

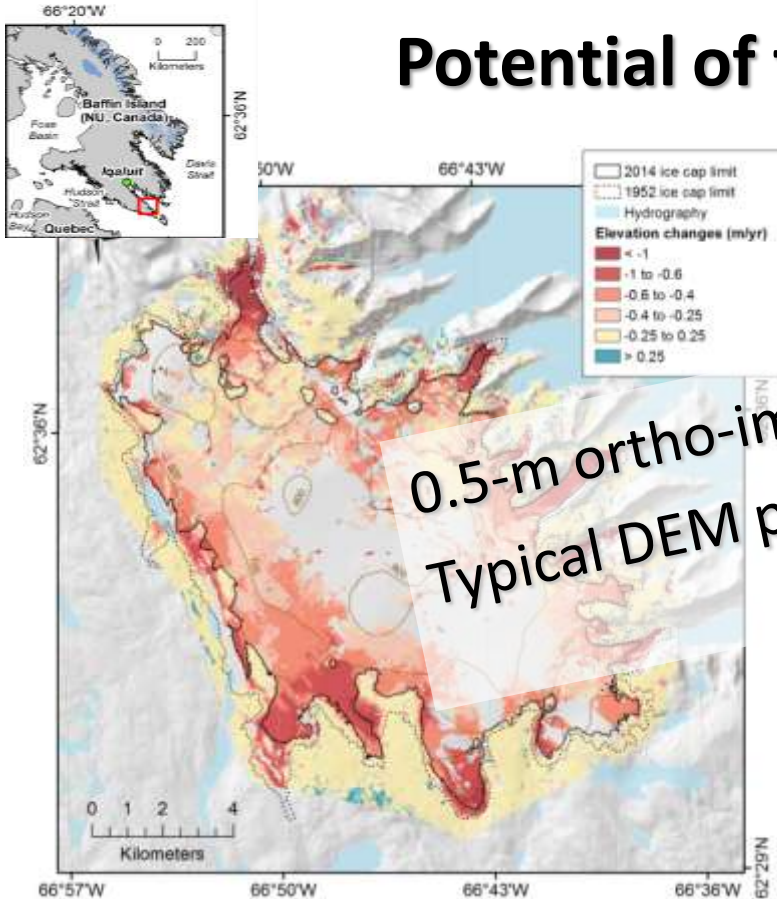


PGO: Pléiades Glacier Observatory

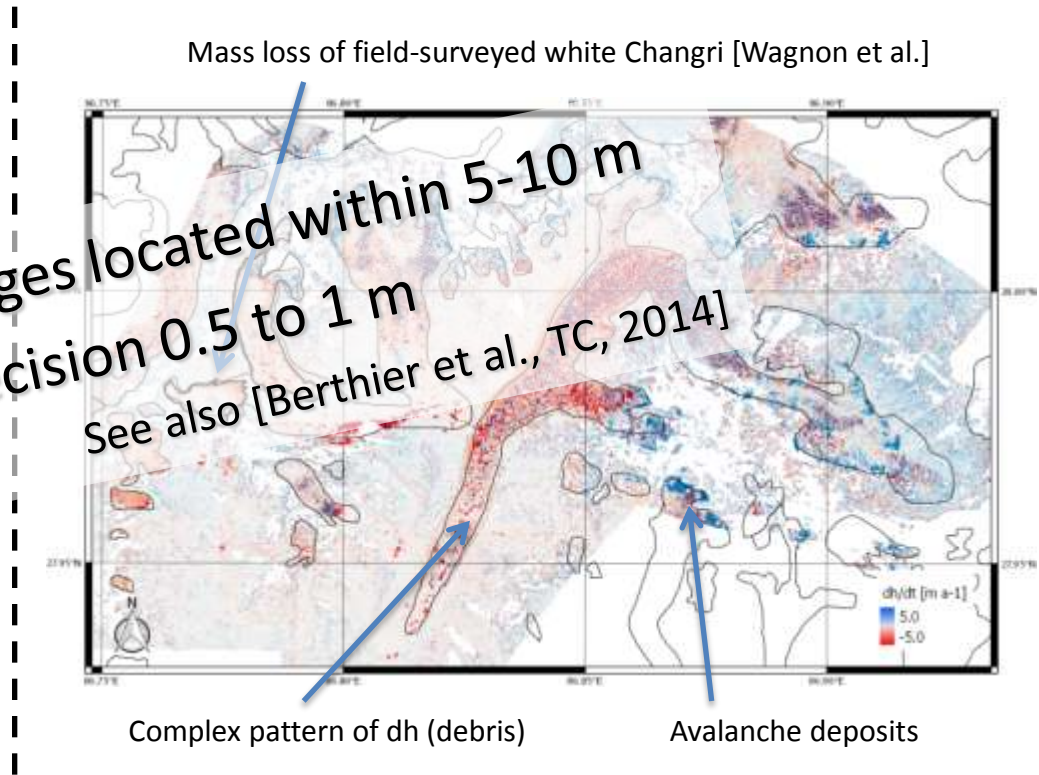
Berthier E., Fontannaz D., Hosford S., Zemp M.



