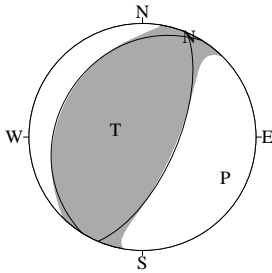


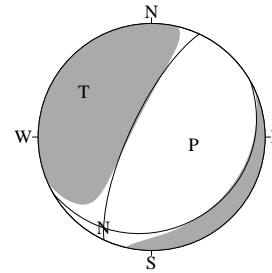
# CMT SOLUTIONS FOR EARTHQUAKES IN MAY, 2019

2019/05/04 11:41:31.3  
 E OFF MIYAGI PREF  
 Hypo.:38°17.9'N 141°53.0'E 46km



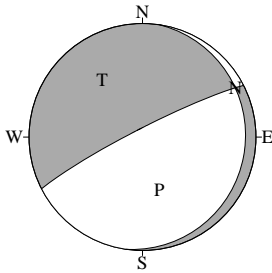
Cent.:38°17.9'N 141°53.2'E 46km  $\Delta t = 0.5$   
 Mo:  $9.11 \times 10^{15}$  N·m Mw:4.6 Mj:4.5 (sec)  
 mrr: 6.63 mtt:-0.95 mff:-5.68  
 mrt: 2.11 mrf: 5.42 mtf:-3.30 ( $\times 10^{15}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 23° 65° 86° P-axis:-9.46 116° 20°  
 NP2:212° 25° 98° T-axis: 8.75 285° 70°  
 N-axis: 0.71 25° 3°  
 V.R.: 64%  $\epsilon$ :-0.07 N:12 COMP:16

2019/05/04 21:34:55.0  
 ISHIKARI DEPRESSION  
 Hypo.:42°43.7'N 141°44.2'E 133km



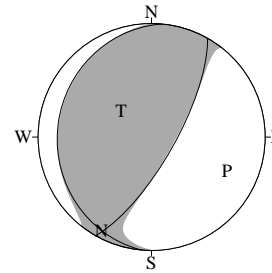
Cent.:42°43.8'N 141°44.0'E 133km  $\Delta t = 0.4$   
 Mo:  $3.32 \times 10^{15}$  N·m Mw:4.3 Mj:4.2 (sec)  
 mrr:-1.53 mtt: 0.54 mff: 1.00  
 mrt: 1.10 mrf: 2.55 mtf: 1.25 ( $\times 10^{15}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 61° 19° -56° P-axis:-3.14 100° 59°  
 NP2:205° 74°-101° T-axis: 3.50 304° 29°  
 N-axis:-0.35 208° 11°  
 V.R.: 81%  $\epsilon$ : 0.10 N:10 COMP:15

2019/05/05 01:40:25.8  
 OFF NEMURO PENINSULA  
 Hypo.:43°10.6'N 146°25.6'E 52km



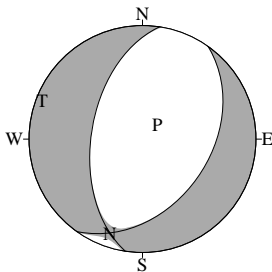
Cent.:43° 7.2'N 146°25.3'E 35km  $\Delta t = 2.7$   
 Mo:  $8.91 \times 10^{16}$  N·m Mw:5.2 Mj:5.3 (sec)  
 mrr:-1.84 mtt: 0.42 mff: 1.42  
 mrt: 7.74 mrf: 3.81 mtf: 1.49 ( $\times 10^{16}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 9° 10°-144° P-axis:-8.92 162° 50°  
 NP2:243° 84° -82° T-axis: 8.91 325° 38°  
 N-axis: 0.00 62° 8°  
 V.R.: 79%  $\epsilon$ : 0.00 N:21 COMP:48

2019/05/05 04:51:43.6  
 E OFF MIYAGI PREF  
 Hypo.:38°44.3'N 142°18.8'E 38km



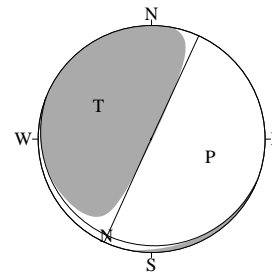
Cent.:38°46.9'N 142°19.0'E 38km  $\Delta t = 0.5$   
 Mo:  $1.20 \times 10^{16}$  N·m Mw:4.7 Mj:4.7 (sec)  
 mrr: 0.62 mtt: 0.01 mff:-0.63  
 mrt: 0.52 mrf: 0.85 mtf:-0.24 ( $\times 10^{16}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 30° 73° 97° P-axis:-1.23 114° 28°  
 NP2:185° 18° 67° T-axis: 1.17 311° 61°  
 N-axis: 0.06 208° 7°  
 V.R.: 77%  $\epsilon$ :-0.05 N:19 COMP:38

