

Dzhungarian Fault, Kazakhstan, slip rate site “Bear River”

Uploader:

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Target: Dzhungarian Fault right-lateral strike-slip fault in Eastern Kazakhstan; UAV survey to measure the vertical and horizontal offsets across a fault scarp. Work within the EwF project.



Data collectors: Christoph Grützner, Austin Elliott, Aidyn Mukambayev

Survey date: 2015-08

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

UAV: helikite

Flight altitude: 60-80 m

Camera: Ricoh GR11

Positioning: eight ground control points measured with RTK DGPS

SfM software: AgiSoft Photoscan Professional

of photos: 1,058

of tie points: 5196

Dense cloud: 175,254,733

pointsDEM size: 10,529 x 11,756 pixels

DEM Resolution: 0.1 m/px

EPSG: 4326 (WGS84 cartographic)

DEM filetype: GeoTIFF

Orthophoto Resolution: 0.045 m/px

Files: The original source images are available upon request from Christoph Grützner

GCPs:

name	long	lat	alt
dzh3-7g	81.376645518	45.903929170	677.2930
dzh3-6g	81.378473951	45.903939486	656.3400
dzh3-0tg	81.377708110	45.904391199	658.6505
dzh3-5g	81.377130807	45.904699689	653.4900
dzh3-0g	81.371014988	45.907132010	664.8877
dzh3-02g	81.370910226	45.907451877	661.6240
dzh3-03g	81.371261616	45.907605901	658.6511
dzh3-04g	81.371757110	45.907404356	655.9826

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Related work: Campbell, G. E., Walker, R. T., Abdrakhmatov, K., Schwenninger, J. L., Jackson, J., Elliott, J. R., & Copley, A. (2013). The Dzhungarian fault: Late Quaternary tectonics and slip rate of a major right-lateral strike-slip fault in the northern Tien Shan region. *Journal of Geophysical Research: Solid Earth*, 118(10), 5681-5698.

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