

Session Programme Topic 8

Rapid climate change in the past – mechanisms, processes and regional patterns

Convener: Achim Brauer, Ralf Tiedemann, Gerrit Lohmann

For an improved assessment of future climate change, researchers need information on time duration, rate, frequency and regional patterns of climate variability. A review into the Earth's history forms the basis of understanding climate reaction and dynamics in comparison with changes in external forcing and internal feedback processes.

The session focusses on identifying and explaining mechanisms and processes of regional and temporal patterns of climate variability. The time span of interest encompasses the last 150,000 years, which also allows for comparisons between the last two glacial terminations, the Eemian and the Holocene. We invite contributions from paleo-modelling and different paleoclimate archives (marine and lake sediments, ice cores, speleothemes).

Tuesday, 7 October 2014

Poster Session:

Umweltforum, Room WK, Winterkirche: 16:10 – 18:10

- TP8-P-01: Wagner, S., E. Zorita: Regional trends in the last two millennia in a comprehensive climate model simulation
- TP8-P-02: Lohmann, G., X. Zhang, X. Gong, G. Knorr, L. Max, M. Pfeiffer, X. Shi, L. Lembke-Jene, T. Laepple, R. Tiedemann: Sea surface temperature trends in the North Atlantic and Pacific Oceans: models and observations
- TP8-P-03: Luedecke, H.-J., A. Hempelmann, C. O. Weiss: Spectral analysis of Central European temperature data
- TP8-P-04: Max, L., L. Belz, R. Tiedemann, K. Fahl, D. Nürnberg, J.-R. Riethdorf: Rapid shifts in subarctic Pacific climate between 138,000 – 70,000 years ago
- TP8-P-05: Ludwig, J., S. Lindhorst, S. Bierstedt, C. Betzler, R. Borówka, K. Osadczuk: The sedimentary 'barcode' of past wind regimes: southern Baltic coastal dunes as climate archive
- TP8-P-06: Masson, D., R. Furrer, N. Kirchner: Dynamic Bayesian models to assess palaeo-Arctic ice shelf extents
- TP8-P-07: Kandiano, E. S., H. A. Bauch, K. Fahl: Last interglacial surface water structure in the NW Mediterranean (Balearic) Sea: climatic variability and Link between low and high latitudes
- TP8-P-08: Wündsche, M., T. Haberzettl, J. Baade, G. Daut, P. Frenzel, K. Kirsten, R. Mäusbacher, M. Meadows, S. Meschner, L. Quick, M. Zabel: Holocene palaeoenvironmental reconstructions from Eilandvlei and Groenvlei, Wilderness Embayment, South Africa
- TP8-P-09: Schwab, M. J., A. Brauer, T. Blume, M. Błaszkiwicz, T. Raab., M. Wilmking, the ICLEA Scientific Team: The Virtual Institute of Integrated Climate and Landscape Evolution Analyses – ICLEA
- TP8-P-10: Lembke-Jene, L., R. Tiedemann, D. Nürnberg, L. Max, G. Lohmann: A mid-Holocene shift and millennial-scale variations in North Pacific mesopelagic oxygenation and upper mixed layer hydrography
- TP8-P-11 Lane C., D. Sachse, A. Brauer, A. Moreno, S. Rasmussen, D. Roche, D. Veres, INTIMATE members: INTEgrating Ice core, Marine and TERrestrial records to understand abrupt climate changes
- TP8-P-12 Stepanek, C., G. Lohmann: Towards a more flexible representation of hydrological discharge transport in paleoclimate modelling

Wednesday, 8 October 2014

Umweltforum, Room S9, Seminar room 9, 1st floor

- 10:00 TP8-O-01: Kandiano, E. S., M. T. J. Van der Meer, S. Schouten, H. A. Bauch, J. S. Sinninghe Damste: Intra-interglacial climate variability in the North Atlantic during MIS 11
- 10:15 TP8-O-02: Rehfeld, K., S. L. Ho, T. Münch, T. Laepple: Glacial-interglacial variability change: a view beyond ice-cores

