# EARTHSEQUENCING Conference Presentations

"Chaos of the Solar System: A method to detect chaotic transitions in Geological Time Series", Melanie Reinelt, Heiko Pälike, GeoBonn, 2. - 6.09.2018

"Investigating the deep-time evolution of the Earth's orbit and searching for chaotic transitions and tidal dissipation patterns in geological time series", Melanie Reinelt, Heiko Pälike, Mathieu Martinez, GeoBremen, 24. - 29.09.2017

Rochholz et al., 2018.: The role of continental and climatic boundary conditions in modulating the Earth system response to astronomical forcing [abstract], In: American Geoscientific Union General Assembly; 2018, 10-15 December, Washington D.C., USA, PP53C-1215

Rochholz et al., 2018.: Understanding weathering feedbacks under CO2 and orbital forcing in the cGENIE Earth System Model of Intermediate Complexity [abstract], In: European Geoscientific Union General Assembly; 2018, 8-13 April, Vienna, Austria, CL1.31

Rochholz et al., 2017.: Understanding climate sensitivity to greenhouse gas concentrations and orbital forcing in the cGenie Earth System Model of IntermediateComplexity [abstract], In: European Geoscientific General Assembly; 2017, 23.-28 April, Vienna, Austria, X4.131

van Peer, Taylor, Liebrand et al. , "Equal expression of eccentricity and obliquity in an Oligocene-Miocene spanning stable isotope stratigraphy from J-Anomaly Ridge Site U1406 (North-West Atlantic Ocean), Poster presented in June 2019 at the MIOMEET meeting in Stockholm.

Maximilian Vahlenkamp, **David De Vleeschouwer,** Sietske Batenburg, Kirsty M. Edgar, Emma Hanson, Mathieu Martinez, Heiko Pälike, Kenneth G. MacLeod, Yong-Xiang Li, Carl Richter, Kara Bogus, Richard W. Hobbs, and Brian T. Huber and the Expedition 369 Scientific Participants (2019). An astrochronology for the lower to middle Eocene of the Mentelle Basin (Australia) and its implications for the geologic time scale. EGU General Assembly, Vienna. Fri, 12 Apr, 14:00–15:45. (Poster)

Matthias Sinnesael, **David De Vleeschouwer, C**hristian Zeeden, and Philippe Claeys and the Cyclostratigraphy Intercomparison Project Participants (2019). Cyclostratigraphy Intercomparison Project (CIP): Results. EGU General Assembly, Vienna. Fri, 12 Apr, 14:00–15:45. (Poster)

Anne-Christine Da Silva, **David De Vleeschouwer,** Damien Pas, Frits Hilgen, and Mark Dekkers (2019). Cyclostratigraphy to improve the Paleozoic time scale – the good, the bad and the ugly. EGU General Assembly, Vienna. Wed, 10 Apr, 16:30–16:45. (Talk)

Maximilian Vahlenkamp, **David De Vleeschouwer,** Sietske Batenburg, Kirsty M. Edgar, Emma Hanson, Mathieu Martinez, Heiko Pälike, Kenneth G. MacLeod, Yong-Xiang Li, Carl Richter, Kara Bogus, Richard W. Hobbs, and Brian T. Huber and the Expedition 369 Scientific Participants (2019). An astrochronology for the lower to middle Eocene of the Mentelle Basin (Australia) and its implications for the geologic time scale. Gemeinsames IODP/ ICDP Kolloquium Köln 2019. 18 - 20. (Poster)

Kirsty M Edgar, Emma M Hanson, Kenneth G MacLeod, Sietske Batenburg, Kara Bogus, Leah LeVay, **David De Vleeschouwer,** Takashi Hasegawa, Brian T Huber, Maria Rose Petrizzo, Zhaokai Xu and Richard W Hobbs (2018) The Impact of Tasman Gateway Opening on Early Paleogene Climate and Oceans: New Results from IODP Expedition 369, Site U1514. AGU Fall Meeting, Washington DC. Mon, 10 Dec. 08:00-12:20. (Poster)

