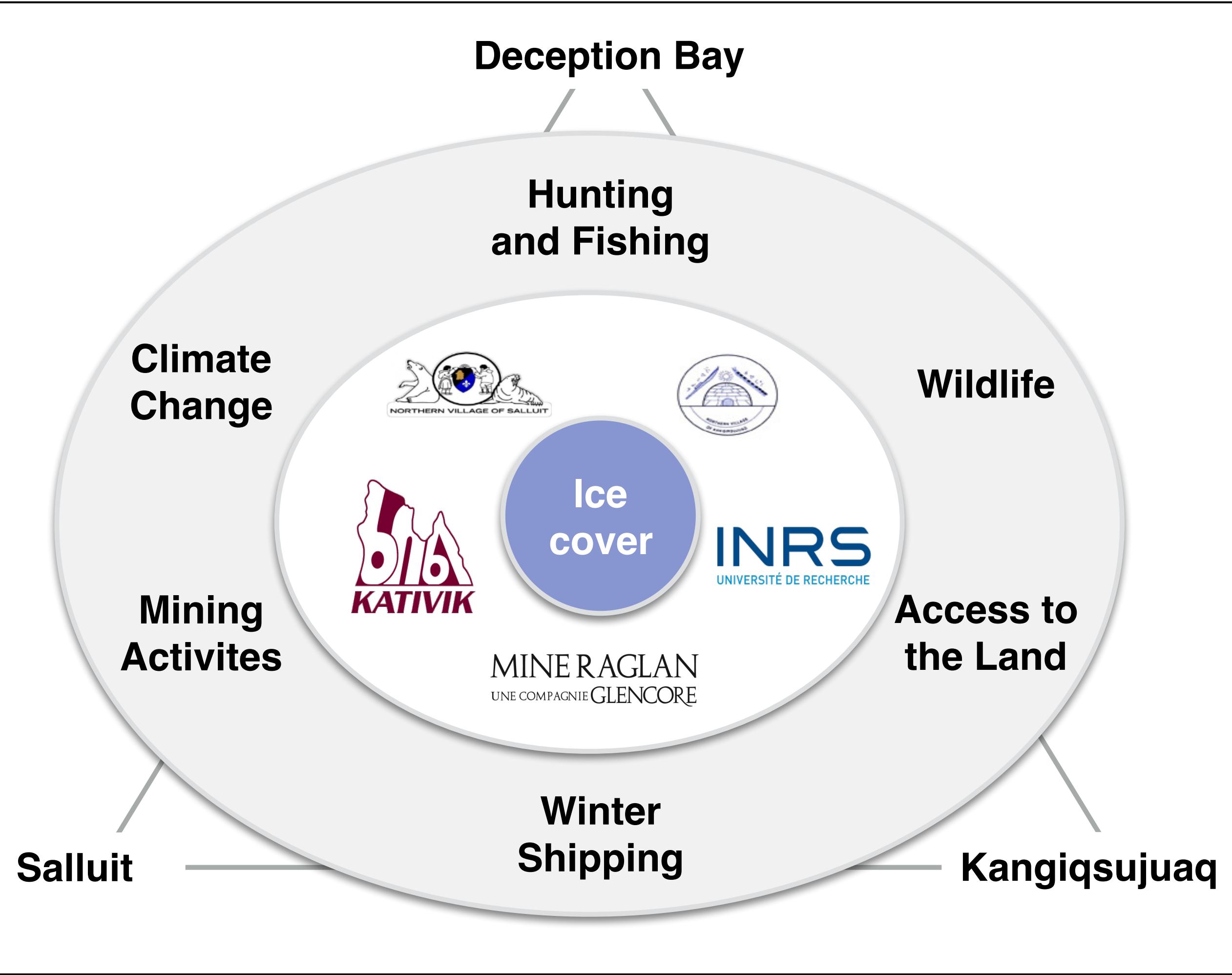


Ice Monitoring in Deception Bay with Control Sites in Salluit and Kangiqsujuaq

Sophie Dufour-Beauséjour ^(1,2), Yves Gauthier ^(1,2), Jimmy Poulin ^(1,2), Véronique Gilbert ⁽³⁾, Monique Bernier ^(1,2), Amélie Rouleau ⁽⁴⁾

