



**GOVERNMENT OF INDIA  
GEOLOGICAL SURVEY OF INDIA**

**A note on earthquake of magnitude 5.1  $M_L$  of 2nd August, 2017 in Manipur, India.**

A moderate earthquake of magnitude 5.1 $M_L$  occurred at a depth of 21.4km near Churchandpur in Manipur, India on 2<sup>nd</sup> August, 2017 at 18 hrs:18 min: 08.30 sec.(UTC) and at 23hrs: 48min: 08.30sec. (IST). The epicentre of the earthquake has been located at Latitude 24.320<sup>0</sup>N and Longitude 93.733<sup>0</sup>E using data recorded at all the five Seismo-geodetic observatories of GSI located at Agartala, Itanagar, Mangan(Sikkim), Jammu and Nagpur. The epicentre of the earthquake is shown on the map (Fig.1). It lies near the thrust boundary in Indo-Burma Ranges. The waveform of the event with location parameters are presented in Fig. 2 (a & b), respectively.

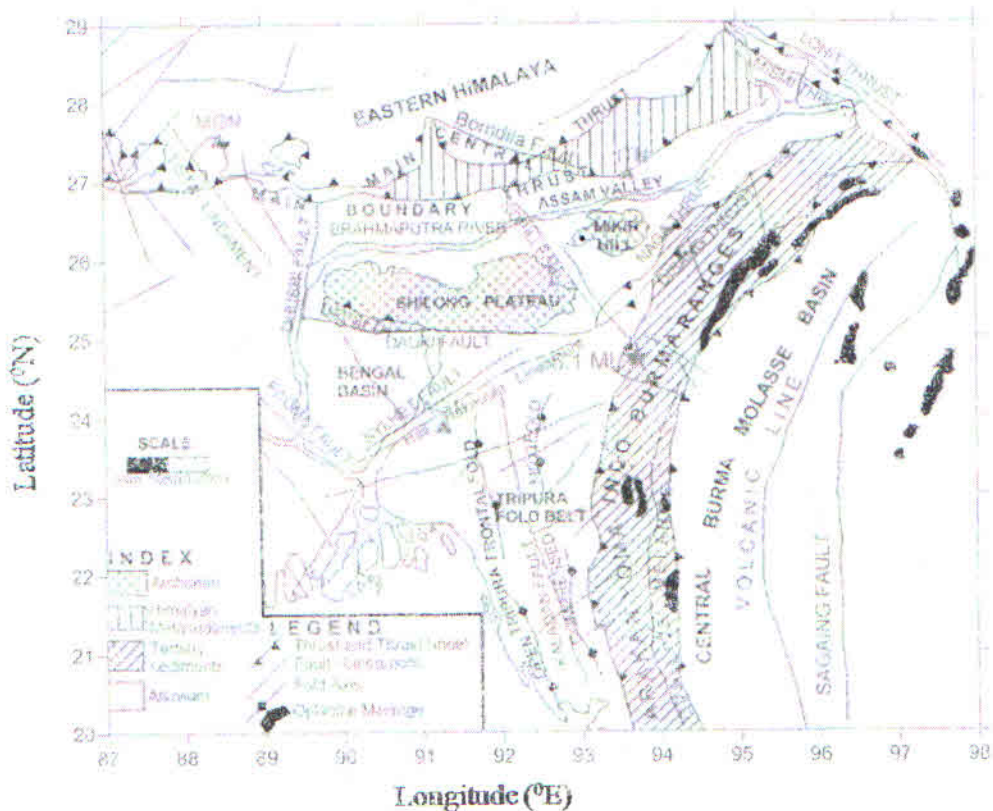


Fig. 1. Tectonic map of NE India and surroundings (after Evans, 1964 and Krishnan, 1960).The star shows the location of the epicentre of the earthquake. The Triangles indicate the location of the Seismo-geodetic Observatories of GSI (AGT: Agartala, ITN: Itanagar and MGN: Mangan, Sikkim) in NE India.

