

## **Crustal Stress Map Data in Kanto Region, central Japan**

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### **1. Introduction**

Geological Survey of Japan, AIST is constructing a crustal stress map in Japanese islands with high spatial resolution based on focal mechanism solution of microearthquakes (Imanishi, 2014). This open-file report includes 10km-mesh map of the crustal stress in the Kanto region (Fig. 1) and focal mechanism solutions (Fig. 2) determined in Imanishi et al. (2019). For details of the data, please refer to Imanishi et al. (2019).

### **2. Data**

2.1 10km-mesh map of the crustal stress (data/10km\_mesh.dat)

The format of the data is as follows.

Lat	Lon	S <sub>Hmax</sub>	var(S <sub>Hmax</sub> )	fptype	var(fptype)	N	R	G	B
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Lat: Latitude of mesh

Lon: Longitude of mesh

S<sub>Hmax</sub>: S<sub>Hmax</sub> direction ( °) (angle measured clockwise from the north)

var(S<sub>Hmax</sub>): Variance of S<sub>Hmax</sub> direction (degree)

fptype: The type of stress field based on Shearer et al. (2006). fptype ranges from -1 to 1.

var(fptype): Variance of fptype

N: The number of focal mechanisms included in the corresponding mesh

R: R (red) value of fptype color scale (RGB) (0–255)

G: G (green) value of fptype color scale (RGB) (0–255)

B: B (blue) value of fptype color scale (RGB) (0–255)

## 2.2 Focal mechanism (data/mec\_imanishi\_et\_al\_2019.dat)

The format of the data is as follows.

YY	MM	DD	HH	MIN	SS	Lat	Lon	Dep	Mw	STR1	DIP1	SLP1
STR2	DIP2	SLP2	Pa	Pp	Ba	Bp	Ta	Tp	TYPE	R	G	B

YY: Year

MM: Month

DD: Day

HH: Hour

MIN: Minute

SS: Second

Lat: Latitude

Lon: Longitude

Dep: Depth (km)

Mw: Moment magnitude

STR1: Strike of nodal plane 1 (°)

DIP1: Dip angle of nodal plane 1 (°)

SLP1: Slip angle of nodal plane 1 (°)

STR2: Strike of nodal plane 2 (°)

DIP2: Dip angle of nodal plane 2 (°)

SLP2: Strike of nodal plane 2 (°)

Pa: Azimuth of P-axis (°)

Pp: Plunge of P-axis (°)

Ba: Azimuth of B-axis (°)

Bp: Plunge of B-axis (°)

Ta: Azimuth of T-axis (°)

Tp: Plunge of T-axis (°)

TYPE: Faulting type defined by Flohlich (1992) (R: reverse-faulting, S: strike-slip faulting, N: normal faulting, O: other)

R: R (red) value of color scale (RGB) of triangle diagram by Flohlich (1992) (0–255)

G: G (green) value of color scale (RGB) of triangle diagram by Flohlich (1992) (0–255)

B: B (blue) value of color scale (RGB) of triangle diagram by Flohlich (1992) (0–255)

(Note) This data does not include the focal mechanism solutions of Imanishi et al.

(2012), Imanishi et al. (2013), and the Japan Meteorological Agency earthquake catalog, which were used in constructing the 10km-mesh map of the crustal stress. If you need these data, please contact the first author (imani@ni.aist.go.jp).

