wang, Y. J., Coops, N. C., **G. Drolet**, Black, T. A., 2009, *Remote Sensing of Environment*, v 113, Is 11, p. 2463-2475.
- Hill, J., Tetzlaff, D., **A. Curtis**, **R. Wood**, 2009, Modeling shallow marine carbonate depositional systems, *Computers & Geosciences*, v 35, Is 9, p. 1862-1874.
- Hippler, D., Kozdon, R., **K. F. Darling**, Eisenhauer, A., Nagler, T. F., 2009, Calcium isotopic composition of high-latitude proxy carrier *Neogloboquadrina pachyderma* (sin.), *Biogeosciences*, v 6, Is 1, p. 1-14.
- Holtta, T. **M. Mencuccini**, and Nikinmaa, E., 2009, Linking phloem function to structure: Analysis with a coupled xylem-phloem transport model, *Journal of Theoretical Biology*, v 259, Is 2, p. 325-337.
- Huntingford, C., Lowe, J.A., Booth, B.B.B., Jones, C.D., Harris, G., Gohar, L.K., **P. Meir**, 2009, Contributions of carbon cycle uncertainty to future climate projection spread, *Tellus Series B-Chemical and Physical Meteorology*, v 61, Is 2, p. 355-360.
- Isaksen, I.S.A., Granier, C., Myhre, G., Berntsen, T.K., Dalsoren, S.B., Gauss, M., Klimont, Z., Benestad, R., Bousquet, P., Collins, W., Cox, T., Eyring, V., Fowler, D., Fuzzi, S., Jockel, P., Laj, P., Lohmann, U., Maione, M., Monks, P., Prevo, A.S.H., Raes, F., Richter, A., Rognerud, B., Schulz, M., Shindell, D., **D.S. Stevenson**, Storelvmo, T., Wang, W.C., van Weele, M., Wild, M., Wuebbles, D., 2009, Atmospheric composition change: Climate-Chemistry interactions, *Atmospheric Environment*, v 43, Is 33, p. 5138-5192.
- Jarvis, P. G.**, **R. J. Clement**, **J. Grace** and **K. A. Smith**, 2009. The role of forests in the capture and exchange of energy and greenhouse gases. In: Read, D.J., Freer-Smith, P.H., Morison, J.I.L., Hanley, N., West, C.C. and Snowdon, P. (Eds), *Combating Climate Change – A Role for UK Forests*. The Stationery Office, Edinburgh, p. 21-47.
- Jeffreys, R. M., Wolff, G. A., **G. L. Cowie**, 2009, Influence of oxygen on heterotrophic reworking of sedimentary lipids at the Pakistan margin, *Deep-Sea Research Part II-Topical Studies in Oceanography*, v 56, Is 6-7, p. 358-375.

- Jones, N.B., Riedel, K., Allan, W., Wood, S., **P. I. Palmer**, Chance, K., Notholt, J. 2009, Long-term tropospheric formaldehyde concentrations deduced from ground-based fourier transform solar infrared measurements, *Atmospheric Chemistry and Physics*, v 9, Is 18, p. 7131-7142.
- Jones, P.D., Briffa, K.R., Osborn, T.J., Lough, J.M., van Ommen, T.D., Vinther, B.M., Lutherbacher, J., Wahl, E.R., Zwiens, F.W., Mann, M.E., Schmidt, G.A., Ammann, C.M., Buckley, B.M., Cobb, K.M., Esper, J., Goosse, H., Graham, N., Jansen, E., Kiefer, T., Kull, C., Kuttel, M., Mosley-Thompson, E., Overpeck, J.T., Riedwyl, N., Schulz, M., **A. W. Tudhope**, Villalba, R., Wanner, H., Wolff, E., Xoplaki, E., 2009, High-resolution palaeoclimatology of the last millennium: a review of current status and future prospects, *Holocene*, v 19, Is 1, p. 3-49.
- Jung, S. J. A., D. Kroon**, Ganssen, G., Peeters, F., **R. Ganeshram**, 2009, Enhanced Arabian Sea intermediate water flow during glacial North Atlantic cold phases, *Earth and Planetary Science Letters*, v 280, Is 1-4, p. 220-228.
- Kaplan, M.R., **A. S. Hein**, Hubbard, A., Lax, S.M., 2009, Can glacial erosion limit the extent of glaciation?, 2009, *Geomorphology*, v 103, Is 2, p. 172-179.
- Keppler, F., Boros, M., Frankenberg, C., Lelieveld, J., **A McLeod**, Pirttila, A.M., Rockmann, T., Schnitzler, J.P., 2009, Methane formation in aerobic environments, *Environmental Chemistry*, v 6, Is 6, p. 459-465.
- Kettle, H., **C. J. Merchant**, Jeffery, C.D., **M. J. Filipiak**, Gentemann, C.L., 2009, The impact of diurnal variability in sea surface temperature on the central Atlantic air-sea CO<sub>2</sub> flux, *Atmospheric Chemistry and Physics*, v 9, Is 2, p. 529-541.
