

Conference Programme

Location:

*Institute for Geology & Mineralogy
Zülpicher Straße 49b, 50674 Cologne, Germany*

Monday – 20.05.2024

Location: Übungsraum 0.03

<u>Time</u>	<u>Lecturer</u>	<u>Workshop</u>
09:00 - 12:00	Tibor Dunai	Cosmogenic Noble Gases
13:00 - 14:30	Steven Binnie	Sample Preparation Techniques in Cologne
15:00 - 18:00	Hella Wittmann-Oelze	The production and delivery of meteoric cosmogenic nuclides

Tuesday – 21.05.2024

Location: GeoBio Hörsaal (Lecture Hall)

08:00 - 8:30	Registration
08:30 - 8:45	Introduction

In situ burial dating and sediment storage convened by Steven Binnie

08:45 - 9:30 Keynote - D. Granger

The Errors Tour: Uncertainties, assumptions, and problematic data in cosmogenic burial dating

09:30 -9:50 V. Vanacker

Constraining aggradation of Quaternary fluvial deposits in the Campine Plateau

09:50 - 10:10 F. Stuart

Decoupling source-to-sink signals in large fluvial systems revealed by cosmogenic ^{21}Ne and ^{10}Be in pebbles in North Plate River, Nebraska.

Coffee break

10:40 - 11:00 M. Knudsen

Constraining early human dispersal patterns with cosmogenic $^{26}\text{Al}/^{10}\text{Be}$ burial dating

11:00 - 11:20 J. Jansen

Recent uplift of the Blue Mountains revealed by P-PINI burial dating

11:20 - 11:40 L. Ylä Mella

Burial dating with P-PINI unveils the early Pleistocene glaciations

11:40 - 12:00 C. Dieleman

An endeavour to reconstruct complex Deckenschotter deposits in 4D

12:00 - 12:20 R. Garba

Unravelling the human journey through multi-dating, multi-nuclide, multi-disciplinary approaches: the archaeologist's and anthropologist's perspective

Lunch Break

In situ erosion and surface process rates convened by Duna Roda Boluda

13:15 - 14:00 Keynote - S. Carretier

Detrital in situ cosmogenic nuclides: from field works to integrated landscape evolution modelling

14:00 - 14:20 K. Stübner

Riversand: Efficient Calculation of Catchmentwide Erosion Rates

14:20 - 14:40 L. Zhang

Constraining catchment-wide erosion rate distribution by combining cosmogenic nuclide-based and surface feature-based erosion models

Coffee Break

15:10 - 15:30 V. Godard

Constraining variations in denudation rates associated with the last post-glacial transition

15:30 - 15:50 D. Scherler

Cosmogenic nuclide tracking of sediment recycling from a frontal Siwalik Range in the northwestern Himalaya

15:50 - 16:10 R. Fülöp

Transient behaviour in steep mountain rivers quantified using cosmogenic ^{10}Be , ^{26}Al , and in-situ ^{14}C

16:10 - 16:30 L. Siame

Pairing *in situ*-produced ^{26}Al to ^{10}Be (Al-Be ratio) and meteoric ^{10}Be to authigenic ^9Be (Be ratio) for a more nuanced understanding of landscape evolution in Central Brazil

Wednesday – 22.05.2024

Location: GeoBio Hörsaal (Lecture Hall)

In situ erosion and surface process rates convened by Réka Fülöp

09:00 - 09:20 S. Ruzkiczay

Variations in Quaternary loess cover and bedrock denudation rates constrained using the $^{26}\text{Al}/^{10}\text{Be}$ cosmogenic nuclide pair, Western Mecsek Mountains, Hungary

09:20 - 09:40 G. Rixhon

Cosmogenic (un-)steadiness revealed by paired-nuclide catchment-wide denudation rates in the formerly half-glaciated Vosges Mountains (NE. France)

09:40 - 10:00 S. Niemeyer

Reconstructing the erosion history of the Cenozoic Indochina basalt province utilizing cosmogenic Krypton

10:00 - 10:20 R. Ott

Erosion-weathering partitioning from cosmogenic nuclides along an erosion gradient in the Black Forest and Jura mountains

Coffee Break

10:50 - 11:10 D. Roda-Boluda

Using in-situ ^{14}C and ^{10}Be to quantify landslide activity on 10^2 - 10^3 year timescales

11:10 - 11:30 A. Mariotti

Impact of an extreme storm on the ^{10}Be signal in a mountainous catchment: new insights from the Alex storm (Var catchment, French Maritim Alps)

11:30 - 11:50 V. Regard

Cosmogenic nuclides for measuring slow millennial seacliff retreat

11:50 - 12:10 B. Mathieux

Unravelling the drainage divide migration of a mid-altitude mountain range in a low-deformation context: Integrating morphometry and cosmogenic nuclides in the Vosges Mountains (NE France)

Lunch Break

Exposure age applications convened by Irene Schimmelpfennig

13:00 - 13:20 A. Binnie

The coevolution of life and landscape in the Atacama Desert: a coupled bio- geochronometer approach