**Invited Lecture: David De Vleeschouwer,** Fiona Rochholz, Maximilian Vahlenkamp, Michel Crucifix, and Heiko Pälike (2018). Climate and carbon-cycle response to astronomical forcing over the last 35 Ma. University of Naples. Thu, 18 Oct. (Talk)

**Keynote: David De Vleeschouwer,** Fiona Rochholz, Maximilian Vahlenkamp, Michel Crucifix, and Heiko Pälike (2018). Climate and carbon-cycle response to astronomical forcing over the last 35 Ma. Goldschmidt, Boston. Thu, 16 Aug, 15:15-15:30. (Talk)

Christian Zeeden, **David De Vleeschouwer,** and Sebastian Kreutzer (2018) Age-Depth Models in Integrated Stratigraphy - Value and Discussion Points. Mon, 09 Apr, 17:30–19:00, Hall X1, X1.314. (Short Course)

Matthias Sinnesael, **David De Vleeschouwer,** Christian Zeeden, and Philippe Claeys (2018) Cyclostratigraphy Intercomparison Project (CIP): case studies. EGU General Assemblee, Vienna. Fri, 13 Apr, 17:30–19:00, Hall X1, X1.279. (Poster)

Christian Zeeden, **David De Vleeschouwer,** Anne-Christine Da Silva, and Jacques Laskar (2018) Reconstructing Palaeozoic astronomical frequencies from geological records. EGU General Assembly, Vienna. Fri, 13 Apr, 17:30–19:00, Hall X1, X1.281. (Poster)

**Solicited Talk: David De Vleeschouwer,** Fiona Rochholz, Maximilian Vahlenkamp, Michel Crucifix, and Heiko Pälike (2018). Climate and carbon-cycle response to astronomical forcing over the last 35 Ma. EGU General Assembly, Vienna. Tue, 10 Apr, 15:45–16:00, Room F2. (Talk)

**David De Vleeschouwer**, Fiona Rochholz, Maximilian Vahlenkamp, Michel Crucifix, Heiko Pälike (2017) Climate and carbon-cycle response to astronomical forcing over the last 35 Ma. AGU Fall Meeting 2017, Thu. 14 Dec., 2017, 12:05 - 12:20. (Talk)

Matthias Sinnesael, **David De Vleeschouwer,** Christian Zeeden, and Philippe Claeys (2017) Reproducibility in cyclostratigraphy: initiating an intercomparison project. GSA Annual Meeting, Mon, 23 Oct, 17:00–17:15, Room 611. (Talk)

**David De Vleeschouwer,** Maximilian Vahlenkamp, Michel Crucifix, and Heiko Pälike (2017) Towards a Cenozoic "Megasplice" of climate history: Hemispheric climate response to astronomical forcing during the past 35 m.y. JpGU-AGU Joint Meeting 2017, Mon. May 22, 2017 9:15 - 9:30. (Talk)

**David De Vleeschouwer,** Maximilian Vahlenkamp, Michel Crucifix, and Heiko Pälike (2017) Alternating Southern and Northern Hemisphere climate response to astronomical forcing during the past 35 m.y. EGU General Assembly, Wed, 26 Apr, 15:30–17:00, Hall X2, X2.16. (Poster)

Matthias Sinnesael, **David De Vleeschouwer,** Christian Zeeden, and Philippe Claeys (2017) Reproducibility in cyclostratigraphy: initiating an intercomparison project. EGU General Assembly, Wed, 26 Apr, 15:30–17:00, Hall X2, X2.8. (Poster)

**David De Vleeschouwer,** Dunlea A.G., Auer G., Anderson C.A., Brumsack H., de Loach A., Gurnis M.C., Huh Y., Ishiwa T., Jang K., Kominz M.A., März C., Schnetger B., Murray R.W., Pälike H., and Expedition 356 shipboard scientists (2017). Quantifying K, U and Th contents of marine sediments using shipboard natural gamma radiation spectra measured on DV JOIDES Resolution. EGU General Assembl, Thu, 27 Apr, 13:30–13:45, Room 1.85. (Talk)

Maximilian Vahlenkamp, I. Niezgodzki, **David De Vleeschouwer**, T. Bickert, D. Harper, G. Lohmann, H. Pälike, and J.C. Zachos (2017). Astronomically paced middle Eocene deepwater circulation in the western North Atlantic. EGU General Assembly 2017, Fri, 28 Apr, 10:45–11:00, Room F2. (Talk)

