



# The 24<sup>th</sup> August 2016 M 6.8 Chauk Earthquake in Myanmar

Hla Hla Aung

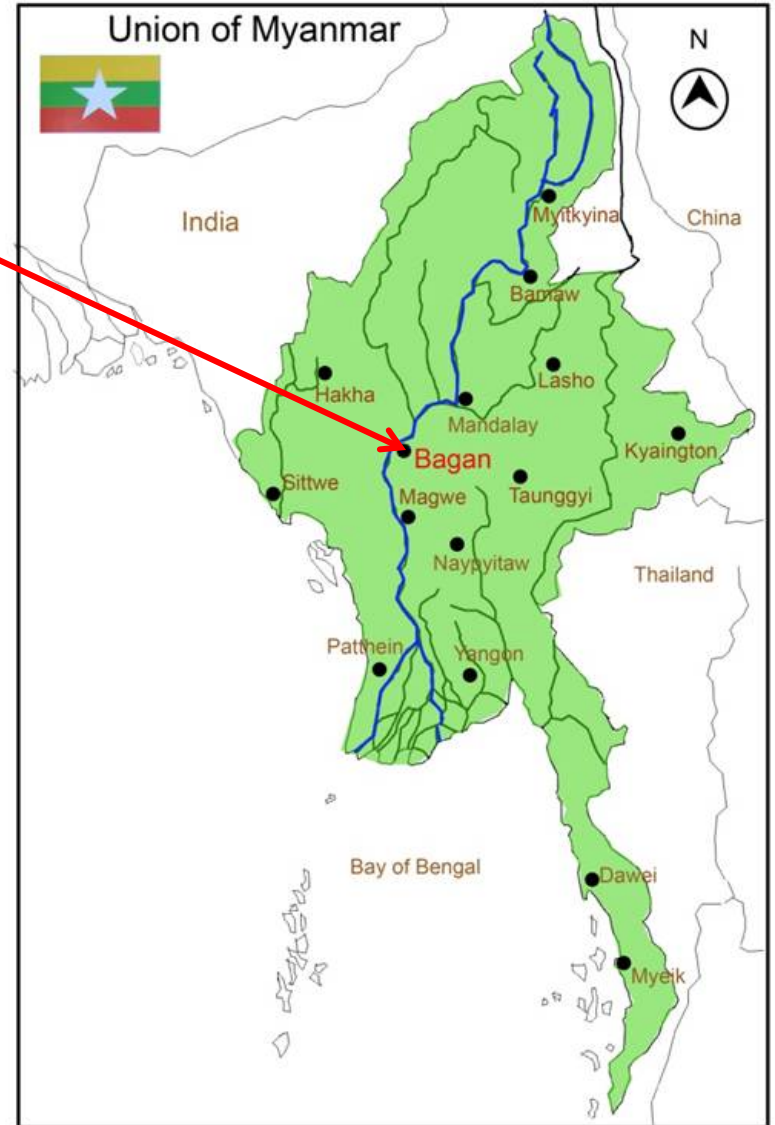
Senior Researcher,

Former Asst.Lecturer

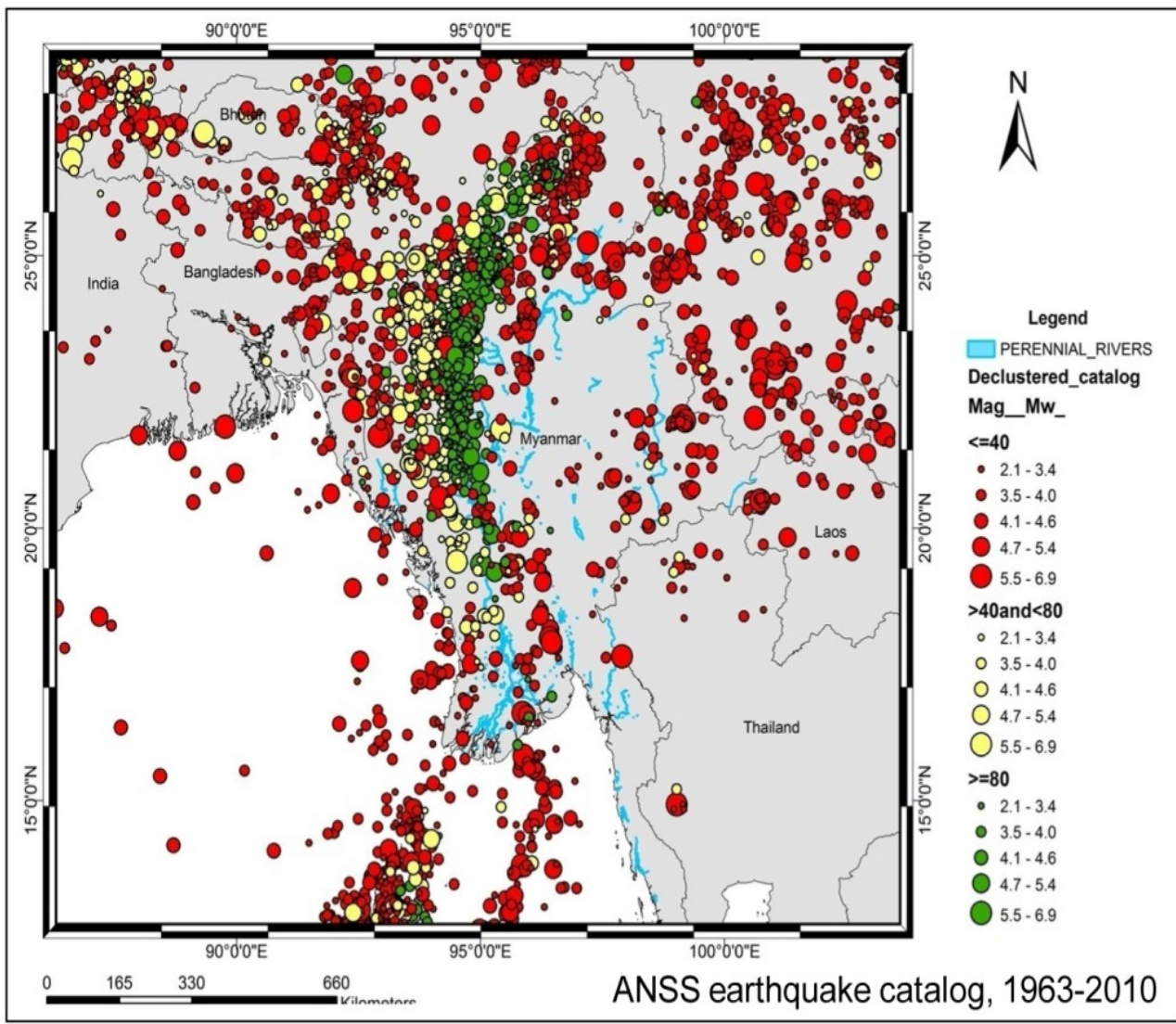
Myanmar Earthquake Committee, Myanmar Engineering Society / Univ. Of Yangon

