

The online article is the official version and may contain additional content not available in this print issue. To access the full article, including multimedia, enhanced figures, auxiliary materials, and other nonprinted content, go to <http://www.agu.org/journals/gl>.

i Highlights of This Issue

Space Sciences

- L08101 Christopher T. Fallen, James A. Secan, and Brenton J. Watkins
In-situ measurements of topside ionosphere electron density enhancements during an HF-modification experiment (doi 10.1029/2011GL046887)
- L08102 S. Dubyagin, V. Sergeev, S. Apatenkov, V. Angelopoulos, A. Runov, R. Nakamura, W. Baumjohann, J. McFadden, and D. Larson
Can flow bursts penetrate into the inner magnetosphere? (doi 10.1029/2011GL047016)
- L08103 J. Krall, J. D. Huba, S. L. Ossakow, G. Joyce, J. J. Makela, E. S. Miller, and M. C. Kelley
Modeling of equatorial plasma bubbles triggered by non-equatorial traveling ionospheric disturbances (doi 10.1029/2011GL046890)
- L08104 N. Østgaard, K. M. Laundal, L. Juusola, A. Åsnes, S. E. Håland, and J. M. Weygand
Interhemispherical asymmetry of substorm onset locations and the interplanetary magnetic field (doi 10.1029/2011GL046767)
- L08105 Eftihia Zesta, Yong Shi, E. Donovan, E. Spanswick, Larry R. Lyons, V. Angelopoulos, J. P. McFadden, C. W. Carlson, Hans-Ulrich Auster, S. Mende, M. A. McCready, C. J. Heinselman, E. Kendall, and R. Doe
Ionospheric convection signatures of tail fast flows during substorms and Poleward Boundary Intensifications (PBI) (doi 10.1029/2011GL046758)
- L08106 A. D. DeJong, J. L. Burch, J. Goldstein, A. J. Coates, and F. Crary
Day-night asymmetries of low-energy electrons in Saturn's inner magnetosphere (doi 10.1029/2011GL047308)
- L08107 K. Kersten, C. A. Cattell, A. Breneman, K. Goetz, P. J. Kellogg, J. R. Wygant, L. B. Wilson III, J. B. Blake, M. D. Looper, and I. Roth
Observation of relativistic electron microbursts in conjunction with intense radiation belt whistler-mode waves (doi 10.1029/2011GL046810)
- L08108 R. Lundin, S. Barabash, E. Dubinin, D. Wingham, and M. Yamauchi
Low-altitude acceleration of ionospheric ions at Mars (doi 10.1029/2011GL047064)

Planets

- L08206 G. Fischer and D. A. Gurnett
The search for Titan lightning radio emissions (doi 10.1029/2011GL047316)
- L08205 P. J. Schinder, F. M. Flasar, E. A. Marouf, R. G. French, C. A. McGhee, A. J. Kliore, N. J. Rappaport, E. Barbinis, D. Fleischman, and A. Anabtawi
Saturn's equatorial oscillation: Evidence of descending thermal structure from Cassini radio occultations (doi 10.1029/2011GL047191)
- L08201 John A. Grant and Sharon A. Wilson
Late alluvial fan formation in southern Margaritifer Terra, Mars (doi 10.1029/2011GL046844)
- L08202 D. Shoji, K. Kurita, and H. K. M. Tanaka
Constraint of Europa ice thickness by measuring electromagnetic emissions induced by neutrino interaction (doi 10.1029/2010GL046460)
- L08203 N. Thomas, G. Portyankina, C. J. Hansen, and A. Pommerol
Sub-surface CO₂ gas flow in Mars' polar regions: Gas transport under constant production rate conditions (doi 10.1029/2011GL046797)
- L08204 Ravit Helled
Jupiter's occultation radii: Implications for its internal dynamics (doi 10.1029/2011GL047107)



