# **Appendix:**

## Residual Plots

### KBCG 19

January 2020

## **Contents**

C	contents				
Li	List of Figures				
1	Eve	nt Terms			
	1.1 1.2	Magnitude			
L	ist o	of Figures			
	1	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0$ . sec: (left) interface events; (right) intraslab events.			
	2	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.01$ sec: (left) interface events; (right) intraslab			
	3	events. Plot of event terms versus magnitude ${\bf M}$ for PSA at $T=0.02$ sec: (left) interface events; (right) intraslab events.			
	4	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.03$ sec: (left) interface events; (right) intraslab events.			
	5	Plot of event terms versus magnitude ${\bf M}$ for PSA at $T=0.05$ sec: (left) interface events; (right) intraslab			
	6	events			
	7	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.1$ sec: (left) interface events; (right) intraslab events.			
	8	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.15$ sec: (left) interface events; (right) intraslab events.			
	9	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.2$ sec: (left) interface events; (right) intraslab events.			
	10	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.25$ sec: (left) interface events; (right) intraslab events.			
	11	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.3$ sec: (left) interface events; (right) intraslab events.			
	12	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.4$ sec: (left) interface events; (right) intraslab events.			
	13	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.5$ sec: (left) interface events; (right) intraslab events.			
	14	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=0.75$ sec: (left) interface events; (right) intraslab events.			
	15	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=1$ . sec: (left) interface events; (right) intraslab events.			
	16	Plot of event terms versus magnitude $\mathbf{M}$ for PSA at $T=1.5$ sec: (left) interface events; (right) intraslab events.			
	17	Plot of event terms versus magnitude <b>M</b> for PSA at $T=2$ . sec: (left) interface events; (right) intraslab			

18	Plot of event terms versus magnitude <b>W</b> for PSA at $T=3$ . sec: (left) interface events; (right) intrastab	
10	events	6
19	Plot of event terms versus magnitude M for PSA at $T=4$ . sec: (left) interface events; (right) intraslab	_
20	events	/
20	events	-
21	Plot of event terms versus magnitude <b>M</b> for PSA at $T = 7.5$ sec: (left) interface events; (right) intraslab	,
<b>41</b>	events	7
22	Plot of event terms versus magnitude <b>M</b> for PSA at $T = 10$ . sec: (left) interface events; (right) intraslab	,
22	events	8
23	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0$ . sec: (left) interface events;	C
23	(right) intraslab events	g
24	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.01$ sec: (left) interface events;	
	(right) intraslab events.	ç
25	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.02$ sec: (left) interface events;	_
	(right) intraslab events.	ç
26	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.03$ sec: (left) interface events;	
	(right) intraslab events	10
27	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.05$ sec: (left) interface events;	
	(right) intraslab events	10
28	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.075$ sec: (left) interface events;	
	(right) intraslab events	10
29	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.1$ sec: (left) interface events;	
	(right) intraslab events	11
30	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.15$ sec: (left) interface events;	
	(right) intraslab events	11
31	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.2$ sec: (left) interface events;	
	(right) intraslab events	11
32	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.25$ sec: (left) interface events;	
	(right) intraslab events	12
33	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.3$ sec: (left) interface events;	
	(right) intraslab events	12
34	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.4$ sec: (left) interface events;	1.0
2.5	(right) intraslab events.	12
35	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.5$ sec: (left) interface events;	1.0
26	(right) intraslab events.	13
36	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=0.75$ sec: (left) interface events;	10
37	(right) intraslab events	13
31	riot of event terms versus deput to op of rupture $Z_{TOR}$ for FSA at $T=1$ , sec. (left) interface events, (right) intraslab events.	13
38	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=1.5$ sec: (left) interface events;	1.
50	riot of event terms versus deput to op of rupture $Z_{TOR}$ for 15A at $T=1.5$ sec. (left) interface events, (right) intraslab events.	14
39	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=2$ . sec: (left) interface events;	
3)	(right) intraslab events	14
40	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=3$ . sec: (left) interface events;	•
	(right) intraslab events	14
41	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=4$ . sec: (left) interface events;	
	(right) intraslab events	15
42	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=5$ . sec: (left) interface events;	
	(right) intraslab events	15
43	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=7.5$ sec: (left) interface events;	
	(right) intraslab events	15
44	Plot of event terms versus depth to op of rupture $Z_{TOR}$ for PSA at $T=10$ . sec: (left) interface events;	
	(right) intraslab events	16