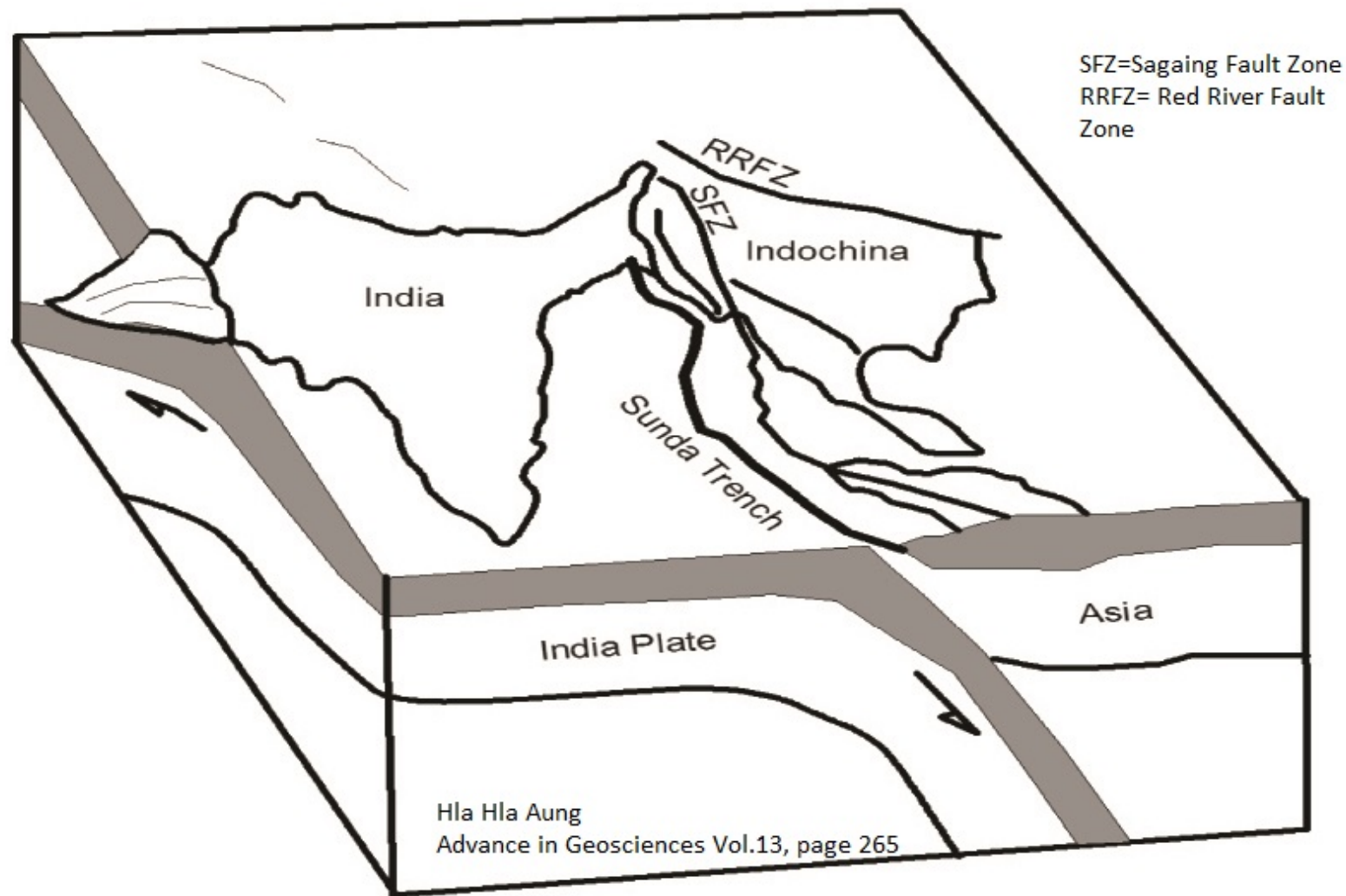
# BAGAN

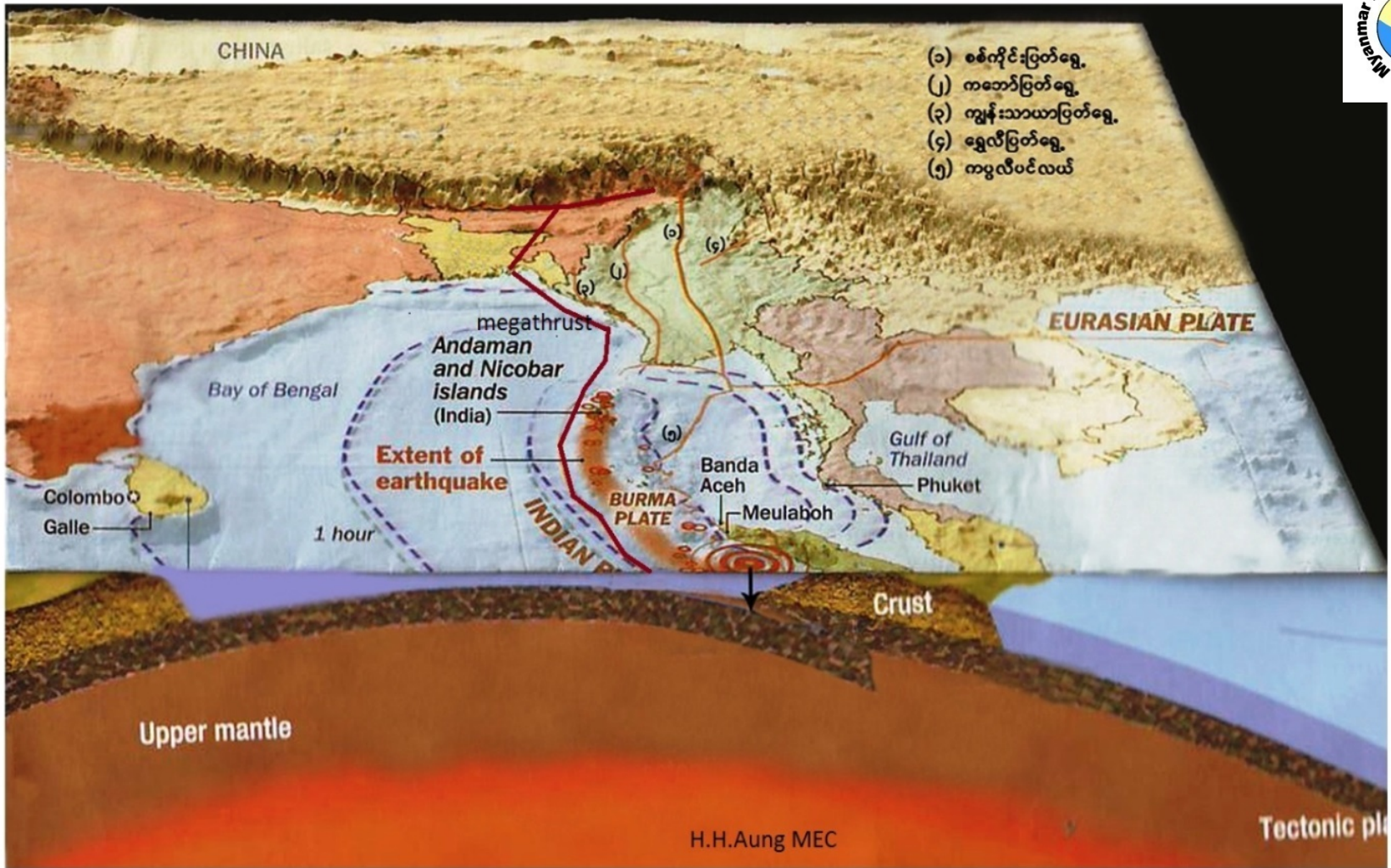
- \* Located in the DRY ZONE of Myanmar
- \* Situated at the ALLUVIAL FLAT PLAIN of Central Myanmar
- \* East of the Ayeyarwaddy River
- \* Coordination:  
Lat 21' 22"E, Long 94' 54" N



