

Seismicity Near Roosevelt Hot Springs: Utah  
Jan 1977 - Dec. 1978

GL04412

June 8, 1979

The earthquakes included on the maps and in the listing of seismicity near Roosevelt Hot Springs are from the earthquake data files of the University of Utah Seismograph Station. All earthquakes in a box containing Roosevelt Hot Springs ( $37.250^{\circ}\text{N}$  to  $37.750^{\circ}\text{N}$  and  $112.250^{\circ}\text{W}$  to  $113.000^{\circ}\text{W}$ ) are presented, for the period January 1, 1977 to December 31, 1978.

Instrumental coverage of the area is regional, with an approximate station spacing of 30 km. Station CFU was installed in March, 1977; the others were operating prior to January 1977. The increase in the numbers of earthquakes located after April 1977 reflects the availability of the CFU data.

The maps are largely self-explanatory; towns, seismograph stations and earthquakes are plotted. Earthquakes of magnitude less than 1.5 are plotted as X's; for larger magnitudes the size of the symbol is proportional to the earthquake's magnitude. The future production zone at Roosevelt Hot Springs is centered slightly north of station RHU.

The listing is in the format of the output of program HYPOELLIPSE; as follows:

- YR - last two digits of the year of occurrence
- DATE - the first two digits of DATE indicate the month of occurrence; the last two digits the day of occurrence (0608 = June 8)
- ORIG - the hour and minute of the earthquake's origin time, in CUT.
- TIME - the second (to hundredths) of the earthquake's origin time after ORIG.
- LAT-N - North latitude of epicenter, decimal degrees.
- LONG-W - West longitude of epicenter, decimal degrees.
- DEPTH - Hypocentral depth, km. A \* following the number in this column indicates that the depth was constrained to that value, and not determined iteratively.
- MAG - Magnitude of the earthquake. A W following the number in the column indicates that magnitude was determined from a Wood-Anderson seismograph; all other magnitudes were determined from coda duration. An M following the number indicates magnitude less than 1.5, which appears as an X on the amp.
- NO - Number of stations used in the location.
- GAP - Maximum azimuthal separation of stations used in the location.
- RMS - Root mean square of residuals.
- Q - A measure of the quality of the location, assigned by HYPOELLIPSE.

