



**GOVERNMENT OF INDIA
GEOLOGICAL SURVEY OF INDIA**

**A note on earthquake of magnitude 5.1 M_L of 6th December, 2017 in
Rudraprayag, Uttarakhand region**

A moderate earthquake of magnitude 5.1 M_L occurred at a depth of 7.9 km near Ukhimath, Rudraprayag, Uttarakhand on 6th December, 2017 at 15hrs: 19min: 54.2sec.(UTC) and at 20hrs: 49min: 54.2sec. (IST). The epicentre of the earthquake has been located at Latitude 30.488°N and Longitude 78.958°E (Fig. 1) using data recorded at five Seismo-geodetic observatories of GSI located at Agartala, Itanagar, Jammu, Mangan and Nagpur. The waveform of the event with location parameters are presented in Fig. 2 (a & b) respectively.

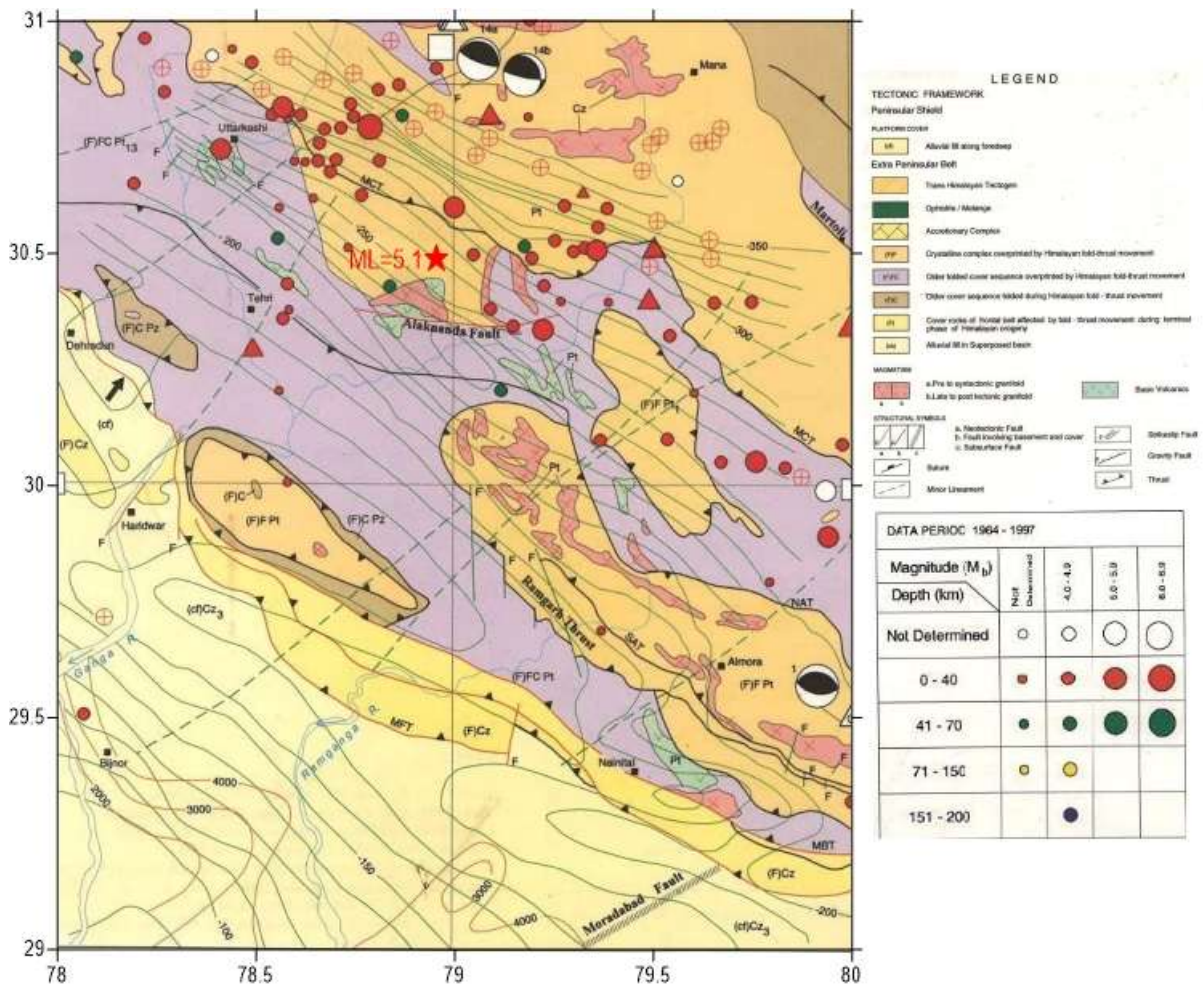


Fig. 1. The star shows the location of the epicentre of the earthquake.

