SIOG239-20 Worksheet

Date of class: 11/10

Group number and members:

Title of paper: InSAR measurements of surface deformation over permafrost on the North Slope of Alaska

Before getting started on this paper – What did you know about InSAR, what are its usual applications? What do you know about permafrost? About how far down is the ground frozen in permafrost?

Abstract (1 – 4 bullet points or sentences) In which kind of environments is InSAR used? It is ultimately used to determine what? On what kind of scale is ground motion happening?

Intro:
What is the active layer? Which methods have been used to measure it? Previous measurements revealed what kind of dimensions?

Discuss how/why the active layer would behave in a warming climate.

How much change in ice volume is expected in the active layer during a thaw-freeze cycle?

How would GPS provide complimentary data? Discuss InSAR vs GPS.

InSAR processing:
List/discuss the three main points of the data processing steps necessary to enhance accuracy in the final images.

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What is a talik?

Results:
What are some of the main observations?

What are possible main causes of surface deformation/subsidence?

If not stated already, on what time scales are the observed changes? Discuss.

How does soil moisture affect the observations?

Conclusions and future work:
What are the main conclusions?

Any further comments?