Figure 1: West Antarctic Ice Sheet Divide ice core Excitation Emission Matrices (EEMs) from the Holocene showing examples of a) protein-like organic matter (OM) fluorescence (7.68 kyrs BP; before present 1950), and b) protein- and humic-like OM (11.0 kyrs BP 1950). Fluorescence intensity is reported on the z axis in Raman Units (R.U.).
Figure 2: Geochemical concentrations of a) strontium (Sr), and b) non-sea salt calcium (Ca) with dissolved organic carbon (DOC) as a function of shallow ice core depth (m) in the upper West Antarctic Ice Sheet Divide ice core WDC 05Q Stick D.
Figure 3: Concentrations of non-sea salt sulfur (nssS; ppb) calculated above the nssS volcanic detection threshold (Sigl et al., 2013) that coincide with a discretely collected EEMs sample for the Last Glacial Maximum (LGM), the last deglaciation (LD), and the Holocene. Note: increases in nssS concentration above the calculated nssS detection threshold are not a metric for volcanic strength.

References