### 1 Event Terms

#### 1.1 Magnitude

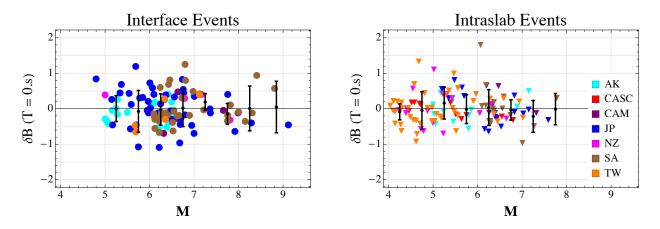


Figure 1: Plot of event terms versus magnitude  $\mathbf{M}$  for PSA at T=0. sec: (left) interface events; (right) intraslab events.

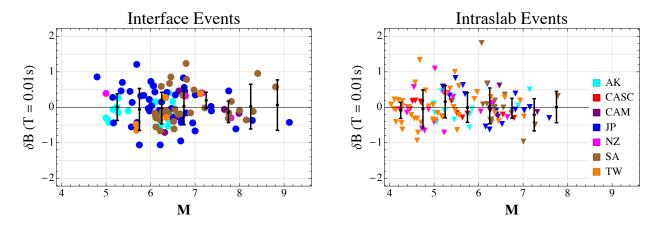


Figure 2: Plot of event terms versus magnitude M for PSA at T=0.01 sec: (left) interface events; (right) intraslab events.

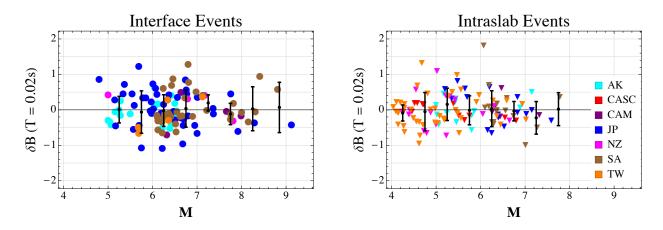


Figure 3: Plot of event terms versus magnitude  ${\bf M}$  for PSA at T=0.02 sec: (left) interface events; (right) intraslab events.

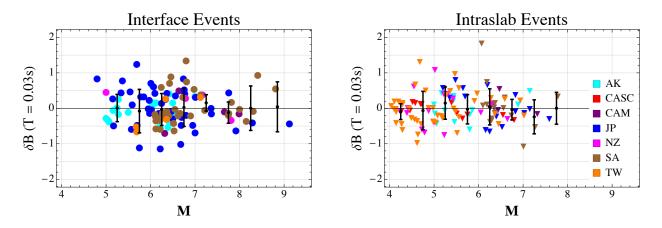


Figure 4: Plot of event terms versus magnitude  $\mathbf{M}$  for PSA at T=0.03 sec: (left) interface events; (right) intraslab events.

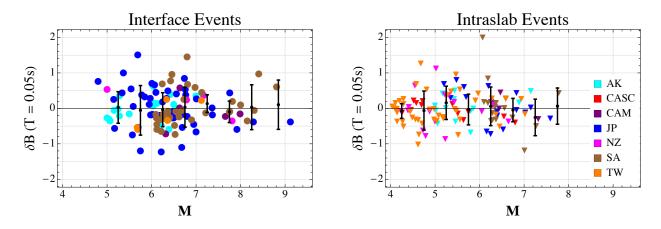


Figure 5: Plot of event terms versus magnitude M for PSA at T=0.05 sec: (left) interface events; (right) intraslab events.

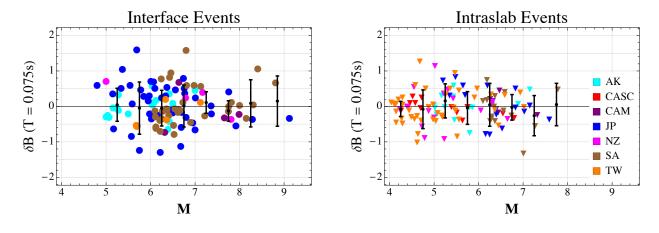


Figure 6: Plot of event terms versus magnitude  ${\bf M}$  for PSA at T=0.075 sec: (left) interface events; (right) intraslab events.