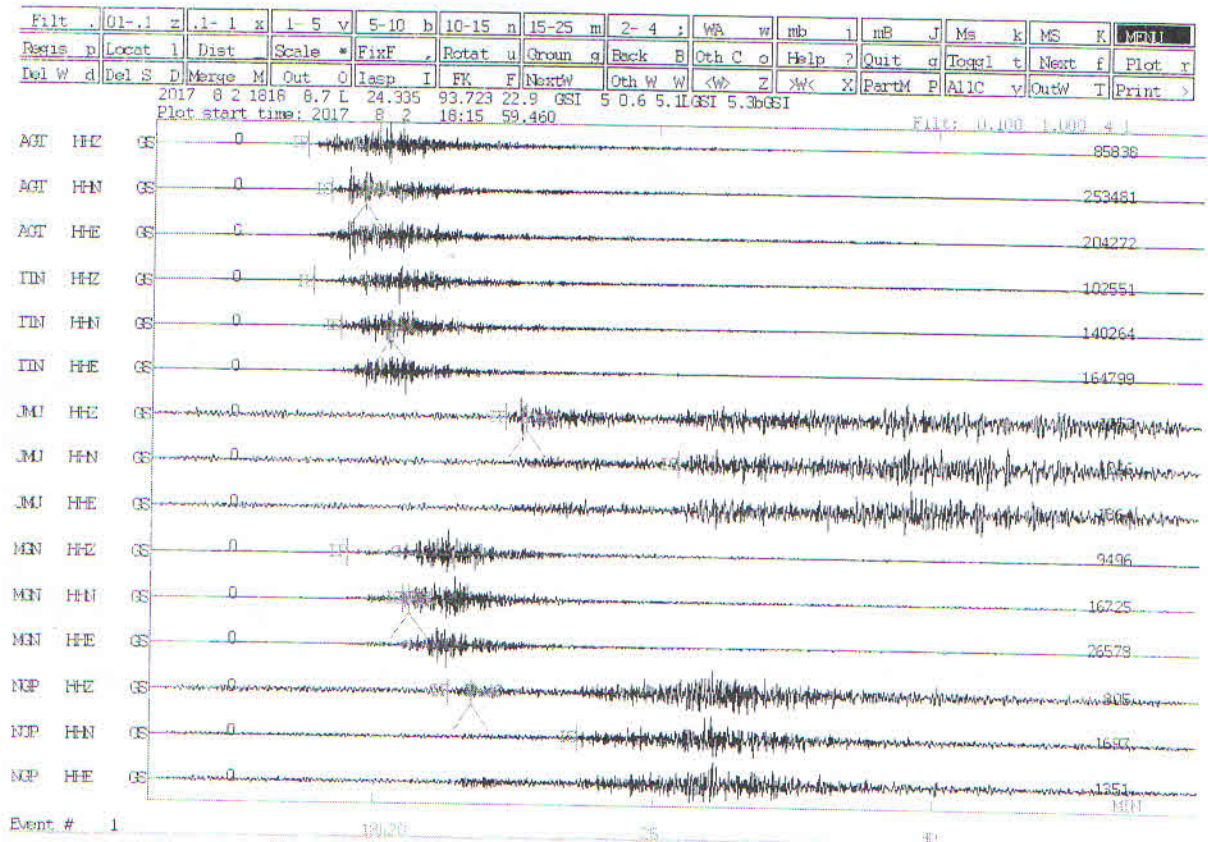


Fig. 2(a) Waveform of the earthquake.

date	hrmn	sec	lat	long	depth	no	m	rms	damp	erln	erlt	erdp		
17 8 2	1818	0.25	2419.23N	93 44.0E	21.4	10	3	0.34	0.000	9.5	6.7	14.0		
stn	dist	azm	ain	w	phas	calc	phs	hrmn	tsec	t-obs	t-cal	res	wt	di
AGT	253	259.0	55.1	0	P	D	PN4	1818	42.9	34.69	34.78	-0.09	1.00	9
AGT	253	259.0	55.1	0	S		SN4	1819	0.4	60.15	60.52	-0.37	1.00	12
AGT	253	259.0				0	IAML	1819	44.6	96.3				
ITN	307	357.5	55.1	0	P	D	PN4	1818	50.0	41.79	41.49	0.29	1.00	11
ITN	307	357.5	55.1	0	S		SN4	1819	20.2	71.91	72.20	-0.29	1.00	21
ITN	307	357.5				0	IAML	1820	13.7	125.4				
MGN	628	305.1	53.1	0	P	C	PN5	1819	29.0	80.75	80.85	-0.10	1.00	9
MGN	628	305.1	53.1	0	S		SN5	1820	29.1	140.88	140.68	0.20	1.00	22
MGN	628	305.1				0	IAML	1820	36.7	148.4				
NGP	1547	259.9	50.9	0	S		SN6	1823	37.9	329.64	328.90	0.74	0.59*	12
NGP	1547	259.9	50.9	0	P		PN6	1821	17.5	189.28	189.02	0.26	0.59*	3
NGP	1547	259.9				0	Iamb	1821	44.0	215.7				
JMU	2062	301.0	50.9	0	P	C	PN6	1822	18.3	250.06	249.64	0.42	0.13*	0
JMU	2062	301.0				0	Iamb	1822	41.0	272.7				
JMU	2062	301.0	50.9	0	S		SN6	1825	23.5	435.27	434.37	0.90	0.13*	0
AGT	HN	hdist:	253.9	amp:	25874.7	T:	1.0	ml =	5.2					
ITN	HN	hdist:	307.7	amp:	17776.7	T:	1.0	ml =	5.1					
MGN	HN	hdist:	628.4	amp:	3633.6	T:	0.7	ml =	5.0					
JMU	HZ	dist:	2062.0	amp:	149.3	T:	0.8	mb =	5.2					
NGP	HZ	dist:	1547.0	amp:	39.8	T:	0.6	mb =	5.3					
2017	8 2	1818	8.3	L	24.320	93.733	21.4	GSI	5 0.3	5.1L	GSI	5.3b	GSI	

Fig. 2(b) Location parameters of the earthquake.