

# 1996年10月・12月の余震

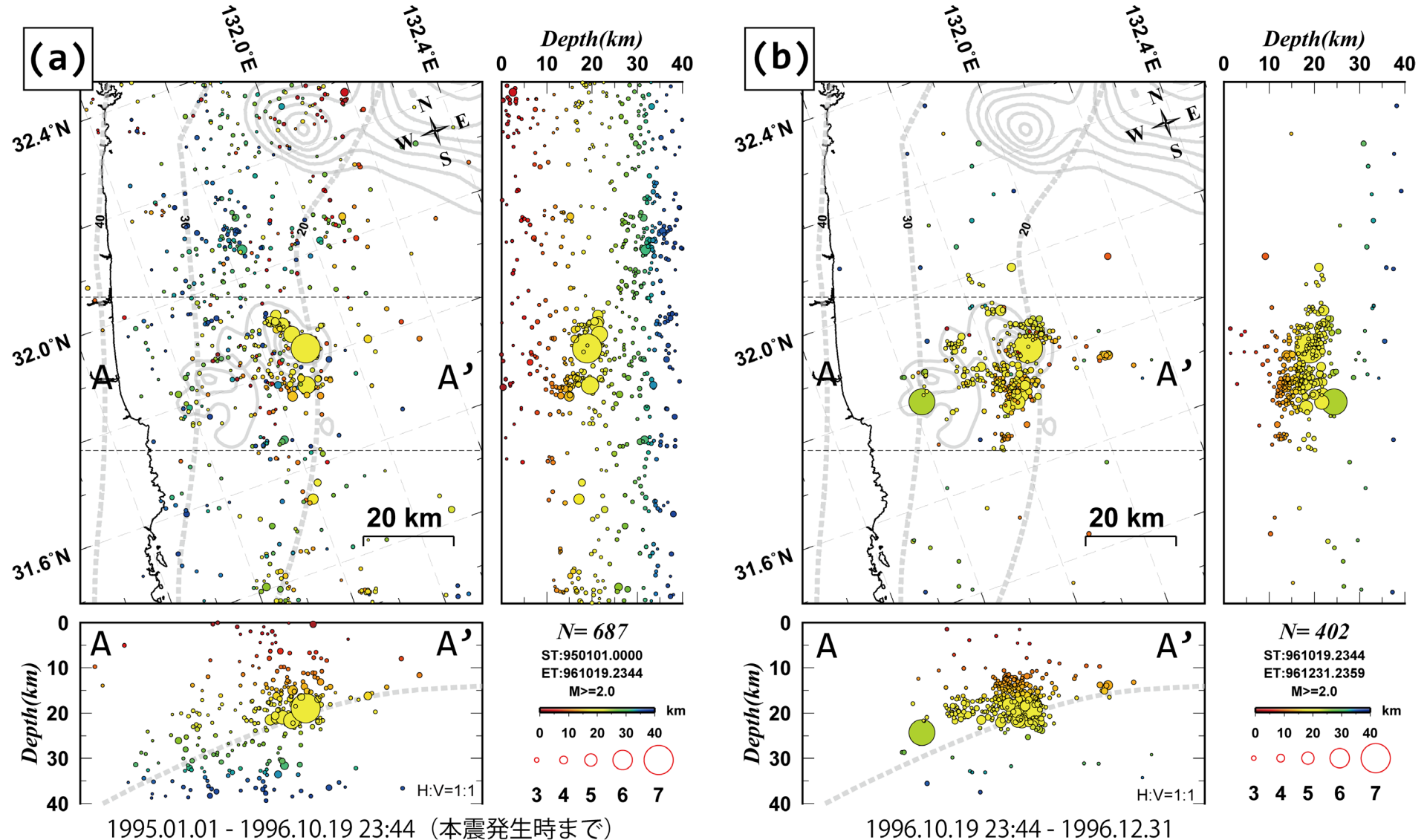
## —震源再決定—

### 震源分布

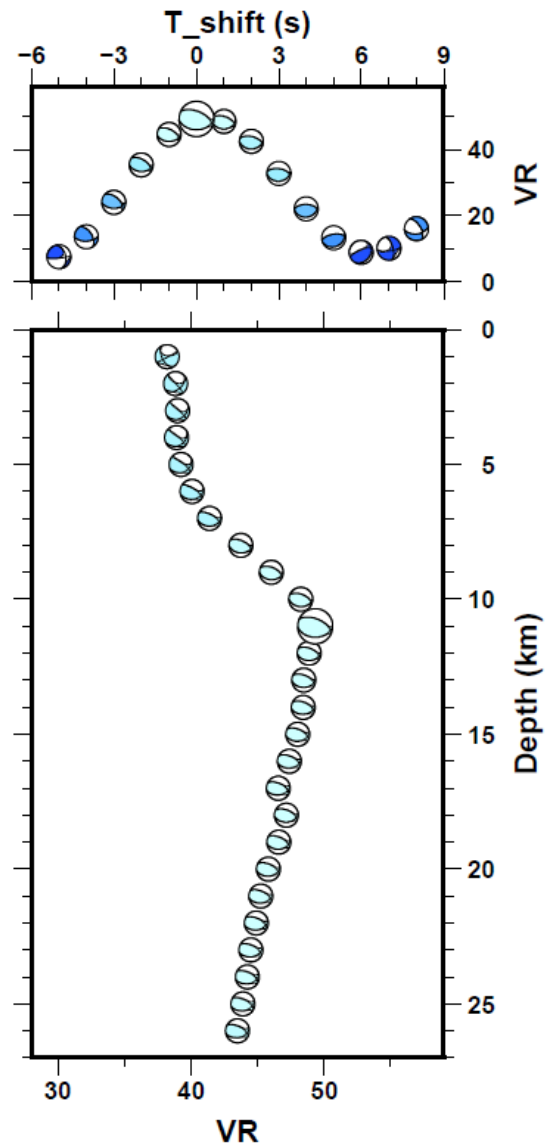
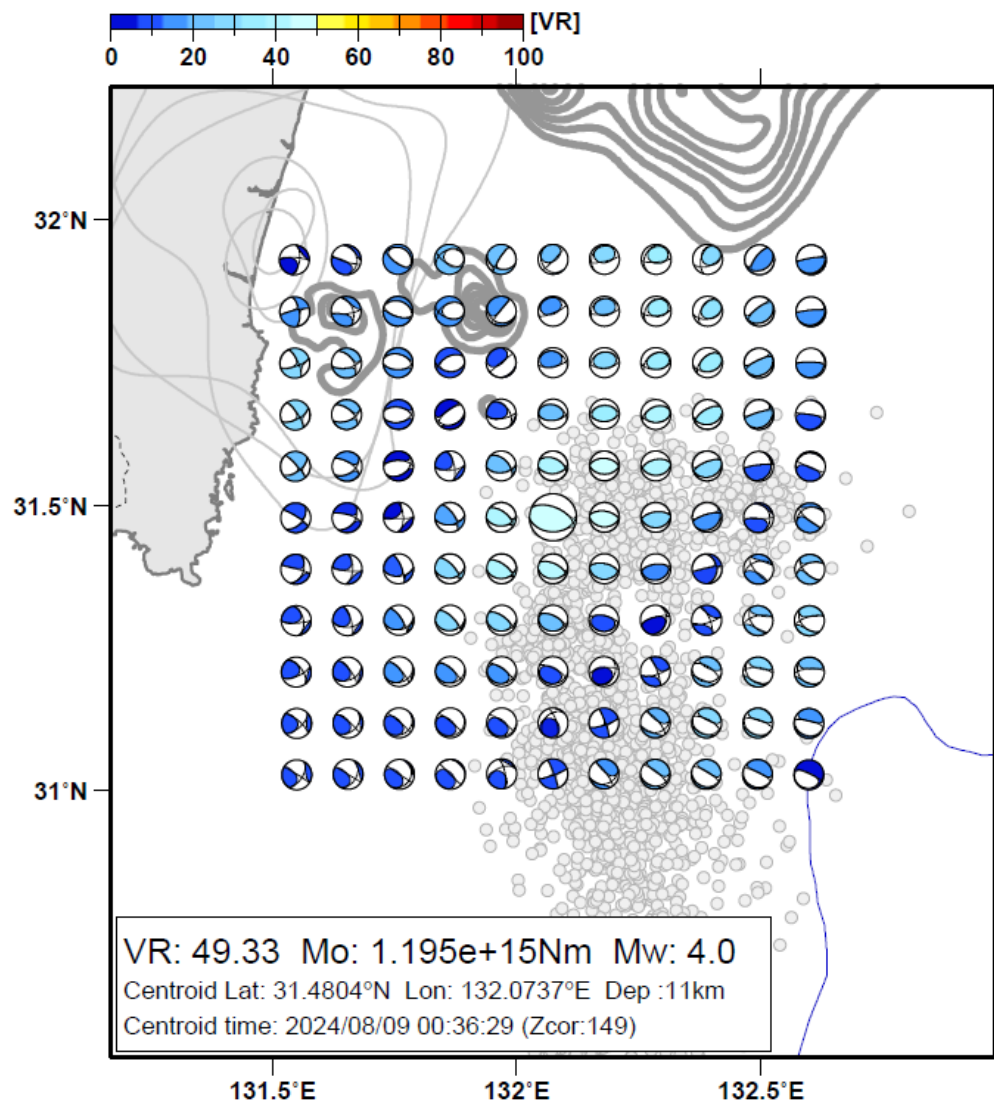
Fig.4 震源再決定された地震の震源分布図 (M2.0以上).  
 (a)1995年1月1日から1996年10月19日の日向灘地震発生まで.  
 (b)1996年10月19日の日向灘地震発生後から1996年12月31日まで.