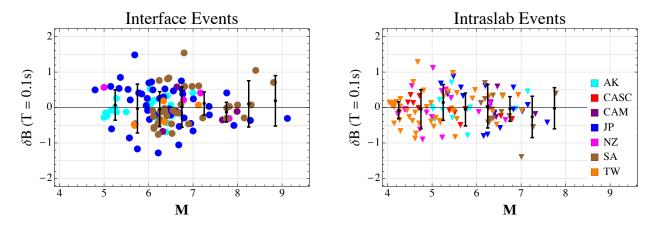


Figure 7: Plot of event terms versus magnitude M for PSA at T=0.1 sec: (left) interface events; (right) intraslab events.

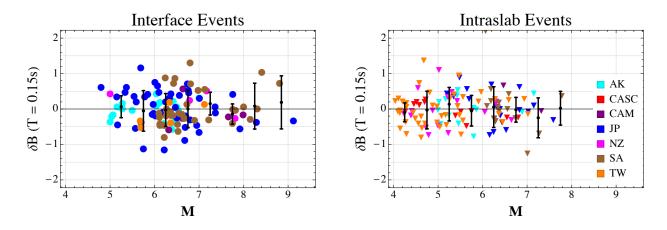


Figure 8: Plot of event terms versus magnitude  ${\bf M}$  for PSA at T=0.15 sec: (left) interface events; (right) intraslab events.

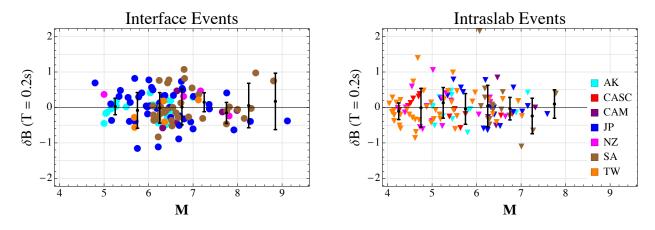


Figure 9: Plot of event terms versus magnitude M for PSA at T=0.2 sec: (left) interface events; (right) intraslab events.

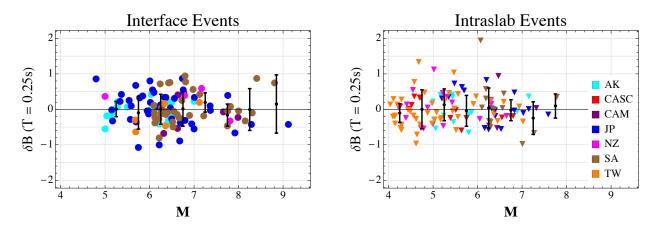


Figure 10: Plot of event terms versus magnitude  ${\bf M}$  for PSA at T=0.25 sec: (left) interface events; (right) intraslab events.

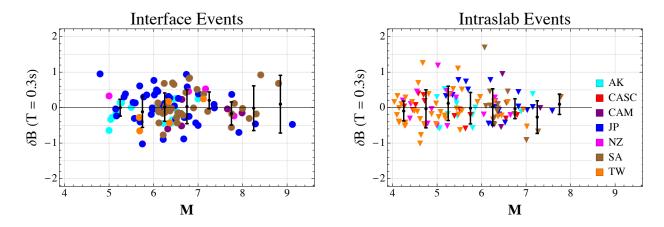


Figure 11: Plot of event terms versus magnitude M for PSA at T=0.3 sec: (left) interface events; (right) intraslab events.

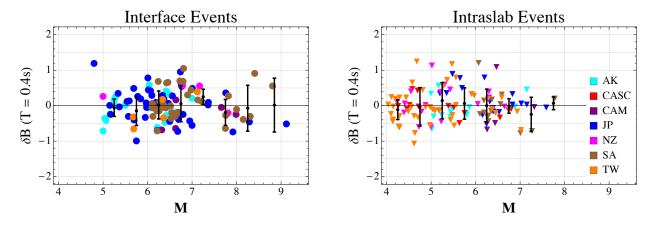


Figure 12: Plot of event terms versus magnitude M for PSA at T=0.4 sec: (left) interface events; (right) intraslab events.

