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Techniques and approaches to data collection within fluvial archives

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Techniques and approaches to data collection within fluvial archives

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ABSTRACTS and FIELD GUIDE

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CHRONOLOGY OF THE VALE DO FORNO FLUVIAL SEQUENCE AND ITS RELEVANCE TO LOWER PALAEO-LITHIC IN W IBERIA

¹Martins A. A., ²[Cunha P.P.](mailto:pcunha@dct.uc.pt), ^{3,4}Buylaert J-P., ⁴Murray A.S., ⁵Raposo L., ⁶Mozzi P., ⁷Stokes M.

Lead author email address: pcunha@dct.uc.pt

¹Centro de Geofísica, Dep. Geociências, Évora University, Portugal

²Department of Earth Sciences, IMAR-CMA, University of Coimbra, Portugal

³Centre for Nuclear Technologies, Techni. Univ. of Denmark, Risø Campus, DK

⁴Nordic Laboratory for Luminescence Dating, Aarhus University, Risø DTU, DK

⁵Museu Nacional de Arqueologia, Portugal

⁶Department of Geosciences – University of Padova, Italy

⁷School of Geography, Earth and Environmental Sciences, University of Plymouth, UK

The Vale do Forno archaeological sites (Alpiarça, central Portugal) document the earliest human occupation in the River Tejo lower valley, well established in geomorphological and environmental terms, within the Middle Pleistocene. In a staircase of six fluvial terraces, the Palaeolithic sites were found on the T4 terrace that comprises a Lower Gravels basal unit (LG) and an overlying Upper Sands unit (US). Geomorphological mapping, coupled with lithostratigraphy, sedimentology and luminescence dating (quartz-OSL and K-feldspar post-IRIR290) were used in this study. The oldest artefacts found in the LG unit show crude bifacial forms that can be attributed to the Early Acheulian. In contrast, the US unit has archaeological sites documenting the Middle and Late Acheulian. Luminescence dating and correlation with the Marine Isotopic Stages suggest that the LG unit has a probable age of 340 to 330 ka and the US unit an age of ca. 330 to 160 ka. This discards previous interpretations ascribing this terrace (and its associated lithic industries) to the Last interglacial and early phases of the Last glacial. Only the VF3 site (Milharós), containing “Micoquian” (Final Acheulian) industries (with fine and elaborated bifaces) found in a level between the T4 terrace and a colluvium associated with Late Pleistocene aeolian sands, can still be attributed to the Last interglacial episode or even later, being probably coeval with the T5 terrace deposition (ca. 135 to 78 ka). This work is in the scope of proj. PTDC/GEO-GEO/2860/2012