- Kirui, B., Huxham, M., Uxham, J. Kairo, **M. Mencuccini**, Skov, M.W., 2009, Seasonal dynamics of soil carbon dioxide flux in a restored young mangrove plantation at Gazi Bay. *Advances in Coastal Ecology*, African Studies Centre, African Studies Collection 20:122-130.
- Kirstein, L.A.**, Foeken, J.P.T., Van der Beek, P., Stuart, F.M., Phillips, R.J., 2009, Cenozoic unroofing history of the Ladakh Batholith, western Himalaya, constrained by thermochronology and numerical modelling, *Journal of The Geological Society*, v 166, Part 4, p. 667-678.
- Kotilainen, T., Tuulia Venalainen, Riitta Tegelberg, **A. Lindfors**, Riitta Julkunen-Tiitto, Sirkka Sutinen, Robert B. O'Hara, and Pedro J. Aphalo, NOV-DEC 2009, Assessment of UV Biological Spectral Weighting Functions for Phenolic Metabolites and Growth Responses in Silver Birch Seedlings, *Photochemistry and Photobiology*, 85(6):1346–1355.
- Krasa, D., Wilkinson, C.D.W., Gadegaard, N., Kong, X., Zhou, H.P., Roberts, A.P., Muxworthy, A.R., **W. Williams**, 2009, Nanofabrication of two-dimensional arrays

- of magnetite particles for fundamental rock magnetic studies, *Journal of Geophysical Research Solid Earth*, v 114, Article no B02104.
- Lamarque, J.-F., C. Granier, T. Bond, V. Eyring, A. Heil, M. Kainuma, D. Lee, C. Liousse, A. Mieville, K. Riahi, M. Schultz, S. Smith, E. Stehfest, **D. Stevenson**, A. Thomson, J. Van Aardenne, and D. Van Vuuren, Gridded emissions in support of IPCC AR5, *IGAC Newsletter*, 41, 12-18, 2009
- Laubach, J. and **K. McNaughton**, 2009, Scaling Properties of Temperature Spectra and Heat-Flux Cospectra in the Surface Friction Layer Beneath an Unstable Outer Layer, *Boundary-Layer Meteorology*, v 133, Is 2, p. 219-252.
- Lavine, M., **G. C. Hegerl**, Lozier, S., 2009, Discussion of reified Bayesian modelling and inference for physical systems by Michael Goldstein and Jonathan Rougier, *Journal of Statistical Planning and Inference*, v 139, Is 3, p. 1243-1245.
- Law, G.T.W., Shimmield, T.M., Shimmield, G.B., **G. L. Cowie**, Breuer, E.R., Harvey, S.M., 2009, Manganese, iron, and sulphur cycling on the Pakistan margin, *Deep-Sea Research Part II-Topical Studies in Oceanography*, v 56, Is 6-7, p. 305-323.
- Lewis, S.L., J. Lloyd, S. Sitch, **E.T.A. Mitchard**, and W.F. Laurance. 2009, Changing Ecology of Tropical Forests: Evidence and Drivers, *Annual Review of Ecology, Evolution, and Systematics*, 40 529-549, doi:10.1146/annurev.ecolsys.39.110707173345
- Li, Q., **P. I. Palmer**, **H. C. Pumphrey**, Bernath, P., Mahieu, E., 2009, What drives the observed variability of HCN in the troposphere and lower stratosphere?, *Atmospheric Chemistry and Physics*, v 9, Is 21, p. 8531-8543.
- Lindfors, A.**, A. Tanskanen, A. Arola, R. van der A, A. Bais, U. Feister, M. Janouch, W. Josefsson, T. Koskela, K. Lakkala, P. N. den Outer, A. R. D. Smedley, H. Slaper, and A. R. Webb., Sept. 2009. The PROMOTE UV Record: Toward a Global Satellite-Based Climatology of Surface Ultraviolet Irradiance, *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing*, 2(3):207–212.
- Lindfors, A.**, Anu Heikkilä, Jussi Kaurola, Tapani Koskela, and Kaisa Lakkala., SEP-OCT 2009, Reconstruction of Solar Spectral Surface UV Irradiances Using Radiative Transfer Simulations. *Photochemistry and Photobiology*, 85(5):1233–1239.
- Lloyd, J.M., Norddahl, H., Bentley, M.J., **A. J. Newton**, Tucker, O., Zong, Y.Q., 2009, Lateglacial to Holocene relative sea-level changes in the Bjarkarlundur area near Reykholar, North West Iceland, *Journal Of Quaternary Science*, v 24, Is 7, p. 816-831.

- Lockwood, M., Davidson, J., **A. Curtis**, 2009, Stratford, E., Griffith, R., 2009, Multi-level Environmental Governance: lessons from Australian natural resource management, *Australian Geographer*, v 40, Is 2, p. 169-186.
- Lomax, A., Michelini, A., **A. Curtis**, 2009. Earthquake location, Direct, Global-Search Methods. in Meyers, R. A. (ed. in chief), *Encyclopedia of Complexity and System Science*. Springer.