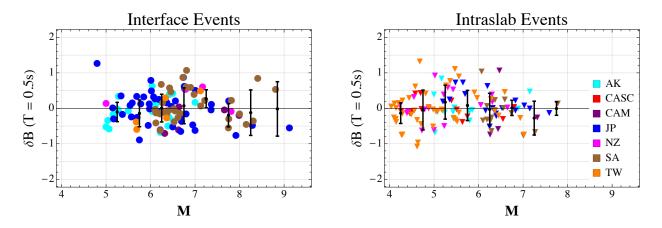


Figure 13: Plot of event terms versus magnitude  $\mathbf{M}$  for PSA at T=0.5 sec: (left) interface events; (right) intraslab events.

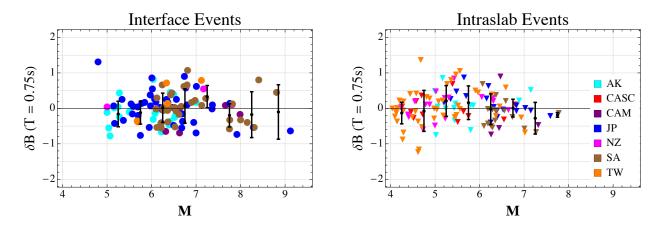


Figure 14: Plot of event terms versus magnitude  ${\bf M}$  for PSA at T=0.75 sec: (left) interface events; (right) intraslab events.

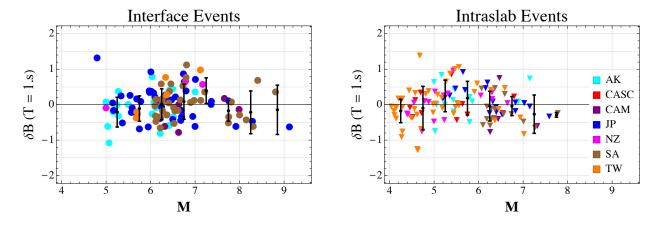


Figure 15: Plot of event terms versus magnitude  $\mathbf{M}$  for PSA at T=1. sec: (left) interface events; (right) intraslab events.

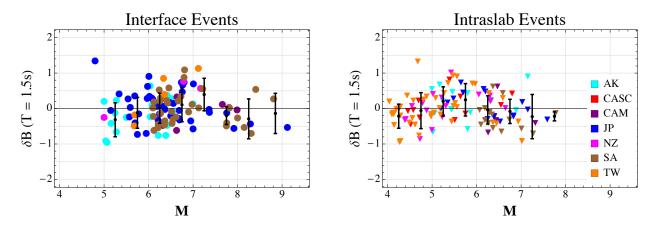


Figure 16: Plot of event terms versus magnitude M for PSA at T=1.5 sec: (left) interface events; (right) intraslab events.

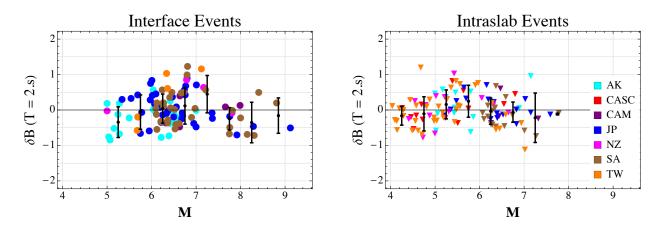


Figure 17: Plot of event terms versus magnitude  $\mathbf{M}$  for PSA at T=2. sec: (left) interface events; (right) intraslab events.

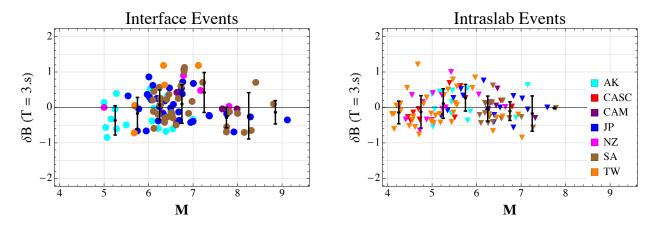


Figure 18: Plot of event terms versus magnitude M for PSA at T=3. sec: (left) interface events; (right) intraslab events.

