

Supplementary

Date	EqTime	Location	Latitude	Longitude	Focal Depth	Mw	Lable
2021-09-04	07:51:52	DongYuan	23.84	114.5	9	3.2	T0
2022-05-14	17:12:46	DianBai	21.14	111.24	19	2.6	T4
2022-05-23	09:26:03	DongYuan	23.84	114.50	10	2.6	T8
2022-07-18	12:37:27	DongYuan	23.73	114.61	6	2.8	T5
2022-07-24	08:31:07	DongYuan	23.73	114.61	7	3.5	T1
2022-07-25	07:20:11	DongYuan	23.76	114.59	12	3.1	T2
2022-08-07	19:23:14	NanPeng	21.60	112.16	11	2.9	T3
2022-08-09	10:12:50	GuangZhou	25.02	113.14	10	2.8	T9
2022-09-07	12:25:46	FengShun	23.84	116.01	6	3.2	T6
2022-09-07	13:45:19	FengShun	23.83	116.01	7	2.7	T7

Figure S1. ten local events near the DAS array with the details. In the table, four events, T0, T1, T2, T3, showed clear P and S waves after de-noising processing. But the other show no signals about the earthquake.

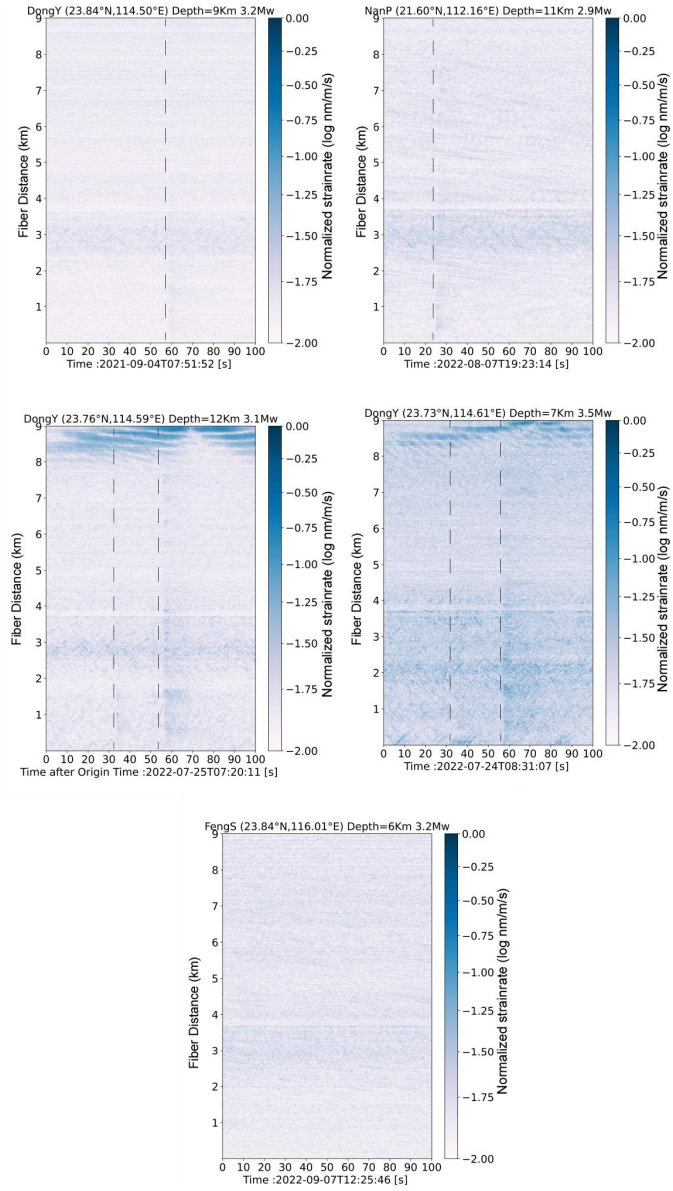


Figure S2. four clear original waveform and the representative undetected one after filtering between 2Hz - 10Hz. The above two original waveform can only show S wave, when the middle two events show P and S wave, but the undetected ones show no signals.

