

Opening Meeting IGCP 652
“Reading Time in Paleozoic sedimentary Rock”
Bremen, Germany

Pre-meeting workshop
“Time-series analysis of paleoclimate signals.”

Wednesday 12th till Friday 14th of September 2018

Teaching staff: David De Vleeschouwer [Bremen],
Matthias Sinnesael [Brussels],
Sietske Batenburg [Oxford]
Anne-Christine Da Silva [Liège]
and a few others [to be confirmed]

Where? Seminar Room 2060
<https://goo.gl/maps/XmxJ4ZFnhqp>

From the airport as well as from the main station tram number 6 (direction "Universität") goes directly to the University. Step out at station "Universität - Zentralbereich". From here you can walk in a few minutes to MARUM.

Where to stay? Participants have to book their own accommodation. We recommend the following hotels.

Close to the university 7Things
<https://www.7things.de>

In the city center Best Western Bremen City
<http://www.booking.com/Share-7NGogu>

What to bring? Bring your own laptop and power adapter!
At the end of the workshop, we will have the opportunity to work with own data...so bring your high-resolution data series on which you wish to carry out time-series analysis.

Preliminary Program

Wednesday 12th of September

- 09:00 - 10:30 Physics of the climate system. How does solar insolation reaches Earth's surface?
- 10:30 – 11:00 Coffee break
- 11:00 - 12:30 Milankovitch theory
- 12:30 - 14:00 Lunch
- 14:00 - 15:30 Theoretical introduction to paleoclimate signals and time-series analysis
- 16:00 - 17:30 Practical introduction to paleoclimate signals and their time-series analysis.

Thursday 13th of September

- 09:00 - 10:30 Sedimentary indications of Milankovitch forcing.
- 11:00 - 12:30 Paleoclimate signals and their time-series analysis: Exercise 1.
- 12:30 - 14:00 Lunch
- 14:00 - 15:30 Exercise 2
- 16:00 - 17:30 Exercise 3

Friday 14th of September

- 09:00 - 16:00 Exercise 4 or analysis of own data
- 15:00 – 16:00 Presentation and discussion of main results of the "Cyclostratigraphy Intercomparison Project".

Pre-meeting Fieldtrip “Climate modes and events of the Paleozoic.”

Saturday 15th of September 2018

08:15 Meeting in front of the MARUM building.
08:30 Transport to Harz
11:00 – 19:00 Several stops in the Harz Mountains illustrating the late Permian “salt giants”, the Zechstein transgression, Late Devonian anoxic events and Middle Devonian carbonate reef development.

Lunch is provided and included in the registration fee.

19:00 LEINE Hotel
Groner Landstrasse 55
37081 Göttingen

Overnight stay is included in the registration fee.

Dinner is not included in the registration fee.

Sunday 16th of September 2018

07:30 Breakfast (included in the registration fee)
08:15 Transport to eastern Sauerland
10:30 – 19:00 Several stops in Sauerland to illustrate Givetian-Frasnian reef complexes, and the strongly cyclic deep-water successions of the Famennian.

Lunch is provided and included in the registration fee.

19:00 Hotel Marburger Hof
Elisabethstraße 12
35037 Marburg

Overnight stay is included in the registration fee.

Dinner is not included in the registration fee.

Monday 17th of September 2018

07:30 Breakfast (included in the registration fee)
08:15 Start of fieldtrip.
08:30 – 15:30 Lower Devonian to Lower Carboniferous sequences of the eastern Rhenish Slate Mountains

Lunch is provided and included in the registration fee.

19:00 Arrival in Bremen. Participants check into their hotels.

Participants have to book their own accommodation in Bremen for this night.

Opening Meeting IGCP 652 “Reading Time in Paleozoic sedimentary Rock”

Tuesday 18th till Wednesday 19th of September 2018

Where?

Seminar Room 2070

<https://goo.gl/maps/XmxJ4ZFnhqp>

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Program

Tuesday 18th of September 2018

- 09:00 – 09:30: Registration
Coffee and refreshments will be served.
- 09:30 – 09:40: Welcome
David De Vleeschouwer.
- 09:40 – 10:00: Timing and pacing of the Late Devonian mass extinction event regulated by eccentricity and obliquity.
David De Vleeschouwer et al.
- 10:00 - 10:20: Astrochronology of the Frasnian–Famennian boundary section (Late Devonian) at Steinbruch Schmidt.
Anne-Christine Da Silva et al.
- 10:20 – 10:40: Divers depositional and geochemical signature of the Frasnian Famennian (F/F) global event in the western Thailand, as a record of Paleotethyan vs. western Australian geotectonic affinities.
Peter Königshof et al.
- 10:40 – 11:20: Coffee break
- 11:20 – 11:40 Tracing palaeoredox conditions across the Devonian-Carboniferous boundary event: a case study from carbonate-dominated settings of Belgium, Czech Republic, and northern France
Tomáš Kumpán et al.
- 11:40 – 12:00 TBD
Ralph Thomas Becker et al.
- 12:00 – 12:30 Preliminary reports from the pre-meeting workshop on time-series analysis.
Workshop participants
- 12:30 – 14:00 Lunch
- 14:00 – 14:30: Tour of posters with all participants.
Poster presenters introduce their poster with 5-minutes presentations
- 14:30 – 15:00: Poster session
- 15:00 – 15:20 Coffee break

