

Technical Note

**IRAN STRONG MOTION RECORDS
(JULY TO DECEMBER 2006)**

E. Farzanegan* H. Mirzaei Alavijeh and F. Sinaiean
Building and Housing Research Center, Tehran, Iran

ABSTRACT

Iran is situated in a highly seismic part of the world and has been frequently struck by catastrophic earthquakes during her recorded history. Any study of earthquakes and earthquake engineering is based on accurate knowledge of the motions of the ground during important earthquakes. To obtain such data and information a network of strong motion accelerographs is maintained by the BHRC from 1973. The network consists of more than 1100 accelerographs. In the second half of the year 2006, 130 accelerograms (with PGA greater than of 0.01g) were recorded by 90 accelerographs, which were triggered by 99 earthquakes with different magnitude. In this period the Nov, 5th koloor earthquake at Ardebil province was the strongest event which triggered 6 accelerographs with PGA greater than 200 cm/s/s at koloor station. In this article the most important earthquakes and those with more than three or more accelerograms in the studied time period are discussed in brief and the detailed information is presented in Table 1.

1. INTRUDUCTION

Iran is located in a relatively seismic active zone and most regions of the country may experience catastrophic and destructive earthquake in the future, as many parts of the country have been recurrently destroyed by earthquake during the past centuries. For decrease of destructive effects of earthquakes, we have to know about the earthquakes specifications such as source parameters and structures behavior during earthquake as well. The basic data for engineering seismology and earthquake engineering are the recordings of

* Email-address of the corresponding author: farzanegan@bhrc.ac.ir

ground accelerations during earthquakes. For this purpose a network of strong motion accelerographs is maintained by the BHRC, which called ISMN (Iran Strong Motion Network). The Iran Strong Motion Network started its activities in 1973. The network was consisted of 274 accelerographs until 1992. At the date of this study, the network was consisted of 1094 accelerographic stations (Figure 1) that are equipped with digital SSA-2 or analog SMA-1 accelerographs. The trigger level of all the instruments were set at 0.01g and more than 6305 accelelograms have been recorded from January 1973 to December 2006. The accelerographs are checked periodically and after any reported earthquake as well, but in the earthquake limited region. The recorded accelerograms of different earthquakes are downloaded, controlled, processed and then added to the comprehensive data bank, which is very useful for the experts, who works in the field of engineering seismology and earthquake engineering. In this catalog the most important earthquakes are briefly described. More information is presented in Table 1 and also available on the web page of BHRC <http://www.bhrc.ac.ir>.