2019/05/07 23:42:23.1  
 FAR E OFF CENTRAL HONSHU  
 Hypo.:35°21.1'N 142°40.0'E 59km



Cent.:35°14.7'N 142°40.6'E 16km  $\Delta t = 0.9$   
 Mo:  $2.34 \times 10^{16}$  N·m Mw:4.8 Mj:4.8 (sec)  
 mrr:-2.17 mtt: 0.23 mff: 1.94  
 mrt:-0.33 mrf: 0.65 mtf: 0.83 ( $\times 10^{16}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 35° 41° -69° P-axis:-2.35 45° 75°  
 NP2:189° 53°-107° T-axis: 2.32 291° 6°  
 N-axis: 0.03 199° 13°  
 V.R.: 84%  $\epsilon$ :-0.01 N:40 COMP:84

2019/05/08 02:58:29.8  
 SE OFF ETOROFU  
 Hypo.:44° 6.2'N 148° 2.2'E 0km

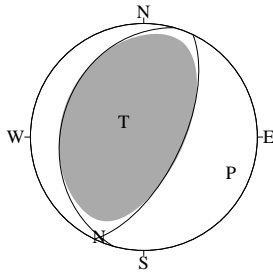


Cent.:44° 6.2'N 148° 3.8'E 10km  $\Delta t = 0.7$   
 Mo:  $1.86 \times 10^{16}$  N·m Mw:4.8 Mj:4.9 (sec)  
 mrr: 0.04 mtt: 0.09 mff:-0.13  
 mrt: 0.79 mrf: 1.67 mtf: 0.23 ( $\times 10^{16}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1:112° 7° -3° P-axis:-1.80 107° 45°  
 NP2:205° 90° -97° T-axis: 1.93 302° 44°  
 N-axis:-0.13 205° 7°  
 V.R.: 60%  $\epsilon$ : 0.07 N:18 COMP:30

## EQUAL AREA PROJECTON, LOWER HEMISPHERE.

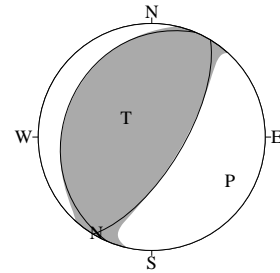
Hypo.:Location of hypocenter, Cent.:Location of centroid,  $\Delta t$ :Centroid time minus origin time  
 Mo:Total scalar moment, Mw:Moment Magnitude, Mj:JMA Magnitude  
 mrr,mtt,mff,mrt,mrf,mtf:Moment tensor components, STR,DIP,SLIP:Fault parameters of nodal plane  
 MOM,AZM,PLG:Moment tensor component, azimuth and plunge of P-, T-, N-axis  
 V.R.:Variance Reduction,  $\epsilon$ :Non-double couple component ratio, N:Number of stations, COMP:Number of components

2019/05/10 07:43:21.2  
 HYUGANADA REGION  
 Hypo.:31°47.1'N 131°59.5'E 25km



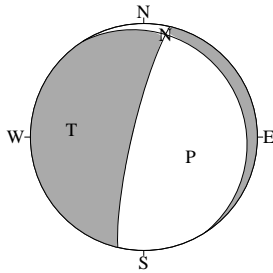
Cent.:31°29.7'N 131°59.7'E 32km  $\Delta t = 3.2$   
 Mo:  $4.30 \times 10^{17}$  N·m Mw:5.7 Mj:5.6 (sec)  
 mrr: 3.63 mtt:-0.63 mff:-3.00  
 mrt: 1.26 mrf: 2.16 mtf:-1.01 ( $\times 10^{17}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 26° 63° 95° P-axis:-4.20 112° 18°  
 NP2:196° 28° 81° T-axis: 4.40 307° 72°  
 N-axis:-0.30 204° 4°  
 V.R.: 74%  $\epsilon$ : 0.07 N:20 COMP:39

