Motivation: paleo temperature from ice core stable isotopes

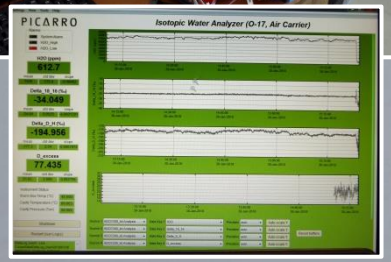
Where: Neumayer III Station, DML, Antarctica
When: Austral summer 2017/18

Data: Stable isotopes water vapour (continuously)
Stable isotopes surface snow (daily, weather permitting)
Neumayer met data, AMPS model data (Polar WRF)





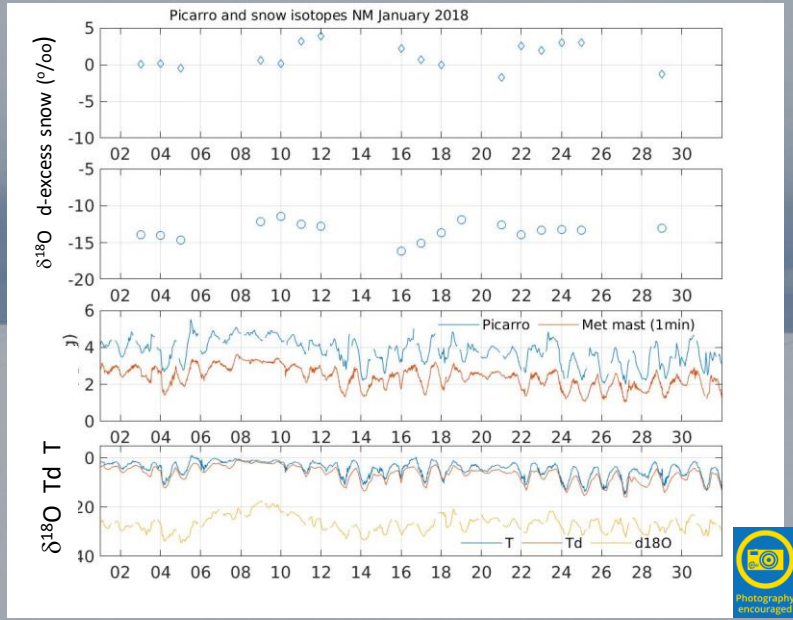




Research questions:
synoptics ➡ isotopes?
interaction air-snow?