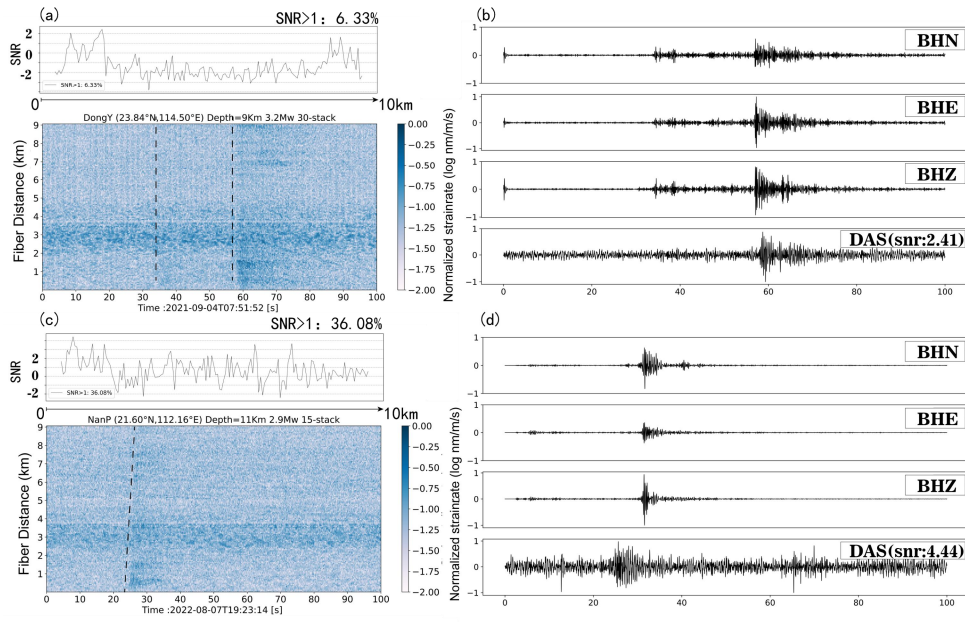


Figure S3. the results of stacking. (a). T0 event shown in the article; (c). T3 event with clear S wave after stacking, and the reason without P wave might be time trimmed out of the P wave; (b)、(d) are the comparison of the max SNR waveform with the Zhuhai station waveform.

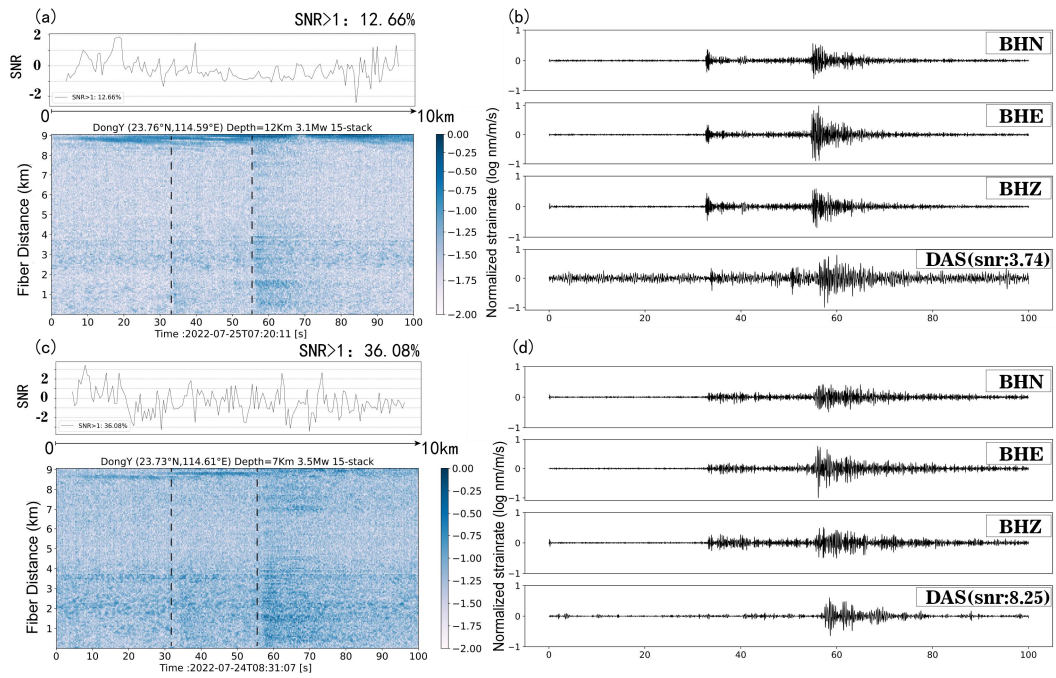


Figure S4. the results of stacking. (a). T1 event with clear P and S wave after stacking; (c). T2 event with clear P and S wave after stacking; (b)、(d) are the comparison of the max SNR waveform with the Zhuhai station waveform.