# ANSS earthquake catalog, 1963-2010



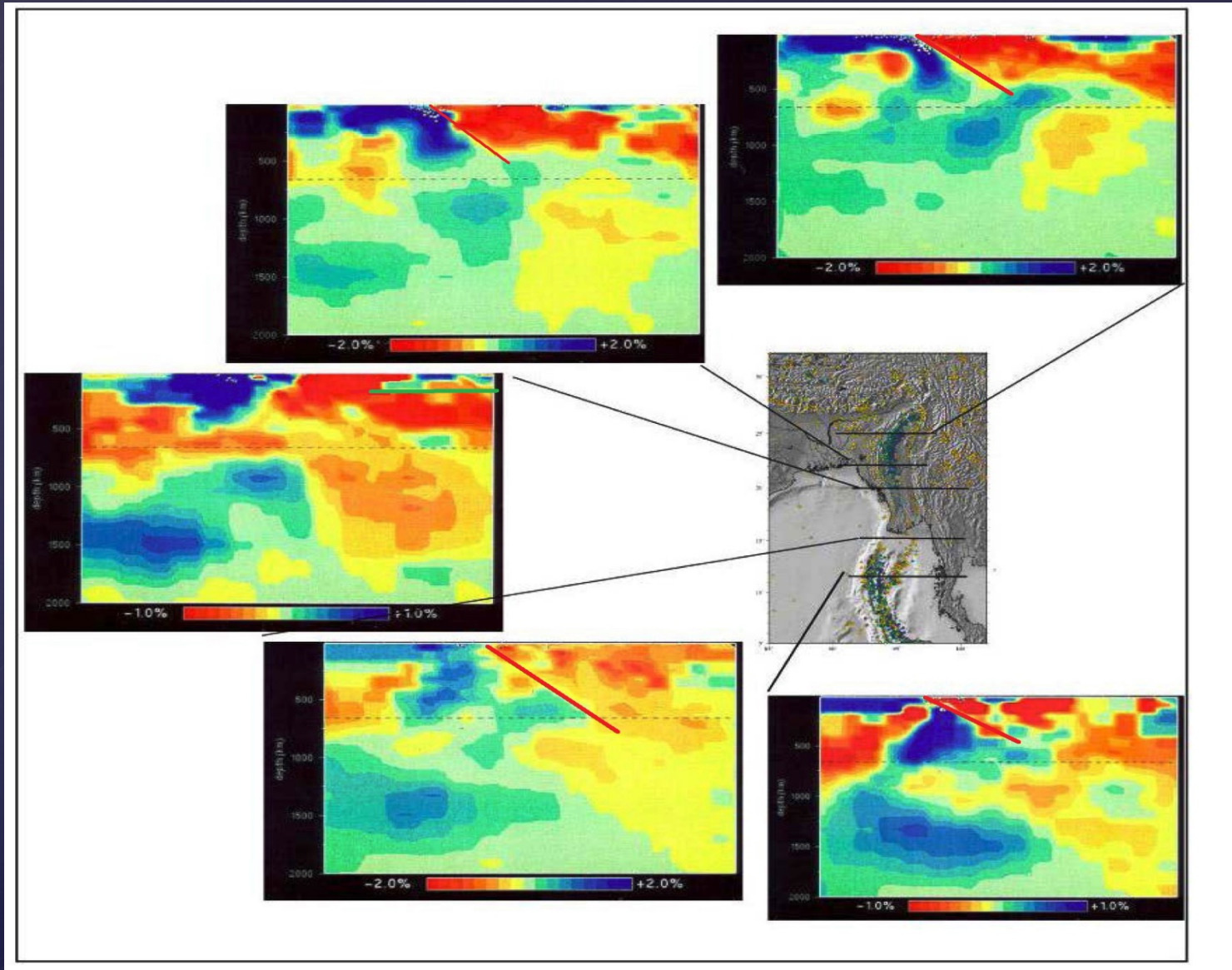


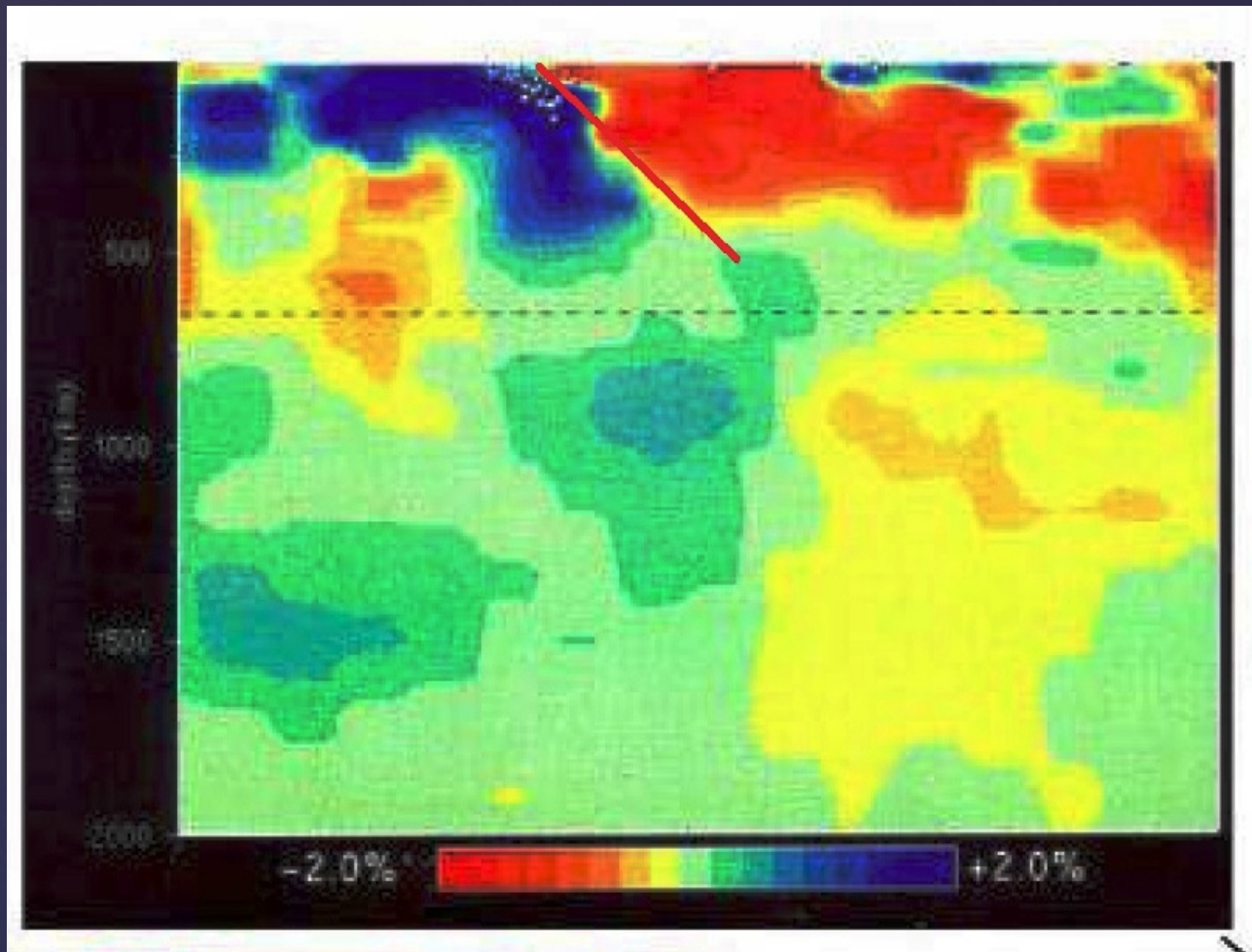


H.H.Aung MEC

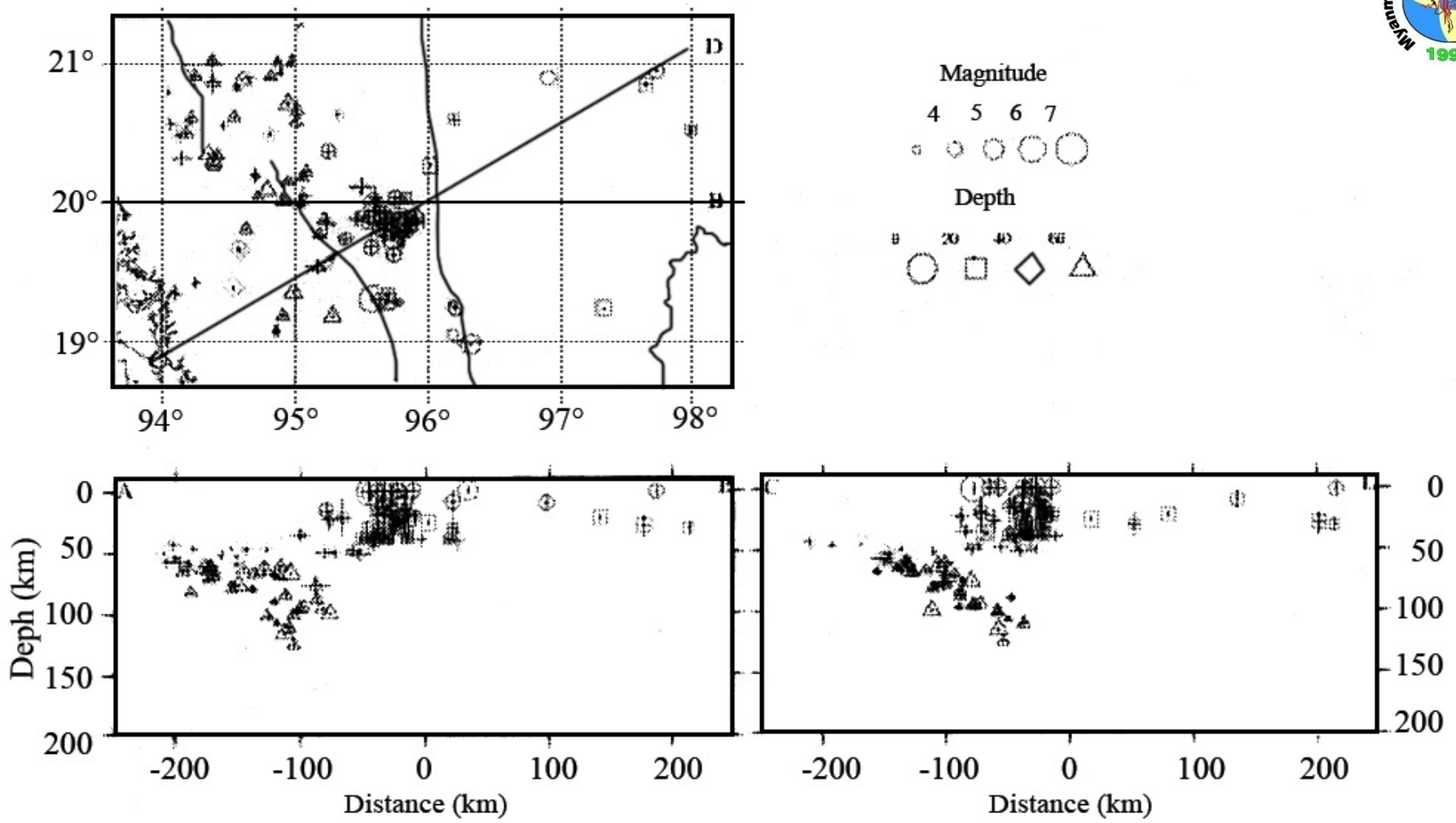
# Configuration of Sunda Megathrust

# Tomographic maps (GIAC)



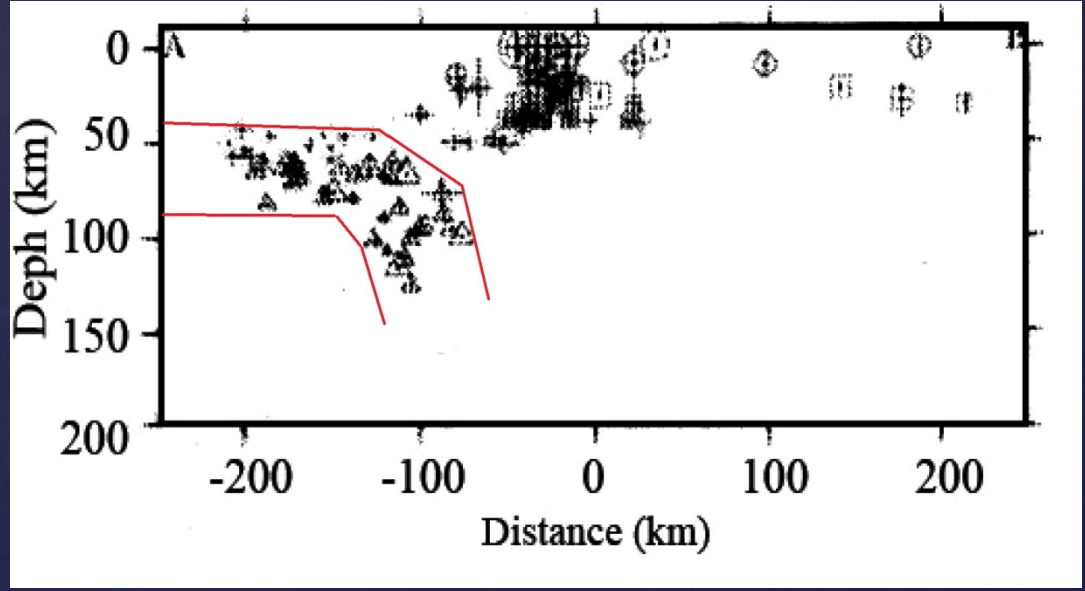
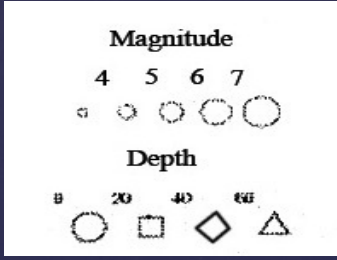
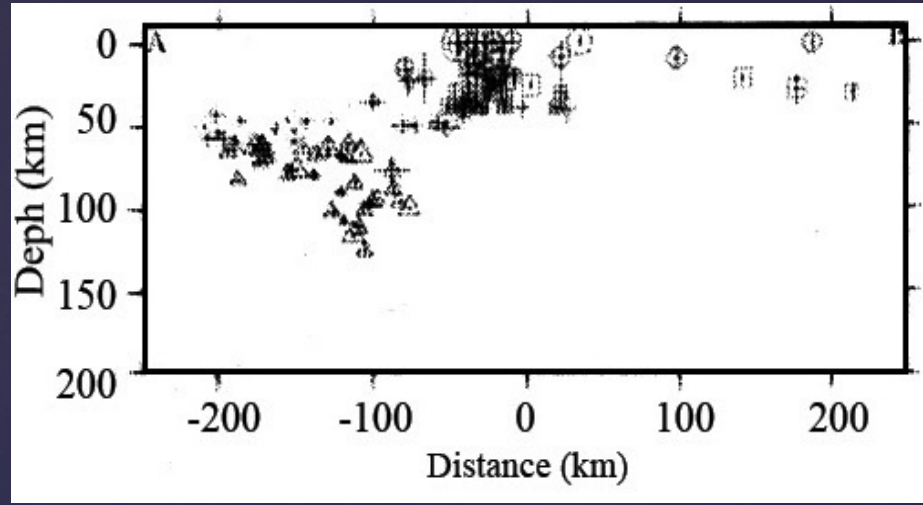
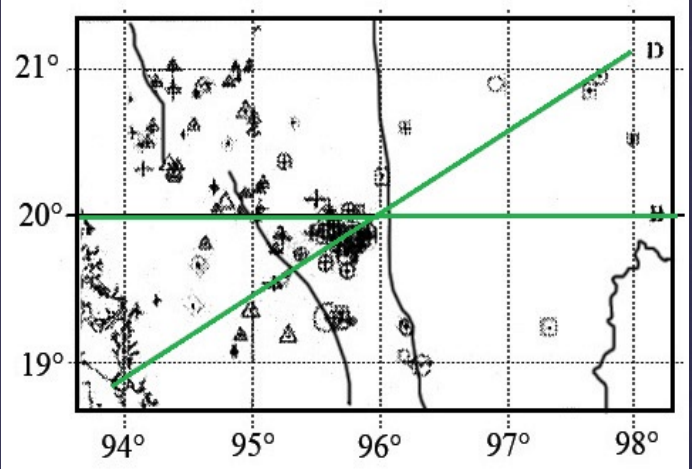