- 10:30 TP8-O-03: [Knorr, G.](#), X. Zhang, G. Lohmann, P. Köhler, S. Barker, A. Brauer, C. Martin-Puertas: The role of glacial/interglacial CO₂ and ice sheet changes for abrupt climate transitions
- 10:45 TP8-O-04: [Martin-Puertas, C.](#), A. Brauer, S. Wulf, F. Ott, S. Lauterbach, G., Knorr, P. Dulski: Abrupt climate changes during the demise of the last interglacial across a transect from Greenland to the Mediterranean: regional similarities and differences
- 11:00 TP8-O-05: [Schwab, M.J.](#), I. Neugebauer, A. Brauer, N. Waldmann, U. Frank, P. Dulski, R. Tjallingii, N. Taha, DSDDP Scientific Party: From warm to cold climate - the MIS 5-4 transition in sediments from the deep Dead Sea basin
- 11:15 COFFEE BREAK (Umweltforum, Room S8, Seminar room 8, 1st floor)

Umweltforum, Room S9, Seminar room 9, 1st floor

- 11:45 TP8-O-06: [Mulitza, S.](#), C. Chiessi, J. Lippold, E. Schefuß, A. Mackensen, A. Paul, M. Prange, A. Sawakuchi, R. Tiedemann, Y. Zhang: Atlantic Ocean forcing of northeast Brazilian precipitation during Heinrich Stadial 1
- 12:00 TP8-O-07: [Müller, J.](#), R. Stein: Abrupt sea ice fluctuations in the subpolar North Atlantic at the end of the last glacial and their potential impact on ocean circulation changes
- 12:15 TP8-O-08: [Sachse, D.](#), K. Schütrumpf, I. Neugebauer, B. Plessen, A.M. Noryskiewicz, A. Brauer: Palaeohydrological changes during the onset of the Younger Dryas from the Rehwiase Paleolake, Berlin, NE Germany and their regional context – a combined biomarker δD and carbonate δ¹⁸O record
- 12:30 TP8-O-09: [Wulf, S.](#), F. Ott, M. Słowinski, N. Dräger, I. Neugebauer, C. Martin-Puertas, A. Brauer: The use of tephras as tools for synchronising palaeoclimate records – an example from late-glacial central European varved lake records
- 12:45 TP8-P-02: [Lohmann, G.](#), X. Zhang, X. Gong, G. Knorr, L. Max, M. Pfeiffer, X. Shi, L. Lembke-Jene, T. Laepple, R. Tiedemann: Sea surface temperature trends in the North Atlantic and Pacific Oceans: models and observations
- 13:00 LUNCH BREAK (Umweltforum, Room S8, Seminar room 8, 1st floor)

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Umweltforum, Room S9, Seminar room 9, 1st floor

- 14:55 TP8-O-10: [Rimbu, N.](#), G. Lohmann, M. Ionita: Reconstruction of climate extreme indices over Europe from high resolution proxy data
- 15:10 TP8-O-11: [Bierstedt, S.](#), B. Hünicke, E. Zorita, S. Wagner: Simulated changes in wind extremes during the last millennium over northern Europe
- 15:25 TP8-O-12: [Ott, F.](#), A. Brauer, M. Słowinski, S. Wulf, V. Putyrskaya, M. Obremska, B. Plessen, M. Blaszkiewicz: A robust chronology established by a multiple dating approach for the varved sediment record from Lake Czechowskie (Poland)
- 15:40 TP8-O-13: [Hoffmann, H.](#), P. Bohleber, T. Erhardt, J. Kerch, N. Spaulding, J. Freitag, D. Wagenbach: Towards retrieving Holocene climate changes in Western Europe from a high Alpine ice core
- 15:55 TP8-O-14: [Helle, G.](#), M. Freund, U. Cubasch, ISONET Members: A spatial reconstruction of European drought from a tree-ring stable isotope network