- Manney, G.L., **R. S. Harwood**, MacKenzie, I.A., Minschwaner, K. Allen, D.R., Santee, M.L., Walker, K.A., Hegglin, M.I., Lambert, A., **H.C. Pumphrey**, Bernath, P.F., Boone, C.D., Schwartz, M.J., Livesey, N.J., Daffer, W.H., Fuller, R.A., 2009, Satellite observations and modeling of transport in the upper troposphere through the lower mesosphere during the 2006 major stratospheric sudden warming, *Atmospheric Chemistry & Physics*, v 9, Is 14, p. 4775-4795.
- Martínez-García, A., Rosell-Melé, A., **W. Geibert**, Gaspari, V., Masqué, P., Gersonde, R., and Barbante, C. , 2009, Links between Fe supply, ocean productivity, sea surface temperature and CO<sub>2</sub> over the last 1.1, *Paleoceanography* 24, doi:10.1029/2008PA001657.
- Martinez-Vilalta, J., Cochard, H., **M. Mencuccini**, Sterck, F., Herrero, A., Korhonen, J.F.J., Llorens, P., Nikinmaa, E., Nole, A., Poyatos, R., Ripullone, F., Sass-Klaassen, U., Zweifel, R., 2009, Hydraulic adjustment of Scots pine across Europe, *New Phytologist*, v 184, Is 2, p. 353-364.
- Maseyk, K., Seibt, U., Ghashghaie, J., **M Mencuccini**, Bathellier, C., Alemeida, P., LOBO DE VALE, R., Pereira, J. S., Yakir, D., **L Wingate**, 2009. Biotic and abiotic factors affecting the  $\delta^{13}\text{C}$  of soil respired CO<sub>2</sub> in a Mediterranean oak woodland. *Isotopes in Environmental and Health Studies* 45, p. 343-359.
- McMullen, M.D., Kresovich, S., Villeda, H.S., Bradbury, P., Li, H.H., Sun, Q., Flint-Garcia, S., Thornsberry, J., Acharya, C., Bottoms, C., Brown, P., Browne, C., Eller, M., Guill, K., Harjes, C., **D. Kroon**, Lepak, N., Mitchell, S.E., Peterson, B., Pressoir, G., Romero, S., Rosas, M.O., Salvo, S., Yates, H., Hanson, M., Jones, E., Smith, S., Glaubitz, J.C., Goodman, M., Ware, D., Holland, J.B., Buckler, E.S., 2009, Genetic Properties of the Maize Nested Association Mapping Population, *Science*, v 325, Is 5941, p. 737-740.
- Meier, U., Trampert, J., **A. Curtis**, 2009, Global variations of temperature and water content in the mantle transition zone from higher mode surface waves, *Earth & Planetary Science Letters*, v 282, Is 1-4, p. 91-101.
- Meinander, O., Wuttke, S. Seckmeyer, G. , Kazadzis, S., **A. Lindfors**, and Kyrö., E. 2009, Solar zenith angle asymmetry cases in polar snow UV albedo. *Geophysica*, 45(1-2).

- Mencuccini, M.** and Holttta, T., 2009, The significance of phloem transport for the speed with which canopy photosynthesis and belowground respiration are linked, *New Phytologist*, v 185, Is 1, p. 189-203.
- Merchant, C. J.**, Harris, A. R., Maturi, E., **O. Embury**, MacCallum, S.N., Mittaz, J., Old, C.P., 2009, Sea Surface Temperature Estimation from the Geostationary Operational Environmental Satellite-12 (GOES-12, *Journal of Atmospheric & Oceanic Technology*, v 26, Is 3, p. 570-581.
- Merchant, C.J.**, Harris, A., Roquet, H., Le Borgne, P., 2009, Retrieval characteristics of non-linear sea surface temperature from the Advanced Very High Resolution Radiometer, *Geophysical Research Letters*, v 36, Article No. L17604.
- Merchant, C.J.**, Le Borgne, P., Roquet, H. and Marsouin, A., 2009, Sea surface temperature from a geostationary satellite by optimal estimation, *Remote Sensing of Environment*, v 113, Is 2, p. 445-457.
- Messenger D.J., **A. R McLeod** and Fry, S.C., 2009, The role of ultraviolet radiation, photosensitizers, reactive oxygen species and ester groups in mechanisms of methane formation from pectin. *Plant Cell and Environment*, 32, p. 1-9.
- Messenger D. J., **A. R McLeod** and Fry S.C., 2009, Reactive oxygen species in aerobic methane formation from vegetation. *Plant Signaling and Behavior*, 4, 1-2.
- Mitchard, E. T. A.**, Saatchi, S.S., **I. H. Woodhouse**, Nangendo, G., Ribeiro, N.S., **M. Williams, C.M. Ryan**, Lewis, S.L., Feldpausch, T.,R., **P. Meir**, 2009, Using satellite radar backscatter to predict above-ground woody biomass: A consistent relationship across four different African landscapes, *Geophysical Research Letters*, v 36, Article No. L23401.