**David De Vleeschouwer,** Dunlea A.G., Auer G., Anderson C.A., Brumsack H., de Loach A., Gurnis M.C., Huh Y., Ishiwa T., Jang K., Kominz M.A., März C., Schnetger B., Murray R.W., Pälike H., and Expedition 356 shipboard scientists (2017). Quantifying K, U and Th contents of marine sediments using shipboard natural gamma radiation spectra measured on DV JOIDES Resolution. Gemeinsames IODP/ICDP Kolloquium 2017, Braunschweig, Wednesday, 15 March 2017, 09:30 - 09:50. (Talk)

Maximilian Vahlenkamp, **David De Vleeschouwer**, Mathias Feldtmann, Fei Wu, James C Zachos, Heiko Palike (2016). Orbitally paced climatic variations of the North Atlantic during the Mid Eocene: Implications from a ~2 Myr benthic isotope record in the North Atlantic (IODP Exp. 342). AGU Fall Meeting, Thursday, 15 December 2016, 08:00 - 12:20. (Poster)

**Keynote lecture: David De Vleeschouwer** (2016). *Paleozoic cyclostratigraphy: state-of-the-art and perspectives.* Closing Meeting of IGCP591 "The Early to Mid Palaeozoic Revolution", Ghent University, Belgium, 6-9 July 2016

**Outstanding Young Scientist Award in the Stratigraphy, Sedimentology and Palaeontology (SSP) Division:David De Vleeschouwer**, Anne-Christine Da Silva, Jed Day, Michael Whalen and Philippe Claeys (2016). A global cyclostratigraphic framework constrains the timing and pacing of environmental changes over the Late Devonian (Frasnian – Famennian) mass extinction. EGU General Assembly, Wednesday, 20 April 2016, 08:30-08: 45, Room 1.85. (Talk)

**David De Vleeschouwer**, Maximilian Vahlenkamp, Michel Crucifix, and Heiko Pälike (2016). A megasplice of globally distributed benthic 18O records exposes the dierent astronomical rhythms of the last 35 million years. EGU General Assembly, Tuesday, 19 April 2016, 17:30 - 19:00. (Poster)

Matthias Sinnesael, Miroslav Zivanovic, **David De Vleeschouwer**, Philippe Claeys, and Johan Schoukens (2016). Orbital component extraction by time-variant sinusoidal modeling. EGU General Assembly, Tuesday, 19 April, 17:30- 19:00. (Poster)

Mathieu Martinez, Sergey Kotov, **David De Vleeschouwer**, Damien Pas, and Heiko Pälike (2016). How much deviations in sampling sedimentary series do impact on the reconstruction of climatic cycles? EGU General Assembly, Tuesday, 19 April 2016, 08:30 - 08:45, Room L6. (Talk)

Slah Boulila, Maximilian Vahlenkamp, Jacques Laskar, **David De Vleeschouwer**, Heiko Pälike, and Yuhji Yamamoto (2016). Bridging the Middle Eocene timescale gap: astronomical tuning from IODP Expedition 342 North Atlantic basin. EGU General Assembly, Tuesday, 19 April 2016, 10:45 - 11:00, Room L6. (Talk)

Jed Day, Sofie Gouwy, **David De Vleeschouwer** and Kenneth G. MacLeod (2016). Record of Middle Devonian (Eifelian - Early Givetian) climate and paleoceanographic change and astronomical forcing: Southern Illinois Basin-Central North America. Geological Society of America Abstracts with Programs. Vol. 48, No. 5. Tuesday, 19 April 2016, 14:35 - 14:50, Chancellor Ballroom. (Talk)

Jed Day, **David De Vleeschouwer**, Brian Witzke, Michael T. Whalen and Philippe Claeys (2016). Astrochronological calibration of late Frasnian sea level and bioevents: Iowa Basin, USA. Geological Society of America Abstracts with Programs. Vol. 48, No. 5. Tuesday, 19 April 2016, 16:10 - 16:25, Illinois Ballroom C. (Talk)