0949-8276 GL-38-B

Solid Earth

- L08311 *Y. K. Hwang, J. Ritsema, and S. Goes*
Global variation of body-wave attenuation in the upper mantle from teleseismic P wave and S wave spectra
(doi 10.1029/2011GL046812)
- L08301 *M. A. G. M. Manthilake, N. de Koker, and D. J. Frost*
Thermal conductivity of CaGeO₃ perovskite at high pressure (doi 10.1029/2011GL046882)
- L08302 *Zhouchuan Huang, Dapeng Zhao, and Liangshu Wang*
Frequency-dependent shear-wave splitting and multilayer anisotropy in northeast Japan
(doi 10.1029/2011GL046804)
- L08303 *Naofumi Aso, Kazuaki Ohta, and Satoshi Ide*
Volcanic-like low-frequency earthquakes beneath Osaka Bay in the absence of a volcano
(doi 10.1029/2011GL046935)
- L08304 *Manuel Moreira, Javier Escartin, Eric Gayer, Cédric Hamelin, Antoine Bezios, Fabien Guillon, and Mathilde Cannat*
Rare gas systematics on Lucky Strike basalts (37°N, North Atlantic): Evidence for efficient homogenization in a long-lived magma chamber system? (doi 10.1029/2011GL046794)
- L08305 *P. Landi, E. Marchetti, S. La Felice, M. Ripepe, and M. Rosi*
Integrated petrochemical and geophysical data reveals thermal distribution of the feeding conduits at Stromboli volcano, Italy (doi 10.1029/2010GL046296)
- L08306 *E. Trasatti, C. Kyriakopoulos, and M. Chini*
Finite element inversion of DInSAR data from the Mw 6.3 L'Aquila earthquake, 2009 (Italy)
(doi 10.1029/2011GL046714)
- L08307 *Michael S. Zhdanov, Robert B. Smith, Alexander Gribenko, Martin Cuma, and Marie Green*
Three-dimensional inversion of large-scale EarthScope magnetotelluric data based on the integral equation method: Geoelectrical imaging of the Yellowstone conductive mantle plume (doi 10.1029/2011GL046953)
- L08308 *Diane Rivet, Michel Campillo, Nikolai M. Shapiro, Victor Cruz-Atienza, Mathilde Radiguet, Nathalie Cotte, and Vladimir Kostoglodov*
Seismic evidence of nonlinear crustal deformation during a large slow slip event in Mexico
(doi 10.1029/2011GL047151)
- L08309 *Matthew Armentrout and Abby Kavner*
High pressure, high temperature equation of state for Fe₂SiO₄ ringwoodite and implications for the Earth's transition zone (doi 10.1029/2011GL046949)
- L08310 *O. Lengliné and J.-L. Got*
Rupture directivity of microearthquake sequences near Parkfield, California (doi 10.1029/2011GL047303)

Hydrology and Land Surface Studies

- L08402 *Takeshi Uemura, Makoto Taniguchi, and Kazuo Shibuya*
Submarine groundwater discharge in Lützow-Holm Bay, Antarctica (doi 10.1029/2010GL046394)
- L08401 *Caroline Dorn, Niklas Linde, Tanguy Le Borgne, Olivier Bour, and Ludovic Baron*
Single-hole GPR reflection imaging of solute transport in a granitic aquifer (doi 10.1029/2011GL047152)
- L08403 *A. Kaab and T. Prowse*
Cold-regions river flow observed from space (doi 10.1029/2011GL047022)
- L08404 *John P. Kaszuba, Hari S. Viswanathan, and J. William Carey*
Relative stability and significance of dawsonite and aluminum minerals in geologic carbon sequestration
(doi 10.1029/2011GL046845)
- L08406 *Ryan Armstrong and Jonathan Ajo-Franklin*
Investigating biomineralization using synchrotron based X-ray computed microtomography
(doi 10.1029/2011GL046916)

*There is no L08405 in this issue.

The Cryosphere

- L08501 *Matt A. King, Keith Makinson, and G. Hilmar Gudmundsson*
Nonlinear interaction between ocean tides and the Larsen C Ice Shelf system (doi 10.1029/2011GL046680)
- L08502 *Ian Bartholomew, Peter Nienow, Andrew Sole, Douglas Mair, Thomas Cowton, Steven Palmer, and Jemma Wadham*
Supraglacial forcing of subglacial drainage in the ablation zone of the Greenland ice sheet
(doi 10.1029/2011GL047063)

Oceans

Special Section: Reconstruction of Western Pacific Climate Change and Variability Since the Last Glacials: Interannual to Millennial Scales

- L00F01 *Liang-Jian Shiau, Min-Te Chen, Steven C. Clemens, Chih-An Huh, Masanobu Yamamoto, and Yusuke Yokoyama*
Warm pool hydrological and terrestrial variability near southern Papua New Guinea over the past 50k
(doi 10.1029/2010GL045309)
- L00F02 *Takuya Sagawa, Yusuke Yokoyama, Minoru Ikehara, and Michinobu Kuwae*
Vertical thermal structure history in the western subtropical North Pacific since the Last Glacial Maximum
(doi 10.1029/2010GL045827)
- L00F03 *Yusuke Yokoyama, Atsushi Suzuki, Fernando Siringan, Yasuo Maeda, Ayako Abe-Ouchi, Rumi Ohgaito, Hodaka Kawahata, and Hiroyuki Matsuzaki*
Mid-Holocene palaeoceanography of the northern South China Sea using coupled fossil-modern coral and atmosphere-ocean GCM model (doi 10.1029/2010GL044231)
- L00F04 *I. I. Mokhov, D. A. Smirnov, P. I. Nakonechny, S. S. Kozlenko, E. P. Seleznev, and J. Kurths*
Alternating mutual influence of El-Niño/Southern Oscillation and Indian monsoon (doi 10.1029/2010GL045932)
For a complete listing of articles in this special section, go to <http://www.agu.org/journals/gl/> and select the link under Journal Details for Special Sections.

