



Supplement of

Estimating snow accumulation and ablation with L-band interferometric synthetic aperture radar (InSAR)

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Supplementary Material

S1. List of Remote Sensing Data

UAVSAR Ground Projected Interferograms

We used the ground projected (GRD) InSAR and PolSAR data from the ‘alamos’ flight line from three dates. This included HH and VV unwrapped phase (.unw), coherence (.cor), amplitude (.amp), and the DEM (.hgt). This data is available at the ASF DAAC (<https://search.asf.alaska.edu/#/>) or UAVSAR data portal (<https://uavsar.jpl.nasa.gov/>).

- 12–19 February
alamos_35915_20005-003_20008-000_0007d_s01_L090_01
https://uavsar.jpl.nasa.gov/cgi-bin/product.pl?jobName=alamos_35915_20005-003_20008-000_0007d_s01_L090_01#data
- 19–26 February
alamos_35915_20008-000_20013-000_0007d_s01_L090_01
https://uavsar.jpl.nasa.gov/cgi-bin/product.pl?jobName=alamos_35915_20008-000_20013-000_0007d_s01_L090_01#data
- 12–26 February
UA_alamos_35915_20005-003_20013-000_0014d_s01_L090_01
https://uavsar.jpl.nasa.gov/cgi-bin/product.pl?jobName=alamos_35915_20005-003_20013-000_0014d_s01_L090_01#data

UAVSAR SLC Stack

We also used an SLC stack to geolocate the new incidence angle data.

- 12, 19, and 26 February
https://uavsar.jpl.nasa.gov/cgi-bin/product.pl?jobName=alamos_35915_04#data
alamos_35915_20013_000_200226_L090HH_04_BU.ann
alamos_35915_04_BU_s1_2x8.lkv
alamos_35915_04_BU_s1_2x8.llh
alamos_35915_04_BU.dop
alamos_35915_20013_000_200226_L090HH_04_BU_s1_2x8.slc

Landsat 8 fSCA

These data are available through the USGS EarthExplorer data portal (<https://earthexplorer.usgs.gov/>). There are no specific product pages for these data.

- 5 March 2020
Tile ID: LC08_CU_010012_20200305_20210504_02_SNOW
- 18 February 2020
Tile ID: LC08_CU_010012_20200218_20210504_02_SNOW

Landsat 8 C2 ARD Reflectance

These data are available through the USGS EarthExplorer data portal (<https://earthexplorer.usgs.gov/>). There are no specific product pages for these data.

- 5 March 2020
Tile ID: LC08_CU_010012_20200305_20210504_02
- 18 February 2020
Tile ID: LC08_CU_010012_20200218_20210504_02

Lidar DEM

- OpenTopography Jemez River Basin Snow-off LiDAR from July 2010
<https://doi.org/10.5069/G9RB72JV>

Canopy Cover

- NLCD 2016 USFS Tree Canopy Cover (CONUS)
<https://www.mrlc.gov/data/nlcd-2016-usfs-tree-canopy-cover-conus>

S2. In Situ Data

Meteorologic Data

We used data from two stations maintained by the Western Regional Climate Center (WRCC).

- Redondo (VC) New Mexico
<https://wrcc.dri.edu/cgi-bin/rawMAIN.pl?nvvrdd>
- Valle Grande, New Mexico Weather Station
<https://wrcc.dri.edu/cgi-bin/rawMAIN.pl?nvvhvc>

GPR

This data set contains two-way travel times from a ground penetrating radar survey conducted at Jemez, New Mexico. Data were collected between 12 February 2020 and 04 March 2020 as part of the SnowEx 2020 campaign.

- https://nsidc.org/data/snex20_j_unm_gpr/versions/1