

Figure S1. Comparison of BIGSTACK<sub>LR04</sub> with the LR04 stack. Blue line with shading shows BIGSTACK<sub>LR04</sub> and its 95% confidence limits. Black line is the LR04 stack. Yellow line is the Northern Hemisphere insolation at  $65^{\circ}$ N. Geomagnetic polarity chrons are marked at the top and bottom of the figure, with the four subchrons within Matuyama being, from young to old, Jaramillo, Cobb Mountain, Olduvai, and Réunion (Feni).