Regular Articles

- L08604 *P. Sutton and D. Roemmich*
Decadal steric and sea surface height changes in the Southern Hemisphere (doi 10.1029/2011GL046802)
- L08610 *Maxim Nikurashin and Raffaele Ferrari*
Global energy conversion rate from geostrophic flows into internal lee waves in the deep ocean
(doi 10.1029/2011GL046576)
- V. V. S. S. Sarma, N. A. Kumar, V. R. Prasad, V. Venkataramana, S. Appalanaidu, B. Sridevi, B. S. K. Kumar,
L08601 *M. D. Bharati, C. V. Subbaiah, T. Acharyya, G. D. Rao, R. Viswanadham, L. Gawade, D. T. Manjary, P. P. Kumar, K. Rajeev, N. P. C. Reddy, V. V. Sarma, M. D. Kumar, Y. Sadhiram, and T. V. R. Murty*
High CO₂ emissions from the tropical Godavari estuary (India) associated with monsoon river discharges
(doi 10.1029/2011GL046928)
- L08602 *A. Biastoch, T. Treude, L. H. Rüpkne, U. Riebesell, C. Roth, E. B. Burwicz, W. Park, M. Latif, C. W. Böning, G. Madec, and K. Wallmann*
Rising Arctic Ocean temperatures cause gas hydrate destabilization and ocean acidification
(doi 10.1029/2011GL047222)
- L08603 *Y.-L. Chang and L.-Y. Oey*
Interannual and seasonal variations of Kuroshio transport east of Taiwan inferred from 29 years of tide-gauge data (doi 10.1029/2011GL047062)
- L08605 *Xin Zhang, Keith C. Hester, William Ussler, Peter M. Walz, Edward T. Peltzer, and Peter G. Brewer*
In situ Raman-based measurements of high dissolved methane concentrations in hydrate-rich ocean sediments (doi 10.1029/2011GL047141)
- L08606 *Christopher K. Algar, Bernard P. Boudreau, and Mark A. Barry*
Release of multiple bubbles from cohesive sediments (doi 10.1029/2011GL046870)
- L08607 *Alexander Rabinovich, Kelly Stroker, Richard Thomson, and Earl Davis*
DARTs and CORK in Cascadia Basin: High-resolution observations of the 2004 Sumatra tsunami in the northeast Pacific (doi 10.1029/2011GL047026)

- L08608** *Andrew B. Kennedy, Uriah Gravois, Brian C. Zachry, Joannes J. Westerink, Mark E. Hope, J. Casey Dietrich, Mark D. Powell, Andrew T. Cox, Richard A. Luettich Jr., and Robert G. Dean*
Origin of the Hurricane Ike forerunner surge (doi 10.1029/2011GL047090)
- L08609** *D. R. Munday, L. C. Allison, H. L. Johnson, and D. P. Marshall*
Remote forcing of the Antarctic Circumpolar Current by diapycnal mixing (doi 10.1029/2011GL046849)
- L08611** *Katherine J. Quinn and Rui M. Ponte*
Estimating high frequency ocean bottom pressure variability (doi 10.1029/2010GL046537)
- L08612** *Ja-Myung Kim, Kitack Lee, Kyungsoon Shin, Eun Jin Yang, Anja Engel, David M. Karl, and Hyun-Cheol Kim*
Shifts in biogenic carbon flow from particulate to dissolved forms under high carbon dioxide and warm ocean conditions (doi 10.1029/2011GL047346)
- L08613** *Shein-Fu Wu, Chen-Feng You, Bo-Shian Wang, Eugenia Valsami-Jones, and Emmanuel Baltatzis*
Two-cells phase separation in shallow submarine hydrothermal system at Milos Island, Greece: Boron isotopic evidence (doi 10.1029/2011GL047409)
- L08614** *Jennifer M. Frederick and Bruce A. Buffett*
Topography- and fracture-driven fluid focusing in layered ocean sediments (doi 10.1029/2010GL046027)

