

Supplementary figures for:

Cryptotephra in the East Antarctic Mount Brown South ice core

Margaret Harlan, Jodi Fox, Helle Astrid Kjær, Tessa Vance, Anders Svensson, and Eliza Cook

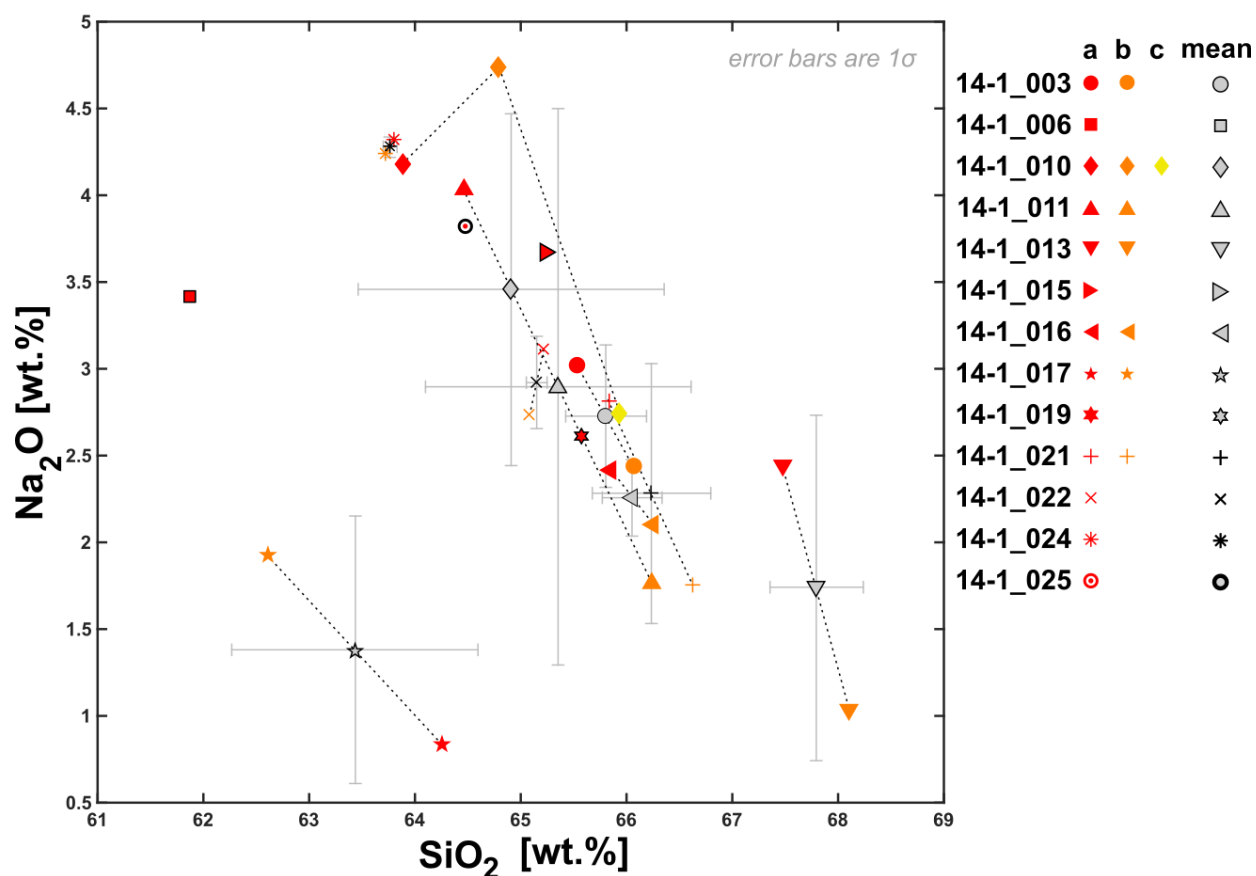


Figure S.1: Variation diagram (Na₂O vs SiO₂) showing the changes in Na₂O measured in repeated analyses on a single glass shard (in cases where glass shard was large enough for multiple point analyses). Where multiple analyses were conducted, the first point measured is shown in red, second point is shown in orange, and third is shown in yellow. Averaged value shown in grey, with error bars representing one standard deviation. Dotted lines connect subsequent analyses of each point for clarity.