13:20 - 13:40 J. Tulenko

Cosmogenic ^{21}Ne exposure ages on late Pleistocene moraines in Lassen Volcanic National Park, California, USA

13:40 - 14:00 S. Kelley

Using in situ cosmogenic ^{10}Be and ^{14}C measurements to reconstruct the deglacial history of the Cairngorm Plateau, Central Scotland

Coffee Break

14:30 - 14:50 T. Tuestad

Late Glacial-Holocene glacier fluctuations on sub-Antarctic Kerguelen Archipelago (49°S) based on surface exposure dating with in situ ^{36}Cl

14:50 - 15:10 C. Rand

Cosmogenic ^{14}C demonstrates thickening, rather than thinning, of the East Antarctic Ice Sheet interior during the Last Glacial Maximum

15:10 - 15:30 J. Feige

Constraints on the origin of individual micrometeorites in our Solar System from cosmogenic ^{26}Al and ^{10}Be

15:30 – 18:00 Poster Session

After Poster Session: BBQ Evening

Thursday – 23.05.2024

Location: GeoBio Hörsaal (Lecture Hall)

Methods and novel approaches convened by Shasta Marrero

08:30 - 09:15 Keynote - M. Tremblay

Opportunities and challenges for reconstructing past Earth and planetary surface temperatures with cosmogenic noble gases

09:15 - 09:35 A. Soerensen

CosmoChron: A new method to construct age-depth models using cosmogenic nuclides and direct age constraints

09:35 - 09:55 R. Braucher

In situ produced cosmogenic ^{10}Be and ^{36}Cl measurement in Serra do Cipó marble

Coffee Break

10:20 - 10:40 N. Lifton

Beyond quartz – revisiting whole-rock *in situ* cosmogenic ^{14}C

10:40 - 11:00 M. Bergelin

Advances in Cosmogenic Nuclides measured in Ferrar Pyroxene

11:00 - 11:20 X. Huang

In situ produced cosmogenic nuclides applied to fine-grained quartz in shale

11:20 - 11:40 G. Hackenberg

^{53}Mn development at Cologne-AMS and its application to burial dating

11:40 - 12:00 M. Mijum

A model framework for scaling pre-Quaternary cosmogenic nuclide production rates

Lunch Break

Applications of meteoric ^{10}Be convened by Hella Wittmann-Oelze

13:00 - 13:45 Keynote - J. Willenbring

Global rates of soil production independent of soil depth

13:45 - 14:05 A. Wackett

From ashes to atoms: Assessing meteoric ^{10}Be dynamics before and after wildfire

14:05 - 14:25 F. von Blanckenburg

Ocean $^{10}\text{Be}/^9\text{Be}$ as denudation rate proxy. Does ^9Be deliver?

14:25 - 14:45 A. Graly

Prognosis for meteoric ^{10}Be as a tracer in terrestrial systems

Coffee Break

15:10 - 15:30 R. Paque

Wet depositional flux of meteoric ^{10}Be along a climatic gradient on Santa Cruz Island, Galapagos.

15:30 - 15:50 M. Šujan

A sequence stratigraphic perspective of the authigenic $^{10}\text{Be}/^9\text{Be}$ dating applicability

15:50 - 16:10 K. Aherwar

Authigenic $^{10}\text{Be}/^9\text{Be}$ dating method as a tool for dating river dominated deltas: An insight from spatial and temporal variability of $^{10}\text{Be}/^9\text{Be}$ ratio in depositional record.

16:10 - 16:30 A. Airo

A 3.8 Ma Old Sedimentary Record from the Hyperarid Atacama Desert, Chile

16:30 - 16:45 Meteoric Be discussion

16:45 - 17:00 (approx.) Wrap up / pop-ups / community discussion

Friday – 24.05.2024

Field Trip Rhine Terraces (Benni Ritter)

Meeting Point Car Park Zülpicher Straße 49b

Entrance to Workshops (see map)