図中灰色の点線は Yamamoto *et al.* によるプレート境界面を示しており、A-A' 断面は図中の黒点線で囲まれた領域の震源を投影している。再計算の結果、走時残差の RMS は 0.619 sec から 0.275 sec に減少した。

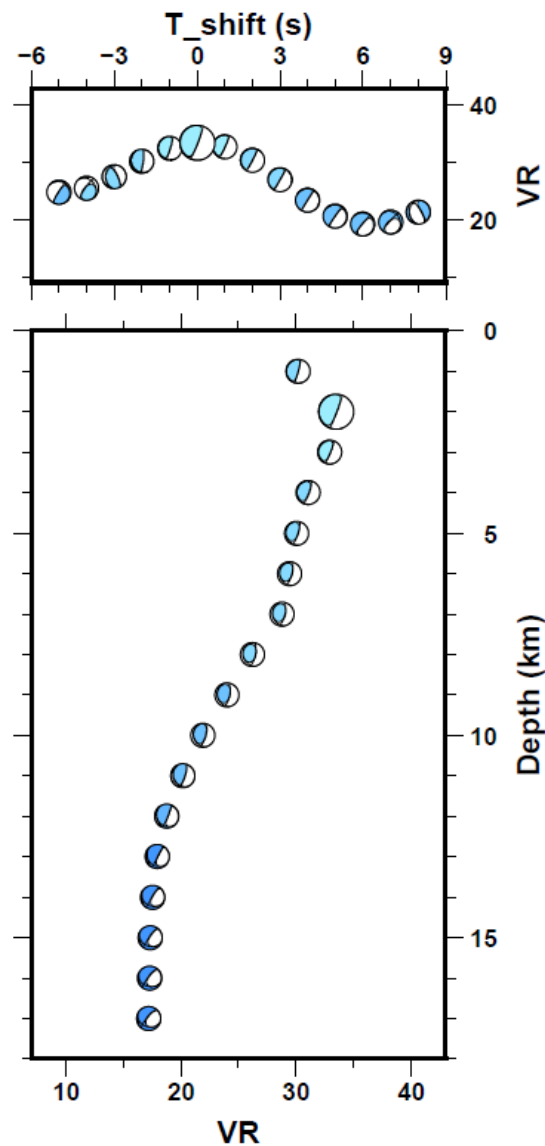
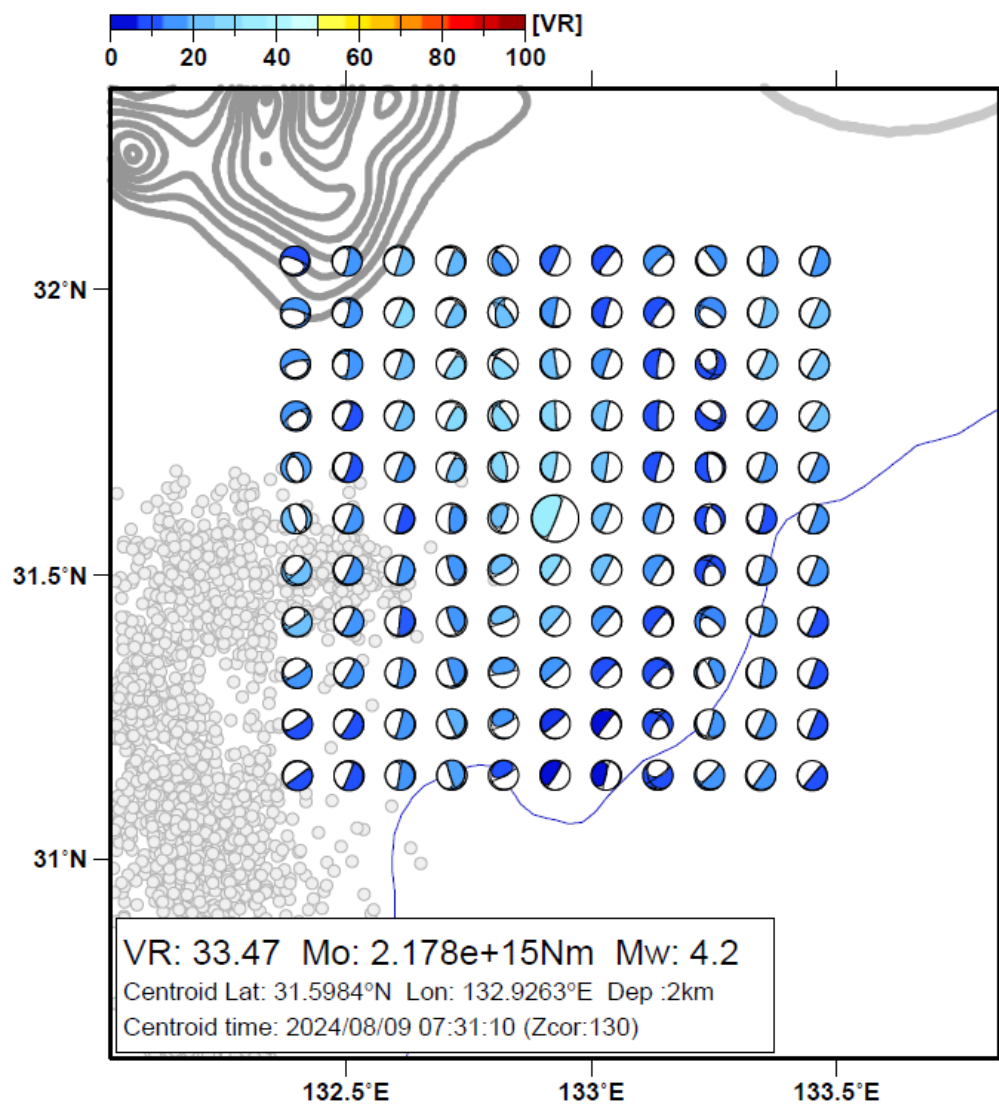
なお、1996年10月と12月の震源が再決定により動いたため、Yagi *et al.* (1999) のすべり分布も震源の移動分だけ水平方向に移動させた。