## SEISMICITY NEAR ROOSEVELT HOT SPRINGS: JAN 77 TO DEC 78

YR	DATE	ORIG	TIME	LAT-N	LONG-W	DEPTH	MAG	NO	GAP	DMN	RMS	Q
77	0118	2053	47.38	38-33.01	112-27.36	7.0*	1.8	4	158	95	.34	D
77	0125	1218	27.33	38-18.87	112-36.52	7.0*	.6	5	229	27	.28	D
77	0125	1235	13.26	38-17.28	112-39.07	7.0*	.0	5	261	26	.20	D
77	0125	1248	42.47	38-17.98	112-37.22	7.0*	.3	7	236	27	.17	D
77	0125	2157	26.37	38-18.10	112-18.38	1.5	.8	5	266	6	.17	D
77	0125	2232	43.49	38-18.57	112-17.67	1.4	.8	4	266	5	.05	D
77	0125	2247	51.41	38-32.50	112-28.65	7.0*	1.5	5	118	26	.14	D
77	0128	2200	5.17	38-32.69	112-29.79	7.0*	1.6	5	118	28	.09	D
77	0202	1814	48.86	38-18.07	112-41.06	19.0	1.9	4	277	36	1.00	D
77	0204	2351	8.03	38-37.01	112-28.91	7.0*	1.5	5	107	29	.14	D
77	0210	1859	4.78	38-36.62	112-28.20	7.0*	1.8	5	105	27	.17	D
77	0211	0510	39.40	38-34.73	112-36.45	7.0*	.3	5	140	21	.17	D
77	0216	2154	31.04	38-33.83	112-26.51	7.0*	1.6	5	107	24	.18	D
77	0217	2213	9.38	38-33.50	112-26.33	7.0*	.9	6	181	23	.08	D
77	0218	1830	5.24	38-36.08	112-29.36	7.0*	1.7	4	195	29	.02	D
77	0221	2217	35.66	38-17.45	112-31.62	7.0*	2.0	5	143	23	.16	D
77	0222	0601	33.40	38-18.36	112-31.83	7.0*	1.4	5	228	23	.18	D
77	0222	0702	19.30	38-19.42	112-31.72	7.0*	.5	5	220	22	.18	D
77	0222	1906	57.45	38-35.43	112-28.64	7.0*	1.3	4	192	27	.43	D
77	0223	0633	45.37	38-41.26	112-33.95	7.0*	.8	5	182	25	.33	D
77	0225	2237	20.27	38-37.54	112-29.45	7.0*	1.8	5	110	30	.17	D
77	0227	2022	26.94	38-34.18	112-36.93	7.0*	1.1	6	114	21	.30	C
77	0302	1756	52.61	38-16.45	112-35.15	7.0*	.6	5	243	28	.17	D
77	0304	1827	42.76	38-35.52	112-28.08	7.0*	1.4	6	101	27	.31	C
77	0305	0629	34.91	38-40.47	112-31.51	7.0*	.2	4	173	28	.19	D
77	0308	2015	55.94	38-33.28	112-33.23	7.0*	1.9	5	146	29	.16	D
77	0309	2208	23.08	38-32.37	112-26.52	7.0*	.7	6	173	23	.01	C
77	0311	2228	16.26	38-36.58	112-30.46	7.0*	1.5	6	107	29	.39	C
77	0317	2337	17.71	38-36.78	112-28.95	7.0*	1.8	5	106	29	.23	D
77	0321	2311	36.39	38-34.90	112-29.68	7.0*	2.0	4	187	29	.11	D
77	0325	0019	18.74	38-35.76	112-29.47	2.2	1.9	6	116	4	.16	C
77	0328	2215	37.43	38-37.63	112-25.81	7.0	1.1	3	247	9	.14	D
77	0330	0617	48.24	38-27.22	112-26.01	3.5	1.5	5	146	17	.06	D
77	0331	1910	40.38	38-33.85	112-29.41	2.8	1.5	6	111	7	.17	C
77	0401	2152	37.51	38-34.91	112-28.96	2.4	1.0	5	156	6	.14	D
77	0403	2130	33.03	38-19.05	112-18.03	2.3	1.7	7	263	5	.13	D
77	0406	2121	.14	38-36.29	112-28.65	6.4	1.9	6	98	5	.16	B
77	0407	2257	54.68	38-37.05	112-29.29	4.0	1.9	6	106	4	.21	B
77	0408	0057	50.18	38-20.07	112-26.45	7.0*	.1	5	213	14	.30	D
77	0412	1846	34.90	38-36.06	112-28.83	6.1	1.6	6	100	5	.18	B