Tomographic image by GIAC

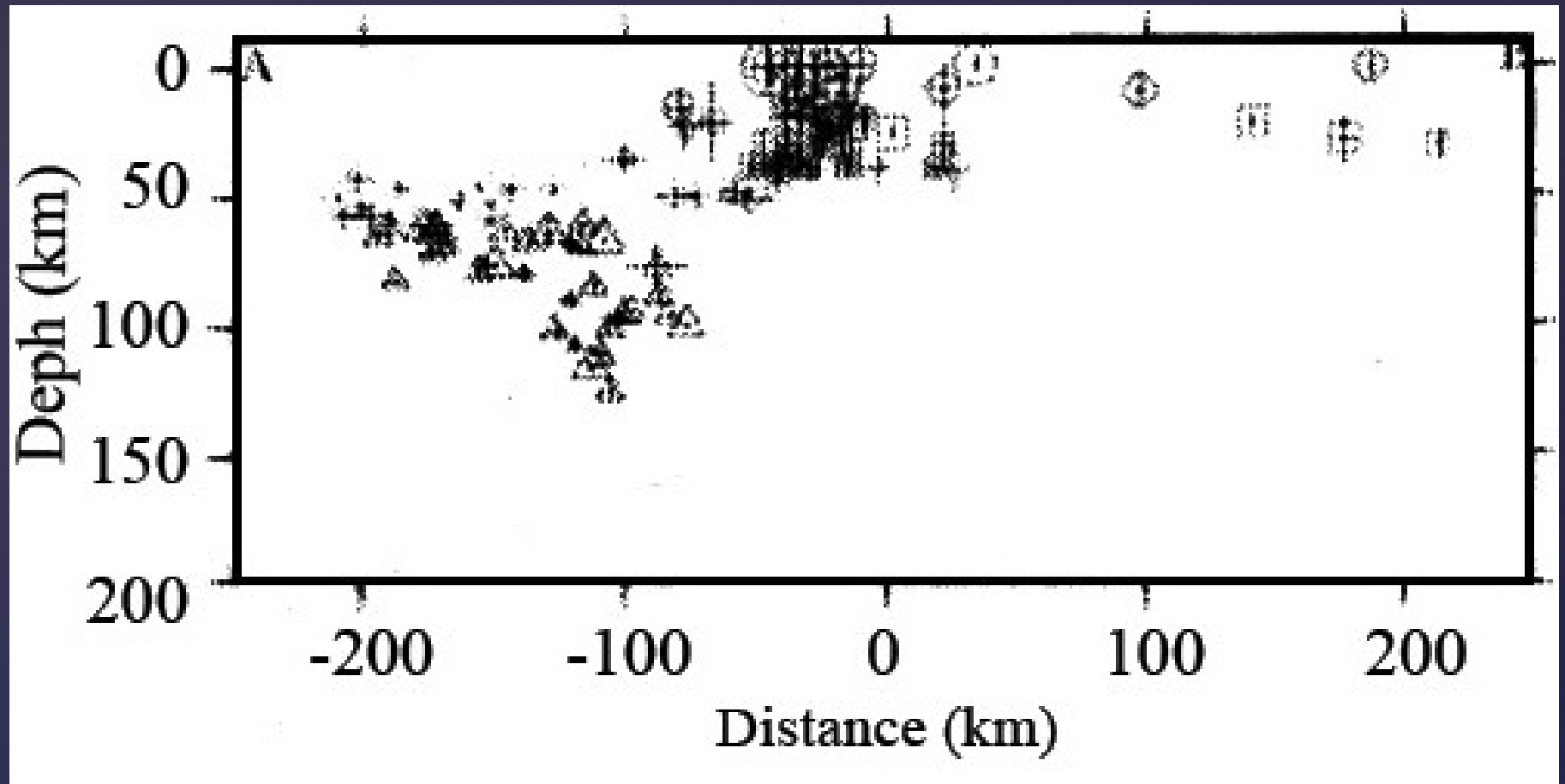


Cross-section across A-B & C-D (DMH)  
MJHD method

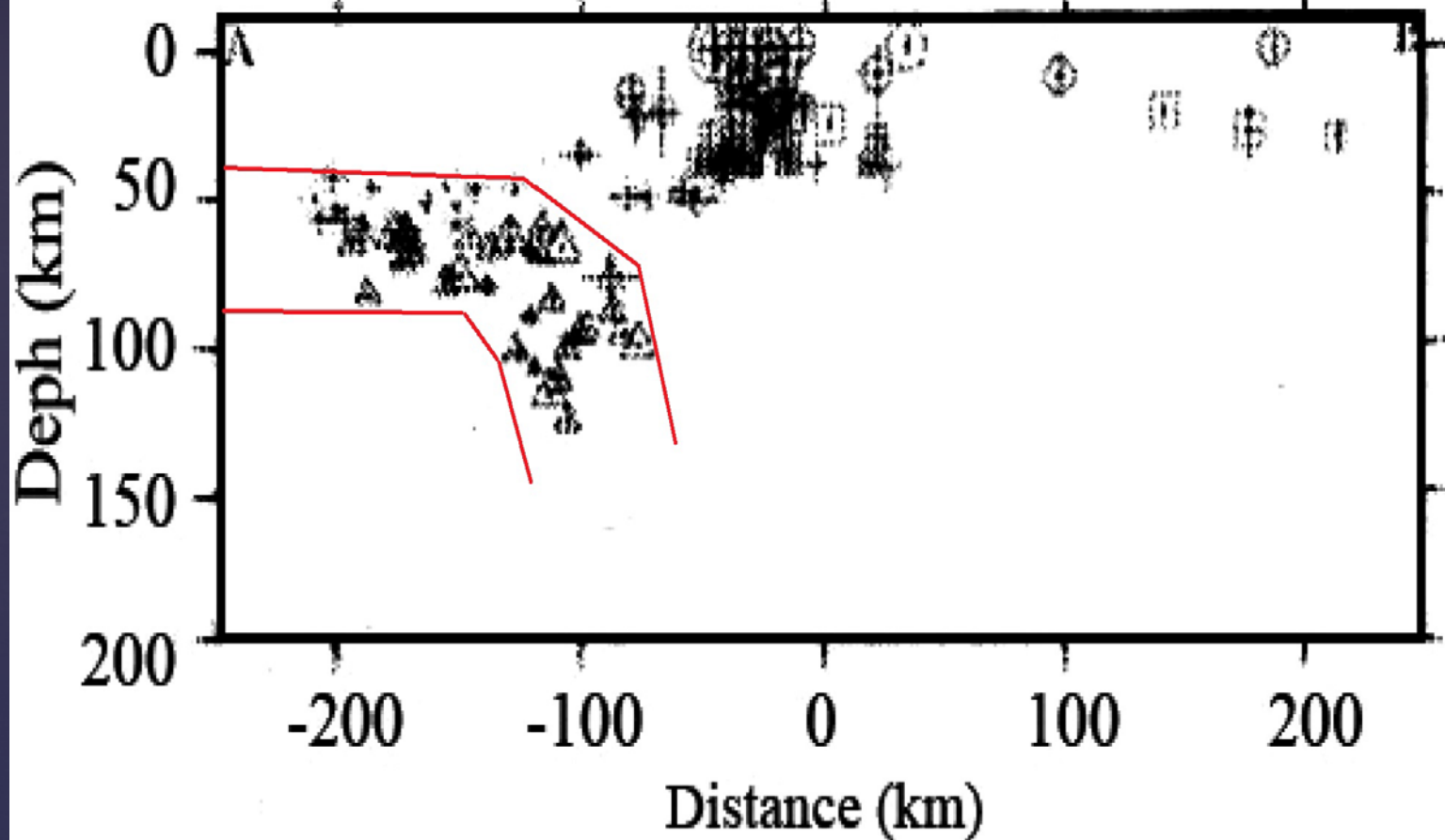


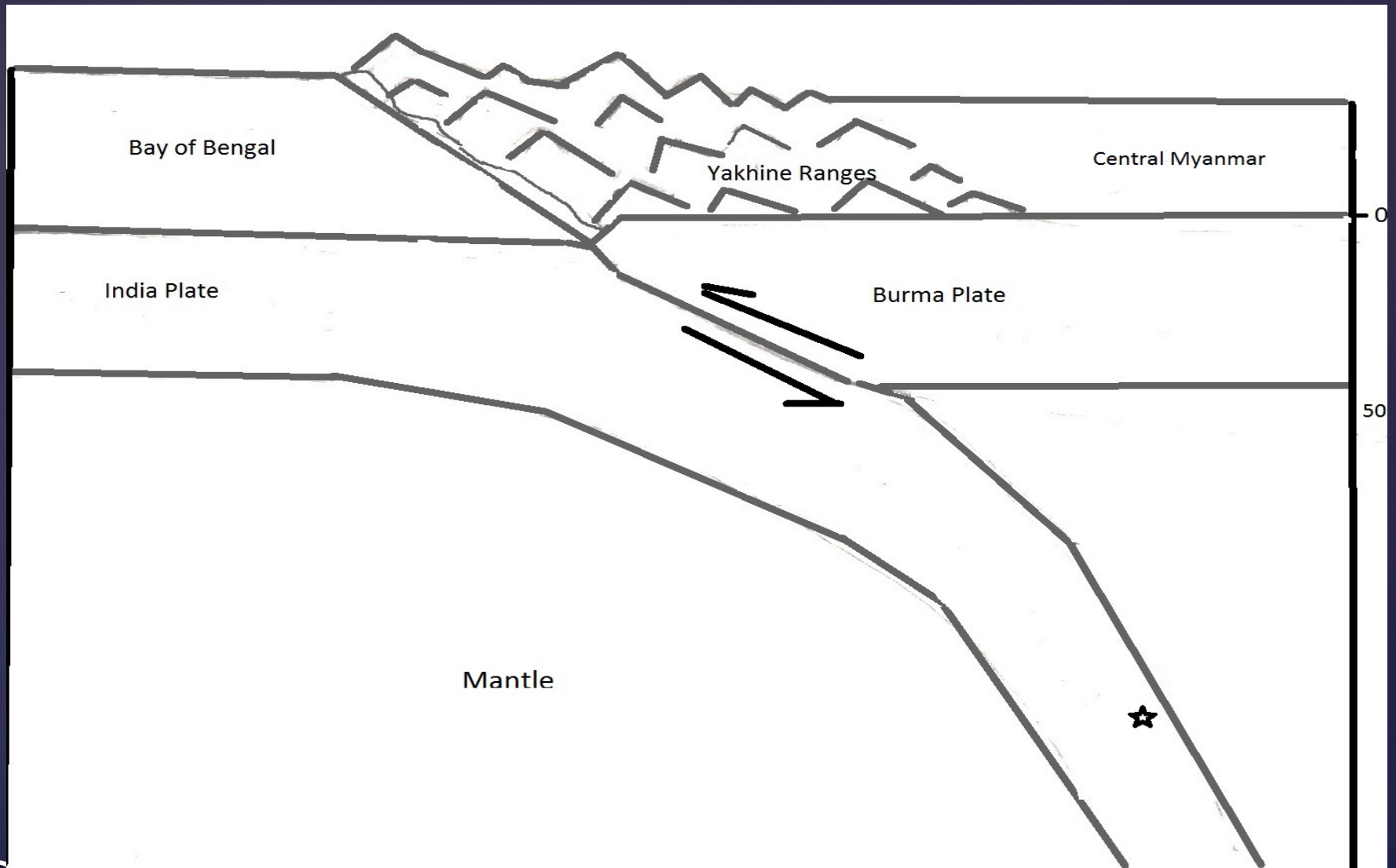


X section by DMH

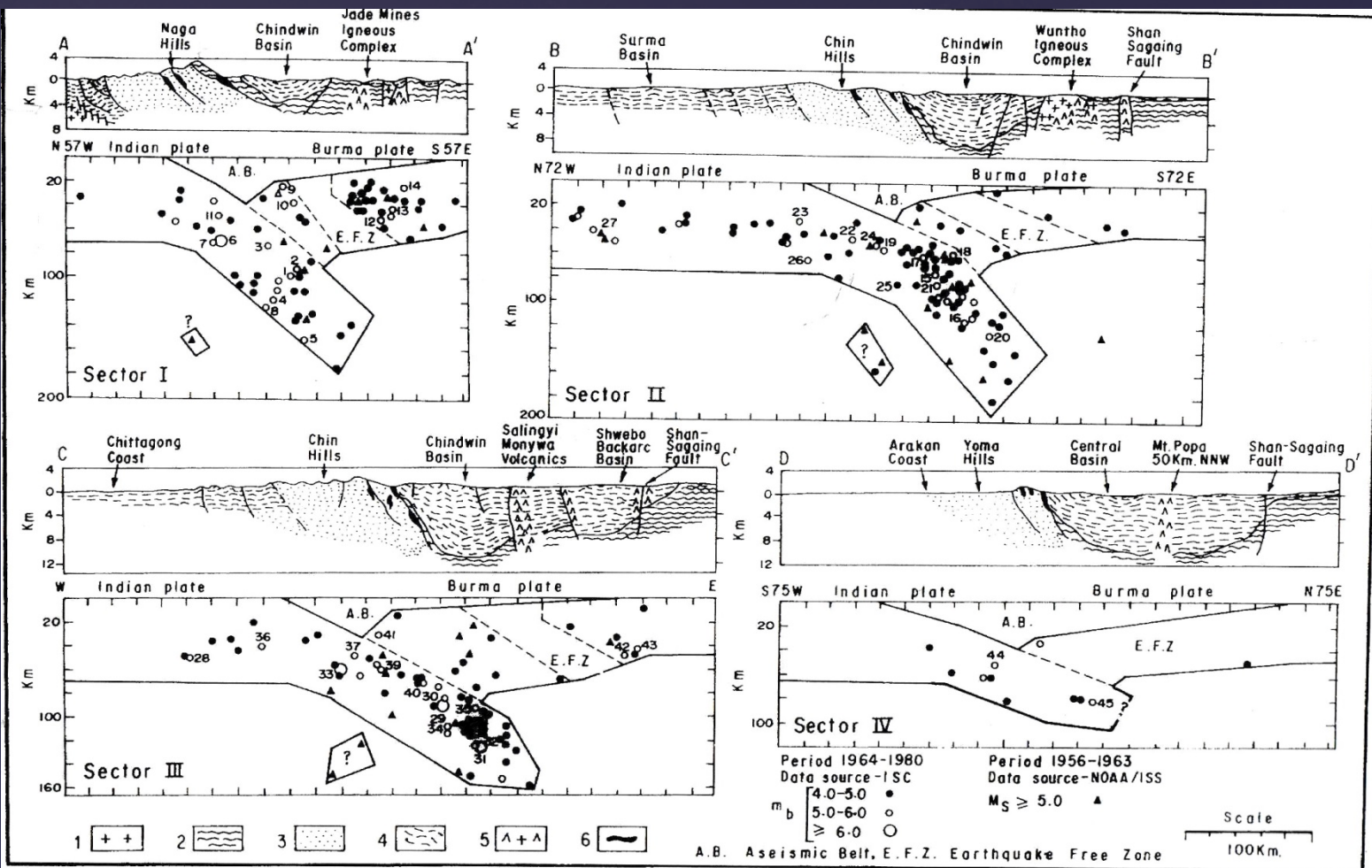


X-section along latitude 20 N, between longitude 94 E-96 E

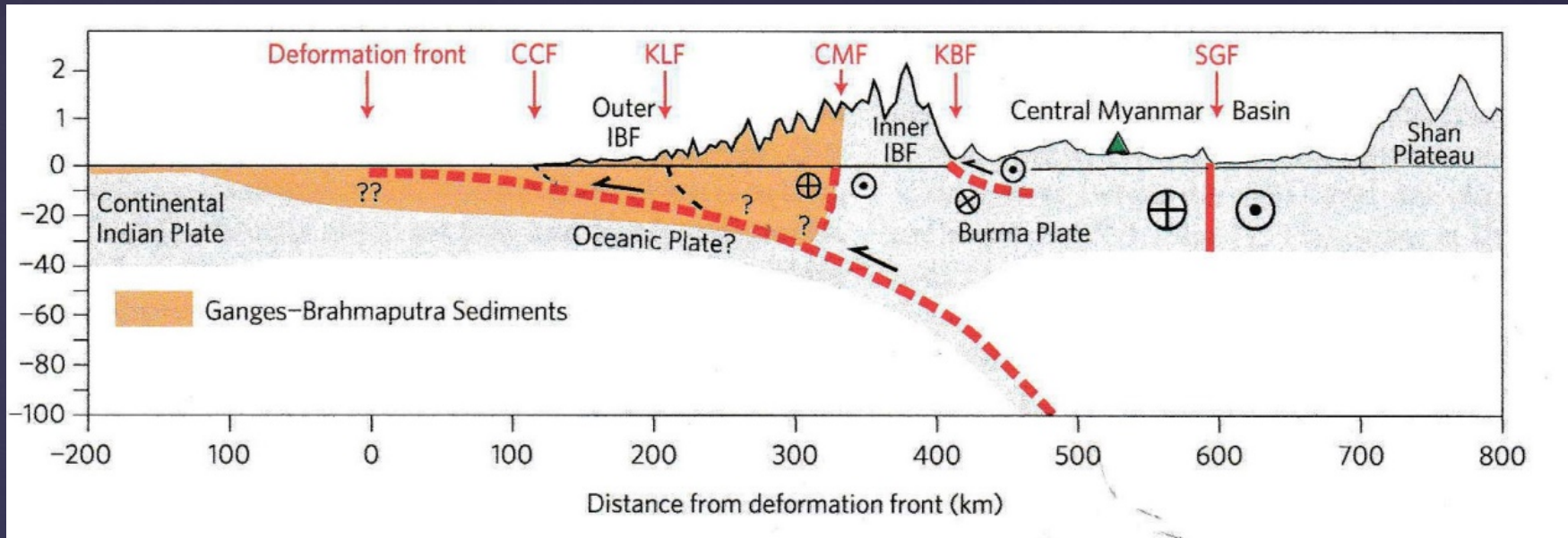