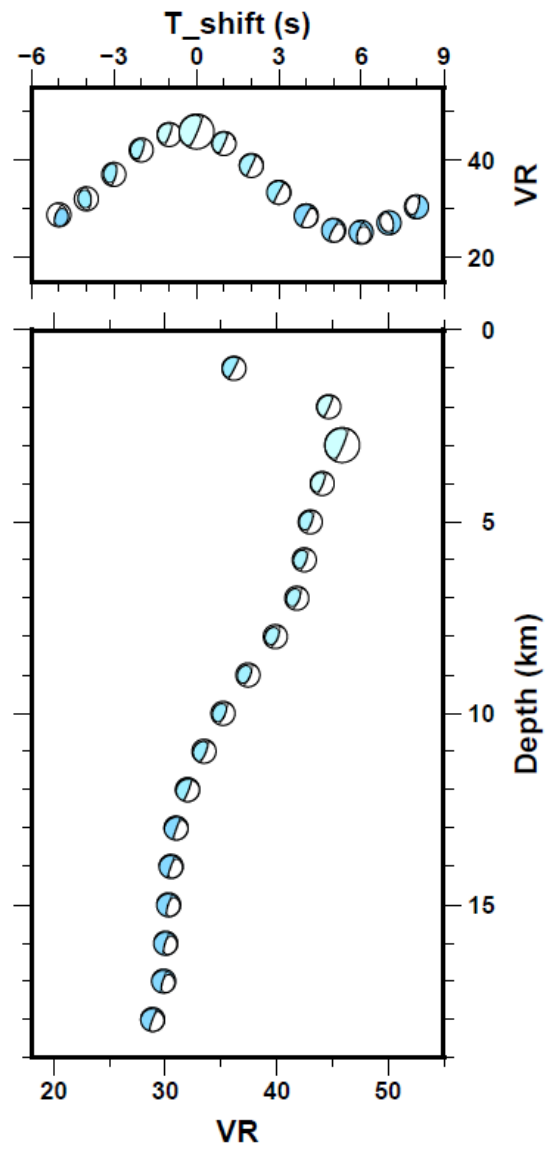
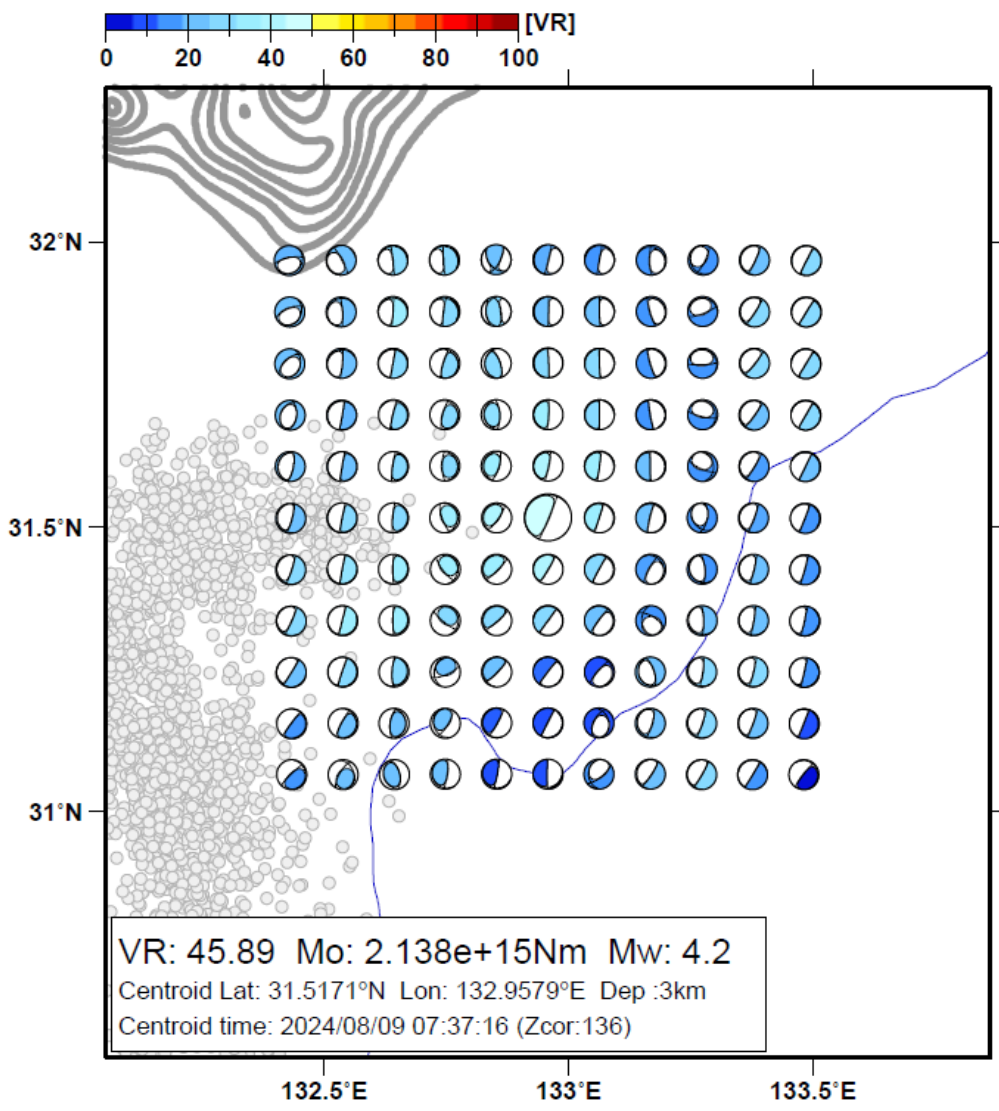
# VLFE解析例 2024/8/9 00:36



# VLFE解析例 2024/8/9 07:31 東側に進展？

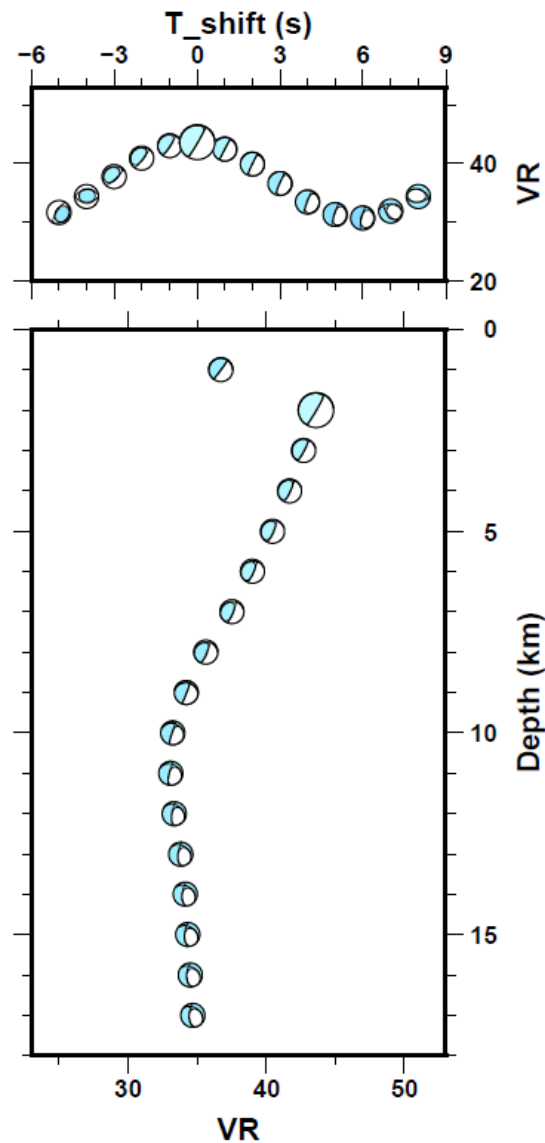
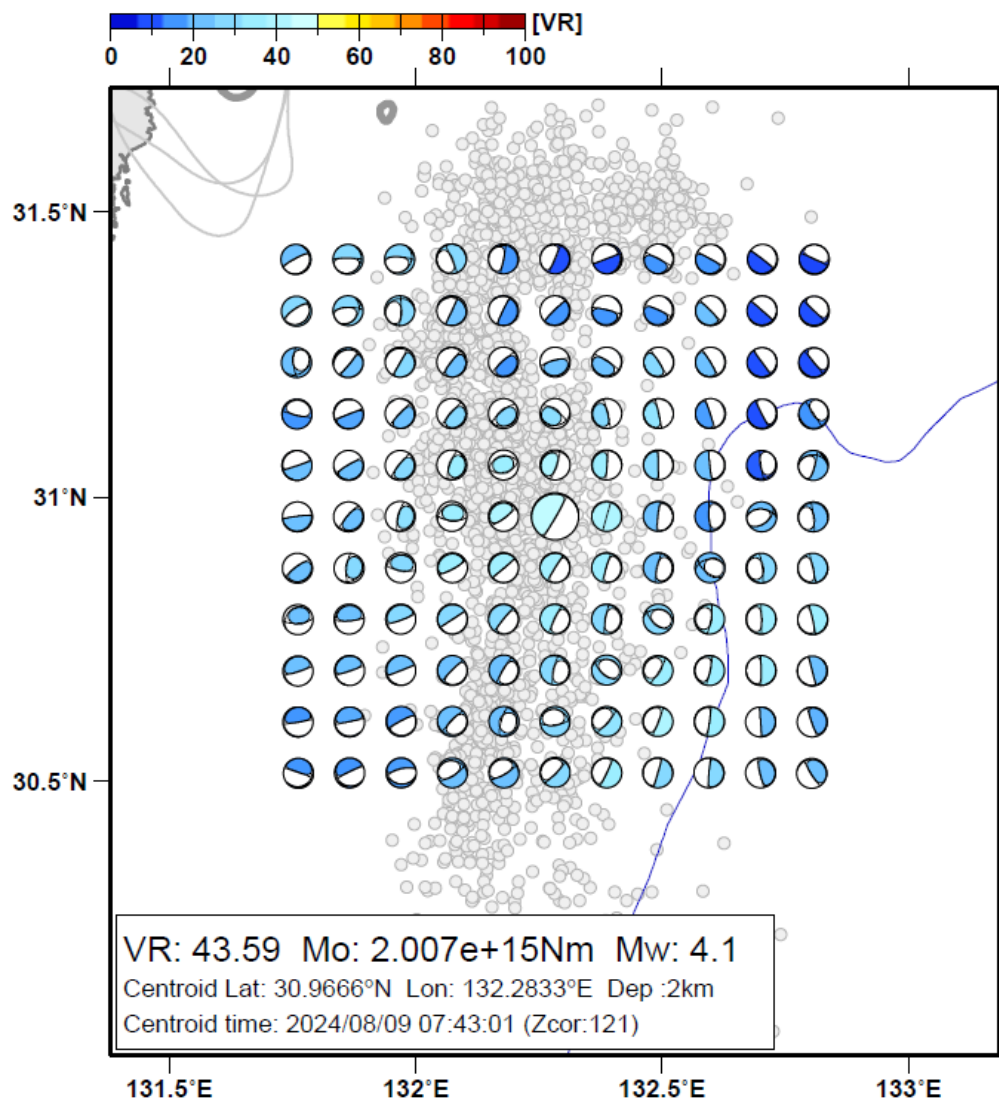