## SEISMICITY NEAR ROOSEVELT HOT SPRINGS: JAN 77 TO DEC 78

YR	DATE	ORIG	TIME	LAT-N	LONG-W	DEPTH	MAG	NO	GAP	DMN	RMS	Q
77	0413	2213	40.40	33-34.19	112-28.35	7.0*	.8	5	133	26	.04	D
77	0415	1616	58.84	33-34.63	112-29.06	7.0*	1.4	5	136	28	.02	D
77	0419	1656	20.65	33-37.53	112-27.73	7.0*	1.4	5	151	28	.29	D
77	0420	2127	9.33	33-33.16	112-28.55	7.0*	1.4	7	114	26	.37	C
77	0422	1123	27.63	33-26.18	112-49.00	17.4	.2	5	226	4	.03	D
77	0422	2133	39.55	33-34.31	112-28.43	7.0*	1.5	5	134	26	.04	D
77	0423	1759	46.55	33-20.13	112-27.56	7.0*	.7	5	212	16	.32	D
77	0424	0654	24.59	33-30.21	112-49.94	2.8	1.0	5	154	3	.09	D
77	0424	0910	31.65	33-27.59	112-45.23	11.4	1.0	5	175	8	.09	C
77	0426	2005	36.56	33-33.11	112-26.56	7.0*	1.6	5	110	23	.07	D
77	0428	1107	51.40	33-28.33	112-58.80	.9	1.1	5	294	11	.18	D
77	0428	1207	45.01	33-41.20	112-34.11	1.8	.7	5	226	8	.06	D
77	0428	1718	39.77	33-34.54	112-26.68	6.8	1.6	5	166	9	.18	D
77	0428	2032	6.29	33-36.31	112-29.32	1.9	.8	5	181	4	.15	D
77	0429	1848	50.30	33-36.04	112-29.79	1.1	1.3	5	170	4	.07	D
77	0503	1723	4.44	33-34.48	112-26.28	.4	.8	5	112	10	.09	D
77	0503	2040	15.36	33-41.01	112-31.62	6.2	.5	5	253	7	.02	D
77	0504	0339	42.80	33-43.20	112-31.35	.7	1.7	8	103	11	.12	C
77	0504	1706	42.30	33-35.49	112-28.31	6.9	1.8	6	102	6	.18	B
77	0506	1953	20.53	33-34.42	112-27.79	1.8	1.5	6	106	8	.11	C
77	0507	1057	26.28	33-42.80	112-30.90	4.0	-.1	6	301	10	.34	D
77	0507	1850	32.61	33-35.37	112-34.85	1.4	.6	6	130	4	.19	C
77	0507	1946	38.30	33-35.65	112-33.79	3.5	.9	5	121	3	.11	D
77	0507	2002	36.72	33-36.20	112-33.81	5.4	1.3	5	137	2	.05	C
77	0508	0345	25.20	33-41.95	112-30.18	4.6	.9	6	181	9	.14	D
77	0511	1408	43.31	33-25.55	112-16.77	4.5	.0	6	133	7	.32	C
77	0511	1938	55.90	33-36.46	112-29.69	5.0	1.6	7	99	4	.26	B
77	0514	0034	44.19	33-41.93	112-31.88	4.0	.7	6	231	9	.10	D
77	0516	1512	4.10	33-36.39	112-30.27	1.5	1.0	5	175	3	.09	D
77	0520	2110	19.79	33-35.26	112-29.99	1.9	1.6	6	105	4	.20	C
77	0527	2021	56.19	33-33.64	112-26.65	1.2	1.8	5	154	10	.18	D
77	0528	1814	51.00	33-36.10	112-34.43	.3	.6	6	143	3	.18	C
77	0530	1057	39.31	33-36.08	112-33.54	1.7	.2	6	134	2	.05	C
77	0602	0741	40.79	33-18.40	112-24.39	1.9	.8	6	232	12	.23	D
77	0602	1223	26.09	33-25.84	112-18.03	2.7	.5	7	114	8	.16	C
77	0603	2029	29.65	33-33.33	112-26.08	7.0*	1.6	6	94	23	.18	C
77	0607	0916	24.86	33-42.55	112-32.11	7.0*	2.0	5	133	28	.28	D
77	0608	0659	1.08	33-39.34	112-35.01	7.0*	1.0	6	124	23	.39	C
77	0608	0957	36.38	33-41.75	112-35.76	7.0*	.7	5	188	23	.11	D
77	0608	1214	40.66	33-41.42	112-35.43	7.0*	.9	5	185	23	.05	D