- Mitchard, E. T. A.**, Saatchi, S.S., Gerard, F.F., Lewis, .S., **P. Meir**, 2009, Measuring Woody Encroachment along a Forest-Savanna Boundary in Central Africa, *Earth Interactions*, v 13, Article No. 8.
- Mohammed, A., P. C. Stoy** and **T. J. Malthus** , 2009, Information Preservation and Change Detection across Spatial Scales in the Assessment of Global CH4 Emission Estimates from Wetlands, *The International Journal of Climate Change: Impacts and Responses*, v 1, Is 3, p. 93-114.
- Mojermame, W., B. M. Rees, **M Mencuccini**, 2010. Effects of site preparation for afforestation on methane (CH4) fluxes at Harwood Forest (NE England). *Biogeochemistry*, 27:89-107.
- Monks, P.S., Granier, C., Fuzzi, S., Stohl, A., Williams, M.L., Akimoto, H., Amann, M., Baklanov, A., Baltensperger, U., Bey, I., Blake, N., Blake, R.S., Carslaw, K.,

- Cooper, O.R., Dentener, F., Fowler, D., Fragkou, E., Frost, G.J., Generoso, S., Ginoux, P., Grewe, V., Guenther, A., Hansson, H.C., Henne, S., Hjorth, J., Hofzumahaus, A., Huntrieser, H., Isaksen, I.S.A., Jenkin, M.E., Kaiser, J., Kanakidou, M., Klimont, Z., Kulmala, M., Laj, P., Lawrence, M.G., Lee, J.D., Liousse, C., Maione, M., McFiggans, G., Metzger, A., Mieville, A., Moussiopoulos, N., Orlando, J.J., O'Dowd, C.D., **P. I. Palmer**, Parrish, D.D., Petzold, A., Platt, U., Poschl, U., Prevot, A.S.H., Reeves, C.E., Reimann, S., Rudich, Y., Sellegri, K., Steinbrecher, R., Simpson, D., ten Brink, H., Theloke, J., van der Werf, G.R., Vautard, R., Vestreng, V., Vlachokostas, C., von Glasow, R., 2009, Atmospheric composition change - global and regional air quality, *Atmospheric Environment*, v 43, Is 33, p. 5268-5350.
- Morsdorf, F., **C Nichol**, , **T. Malthus**, **I. H Woodhouse**, , 2009, Assessing forest structural and physiological information content of multi-spectral LiDAR waveforms by radiative transfer modelling, *Remote Sensing of Environment*, v 113, Is 10, p. 2152-2163.
- Mudd, S.M.**, Howell, S.M., and Morris, J.T., 2009, Impact of dynamic feedbacks between sedimentation, sea-level rise, and biomass production on near-surface marsh stratigraphy and carbon accumulation, *Estuarine Coastal and Shelf Science*, v 82, Is 3, p. 377-389.
- Muxworthy, A.R. and **W. Williams**, Critical superparamagnetic/single-domain grain sizes in interacting magnetite particles: implications for magnetosome crystals, *Journal of the Royal Society Interface*, v 6, Is 41, p. 1207-1212.
- Napier, F., Jefferies, C., **K.V. Heal**, Fogg, P., Arcy, B.J.D., Clarke, R., 2009, Evidence of traffic-related pollutant control in soil-based Sustainable Urban Drainage Systems (SUDS), *Water Science and Technology*, v 60, Is 1, p. 221-230.
- Ngwenya, B.T.**, Tournay, J., Magennis, M., Kapetas, L., Olive, V., 2009., A surface complexation framework for predicting water purification through metal biosorption, *Desalination, International Workshop on water and Sanitation in International Development and Disaster Relief*, May 28-30, 2008, Edinburgh, Scotland, v 248, Is 1-3, p. 344-351.
- Ngwenya, B.T.**, Mosselmans, J.F.W., Magennis, M., Atkinson, K.D., Tournay, J., Olive, V., Ellam, R.M., 2009, Macroscopic and spectroscopic analysis of lanthanide adsorption to bacterial cells, *Geochimica et Cosmochimica Acta*, v 73, Is 11, p. 3134-3147.
- Nielsen, S.B., Gallagher, K., Leighton, C., Balling, N., Svenningsen, L., Jacobsen, B.H., Thomsen, E., Nielsen, O.B., Heilmann-Clausen, C., Egholm, D.L., **M. A. Summerfield**, Clausen, O.R., Piotrowski, J.A., Thorsen, M.R., Huuse, M., Abrahamsen, N., King, C., Lykke-Andersen, H., 2009, The evolution of western

- Scandinavian topography: A review of Neogene uplift versus the ICE (isostasy-climate-erosion) hypothesis, *Journal of Geodynamics*, v 47, Is 2-3, p. 72-95.
- Novick, K., Oren, R., **P. Stoy**, Juang, J.Y., Siqueira, M., Katul, G., 2009, The relationship between reference canopy conductance and simplified hydraulic architecture, *Advances in Water Resources*, v 32, Is 6, p. 809-819.