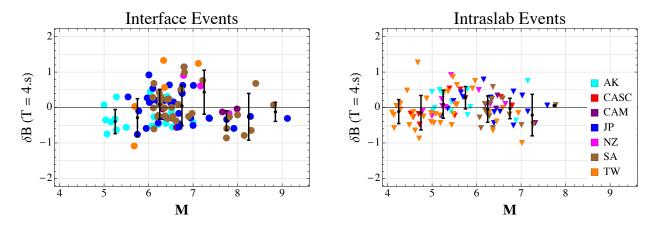


Figure 19: Plot of event terms versus magnitude  $\mathbf{M}$  for PSA at T=4. sec: (left) interface events; (right) intraslab events.

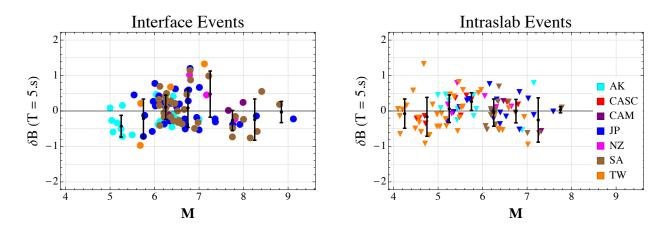


Figure 20: Plot of event terms versus magnitude  $\mathbf{M}$  for PSA at T=5. sec: (left) interface events; (right) intraslab events.

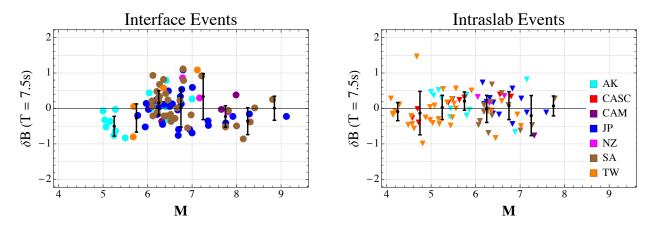


Figure 21: Plot of event terms versus magnitude M for PSA at T = 7.5 sec: (left) interface events; (right) intraslab events.

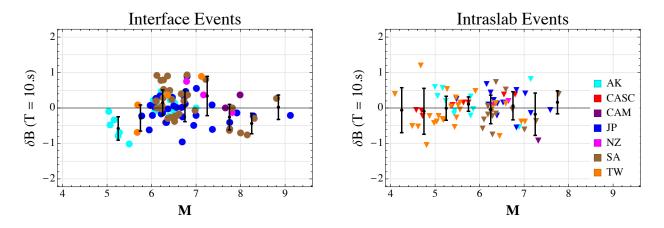


Figure 22: Plot of event terms versus magnitude  $\mathbf{M}$  for PSA at T=10. sec: (left) interface events; (right) intraslab events.

#### 1.2 Depth-To-Top-Of-Rupture

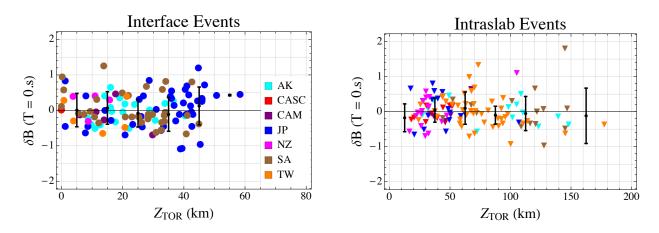


Figure 23: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0. sec: (left) interface events; (right) intraslab events.

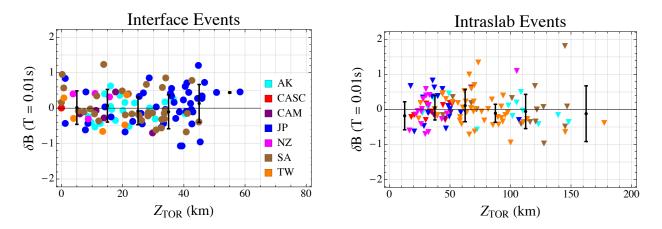


Figure 24: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.01 sec: (left) interface events; (right) intraslab events.