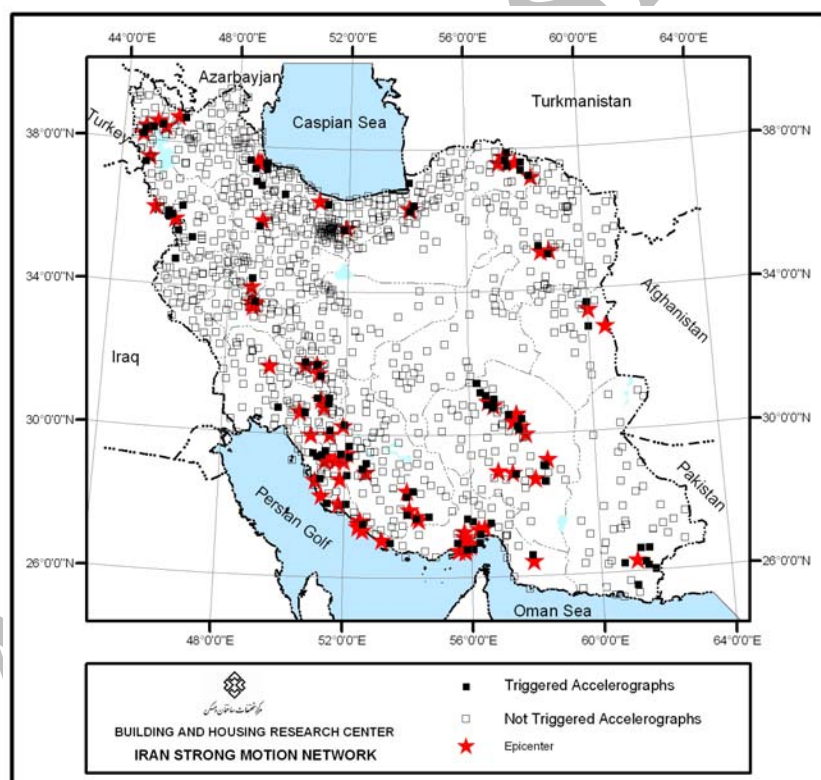


Figure 1. Accelerographs triggered and epicenter of important earthquakes

2. THE CATALOG OF ACCELEROGRAMS RECORDED BY ISMN

Instrumentation in the ISMN is currently comprised of approximately 95% digital recorders. The analog stations contain kinematics SMA-1 recorders and digital recorders are kinematics SSA-2 accelerographs. More than 800 ISMN digital recorders are hooked up to telephone line for rapid retrieval. In the second half of the year 2006, 130 accelerograms (with PGA greater than the trigger level of 0.01g) were recorded by 90 accelerographs, which were triggered by 99 different earthquakes (Figure 1). The maximum PGA of about 0.2g was occurred in Kolor station (Ardebil province) due to the Kolor earthquake of Nov 5th, 2006. The strong motion (With PGA more than 0.01g) and the seismological data of the major earthquakes are presented in Table 1. The most important events are described at the following briefly.

2.1 Rask Earthquake of July 18th, 2006

An mb=5.1 earthquake in the south of Sistan and Baluchestan province triggered 8 stations on 18 July 2006, 23:27:05(UTC). The event was located near Rask and Baftan stations and the maximum acceleration reached 0.043 g in Baftan station.

The epicenter of this event had been computed at 26.106, 61.249(IGTU), 26.23N 61.19(IIEES), 26.3, 61.12(NEIC) and 26.25N, 61.24 E (BHRC) (Figure 2)

2.2 Dalaki Earthquake of September 14th, 2006

On September 14, 2006, an Ml=4.6(IGTU) earthquake in Bushehr province, south of Iran triggered 4 station in border region of Fars and Bushehr provinces. The maximum recorded ground acceleration was 0.153 g at Dalaki station, a small village near Saad Abad town. The seismological parameters such as magnitude and epicenter coordinate were computed by seismological agencies. The epicenter of this event was located at 29.23N, 51.34 E (IGTU), 29.26 N, 51.36 E (NEIC) and 29.30N, 51.51 E(BHRC). Fars province and some parts of Bushehr province are of the most active seismic regions in Iran. (Figure 3)

2.3 Garmkhan Earthquake of September 16th, 2006

Only two days after Dalaki earthquake in south of Iran, an Ml=4.8 earthquake occurred in the north part of northern Khorasan province near Shirvan town (Figure 4). This event triggered 5 strong ground motion accelerographs in Gifan, Naveh, Garmkhan, Barezoo Dam2 and Shirvan stations, all of these stations installed after 1997 destructive earthquake on Bojnoord area. Maximum peak ground acceleration was 88 cm/s/s recorded at Barezoo dam station in the north of shirvan town. The maximum recorded PGA which was 73, 31, 47 and 14 cm/s/s respectively at Garmkhan, Shirvan, Naveh and Gifan. The epicenter of this event has been located at 37.65 N, 57.73E (KHSN), 38.06 N, 57.78 E (IIEES), 37.60N,

