Preliminary Analysis of Ku-Band Radar Measurements over the Trail Valley Creek Region of the Canadian Northwest Territories

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ABSTRACT

During the 2018 – 2019 winter season, the University of Massachusetts and Environment and Climate Change Canada teamed up to test an airborne Ku-band interferometric SAR over the Trail Valley Creek region located in the Canadian Northwest Territories. Data were collected over three periods (November, January and March) in a grid pattern over a 60 km region, with at least three flights per period. These data were collected concurrently with ground validation and additional satellite data in order to create a suite of observations that can be used for inferring snow properties, as described in a companion paper (King *et al*., 2019).

In this paper, a description of the UMass Ku-band SAR is given, along with intermediate analyses that have been performed on collected SAR data. These analyses include spatial and temporal characteristics of the data, and the efforts that have been employed thus far in processing the data set.

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