Climate

- L08705** *Evan Kodra, Karsten Steinhaeuser, and Auroop R. Ganguly*
Persisting cold extremes under 21st-century warming scenarios (doi 10.1029/2011GL047103)
- L08701** *Pang-chi Hsu, Tim Li, and Bin Wang*
Trends in global monsoon area and precipitation over the past 30 years (doi 10.1029/2011GL046893)
- L08702** *Sajjad Saeed, Wolfgang A. Müller, Stefan Hagemann, Daniela Jacob, M. Mujumdar, and R. Krishnan*
Precipitation variability over the South Asian monsoon heat low and associated teleconnections (doi 10.1029/2011GL046984)
- L08703** *D. Masson and R. Knutti*
Climate model genealogy (doi 10.1029/2011GL046864)
- L08704** *Xiaoying Shi, Jiafu Mao, Peter E. Thornton, Forrest M. Hoffman, and Wilfred M. Post*
The impact of climate, CO₂, nitrogen deposition and land use change on simulated contemporary global river flow (doi 10.1029/2011GL046773)

Atmospheric Science

- L08809** *Olaf Krüger and Hartmut Graßl*
Southern Ocean phytoplankton increases cloud albedo and reduces precipitation (doi 10.1029/2011GL047116)
- L08801** *Gordon G. Shepherd*
Thermospheric observations of equatorial wavenumber 4 density perturbations from WINDII data (doi 10.1029/2011GL046986)
- L08804** *A. Chandran, R. L. Collins, R. R. Garcia, and D. R. Marsh*
A case study of an elevated stratopause generated in the Whole Atmosphere Community Climate Model (doi 10.1029/2010GL046566)
- L08811** *Ryan E. Truchelut and Robert E. Hart*
Quantifying the possible existence of undocumented Atlantic warm-core cyclones in NOAA/CIRES 20th Century Reanalysis data (doi 10.1029/2011GL046756)
- L08802** *N. F. Blagoveshchenskaya, T. D. Borisova, T. K. Yeoman, M. T. Rietveld, I. M. Ivanova, and L. J. Baddeley*
Artificial small-scale field-aligned irregularities in the high latitude F region of the ionosphere induced by an X-mode HF heater wave (doi 10.1029/2011GL046724)
- L08803** *S. Suresh Babu, K. Krishna Moorthy, Ravi K. Manchanda, Puna Ram Sinha, S. K. Satheesh, Dinkar Prasad Vajja, S. Srinivasan, and V. H. Arun Kumar*
Free tropospheric black carbon aerosol measurements using high altitude balloon: Do BC layers build “their own homes” up in the atmosphere? (doi 10.1029/2011GL046654)

- L08805** *Y. T. Tanaka, M. Hayakawa, Y. Hobara, A. P. Nickolaenko, K. Yamashita, M. Sato, Y. Takahashi, T. Terasawa, and T. Takahashi*
Detection of transient ELF emission caused by the extremely intense cosmic gamma-ray flare of 27 December 2004 (doi 10.1029/2011GL047008)
- L08806** *Xiaoyong Xu, A. H. Manson, C. E. Meek, and J. R. Drummond*
Quasi-biennial modulation of the wintertime Arctic temperature as revealed by Aura-MLS measurements (doi 10.1029/2011GL047075)
- L08807** *D. M. Smith, J. R. Dwyer, B. J. Hazelton, B. W. Grefenstette, G. F. M. Martinez-McKinney, Z. Y. Zhang, A. W. Lowell, N. A. Kelley, M. E. Splitt, S. M. Lazarus, W. Ulrich, M. Schaal, Z. H. Saleh, E. Cramer, H. K. Rassoul, S. A. Cummer, G. Lu, and R. J. Blakeslee*
The rarity of terrestrial gamma-ray flashes (doi 10.1029/2011GL046875)
- L08808** *Barbara Winter and Michel S. Bourqui*
The impact of surface temperature variability on the climate change response in the Northern Hemisphere polar vortex (doi 10.1029/2011GL047011)
- L08810** *E. L. Hodson, B. Poulter, N. E. Zimmermann, C. Prigent, and J. O. Kaplan*
The El Niño–Southern Oscillation and wetland methane interannual variability (doi 10.1029/2011GL046861)
- L08812** *Vishal Dixit and J. Srinivasan*
The role of vertical shear of the meridional winds in the northward propagation of ITCZ (doi 10.1029/2010GL046601)
- L08813** *Siegfried Gonzi, Liang Feng, and Paul I. Palmer*
Seasonal cycle of emissions of CO inferred from MOPITT profiles of CO: Sensitivity to pyroconvection and profile retrieval assumptions (doi 10.1029/2011GL046789)
- L08814** *Jean-Charles Dupont, Martial Haeffelin, Yohann Morille, Jennifer M. Comstock, Connor Flynn, Charles N. Long, Chitra Sivaraman, and Rob K. Newsom*
Cloud properties derived from two lidars over the ARM SGP site (doi 10.1029/2010GL046274)

The Author Index appears at the end of the issue.