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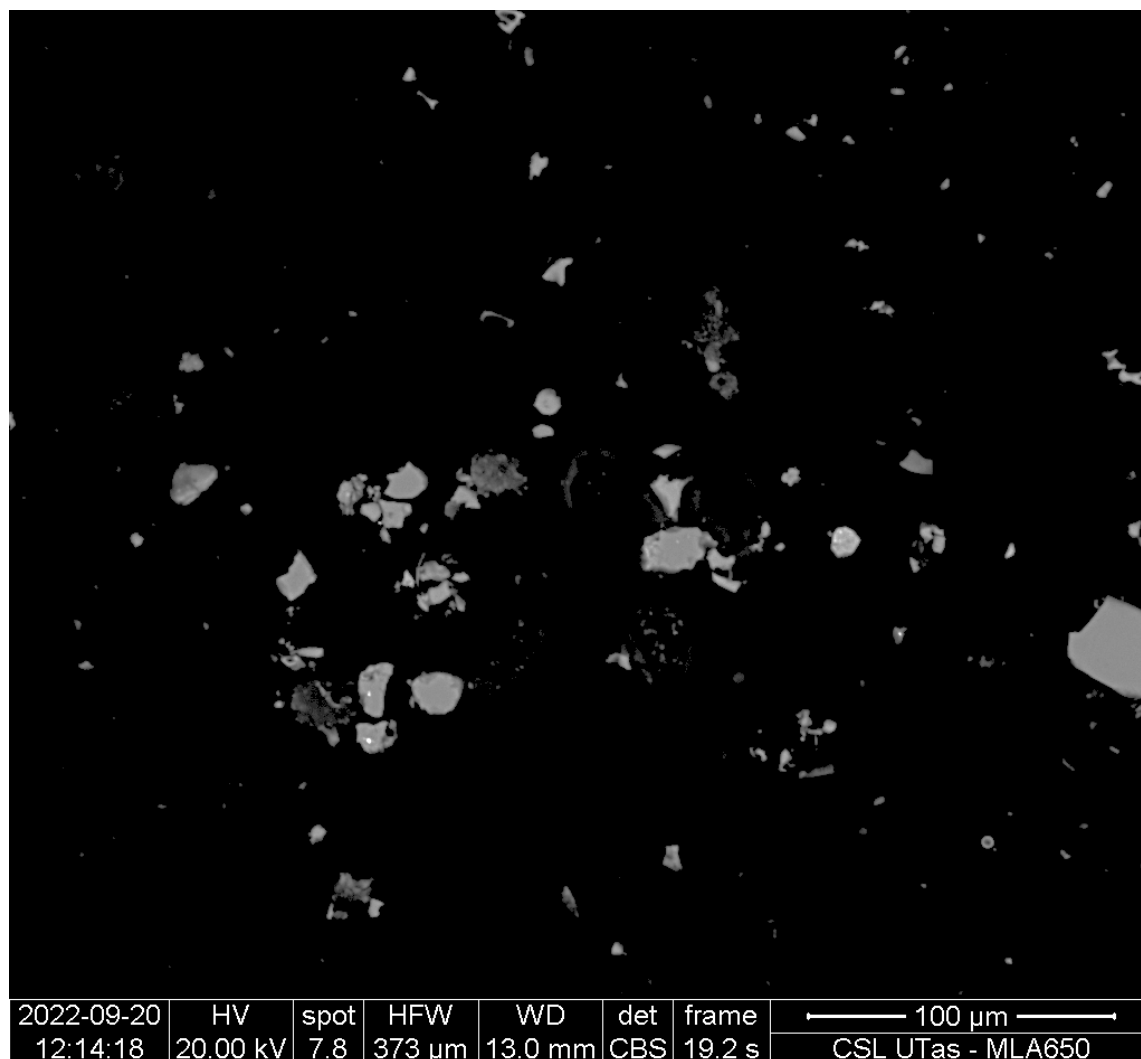


Figure S.2: BSE image of the 8.015 m sample. This sample contained shards identified as rhyolites as well as other particles of unknown origin.

