

## A detailed post-IR IRSL chronology for the last interglacial soil at the Jingbian loess site (northern China) - DTU Orbit (08/11/2017)

### A detailed post-IR IRSL chronology for the last interglacial soil at the Jingbian loess site (northern China)

The chronology of dust deposition and climate during the last interglacial is poorly known on the Chinese Loess Plateau. Here, 51 samples were taken from the ~5 m S1 palaeosol (MIS5) at the desert marginal Jingbian site to develop what is currently the most detailed S1 chronology on the Plateau using instrumental dating techniques. We use the post-IR IRSL signal from sand-sized grains of K-rich feldspar. Signal resetting in the agricultural layer shows that it is possible to almost completely zero this signal in nature. First IR stimulation plateau measurements show that there is no clear dependence of  $D_e$  on first IR stimulation temperature between 50 and 260 °C suggesting negligible signal fading. Resultant ages are consistent with a last interglacial age (~130 to ~75 ka) and are also consistent with errors with continuous linear sedimentation rates. The average mass accumulation rate for S1 is  $\sim 150 \text{ g m}^{-2} \text{ a}^{-1}$ , considerably higher than at many other sites but within the overall range of Loess Plateau estimates. The remarkably stable sediment accumulation at the site contrasts with a more complex record of environmental and monsoonal change recorded in grain-size and magnetic susceptibility. © 2015 Elsevier B.V. All rights reserved.

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