

Description of dataset “Klyuchevskoy volcanic group experiment (KISS): Supplementary data of the passive seismological measurement”

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When using the data please cite:

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Abstract

This document describes the supplemental dataset of the X9_2015 network that was operated from 2015 until 2016 within the KISS experiment in the area of the Klyuchevskoy Volcanic Group. In addition, the associated seismic waveform data are archived in the GFZ GEOFON archive with the <https://doi.org/10.14470/K47560642124> (Shapiro et al., 2015) and the associated Scientific Technical Report – Data (Green et al., 2021, <https://doi.org/10.48440/GFZ.B103-21019>). Please refer to this site for any further information.

Coordinates: 57° N, 160° E

Keywords: Volcano seismology, Kamchatka

1. Purpose of this Dataset

Data in the KISS experiment was mainly recorded by Cube3 digitizers which requires a conversion into standard seismological formats including a resampling to adjust the timing of the data to the GPS signals. The data in the GEOFON archive does therefore already include some degree of processing and some loss of information contained in the GPS tags of the raw data. We therefore provide a copy of the raw data as it was retrieved from the Cube digitizers (www.gfz-potsdam.de/gipp → Instruments). Additionally, we provide raw data from the Baikal digitizers and photographs of the sites from the station collection.

1. Data Acquisition – Experiment, schedule, acquisition parameters

Details of the data acquisition can be found in the X9 network description (Shapiro et al., 2015) and the associated data report (Green et al., 2021). The experiment is described in Shapiro et al. (2017) and Green et al. (2020).

3. Data Processing

This dataset contains the raw data as they are produced by the data recorders, so no (pre-)processing has been applied. Processed data can be found at the GFZ GEOFON archive (<https://geofon.gfz-potsdam.de/waveform/archive>) with the DOI <https://doi.org/10.14470/K47560642124> (Shapiro et al., 2015).

4. Content of this Dataset

This dataset has the following structure containing the raw data:

```
- raw/      -      GFZ_cubes      -      < Digitizer name >      -      < start >
              -              -      < Digitizer name >      -      < start >
              -      NSU_cubes      -      < Digitizer name >      -      < start >
              -              -      < Digitizer name >      -      < start >
              -      BAIKALS      -      < Digitizer name >
              ...
```

where the actual data files are contained in the folders. < Digitizer > name refers to the name/number of the digitizer which recorded the data. < start > indicates an intermediate folder named according to the beginning of the recording epoch following the YYYYMMDD scheme.

Photographs of the sites are contained in the following directory structure:

```
- info/Station_photos - photos      - < Station >
                              - < Station >
                              -      ...
```

Here < Station > refers to the station field of the seedID - the name of the station. The association of station and digitizer names is provided in the table in Appendix 1.

6. Data Availability/Access

Data is archived at the *GIPP Experiment and Data Archive* where it is freely available for further use. When using the data, please give reference to this data publication. Recommended citation is:

Shapiro, N.M., et al. (2020) Klyuchevskoy volcanic group experiment (KISS): Supplemental Data. GFZ Data Services. <http://doi.org/10.5880/GIPP.201505.1>

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Appendix 1: Station table

Station	Sensor type	Sensor Name	Digitizer type	Digitizer name
B01	CME	569	Baikal	52
B02	CME	0	Baikal	112
B03	CME	576	Baikal	37
B04	CME	0	Baikal	63
B05	CME	0	Baikal	53
B06	CME	0	Baikal	110
B07	CME	719	Baikal	132
B08	CME	0	Baikal	101
B09	CME	707	Baikal	95
IR1	Trillium	TC-021	CUBE	821
IR10	Trillium	TC-034	CUBE	832
IR11	Mark	MS-1181	CUBE	833
IR12	Trillium	TC-036	CUBE	834
IR13	Mark	MS-1183	CUBE	835
IR14	Trillium	TC-037	CUBE	836
IR15	Mark	MS11-84	CUBE	837
IR16	Trillium	TC-049	CUBE	838
IR17g	Guralp	T6E02	Guralp	0
IR18g	Guralp	T6Q74	CUBE	ADE
IR19g	Guralp	T6Q76	CUBE	ADF
IR2	Mark	MS-1879	CUBE	822
IR20g	Guralp	T6E09	Guralp	0
IR3	Trillium	TC-028	CUBE	823
IR4	Mark	MS-2831	CUBE	824
IR5	Mark	MS-3042	CUBE	779
IR6	Mark	MS-1169	CUBE	828
IR7	Trillium	TC-031	CUBE	829
IR8	Mark	MS-1177	CUBE	830
IR9	Trillium	TC-032	CUBE	831
OL1	Mark	MS-1338	CUBE	861
OL2	Trillium	TC-061	CUBE	862
OL3	Mark	MS1340a	CUBE	863
OL4	Mark	MS13-45	CUBE	866
OL5	Trillium	TC-063	CUBE	867
OL6	Trillium	TC-064	CUBE	868
OL7g	Guralp	T6Q73	CUBE	ADH
OL8g	Guralp	T6D98	Guralp	0
OL9g	Guralp	T6D99	Guralp	0
OR1	Trillium	TC-007	CUBE	764
OR10	Trillium	TC-012	CUBE	773
OR11	Mark	MS1357a	CUBE	774
OR12	Trillium	TC-013	CUBE	775
OR13	Mark	MS-1823	CUBE	776
OR14	Trillium	TC-014	CUBE	777
OR15	Mark	MS-1824	CUBE	778
OR16	Trillium	TC-015	CUBE	782
OR17	Mark	MS-1826	CUBE	810