57.75 E (IGTU) and 37.38N, 57.68 E (BHRC)

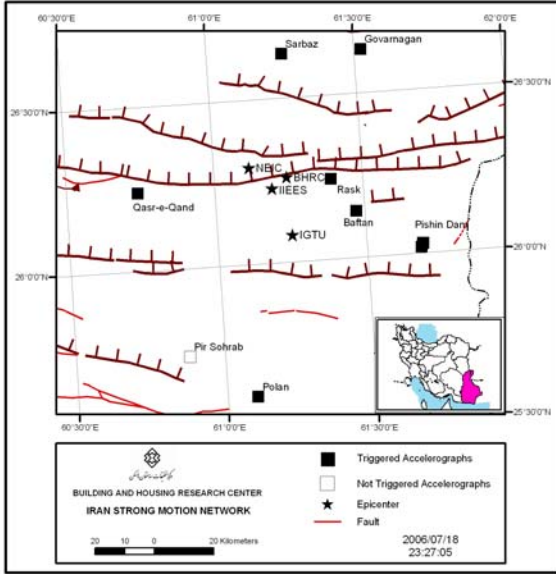


Figure 2. The map of Rask Earthquake of July 18th, 2006

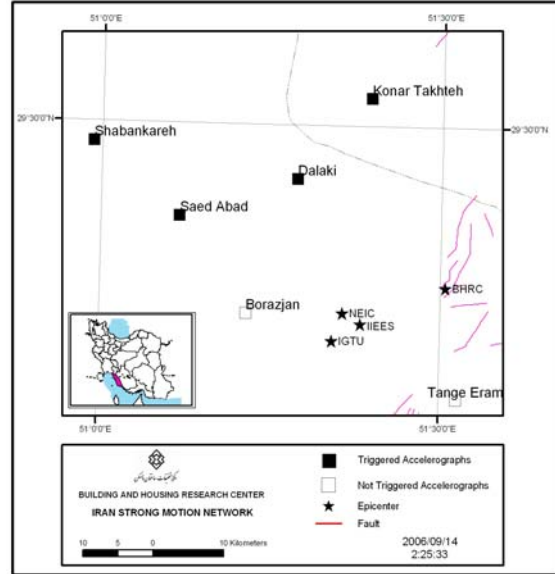


Figure 3. The map of Dalaki Earthquake of Sep 14th 2006

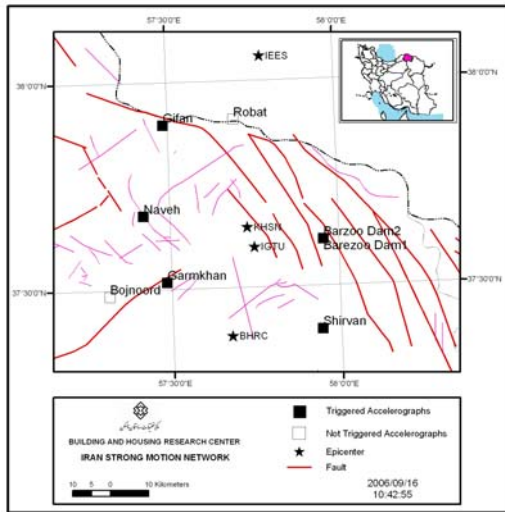


Figure 4. The map of Garmkhan Earthquake of Sep.16th, 2006

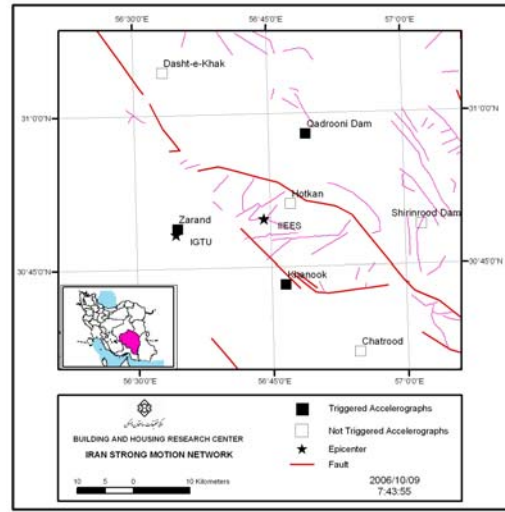


Figure 5. The map of Zarand Earthquake of Oct.9th, 2006

2.4 Zarand Earthquake of October 9th, 2006

On Oct.9th, 2006 at 7:43:55 (UTC) an earthquake with M4.9 (IGTU), M14.5 (IIEES), occurred near of Zarand city in The Kerman Province, South-East of Iran (Figure 5). This earthquake was recorded by Iran Strong Motion Network of BHRC in 3 accelerographic stations of Zarand, Qadrooni Dam and Khanook. The maximum PGA as much as 63 cm/s/s were recorded at the Khanook station. The epicenter of this earthquake has been located at 30.80N, 56.79E (IGTU), and 30.83N, 56.74E (IIEES).

2.5 Kolor Earthquake of November 5th, 2006

On November 5th, 2006, an M_L=5.1(IGTU), M_w 4.8(KHSN), M_L 5.1(IIEES) earthquake in Ardebil province, North of Iran triggered 6 station in border region of Ardebil and Gilan provinces. The recorded peak ground acceleration was 200cm/s/s at kolor station, a small town near Khalkhal city (Figure 6). The seismological parameters such as magnitude and epicenter coordinate were computed and reported by seismological agencies. The epicenter of this event was located at 37.566N, 48.848 E (IGTU), 37.48 N, 48.89E (IIEES), 37.52 N, 49.1E (KHSN) and 37.48N,48.83 E(BHRC)