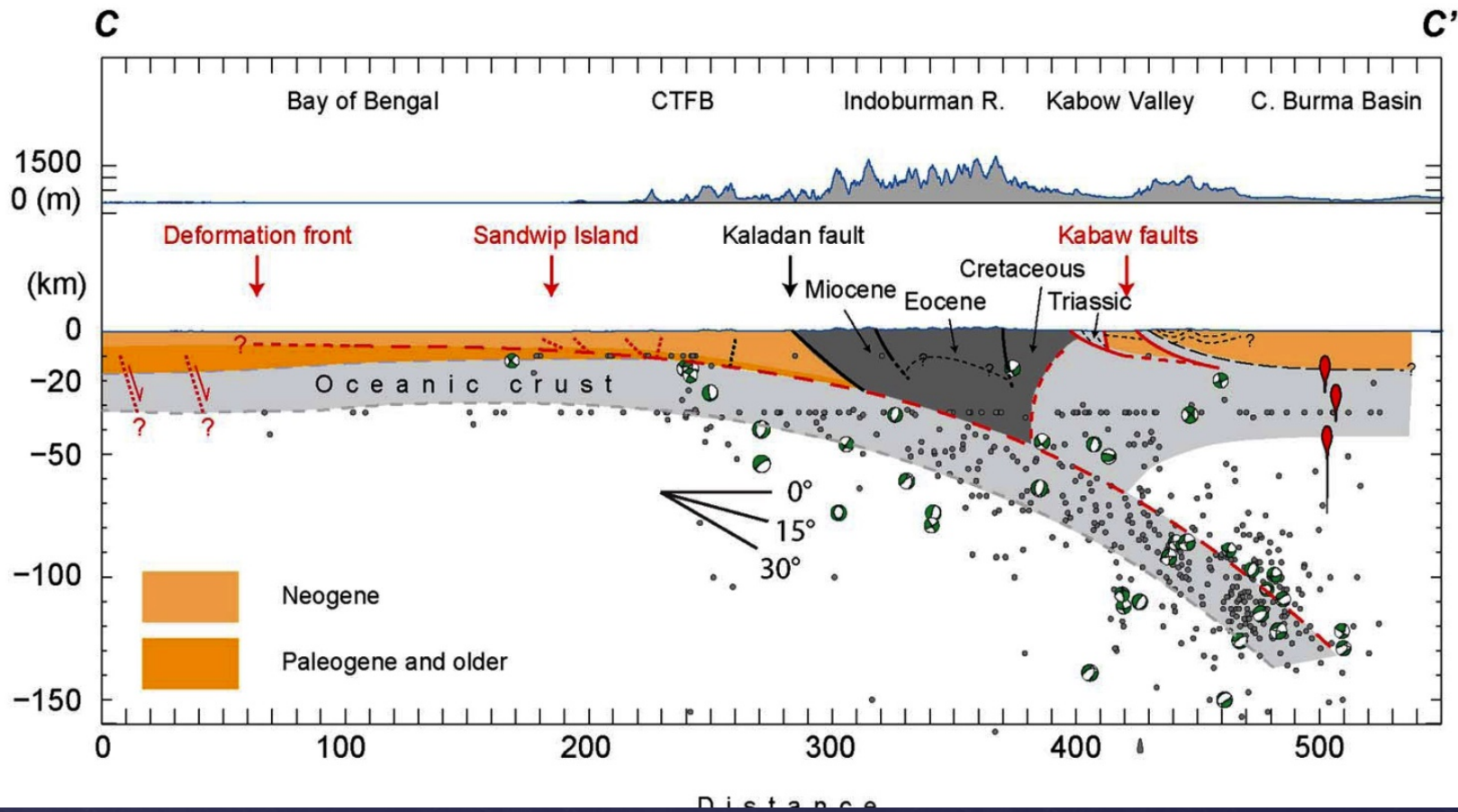
Cartoon of Subduction Eq. in Myanmar



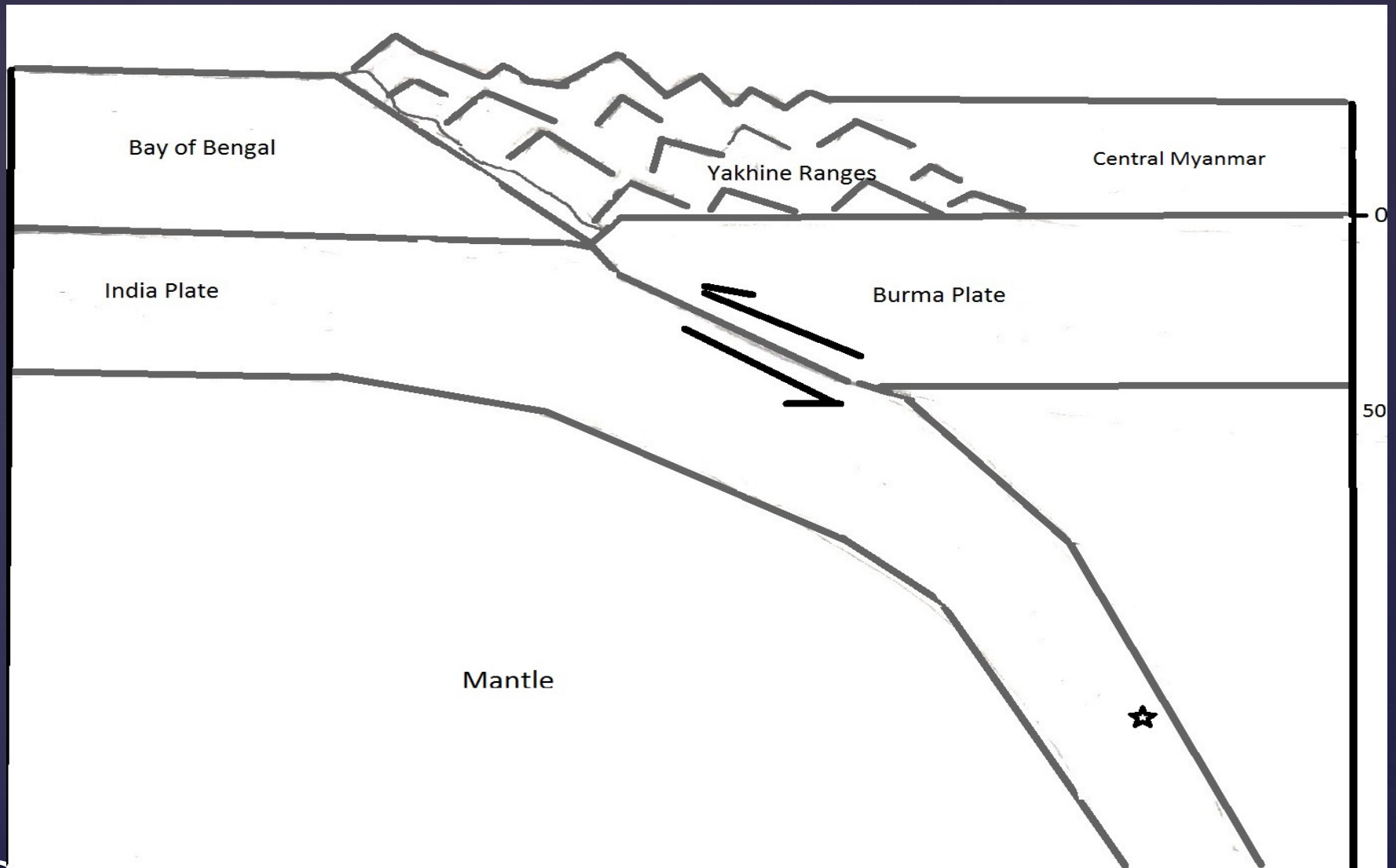
X section by Manoj & Dasgupta, 1988



X section by  
Steckler, 2016



X section by Wang Yu et al.2013

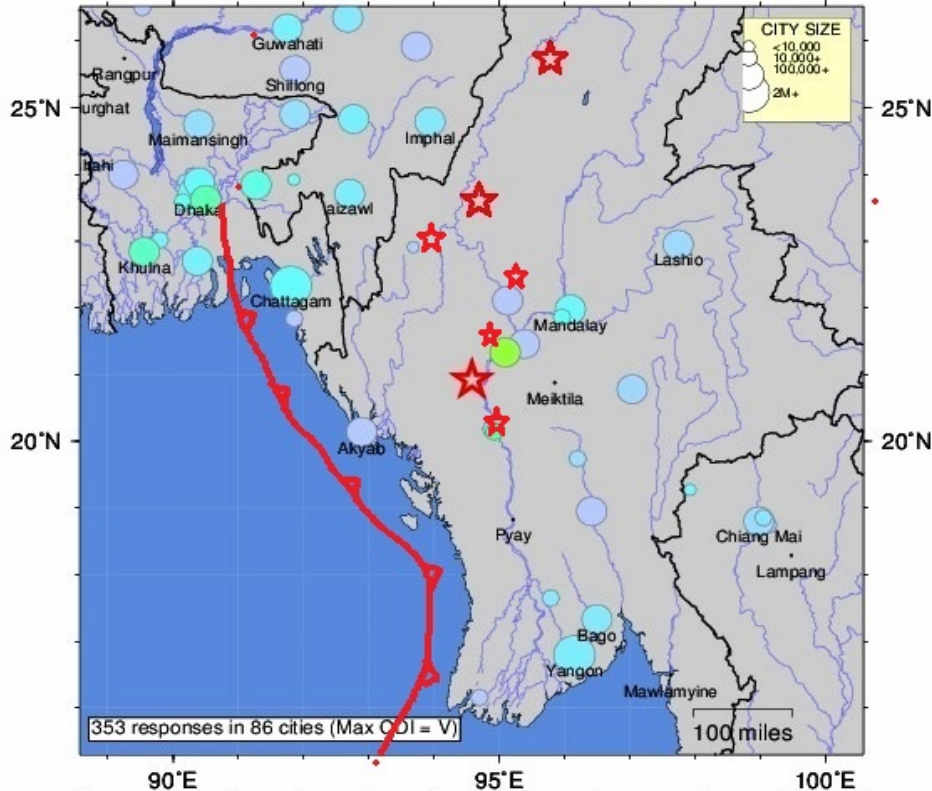


Cartoon of Subduction Eq. in Myanmar

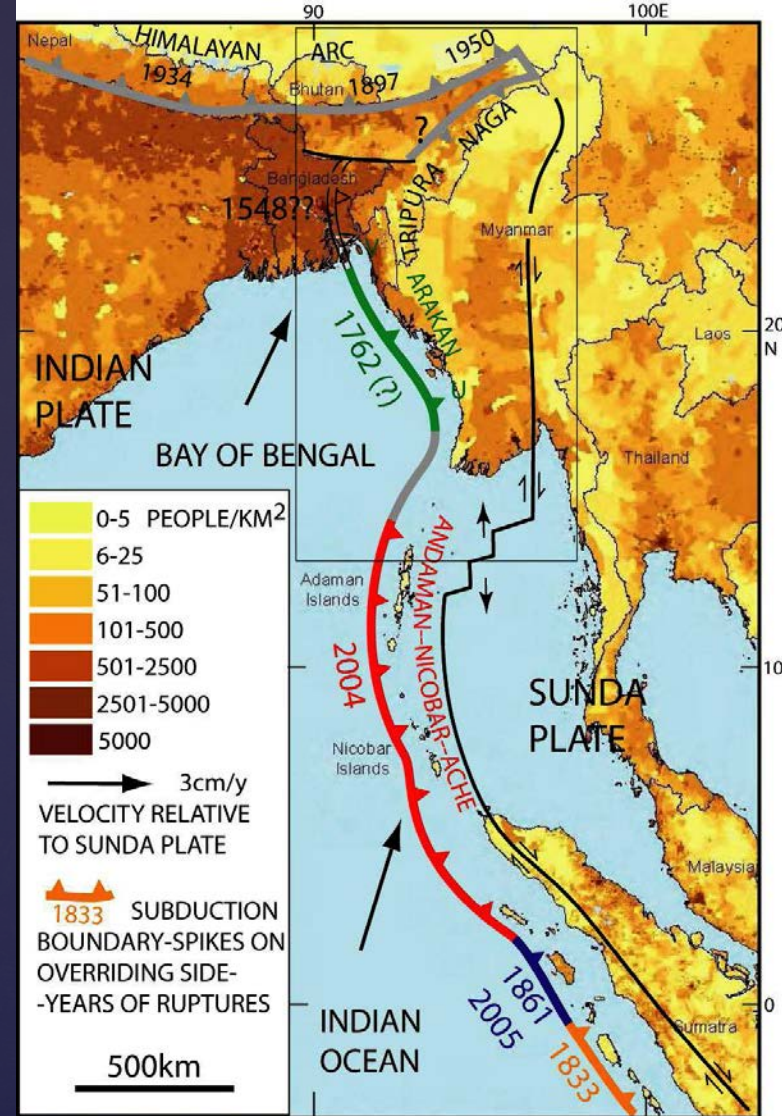


