



**GOVERNMENT OF INDIA
GEOLOGICAL SURVEY OF INDIA**

A note on earthquake of magnitude 5.7 M_L of 6th February, 2017 in Rudraprayag, Uttarakhand, India

A moderate earthquake of magnitude 5.7 M_L occurred at a depth of 11.1 Km at Rudraprayag, Uttarakhand, India on 6th February 2017 at 17 hr:03 m:11s (UTC) and 22hr:33m:11 s (IST). The epicenter of the earthquake has been located at latitude 30.414° N and longitude 78.954°E (near Alakananda fault) as shown in Fig.1. The epicenter of earthquake has been located using data recorded at four Seismo-geodetic observatories of GSI established at Agartala, Itanagar, Jammu and Nagpur. The waveform of the earthquake and its location parameters are presented in Fig 2a and Fig.2b respectively.

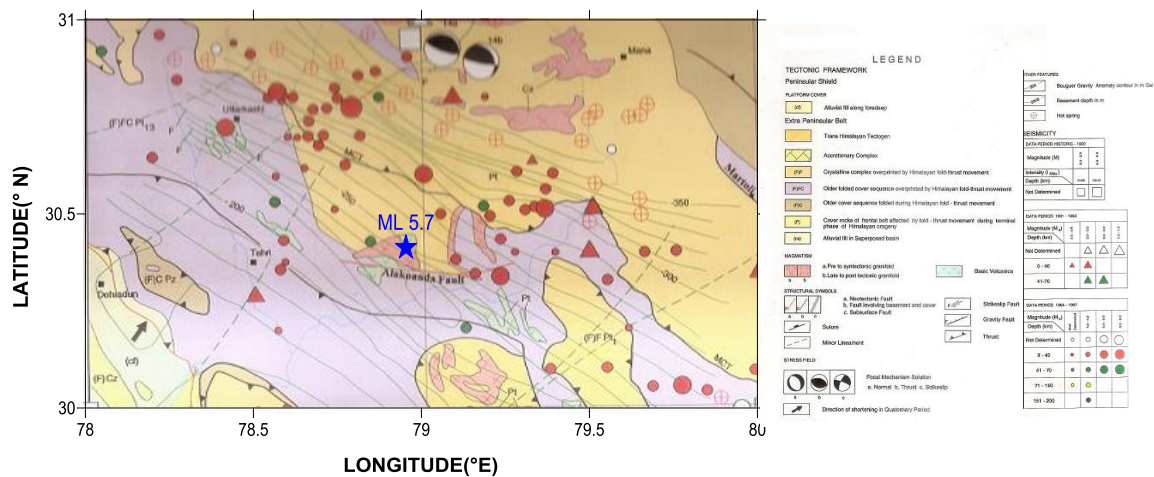


Figure 1. Tectonic map of Rudraprayag Uttarakhand and surroundings (Seismotectonic Atlas of India and its environs, 2000) with location of epicenter earthquake (blue star).

