

Ancient Ice

Buried Below a Meter of Regolith Ong Valley, Antarctica

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WHY?

- Ice contains direct climate info
- Current climate record < 1 Ma

WHAT?

- Ong Valley, Antarctica
- Buried ice mass
- Ice core (~ 10 m long)
- Cosmogenic nuclide dating
- $\delta^{18}\text{O}$ analysis

We want to know

- Age of the ice

RESULTS

Fitting a model prediction to the measured cosmogenic nuclide concentration in the surficial till and ice provide the age of the ice **2.7 Ma**

BUT we see an increase in cosmogenic nuclide concentrations at the bottom of the ice core, which is incompatible with simple one layer model

Large variation in $\delta^{18}\text{O}$ suggests that the **BOTTOM** of the ice core belongs to a separate, older ice mass which has previously been exposed at the surface **3.5 Ma** ago