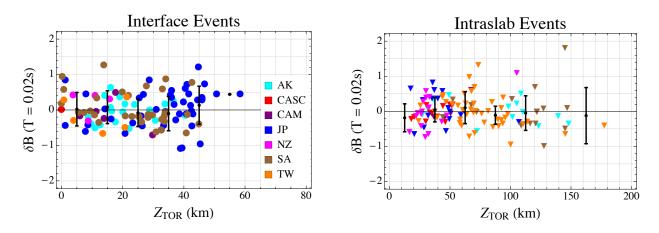


Figure 25: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.02 sec: (left) interface events; (right) intraslab events.

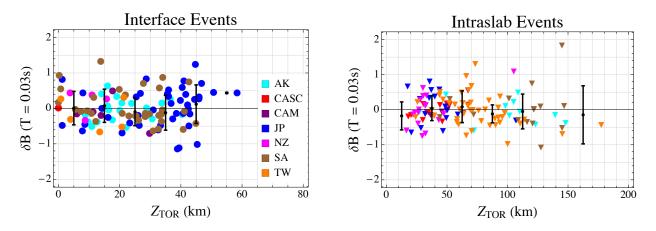


Figure 26: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.03 sec: (left) interface events; (right) intraslab events.

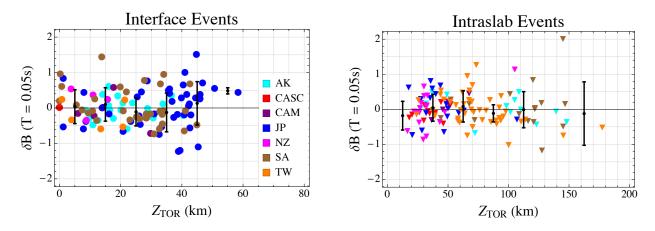


Figure 27: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.05 sec: (left) interface events; (right) intraslab events.

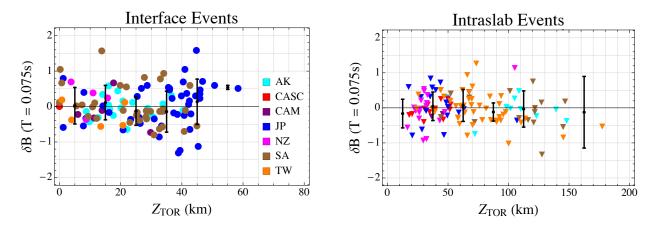


Figure 28: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.075 sec: (left) interface events; (right) intraslab events.

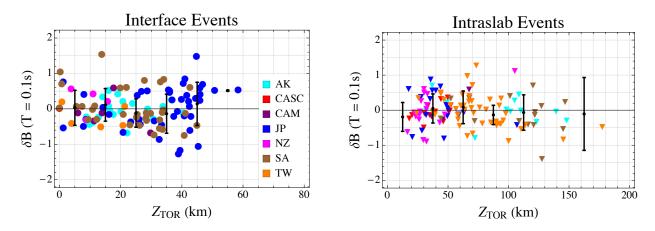


Figure 29: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.1 sec: (left) interface events; (right) intraslab events.

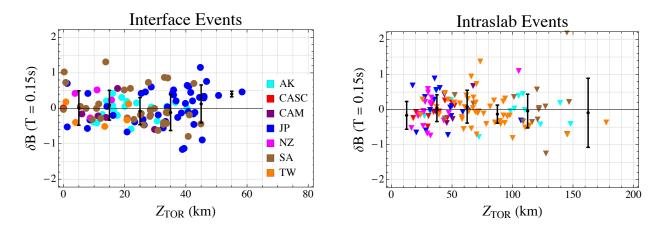


Figure 30: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.15 sec: (left) interface events; (right) intraslab events.

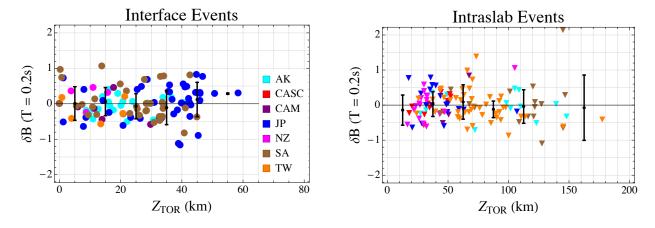


Figure 31: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.2 sec: (left) interface events; (right) intraslab events.