(1) Université INRS (2) Centre for Northern Studies, (3) Kativik Regional Government, (4) Raglan Mine, a Glencore Company



Ice observation program

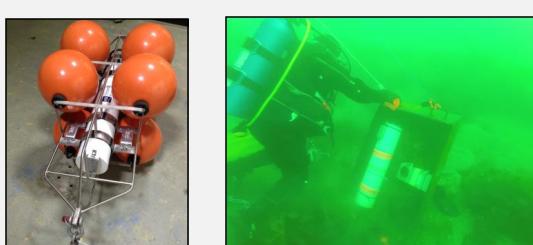
- Historical changes in freeze-up and break-up (1988-2018)
- Yearly changes in the ice characteristics (2015-2018)

Instruments (Deception Bay only)

Cameras (5)



Underwater sonars (2)



Satellite Images

Optical



Radar



Local Knowledge

Local experts



Schools



Fieldwork

Ice coring



Ice drilling



Georadar



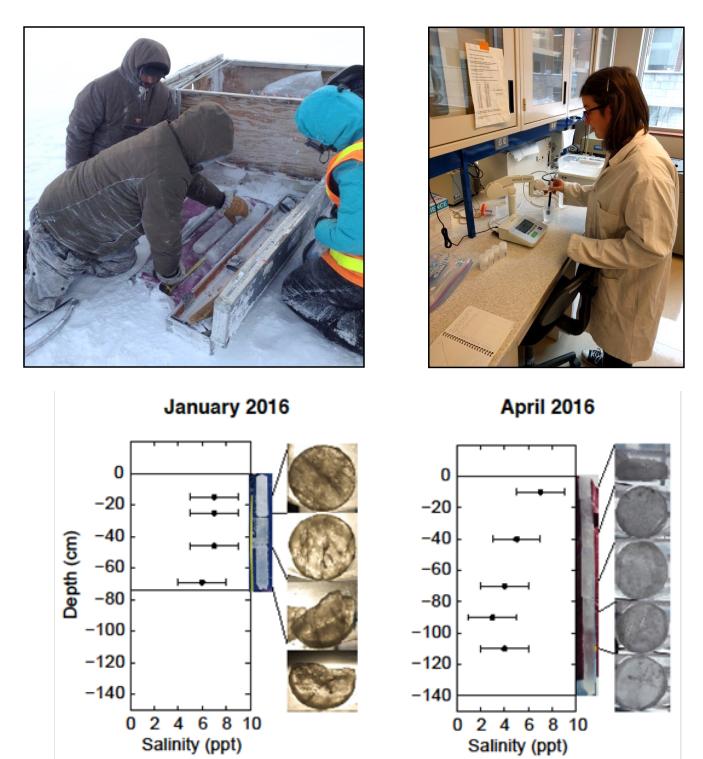
Who : Scientists from the university, the KRG environment specialist and local Inuit experts