Weather and logistic problems, thus only **case studies**

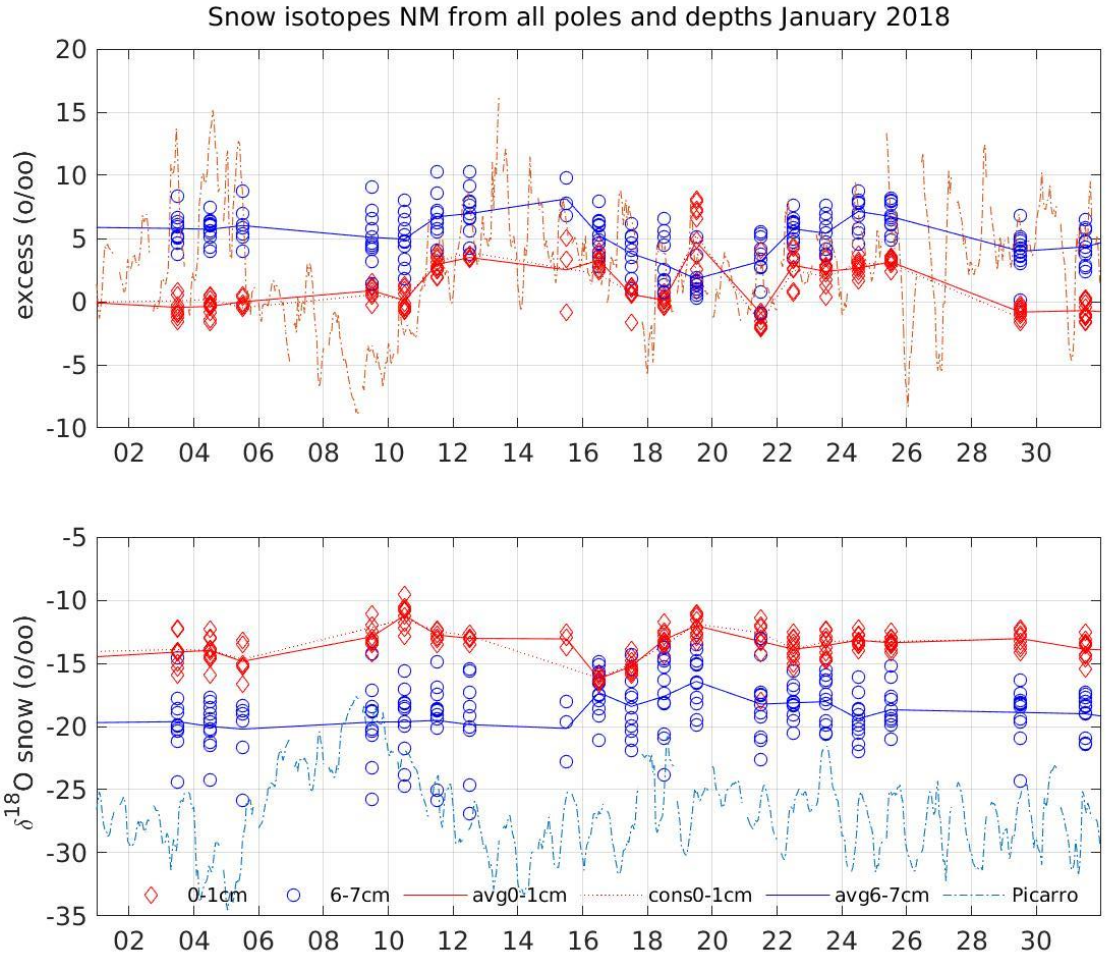


Atmospheric influences on water stable isotopes in Antarctic water vapor and surface snow - implications for ice core interpretation
(E. Schlosser et al.)