USGS Community Internet Intensity Map  
MYANMAR

Aug 24 2016 05:04:55 PM local 20.9192N 94.5789E M6.8 Depth: 84 km ID:us10006gbf

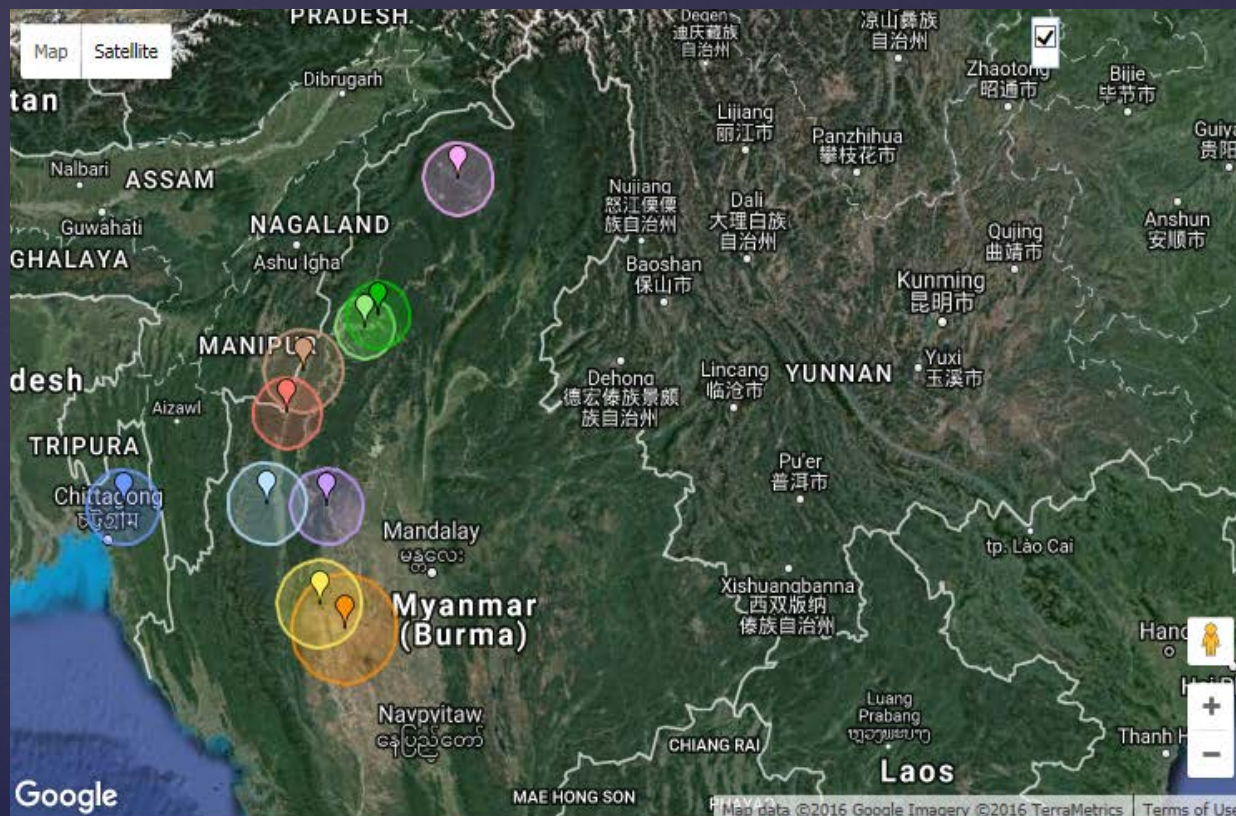




Processed: Wed Aug 24 14:14:10 2016 vmdyfi1



Naga-Tripura-Arakan segment & 2016 ruptures

# Occurrences of Eq.s in Myanmar

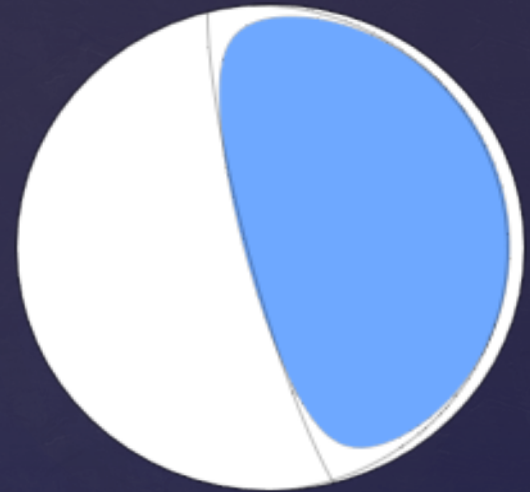
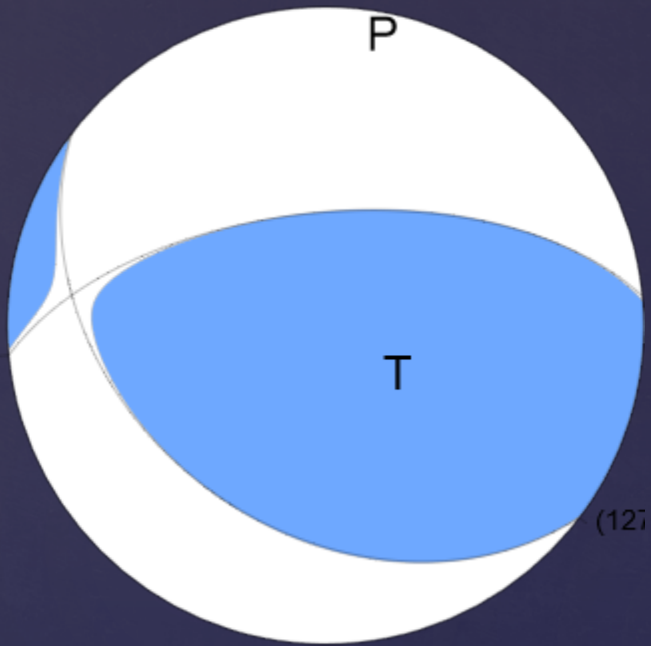