## SEISMICITY NEAR ROOSEVELT HOT SPRINGS: JAN 77 TO DEC 78

YR	DATE	ORIG	TIME	LAT-N	LONG-W	DEPTH	MAG	NO	GAP	DMN	RMS	Q
77	0610	2017	20.61	38-31.95	112-26.71	7.0*	1.7	6	164	23	.63	D
77	0611	2232	42.54	38-34.84	112-33.91	7.0*	1.2	5	182	25	.19	D
77	0611	2259	54.78	38-35.84	112-33.73	7.0*	.8	5	190	25	.04	D
77	0612	0158	35.40	38-42.11	112-35.18	7.0*	1.4	7	137	24	.12	C
77	0615	1408	28.98	38-35.05	112-35.52	7.0*	1.3	5	182	22	.10	D
77	0615	1750	33.47	38-23.15	112-18.90	7.0*	2.0	6	179	18	.49	C
77	0617	2157	34.50	38-37.04	112-20.29	8.9	2.0	6	146	8	.29	C
77	0618	2331	54.19	38-39.60	112-38.39	1.5	2.3	7	131	9	.46	C
77	0621	1930	12.49	38-35.21	112-28.33	3.4	1.3	6	194	6	.04	C
77	0624	2131	38.79	38-35.41	112-29.48	4.8	1.3	5	190	5	.39	D
77	0704	0257	20.19	38-40.87	112-36.46	7.0*	.5	3	247	9	.00	D
77	0707	1404	48.68	38-34.73	112-37.67	4.2	1.1	5	137	8	.11	D
77	0803	0529	.80	38-25.99	112-30.06	7.0*	.9	4	165	21	.02	D
77	0818	0505	5.80	38-15.17	112-19.04	.1	.9	6	274	12	.26	D
77	0820	2027	26.74	38-15.16	112-18.66	7.0*	.5	7	275	31	.11	D
77	0830	0943	17.58	38-16.50	112-52.14	7.0*	1.5	6	285	22	.15	D
77	0905	0513	57.98	38-41.32	112-38.50	7.0*	.9	5	219	29	.20	D
77	0907	0421	43.71	38-43.44	112-33.34	7.0*	.3	5	218	37	.49	D
77	0908	0536	3.05	38-18.01	112-38.68	7.0*	.6	5	257	26	.03	D
77	1011	2054	39.07	38-17.80	112-52.48	10.3	.9	7	281	19	.10	D
77	1103	1641	18.43	38-36.20	112-38.87	5.8	.7	8	164	9	.12	C
77	1104	0903	12.21	38-36.25	112-38.71	1.4	1.0	6	164	9	.12	C
77	1107	0805	23.69	38-35.87	112-38.20	.4	.9	6	157	8	.12	C
77	1108	2341	41.54	38-42.72	112-33.99	1.4	.1	6	236	10	.38	D
77	1116	0500	29.05	38-35.80	112-37.54	2.6	.4	6	162	7	.06	C
77	1118	1033	31.51	38-18.55	112-16.98	.5	1.1	8	267	5	.13	D
77	1118	1034	27.73	38-17.40	112-15.85	4.2	1.4	8	274	7	.10	C
77	1124	0000	58.30	38-15.77	112-17.75	7.0*	2.5	7	139	10	.13	C
77	1206	2331	13.18	38-17.79	112-17.29	7.0*	.7	4	284	6	.19	D
77	1223	0635	42.01	38-37.01	112-37.90	4.3	1.1	5	177	6	.13	D
77	1230	0622	6.05	38-15.01	112-19.44	1.3	.7	6	311	12	.23	D
78	0105	2259	30.23	38-15.62	112-31.39	7.0*	.6	8	246	24	.19	D
78	0107	0823	10.70	38-31.19	112-26.38	1.5	.5	9	130	14	.22	C
78	0112	1650	50.36	38-24.88	112-36.63	7.0*	.7	4	213	21	.32	D
78	0116	1639	36.00	38-44.69	112-32.97	9.8	.3	6	242	14	.39	D
78	0120	1000	12.08	38-15.87	112-34.82	7.0*	.5	5	296	28	.23	D
78	0126	0257	26.43	38-37.80	112-33.05	3.9	.3	6	204	1	.07	C
78	0131	0044	13.03	38-42.23	112-33.59	1.7	.2	7	165	9	.18	C
78	0131	1317	5.87	38-20.55	112-24.36	.9	.2	6	209	11	.14	C
78	0214	1831	45.10	38-37.19	112-30.03	2.0	.1	6	181	5	.06	D