When : January to April

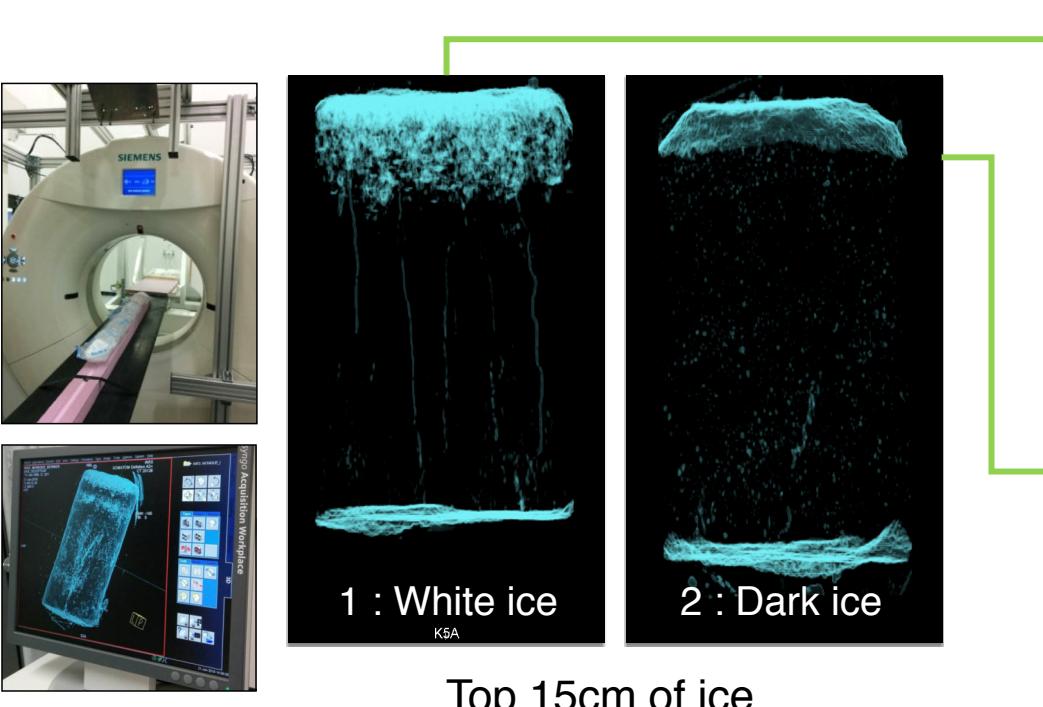
Where : Deception Bay, Salluit fjord and Kangiqsujuaq

What do we measure on the ice ?

