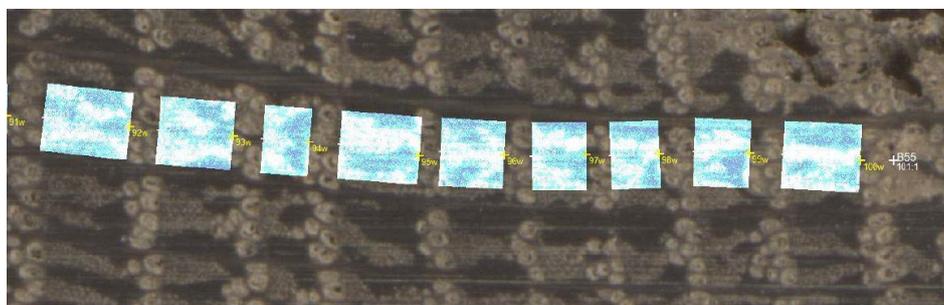


Workshop 'Blue Intensity' – Dendro-Analyses on Late Wood of Subfossil Oak Timbers

The method of 'Blue Intensity' (BI) measures the amount of reflected blue light on scanned images of dendrochronological samples. As for tree ring width, BI is recorded for every tree ring or, more accurate, for the late wood part. The results of the BI measurements are comparable to the 'maximum late wood density' and are hence a good indicator of year-to-year climate variability (high frequency).

BI was originally developed for samples of living conifers. In Cologne we will now try to establish BI for subfossil oak timbers, which feature different growth characteristics and colour changes due to site formation processes.



Screenshot of BI-Analysis in the program 'CooRecorder'.

Participants of the workshop will learn the basic principles of the BI method including a short introduction to ring width dendrochronology. Furthermore, all steps from sample preparation to analysis will be part of the workshop. Against this background, **Dr. Ryszard Kaczka** (Charles University in Prague, CUNI, Department of Physical Geography and Geocology) will hold the following theoretical and practical sessions in English, which build on each other in terms of content and are to be understood as a coherent block (54 hours). In preparation for the course, the essays by Rydval et al. 2014 and Wilson et al. 2014 are to be read (together 25 pages). During the one-week internship, a flow chart ("How do I do BI properly?") is to be created in which the work steps of a BI analysis are documented. This schedule is to be sent in digital form with name and matriculation number to Manuel Broich by the end of September. **The whole workshop-package will be assessed with 3CP in total.**

Date	Activity	Hours
06.-08.09.22	Introductory lectures a (6.9.) and b (7.9.) and one-day-laboratory practical course (8.9.) (max. 12 students)	12
12.-16.09.22	Laboratory internship "Dendrochronology and Blue Intensity" 5 days of 6 hours (max. 12 students)	30
20.-22.09.22	Computer Internship "Coo-Recorder" (20./21.9.) and one-day-laboratory practical course (22.9.) (max. 12 students)	12



Dr. Ryszard Kaczka
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While parts of the course can also be attended online, the practical parts require the presence in the research archive of the Laboratory for Dendroarchaeology in Unnauer Weg 7A, 50767 Cologne (Lindweiler). Directions can be found on the homepage of the Dendroarchaeology Laboratory: www.dendrolabor.de.

For binding registrations please contact Manuel Broich (mbroich8@uni-koeln.de). Registration deadline is 05.08.2022.

The following essays will be sent upon registration for the workshop.

Rydval et al. 2014

M. Rydval/L.-Å. Larsson/L. McGlynn et al., Blue intensity for dendroclimatology: Should we have the blues? Experiments from Scotland. *Dendrochronologia* 32, 2014, 191–204.

Wilson et al. 2014

R. J. S. Wilson/R. Rao/M. Rydval et al., Blue Intensity for dendroclimatology: The BC blues: A case study from British Columbia, Canada. *The Holocene* 24, 11, 2014, 1428–1438.