Potential of the Pléiades data in glaciology



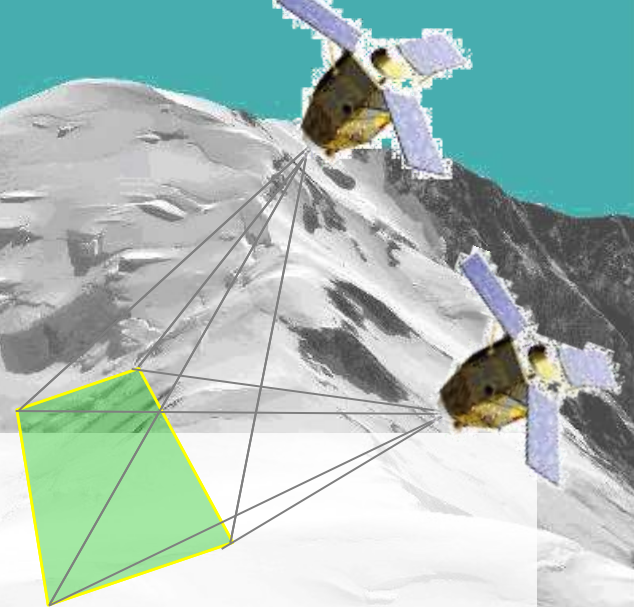
Rate of elevation change (1952-2014) for the Grinnell ice cap Pléiades vs Aerial photograph [Papasodoro et al., TC, 2015]



1-yr elevation change (2015-2016) for the Everest area, Pléiades vs. Pléiades [poster F. Brun @ Friday]

The Pléiades Glacier Observatory

- Entirely funded by the French Space Agency (**CNES**)
- Facilitate access to Pléiades satellite data for glaciologists
- Acquire stereo data at the **right time of the year** (i.e. end of the melt season)
- Sites selected in coordination with **WGMS**: initial goals are to use these data to (i) provide a DEM/image of benchmark glaciers and (ii) help to assess the regional representativeness of the glaciers monitored in the field.
- One contact scientist for each site to define the acquisition parameters and validate the images when acquired.
- Raw stereo-data are provided. Possibility to get a DEM + ortho-image (generation @LEGOS using Ames Stereo Pipeline)
- PGO stereo images are **freely available to all science users**, on the condition that they sign an agreement with CNES.
- Two acquisition campaigns completed: Aug-Oct 2016 (NH) and Feb-April 2017 (SH)





