Long Term Observatory – Dataflow
from sensor to publication

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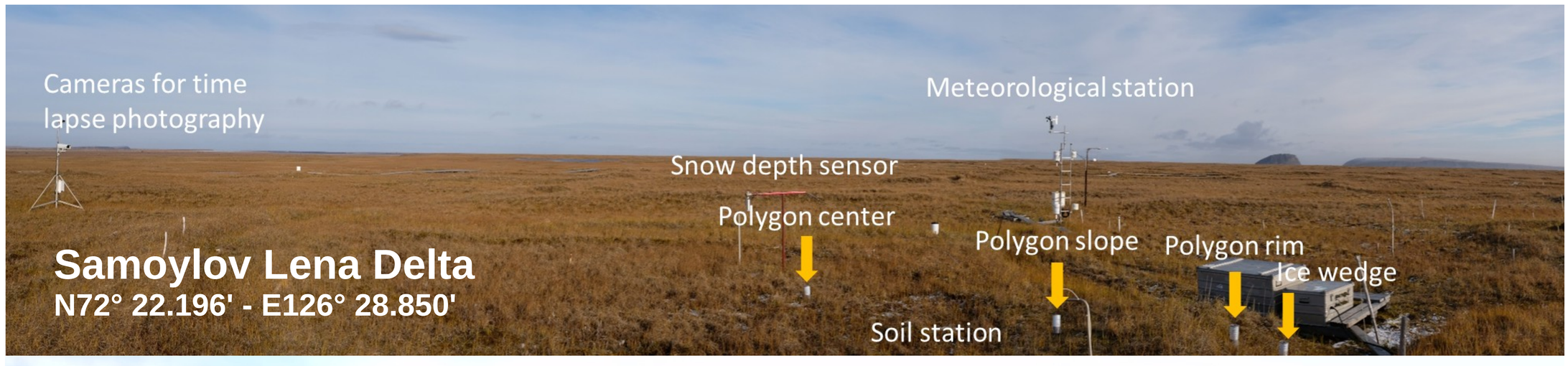
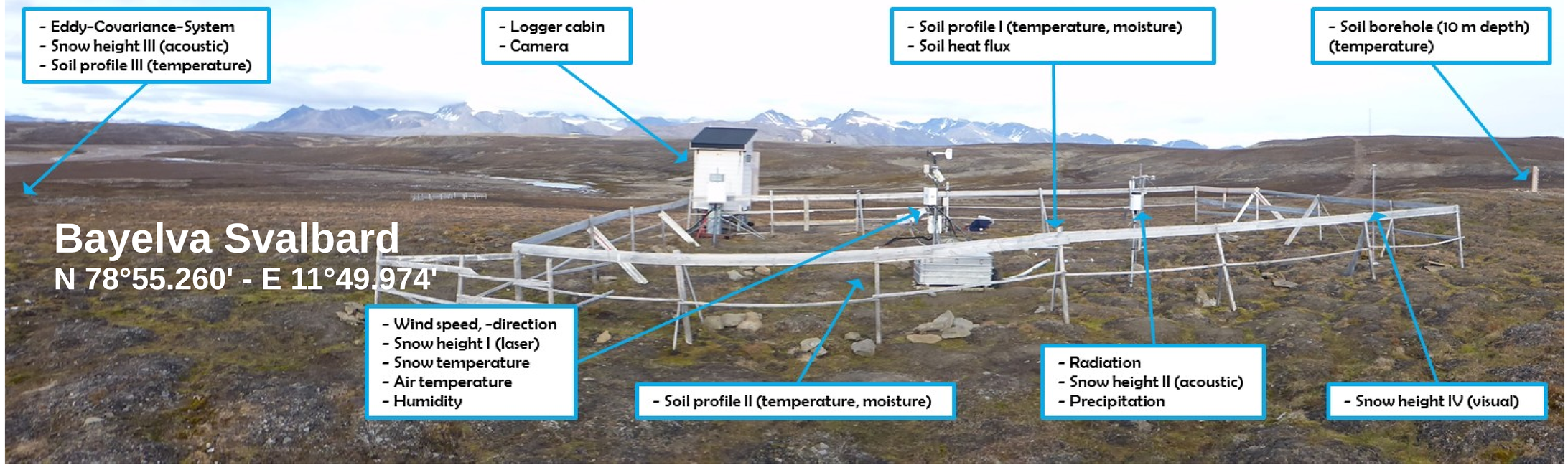
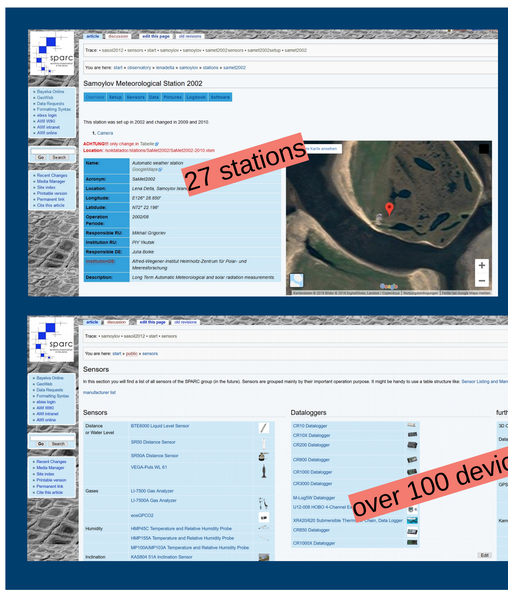
Long Term Observatory