## SEISMICITY NEAR ROOSEVELT HOT SPRINGS: JAN 77 TO DEC 78

YR	DATE	ORIG	TIME	LAT-N	LONG-W	DEPTH	MAG	NO	GAP	DMN	RMS	Q
78	0221	2312	33.33	38-35.27	112-40.80	5.8	.2	6	154	12	.04	C
78	0222	1644	46.04	38-35.38	112-40.91	7.0*	-.2	6	152	12	.10	C
78	0222	1809	4.09	38-35.27	112-40.82	7.4	.0	7	151	12	.08	C
78	0224	1946	31.43	38-19.75	112-51.29	1.8	1.3	7	275	15	.19	D
78	0224	1949	48.77	38-19.97	112-50.60	1.5	3.5W	12	164	15	.46	C
78	0224	2011	11.85	38-20.10	112-51.38	8.2	.2	6	276	15	.07	D
78	0224	2011	37.38	38-20.44	112-51.37	10.1	.3	6	275	14	.05	D
78	0224	2020	19.61	38-20.03	112-49.90	6.7	.7	7	268	15	.08	D
78	0224	2109	26.79	38-20.91	112-50.03	7.0*	.8	8	266	13	.16	C
78	0224	2134	24.67	38-21.74	112-47.86	2.0	.5	6	250	12	.20	D
78	0225	1320	39.36	38-20.80	112-50.15	7.3	.1	5	267	14	.05	D
78	0226	0126	35.32	38-20.70	112-48.81	1.4	.7	9	260	14	.22	D
78	0227	2344	3.05	38-16.26	112-51.68	7.0*	1.9	11	166	22	.56	D
78	0304	1430	31.45	38-21.76	112-50.90	10.7	1.2	5	286	12	.03	D
78	0307	0210	11.49	38-19.70	112-18.78	7.0*	1.2	7	192	23	.51	D
78	0323	0058	22.54	38-17.42	112-16.64	7.0*	1.2	7	272	26	.17	D
78	0326	1547	46.58	38-17.59	112-20.27	7.0*	2.3	10	126	28	.29	C
78	0417	0200	17.69	38-38.49	112-37.57	6.2	.8	5	205	8	.06	C
78	0418	1040	56.21	38-38.62	112-38.07	1.5	.6	6	206	8	.13	D
78	0418	1333	44.13	38-38.24	112-38.01	7.0*	.5	5	200	8	.28	D
78	0418	1743	30.61	38-42.62	112-36.54	2.2	.8	6	236	11	.18	D
78	0423	0226	17.48	38-38.64	112-38.28	1.7	.0	5	206	9	.10	D
78	0426	1217	29.19	38-34.41	112-34.02	2.6	-.1	6	144	5	.07	C
78	0509	1602	3.18	38-30.87	112-43.24	6.6	.5	5	157	12	.21	D
78	0512	0529	12.84	38-16.57	112-39.47	7.0*	.2	5	265	27	.05	D
78	0512	0646	19.44	38-15.12	112-40.25	7.0*	.3	5	272	28	.05	D
78	0605	0247	20.07	38-21.97	112-21.18	7.0*	1.0	7	176	22	.39	C
78	0616	0656	14.34	38-22.23	112-19.56	7.0*	.6	7	244	20	.04	D
78	0625	2129	16.14	38-31.08	112-15.27	1.6	1.3	5	188	7	.36	D
78	0629	0549	48.51	38-41.18	112-30.20	17.1	.1	5	228	8	.15	D
78	0629	0553	42.42	38-40.29	112-30.12	16.3	.3	5	222	6	.18	D
78	0629	0554	53.90	38-40.27	112-30.19	16.4	.3	5	222	6	.17	D
78	0629	0556	24.73	38-40.56	112-30.37	16.0	.3	5	224	7	.17	D
78	0629	0559	52.41	38-40.30	112-30.33	17.2	.4	5	223	6	.16	D
78	0629	0609	1.04	38-44.34	112-29.51	13.1	.5	5	245	14	.14	D
78	0801	2334	6.56	38-15.81	112-20.42	7.0*	.6	6	197	31	.32	D
78	0828	2351	49.27	38-34.35	112-34.54	7.0*	1.0	4	147	6	.22	D
78	0830	2345	19.81	38-17.47	112-29.17	1.5	.7	6	258	9	.28	D
78	1005	0614	58.53	38-20.47	112-16.79	.1	.7	4	298	1	.26	D
78	1005	0650	46.03	38-21.42	112-19.36	3.5	1.8	6	132	4	.64	C

