

Cyclostratigraphy Newsletter, Sep 2022

Hello and welcome to Cyclostratigraphy Newsletter number 6.

This newsletter includes an invitation to the Cyclocafé, opportunities for Early Career Scientists, links to podcasts, highlighted publications as well as a list of conferences with sessions dedicated to cyclostratigraphy.

You are very much invited to get in touch if you have news, publications, job opportunities or events that you would like to see included in the next newsletter.

Best wishes,

Sietske Batenburg, sbatenburg@ub.edu

1. CycloCafé

The first two sessions of the Cyclocafé were well attended, with more than 70 participants in the first session. Keep an eye on the <u>listing</u> if you would like to join for an informal chat on anything regarding cyclostratigraphy.

This is the preliminary program for the next two sessions of the CycloCafé, with timings to accommodate participation from different timezones:

October 7th 2022, 07:00 AM UTC:
 "Arne Ulfers: How to detect half-precession cycles?"



(image borrowed from the Cyclo café in Vellore, Tamil Nadu)

 January 13th 2022, 15:00 AM UTC:
 "Cyclostratigraphy Intercomparison Project: a 10-step flexible guideline for an effective cyclostratigraphic study"

Feel free to join at http://www.zoom.us/j/66199327887
If cyclostratigraphy is new to you, or if you would like some advice on how to approach a new record or research topic, you are warmly invited to join.

2. Podcasts on www.cyclostratigraphy.org

In <u>CycloPod Episode 11</u>, Anta-Clarisse Sarr from the CEREGE research centre in France discusses the impact of topography on Miocene monsoon systems, using Earth system model simulations to evaluate the interactions between palaeogeography and ocean—atmosphere dynamics.





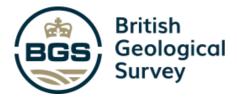
3. Job and Research Opportunities

<u>IODP Expedition 389</u>: Hawaiian Drowned Reefs is open for applications through <u>ECORD</u> or <u>member offices</u>. The deadline to apply for this IODP mission specific platform is 23 September 2022.

Several early career opportunities are open for applications in the fields of geochronology, integrated stratigraphy, paleoclimate and paleoceanography:

Two <u>PhD positions</u> are available in Graz, Austria, to apply micropaleontological and paleoceanographic techniques on ocean drilling project material from the Indian Ocean. Deadline for applications is 15 September.





The British Geological Survey in Nottingham, UK is recruiting a <u>postdoctoral research assistant</u> in geochronology and isotope tracing, involving ICP-MS techniques and laser ablation for a range of geochronometers. Closing date: 18 September.

A <u>postdoc</u> position is open until 30 September on "Late Quaternary dynamics of marine paleoenvironments and ecosystems in the Gulf of Corinth (eastern Mediterranean)" at the University of Cologne, Germany, involving sedimentological, geochemical and foraminiferal research on suborbital timescales.





4. Conferences and workshops

The GeominKöln is the <u>annual conference</u> of the German Geological and Mineralogical Societies, and will celebrate its 100th birthday in Cologne, Germany, from 11–15 September.

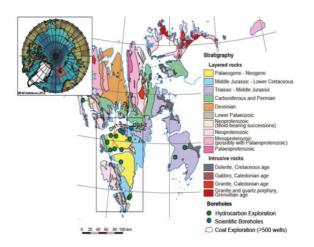
<u>Session 5.2</u> focusses on: The imprint of astronomical climate forcing: Geochronometer and paleoclimate archives.





Early registration is open for the <u>GSA Connects 2022</u> meeting of the Geological Society of America, taking place 9–12 October in Denver, USA and online. A selection of submitted abstracts highlights orbital forcing in the <u>Devonian</u>, <u>Carboniferous–Permian</u>, the <u>Late Triassic</u>, the <u>Jurassic</u>, the <u>Cretaceous/Paleogene</u> transition, sea level in the <u>Cenozoic</u>, the <u>Miocene</u>, the <u>early Pleistocene</u>, and the <u>last 500 kyr</u>, as well as the (<u>Bayesian</u>) <u>integration</u> of dating methods and applications of <u>machine learning</u>.

The Magellan Plus workshop SVALCLIME 18-21 October in Longyearbyen, Norway, and online, will focus on the sedimentary record of the Svalbard archipelago, with the potential to drill Carboniferous to Eocene sediments for paleoclimate reconstruction. Please find a first circular of "Deep-time Arctic climate archives: High-resolution coring of Svalbard's sedimentary record (SVALCLIME)" as well as a registration form (deadline 30 September) online. Figure: the geologic record of the Svalbard archipelago and existing boreholes (first circular)





Chicago, IL & Online Everywhere 12–16 December 2022

The <u>fall meeting</u> of the American Geophysical Union will take place from 12–16 December 2022 in Chicago and online. <u>Session PP008</u> is on "Cyclostratigraphy and Astronomical Forcing of Earth's Paleoclimate System" and <u>session GP008</u> on "Magnetic Chronostratigraphy". Early bird registration is open until 2 November.

