Earthquake Commentary for October, 1998

Map of recent earthquake activity

Send comments and suggestions to:kate@bombay.gps.caltech.edu

18:32 PST, Friday, October 30

We have had two more Whiskey Springs aftershocks this afternoon: a M2.9 at 2:00 pm and a M2.8 at 5:18 pm, located 5 miles and three miles north of Big Bear City, respectively.

16:49 PST, Thursday, October 29

We recorded and analysed 280 earthquakes in the past week, 93 of which belonged to the Whiskey Springs sequence. Click here to see a summary and map .

16:30 PST, Wednesday, October 28

There has just been a M3.0 Whiskey Springs aftershock (to Monday's ML4.9). It occurred at 4:06 pm, and was, like the others, 4 miles north of Big Bear City.

10:09 PST, Tuesday, October 27

Here's a brief summary of the Whiskey Springs earthquake and its larger aftershocks: the mainshock was a M4.9 yesterday at 5:08 pm. The epicenter was 4 miles north of Big Bear City, and the focal mechanism was strike-slip. Since it occurred slightly outside of the aftershock zone of the June 28, 1992 (Mw6.2) Big Bear quake, and because the aftershocks of that Big Bear quake died off almost completely a couple of years ago, the Whiskey Springs event is not a Big Bear/Landers aftershock. It did, however, have aftershocks of its own. The largest ones so far have been: a M3.2 at 5:42 pm, a M3.7 at 11:16 pm, and a M4.1 at 7:40 am this morning. There have also been 30 or so smaller aftershocks; a normal California aftershock sequence, in other words.

For more commentary on the Whiskey Springs quake, see the Trinet Special Report.

14:20 PST, Sunday, October 25

At 3:40 am this morning, Pacific Standard Time, there was a M3.0 that was located 6 miles south of

Redlands. It is quite possible that this event was felt in Riverside or San Bernardino; however, I haven't gotten any information to that effect yet.

15:53 PDT, Friday, October 23

The only quake of interest in the past day was a M2.8 in the northern Imperial Valley, near Obsidian Butte, at 1:44 am today. As far as we know, it was not felt.

17:30 PDT, Thursday, October 22

We recorded and analysed 190 earthquakes in the past week. Click here to see a summary and map .

08:18 PDT, Thursday, October 22

The overnight activity included two small earthquakes worth mentioning. The first was a M2.6, located 4 miles southwest of Borrego Springs, at 5:41 pm. The second was another member of the Baja swarm that has continued for the past few days. This morning's event had a M3.2 magnitude and occurred at 4:06 am, 55 miles south of Calexico. Neither attracted any public attention.

09:26 PDT, Wednesday, October 21

The only new Baja swarm member worth mentioning overnight was a M3.2 at 6:54 am this morning. It was at the usual location, 41 miles south of Calexico.

In addition to the Baja swarm, we had a quake in the general vicinity of the Landers aftershock zone, plus a Northridge aftershock. The former was a M3.1 that occurred at 1:56 am this morning, 21 miles east of Barstow. This is actually a few miles east of any of the other Landers aftershocks, so calling it an aftershock would be problematic. So I won't.

The Northridge aftershock occurred at 5:58 am this morning, 4 miles west-southwest of Valencia, and had a magnitude of M2.6. None of these events generated any public inquiries.

16:51 PDT, Tuesday, October 20

There are yet two more additions to the Baja swarm membership list: a M3.8 at 4:14 pm today, and a M3.1 at 4:28 pm today. Both were located approximately 40 miles south of Calexico.

08:49 PDT, Tuesday, October 20

There were a some more members of the Baja swarm since the last post: a M3.0 at 2:18 pm, a M4.2 at 7:48 pm, and a M3.7 at 7:53 pm, all yesterday, and a M3.9 at 2:25 am today. Again, we've received no public inquiries on any of them.

13:36 PDT, Monday, October 19

The most significant activity this weekend occurred south of the U.S./Mexico border, approximately 50 miles south of Calexico. This sequence included two quakes that might possibly have been felt in the Imperial Valley: a M3.7 at 12:38 pm on Sunday and a M3.6 at 11:06 pm on Sunday.

In addition to the Baja quakes, we had a M2.7 at 11:00 pm and a M2.6 at 11:20 pm on Saturday, both located 6 miles east-southeast of Big Bear City.

At 12:53 am on Sunday, Frazier Park experienced a small quake of magnitude M2.5. That epicenter was 2 miles south of Frazier Park.

Following that, at 4:42 am on Sunday, there was a small Northridge aftershock. The magnitude was M2.6 and the epicenter was 4 miles west of Canoga Park. There was another small Northridge aftershock at 7:03 pm Sunday, this one located 3 miles northeast of Granada Hills.

Lastly, there was a M2.5 at 2:32 am this morning, located 6 miles north of Ridgecrest.

All in all, quite a bit of activity for a weekend when no-one reported feeling anything!

08:58 PDT, Friday, October 16

There were two quakes overnight that are worth mentioning. First, there was a M2.9 at 6:48 pm yesterday, located 11 miles south-southeast of Santa Maria. Second, there were a couple of more Imperial Valley quakes, the largest of which was a M2.6 at 7:25 pm yesterday. It was a member of the small swarm that was going on earlier the same day, 6 miles east of El Centro. We've gotten no inquiries on either of these two events.

18:13 PDT, Thursday, October 15

We recorded and analysed 192 earthquakes in the past week. Click here to see a summary and map .

Note that there have been a few more members in the Imperial Valley swarm, including a M2.6 at 1:38 pm and a M2.7 at 1:47 pm.