# VLFE解析例 2024/8/9 07:37 東側に進展？

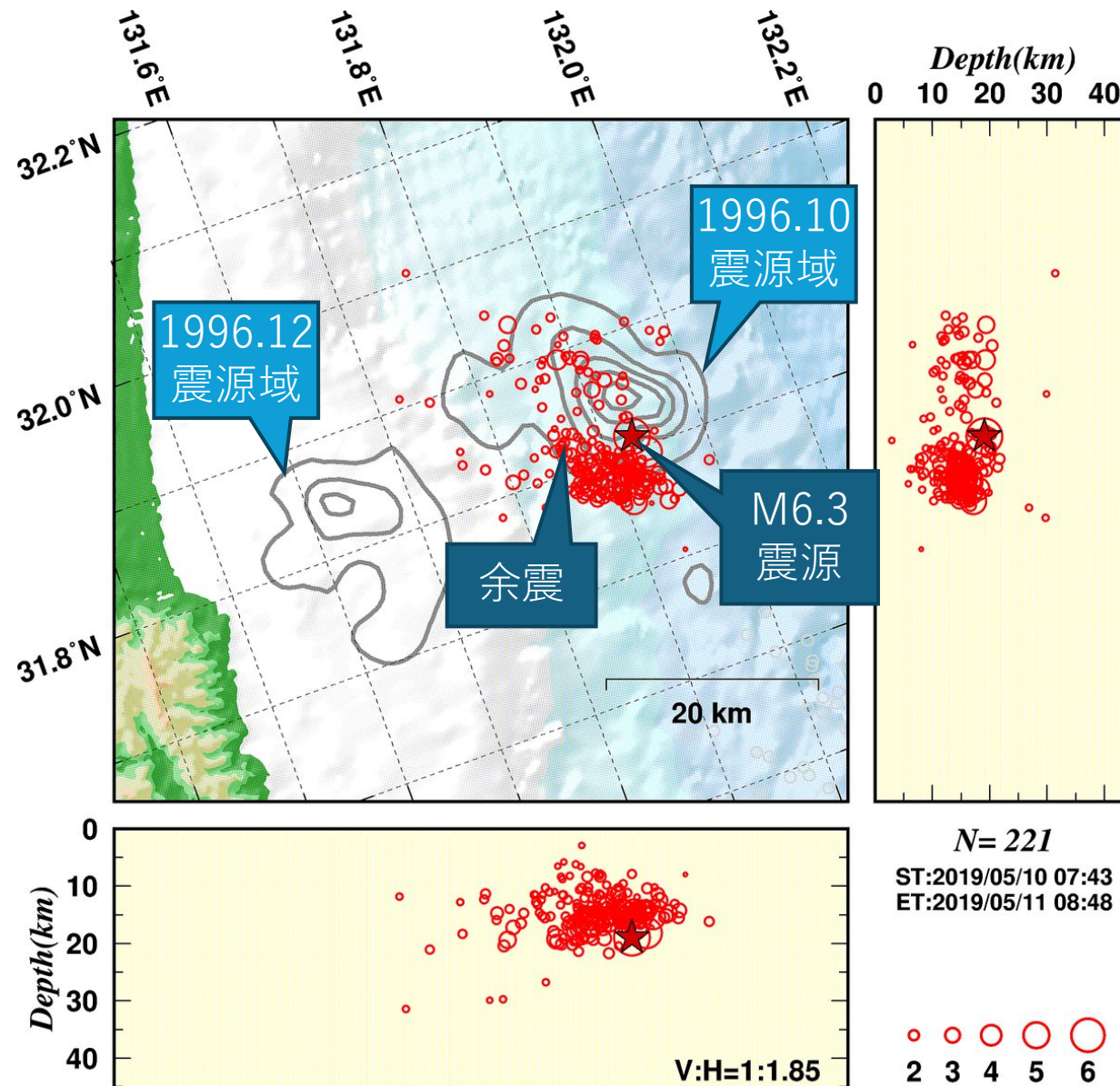




# VLFE解析例 2024/8/9 07:43

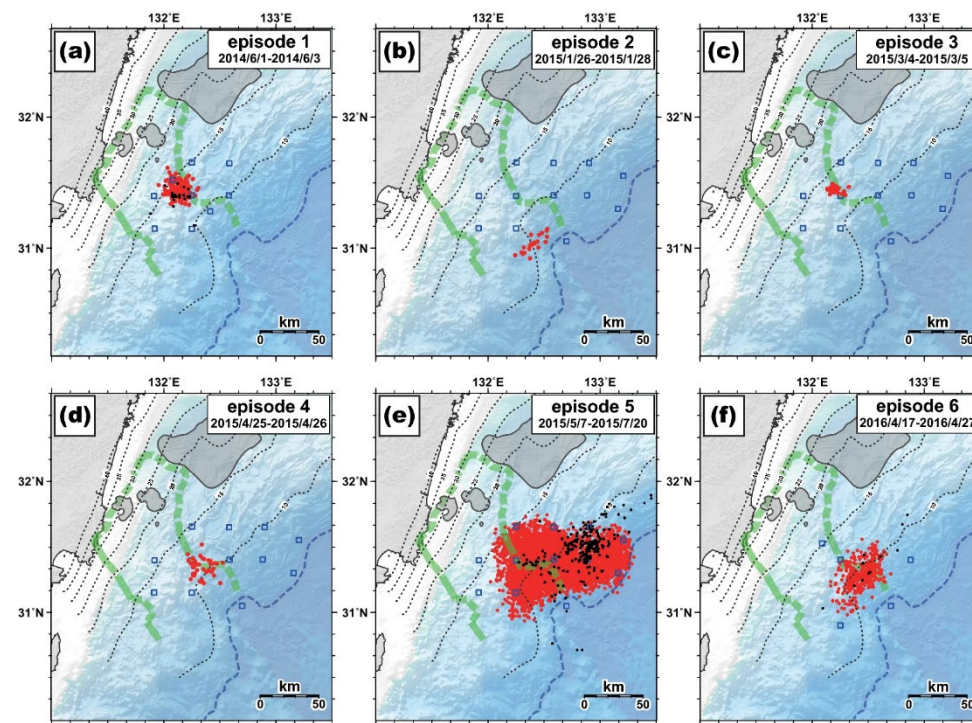
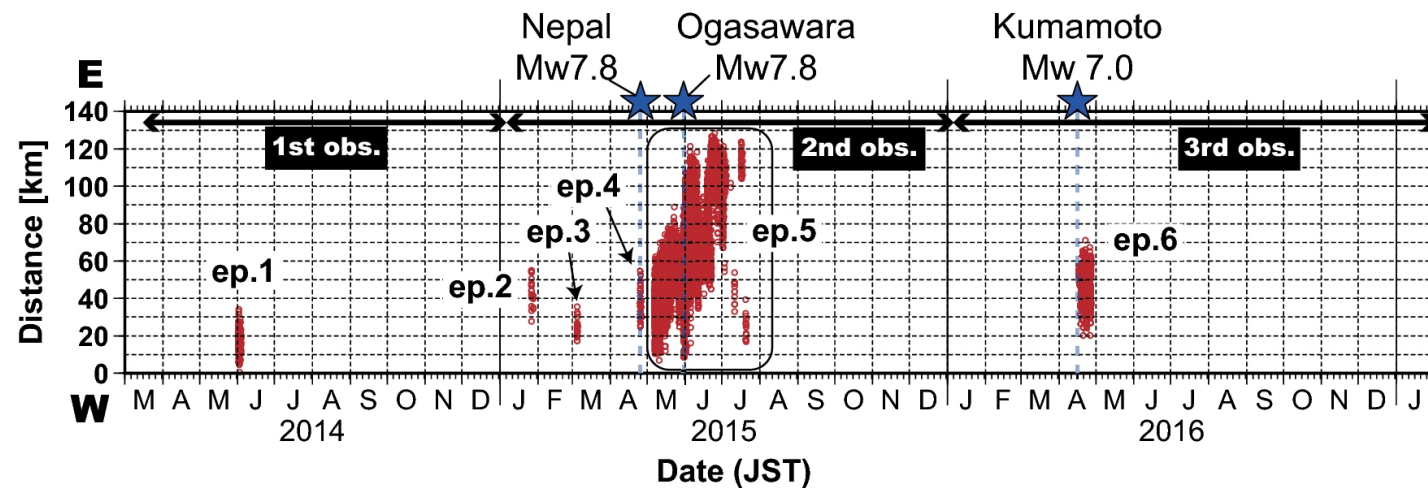
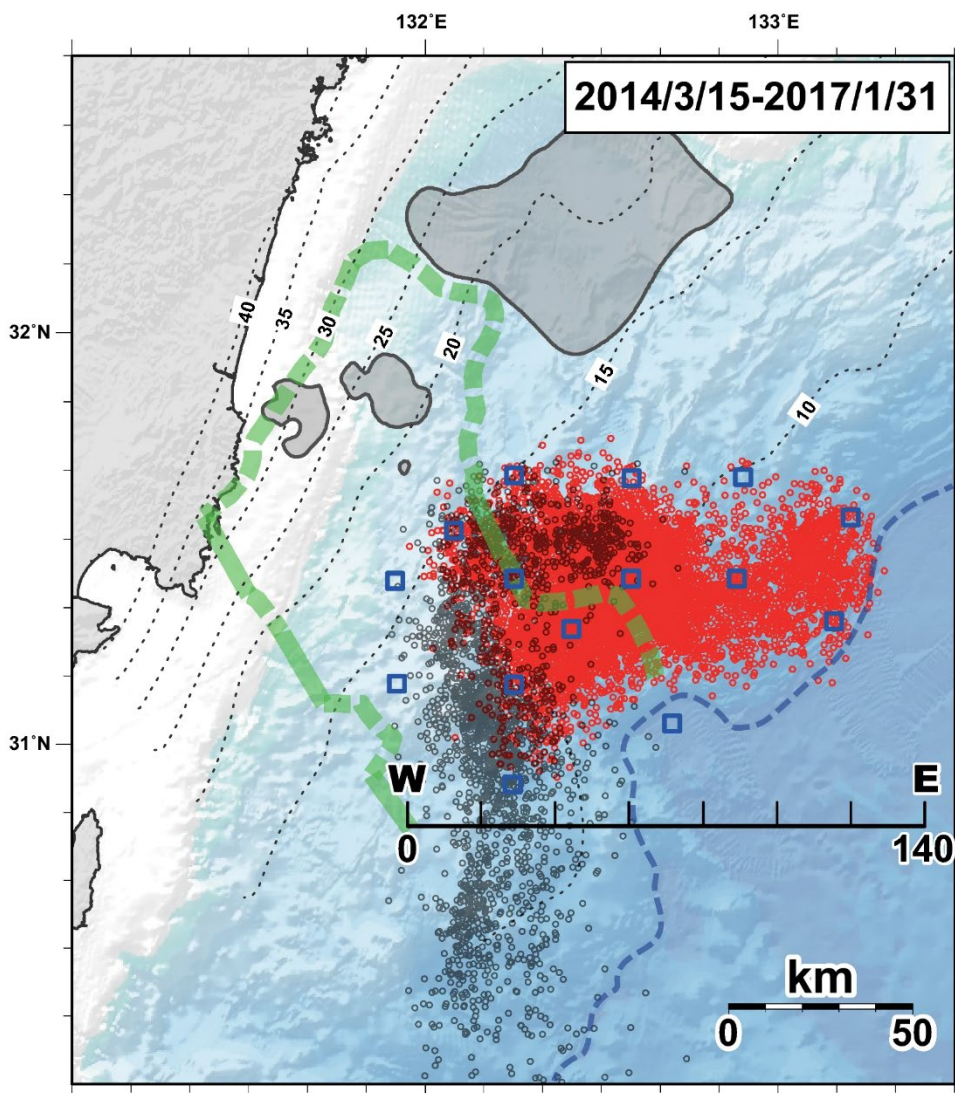