The XXI INQUA Congress of the International Union for Quaternary Research will take place in Rome, Italy from 13–20 July 2023. Session theme 5E on "Climate changes on sub-millennial to Milankovitch time scale" features responses to astronomical forcing in the Pleistocene and monsoon dynamics, whereas theme 6C on "Geochronology. Progress in dating technique" highlights magnetostratigraphy.



<u>Abstract submission</u> is open, as well as the possibility to apply for financial support, until 1 November 2022.

5. Cyclostratigraphy publishing

In the last few months, several articles have been published on behaviour of Earth and other planets, as well as on the interaction between Earth and the moon.

Bao, X., Zhao, H., Zhang, S., Li, X., Tan, W., Li, C., Wu, H., Li, H. and Yang, T., 2022. Length-of-day at ca. 1.1 Ga based on cyclostratigraphic analyses of the Nanfen Formation in the North China craton, and its geodynamic implications. Journal of the Geological Society, jgs2022-022. DOI: https://doi.org/10.6084/m9.figshare.c.6086544.

Boulila, S. and Hinnov, L., 2022. Constraints on Earth-Moon dynamical parameters from Eocene cyclostratigraphy. Global and Planetary Change, p.103925. DOI: https://doi.org/10.1016/j.gloplacha.2022.103925.

Farhat, M., Auclair-Desrotour, P., Boué, G., Laskar, J., 2022. The resonant tidal evolution of the Earth-Moon distance. A&A, Forthcoming article. DOI: https://doi.org/10.1051/0004-6361/202243445.





- Mau, M., Kent, D.V. and Clemmensen, L.B., 2022. Planetary chaos and inverted climate phasing in the Late Triassic of Greenland. Proceedings of the National Academy of Sciences, 119(17), p.e2118696119. DOI: https://doi.org/10.1073/pnas.2118696119.
- Wu, H., Hinnov, L.A., Zhang, S., Jiang, G., Yang, T., Li, H., Xi, D., Ma, X. and Wang, C., 2022. Continental geological evidence for Solar System chaotic behavior in the Late Cretaceous. GSA Bulletin. DOI: https://doi.org/10.1130/B36340.1.
- Zeebe, R.E., 2022. Reduced Variations in Earth's and Mars' Orbital Inclination and Earth's Obliquity from 58 to 48 Myr ago due to Solar System Chaos. The Astronomical Journal, 164(3), p.107. DOI: https://doi.org/10.3847/1538-3881/ac80f8.
- Zhou, M., Wu, H., Hinnov, L.A., Fang, Q., Zhang, S., Yang, T. and Shi, M., 2022. Empirical reconstruction of Earth-Moon and Solar System dynamical parameters for the past 2.5 billion years from cyclostratigraphy. Geophysical Research Letters, p.e2022GL098304. DOI: https://doi-org.sire.ub.edu/10.1029/2022GL098304.

Also highlighted here are two manuscripts on cyclostratigraphic approaches. The first of these is submitted and in the review stage. A preprint is available and scientists are invited to contact the author David Smith for comments at d.g.smith@talktalk.net.

- Smith, D., 2022. P-hacking, HARKing and confirmation bias in cyclostratigraphic spectral analysis. Submitted. https://doi.org/10.1002/essoar.10511908.1
- Wouters, S., Crucifix, M., Sinnesael, M., Da Silva, A.C., Zeeden, C., Zivanovic, M., Boulvain, F. and Devleeschouwer, X., 2022. A decomposition approach to cyclostratigraphic signal processing. Earth-Science Reviews, 225, p.103894. DOI: https://doi.org/10.1016/j.earscirev.2021.103894.

A selection of articles will be included in the next newsletter. If you would you like to see your work included in a future newsletter, or if you would like to share other news, get in touch.

Several researchers have expressed interest in publishing in the new open-access journal on Cyclostratigraphy and Rhythmic Climate Change. Contact the editors if you would like to submit a manuscript for the opening issue.

Feel free and encouraged to distribute this newsletter further. If you know of conferences, workshops, job opportunities, or if you would like to share other news related to cyclostratigraphy, please do not hesitate to email. Subscribe or unsubscribe from this newsletter by writing to sbatenburg@ub.edu. The newsletter will be available for download on www.cyclostratigraphy.org.