-  **about 20 hours ago 5.2 magnitude, 128 km depth**  
Pakokku, Magway, Myanmar
-  **6 days ago 4.9 magnitude, 97 km depth**  
Pakokku, Magway, Myanmar
-  **28 days ago 4.4 magnitude, 98 km depth**  
Yairipok, Manipur, India
-  **about a month ago 4.5 magnitude, 132 km depth**  
Phek, Manipur, India
-  **about a month ago 4.7 magnitude, 10 km depth**  
Manikchari, Chittagong, Bangladesh
-  **about a month ago 4.7 magnitude, 99 km depth**  
Monywa, Sagain, Myanmar
-  **2 months ago 4.6 magnitude, 74 km depth**  
Khonsa, Arunachal Pradesh, India
-  **2 months ago 4.8 magnitude, 42 km depth**  
Falam, Chin, Myanmar
-  **3 months ago 4.8 magnitude, 72 km depth**  
Wāngjing, Manipur, India
-  **4 months ago 4.6 magnitude, 67 km depth**  
Mawlaik, Sagain, Myanmar

# Occurrences of Eq.s in Myanmar



- ℳ 7 days ago 4.7 magnitude, 22 km depth  
Mawlaik, Sagaing, Myanmar
- ℳ 2 months ago 4.7 magnitude, 41 km depth  
Serchhip, Mizoram, India
- ❖ 2 months ago 5.0 magnitude, 110 km depth  
Mawlaik, Sagaing, Myanmar
- ℳ 2 months ago 4.5 magnitude, 32 km depth  
Bhamo, Kachin, Myanmar
- ℳ 2 months ago 4.7 magnitude, 97 km depth  
Phek, Manipur, India
- ℳ 3 months ago 4.6 magnitude, 139 km depth  
Phek, Manipur, India
- ❖ 4 months ago 6.8 magnitude, 84 km depth  
Chauk, Magway, Myanmar
- ❖ 4 months ago 5.3 magnitude, 106 km depth  
Mawlaik, Sagaing, Myanmar
- ❖ 5 months ago 5.2 magnitude, 128 km depth  
Pakokku, Magway, Myanmar
- ❖ 5 months ago 4.9 magnitude, 97 km depth  
Pakokku, Magway, Myanmar
- ℳ 5 months ago 4.4 magnitude, 98 km depth  
Yairipok, Manipur, India
- ℳ 6 months ago 4.5 magnitude, 132 km depth  
Phek, Manipur, India
- ℳ 6 months ago 4.7 magnitude, 10 km depth  
Manikchari, Chittagong, Bangladesh
- ❖ 6 months ago 4.7 magnitude, 99 km depth  
Monywa, Sagaing, Myanmar
- ℳ 7 months ago 4.6 magnitude, 74 km depth  
Khonsa, Arunachal Pradesh, India
- ℳ 7 months ago 4.8 magnitude, 42 km depth  
Falam, Chin, Myanmar
- ℳ 7 months ago 4.8 magnitude, 72 km depth  
Wangjing, Manipur, India
- ❖ 8 months ago 4.6 magnitude, 67 km depth  
Mawlaik, Sagaing, Myanmar
- ❖ 8 months ago 6.9 magnitude, 134 km depth  
Mawlaik, Sagaing, Myanmar
- ℳ 9 months ago 4.4 magnitude, 62 km depth  
Bhamo, Kachin, Myanmar
- ℳ -

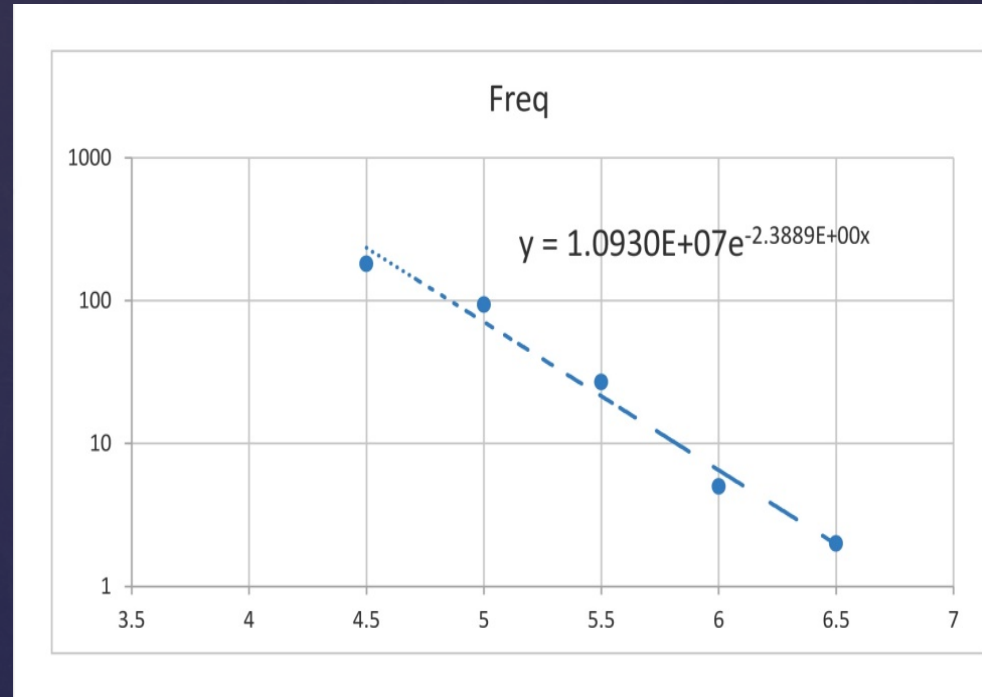
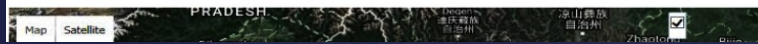
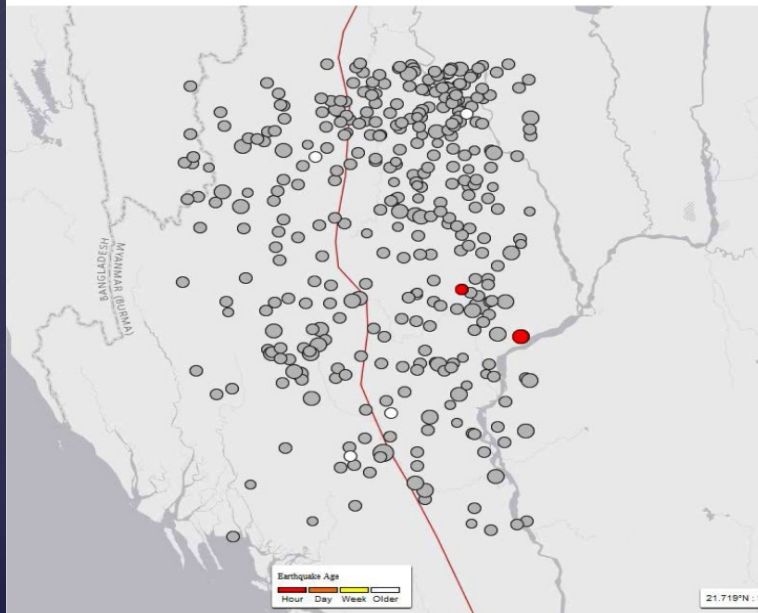
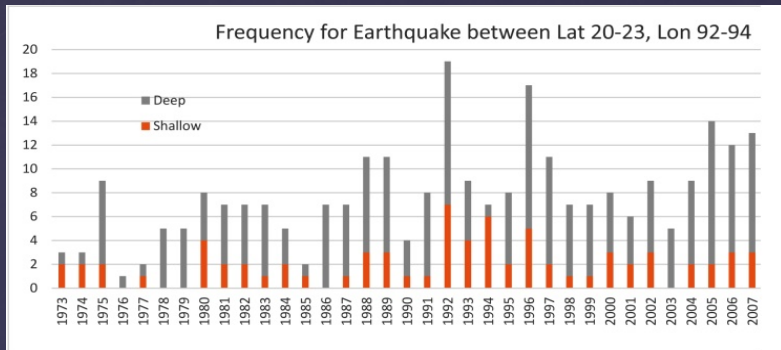


Moment tensor of Mawlaik & Chauk

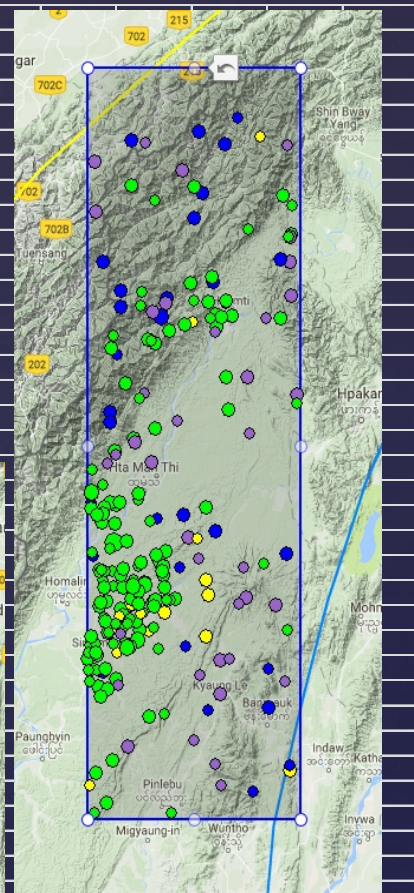
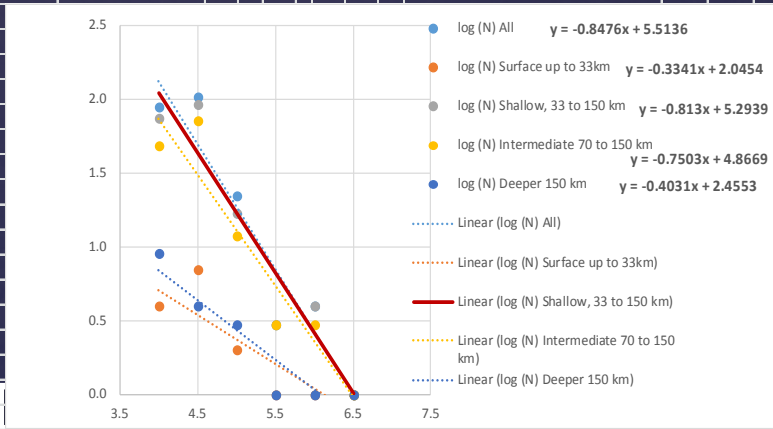
- ⌘ Tama-thi earthquake (NW Burma)
- ⌘ Magnitude : 4.8
- ⌘ Local Time (conversion only below land) :  
2016-10-11 14:00:15
- ⌘ GMT/UTC Time : 2016-10-11 07:30:15
- ⌘ Depth (Hypocenter) : 91 km