### 3. Disclaimer

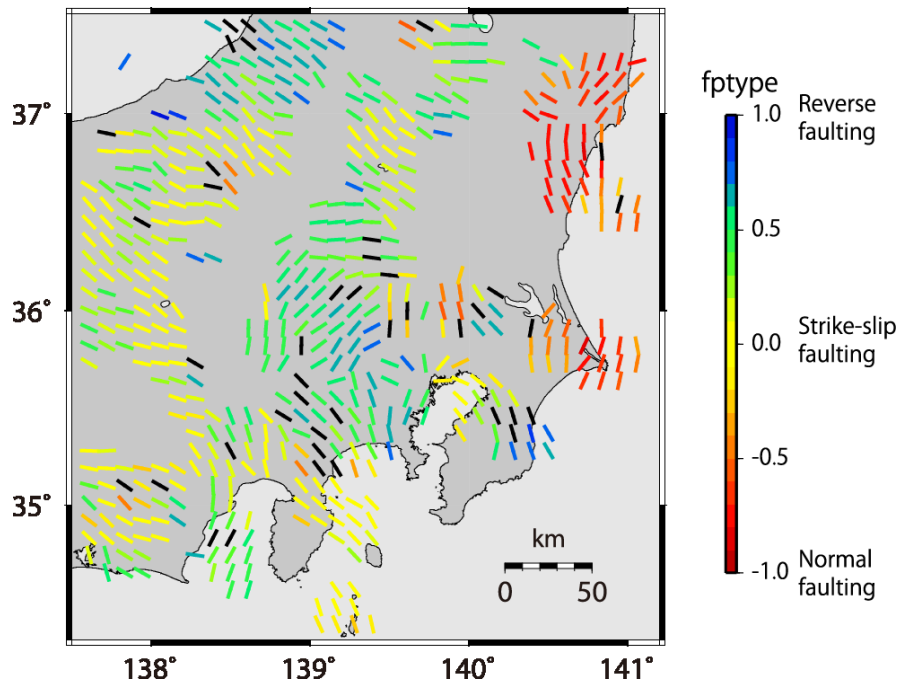
The Geological Survey of Japan, AIST shall not be responsible or liable for any damages that may arise from the use of stress map data on this website.

### 4. Citation

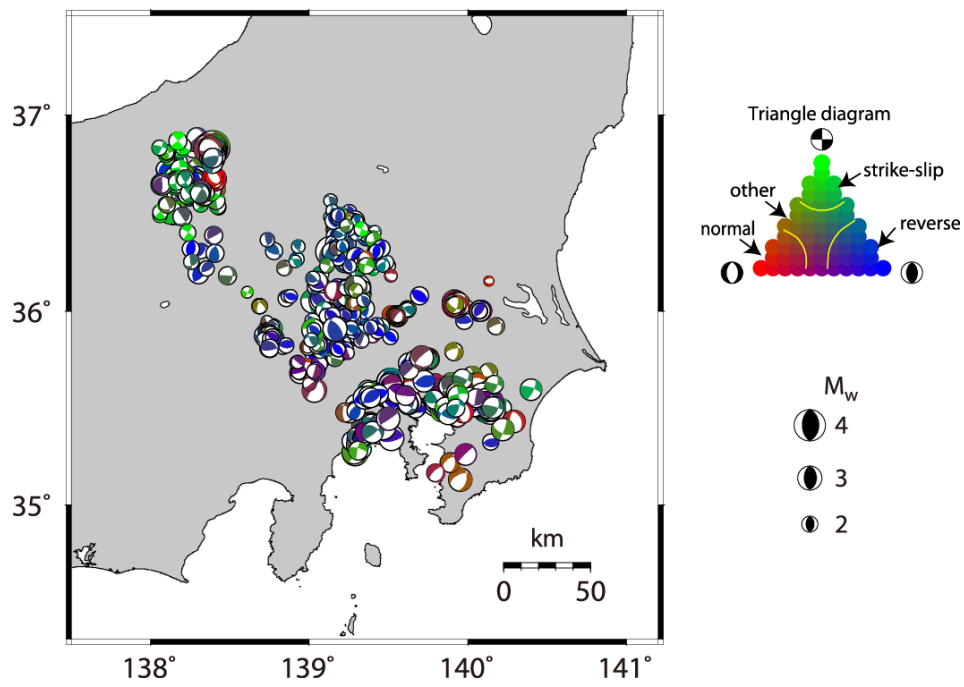
Imanishi, K., Uchide, T., Ohtani, M., Matsushita, R., Nakai, M. (2019) Crustal Stress Map in Kanto Region, central Japan. Open-File Report of the Geological Survey of Japan, AIST, no. 681, p.1-4.

### References

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**Fig.1** 10-km mesh map of the crustal stress



**Fig.2** Focal mechanism solutions