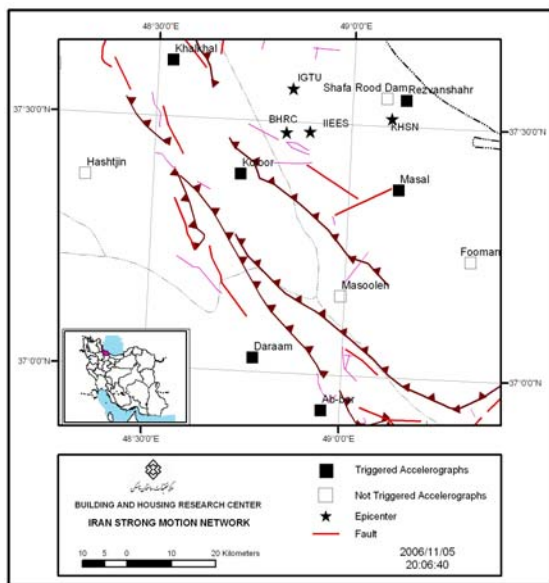


Figure 6. The Map of Kolor Earthquake of Nov 5th, 2006

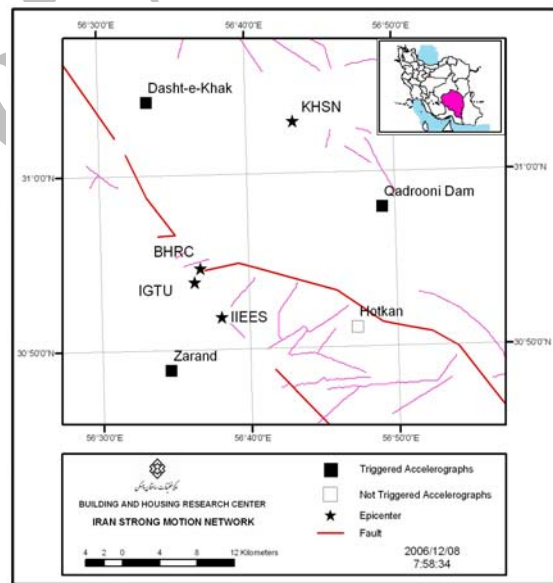


Figure 7. The Map of Zarand Earthquake of Dec 8th, 2006

2.6 Zarand Earthquake of December 8th, 2006

On December 8th, 2006 at 7:58:34 (UTC) an earthquake with M4.8 (IGTU), M14.4 (IIEES) and M1 5(KHSN), occurred near Zarand city in the Kerman Province, South-East of Iran (Figure 7). This earthquake was recorded by Iran Strong Motion Network of BHRC, in 3 accelerographic stations of Zarand, Qadrooni Dam and Khanook. The maximum PGA as much as 65 cm/s/s were recorded at Zarand station. The epicenter of this earthquake has been located at 30.90N, 56.61E(IGTU)30.86N,56.63E(IIEES),and30.91N,56.61 E(BHRC).

Table 1. The catalog of events of 2006 (1 June~30 December)

Strong Motion Data (BHRC)						Seismological Data						
No.	Station	Record No.	Coordinate		U.P.G.A (cm/s/s)	Origin Time		Epicenter		FD (km)	Magn.	Ref.
			N	E		Y-M-D	h:m:s	N	E			
1	Silvana	4194	37.39	44.877	17	2006/07/01	21:06:28	37.55	44.99	33	M4.0	IGTU
			5					37.29	44.92	14	M12.9	IIEES
2	Dalaki	4148/02	29.428	51.288	17	2006/07/03	3:29:44	29.38	51.42	15	M13.3	IIEES
3	Tomban	4256/01	26.766	55.863	15	2006/07/07	3:28:57	26.75	55.61	18	M4.1	IGTU
								27.06	56.04	14	M13.9	IIEES
4	Tomban	4256/02	26.77	55.86	31	2006/07/07	20:01:37	26.82	55.84	15	M3.9	IGTU
								26.86	55.85	14	M13.7	IIEES
								26.86	55.85	14	mb4.3	NEIC
5	Tomban	4256/03	26.77	55.86	28	2006/07/07	20:10:58	26.87	55.76	27	M3.6	IGTU
								27.13	55.77	15	M13.4	IIEES
								27.13	55.77	15	mb3.9	NEIC
6	Farrashband	4150	28.86	52.091	18	2006/07/08	0:04:31	28.75	51.85	6	M3.6	IGTU
			1					28.71	51.69	34	M13.7	IIEES
7	Tomban	4256/04	26.766	55.863	25	2006/07/08	12:22:06	27.27	55.79	14	M13.0	IIEES
8	Bam	4145	29.079	58.353	52	2006/07/08	21:01:00	29.26	58.48	15	M4.5	IGTU
	Barvat	4146/02	29.071	58.402	49			29.26	58.56	14	M14.4	IIEES
9	Kashmar	4157	35.242	58.470	34	2006/07/08	23:39:03	35.09	58.53	8	M3.3	IGTU
10	Sepidan	4180	30.268	51.977	22	2006/07/11	23:38:04	30.24	51.93	8	M4.0	IGTU
								30.15	52.05	15	M13.8	IIEES
11	Joshan	4174	30.124	57.610	18	2006/07/12	20:39:31	30.34	57.42	18	M2.9	IGTU
								30.14	57.56	14	M13.0	IIEES
12	Haji Abad	4149	33.605	59.994	19	2006/07/16	21:31:22	33.41	60.03	18	M3.7	IGTU
13	Tomban	4256/0	26.77	55.86	68	2006/07/17	22:01:0	26.88	55.91	10	M4.0	IGTU