2019/05/10 08:48:41.6  
 HYUGANADA REGION  
 Hypo.:31°48.0'N 131°58.4'E 25km



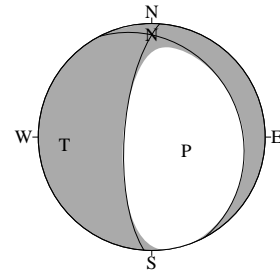
Cent.:31°39.9'N 131°57.8'E 32km  $\Delta t = 5.7$   
 Mo:  $2.66 \times 10^{18}$  N·m Mw:6.2 Mj:6.3 (sec)  
 mrr: 1.81 mtt:-0.30 mff:-1.51  
 mrt: 1.01 mrf: 1.58 mtf:-0.85 ( $\times 10^{18}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 31° 68° 93° P-axis:-2.72 119° 22°  
 NP2:203° 23° 82° T-axis: 2.59 307° 67°  
 N-axis: 0.13 210° 3°  
 V.R.: 79%  $\epsilon$ :-0.05 N:24 COMP:51

2019/05/11 08:59:40.0  
 HYUGANADA REGION  
 Hypo.:32°41.4'N 132°17.6'E 36km



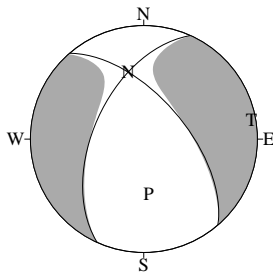
Cent.:32°43.4'N 132°17.4'E 26km  $\Delta t = 2.3$   
 Mo:  $2.82 \times 10^{16}$  N·m Mw:4.9 Mj:5.0 (sec)  
 mrr:-0.80 mtt:-0.15 mff: 0.95  
 mrt: 0.67 mrf: 2.59 mtf:-0.19 ( $\times 10^{16}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1:327° 12°-135° P-axis:-2.82 113° 53°  
 NP2:193° 82° -81° T-axis: 2.83 276° 36°  
 N-axis:-0.01 12° 8°  
 V.R.: 85%  $\epsilon$ : 0.00 N:42 COMP:94

2019/05/12 15:07:43.7  
 HYUGANADA REGION  
 Hypo.:32°42.3'N 132°17.6'E 37km



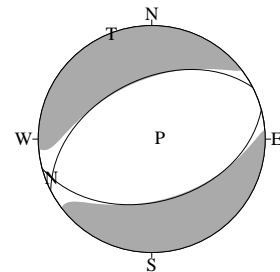
Cent.:32°42.3'N 132°17.2'E 37km  $\Delta t = 0.4$   
 Mo:  $3.67 \times 10^{15}$  N·m Mw:4.3 Mj:4.3 (sec)  
 mrr:-2.37 mtt: 0.09 mff: 2.28  
 mrt: 0.49 mrf: 2.75 mtf:-0.53 ( $\times 10^{15}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1:333° 23°-119° P-axis:-3.76 112° 63°  
 NP2:184° 70° -78° T-axis: 3.58 265° 24°  
 N-axis: 0.18 360° 11°  
 V.R.: 79%  $\epsilon$ :-0.05 N:19 COMP:24

2019/05/13 14:01:46.7  
 FAR E OFF IZU ISLANDS  
 Hypo.:30°31.8'N 143°28.4'E 18km



Cent.:30°31.5'N 143°31.6'E 10km  $\Delta t = 0.6$   
 Mo:  $1.39 \times 10^{16}$  N·m Mw:4.7 Mj:5.2 (sec)  
 mrr:-0.83 mtt:-0.56 mff: 1.39  
 mrt: 0.61 mrf:-0.06 mtf:-0.30 ( $\times 10^{16}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1:319° 60°-137° P-axis:-1.33 175° 50°  
 NP2:204° 53° -38° T-axis: 1.45 80° 4°  
 N-axis:-0.12 347° 39°  
 V.R.: 71%  $\epsilon$ : 0.08 N:14 COMP:19

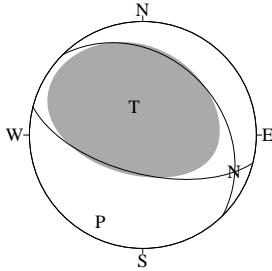
2019/05/13 18:59:34.9  
 E OFF FUKUSHIMA PREF  
 Hypo.:37° 9.3'N 141°14.8'E 21km



Cent.:37° 9.3'N 141°14.7'E 10km  $\Delta t = 0.4$   
 Mo:  $4.66 \times 10^{15}$  N·m Mw:4.4 Mj:4.7 (sec)  
 mrr:-4.43 mtt: 4.16 mff: 0.27  
 mrt: 0.03 mrf: 0.47 mtf: 1.76 ( $\times 10^{15}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 75° 44° -81° P-axis:-4.48 81° 84°  
 NP2:243° 47° -98° T-axis: 4.84 339° 1°  
 N-axis:-0.36 249° 6°  
 V.R.: 78%  $\epsilon$ : 0.07 N:29 COMP:44

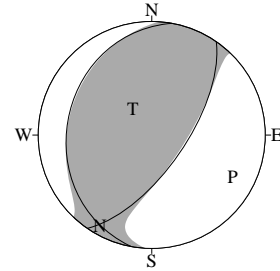
EQUAL AREA PROJECTON, LOWER HEMISPHERE.