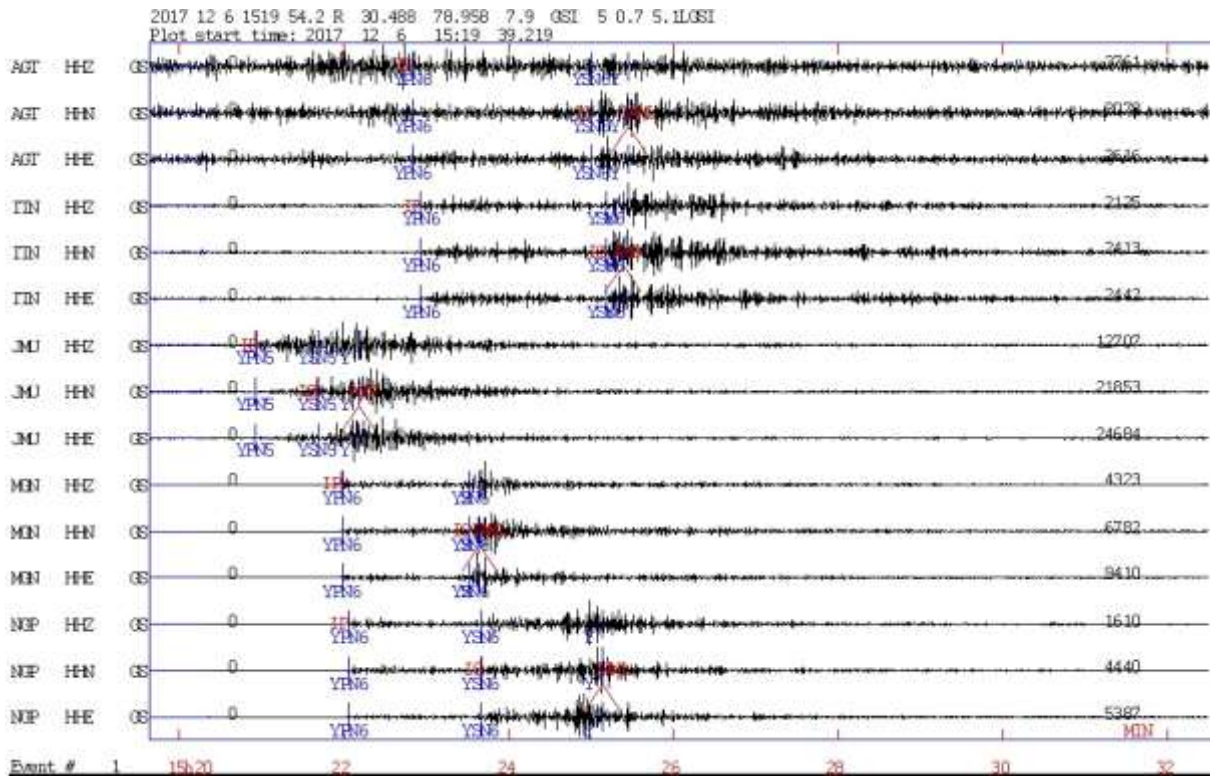


Fig. 2(a) Waveform of the earthquake.

date	hrmn	sec	lat	long	depth	no	m	rms	damp	erln	erlt	erdp	
1712 6	1519	54.17	3029.26N	78 57.5E	7.9	10	3	0.65	0.000	6.1	6.9	14.3	
stn	dist	azm	ain	w	phas	calcphs	hrmn	tsec	t-obs	t-cal	res	wt	di
JMU	458	303.5	48.7	0	P	PN5	1520	57.0	62.83	61.47	1.36	1.00	10
JMU	458	303.5	48.7	0	S	SN5	1521	40.3	106.18	106.95	-0.78	1.00	23
JMU	458	303.5	0	0	AMP		1522	11.2	137.0				
MGN	990	107.2	46.8	0	P	PN6	1521	58.3	124.16	125.07	-0.91	1.00	7
MGN	990	107.2	46.8	0	S	SN6	1523	32.0	217.86	217.62	0.24	1.00	11
MGN	990	107.2	0	0	IAML		1523	38.9	224.8				
NGP	1032	179.5	46.8	0	P	PN6	1522	3.6	129.42	129.83	-0.41	1.00	10
NGP	1032	179.5	46.8	0	S	SN6	1523	40.3	226.12	225.90	0.21	1.00	22
NGP	1032	179.5	0	0	IAML		1525	8.4	314.3				
AGT	1424	118.0	46.8	0	P	PN6	1522	50.2	175.98	175.96	0.02	0.71*	3
AGT	1424	118.0	46.8	0	S	SN6	1525	0.7	306.54	306.17	0.37	0.71*	4
AGT	1424	118.0	0	0	IAML		1525	27.2	333.0				
ITN	1477	101.2	46.8	0	P	PN6	1522	56.2	182.04	182.14	-0.11	0.66*	3
ITN	1477	101.2	46.8	0	S	SN6	1525	11.4	317.26	316.93	0.33	0.66*	6
ITN	1477	101.2	0	0	AMP		1525	23.5	329.3				
JMU	HN	hdist:	458.1	amp:	19175.5	T:	1.1	m1 =	5.4				
MGN	HN	hdist:	990.0	amp:	724.5	T:	0.4	m1 =	4.8				
NGP	HN	hdist:	1032.0	amp:	449.4	T:	0.8	m1 =	4.6				
AGT	HN	hdist:	1424.0	amp:	247.4	T:	0.5	m1 =	4.8				
ITN	HN	hdist:	1477.0	amp:	2237.4	T:	1.3	m1 =	5.8				
2017	12 6	1519 54.2	R	30.488	78.958	7.9	GSI	5 0.7	5.1LCSI				

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