Strong Motion Data (BHRC)					Seismological Data								
No.	Station	Record No.	Coordinate		U.P.G.A (cm/s/s)	Origin Time		Epicenter		FD (km)	Magn.	Ref.	
			N	E		Y-M-D	h:m:s	N	E				
		5					0	26.72	55.82	10	M4.0	IIEES	
								26.72	55.82	10	mb4.4	NEIC	
14	Margoun	4179	30.99 2	51.087	14	2006/07/18	19:59:5 1	30.95	51.20	29	M4.3	IGTU	
								30.99	51.42	14	M14.4	IIEES	
	Qasr-e-Qand	4153	26.23 5	60.740	32	2006/07/18	23:27:0 5	26.25	61.24	46	M15.8	BHRC	
	Govarnagan	4154	26.62 9	61.524	12			26.10 6	61.24 9	33	M5.0	IGTU	
	Rask	4155	26.24 1	61.393	18			26.23	61.19	46	M15.0	IIEES	
15	Polan	4223	25.59 6	61.100	16			26.3	61.12	43	mb5.1	NEIC	
	Baftan	4239	26.13 8	61.471	43								
	Pishin Dam	4240	26.02 6	61.689	13								
	Pishin Dam	4241	26.01 5	61.682	29								
	Sarbaz	4156	26.63 1	61.256	30								
16	Tomban	4256/0 6	26.76 6	55.863	13	2006/07/22	5:57:01	26.88	55.96	10	M13.0	IIEES	
								38.40	44.78	10	M4.0	IGTU	
17	Seylab	4186	38.31	44.76	13	2006/07/29	1:51:11	38.53	44.91	14	M13.8	IIEES	
								38.40	44.78		mb4.1	NEIC	
18	Kani Soor	4159	36.06 1	45.795	107	2006/07/30	8:41:02						
								29.29	52.07	5	M3.3	IGTU	
19	Romghan	4273	29.37	52.16	38	2006/07/30	13:18:5 4	29.46	52.07	15	M13.5	IIEES	
								29.46	52.07	14	mb4.2	NEIC	
20	Naveh	4160	37.67 4	57.421	26	2006/07/31	14:14:5 3						
21	Tazeh-Shahr	4177	38.17 5	44.696	18	2006/08/05	12:23:4 7	38.17	44.69	2	M3.2	IGTU	
								34.07	48.76	19	M4.1	IGTU	
22	Malayer	4214	34.31	48.8	22	2006/08/11	19:30:3 6	34.24	48.75	14	M14.1	IIEES	
								34.07	48.76	19	mb4.5	NEIC	
23	Zanjireh	4178	38.45 6	45.366	17	2006/08/12	7:02:53	38.41	45.47	14	M3.6	IGTU	
								38.92	45.57	3	M13.2	IIEES	
24	Boldaji	4188	31.94 3	51.057	17	2006/08/13	7:00:44	31.94	51.04	10	M2.0	IGTU	
25	Aghajari	4166	30.70 0	49.829	21	2006/08/13	8:37:26						
26	Narges Zar	4193/0	29.44	51.891	35	2006/08/13	22:12:5	29.26	51.70	10	M3.3	IGTU	

Strong Motion Data (BHRC)					Seismological Data							
No.	Station	Record No.	Coordinate		U.P.G.A (cm/s/s)	Origin Time		Epicenter		FD (km)	Magn.	Ref.
			N	E		Y-M-D	h:m:s	N	E			
		1	7				6	29.66	52.15	14	M3.2	IIES
27	Narges Zar	4193/02	29.447	51.891	23	2006/08/14	9:42:32	29.26	51.97	31	M3.0	IGTU
								29.23	51.40	46	M3.7	IIES
28	Marzan Abad	4222	36.451	51.299	15	2006/08/23	18:25:28	36.52	50.98	1	M3.7	IGTU
								36.54	50.95	23	M3.3	IIES
29	Changoureh	4176	35.777	48.963	47	2006/08/29	20:27:23	35.95	49.03	2	M3.0	IGTU
								35.74	48.89	14	M3.0	IIES
30	Chalan Choolan	4261/01	33.659	48.913	35	2006/09/01	8:54:54	33.63	48.86	1	M3.2	IGTU
								33.71	48.96	14	M3.1	IIES
31	Tomban	4256/07	26.766	55.863	29	2006/09/03	11:56:39					
32	Dalaki	4190/01	29.428	51.288	16	2006/09/07	8:00:40	29.99	50.90	6	M2.4	IGTU
33	Baneh	4172	35.972	45.888	28	2006/09/09	9:51:38	35.87	46.03	14	M3.6	IGTU
	Boein Sofla	4173	35.954	45.942	88			35.98	46.14	14	M3.3	IIES
34	Evaz	4170	27.759	54.005	44	2006/09/10	8:57:46	27.72	54.32	14	M4.8	IIES
	Lar	4171	27.652	54.291	39							
35	Asadiyeh	4213	32.91	60.02	13	2006/09/11	14:01:11	32.91	60.57	5	M4.6	IGTU
								33.54	60.56	15	M4.5	IIES
								32.94	60.41	9	M4.7	KHSN
36	Dorahan	4181	31.623	51.188	21	2006/09/13	10:37:58	31.69	51.11	1	M3.8	IGTU
								31.56	51.22	14	M3.7	IIES
37	Shabankareh	4184	29.471	50.988	19	2006/09/14	2:25:33	29.30	51.51	7	M5.2	BHRC
	Dalaki	4190/02	29.428	51.288	153			29.23	51.34	5	M4.6	IGTU
	Konar Takhteh	4192	29.531	51.395	39			29.25	51.38	39	M4.6	IIES
	Saed Abad	4231	29.379	51.116	28			29.26	51.36	11	mb4.9	NEIC
38	Shafa Rood Dam	4203	37.551	49.088	15	2006/09/14	21:56:32					
39	Barzoo Dam2	4205	37.608	57.954	88	2006/09/16	10:42:55	37.38	57.68	10	M5.5	BHRC
	Garmkhan	4182	37.513	57.486	73			37.60	57.75	3	M4.7	IGTU
	Shirvan	4183	37.391	57.944	31			38.06	57.78	16	M4.4	IIES
	Naveh	4210/01	37.674	57.421	47			37.65	57.73	5	M4.8	KHSN