08:30

Meeting Car Park

09:00

Start Bus Tour

17:00-19:00

Arrival back in Cologne*

** depending on traffic and performance of the field trip*

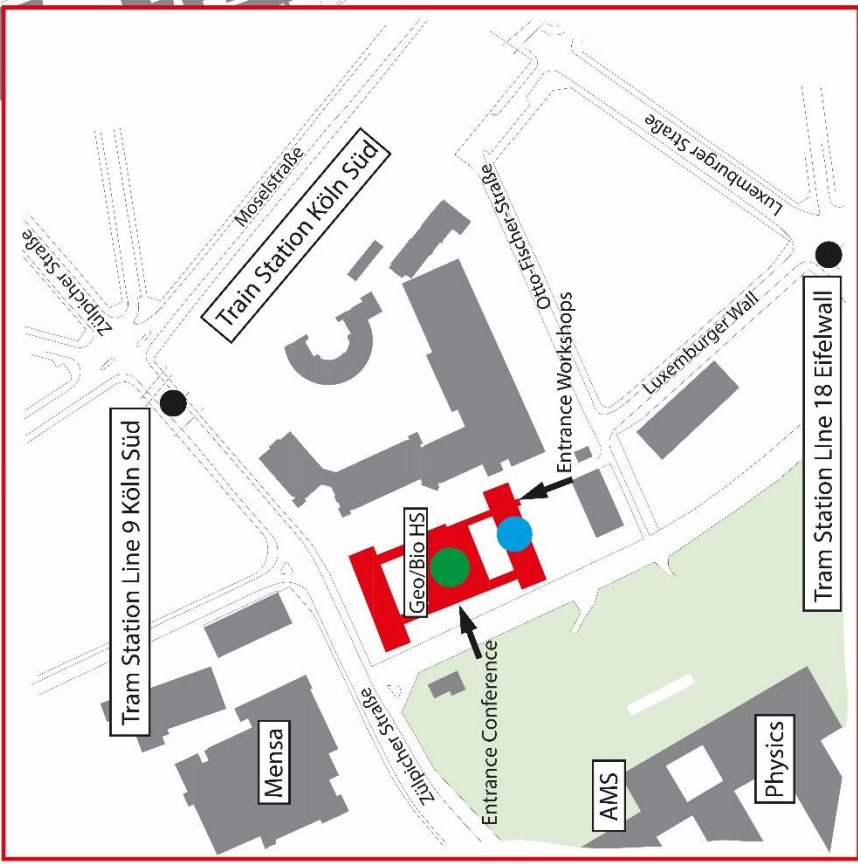
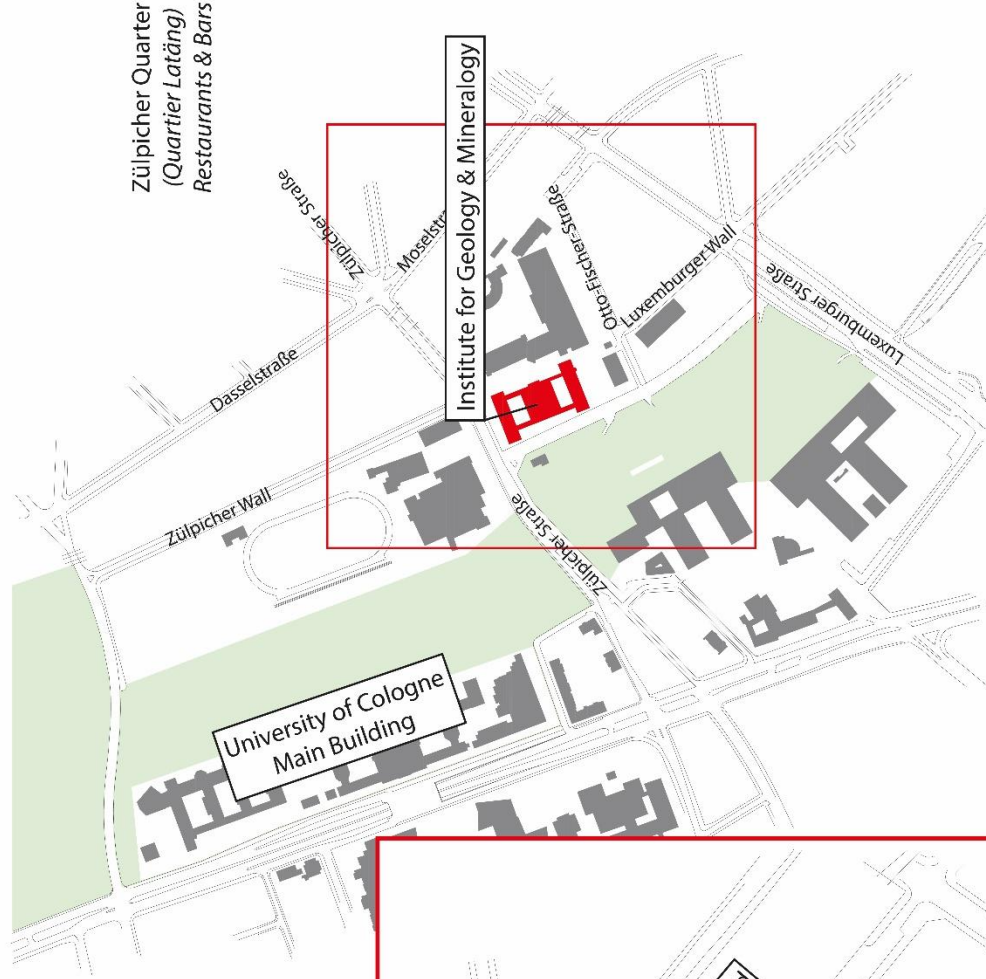
Overview Map

6th Workshop on Cosmogenic Nuclides
Cosmo2024 - Cologne 20th to 24th 2024

Conference Location:
Institut für Geologie und Mineralogie
Zülpicher Straße 49a/b
50674 Köln



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- Workshops (Monday 20.05.24)
- ICE-D Workshop (25-26.05.24)
- Conference Lecture Hall