Introduction – Research Technician in Palaeomagnetic Dating/Tropical Palaeoclimatology

The post will use palaeomagnetic and rock magnetic techniques to provide a high-resolution age model, and analysis of environmental magnetic signatures, in order to investigate the incidence of millennial-scale mega-droughts recorded by the sediments of Lake Challa, a 97m deep crater lake on the flank of Kilimanjaro. A project co-funded by the International Continental Scientific Drilling Programme, (ICDP), named DeepCHALLA, recovered the lacustrine sediment sequence of Lake Challa down to 215 m below the lake floor, with almost 100% coverage over the uppermost 121 m (ca.150,000 years ago to the present) and at least 80% coverage in the lower part of the sequence, down to the lowermost distinct seismic unit, ca.250,000 years old.

The post will contribute to two related projects. Firstly, the overarching ICDP DeepCHALLA project, led by Prof Dirk Verschuren, Ghent University, has more than 30 scientists from 15 countries each bringing particular specialisms. Secondly, the UK component, DeepCHALLA-UK, incorporates investigators from Cambridge University, British Geological Survey, Scottish Universities Environmental Research Centre, and Queen’s University, Belfast. DeepCHALLA-UK is funded by the Natural Environment Research Council (NERC).

Lancaster Environment Centre
Lancaster Environment Centre forms one of the largest and most prestigious groups of interdisciplinary environmental researchers in Europe, with over 200 staff and research and teaching that span the Environmental, Biological and Social Sciences. LEC was formed through the merger of three successful university departments (Environmental Science, Geography and the non-Medical parts of Biology) and operates as a fully integrated university department on a single site. It is the largest department in Lancaster University and a key player in the strategic development of the institution and the Faculty of Science and Technology. The co-location of the NERC Centre for Ecology and Hydrology on the Lancaster campus as part of the LEC complex adds critical mass in environmental research capacity enabling staff from both organizations to work closely together in a formal collaboration. A distinctive feature of LEC is its Enterprise and Business Partnership (EBP) unit which hosts some 20 small companies working with LEC researchers and which has links to a large number of other national and multi-national businesses and organisations. We run both graduate and undergraduate consultancy programmes and have an extensive programme of knowledge innovation and transfer with both private and public sector partners.

Research and teaching in LEC is conducted by a community of colleagues with diverse backgrounds including: chemists, earth-atmospheric scientists, ecologists, geographers (human/physical), geophysicists, hydrologists, marine scientists, plant scientists and sociologists. Qualitative and quantitative approaches, spanning ethnography, in-depth interviews, large scale surveys, laboratory, field, modelling, policy and strong stakeholder/end-user engagement are all employed. Our four research challenges, Agri-
Food, Eco-Innovation, Sustainable Catchments and Tropical Futures, provide a focus for our fundamental and applied research, ensuring our work helps provide the underlying knowledge needed to find effective solutions. Staff members work in multi-disciplinary research groups focusing on: Atmosphere, Climate and Pollution; Critical Geographies; Earth Science Ecology and Conservation; Environmental and Biochemistry; Geospatial Data Science; Plant and Crop Science; Political Ecology; Soil, Plant and Land Systems; and, Water Science.

LEC currently admits about 240 undergraduate students and 100 postgraduate (MSc/PhD) students each year and teaches across a wide range of degree schemes. Our teaching methods range from small group discussions and lab based experiments to international fieldwork. In October 2016 LEC in collaboration with the Centre for Ecology and Hydrology (CEH) and Rothamsted Research launched a new ‘Graduate School for the Environment’. This exciting collaboration aims to create a ‘World-leading and distinctive entity for PG training, research and professional development’, which will enhance our postgraduate activities.

LEC offers a highly inclusive and stimulating environment for career development. We are committed to family-friendly and flexible working policies on an individual basis, as well as the Athena SWAN Charter, which recognises and celebrates good employment practice undertaken to address gender equality in higher education and research.

The University
Lancaster is a world-class university with an international reputation for excellence in teaching, scholarship and research. Lancaster is ranked top ten in the Guardian League table and is consistently highly placed in all major league tables. Lancaster is the highest placed UK university in the Times Higher Education 100 Under 50 ranking of the world’s best young universities. Lancaster is the highest ranked of only 14 UK universities to be listed. Established in 1964 Lancaster currently has over 12,000 students and has seen £450 million being invested in our campus since 2002. The University boasts an idyllic campus that combines city, coast and countryside all into one. The campus setting conveys a tranquil ambiance whilst offering such a range of facilities it can almost be called a small town in its own right. The main Bailrigg campus is home to a range of amenities, and even its own cultural hub including a theatre, art gallery and concert series. More recently, Lancaster University has developed a portfolio of teaching partnerships overseas, as part of its global outreach internationalisation strategy.

Lancaster and the Region
The main campus lies 3 miles outside the City of Lancaster and is easily accessible via road, rail and bicycle. The city centre is just 15 minutes away by bus, and was recently ranked one of the top 10 most vibrant cities in the UK thanks to its arts scene and student population. The City of Lancaster also enjoys a long and diverse history dating as far back as 1193, and has a well-maintained iconic city centre and medieval castle. The campus is just 30 miles south of the beautiful Lake District and about the same distance from the Yorkshire Dales. It is very well connected by road and rail, with Manchester (and its international airport) just over an hour distant, while the train journey to London takes just two and a half hours.

Further information
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