

Metadata Report

Project Name

Survey of Pamir Frontal Thrust fault, trench site T5, Alai Valley, Kyrgyzstan, July 2018.

Summary

UAV survey of trenching site to measure the vertical and horizontal offsets across a fault scarp. This dataset is part of extended trenching study along the central segment of the Pamir Frontal Thrust fault.

Data Collectors

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Processing and upload:

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Site Information

The Tashkungey paleoseismic site is located at the eastern end of the cPFT, on alluvial-fan deposits of a terrace east of the active, ~20-m-deep Tashkungey river channel. We chose to excavate across a portion of the fault scarp which has a double scarp morphology and a total scarp height of 7 m. Additionally we surveyed a terrace west of the trenching site, which is assumed to be younger (Qt4) than the terrace at Tashkungey river (Qt3).

Survey objective: Paleoseismology

Survey date: 2018-08-02 and 2018-08-06

Site location: 39.518663°N 72.780018°E and 39.516398°N 72.761239°E

Survey Info

UAV: DJI Phantom 4 Pro and Mavic Pro

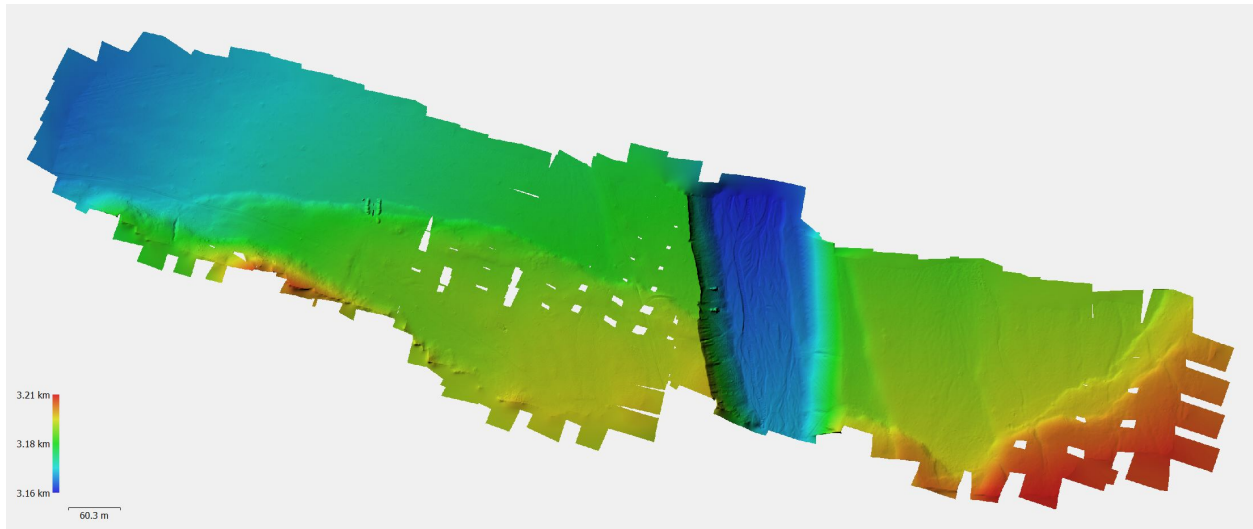
Flight altitude: 60-80 m

Camera photo resolution: 4000 x 3000 px and 5472 x 3648 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



Product info

Number of photos: 386

Number of ground control points: 5

Number of tie points: 324,567

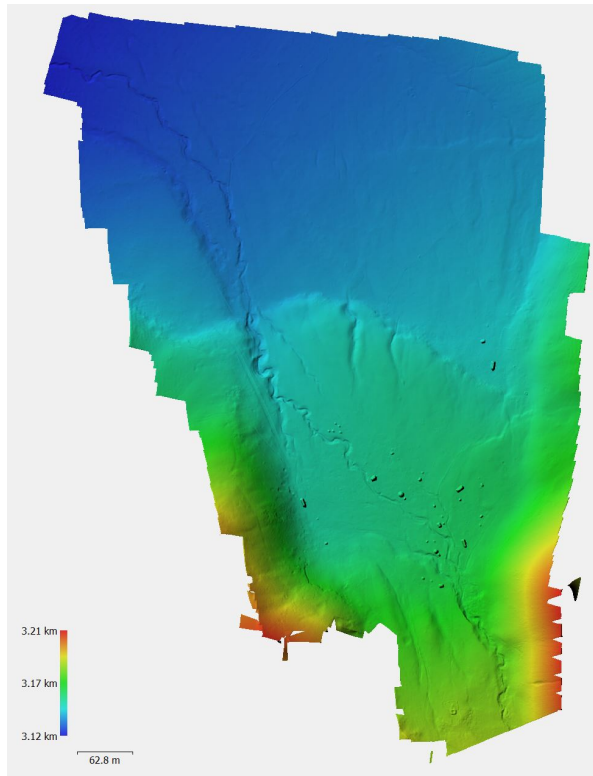
Dense cloud: 320,457,564

DEM size: 17689 x 9116

DEM resolution: 0.1 m/px

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

Orthophoto resolution: 0.05 m/px



Product info

Number of photos: 805

Number of ground control points: 5

Number of tie points: 7,589,287

Dense cloud: 225,637,612

DEM size: 9010 x 10866

DEM resolution: 0.1 m/px

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

Orthophoto resolution: 0.05 m/px

Misc Notes

Funding: This project is part of the CaTeNA-project within the Client II program of and funded by the Federal Ministry of Education and Research (BMBF; Sub-project grant 03G0878E to Manfred Strecker).

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



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Related work: this dataset is included in a doctoral thesis of Magda Patyniak