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Dome Argus: Prospect for 1.5 million year old ice

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In 2004/05, a 110 m long ice core was recovered at Dome Argus, the highest ice feature in East Antarctica. We calculated a very low late Holocene accumulation rate of 1.25 to 1.5 cm H_2O/yr using ice core bubble methane, air isotopic composition, firn density measurements and densification modeling. This is only two-thirds of the lowest accumulation rate at Antarctic inland ever reported. When considering additionally a local annual temperature -58.5 ° and an ice thickness over 3050 m, the Dome Argus area should be a priority target for the ice core community to get access to ice possibly as old as 1.5 million years.