# Tama-thi earthquake

# B-value of Chauk area

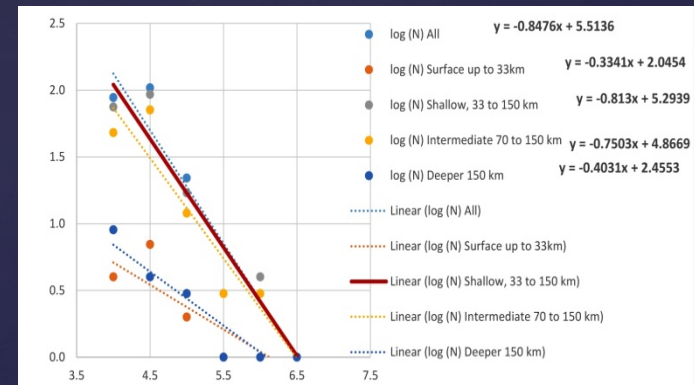
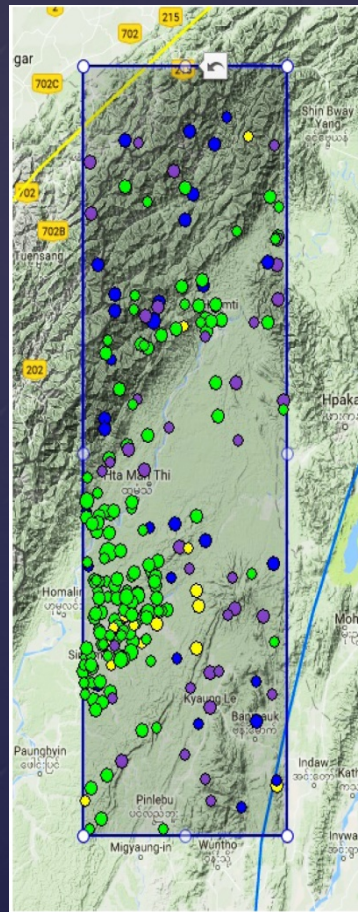


Depth Zone (Multiple Items)							
Column Labels							
		4	4.5	5	5.5	6	6.5
Count of Mag		75	93	17	3	4	1
	mag	4	4.5	5	5.5	6	6.5
all	All	88	104	22	3	4	1
	Surface up to 33km	4	7	2			
	Shallow, 33 to 150 km	75	93	17	3	4	1
	Intermediate 70 to 150 km	48	71	12	3	3	1
	Deeper 150 km	9	4	3			
	log (N) All	1.944	2.017	1.342	0.477	0.602	0.000
	log (N) Surface up to 33km	0.602	0.845	0.301	#####	#####	#####
	log (N) Shallow, 33 to 150 km	1.875	1.968	1.230	0.477	0.602	0.000
	log (N) Intermediate 70 to 150 km	1.681	1.851	1.079	0.477	0.477	0.000
	log (N) Deeper 150 km	0.954	0.602	0.477	#####	#####	#####



# b-value of Rama-thi area

# Distribution of seismicity & b-value

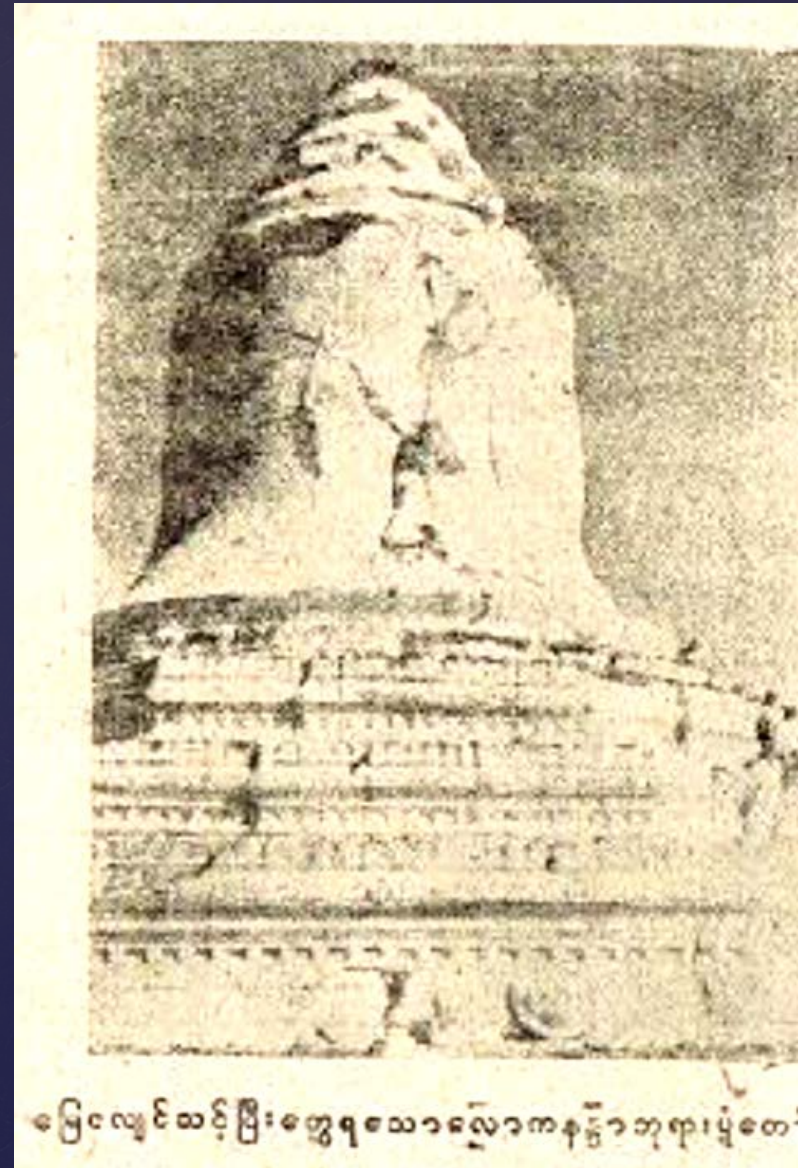




# Mud flow in Sittwe



# Earthquake in 1975



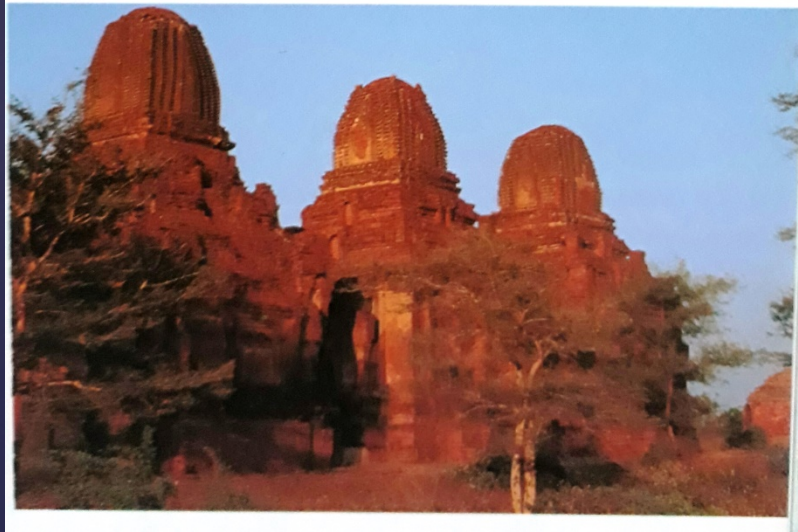


after1975

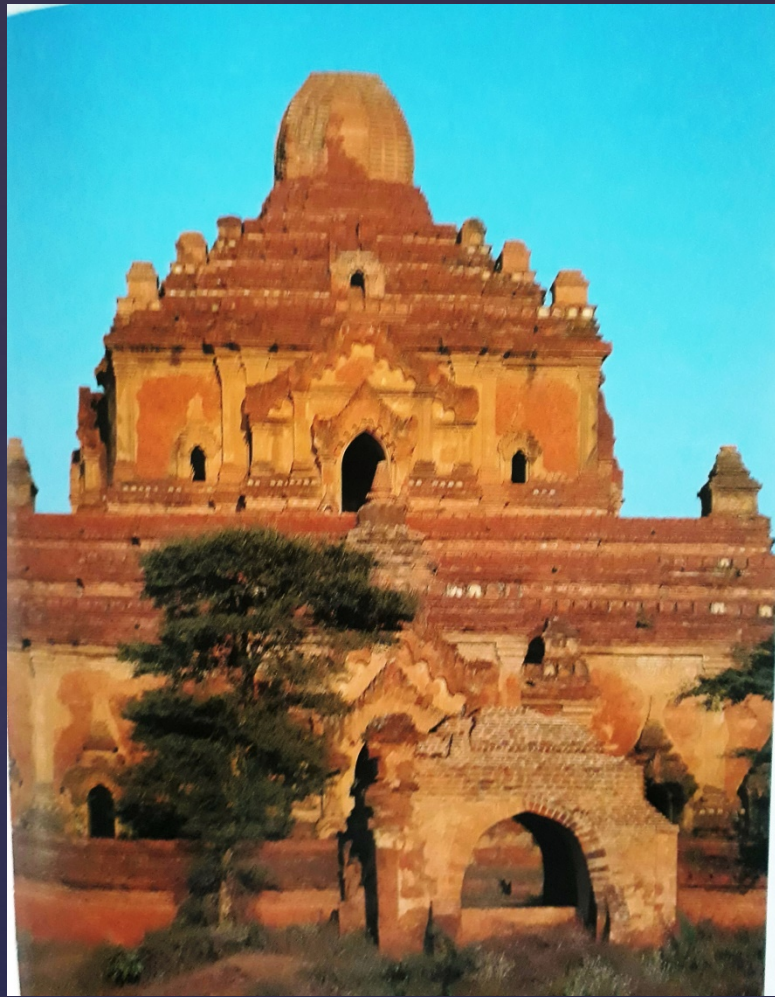
# Sulamani Temple







after 1975



after1975

# Pyatthatgyi Phaya2016



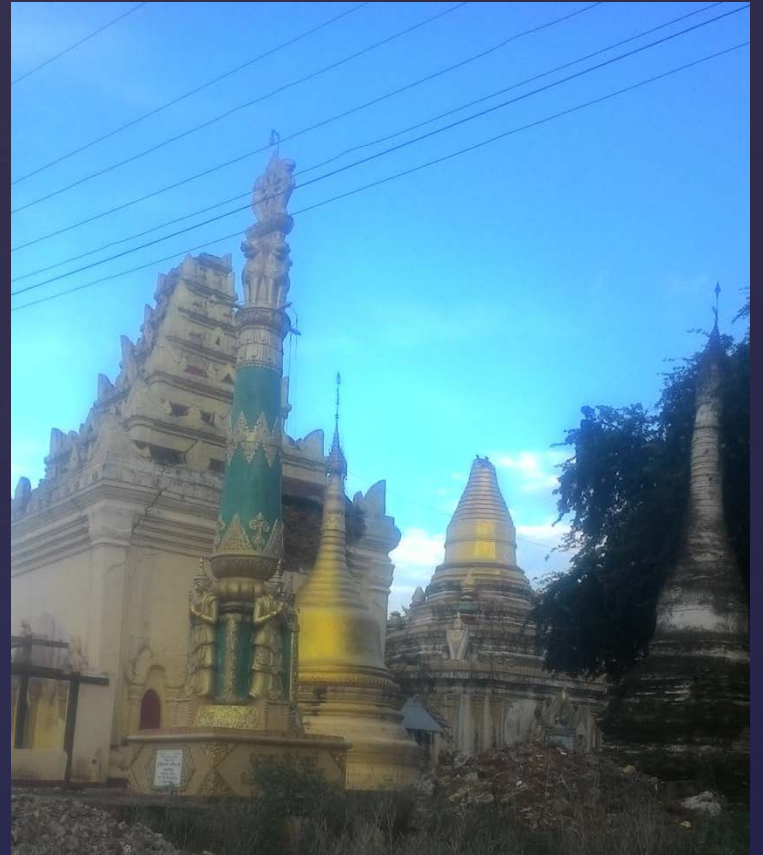
7:35/9



















**Thank You**