

Crustal-scale fault systems in the Korean Peninsula unraveled by reflection seismic data - Final stack results and example receiver gathers from South Korea seismic reflection campaign in 2021

SND-ID: 2022-120-1. **Version:** 1. **DOI:** <https://doi.org/10.57804/f8w5-6r98>

Download data

korea2021_P3_crossdipcorrected_migrated.segy (6.92 MB)
korea2021_P3_crossdipcorrected_stack.segy (22.26 MB)
korea2021_P3_migrated.segy (16.52 MB)
korea2021_P3_rec1185_raw_refst_fil_res_tm.segy (6.06 MB)
korea2021_P3_rec1185_raw.segy (3.3 MB)
korea2021_P3_rec487_raw_refst_fil_res_tm.segy (5.72 MB)
korea2021_P3_rec487_raw.segy (3.66 MB)
korea2021_P3_stack.segy (53.2 MB)
korea2021_P3_streamer_stack.segy (4.07 MB)

Download all files

2022-120-1-1.zip (~121.71 MB)

Citation

Zappalà, S. (2022) Crustal-scale fault systems in the Korean Peninsula unraveled by reflection seismic data - Final stack results and example receiver gathers from South Korea seismic reflection campaign in 2021 (Version 1) [Data set]. Uppsala University. Available at: <https://doi.org/10.57804/f8w5-6r98>

Creator/Principal investigator(s)

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Research principal

[Uppsala University](#) - Department of Earth Sciences

Description

Resulting data from the 2021 campaign in the Seoul metropolitan area (South Korea). Around 40 km of high-resolution reflection seismic data were acquired along an E-W profile cross-cutting major crustal scale fault systems. The raw data were obtained with 2 seismic vibrators as source and 421 10 Hz geophones as receivers, with an asymmetric split spread and roll-along geometry. The acquired data has been processed with Globe Claritas software and it is provided in a standard seg-y format.

A full description of the data acquisition is provided in:

Samuel Zappalà, Alireza Malehmir, Tae-Kyung Hong, Christopher Juhlin, Junhyung Lee, Myrto Papadopoulou, Bojan Brodic, Seongjun Park, Dongchan Chung, Byeongwoo Kim, & Jeongin Lee. Crustal-scale fault systems in the Korean Peninsula unraveled by reflection seismic data, Earth and

Space Science, submitted

However, the methodology is the same as used in the previous study:

Malehmir, A., Hong, T.-K., Lee, J., Zappalá, S., Brodic, B., Chung, D., Kim, B., Park, S., Lee, J., & Kil, D. (2022). Fault intersections control short period intraplate start-stop seismicity in the Korean Peninsula. In *Tectonophysics* (No. 229387; Vol. 834). <https://doi.org/10.1016/j.tecto.2022.229387>

In the dataset are present:

- 2 examples of receiver gathers raw: (korea2021_P3_rec1185_raw.segy and korea2021_P3_rec487_raw.segy).
- the same 2 receiver gathers after the applied processing: (korea2021_P3_rec1185_raw_rfst_fil_res_tm.segy and korea2021_P3_rec487_raw_rfst_fil_res_tm.segy).
- stack section acquired with wireless receivers (20 m spacing), unmigrated and migrated: (korea2021_P3_stack.segy and korea2021_P3_migrated.segy).
- stack section acquired with wireless receivers (20 m spacing) with an applied cross dip correction for 10 degrees towards north, unmigrated and migrated: (korea2021_P3_crossdipcorrected_stack.segy and korea2021_P3_crossdipcorrected_migrated.segy).
- unmigrated stack section acquired with landstreamer receivers (2 m spacing): (korea2021_P3_streamer_stack.segy).

Data contains personal data

No

Language

[English](#)

Time period(s) investigated

2021-07-10 - 2021-08-05

Data format / data structure

[Geospatial](#)

[Other](#)

Geographic spread

Geographic location: [Korea, the Republic of](#)

Responsible department/unit

Department of Earth Sciences

Contributor(s)

Yonsei University

Funding 1

- Funding agency: Korean Meteorological Administration (KMA) Research and Development Program
- Funding agency's reference number: KMI2022-00710

Funding 2

- Funding agency: Basic Science Research Program of National Research Foundation of Korea
- Funding agency's reference number: NRF-2017R1A6A1A07015374

Research area

[Geophysics](#) (Standard för svensk indelning av forskningsämnen 2011)

Keywords

[Seismic profile](#), [Geological faults](#), [South korea](#)

Publications

Malehmir, A., Hong, T.-K., Lee, J., Zappalá, S., Brodic, B., Chung, D., Kim, B., Park, S., Lee, J., & Kil, D. (2022). Fault intersections control short period intraplate start-stop seismicity in the Korean Peninsula. In *Tectonophysics* (No. 229387; Vol. 834). <https://doi.org/10.1016/j.tecto.2022.229387>

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DOI: <https://doi.org/10.1016/j.tecto.2022.229387>

If you have published anything based on these data, [please notify us](#) with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

Polygon (Lon/Lat)

126.964637, 37.827752

127.462019, 37.827752

127.462019, 38.094106

126.964637, 38.094106

126.964637, 37.827752

Accessibility level

Access to data through SND

Data are freely accessible

Use of data

[Things to consider when using data shared through SND](#)

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Versions

Version 1. 2022-08-04

Contact for questions about the data

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