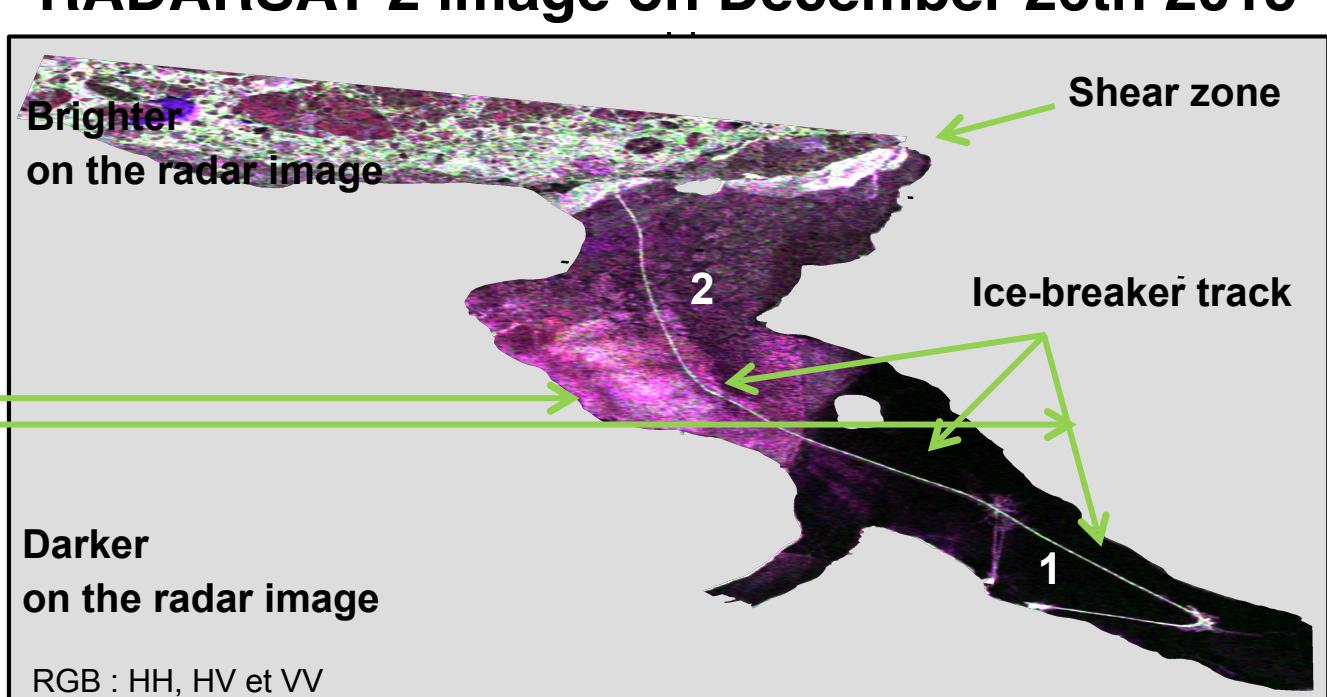
The amount of salt in the ice



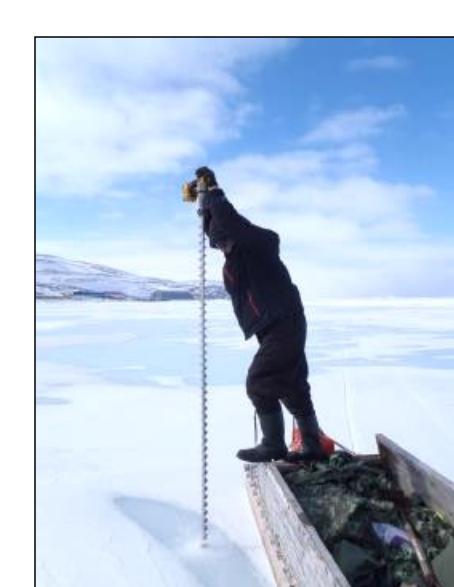
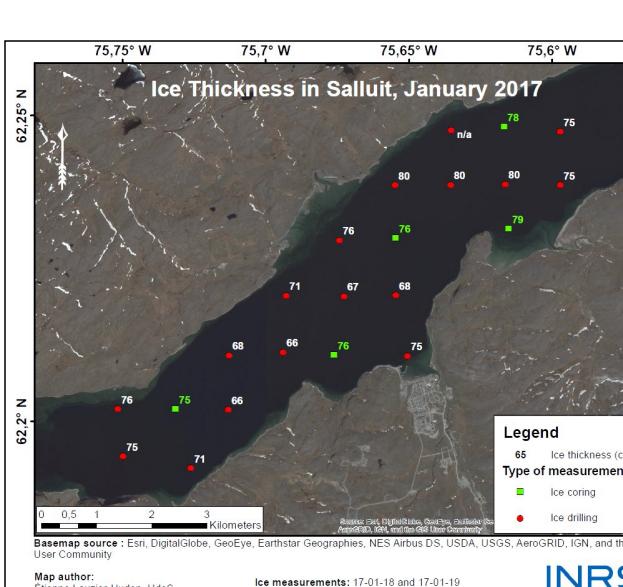
