

# Metadata Report

## Project Name

Koman Fault scarp, central Alai Valley, Kyrgyzstan, August 2017

## Summary

UAV survey of the Koman Fault in the central Alai Valley to measure vertical scarp offsets and for tectono-geomorphic analysis.

## Data Collectors

Roland Freisleben, Magda Patyniak, Ramon Arrowsmith, Angela Landgraf, Atyrgul Dzhumabaeva, Sultan Baikulov

## Site Information

The fault scarp of the Koman Fault is located in the central Alai Valley, an intermontane valley between the Pamir and Tien Shan. The scarp is located ~3 km south of the Kyzilsu river between the Komansu and Tashkungey rivers. It is surrounded and partially covered by a large rock avalanche deposit that is characterized by hummocky topography.

Survey objective: Tectono-geomorphic analysis

Survey date: 2017-07-29, 2017-08-02, and 2017-08-03

Site location: 39.586° to 39.596°N, 72.635° to 72.662°E

## Survey Information

UAV: DJI Phantom 3 4K

Flight altitude: 50-100 m

Image overlap: 80-85%

Camera photo resolution: 4000 x 3000 px

Positioning: global navigation satellite system (GNSS) with a 10 m accuracy; ground control points measured with RTK dGPS

Survey method: Structure-from-Motion from UAV aerial images

SfM software: AgiSoft Photoscan Professional 1.2.5

## Product Information

Number of photos: 1629

Number of ground control points: 39

Number of tie points: 609,840

Dense cloud: 389,221,229

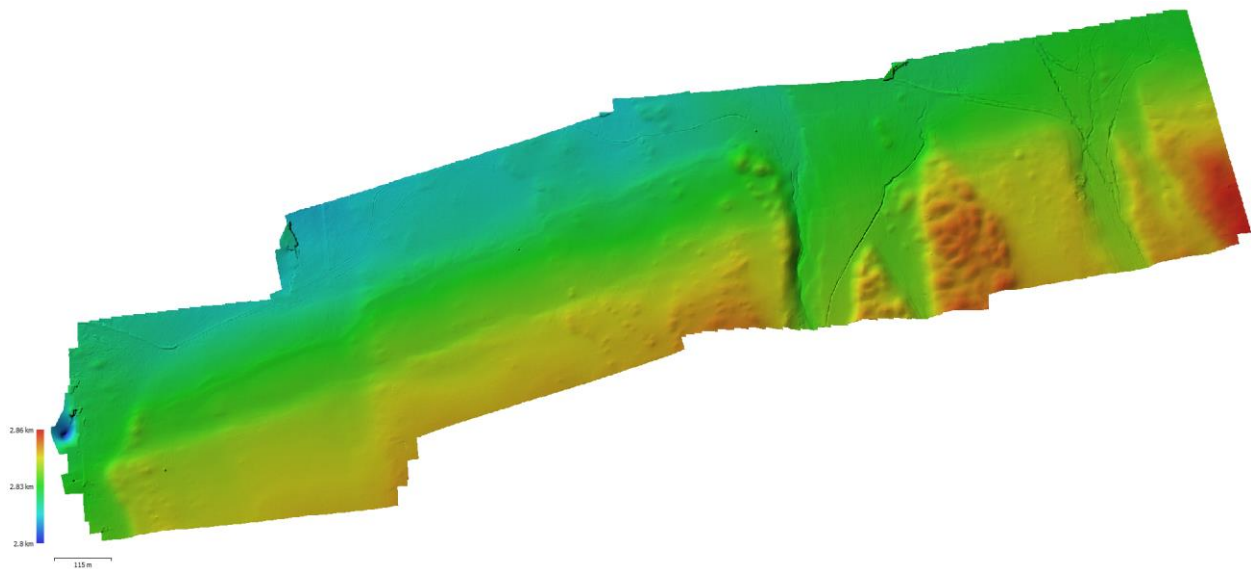
DEM size: 46780 x 25008

DEM resolution: 5.68 cm/px

Coordinate system of dataset: WGS 84 UTM Zone 43N (ESPG:32643)

Orthomosaic resolution: 2.84 cm/px

Data format: Raster



### Misc Notes

Funding: This work was supported by the CaTeNA-project funded by the Federal Ministry of Education and Research (BMBF; Sub-project grant 03G0878E to Manfred Strecker), the Volkswagen Foundation grant AZ 86860 to O. Korup, A. Landgraf, and A. Dzhumabaeva as well as the U.S. National Science Foundation grant EAR-9805319 to R. Arrowsmith. It was further supported by the Institute of Geosciences of the University of Potsdam.

Our fieldwork was kindly supported by the Institute of Seismology at the National Academy of Science of Kyrgyzstan (Bishkek, Kyrgyzstan).