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### **218. Optically Stimulated Luminescence dating of young floodplain sediments**

**Drs. N. Hobo**, Alterra WUR, Utrecht University, NCL, The Netherlands; J. Wallinga, Netherlands Centre for Luminescence dating (NCL), TU Delft; B. Makaske, Alterra, Wageningen University and Research Centre; H. Middelkoop, Department of Physical Geography, Faculty of Geosciences, Utrecht University



Efficient and sustainable floodplain management requires insight into sedimentary dynamics of floodplains. One vital aspect is reconstruction of sedimentation rates during the past decades to centuries. Goal of our research is to reconstruct the sedimentation rates in the Rhine embanked floodplains since

river normalization around 1850 AD. We use Optically Stimulated Luminescence (OSL) dating, which allows us to determine the time of deposition and burial of sand-sized grains of quartz.

Application of OSL dating to young fluvial deposits is challenging because limited light exposure of the grains during fluvial transport may cause age overestimation. Under subdued light conditions in turbid river water the OSL signal may be reset incompletely; any remaining signal at the time of deposition causes an age offset. This effect will be relatively large for younger samples.

In the first stage of our research we have concentrated on developing a suitable OSL dating protocol for young fluvial deposits. We present preliminary dating results on a suite of samples from an embanked floodplain of the River Waal near Neerijnen, and discuss the possibilities to use them for estimation of sedimentation rates.

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