Data 1: Stable snow isotopes from transect, 11 poles 0-1cm, 6-7cm, daily



Surface snow sampling transect



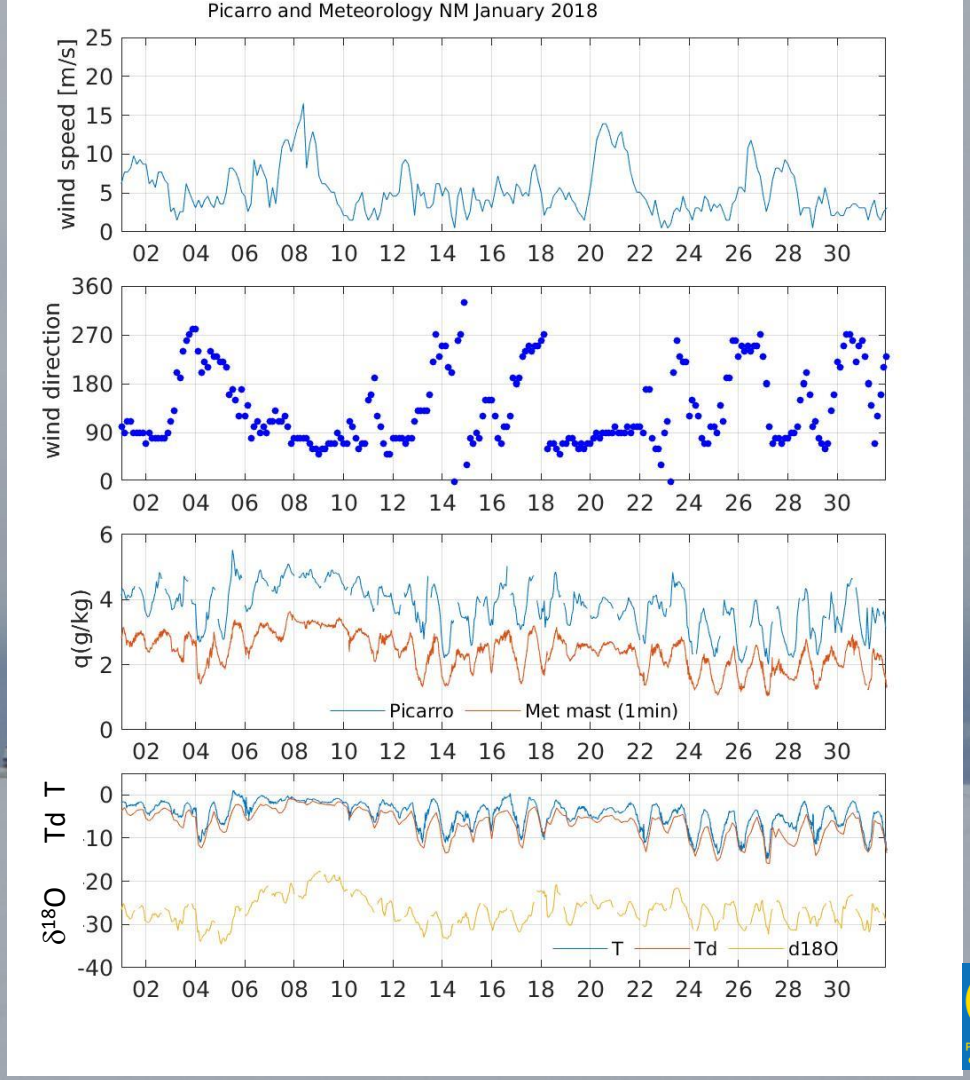
Photography encouraged

Atmospheric influences on water stable isotopes in Antarctic water vapor and surface snow - implications for ice core interpretation
(E. Schlosser et al.)

Data 2: **Meteorological data Neumayer**
10-m mast



Meteorological mast and radiation measurements NM



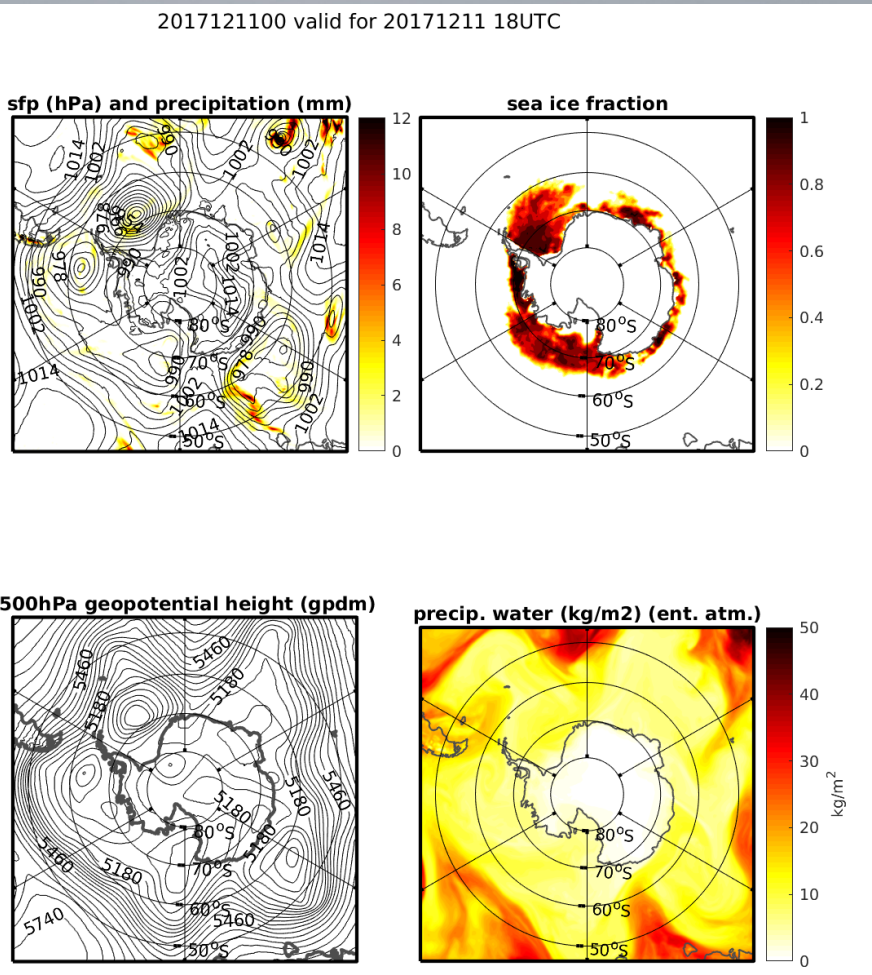
Atmospheric influences on water stable isotopes in Antarctic water vapor and surface snow - implications for ice core interpretation
(E. Schlosser et al.)

Data 3: **AMPS (Antarctic Mesoscale Prediction System) archive data**

Polar WRF, run routinely at NCAR, Boulder, US, for US Antarctic Program (flight operations)



Neumayer III



NCAR
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Photography encouraged

BYRD POLAR RESEARCH CENTER
THE OHIO STATE UNIVERSITY

Atmospheric influences on water stable isotopes in Antarctic water vapor and surface snow - implications for ice core interpretation
(E. Schlosser et al.)

Data 4: **Isotope and moisture source model data**

Flexpart (with AWI, Martin Werner, Saeid Bagheri)
Watersip?
COSMO-iso (with ETH, Franziska Aemisegger)
Div. (with LSCE, Valérie Masson-Delmotte, Amaélle Landais)

ongoing

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Der Wissenschaftsfonds.