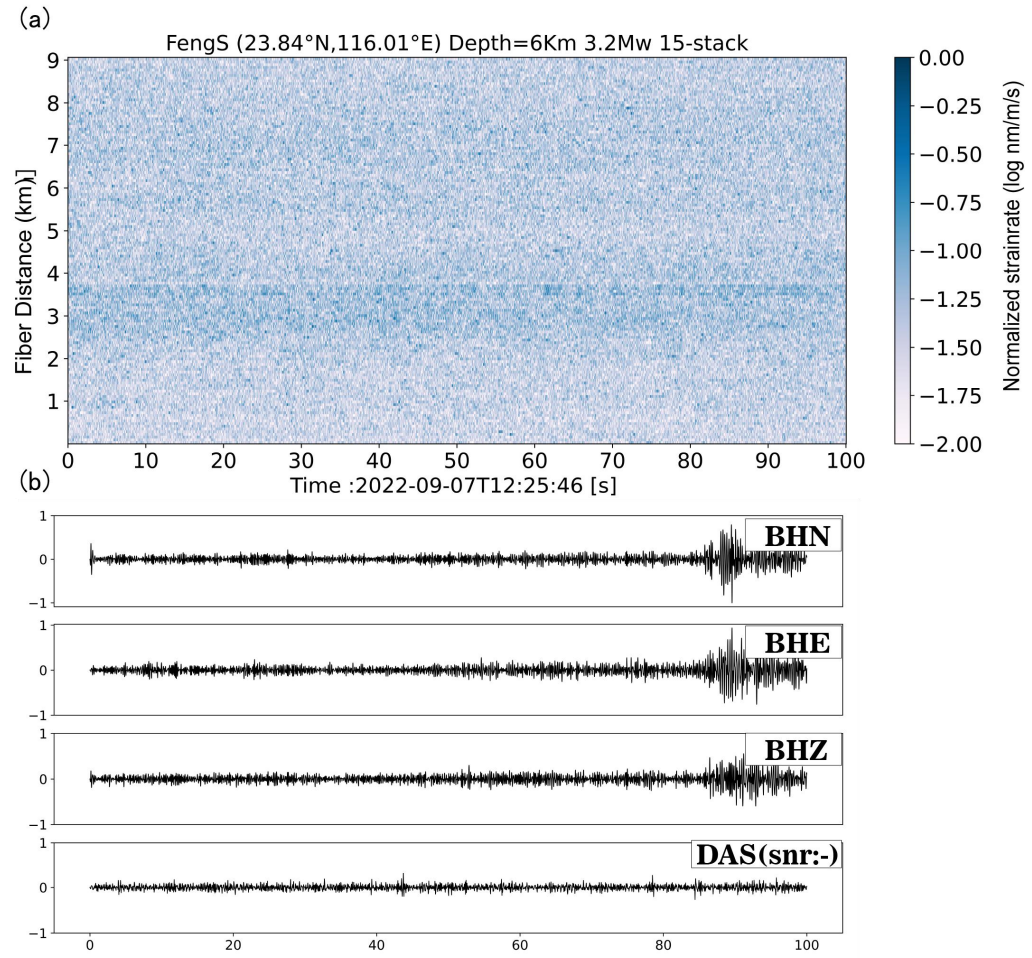


Figure S5. T6 event with no signals. The following figure is the comparison of the max SNR waveform with the Zhuhai station waveform.

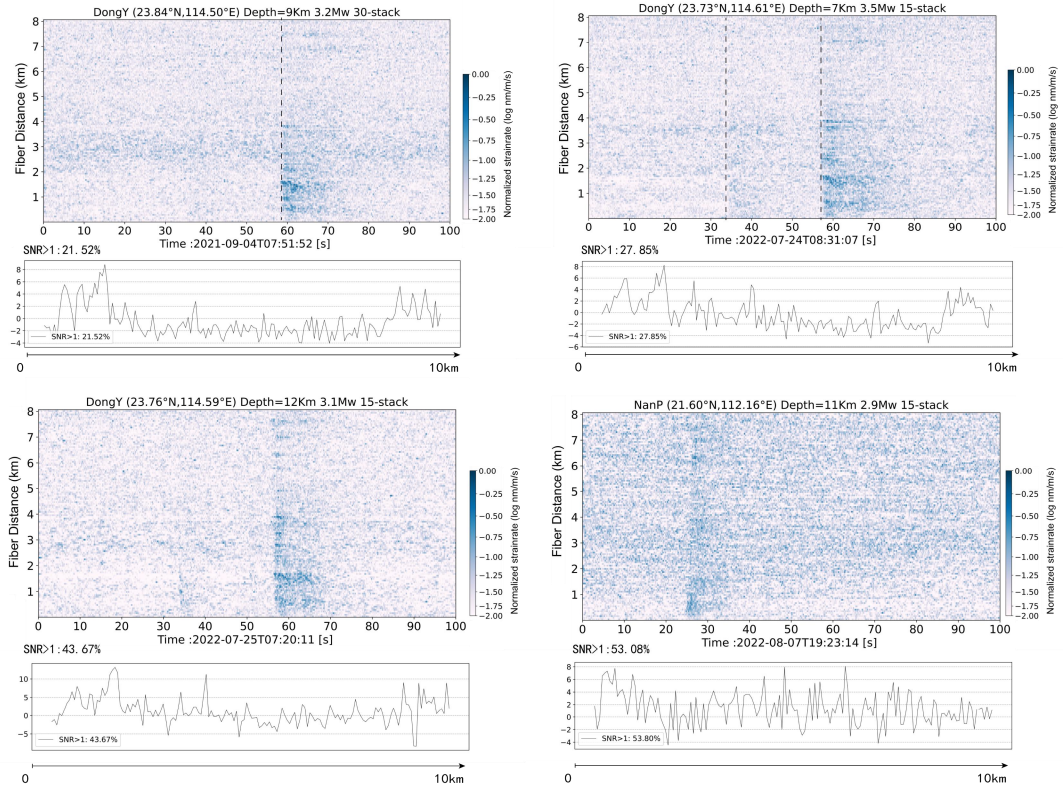


Figure S6. T1、T2、T3、T6 waveform after DWT denoising. P wave show more details and the most noise are removed.