- Ostle, N.J., Smith, P., Fisher, R., Woodward, F.I., Fisher, J.B., Smith, J.U., Galbraith, D., Levy, P., **P. Meir**, McNamara, N.P., Bardgett, R.D., 2009, Integrating plant-soil interactions into global carbon cycle models, *Journal of Ecology*, v 97, Is 5, p. 851-863.
- Palmer, P.I.** and Rayner, P., 2009, Failure to launch, *Nature Geoscience*, v 2, Is 4, p. 247-247.
- Patino, S., Lloyd, J., Paiva, R., Baker, T.R., Quesada, C.A., Mercado, L.M., Schmerler, J., Schwarz, M., Santos, A.J.B., Aguilar, A., Czimczik, C.I., Gallo, J., Horna, V., Hoyos, E.J., Jimenez, E.M., Palomino, W., Peacock, J., Pena-Cruz, A., Sarmiento, C., Sota, A., Turriago, J.D., Villanueva, B., Vitzthum, P., Alvarez, E., Arroyo, L., Baraloto, C., Bonal, D., Chave, J., Costa, A.C.L, Herrera, R., Higuchi, N., Killeen, T., Leal, E., Luizao, F., **P. Meir**, Monteagudo, A, Neil, D., Nunez-Vargas, P., Penuela, M.C., Pitman, N., Priante, N., Prieto, A., Panfil, S.N., Rudas, A., Salomao, R., Silva, N., Silveira, M., deAlmeida, S.S., Torres-Lezama, A., Vasquez-Martinez, R., Vieira, I., **Y. Malhi**, Phillips, O.L., 2009, Branch xylem density variations across the Amazon Basin, *Biogeosciences*, v 6, Is 4, p. 545-568.
- Pichevin, L. E.**, B. C., Reynolds, **R. S. Ganeshram**, I., Cacho, Pena, L., Keefe, K., Ellam, RM, 2009, Enhanced carbon pump inferred from relaxation of nutrient limitation in the glacial ocean, *Nature*, v. 28 , Issue: 13-14, p. 1291-1303.
- Phillips, O.L., Aragao, L.E.O.C., Lewis, S.L., Fisher, J.B., Lloyd, J., Lopez-Gonzalez, G., **Y. Malhi**, Monteagudo, A., Peacock, J., Quesada, C.A., van der Heijden, G., Almeida, S., Amaral, I., Arroyo, L., Aymard, G., Baker, T.R., Banki, O., Blanc, L., Bonal, D., Brando, P., Chave, J., de Oliveira, A.C.A., Cardozo, N.D., Czimczik, C.I., Feldpausch, T.R., Freitas, M.A., Gloor, E., Higuchi, N., Jimenez, E., Lloyd, G., **P. Meir**, Mendoza, C., Morel, A., Neill, D.A., Nepstad, D., Patino, S., Penuela, M.C., Prieto, A., Ramirez, F., Schwarz, M., Silva, J., Silveira, M., Thomas, A.S., ter Steege, H., Stropp, J., Vasquez, R., Zelazowski, P., Davila, E.A., Andelman, S., Andrade, A., Chao, K.J., Erwin, T., Di Fiore, A., Honorio, E., Keeling, H., Killeen, T.J., Laurance, W.F., Cruz, A.P., Pitman, N.C.A., Vargas, P.N., Ramirez-Angulo, H., Rudas, A., Salamao, R., Silva, N., Terborgh, J., Torres-Lezama, A., 2009, Drought Sensitivity of the Amazon Rainforest, *Science*, v 323, Is 5919, . 1344-1347.

- Polson, D., **A. Curtis**, C. Vivalda and S. Saunier, 2009. Process for tracking the evolving perception of risk during CO<sub>2</sub> storage projects, Publication SPE 124703, Proceedings of the 2009 SPE Offshore Europe Oil & Gas Conference & Exhibition, Aberdeen, UK, 8–11 September 2009
- Proctor, M.C.F., McHaffie, H.S., **C. J. Legg**, Amphlett, A., 2009, Evidence from water chemistry as a criterion of ombrotrophy in the mire complexes of Abernethy Forest, Scotland, *Journal of Vegetation Science*, v 20, Is 1, p. 160-169.
- Pumphrey, H.C.**, Cofield, R.E., **M. J. ilipiak**, Livesey, N.J., 2009, An all-sky survey at 230 GHz by MLS on Aura, *Advances in Space Research*, v 43, Is 3, p. 342-348.
- Reay, D.**, 2009, Climate books with clout, *Nature*, v. 461, Is 7267, p. 1060.
- Rounsevell MDA and **D.S. Reay** ,2009, Land Use and Climate Change in the UK. *Land Use Policy*, 26S, S160-S169
- Reay D. S.**, 2009, Inconspicuous Consumption. *New Scientist*, 2736, p. 43-47.
- Reay D. S.**, 2009, *Your Planet Needs You!*. Macmillan. ISBN-10: 0330450956
- Reay D.S.**, Edwards A.C. and **K. A. Smith**, 2009 Importance of indirect nitrous oxide emissions at the field, farm and catchment scale. *Agriculture, Ecosystems and Environment*. 133, p. 163-169.