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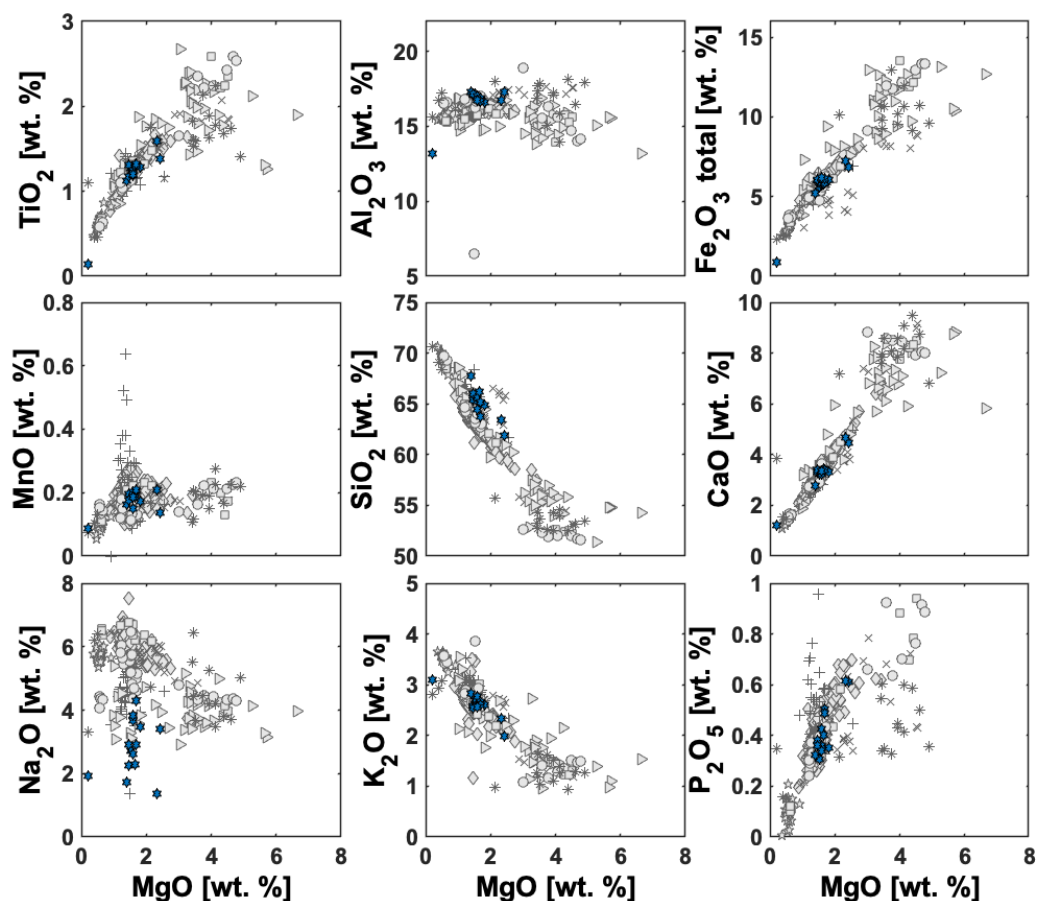


Figure S.3: Variation diagrams vs MgO for 1991 sample, shown together with literature values of eruptive products for Cerro Hudson. MBS-Alpha 1991 cryptotephra: blue hexagrams. Holocene products of Cerro Hudson: grey circles (Fernandez and Bitschene, 1993), triangles (Haberle and Lumley, 1998), crosses (Gutiérrez et al., 2005), squares (Kratzmann et al., 2010a), plusses (Del Carlo et al., 2018), stars (Panaretos et al., 2021), asterisks (Abbott et al., 2024), and diamonds (Streeter et al., 2024)).