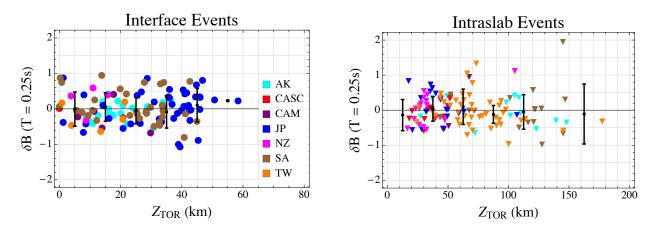


Figure 32: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.25 sec: (left) interface events; (right) intraslab events.

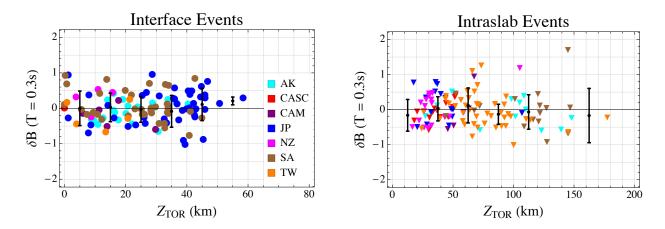


Figure 33: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.3 sec: (left) interface events; (right) intraslab events.

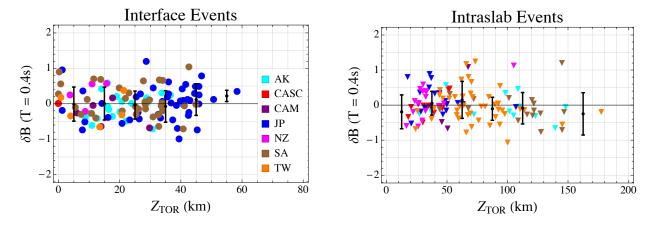


Figure 34: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.4 sec: (left) interface events; (right) intraslab events.

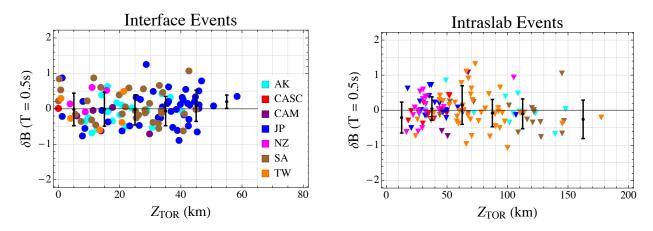


Figure 35: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.5 sec: (left) interface events; (right) intraslab events.

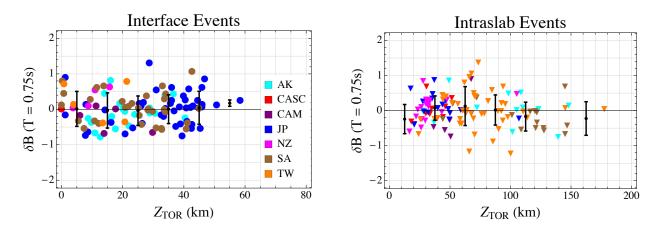


Figure 36: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=0.75 sec: (left) interface events; (right) intraslab events.

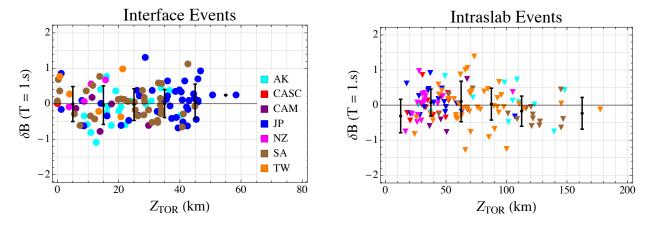


Figure 37: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=1. sec: (left) interface events; (right) intraslab events.

