

Annual Layers and Irregular Stratigraphy: Electrical Measurements of the WAIS Divide Ice Core

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We present an annually resolved timescale (WDC06A-5) of the WAIS Divide Ice Core to ~3100 m depth using measurements of the electrical properties of the ice. Below ~3100 m, the annual signal fades out due to what appears to be irregular layering and/or mixing from ice flow. We use multi-track images of the electrical conductivity across the core to examine the stratigraphy. We use the timescale and associated annual layer thicknesses in an ice flow model to extract preliminary estimates of past accumulation rates, past ice thickness changes, and the geothermal flux.

- Ice Sheet and WAIS system models