



Glacier flow speed

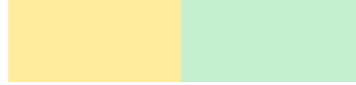


InSAR,
feature
tracking,

GPS,
boreholes
to measure
depth
profiles of
velocity.

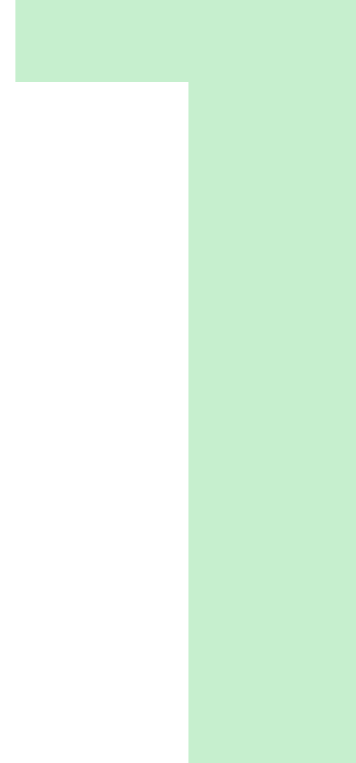
SST

SSS



If ice-free
If ice-free

Bottom topography
below ice SHELF



gravimetry

seismic

Bottom topography
(seafloor Bathymetry
under floating ice ?)



gravimetry

seismic

Bottom topography
(Bedrock under
grounded ice)

RES,
gravimetry

RES,
Seismic

Ice SHELF basal
melt/freeze rates

upward
looking
altimeter

Phase
Coherent
RES
(instrument
at surface)

Ice SHELF englacial
temperatures (for
ocean ice heat
transfer fluxes)

Embedded
temperatur
e sensors
(boreholes)

Embedded
temperatur
e sensors:
thermistor
chains or
DTS
(boreholes)

* Good as complement to other methods, but there is a problem with the drifters moving out of the measurement region too fast.

DTS - Distributed Temperature Sensing - e.g. optic fibre systems

RES - Radar echo Sounding - i.e. Radar that penetrates ice sheets