

Data from the 2018 NSF Workshop on Volcanic Blasts.

Elevation Data of Craters

Elevation data were created from photographs taken right after charge detonations. The 3D-data was derived in a standard photogrammetry software (Metashape™). This data was then rasterized and imported into ArcGIS, and is provided here. Fine adjustments were made to better match reference locations of the available site coordinate system.

Contents of the zip archive:

```
data/UMKC
├── Pad1
│   ├── charge-coords_v.a.csv
│   ├── ideal_charge-coords_crater-crs.csv
│   └── raster.tif
├── Pad2
│   ├── elevation
│   │   └── *.adf
│   ├── charge-coords_crater-cs.csv
│   ├── charge-coords.csv
│   └── ideal-charge-coords_crater-cs.csv
├── Pad3
│   ├── block-coords.csv
│   ├── charge-coords_site-crs.csv
│   ├── ideal_charge-coords-crater-crs.csv
│   └── Pad3high1.tif
├── Pad4
│   ├── elevation
│   │   └── *.adf
│   ├── block-coords.csv
│   ├── charge-coords_crater-crs.csv
│   ├── charge-coords_site-crs.csv
│   ├── ideal_charge-coords-crater-crs.csv
│   └── origin_crater-coords.csv
├── pad[i]_[res]_dem_ccoords.geo.tif
├── pad[i]_[res]_dem_ccoords.tif
├── pad[i]_[res]_dem.geo.tif
├── pad[i]_[res]_dem.jpg
├── pad[i]_[res]_hillshade_ccoords.jpg
├── pad[i]_[res]_hillshade_ccoords.tif
├── pad[i]_[res]_hillshade.jpg
└── pad[i]_[res]_hillshade.tif
```

- "Raw" elevation data are in the `Pad[i]` sub-folders. If that folder contains an "elevation" folder, data is stored in the `*.adf` files there. Otherwise elevation data is stored in the geotiff in `Pad[i]`.
- Processed files were fine-adjusted to minimize deviations to reference blocks.
File name pattern: `pad[x]_[res]_[type].[ext]`. If the filename ends in `_ccoords` the file was rotated into the crater coordinate system (rows and columns of the raster are then parallel to x, y coordinate axes). `[x]`: pad number (1 ... 4) `[res]`: spatial resolution (size of a pixel) `[type]`: type of data; either `dem` or `hillshade` `[ext]`: file extension: a file with `geo.tif` extension can be imported into GIS software.
- The `.csv` files contain locations of the explosive charges in the specified coordinate systems.