

Description of Additional Supplementary Files

Filename: Supplementary Data 1

Description: Age model tie points for MD03-2705 based on $\delta^{18}\text{O}$ stratigraphy and magnetic reversal ages

Filename: Supplementary Data 2

Description: MD03-2705 alkane concentrations and isotopic compositions

Filename: Supplementary Data 3

Description: MD03-2705 helium isotopic compositions and dust fluxes

Filename: Supplementary Data 4

Description: MD03-2705 helium and thorium normalization comparison data