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## Paleo-ENSO influence on African environments and early modern humans

**Stefanie Kaboth-Bahr**<sup>1,2</sup>, William D. Gosling<sup>3</sup>, Ralf Vogelsang<sup>4</sup>, André Bahr<sup>2</sup>, Eleanor M. L. Scerri<sup>4,5,6</sup>, Asfawossen Asrat<sup>7,8</sup>, Andrew S. Cohen<sup>9</sup>, Walter Düsing<sup>1</sup>, Verena Foerster<sup>10</sup>, Henry F. Lamb<sup>11,12</sup>, Mark A. Maslin<sup>13,14</sup>, Helen M. Roberts<sup>11</sup>, Frank Schäbitz<sup>10</sup>, and Martin H. Trauth<sup>1</sup>

<sup>1</sup>University of Potsdam, Institute of Geosciences, Potsdam-Golm, Germany (kabothbahr@uni-potsdam.de)

<sup>2</sup>Heidelberg University, Institute of Earth Sciences, Heidelberg, Germany

<sup>3</sup>University of Amsterdam, Institute for Biodiversity and Ecosystem Dynamics, Amsterdam, The Netherlands

<sup>4</sup>University of Cologne, Department of Prehistoric Archaeology, Cologne, Germany

<sup>5</sup>Max Planck Institute for the Science in Human History, Pan-African Evolution Research Group, Jena, Germany

<sup>6</sup>University of Malta, Department of Classics and Archaeology, Msida, Malta

<sup>7</sup>Addis Ababa University, School of Earth Sciences, Addis Ababa, Ethiopia

<sup>8</sup>Botswana International University of Science and Technology, Department of Mining and Geological Engineering, Palapye, Botswana

<sup>9</sup>University of Arizona, Department of Geosciences, Tucson, USA

<sup>10</sup>University of Cologne, Institute of Geography Education, Cologne, Germany

<sup>11</sup>Aberystwyth University, Department of Geography and Earth Sciences, Aberystwyth, United Kingdom

<sup>12</sup>Trinity College Dublin, Department of Botany, Dublin, Ireland

<sup>13</sup>University College London, Department of Geography, London, United Kingdom

<sup>14</sup>University of Copenhagen, Natural History Museum of Denmark, Copenhagen, Denmark

In this study, we synthesize terrestrial and marine proxy records, spanning the past 620,000 years, to decipher pan-African climate variability and its drivers and potential linkages to hominin evolution. We find a tight correlation between moisture availability across Africa to El Niño Southern Ocean oscillation (ENSO) variability, a manifestation of the Walker Circulation, that was most likely driven by changes in Earth's eccentricity. Our results demonstrate that low-latitude insolation was a prominent driver of pan-African climate change during the Middle to Late Pleistocene. We argue that these low-latitude climate processes governed the dispersion and evolution of vegetation as well as mammals in eastern and western Africa by increasing resource-rich and stable ecotonal settings thought to have been important to early modern humans.