- Ripullone F, **M. R. Guerrieri**, Saurer M, Siegwolf RTW, Jäggi M, Guarini R, Magnani F, 2009, Testing a dual isotope model to track carbon and water gas exchanges in a Mediterranean forest. *iForest* 2: 59-66 .
- Ripullone, F., Borghetti, M., Raddi, S., Vicinelli, E., Baraldi, R., **M. R Guerrieri**, , Nole, A., Magnani, F., 2009, Physiological and structural changes in response to altered precipitation regimes in a Mediterranean macchia ecosystem, *Trees-Structure and Function*, v 23, Is 4, p. 823-834.
- Russon, T.**, **M. Elliot**, C. Kissel, G. Cabioch, P. De Deckker, and T. Corregge (2009), Middle-Late Pleistocene Deep Water Circulation in the Southwest Subtropical Pacific, *Paleoceanography*, 24, PA4205, doi: 10.1029/2009PA001755.
- Rutt, I.C., **M. Hagdorn**, **N. R. J Hulton**, , Payne, A.J., 2009, The Glimmer community ice sheet model, *Journal of Geophysical Research-Earth Surface*, v 114.
- Rutter, N, **R. L. H. Essery** *et al.*, 2009. Evaluation of forest snow processes models (SnowMIP2). *Journal of Geophysical Research*, 114, doi:10.1029/2008JD011063.

- Saher, M.H., Rostek, F., Jung, S.J.A., Bard, E., Schneider, R.R., Greaves, M., Ganssen, G.M., Elderfield, H. and **D. Kroon**, 2009, Western Arabian Sea SST during the penultimate interglacial: A comparison of U-37(K ') and Mg/Ca paleothermometry, *Paleoceanography*, May 29, v 24, Article no. PA2212.
- Sargeant, S., Ottemöller, L., Baptie, B. , **A. Bell**, **A. Curtis** and **I. Main**, 2009. *Frontiers of Seismology. Astronomy and Geophysics* (pub. Royal Astronomical Society, London), August, Vol. 50, p. 4.31-4.34.
- Schulze, Ernst-Detlef, Hessenmoeller, D., Knohl, A.r, Luysaert, S., Boerner, A., **John Grace**, ED Wirth, C., Gleixner, G., Heimann, M., 2009, Temperate and Boreal Old-Growth Forests: How do Their Growth Dynamics and Biodiversity Differ from Young Stands and Managed Forests?, *Old-Growth Forests: Function, Fate and Value*, p. 343-366.
- Schurer, A.**, Calura, F., Silva, L., Pipino, A., Granato, G.L., Matteucci, F., Maiolino, R., 2009, Modelling the effects of dust evolution on the SEDs of galaxies of different morphological type, *Monthly Notices of the Royal Astronomical Society*, v 394, Is 4, p. 2001-2021.
- Schurer, A.**, Calura, F., Silva, L., Pipino, A., Granato, G.L., Matteucci, F., Maiolino, R., 2009, The importance of following the evolution of the dust in galaxies on their SEDs, *Low-Metallicity Star Formation: From the First Stars To Dwarf Galaxies*, v 255, p. 147-151.
- Schwartz, M. C ., **C. Woulds**, **G. L. Cowie**, 2009, Sedimentary denitrification rates across the Arabian Sea oxygen minimum zone, *Deep-Sea Research Part II- Topical Studies in Oceanography*, v 56,Is 6-7, p. 324-332.
- Schweizer, M.**, Pawlowski, J., Kouwenhoven, T.J., van der Zwaan, B., 2009, Molecular phylogeny of common cibicidids and related Rotaliida (Foraminifera) based on small subunit rDNA sequences. *Journal of Foraminiferal Research*: 39(4) p. 300-315.
- Sinclair, H. D.**, Gibson, M., Lynn, G., Stuart, F., 2009, The Evidence for a Pyrenean Resurrection: a response to Babault *et al.* (2008), *Basin Research*, v 21, Is 1, p. 143-145.
- Shepherd, A.**, Hubbard, A., **P. Nienow**, King, M., McMillan, M., Joughin, I., 2009, Greenland ice sheet motion coupled with daily melting in late summer, *Geophysical Research Letters*, v 36, Article no L01501.
- Spadavecchia, L. and **M. Williams**, 2009, Can spatio-temporal geostatistical methods improve high resolution regionalisation of meteorological variables?, *Agricultural and Forest Meteorology*, v 149, Is 6-7, p. 1105-1117.

- Stevenson, D. S.**, 2009, Putting the wind up ozone, *Nature Geoscience*, v 2, Is 10, p. 677-679.
- Stevenson, D.S.** and Derwent, R.G., Does the location of aircraft nitrogen oxide emissions affect their climate impact?, *Geophysical Research Letters*, v 36, Article no L17810.
- Stoy, P.C., M. Williams**, Disney, M., Prieto-Blanco, A., Huntley, B., Baxter, R., Lewis, P., 2009, Upscaling as ecological information transfer: a simple framework with application to Arctic ecosystem carbon exchange, *Landscape Ecology*, v 24, Is 7, p. 971-986.