# (参考) 2019年M6.3



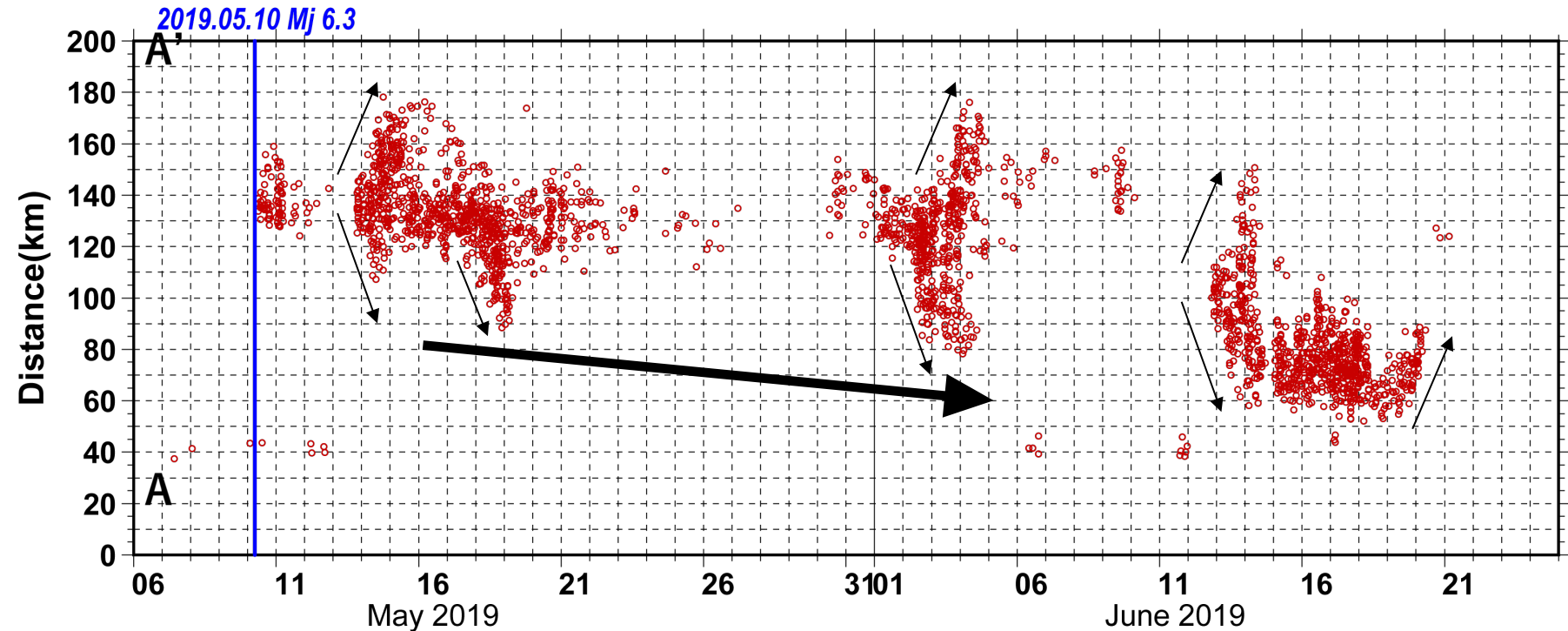
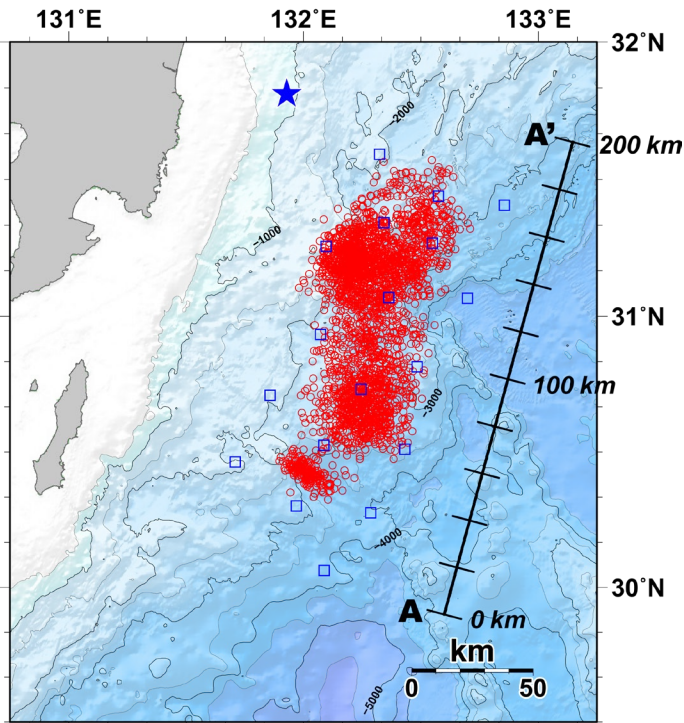