2019/05/15 05:55:27.2  
 E OFF HOKKAIDO  
 Hypo.: 43°36.2'N 147°50.1'E 5km



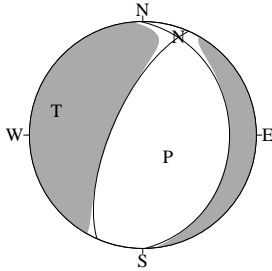
Cent.: 43°33.1'N 147°50.1'E 54km  $\Delta t = 7.2$   
 Mo:  $1.10 \times 10^{17}$  N·m Mw: 5.3 Mj: 5.0 (sec)  
 mrr: 0.93 mtt: -0.62 mff: -0.32  
 mrt: 0.62 mrf: 0.05 mtf: 0.33 ( $\times 10^{17}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 104° 62° 75° P-axis: -1.00 206° 16°  
 NP2: 315° 32° 117° T-axis: 1.20 343° 69°  
 N-axis: -0.20 112° 14°  
 V.R.: 80%  $\epsilon$ : 0.17 N:20 COMP:45

2019/05/15 14:24:31.2  
 NEAR AMAMI-OSHIMA ISLAND  
 Hypo.: 29°44.6'N 130°41.1'E 36km



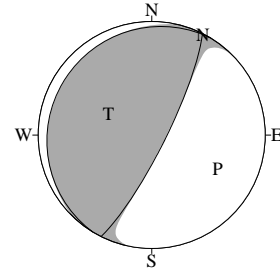
Cent.: 29°39.9'N 130°42.8'E 30km  $\Delta t = 2.0$   
 Mo:  $4.80 \times 10^{17}$  N·m Mw: 5.7 Mj: 5.7 (sec)  
 mrr: 3.33 mtt: -0.17 mff: -3.16  
 mrt: 2.03 mrf: 2.48 mtf: -1.60 ( $\times 10^{17}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 35° 66° 100° P-axis: -5.00 117° 21°  
 NP2: 190° 26° 68° T-axis: 4.60 324° 67°  
 N-axis: 0.40 210° 9°  
 V.R.: 65%  $\epsilon$ : -0.08 N:37 COMP:82

2019/05/25 15:20:46.6  
 KUJUKURI COAST BOSO PEN  
 Hypo.: 35°21.4'N 140°17.4'E 38km



Cent.: 35°23.1'N 140°17.5'E 38km  $\Delta t = 0.7$   
 Mo:  $3.09 \times 10^{16}$  N·m Mw: 4.9 Mj: 5.1 (sec)  
 mrr: -2.07 mtt: -0.12 mff: 2.20  
 mrt: 1.03 mrf: 1.91 mtf: 0.52 ( $\times 10^{16}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 359° 24° -113° P-axis: -3.02 131° 66°  
 NP2: 204° 68° -80° T-axis: 3.15 286° 22°  
 N-axis: -0.13 20° 9°  
 V.R.: 79%  $\epsilon$ : 0.04 N:46 COMP:87

2019/05/26 08:58:47.7  
 FAR E OFF SANRIKU  
 Hypo.: 39°54.0'N 143°23.9'E 9km



Cent.: 39°54.0'N 143°24.6'E 10km  $\Delta t = 0.4$   
 Mo:  $4.75 \times 10^{15}$  N·m Mw: 4.4 Mj: 4.6 (sec)  
 mrr: 1.53 mtt: -0.27 mff: -1.26  
 mrt: 1.99 mrf: 4.00 mtf: -0.77 ( $\times 10^{15}$  N·m)  
 STR DIP SLIP MOM AZM PLG  
 NP1: 27° 80° 89° P-axis: -4.83 117° 35°  
 NP2: 211° 10° 95° T-axis: 4.67 296° 55°  
 N-axis: 0.16 27° 1°  
 V.R.: 70%  $\epsilon$ : -0.03 N:19 COMP:25

EQUAL AREA PROJECTON, LOWER HEMISPHERE.