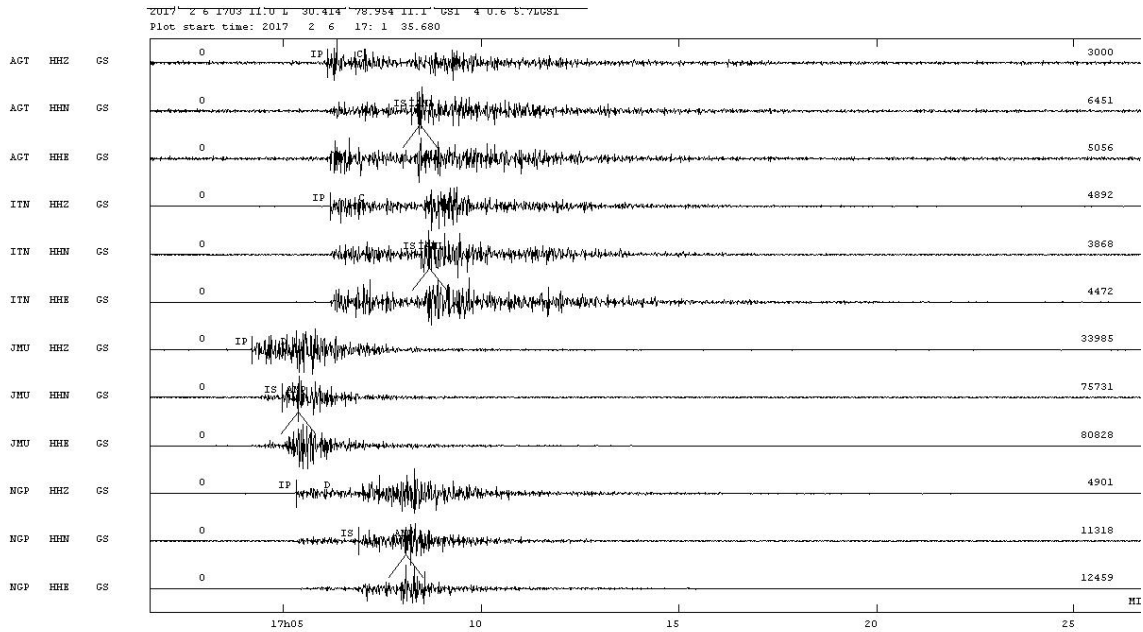


Figure 2a. Waveform of the earthquake.

date	hrmn	sec	lat	long	depth	no	m	rms	damp	erln	erlt	erdp	i			
17	2	6	17	3	11.00	3024.82N	78	57.3E	11.1	8	3	0.60	0.000	5.7	5.4	12.4
stn	dist	azm	ain	w	phas	calcp	h	phs	hrmn	tsec	t-obs	t-cal	res	wt	di	
JMU	462	304.4	48.7	0	P	D	PN5	17	4	12.8	61.84	61.64	0.20	1.00	11	
JMU	462	304.4	48.7	0	S		SN5	17	4	58.1	107.10	107.26	-0.15	1.00	22	
JMU	462	304.4	48.7	0	AMP			17	5	23.3	132.3					
NGP	1024	179.4	46.8	0	P	D	PN6	17	5	19.7	128.73	128.51	0.22	1.00	11	
NGP	1024	179.4	46.8	0	S		SN6	17	6	54.5	223.51	223.61	-0.09	1.00	22	
NGP	1024	179.4	46.8	0	AMP			17	8	6.2	295.2					
AGT	1421	117.7	46.8	0	S		SN6	17	8	15.4	304.35	304.84	-0.48	0.71	*10	
AGT	1421	117.7	46.8	0	IAML			17	8	26.5	315.5					
AGT	1421	117.7	46.8	0	P	C	PN6	17	6	6.6	175.61	175.19	0.42	0.71	*5	
ITN	1476	100.9	46.8	0	P	C	PN6	17	6	11.3	180.25	181.65	-1.40	0.66	*6	
ITN	1476	100.9	46.8	0	S		SN6	17	8	28.1	317.12	316.07	1.05	0.66	*13	
ITN	1476	100.9	46.8	0	IAML			17	8	41.8	330.8					
JMU	HN	hdist:	462.1	amp:	68347.3	T:	1.0	m1 =	6.0							
NGP	HN	hdist:	1024.1	amp:	9704.9	T:	0.0	m1 =	5.9							
AGT	HN	hdist:	1421.0	amp:	498.8	T:	0.3	m1 =	5.1							
ITN	HN	hdist:	1476.0	amp:	1563.7	T:	0.9	m1 =	5.7							
2017	2	6	1703	11.0	L	30.414	78.954	11.1	GSI	4	0.6	5.7	L	GSI		

Figure 2b. Location parameters of the earthquake.

SGDRPC, M-IV, CHQ, KOLKATA