



## **The Mount Brown South ice core: initial results from a new, millennial length East Antarctic climate record.**

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Atmospheric circulation variability in the Indo-Pacific mid- to high-latitudes prior to 1979 is poorly understood due to this region having few station climate data from before the satellite era. A small number of stations were established around the International Geophysical Year of 1958 on sub-Antarctic islands and coastal East Antarctica, which enables comparison with high resolution proxy records over the last 60 years. This study details initial trace chemistry, water isotope, and derived annual accumulation rates over 1958-2017 from the observation era section (upper 30 metres) of a new 295 metre ice core drilled south of Mount Brown in Wilhelm II land, East Antarctica. The site was chosen to fulfil a range of criteria, including to produce highly resolved (sub-annual) chemical and isotopic records spanning 1000+ years. A detailed site selection study prior to drilling showed this site should be strongly teleconnected to the mid-latitude circulation of the southern Indian Ocean, adding a new proxy source to the small existing East Antarctic ice core array covering the last 2000 years. Initial findings of the Mount Brown South ice core record will be presented.