- Stoy, P.C., M. Williams**, Spadavecchia, L., **R.A. Bell**, Prieto-Blanco, A., Evans, J.G., van Wijk, M.T., 2009, Using Information Theory to Determine Optimum Pixel Size and Shape for Ecological Studies: Aggregating Land Surface Characteristics in Arctic Ecosystems, *Ecosystems*, v 12, Is 4, p. 574-589.
- Sugden, David E., Robert D. McCulloch**, Bory, A.J.M, Hein, A.S., 2009, Influence of Patagonian glaciers on Antarctic dust deposition during the last glacial period, *Nature Geoscience*, v 2, Is 4, p. 281-285.
- Sundal, A.V., Shepherd, A., **P. Nienow**, Hanna, E., Palmer, S., Huybrechts, P., 2009, Evolution of supra-glacial lakes across the Greenland Ice Sheet, *Remote Sensing of Environment*, v 113, Is 10, p. 2164-2171.
- Tamooch, F., Kairo, J. G., Huxham M. Kirui, B., **M. Mencuccini** and Karachi, M., 2009. Biomass accumulation in a rehabilitated mangrove forest at Gazi Bay. *Advances in Coastal Ecology*, African Studies Centre, African Studies Collection 20, p. 138-150.
- Tanzil, J.T.I., Brown, B.E., **A. W., Tudhope**, Dunne, R.P., 2009, Decline in skeletal growth of the coral *Porites lutea* from the Andaman Sea, South Thailand between 1984 and 2005, *Coral Reefs*, v 28, Is 2, p. 519-528.
- Timmerman, M.J., Heeremans, M., Kirstein, L.A., Larsen, B.T., Spencer-Dunworth, E.A., Sundvoll, B., 2009, Linking changes in tectonic style with magmatism in northern Europe during the late Carboniferous to latest Permian, *Technophysics*, v 473, Is 3-4, p. 375-390.
- Titchner, H.A., Thorne, P.W., McCarthy, M.P., **S. F. B. Tett**, Haimberger, L., Parker, D.E., 2009, Critically Reassessing Tropospheric Temperature Trends from Radiosondes Using Realistic Validation Experiments, *Journal of Climate*, v 22, Is 3, p. 465-485.

- Thompson, R.**, Ventura, M., and Camarero, L., 2009, On the climate and weather of mountain and sub-arctic lakes in Europe and their susceptibility to future climate change, *Freshwater Biology*, v 54, Is 12, p. 2433-2451.
- Tourney, J., **B.T. Ngwenya**, Mosselmans, J.W.F., Magennis, M., 2009, Physical and chemical effects of extracellular polymers (EPS) on Zn adsorption to *Bacillus licheniformis* S-86, *Journal Of Colloid And Interface Science*, v 337, Is 2, p. 381-389.
- Tourney, J. and **B. T. Ngwenya**, 2009, Bacterial extracellular polymeric substances (EPS) mediate CaCO<sub>3</sub> morphology and polymorphism, *Chemical Geology*, v 262, Is 3-4, p. 138-146.
- Tuohy, A., Bazilian, M., **R. Doherty**, O Gallachoir, B., O'Malley, M., 2009, Burning peat in Ireland: An electricity market dispatch perspective , *Energy Policy*,v 37, Is 8, p. 3035-3042.
- van de Weg, M.J., P. Meir, J. Grace**, Atkin, O.K., 2009, Altitudinal variation in leaf mass per unit area, leaf tissue density and foliar nitrogen and phosphorus content along an Amazon-Andes gradient in Peru, *Plant Ecology & Diversity*, v 2. Is 3, p. 243.
- van Gorsel, E., Delpierre, N., Leuning, R., Black, A., Munger, J.W., Wofsy, S., Aubinet, M., Feigenwinter, C., Beringer, J., **R. Clement**, *et al.*, Estimating nocturnal ecosystem respiration from the vertical turbulent flux and change in storage of CO<sub>2</sub>, *Agriculture & Forest Meteorology*, v 149, Is 11, p. 1919-1930.
- van Pul, A., Hertel, O., Geels, C., Dore, A.J., **M. Vieno**, van Jaarsveld, H.A., Bergstrom, R., Schaap, M., Fagerli, H., 2009, Modelling of the Atmospheric Transport and Deposition of Ammonia at a National and Regional Scale, *Atmospheric Ammonia - Detecting Emission Changes and Environmental Impacts*, UNECE Expert Workshop on Atmospheric Ammonia - Detecting Emission Changes and Environmental Impacts, Dec 04-06, 2006, p. 301-358.
- van Pul, A., Reis, S., Dore, T., Liu, X.J., Fagerli, H., Geels, C., Hertel, O., Kruijt, R.W., Kryza, M., Bergstrom, R., **M. Vieno**, Smith, R., Nemitz, E., 2009. Modelling the National and Regional Transport and Deposition of Ammonia. *Atmospheric Ammonia*, p. 409-421.