# (参考) 2014-2017 tectonic tremor



# (参考) 2019年M6.3後のtectonic tremor活動

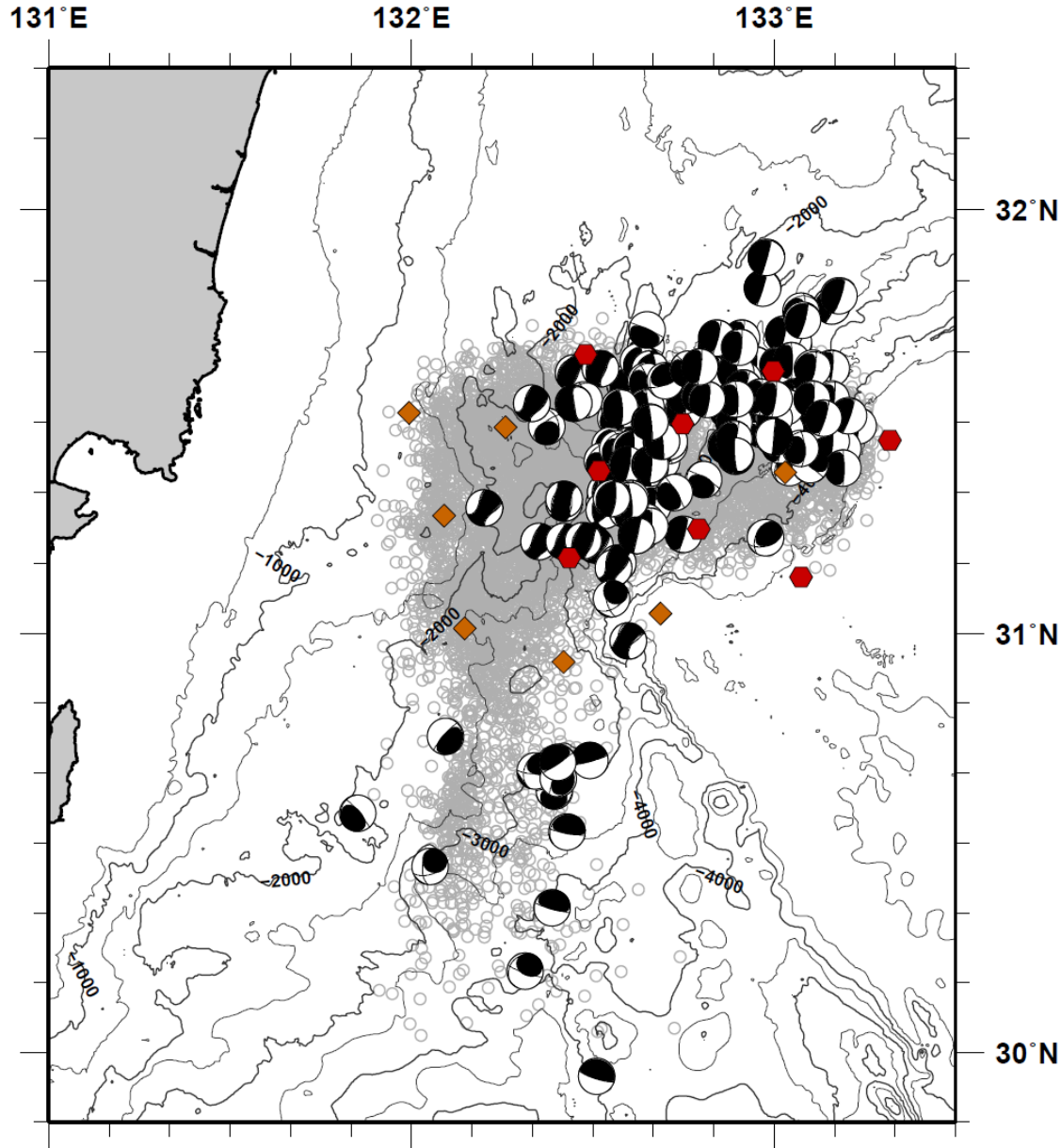
Spatio-temporal distribution (May 6<sup>th</sup>, 2019 – June 24, 2019)



- Activity started immediately after the Mj6.3 earthquake (135-140 km on the A-A' line)
- Intermittent activity continued for about a month and a half (although there were periods when the epicenter could not be determined due to small magnitude)
- Gradually migrated to the south in the long term (~ several km/day) and slight migration to the east was also observed.
- In the shorter term, it migrated to both north and south (~20km/day)
- The southern edge of the active area is within the observation network, and the spread of the activity is well constrained.



# (参考) VLFE・tremor



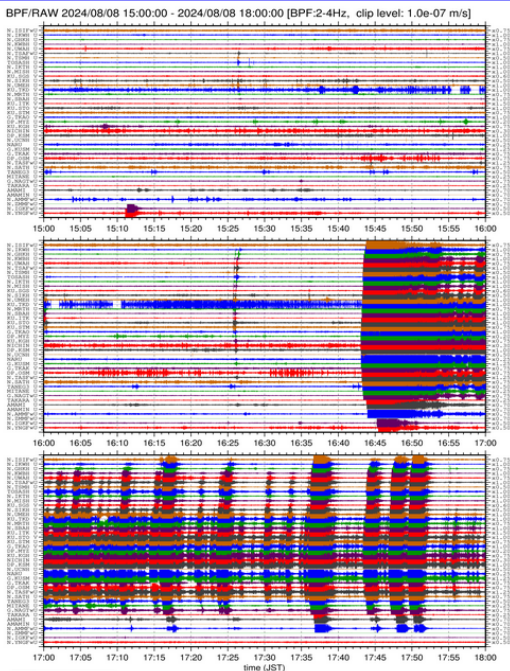
ビーチボール：  
陸上広帯域観測点を用いたVLFE解析の結果  
(2023年活動)

灰丸：  
海底地震観測点を用いたtectonic tremor解  
析の結果 (Yamashita et al., 2015;2021)

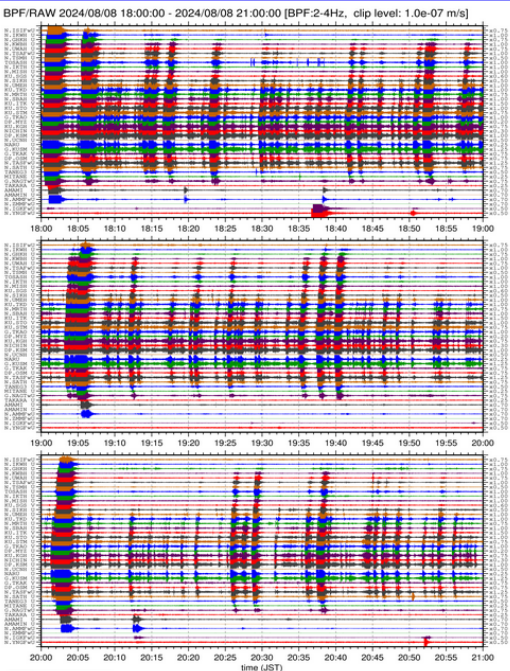
※赤印：海底地震観測点 (解析には使用し  
ていない)



