

**OpenTopography Data Description Worksheet**

Please provide the information below in order to help streamline the OpenTopography data ingestion process and insure data are properly acknowledged and attributed. If the information requested is explicitly specified in dataset metadata it is not necessary to duplicate it below (e.g. coordinates). For examples from other OT-hosted data see: *http://opentopo.sdsc.edu/gridsphere/gridsphere?cid=geonlidar*

# 1. Dataset Full name

Susquehanna Shale Hills Critical Zone Observatory Leaf On/ Leaf Off LiDAR Survey

# 2. RECOMMEND Dataset Short name *(max length = 10 characters e.g., ISMEP\_BC)*

SSHCZO\_LiDAR

# 3. Overview Description *(one or two short paragraphs – 2000 characters MAX)*

High-resolution LiDAR survey covers an area of 170 km2 located 10 miles southwest of State College, Pennsylvania. The data collection was funded by the National Science Foundation (NSF) and performed by the National Center for Airborne Laser Mapping (NCALM) during peak leaf-on and leaf-off conditions in 2010 (July 2010 and December 2010, respectively). The dataset contains point cloud tiles in LAS format, 1 m Digital Surface Model (DSM) derived using first-stop points, 1 m Digital Elevation Model (DEM) derived using ground-class points and 1 m hill shade dataset derived from DEM. These datasets were used to estimate vegetation biomass and distributions, provide bare earth elevations, and to assist with prediction of Critical Zone creation and structure.

# 4. Horizontal Coordinate system *(e.g. UTM z12N WGS84 meters)*

UTM 18N NAD83 meters

# 5. Vertical Coordinate system *(e.g NAVD88)*

NAVD88

# 6. Logos *(URLS or attachements, inc. preferred display order)*

SSHCZO, NCALM, PSU

# 7. Metadata document *(URL or attach – n.A. if provded with data)*

http://www.czo.psu.edu/downloads/Metadataworksheets/LidarLeafOn\_Metadata.docx

# 8. Dataset Citation language

LiDAR data acquisition and processing were completed by the National Center for Airborne Laser Mapping (NCALM), funded by the National Science Foundation Award EAR-0922307, and coordinated by Qinghua Guo for the Susquehanna Shale Hills Critical Zone Observatory funded by the National Science Foundation Award EAR-0725019.

# 9. Dataset Keywords (for search purposes – 200 characters max)

CZO, Critical Zone Observatory, Shaver’s Creek, Shale Hills, Pennsylvania

# 9. PROject roles (inc. organization urls)

**FUNDER(s):** National Science Foundation Critical Zone Observatory Programs

**PARTNER(s):** Susquehanna Shale Hills Critical Zone Observatory

University of California, Merced

**COLLECTOR(s):** National Center for Airborne Laser Mapping