Strong Motion Data (BHRC)					Seismological Data							
No.	Station	Record No.	Coordinate		U.P.G.A (cm/s/s)	Origin Time		Epicenter		FD (km)	Magn.	Ref.
			N	E		Y-M-D	h:m:s	N	E			
	Gifan	4212	37.89 3	57.487	14							
40	Chalan Choolan	4261/0 2	33.65 9	48.913	15	2006/09/16	18:02:1 3	33.64	48.78	4	M2.8	IGTU
								33.61	48.94	14	M12.8	IIIES
41	Chalan Choolan	4261/0 3	33.65 9	48.913	15	2006/09/16	22:42:4 8	33.51	48.82	8	M2.7	IGTU
								33.60	48.95	14	M12.7	IIIES
42	Jovakan	4191	29.03 7	52.571	18	2006/09/22	15:23:0 7					
43	Bandar-e-Asaluyeh	4189/0 1	27.47 9	52.609	89	2006/09/23	9:22:24	27.58	52.51	18	M3.8	IGTU
								27.33	52.47	6	M13.8	IIIES
44	Bandar-e-Asaluyeh	4189/0 2	27.47 9	52.609	58	2006/09/23	10:17:4 2					
45	Bandar-e-Asaluyeh	4189/0 3	27.47 9	52.609	42	2006/09/23	10:26:5 5	27.55	52.54	18	M3.6	IGTU
								27.36	52.39	6	M13.5	IIIES
46	Bandar-e-Asaluyeh	4189/0 4	27.47 9	52.609	105	2006/09/23	10:39:1 4					
47	Bandar-e-Asaluyeh	4189/0 5	27.47 9	52.609	153	2006/09/23	22:50:2 7	27.32	52.58	13	M3.5	IGTU
								27.47	52.49	14	M13.4	IIIES
48	Bandar-e-Asaluyeh	4189/0 6	27.47 9	52.609	40	2006/09/24	0:17:40	27.50	52.46	33	M3.3	IGTU
								27.28	52.54	14	M13.3	IIIES
49	Bandar-e-Asaluyeh	4189/0 7	27.47 9	52.609	36	2006/09/24	1:15:05					
50	Bandar-e-Asaluyeh	4189/0 8	27.47 9	52.609	164	2006/09/24	1:46:28	27.42	52.44	10	M3.4	IGTU
								27.30	52.42	14	M13.4	IIIES
51	Bandar-e-Asaluyeh	4189/0 9	27.47 9	52.609	38	2006/09/24	7:01:58					
52	Farooj	4228	37.22 8	58.226	15	2006/09/25	13:39:5 3	37.20	58.29	2	M2.8	IGTU
53	Ardal	4187	32	50.66	121	2006/09/26	8:14:42	31.91	50.65	30	M4.6	IGTU
								31.88	50.76	15	M14.5	IIIES
								31.91	50.65	29	mb4.6	NEIC
54	Bandar-e-Asaluyeh	4189/1 0	27.47 9	52.609	145	2006/09/27	2:03:55					
55	Bandar-e-Asaluyeh	4195	27.47 9	52.609	50	2006/09/27	9:42:22					
56	Salasebabajani	4215	34.73 5	46.156	55	2006/09/28	14:00:5 7					
57	Noor Abad Mamasani	4211	30.12	51.52	18	2006/09/29	15:18:3 1	30.05	51.59	9	M4.0	IGTU
								30.06	51.65	14	M14.2	IIIES
								30.00	51.50	12	mb4.3	NEIC
58	Fin	4197	27.63 0	55.895	32	2006/09/30	16:16:2 5					
	Rezvan	4198	27.56	56.078	119							