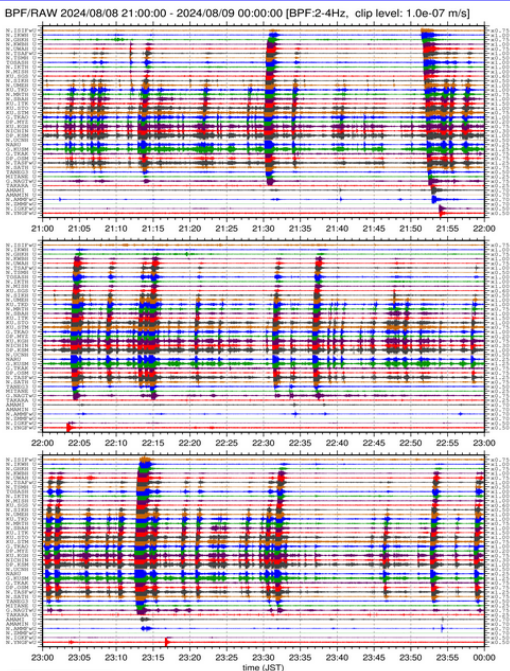
2024/08/08 15:00 - 2024/08/08 18:00



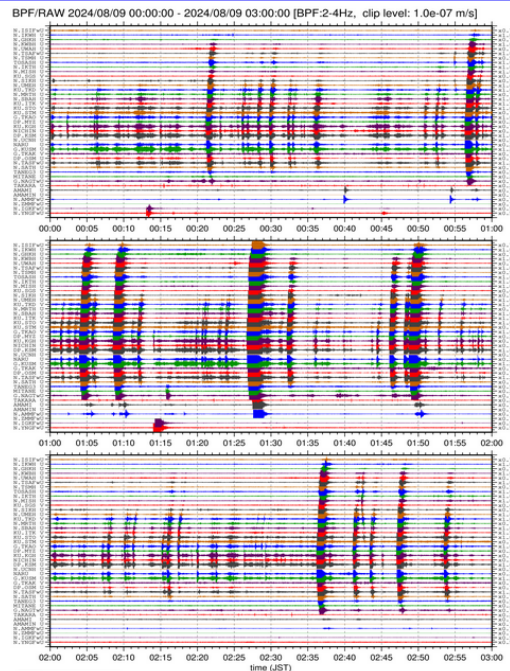
2024/08/08 18:00 - 2024/08/08 21:00



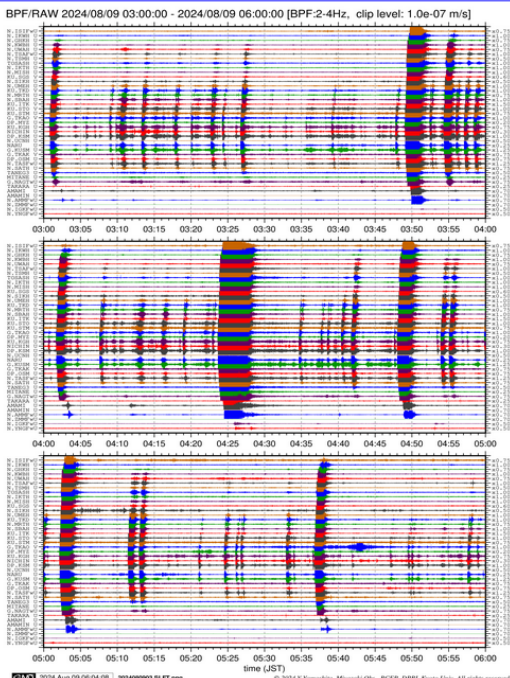
2024/08/08 21:00 - 2024/08/09 00:00



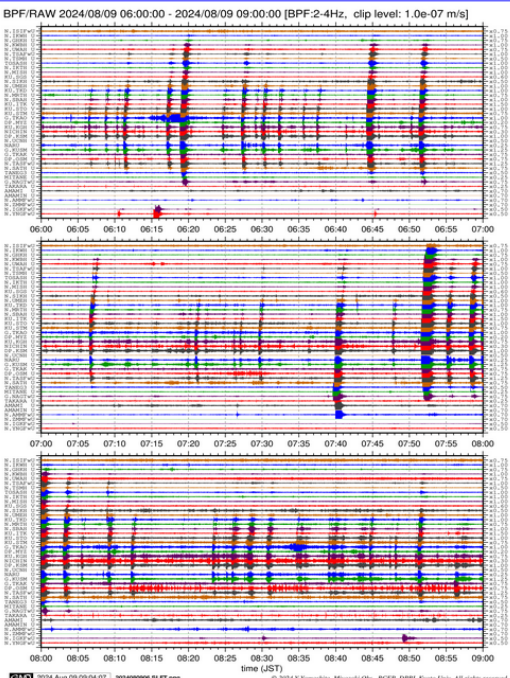
2024/08/09 00:00 - 2024/08/09 03:00



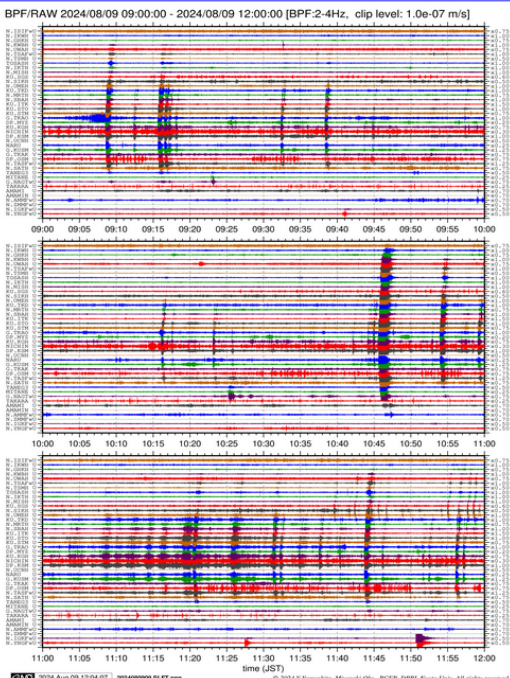
2024/08/09 03:00 - 2024/08/09 06:00



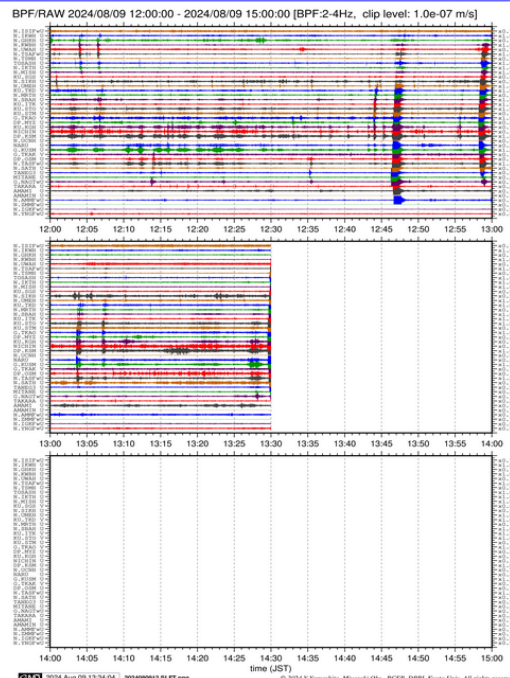
2024/08/09 06:00 - 2024/08/09 09:00



2024/08/09 09:00 - 2024/08/09 12:00



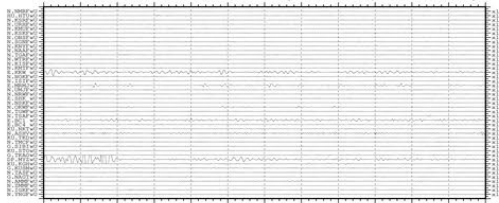
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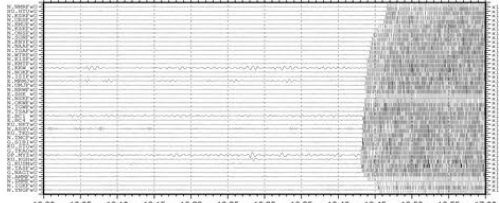


2024/08/08 15:00 - 2024/08/08 18:00

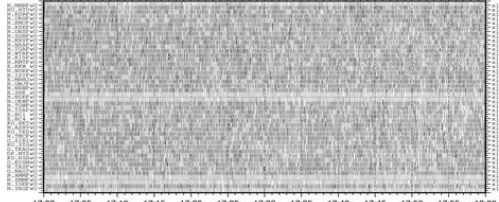
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15:00 15:05 15:10 15:15 15:20 15:25 15:30 15:35 15:40 15:45 15:50 15:55 16:00



16:00 16:05 16:10 16:15 16:20 16:25 16:30 16:35 16:40 16:45 16:50 16:55 17:00

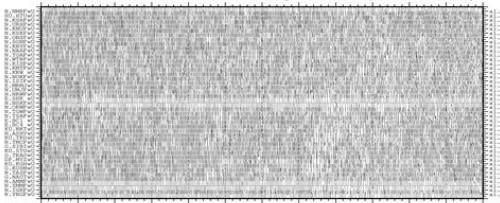


17:00 17:05 17:10 17:15 17:20 17:25 17:30 17:35 17:40 17:45 17:50 17:55 18:00

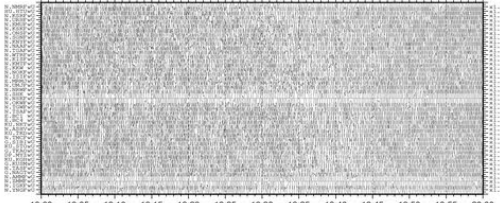
CLM7 2024 Aug 08 18:04:42 2024080815.BB.L.png © 2024 Y. Yamashita, Mizusaki Obs., RCEP, DPPE, Kyoto Univ. All rights reserved.

2024/08/08 18:00 - 2024/08/08 21:00

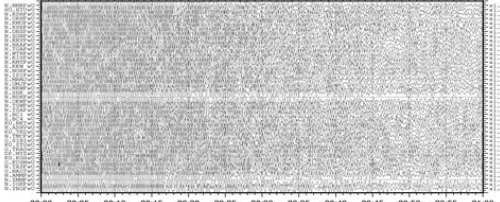
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18:00 18:05 18:10 18:15 18:20 18:25 18:30 18:35 18:40 18:45 18:50 18:55 19:00



19:00 19:05 19:10 19:15 19:20 19:25 19:30 19:35 19:40 19:45 19:50 19:55 20:00

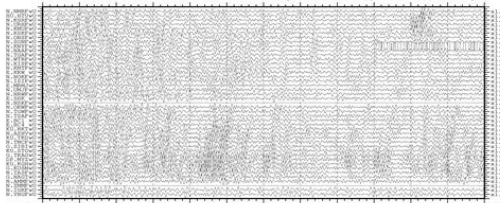


20:00 20:05 20:10 20:15 20:20 20:25 20:30 20:35 20:40 20:45 20:50 20:55 21:00

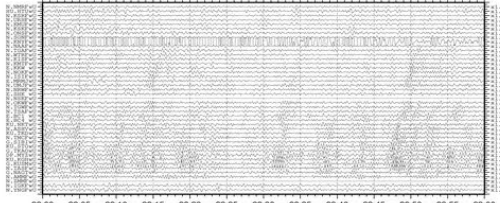
CLM7 2024 Aug 08 21:04:45 2024080818.BB.L.png © 2024 Y. Yamashita, Mizusaki Obs., RCEP, DPPE, Kyoto Univ. All rights reserved.