- Vernon, A.J., van der Beek, P.A., **H. D. Sinclair**, Persano, C., Foeken, J., Stuart, F.M., 2009, Variable late Neogene exhumation of the central European Alps: Low-temperature thermochronology from the Aar Massif, Switzerland, and the Lepontine Dome, Italy, *Tectonics*, v 28, Article No TC5004.

- Vernon, A.J., van der Beek, P.A. and **H. D. Sinclair**, 2009, Spatial correlation between long-term exhumation rates and present-day forcing parameters in the western European Alps, *Geology*, v 37, Is 9, p. 859-862.
- Versteegh, E.A.A., Troelstra, S.R., Vonhof, H.B., **D. Kroon**, 2009, Oxygen Isotope Composition of Bivalve Seasonal Growth Increments and Ambiente Water in the Rivers Rhine and Meuse, *Palaios*, v 24, Is 7-8, p. 497-504.
- Vieno, M.**, A.J. Dore, **D.S. Stevenson**, **R. Doherty**, **M. R. Heal**, S. Reis, S. Hallsworth, L. Tarrason, P. Wind, D. Fowler, D. Simpson, and M.A. Sutton, Modelling surface ozone during the 2003 heatwave in the UK, *Atmos. Chem. Phys. Discuss.*, 9, 19509-19544, 2009
- Vieno, M.**, Dore, A.J., Wind, P., Di Marco, C., Nemitz, E., Phillips, G., Tarrason, L., Sutton, M.A., 2009, Application of the EMEP Unified Model to the UK with a Horizontal Resolution of 5 x 5 km(2), Atmospheric Ammonia - Detecting Emission Changes and Environmental Impacts, UNECE Expert Workshop on Atmospheric Ammonia - Detecting Emission Changes and Environmental Impacts, DEC 04-06, 2006, p. 367-372.
- Walcott, R.C.** and **M. A. Summerfield**, 2009, Universality and variability in basin outlet spacing: implications for the two-dimensional form of drainage basins, *Basin Research*, v 21, Is 2, p. 147-155.
- Williams, M.**, Richardson, A.D., Reichstein, M., Stoy, P.C., Peylin, P., Verbeeck, H., Carvalhais, N., Jung, M., Hollinger, D.Y., Kattge, J., Leuning, R., Luo, Y., Tomelleri, E., Trudinger, C.M., Wang, Y.P., 2009, Improving land surface models with FLUXNET data, *Biogeosciences*, v 6, Is 7, p. 1341-1359.
- Wingate, L.**, Ogee, J., Cuntz, M., Genty, B., Reiter, I., Seibt, U., Yakir, D., Maseyk, K., Pendall, E.G., Barbour, M.M., Mortazavi, B., Burlett, R., Peylin, P., Miller, J., **M. Mencuccini**, Shim, J.H., Hunt, J., **Grace, J.**, 2009, The impact of soil microorganisms on the global budget of delta O-18 in atmospheric CO<sub>2</sub>, *Proceedings of the National Academy of Sciences of the United States of America*, v 106, Is 52, p. 22411-22415.
- Woulds, C.**, Andersson, J. H., **G. L. Cowie**, Middelburg, J. J., Levin, L. A., 2009, The short-term fate of organic carbon in marine sediments: Comparing the Pakistan margin to other regions, *Deep-Sea Research Part II-Topical Studies in Oceanography*, v 56, Is 6-7, p. 393-402.
- Woulds, C.**, **G. L. Cowie**, 2009, Sedimentary pigments on the Pakistan margin: Controlling factors and organic matter dynamics, *Deep-Sea Research Part II-Topical Studies in Oceanography*, v 56, Is 6-7, p. 347-357

- Woulds, C.**, Schwartz, M.C., Brand, T., **G. L. Cowie**, Law, G., **S. R. Mowbray**, 2009, Porewater nutrient concentrations and benthic nutrient fluxes across the Pakistan margin OMZ, Deep-Sea Research Part II-Topical Studies In Oceanography, v 56, Is 6-7, p. 333-346.
- Yoo, K., **S. M. Mudd**, Sanderman, J., Amundson, R., Blum, A., 2009, Spatial patterns and controls of soil chemical weathering rates along a transient hillslope, Earth and Planetary Science Letters, v 288, Is 1-2, p. 184-193.
- Zinke, J., Pfeiffer, M., Timm, O., Dullo, W.C., **D. Kroon**, Thomassin, B.A., 2009, Mayotte coral reveals hydrological changes in the western Indian Ocean between 1881 and 1994, Geophysical Research Letters, v 35, Is 23, Art No. L23707.
- Zimmermann, M., **P. Meir**, Bird, M.I., **Y. Malhi**, Ccahuana, A.J.Q., 2009, Climate dependence of heterotrophic soil respiration from a soil-translocation experiment along a 3000 m tropical forest altitudinal gradient, European Journal of Soil Science, v 60, Is 6, p. 895-906.
- Zimmermann, M., **P. Meir**, Bird, M., **Y. Malhi**, , Ccahuana, A., 2009, Litter contribution to diurnal and annual soil respiration in a tropical montane cloud forest, Soil Biology & Biochemistry, v 41, Is 6, p. 1338-1340.