Strong Motion Data (BHRC)					Seismological Data							
No.	Station	Record No.	Coordinate		U.P.G.A (cm/s/s)	Origin Time		Epicenter		FD (km)	Magn.	Ref.
			N	E		Y-M-D	h:m:s	N	E			
			0									
59	Jovakan	4202	29.03 7	52.571	20	2006/10/01	5:10:08					
60	Joshan	4221	30.12 4	57.610	21	2006/10/04	13:39:4 1	29.99	57.81	10	M3.4	IGTU
								30.05	57.60	15	M2.9	IIIES
61	Chalan Choolan	4261/0 4	33.65 9	48.913	19	2006/10/07	18:15:3 3	33.62	48.82	10	M3.5	IGTU
								33.75	48.90	14	M3.4	IIIES
62	Tomban	4256/0 8	26.76 6	55.863	17	2006/10/08	11:16:2 8					
63	Zarand	4201	30.81 0	56.577	36	2006/10/09	7:43:55	30.80	56.79	10	M4.9	IGTU
	Qadrooni Dam	4259/0 3	30.96 2	56.819	24			30.83	56.74	14	M4.5	IIIES
	Khanook	4200	30.71 7	56.776	63							
64	Naveh	4210/0 2	37.67 4	57.421	38	2006/10/12	8:36:33	37.78	57.35	1	M2.6	IGTU
								37.72	57.37		M2.6	KHSN
65	Ali Abad	4232	27.69 7	54.688	15	2006/10/13	10:19:5 8	27.75	54.17	26	M4.1	IGTU
	Lar	4233	27.65 2	54.291	15			27.62	54.36	18	M4.3	IIIES
								27.62	54.36	18	mb4.6	NEIC
66	Bandar-e-Asaluyeh	4230	27.47 9	52.609	42	2006/10/13	11:40:3 0					
67	Bandar-e-Moqam	4252	26.97	53.48	41	2006/10/17	12:17:1 8	26.86	52.98	18	M3.9	IGTU
								26.94	53.13	43	M4.1	IIIES
								27.05	53.19	12	mb4.4	NEIC
68	Feyz Abad	4227	35.01 3	58.781	15	2006/10/21	16:49:2 1	35.10	58.82	12	M3.2	IGTU
								35.10	58.80	5	M3.0	KHSN
69	Chalan Choolan	4261/0 5	33.65 9	48.913	28	2006/10/24	0:21:06	33.58	48.90	26	M3.1	IGTU
								33.70	48.95	18	M2.9	IIIES
70	Takht	4255/0 1	27.50 0	56.637	13	2006/10/30	2:23:57	27.35	56.24	34	M3.2	IGTU
								27.53	56.32	25	M3.2	IIIES
71	Sisakht	4236	30.85 2	51.458	50	2006/11/02	12:30:3 3	30.76	51.31	25	M3.6	IGTU
	Khafr	4244	30.99 5	51.481	18			30.83	51.51	14	M3.4	IIIES
72	Bardkhood	4229	28.06 2	51.473	21	2006/11/03	7:54:13	28.28	51.26	18	M4.1	IGTU
								28.14	51.14	18	M4.1	IIIES
73	Khalkhal	4206	37.60 8	48.537	12	2006/11/05	20:06:4 0	37.48	48.83	9	M5.6	BHRC
	Kolor	4207/0 1	37.38 8	48.723	200							
	Masal	4208	37.37	49.127	18			37.48	48.80	14	M5.1	IIIES