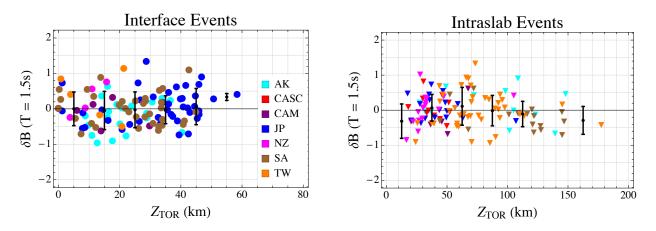


Figure 38: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=1.5 sec: (left) interface events; (right) intraslab events.

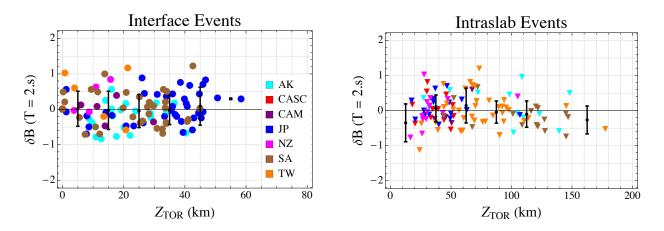


Figure 39: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=2. sec: (left) interface events; (right) intraslab events.

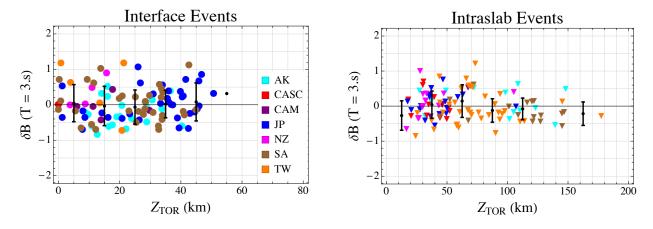


Figure 40: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=3. sec: (left) interface events; (right) intraslab events.

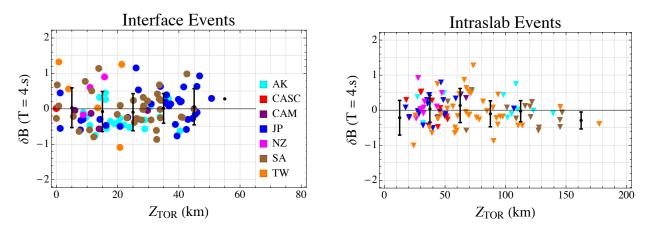


Figure 41: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=4. sec: (left) interface events; (right) intraslab events.

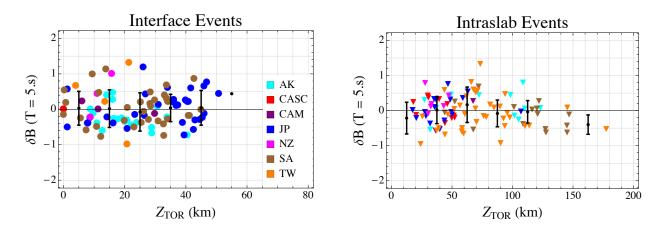


Figure 42: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=5. sec: (left) interface events; (right) intraslab events.

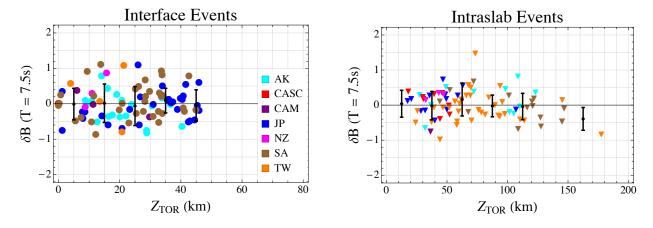


Figure 43: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=7.5 sec: (left) interface events; (right) intraslab events.

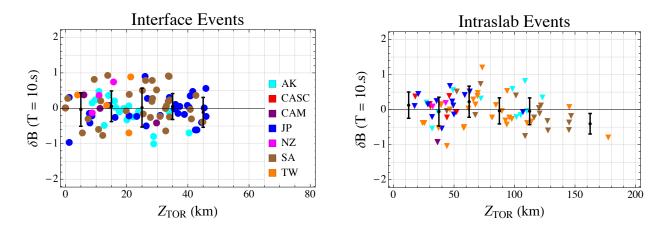


Figure 44: Plot of event terms versus depth to op of rupture  $Z_{TOR}$  for PSA at T=10. sec: (left) interface events; (right) intraslab events.