SEISMICITY NEAR ROOSEVELT HOT SPRINGS: JAN 77 TO DEC 78

YR	DATE	ORIG	TIME	LAT-N	LONG-W	DEPTH	MAG	NO	GAP	DMN	RMS	Q
78	1208	0809	13.69	38-39.29	112-31.48	4.0	2.7	8	90	4	.27	B
78	1208	0613	36.55	38-38.71	112-30.94	7.1	1.8	8	142	3	.33	C
78	1209	1459	48.33	38-39.49	112-31.65	4.4	3.3W	11	90	4	.24	B
78	1209	1615	20.51	38-39.61	112-30.42	.6	2.3	9	90	5	.58	C
78	1209	1937	26.88	38-38.69	112-31.17	1.0	2.0	9	87	3	.37	B
78	1209	2231	15.66	38-36.85	112-31.61	6.8	2.1	7	143	3	.20	C
78	1209	2238	27.21	38-37.30	112-30.32	1.2	2.0	10	82	2	.42	B
78	1209	2349	7.97	38-38.95	112-31.39	5.4	3.3W	10	88	3	.22	B
78	1210	0611	56.62	38-39.22	112-31.66	5.7	1.2	9	145	4	.22	C
78	1210	0616	46.77	38-38.78	112-32.07	5.5	1.0	5	211	3	.06	D
78	1210	0110	40.92	38-39.79	112-30.33	1.5	2.4	9	90	5	.66	C
78	1210	0117	29.38	38-39.01	112-30.34	2.5	1.0	7	142	4	.20	C
78	1210	0403	21.73	38-39.65	112-31.39	8.2	2.5	9	147	4	.23	C
78	1210	0428	32.45	38-37.80	112-30.77	1.7	2.5	9	84	2	.67	C
78	1210	0545	41.73	38-36.90	112-32.48	4.8	.7	6	130	6	.11	B
78	1210	0736	30.85	38-38.75	112-31.52	8.4	1.3	7	143	3	.18	C
78	1210	0602	25.67	38-37.29	112-33.31	3.7	.9	8	137	1	.23	C
78	1210	1711	54.31	38-41.44	112-31.21	.9	2.1	8	156	8	.61	D
78	1210	2001	12.23	38-37.47	112-32.97	4.7	.6	7	138	1	.12	C
78	1211	0345	11.23	38-15.85	112-19.06	5.1	1.4	4	309	11	.22	D
78	1211	0645	43.36	38-41.05	112-31.90	4.4	1.5	8	156	7	.15	C
78	1211	0646	41.28	38-39.44	112-31.97	6.1	1.1	7	147	4	.06	C
78	1211	0842	47.63	38-39.58	112-31.51	4.4	1.8	8	147	4	.26	C
78	1211	2043	51.98	38-36.78	112-32.38	5.5	1.3	6	211	3	.09	D
78	1212	2527	14.34	38-29.30	112-46.19	5.7	.7	7	138	4	.06	C
78	1214	1056	55.10	38-37.80	112-31.57	2.9	.8	5	251	1	.06	C
78	1217	1019	.09	38-17.81	112-28.66	2.2	.6	5	232	19	.21	D
78	1221	0730	24.73	38-36.08	112-30.87	1.0	.9	4	170	2	.45	D
78	1221	2103	14.93	38-34.50	112-33.82	2.6	.4	5	139	5	.04	D
78	1221	2140	1.64	38-34.67	112-33.42	.5	.6	5	110	4	.03	D
78	1223	1733	5.71	38-38.24	112-32.69	3.8	.4	7	207	2	.20	C
78	1223	1733	26.37	38-39.05	112-32.63	4.5	.3	6	213	3	.10	C
78	1223	1738	10.10	38-37.97	112-33.14	4.5	.3	8	205	1	.11	C
78	1223	2103	13.39	38-40.76	112-30.54	7.0	1.2	8	152	7	.19	C
78	1223	2216	34.69	38-40.43	112-30.84	6.6	1.4	8	150	6	.24	C
78	1225	0243	53.94	38-22.81	112-26.05	9.8	.0	6	186	14	.05	C
78	1226	0451	47.62	38-23.86	112-25.44	1.7	-.1	5	229	13	.08	D
78	1226	1107	39.73	38-35.30	112-26.70	10.6	-.1	5	177	8	.02	C
78	1227	2153	46.40	38-37.77	112-31.55	.5	1.6	9	138	1	.41	C

NUMBER OF EVENTS = 239