**David De Vleeschouwer,** Jeroen Groeneveld, Tobias Himmler, Lars Reuning and Expedition 356 Scientists (2016). IODP Expedition 356 (Indonesian Throughflow): operations and lithologic characterization. IODP/ICDP Kolloquium Heidelberg. Tuesday, 15 March 2016, 14:15-14:30. (Talk)

**David De Vleeschouwer**, Maximilian Vahlenkamp, Michel Crucifix, Heiko Pälike (2015). A megasplice of globally distributed benthic $^{18}O$ records exposes the different astronomical rhythms of the last 35 million years. AGU Fall Meeting San Francisco. Friday, 18 December 2015, 11:35 - 11:50, Moscone West - 2010. (Talk)

Maximilian Vahlenkamp, **David De Vleeschouwer**, Heiko Pälike, Slah Boulila, Yuhji Yamamoto, Jacques Laskar (2015). Towards closing the Eocene Astronomical Time Scale Gap: Cyclostratigraphic Implications from IODP Expedition 342. AGU Fall Meeting San Francisco. Friday, 18 December 2015, 13: 45 - 18:00, Moscone South Poster Hall. (Poster)

Sietske J. Batenburg, **David De Vleeschouwer** (*presenting author*), Mario Sprovieri, Frederik J. Hilgen, Andrew S. Gale, Brad S. Singer, Christian Koeberl, Rodolfo Coccioni, Philippe Claeys, Alessandro Montanari (2015). Orbital control on the timing of oceanic anoxia in the Late Cretaceous. EGU General Assemblee 2015. Tuesday, 14 April 2015, 11:30 – 11:45 / Room B3. (Talk)

Mathieu Martinez, Sergey Kotov, **David De Vleeschouwer**, Damien Pas, and Maximilian Vahlenkamp (2015). Testing the impact of stratigraphic uncertainty on spectral analyses of sedimentary time series. EGU General Assemblee 2015. Monday, 13 April 2015, 17:30 – 19:00 / Yellow Posters. (Poster)

**Vahlenkamp, M.**, Niezgodzki, I., De Vleeschouwer, D., Lohmann, G., Pälike, H.: Ocean and climate response to North Atlantic seaway changes at the onset of long-term Eocene cooling, Clusterkonferenz„Ocean – Climate – Sustainability Research Frontiers“2018, *Poster*

**Vahlenkamp, M**., Niezgodzki, I., De Vleeschouwer, D., Bickert, T., Harper, D., Turner, S.K., Lohmann, G., Sexton, P., Zachos, J., Pälike, H.: The metronome of North Atlantic deep-water circulation in the middle Eocene Climatic and Biotic Events of the Paleogene 2017, *Talk*

**Vahlenkamp, M**., De Vleeschouwer, D., Bickert, T., Harper,D., Lohmann,G., Zachos, J., Pälike, H.: Astronomically paced middle Eocene deepwater circulation in the western North Atlantic, EGU General Assembly 2017,*Talk*

**Vahlenkamp, M**., De Vleeschouwer, D., Wu, F., Feldtmann, M., Zachos, J., Pälike, H.: Orbitally paced climatic variations of the North Atlantic during the Mid-Eocene: Implications from a ~2 Myr benthic isotope record in the North Atlantic (IODP Exp. 342) ICP 2016, *Poster*

**Vahlenkamp, M**., De Vleeschouwer, D., Wu, F., Feldtmann, M., Zachos, J., Pälike, H.: Orbitally paced climatic variations of the North Atlantic during the Mid-Eocene: Implications from a ~2 Myr benthic isotope record in the North Atlantic (IODP Exp. 342) AGU2016, *Poster*

**Vahlenkamp, M**., De Vleeschouwer, D., Pälike, H.: Towards closing the Eocene Astronomical Time Scale Gap: Cyclostratigraphic Implications from IODP Expedition 342 AGU Fall Meeting 2015, *Poster*

*Sergey Kotov, Heiko Paelike, David De Vleeschouwer, Mathieu Martinez,* Chaos recognition in palaeoclimatic systems // Abstracts, IAMG2015, Freiberg, 2015

*Kotov S*. Paleo-climatic time series reconstruction and forecasting // Abstracts, ITISE 2016, International Work-Conference on Time Series Analysis, Granada, 2016

*Kotov, S., De Vleeschouwer, D., Martinez, M. and Pälike, H*. A signal matching algorithm based on Dynamic Time Warping // Abstracts, 35IGC, Cape Town, 2016

*Martinez, M., Kotov, S., De Vleeschouwer, D., Pas, D., and Pälike, H.*: Testing the impact of stratigraphic uncertainty on spectral analyses of sedimentary series, Clim. Past, 12, 1765-1783, doi:10.5194/cp-12-1765-2016, 2016.