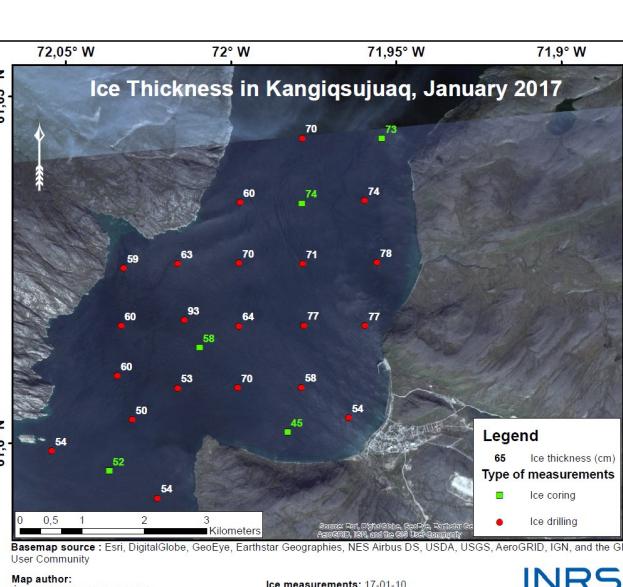
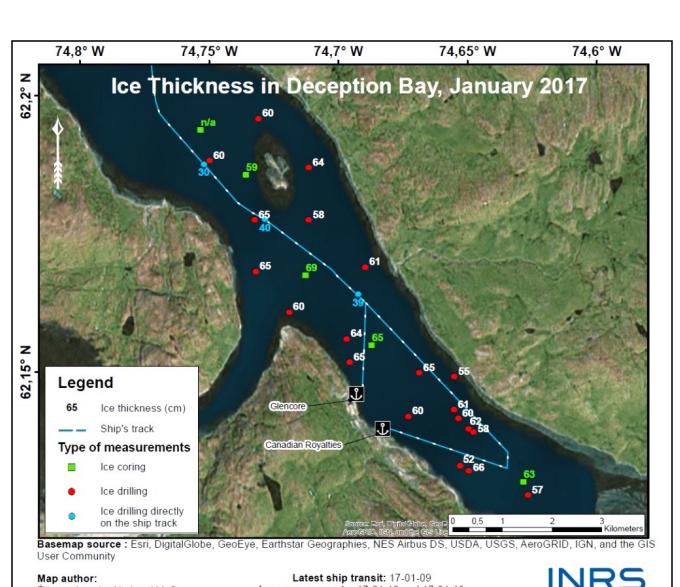
The size of air and salt-water bubbles