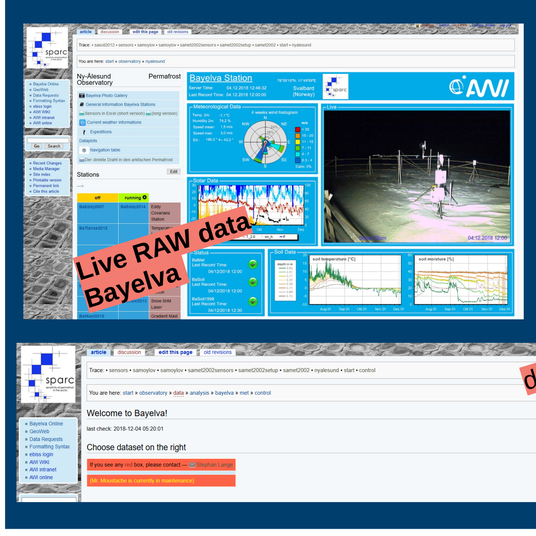
Metadata



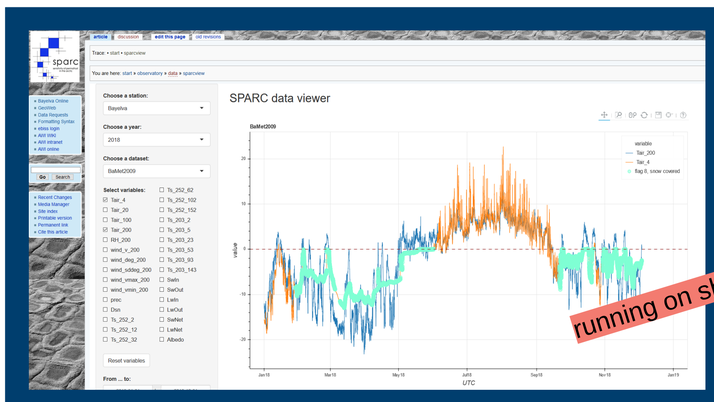
for each station
Information about the setup, sensors, pictures and maintenance protocols

for each sensor
full description, timeline, manuals, certificates, links to our stations

Monitoring



Visualization



Data viewer
- over 200 variables
- over 20 years

Trend viewer
- adjustable for different periods
- statistics and linear trend

Filtertool
- set manual quality flags
- data comparison

Archiving

RAW
- different sensors / logger
- different resolution
- different data formats
- online data vs. expedition data

Level 0
- one file format
- one time format (UTC)
- empty lines filled with NA

Level 1

Flag system / quality check
0 – good data
1 – no data
2 – system error
3 – maintenance
4 – physical limits
5 – gradient
6 – plausibility
7 – decreased accuracy
8 – snow covered

Level 2
- specific data products
- gap filling
- statistics

Boike, J., Juszak, I., Lange, S., Chadburn, S., Burke, E., Overduin, P. P., Roth, K., Ippisch, O., Bornemann, N., Stern, L., Gouttevin, I., Hauber, E., and Westermann, S.: A 20-year record (1998–2017) of permafrost, active layer and meteorological conditions at a high Arctic permafrost research site (Bayelva, Spitsbergen), Earth Syst. Sci. Data, 10, 355-390, https://doi.org/10.5194/essd-10-355-2018, 2018.
Boike, J., Nitzbon, J., Anders, K., Grigoriev, M., Bolshiyanov, D., Langer, M., Lange, S., Bornemann, N., Morgenstern, A., Schreiber, P., Wille, C., Chadburn, S., Gouttevin, I., and Kutzbach, L.: A 16-year record (2002–2017) of permafrost, active layer, and meteorological conditions at the Samoylov Island Arctic permafrost research site, Lena River Delta, northern Siberia: an opportunity to validate remote sensing data and land surface, snow, and permafrost models, Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2018-82, in review, 2018.