**TIEN SHAN
KARAKORAM**

TUYUKSU

YASGHIL



**CANADIAN
ARCTIC**

MEIGHEE

MELVILLE

GRASEFIORD



**SVALBARD
NORWAY**

KONGSJFORDEN



**ALASKA
ROCKIES
COASTAL MTS**

GULKANA

WOLVERINE

BOLOGNA

**Pléiades
Glacier
Observatory –
2016 north
Hemisphere**

COLUMBIA
WAPTA

GARIBALDI



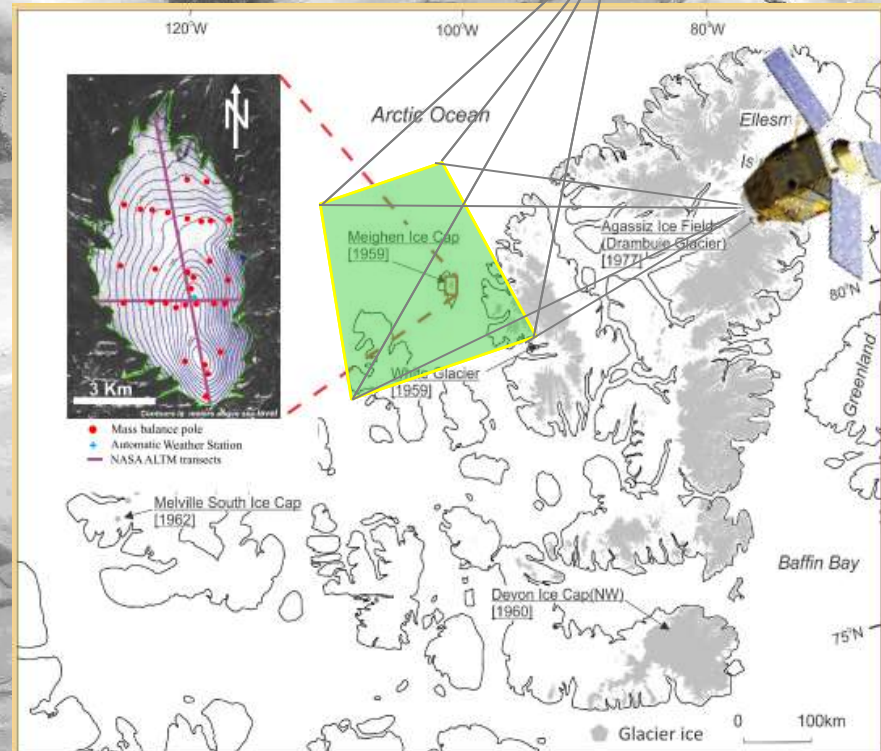
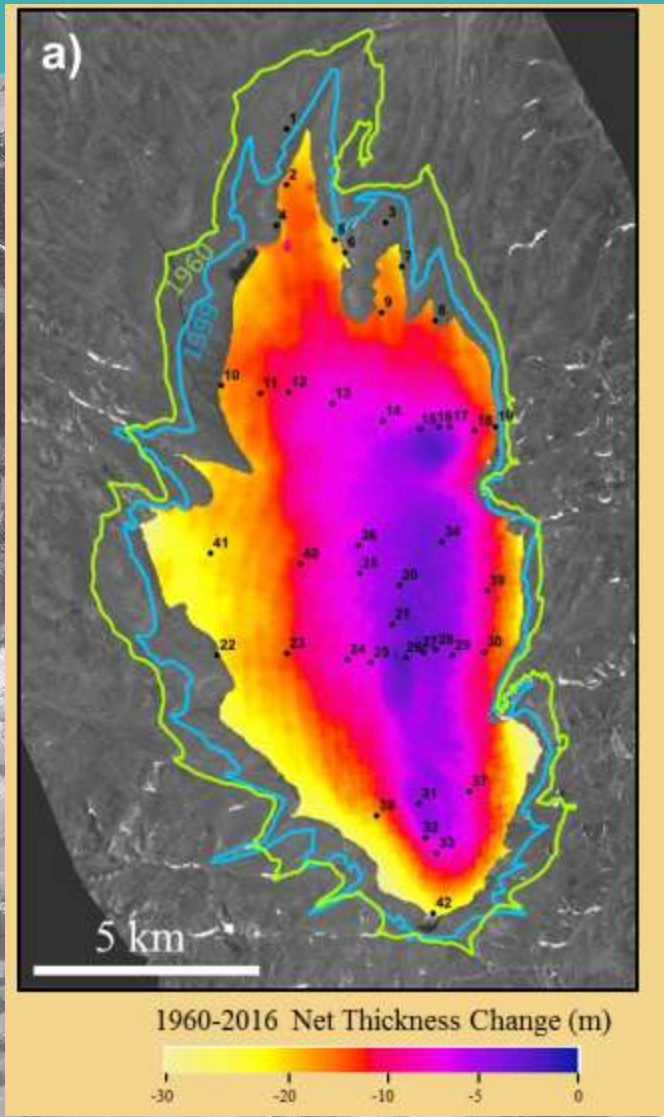
**EUROPEAN
ALPS**

SVETISEN

ORTLES

STUBACHER

Example of first results: ©D. Burgess *Natural Resources Canada*



Re-analysis of the Glacier Mass Balance Time Series
From Meighen Ice Cap, Nunavut, Canada (1960-2016)

The Pléiades Glacier Observatory

- Do not hesitate to **propose your study site** (< 400 km²) for the upcoming 2017-North & 2018-South acquisition campaigns. Not all requests can be satisfied though...
- Contact us if you want to access the stereo-pairs already acquired.
- For EU researchers (including all ESA countries), access to Pléiades data is also possible through the ISIS programme. Cost of 1.8 euros / km² ; 3.6 euros / km² for a stereo coverage. Contact: isis-pleiades@cnes.fr
- Questions/feedbacks?
- etienne.berthier@legos.obs-mip.fr