2024/08/08 21:00 - 2024/08/09 00:00

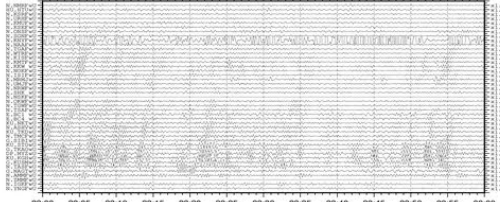
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21:00 21:05 21:10 21:15 21:20 21:25 21:30 21:35 21:40 21:45 21:50 21:55 22:00



22:00 22:05 22:10 22:15 22:20 22:25 22:30 22:35 22:40 22:45 22:50 22:55 23:00

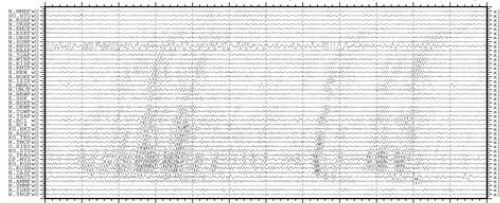


23:00 23:05 23:10 23:15 23:20 23:25 23:30 23:35 23:40 23:45 23:50 23:55 00:00

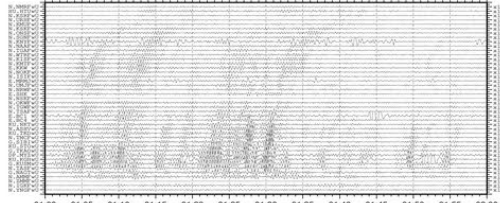
CLM7 2024 Aug 09 00:04:58 2024080821.BB.L.png © 2024 Y. Yamashita, Mizusaki Obs., RCEP, DPPE, Kyoto Univ. All rights reserved.

2024/08/09 00:00 - 2024/08/09 03:00

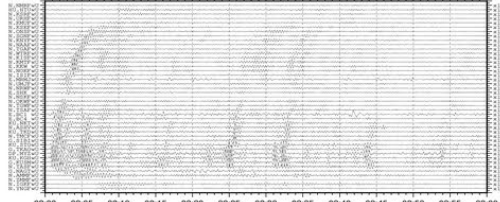
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00:00 00:05 00:10 00:15 00:20 00:25 00:30 00:35 00:40 00:45 00:50 00:55 01:00



01:00 01:05 01:10 01:15 01:20 01:25 01:30 01:35 01:40 01:45 01:50 01:55 02:00

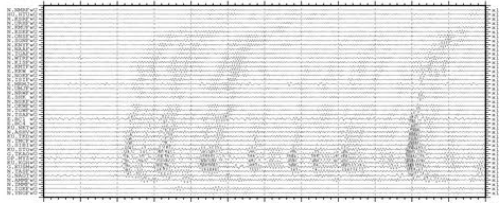


02:00 02:05 02:10 02:15 02:20 02:25 02:30 02:35 02:40 02:45 02:50 02:55 03:00

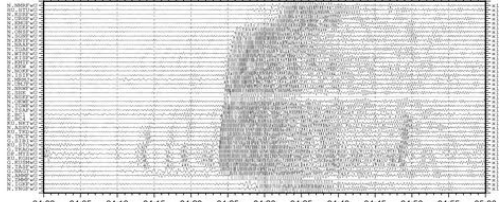
CLM7 2024 Aug 09 03:04:57 2024080900.BB.L.png © 2024 Y. Yamashita, Mizusaki Obs., RCEP, DPPE, Kyoto Univ. All rights reserved.

2024/08/09 03:00 - 2024/08/09 06:00

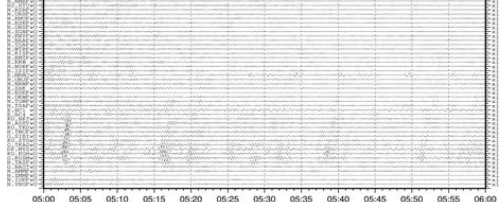
BPF/RAW 2024/08/09 03:00:00 - 2024/08/09 06:00:00 [BPF:20-50s, clip level: 1.5e-07 m/s]



03:00 03:05 03:10 03:15 03:20 03:25 03:30 03:35 03:40 03:45 03:50 03:55 04:00



04:00 04:05 04:10 04:15 04:20 04:25 04:30 04:35 04:40 04:45 04:50 04:55 05:00

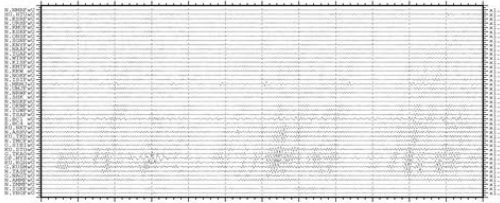


05:00 05:05 05:10 05:15 05:20 05:25 05:30 05:35 05:40 05:45 05:50 05:55 06:00

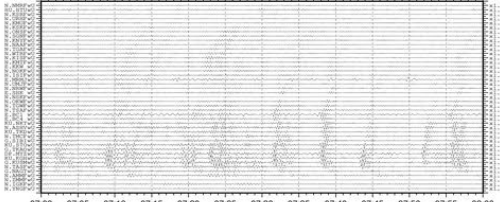
CLM7 2024 Aug 09 06:04:58 2024080903.BB.L.png © 2024 Y. Yamashita, Mizusaki Obs., RCEP, DPPE, Kyoto Univ. All rights reserved.

2024/08/09 06:00 - 2024/08/09 09:00

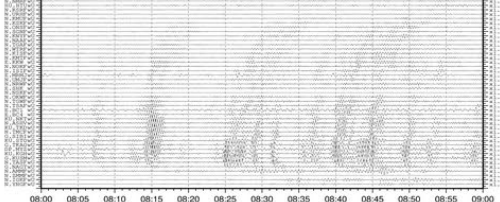
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06:00 06:05 06:10 06:15 06:20 06:25 06:30 06:35 06:40 06:45 06:50 06:55 07:00



07:00 07:05 07:10 07:15 07:20 07:25 07:30 07:35 07:40 07:45 07:50 07:55 08:00

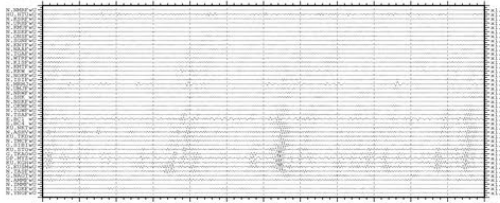


08:00 08:05 08:10 08:15 08:20 08:25 08:30 08:35 08:40 08:45 08:50 08:55 09:00

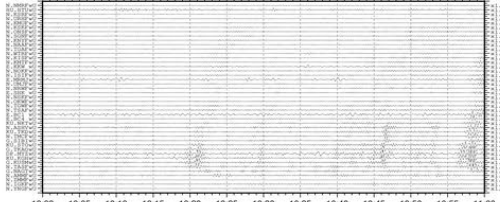
CLM7 2024 Aug 09 09:04:53 2024080906.BB.L.png © 2024 Y. Yamashita, Mizusaki Obs., RCEP, DPPE, Kyoto Univ. All rights reserved.

2024/08/09 09:00 - 2024/08/09 12:00

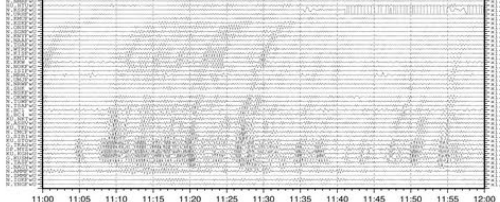
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09:00 09:05 09:10 09:15 09:20 09:25 09:30 09:35 09:40 09:45 09:50 09:55 10:00



10:00 10:05 10:10 10:15 10:20 10:25 10:30 10:35 10:40 10:45 10:50 10:55 11:00

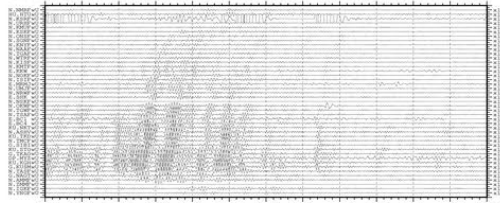


11:00 11:05 11:10 11:15 11:20 11:25 11:30 11:35 11:40 11:45 11:50 11:55 12:00

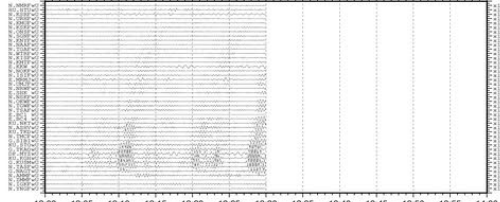
CLM7 2024 Aug 09 12:04:53 2024080909.BB.L.png © 2024 Y. Yamashita, Mizusaki Obs., RCEP, DPPE, Kyoto Univ. All rights reserved.

2024/08/09 12:00 - 2024/08/09 15:00

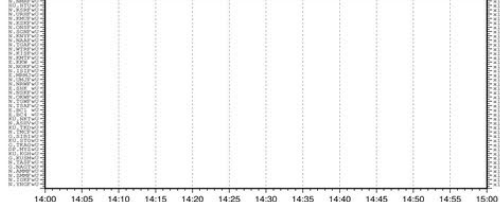
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12:00 12:05 12:10 12:15 12:20 12:25 12:30 12:35 12:40 12:45 12:50 12:55 13:00



13:00 13:05 13:10 13:15 13:20 13:25 13:30 13:35 13:40 13:45 13:50 13:55 14:00



14:00 14:05 14:10 14:15 14:20 14:25 14:30 14:35 14:40 14:45 14:50 14:55 15:00

CLM7 2024 Aug 09 15:04:53 2024080912.BB.L.png © 2024 Y. Yamashita, Mizusaki Obs., RCEP, DPPE, Kyoto Univ. All rights reserved.