OpenTopography

Metadata Report

Project Name *Wainiha Valley, HI, USA, 2012, SETSM DEM derived from WV imagery*

Summary
This dataset contains raster DEMs over Wainihia Valley, HI USA produced from WorldView-01 stereo imagery acquired on 21January 2012 produced using the Surface Extraction from TIN Space-search Minimization (SETSM) algorithm. The raw imagery has 0.5m resolution and the SETSM algorithm was employed using a 2m output resolution. The two DEMs in the dataset contain one unfiltered and one filtered with a local surfacing filter (LSF), each are named as such. Both were then co-registered to LiDAR following the geolocation procedure of Nuth and Kaab 2011. A complete description of the generation of this dataset, the images that were used to construct the raster and how the co-registration was performed can be found in the associated manuscript. Please cite this publication if you use this dataset: Atwood, Abra, and A. Joshua West. "Evaluation of high-resolution DEMs from satellite imagery for geomorphic applications: A case study using the SETSM algorithm." *Earth Surface Processes and Landforms*. 2021. This work has been supported by the NSF Grant EAR-1640894 to AJW.

Personnel
Contributors: Abra Atwood, A. Joshua West

Products
Date of dataset collection: 01/21/2012
Coordinate system of datasets WGS 84 / UTM zone 4N
Spatial resolution: 2m