Supporting Information for

The influence of subpolar marine ice expansion on global climate in the Early Pleistocene

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Supplementary Figures

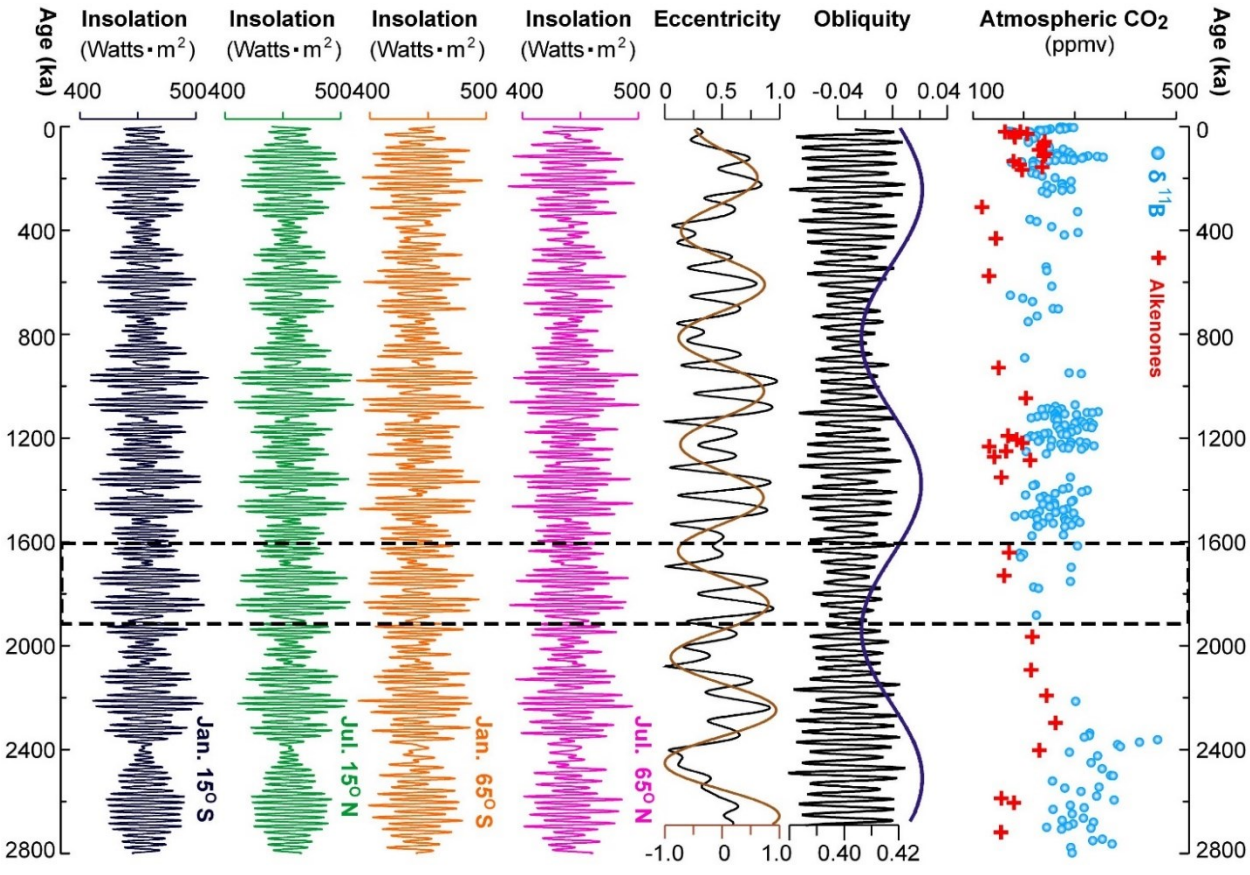

Figure 1. Plot showing variations in insolation at different latitudes, as well as Earth's long (405-kyr, brown) and short (100-kyr, black) eccentricity and obliquity (black) and filtered 1.2-Myr variations (dark blue)[1]. Atmospheric CO_2 concentrations[2] during the past 2.8 Ma were also shown.

Supplementary Tables

Table 1 Identified regime shift events based on recurrence analysis of global climate and oceanographic records.

Proxies and locations	Identified regime shift events			
	I	II	III	IV
coarse size fraction (>30 μm) from the Western Kunlun Mountain	2.4	1.7	1.1	−
Mn_{HOAC} record from the Qaidam Basin	2.2	1.75	1.2	0.6
Magnetic susceptibility record from the Chinese Loess Plateau	2.1	1.7	1.2	−
dust flux record from the ODP Site 722 in the Indian Ocean	2.1	1.65	1.25	−
K content from the IODP Site U1422 in the Japan Sea	2.25	1.65	1.2	0.6
dust flux record from ODP Site 1146 in the South China Sea	−	1.7	1.3	−
dust flux record from Site 967 in the Eastern Mediterranean	−	1.9	1.15	−
LR04 marine $\delta^{18}O$ data	−	1.65	−	0.6
ice-rafted debris record from the ODP Site 907 in the Nordic Seas	2.2	1.6	1.25	−
SST record of the ODP site 982	−	1.7	1.2	0.4
SST record of the ODP site 1125	2.2	1.6	1.2	−
SST record of the ODP site 1090	2.2	1.6	1.2	−

References

1. Berger, A., & Loutre,M. F. Insolation values for the climate of the last 10 million years. *Quaternary Science Reviews* **10**(4), 297–317 (1991).
2. Rae, J. W. B., et al. Atmospheric CO_2 over the past 66 million years from marine archives. *Annual Review of Earth and Planetary Sciences* **49**, 609–641 (2021).