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A new age model for the early-middle Miocene in the North Alpine Foreland Basin

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The establishment of high-resolution age models for sedimentary successions is crucial for numerous research questions in the geosciences and related disciplines. Such models provide an absolute chronology that permits precise dating of depositional episodes and related processes such as mountain uplift or climate change. Recently, our work in the Miocene sediments of the North Alpine Foreland Basin (NAFB) has revealed a significantly younger age (16.6 Myr) for sediments that were thought to have been deposited 18 Myr ago. This implies that a fundamentally revised new age model is needed for the entire suite of lower-middle Miocene sedimentary rocks in the NAFB (20 to 15-Myr). Our new data also indicate that previously published reconstructions of early-middle Miocene palaeogeography, sedimentation dynamics, mountain uplift and climate change in the NAFB all require a critical review and revision. Further, the time-span addressed is of special interest, since it encompasses the onset of a global warming phase. However, it appears that a fundamentally revised new age model for the entire suite of lower-middle Miocene sedimentary rocks in the NAFB can only be achieved based on a 500 m deep drilling in the NAFB for which we currently seek collaboration partners to develop a grant application to the International Continental Deep Drilling Program (ICDP).

Reference:
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