

Hanse-Wissenschaftskolleg
Institute for Advanced Study

2nd Meeting of the HWK Study Group

Atmosphere-ocean changes in the Southeast Pacific — from glacial / interglacial to instrumental time-scales

Delmenhorst, December 2 – 4, 2015

Organizers:

Prof. Dr. Carina Lange
University of Concepción, Chile and HWK Fellow

Dr. Doris Meyerdierks
Hanse-Wissenschaftskolleg

Venue:

Hanse-Wissenschaftskolleg
Institute for Advanced Study
Lehmkuhlenbusch 4
27753 Delmenhorst
Germany
www.h-w-k.de

Program

Wednesday, December 2

9.00 - 9.30 **Doris Meyerdierks, Carina Lange and Frank Lamy:**
Opening, welcome, and introduction to the workshop

Theme 1: *Deep and intermediate water circulation in the South Pacific*

9.30 - 11.00 **Elisabeth Michel / Giuseppe Siani:** Review and update of deep and intermediate water records from off Chile

Gema Martínez Mendéz: Intermediate water changes off Chile

11.00 - 11.30 Coffee break

11.30 - 13.00 **Torben Struve:**

Nd isotopes from Southern Ocean deep-sea corals – implications for water mass mixing and interoceanic water mass exchange

Thomas Ronge:

Deep water mass circulation in the SW Pacific and Indian Ocean

13.00 - 14.00 Lunch break

14.00 - 15.00 **Frank Lamy:** Quantifying CO₂ outgassing from the mid-depth South Pacific during the last glacial termination

Lester Lembke-Jene:

North Pacific vs. Antarctic Intermediate Water: nutrient and oxygen source variations for the low-latitude Pacific

15.00 - 15.30 Coffee break

15.30 - 17.00 **All: *General discussion on Theme 1***

17.00 - 18.00 Relax in the “Kaminzimmer” at HWK

18.00 - 19.00 Fellow Lecture **Carina Lange:**

“Marine Sediments from southern Chile are unique archives of past climate changes“

19.00 All are invited to the Fellow dinner at HWK

Thursday, December 3

Theme 2: *Hydrological cycle and implications for Westerlies*

- 9.00 - 11.00 **Marc Wengler:**
Reconstruction of South Pacific dust flux and dust provenance
James Collins: Deglacial delta D reconstruction (precipitation) from off central-southern Chile
Jérôme Kaiser:
Western Patagonian Ice Sheet (PIS) melting during the last deglaciation
James Collins:
Centennial oscillations of the SAM: evidence from Lake Lanalhue
- 11.00 - 11.30 Coffee break
- 11.30 - 13.00 **Sébastien Bertrand:** Patagonian fjord sediment geochemistry: From modern river discharge to paleohydrological reconstructions
Mahyar Mohtadi:
Reconstruction of the hydrological cycle – future efforts at MARUM
Naoufel Haddam / Guillaume Rouaud: Temperature reconstructions off Chile based on forams and coccolith assemblages
- 13.00 - 14.00 Lunch break
- 14.00 - 15.00 **Rolf Kilian:** Sea-spray as a potential proxy for Westerly Wind changes
Dominic Hodgson: Late Quaternary changes in the Westerly Winds over the Southern Ocean
- 15.00 – 16.30 **All: *General discussion on Theme 2 with Coffee break***

Theme 3: *Methodology, proxies, mystery records*

- 16.30 - 18.00 **Helge Arz:** REM-EDX automated particle analysis
Jérôme Kaiser: Do hydrogen isotope ratios of higher plant leaf waxes record Holocene humidity changes in southernmost Chile
- All: *Discussion on Theme 3,***
discussion on own and other available data-sets that do not fit in the overall paleoclimatic scenario (***if you have data you would like to discuss, please prepare some slides***).
- 19.30 Study Group Dinner in downtown Delmenhorst

Friday, December 4

Theme 4: *New projects and cruises*

- 9.00 – 10.30 **Frank Lamy:** PS97 Drake Passage, 2016
Carina Lange: Mirai, Chilean margin, 2017
Helge Arz: RV Sonne, Chilean margin (2019?)
Carina Lange: small vessels for operation in Patagonian (LC Sur-Austral) and Antarctic Peninsula (Karpuj) fjords
- 10.30 - 11.00 Coffee break
- 11.00 - 13.00 **Sébastien Bertrand:**
New projects Chilean fjords (*Hydroprox* and *paleo-GLOFs*).
Rolf Kilian: Gran Campo (new projects?)
Frank Lamy: RV Sonne, New Zealand margin, 2018
Carina Lange: Closing remarks
- 13.00 - 14.00 Lunch break and end of workshop