Kotov, S., Paelike, H. MyDTW – Dynamic Time Warping program for stratigraphical time series, in: EGU 2017. Vienna, 2017

Kotov, S., Paelike, H. Principal Tensor Analysis as a Tool for Paleoclimatic Reconstructions, in: 18th International Association for Mathematical Geosciences Conference 2017. IAMG, Perth, p. 67, 2017

Kotov, S., Paelike, H. Dynamic Time Warping Program to Automatically Tune and Correlate Stratigraphical Series, in: 18th International Association for Mathematical Geosciences Conference 2017. IAMG, Perth, p. 206, 2017

Kotov S. and Paelike H., Milankovitch Pattern Recognition in Multi-Way Climatic Data Sets: a new Method. Geophysical Research Abstracts, Vol. 20, EGU2018-1496, 2018, EGU General Assembly 2018

Kotov S., Paelike H., Enhanced Principal Tensor Analysis (PTA_SSA): a tool for multi-way geological data reconstructions, in: IAMG annual conference 2018, Olomouc, p. 121, 2018

Kotov S., Kotova I., Kayukova E. Geological controls and the impact of human society on the composition of peloids of present-day salt lakes (coastal zones of the Black, Azov, and Dead Seas) // accepted for publication, Journal of Coastal Conservation, 2018

Kotov S., Paelike H. Enhanced Principal Tensor Analysis as a tool for 3-way geological data reconstructions // accepted for publication, Computers and Geosciences, 2018

Kotov S., Pälike H. Enhanced Principal Tensor Analysis as a tool for 3-way geological data reconstructions. Computers & Geosciences, November 2018. DOI: https://doi.org/10.1016/j.cageo.2018.11.001

Martinez, M., Dera, G., 2015. Cycles and trends in the 18O and 13C records over the Jurassic and the Early Cretaceous. EGU General Assembly, Vienna, Austria, EGU2015-6618.

Martinez, M., Dera, G., 2015. Orbital pacing of carbon fluxes by a ~9-Myr eccentricity cycle during the Mesozoic. AGU Fall Meeting 2015, San Francisco, USA, PP53A-2322.

Martinez, M., Kotov, S., De Vleeschouwer, D., Pas, D., Pälike, H., 2016. How much deviation in sampling sedimentary series does impact on the reconstruction of climatic cycles? EGU General Assembly, Vienna, Austria.

Martinez, M., Aguirre-Urreta, B., Lescano, M., Omarini, J., Tunik, M., Frederichs, T., Nickl, A.-L., Pälike, H., 2017. Radio-astrochronology of the Agrio Formation (Neuquén Basin, Argentina) to reduce the uncertainties of the geological time scale in Early Cretaceous times. EGU General Assembly, Vienna, Austria.

Aguirre-Urreta, B., Schmitz, M., Martinez, M., Lescano, M., Omarini, J., Concheyro, A., Tunik, M., Rawson, P.F., Ramos, V., 2017. Biostratigraphy, cyclostratigraphy and radio-isotopic geochronology of the Agrio Formation (Argentine, Andes): towards an intercalibration with the Tethys during the Valanginian–Hauterivian. 10th International Symposium of the Cretaceous, August 21-26 2017, Vienna, Austria, p. 5.

Martinez, M., Aguirre-Urreta, B., Lescano, M., Omarini, J., Tunik, M., Frederichs, T., Nickl, A.-L., Pälike, H., 2017. Synchronizing the astronomical time scales in the Valanginian-Hauterivian from the neuquén Basin (Argentina) and the Tethyan area. 10th International Symposium of the Cretaceous, August 21-26 2017, Vienna, Austria, p. 177.