- 15:20 – 15:40 High-resolution stratigraphy on the Ordovician strata from southwestern Ordos, China
Shuang Dai et al.
- 15:40 – 16:00 Upper Katian Cyclostratigraphy of the Vauréal Formation, Anticosti Island (Gulf of St. Lawrence, Canada)
Matthias Sinnesael et al.
- 16:00 – 16:10 Concluding remarks.

Wednesday 19th of September 2018

- 09:00 – 09:10: Opening of the second day.
David De Vleeschouwer
- 09:10 – 09:30: The Lochkovian (Lower Devonian) in the Spanish Central Pyrenees: conodont high-resolution biostratigraphy as a basis for integrating Events, oceanic, climatic changes and Milankovitch cycles.
José Ignacio Valenzuela-Ríos and Jau-Chyn Liao
- 09:30 - 09:50: The Givetian (Middle Devonian) in the Spanish Central Pyrenees: conodont high-resolution biostratigraphy as a basis for testing the ties of biological and environmental evolution to astronomical forces.
Jau-Chyn Liao and José Ignacio Valenzuela-Ríos
- 09:50 – 10:10: Devonian (ca. 388-375 My) Horn River Group of Mackenzie Platform (northwestern Canada) is an open-shelf succession recording global anoxic events.
Pavel Kabanov
- 10:10 – 10:50 Coffee break
- 10:50 - 11:10 Impact event stratigraphy: lessons from Paleozoic craters, Chicxulub and the K-Pg boundary deposits
Michael T. Whalen et al.
- 11:10 – 11:30 Magnetic polarity time scale for the Devonian...?
Annie van der Boon et al.
- 11:30 – 12:00 **Keynote:** Cross recurrence plot analyses of conodont community turnover – a model free, continuous, high-resolution correlation tool.
Andrej Spiridonov et al.
- 12:00 – 12:20 To see or not to see Milankovitch cycles – Example of the Lower Devonian hemipelagic succession from Czech Republic
Anne-Christine Da Silva et al.
- 12:20 – 14:00 Lunch
- 14:00 – 16:00 Where to go with IGCP 652?
Division of tasks and future paper writing.
Future meetings.
Concluding Remarks

Posters

Title	Authors and presenter
A positive test for the Greater Tarim Block at the heart of Rodinia: Mega-dextral suturing of supercontinent assembly	<i>Bin Wen & David A.D. Evans</i>
Iterative speciation in Late Silurian Pristiograptine graptolites of the Baltic Basin and the value of stratigraphy in cladistics	<i>Misha Whittingham, Sigitas Radzevičius, & Andrej Spiridonov</i>
The Devono-Mississippian Besa River Group of Liard Basin, Canada: stratigraphy of a world-class shale gas resource	<i>F. Ferri, B.C. Richards, M. McMechan, Pavel Kabanov, A. Mort, E. Little, P. Thapa & J. Leslie-Panek</i>
Reassessment of the Lower Devonian and lower Middle Devonian conodont biostratigraphy in the Northwest Territories, Canada: changes in the time-rock chart for the northern Mackenzie Mountains and adjacent plains	<i>Sofie A. Gouwy & Pavel Kabanov</i>
The remagnetization of marine carbonate rocks of late Ordovician in Pingliang section (China)	<i>Junhua Luo, Shuang Dai, Mark J. Dekkers, Weiguo Wang, Xiaoke Qiang, Lei Qiang, Chao Tian, Haiyu Xi & Wout Krijgsman</i>
Identifying cyclicities in different types of data series: a study of the Carboniferous rhythmites of the Itararé Group, Paraná Basin	<i>Kochhann, M.V.L., Cagliari, J., Kochhann, K.G.D., Tedesco, J., Aquino, C.D., Souza, M.K. & Souza, L.V.</i>
Refining the end of the Late Paleozoic Ice Age – LPIA in the Paraná Basin, southern of Gondwana	<i>Cagliari, J., Netto, R.G. & Schmitz, D.M.</i>
Trace Elements of the Middle-Late Ordovician in SW Ordos and its paleoenvironmental implications	<i>Lei Qiang, Shuang Dai, Anne-Christine da Silva, David De Vleeschouwer, Weiguo Wang, Guoshan Li, Junhua Luo, Haiyu Xi & Chao Tian</i>
TBD	<i>Daniel Franco</i>
TBD	<i>Sven Hartenfels</i>

Integrating U-Pb radio-isotopic ages and *David De Vleeschouwer*
cyclostratigraphy to better constrain the Devonian
geological time-scale