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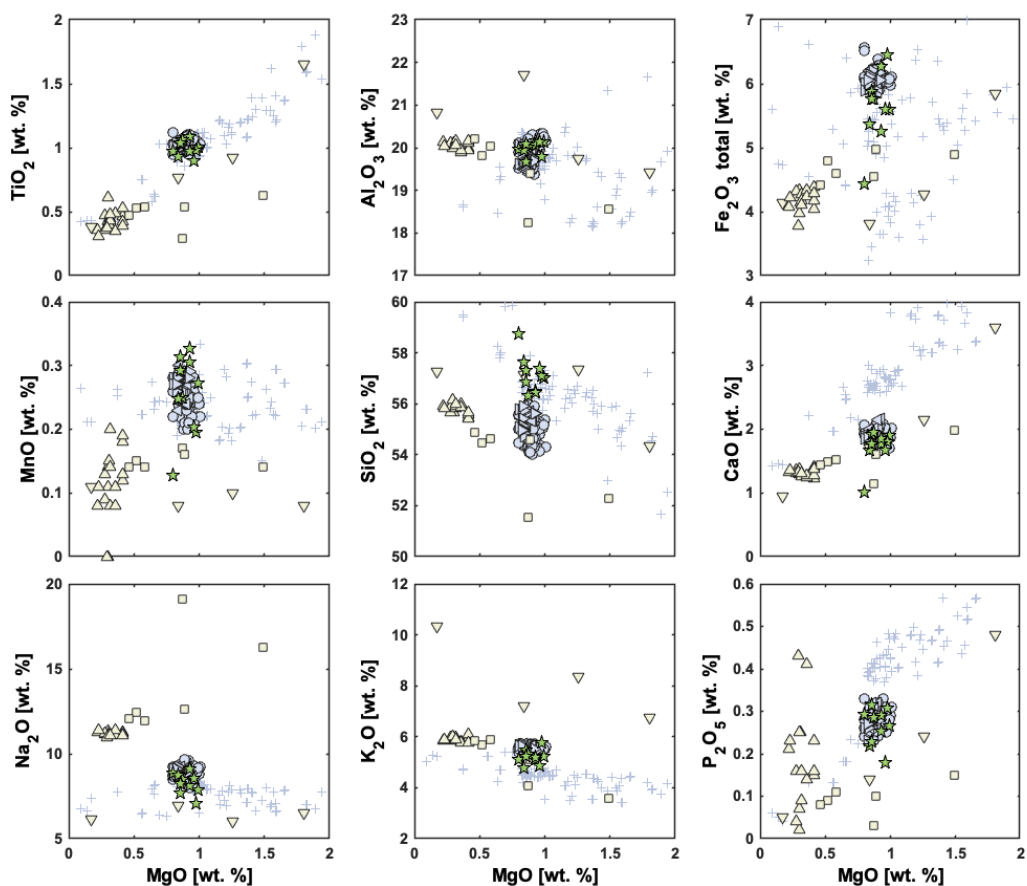


Figure S.4: Variation diagrams vs MgO for 1985 sample, shown together with literature values of eruptive products for Erebus and McDonald Islands. MBS-Alpha 1985 cryptotephra: green stars. Erebus data: Blue right pointing triangles (Kelly et al., 2008), left pointing triangles (Iverson et al., 2014), circles (Harpel et al., 2008), diamonds (Silaev et al., 2020), hexagrams (Narcisi et al., 2012), and pluses (Kyle, 1990; Kyle et al., 1992; Martin et al., 2021)). McDonald Islands: squares (Leach et al. (2016) McDonald Islands samples), upward pointing triangles (Leach et al. (2016) obsidian floater), and downward pointing triangles (Barling et al., 1994).