Getting Ready for NISAR

Sentinel-1 Interferometric Beta Imagery Available

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Deformation in the Carlsbad, New Mexico, region is revealed in this Sentinel-1(https://www.asf.alaska.edu/sentinel/) InSAR beta image. Created through the collaborative Getting Ready for NISAR(https://www.asf.alaska.edu/newsnotes/2016-fall/nisar-sentinel-news/) project with JPL, this image is one of many available through either ASF DAAC's Vertex(https://vertex.daac.asf.alaska.edu/) or NASA's Earthdata Search(https://search.earthdata.nasa.gov/) . See the full article for more about the project, available products, and how to offer feedback. Image credit: ASF DAAC(http://www.asf.alaska.edu/) & JPL 2017, contains

modified Copernicus(http://www.esa.int/Our_Activities/Observing_the_Earth/Copernicus) Sentinel data 2017.

SAR data users interested in Sentinel-1 InSAR products may now download select Level 2 beta products developed through the ASF-Jet Propulsion Laboratory collaboration known as Getting Ready for NISAR(https://www.asf.alaska.edu/news-notes/2016-fall/nisar-sentinel-news/) (GRFN). NISAR is a joint U.S-India mission slated for launch in 2021. Sentinel-1 data is analogous enough to NISAR data to enable engineers to develop methods for processing and distributing the much larger anticipated volume of NISAR data, as well as sample science products. Currently, the InSAR products are available for three geographic regions: Central California, areas around Carlsbad, New Mexico, and Cedar City, Utah. Additional products are expected to be added daily, including imagery for Unimak Island, Alaska, and Kilauea Volcano, Hawaii. These prototype products are not part of the ASF long-term archive, and may become unavailable at any time as the GRFN team explores new InSAR processing and delivery methods, including providing data through the cloud.

GRFN beta products are divided into three Sentinel-1 collections:

- 1. All InSAR products
- 2. Full-resolution wrapped interferogram and DEM
- 3. Unwrapped interferogram and coherence map

Using Vertex to access the InSAR beta products

After conducting a geographic search over the available areas of interest, enter "interferogram" in the Find field (upper right corner) to filter the results for InSAR beta products.

Large geographic searches can yield truncated results. The following suggested coordinates should yield full results:

Carlsbad, New Mexico, region

Geospatial
Granule
Missions

✓ Geographic Region
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-105.68, 31.19, -102.57, 31.19, -102.57, 34.23, -105.68, 34.23, -105.68, 31.19, -102.57, -1

Cedar City, Utah, region

-114.14,36.9,-112.35,36.9,-112.35,38.4,-114.14,38.4,-114.14,36.9

Central California

-122.34, 36.54, -119.18, 36.54, -119.18, 37.99, -122.34, 37.99, -122.34, 36.54

GRFN data products are also available through the "Missions" tab in Vertex.

Using Earthdata Search to accessing the InSAR products

Use this link(https://search.earthdata.nasa.gov/search?q=GRFN&ok=GRFN) to access the Sentinel-1 beta collections

Sentinel-1 SAR data products will be used in part to develop ways for scientists to interact with NISAR datasets, and the GRFN team would greatly appreciate feedback(https://docs.google.com/a/alaska.edu/forms/d/1X9J-4FR4kDK7JniO5RK3YmCZUyhYBrtAkMYvnsopfcE/viewform?edit_requested=true) .

GRFN Feedback

Getting Ready for NISAR (GRFN) is a prototypical cloud-processing pipeline developed by the Alaska Satellite Facility to determine costeffective processing solutions for large volumes of SAR data. The system will be used to inform data management decisions for the upcoming NASA NISAR mission.

(https://docs.google.com/a/alaska.edu/forms/d/1X9J-4FR4kDK7JniO5RK3YmCZUyhYBrtAkMYvnsopfcE/viewform? edit_requested=true)

Products were processed using Jet Propulsion Laboratory's (JPL's) Science Data System under development for the NISAR mission, using the ISCE software package.



📽 About Us

The Alaska Satellite Facility downlinks, processes, archives, and distributes remote-sensing data to scientific users around the world. ASF's mission is to make remote-sensing data accessible.

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