The role of fluids in earthquake swarms in northeastern Noto Peninsula, central Japan: Insights from source mechanisms

Sayaka Takano[1], Yoshihiro Hiramatsu[*2], Yohei Yukutake[3]

[1]Graduate School of Natural Science and technology, Kanazawa University, Kanazawa 920-1192, Japan
e-mail: sayaka0701@stu.kanazawa-u.ac.jp

[2]Yoshihiro Hiramatsu
Faculty of Geosciences and Civil Engineering, Institute of Science and Engineering, Kanazawa University, Kanazawa 920-1192, Japan
e-mail: yoshizo@staff.kanazawa-u.ac.jp

[3]Yohei Yukutake
Earthquake Research Institute, the University of Tokyo, Bunkyo-ku 113-0032, Japan
e-mail: yukutake@eri.u-tokyo.ac.jp

[*]Correspondence: (yoshizo@staff.kanazawa-u.ac.jp)

Contents:

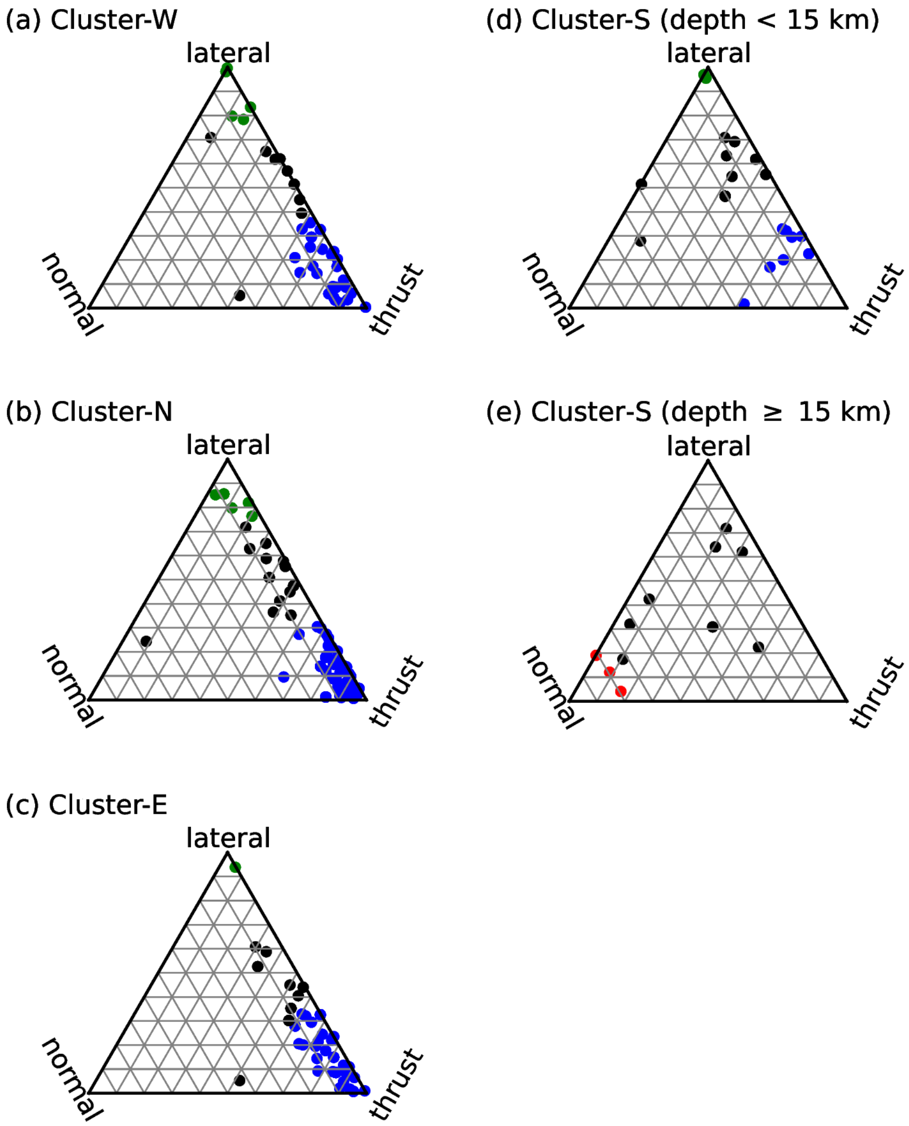

Fig. S1. Focal mechanisms classified based on the criteria of Frohlich (1992). Red, normal fault; blue, reverse fault; green, lateral fault; black, other intermediate fault mechanisms.

Table S1. List of earthquake origin times (JST), depths, M_w (moment magnitude), and information describing the two nodal planes (strike, dip, and slip).

See Table_S1.xlsx.

Table S2. Summary of the results of our stress tensor inversion. σ_1, σ_2, and σ_3 are the maximum, intermediate, and minimum principal stresses, respectively. *R* is the stress ratio, defined as $(\sigma_1 - \sigma_2)/(\sigma_1 - \sigma_3)$.

	Number	R	σ_1		σ_2		σ_3	
			Azimuth	Plunge	Azimuth	Plunge	Azimuth	Plunge
All	228	0.70	319.4	10.5	229.3	0.2	138.5	79.5
Cluster S (depth < 15 km)	21	0.85	300.8	31.7	187.1	33.1	62.9	40.8
Cluster S (depth ≥ 15 km)	11	0.72	166.2	47.3	335.1	42.2	70.1	5.5
Cluster W	42	0.71	307.6	5.1	217.5	1.0	116.2	84.8
Cluster N	102	0.59	326.7	14.9	56.8	0.3	148.0	75.1
Cluster E	52	0.67	326.2	9.2	235.3	5.3	115.5	79.3
Clusters W, N, E	196	0.64	320.9	10.3	51.3	2.4	154.4	79.4