DIPARTIMENTO DI SCIENZE DELLA TERRA
UNIVERSITÀ DI PISA
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Attuning the labs: sample preparation affects past carbon budget estimates

To reconstruct the past ocean carbon budget, realistic estimates of carbon export and accumulation from calcifying microorganisms are essential. Sample preparation is crucial for obtaining comparable data across laboratories, sites, and times. For nannofossils, various methods have been used to quantify carbon and carbonate fluxes over the past 200 My. The “drop” technique has proven practical, reproducible, and consistent with other approaches. Harmonizing protocols among laboratories is key to ensuring reliable reconstructions of the ocean carbon cycle.

PROGRAMME

Wednesday afternoon, 5th November 2025

14:00 – 17:30

Room: administrative meeting room (follow the nanno), 2nd floor,
Earth Science Department, University of Pisa, Via S. Maria 56, Pisa

13:45 – 14:15 Registration

14:15 – 14:25 Welcome, Introduction and Workshop Goals

14:25 – 15:15 Lecture highlighting the link between different nannofossil sample preparation techniques and estimates of the nannofossil-derived calcium carbonate and carbon export/accumulation in the oceans

15:15 – 15:45 Coffee break

15:45 – 16:45 Practical preparation of nannofossil samples following the protocol of the “drop” technique

16:45 – 17:15 Interactive round table of discussion on the issues and experience with estimating the past carbon budget, with the aim to share novel ideas for future collaborations on this specific topic

17:15 – 17:30 Greetings

Workshop held by:

Manuela Bordiga, National Institute of Oceanography and Applied Geophysics – OGS, Trieste (Italy)

Miloš Bartol, Geological Survey of Slovenia, Ljubljana (Slovenia)

Coordinated by:

Laura Bronzo, Earth Science Department – University of Pisa (Italy)