14:13 PDT, Thursday, October 15

There appears to be a small Imperial Valley swarm happening 6 miles east of El Centro. The largest events so far have been a M2.6 at 10:59 am and a M3.0 at 1:06 pm, accompanied by a handful of smaller events. The M3.0 event was felt in Calexico.

09:08 PDT, Wednesday, October 14

This morning at 7:37 am, there was a M3.8 south of the U.S./Mexico border, 26 miles south-southeast of Calexico. This epicenter is in the Cerro Prieto Seismic Zone, which is an active area. It is quite possible that this morning's event was felt in the southern Imperial Valley.

14:01 PDT, Monday, October 12

There have been only a couple of quakes worth mentioning in the last day or two. The first was in Obsidian Butte quake, in the Brawley Seismic Zone in the Imperial Valley, at 10:44 am yesterday. Magnitude was M2.9.

Following that, at 2:21 pm yesterday, there was a M2.7 Landers aftershock, located 21 miles northeast of Lucerne Valley. There were no inquiries about either quake.

17:40 PDT, Thursday, October 08

We recorded and analysed 178 earthquakes in the past week. Click here to see a summary and map .

Here are the statistics for the third quarter. You'll notice this quarter there were fewer overall earthquakes as compared to last quarter, but a greater number of larger (magnitude M3.0+) earthquakes. This type of variability is expected in a random distribution such as earthquakes (look at the 1st and 2nd quarter of 1997 and the 2nd and 3rd quarter of 1994).

Totals listed below apply to the area within a polygon bounded by the following latitude, longitude pairs:
35.0N, 121.0W; 37.0N, 119.0W; 37.0N, 115.0W; 32.5N, 115.0W; and 32.5N, 121.0W.

	1st quarter		2nd quarter		3rd quarter		4th quarter	
	all	3.0+	all	3.0+	all	3.0+	all	3.0+
1986	3,040	16	2,865	19	6,634	192	2,300	38
1987	1,679	24	1,887	36	2,341	38	5,748	198
1988	2,749	40	2,128	45	2,195	30	2,208	27
1989	2,528	46	2,340	21	2,323	19	2,335	26
1990	2,850	56	2,293	43	1,859	27	2,039	31
1991	1,679	10	1,843	32	2,081	21	2,337	27
1992	3,389	37	10,084	741	25,849	808	9,775	181
1993	4,799	41	5,152	58	5,039	46	4,419	34
1994	10,735	418	5,766	42	5,221	48	4,813	39
1995	3,639	28	3,788	37	8,252	88	7,733	49

```
1996     5,735   56      3,966   32      3,690   23      4,660   50
1997     3,699   39      3,276   54      3,193   31      2,443   27
1998     3,590   56      2,830   27      2,655   37

Northridge area
---------------
1/17/94 - 9/30/98
Latitude 34.1 - 34.5 North, Longitude 118.3 - 118.85 West
All events      14,811  (66 of them this quarter)
3.0 - 3.9          421  (1 of them this quarter)
4.0 - 4.9           52  (none this quarter)
5.0 and up          11  (none this quarter)

Landers/Big Bear area
---------------------
4/23/92 - 9/30/98
Latitude 33.8 - 35.33 North, Longitude 116.0 - 117.05 West

All events      70,140  (791 of them this quarter)
3.0 - 3.9        1,655  (9 of them this quarter)
4.0 - 4.9          173  (1 of them this quarter)
5.0 and up          23  (none this quarter)
-----------------------------------------------------------------------
```

09:51 PDT, Monday, October 05

There were three quakes worth mentioning over the weekend. The first was a M3.0 Landers aftershock, at 5:34 am on Saturday. It was located 3 miles north of Yucca Valley. Presumably, this event could have been felt in Yucca Valley. However, we received no calls.

On Sunday, at 6:16 am, there was a M2.6 11 miles north of Borrego Springs, within the complex San Jacinto fault zone.

This morning, at 4:50 am, there was another small quake near the southern San Jacinto. This one was a M2.7, located 6 miles northeast of Ocotillo Wells. Neither of the last two was apparently felt.

18:47 PDT, Friday, October 02

There was an interesting earthquake at 5:04 pm today: a M3.0 located 12 miles southeast of Palmdale. This epicenter is in the Juniper Hills area, extremely close to the San Andreas fault. A preliminary look at the focal mechanism indicates a significant amount of thrust motion, which would suggest that it is not the San Andreas itself. A small quake like this isn't necessarily a cause for alarm, even if it does turn out to be on the San Andreas. However, it is interesting because we don't have too many like it. It seems reasonable that the Juniper Hills quake was felt, but we haven't received any inquiries.

Earlier, at 1:41 pm, there was also a M2.7, located 6 miles south of Ocotillo. We haven't gotten any inquiries about that one, either.

17:20 PDT, Thursday, October 01

We recorded and analysed 209 earthquakes in the past week. Click here to see a summary and map .

12:01 PDT, Thursday, October 01

We have revised the magnitude for the 11:18 am quake to M4.7, based on 172 readings from our analog and digital stations.

11:35 PDT, Thursday, October 01

An earthquake this morning at 11:18 am, in the San Bernardino Mtns., was widely felt as far away as Pasadena. It had a preliminary magnitude of M4.5, and was located 6 miles west of Mt. San Gorgonio, which makes it an aftershock of the M4.8 on August 16 of this year. Further information will be posted to this site as soon as we get it.

09:12 PDT, Thursday, October 01

The Big Bear Lake area experienced a M3.4 quake early this morning, at 6:59 am. The epicenter was 5 miles north-northwest of the town of Big Bear Lake. The focal mechanism is slightly-oblique strike-slip.

Last updated 18:32 PST October 30, 1998
Send comments and suggestions to:kate@bombay.gps.caltech.edu