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Pleistocene calcareous nannofossil biostratigraphy and biochronology: preliminary results from the IODP Site U1385 (Exp 339), the Shackleton Site.

Jose-Abel Flores (1), Barbara Balestra (2), Gary Acton (3), Carlos Alvarez-Zarikian (4), Patrick Grunert (5), Francisco Javier Hernández-Molina (6), David Hodell (7), Baohua Li (8), Carl Richter (9), María Fernanda Sanchez Goñi (10), Francisco Javier Sierro (1), Arun Singh (11), Dorrik Stow (12), Antje Voelker (13), Chuang Xuan (14), and the ODP Expeditions 339 Scientists Team

(1) University of Salamanca, Department of Geology, Spain (flores@usal.es), (2) University of California Santa Cruz, Institute of Marine Science, USA, (3) University of California, Davis, Department of Geology, US, (4) Integrated Ocean Drilling Program & Department of Oceanography, Texas A&M University, Texas, USA, (5) Institute of Earth Sciences, University of Graz, Austria , (6) Department of erath Sciences, Royal Holloway University of London, Egham, Surrey, TW20 0EX United Kingdom, (7) University of Cambridge, Department of Earth Sciences, United Kingdom, (8) Department of Micropalaeontology, Nanjing Institute of Geology and Palaeontology, P.R. China, (9) University of Louisiana, Department of Geology and Energy Institute, USA, (10) EPOC, UMR CNRS 5805, Université de Bordeaux I, France, (11) Department of Geology, Banaras Hindu University, India, (12) Institute of Petroleum Engineering, Heriot-Watt University, United Kingdom, (13) Geology and Marine Georesources Division, Portuguese Institute for the Ocean and the atmosphere, Portugal, (14) School of Ocean and earth Science University of Southampton, Southampton, United Kingdom

Site U1385 was selected and drilled in the Portuguese margin, at a location close to the so-called Shackleton Site MD95-2042 (in honor of the late Sir Nicholas Shackleton, 37°48'N 10°10′W, 3146 m water depth), during IODP Expedition 339 (Mediterranean Outflow Water in the Gulf of Cadiz and coastal areas off West Iberia, North East Atlantic), to provide a marine reference section of the Pleistocene millennial- and submillennial-scale climate variability. Site U1385 was recovered using the triple APC technique, which obtains a continuous record covering the last 1.2 Ma. In this study we show results of the succession of standard and alternative calcareous nannofossil events. The quantitative study based on calcareous nannofossils shows well-preserved and abundant assemblages along the core. Most conventional calibrated Pleistocene events were recognized. Moreover, these quantitative investigations provide further data on the stratigraphic distribution of some species and groups, such as the large Emiliania huxleyi (>4 μm), the small and medium sized Gephyrocapsa, the Reticulofenestra cisnerosii, and other circular forms. A preliminary calibration with the paleomagnetic and astronomical (oxygen isotope) signal is also presented.

*IODP Expedition 339 Scientists: Bahr, A., Ducassou. E., Flood, R., Furota, S., Jimenez-Espejo, F., Kim, J. K., Krissek, L., Kuroda, J., Llave, E., Lofi, J., Lourens, L., Miller, M., Nanayama, F., Nishida, N., Roque, C., Sloss, C., Takashimizu, Y., Tzanova, A., Williams, T.