Strong Motion Data (BHRC)					Seismological Data							
No.	Station	Record No.	Coordinate		U.P.G.A (cm/s/s)	Origin Time		Epicenter		FD (km)	Magn.	Ref.
			N	E		Y-M-D	h:m:s	N	E			
			0									
	Rezvanshahr	4209	37.549	49.137	18			37.566	48.848	9	M5.1	IGTU
	Ab-bar	4225	36.925	48.954	11			37.52	49.1	5	Mw4.8	KHSN
	Daraam	4226	37.024	48.775	14							
74	Koloor	4207/02	37.388	48.723	37	2006/11/05	20:10:16	37.55	48.93	14	M13.7	IIES
75	Koloor	4207/03	37.388	48.723	31	2006/11/05	21:35:17	37.57 37.48	48.76 48.81	10 14	M3.1 M13.2	IGTU IIES
76	Astaneh	4218/01	36.269	54.099	35	2006/11/13	15:00:29	36.34	54.10	4	M4.1	IGTU
	Dibaj	4219	36.429	54.231	15			36.49	53.96	14	M14.0	IIES
77	Takht	4255/02	27.500	56.637	39	2006/11/13	18:31:35	27.38	56.42	3	M3.8	IGTU
								27.49	56.56	14	M13.9	IIES
78	Riz	4224	28.054	52.074	16	2006/11/14	8:00:52	28.05	51.83	10	M3.6	IGTU
								28.11	51.70	14	M13.7	IIES
79	Goharan	4220	26.580	57.900	35	2006/11/16	11:22:46	26.42	57.93	22	M4.2	IGTU
								26.36	57.86	14	M13.9	IIES
80	Doobaran	4234/01	28.411	54.182	24	2006/11/17	15:47:57	28.42	53.98	9	M3.6	IGTU
								28.29	54.02	37	M13.6	IIES
81	Astaneh	4218/02	36.269	54.099	17	2006/11/19	6:51:03	36.33	54.07	10	M3.2	IGTU
82	Ali Hoseini	4217	28.756	51.245	19	2006/11/22	4:18:44	28.71	51.07	7	M2.5	IGTU
83	Masjed Soleyman Dam2	4250	32.051	49.372	16	2006/11/23	12:21:34	31.87	49.48	8	M4.0	IGTU
								31.75	49.37	39	M13.8	IIES
84	Tomban	4256/09	26.766	55.863	44	2006/11/27	18:02:03	26.75	55.80	29	M3.5	IGTU
								27.11	55.70	14	M13.3	IIES
85	Jovakan	4243	29.037	52.571	47	2006/11/29	6:53:30	28.95	52.67	8	M3.6	IGTU
	Kavar	4245	29.202	52.692	13			28.99	52.40	15	M13.6	IIES
86	Naveh	4235	37.674	57.421	20	2006/11/29	21:38:50	37.60	57.17	14	M3.5	IGTU
								37.57	57.02	9	M13.6	KHSN
87	Aru	4216	30.588	50.702	31	2006/11/30	1:55:25	30.61	50.52	21	M4.2	IGTU
								30.56	50.76	18	M14.1	IIES
88	Seyedtajedin	4263	38.36	45.04	40	2006/12/02	6:39:39	38.56	45.19	10	M4.4	IGTU
								38.77	45.18	14	M14.0	IIES
								38.56	45.19	10	mb4.4	NEIC

Strong Motion Data (BHRC)						Seismological Data						
No.	Station	Record No.	Coordinate		U.P.G.A (cm/s/s)	Origin Time		Epicenter		FD (km)	Magn.	Ref.
			N	E		Y-M-D	h:m:s	N	E			
89	Qadrooni Dam	4259/04	30.962	56.819	20	2006/12/08	7:58:34	30.91	56.61	12	M15.5	BHRC
	Zarand	4237	30.810	56.577	65			30.90	56.61	8	M4.8	IGTU
	Dasht-e-Khak	4282	31.066	56.555	18			30.86	56.63	14	M14.4	IIEES
90	Nesa Dam 2	4258	28.650	58.389	12	2006/12/09	8:09:11	28.73	58.07	4	M4.2	IGTU
			28.64	58.11	14			M14.3	IIEES			
91	Doobaran	4234/02	28.411	54.182	31	2006/12/10	2:47:22	27.90	54.06	18	M3.6	IGTU
								28.20	54.11	14	M13.6	IIEES
92	Sirch	4260	30.203	57.557	23	2006/12/11	0:09:07	30.21	57.65	9	M3.7	IGTU
								30.32	57.61	15	M13.6	IIEES
93	Shahdad	4242	30.41	57.69	12	2006/12/13	13:32:07	30.55	57.52	7	M4.7	IGTU
								30.50	57.57	14	M14.4	IIEES
								31.00	57.47	14	Mw4.4	KHSN
94	Tomban	4256/10	26.77	55.86	15	2006/12/18	19:43:38	27.09	55.87	5	M4.2	IGTU
								26.95	56.00	27	M14.1	IIEES
								26.95	56.00	26	mb4.6	NEIC
95	Boomehen	4238	35.732	51.857	37	2006/12/20	4:39:20	35.79	51.93		M4.2	IGTU
			35.74	51.88	13			M14.1	IIEES			
96	Jiroft Dam1	4257/01	28.860	57.465	15	2006/12/24	11:35:55	28.96	56.90	15	M4.0	IGTU
								28.98	56.91	15	M13.9	IIEES
97	Kharvanagh	4249/01	38.688	46.166	16	2006/12/25	10:04:55	38.72	45.91	18	M3.8	IGTU
								39.08	46.09	16	M13.6	IIEES
98	Jiroft Dam1	4257/02	28.860	57.465	20	2006/12/28	3:32:48	28.90	57.35	7	M3.7	IGTU
								28.98	57.25	26	M13.9	IIEES
99	Boein Sofla	4246	35.954	45.942	34	2006/12/30	4:04:22	36.17	45.32	18	M3.1	IGTU