RADARSAT-2 image on December 26th 2015

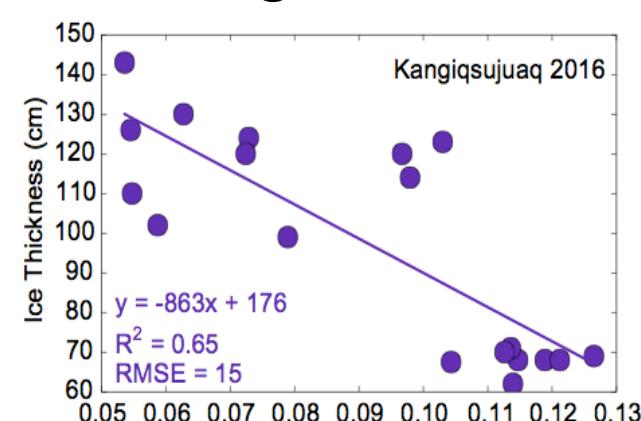


The ice thickness

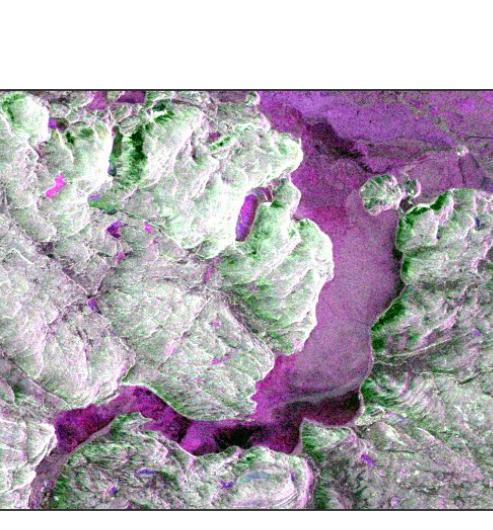
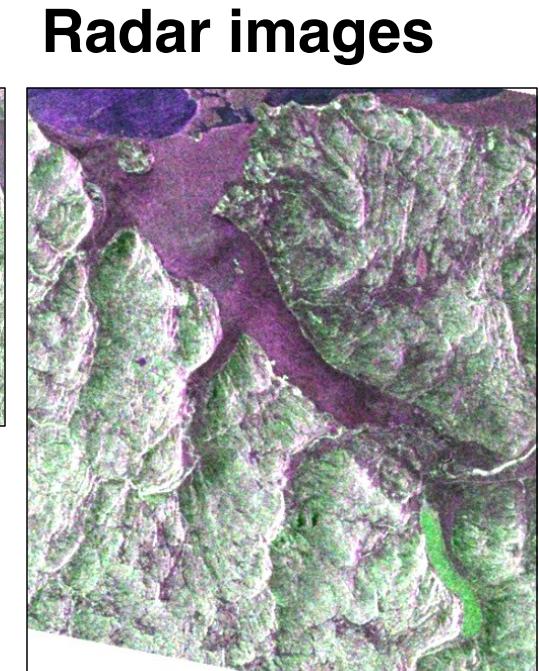
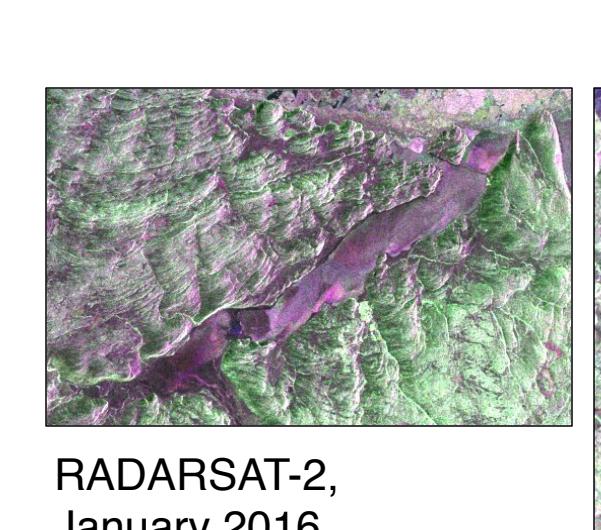
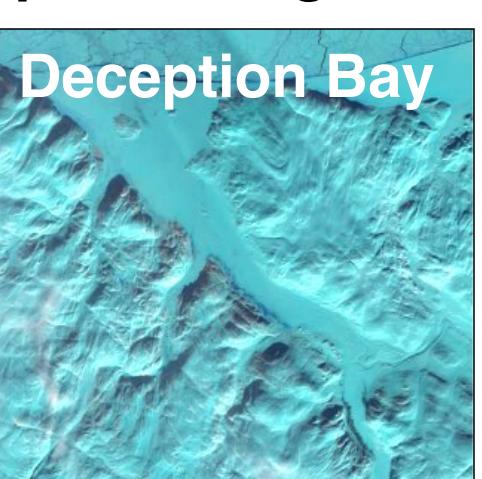
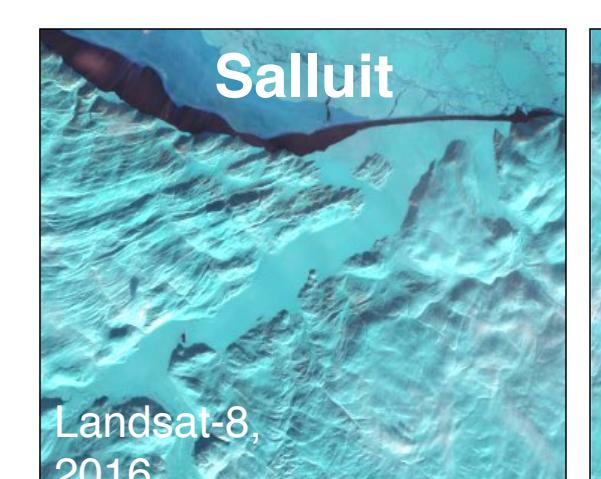


Satellite images of the bays

Ice thickness vs radar brightness



Optical images



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- Putulik Cameron
- Elijah Qisiiq
- Dany Alaku
- Maasiu Arngak
- Noah Annahatak
- Peter Arngak
- Elijah Ningiuruvik

Kangiqsujuaq

- Charlie Alaku
- Elijah Qisiiq
- Dany Alaku
- Maasiu Arngak
- Noah Annahatak
- Peter Arngak
- Elijah Ningiuruvik