# Earthquake Commentary for June, 1998

**Map of recent earthquake activity**

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

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**18:12 PDT, Monday, June 29**

It was a very quiet weekend in Southern California, seismically speaking. The largest earthquake over the weekend was a M2.5 offshore of Malibu, which occurred Sunday evening. Earthquakes of that size are usually too small to feel, but we have gotten believable reports that earthquakes smaller than this have been felt. We received no word that anyone felt this quake.

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**18:50 PDT, Friday, June 26**

It's only been alittle over a week since our last M3.9 earthquake, but this morning at 9:55 am we got another one. It was located 18 miles SSE of Salton City which puts it in the aftershock zone of the M6.6 Superstition Hills earthquake (November 24, 1987) which occurred on the Superstition Hills fault. The focal mechanism of todays earthquake also shows similar faulting of those produced in 1987. Though, despite these similarities, by definition, today's earthquake is NOT an aftershock. We call an earthquake an aftershock as long as the rate of earthquakes in the area is greater than it was before the mainshock - the M6.6 Superstition Hills mainshock in this case. The rate of earthquake activity in this region had returned to background levels years ago.

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**18:34 PDT, Thursday, June 25**

We recorded and analysed 166 earthquakes in the past week. Click here to see a summary and map .

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**08:31 PDT, Thursday, June 25**

The only quake of interest in the past 24 hours was a M2.8 at 8:32 pm yesterday, located 2 miles north-northeast of Ocotillo Wells. This location is in the very active San Jacinto fault zone.

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**09:04 PDT, Tuesday, June 23**

Last night at 11:33 pm, there was a M2.7 10 miles northeast of Ridgecrest. Following that, at 2:13 am today, there was a M2.9, located 10 miles south-southwest of Ocotillo. As far as we know, neither was felt.

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**09:09 PDT, Monday, June 22**

Saturday was a pretty dull day, seismically speaking, but we had a few quakes on Sunday. The largest one was a M3.6 at 5:07 pm, located 4 miles west-southwest of Morongo Valley. This location is near the intersection of the Morongo Valley fault and the Mission Creek branch of the San Andreas. The focal mechanism was oblique strike-slip, with a strike more or less consistent with the Mission Creek. It was felt in the epicentral area.

In addition to that quake, we had a M2.9 Landers aftershock at 11:40 am on Sunday morning, located 8 miles east-southeast of Desert Hot Springs. This location is just about at the southern end of the Landers rupture, also very close to the San Andreas fault.

At 1:00 pm on Sunday, we had a M2.5 19 miles east of Coso Junction. This is a familiar location from the past few weeks.

And finally, there was a M2.6 at 5:19 am today, 11 miles south-southwest of Ocotillo.

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**18:44 PDT, Thursday, June 18**

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

Note the Landers aftershock (M2.6) at 2:57 pm today. It was located 25 miles north of Yucca Valley.

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**14:00 PDT, Wednesday, June 17**

We had some more activity this morning, this time Northridge aftershocks. There were two in the same minute: M3.1 at 11:51:11 and M3.9 at 11:51:32. Both were at the same location, 2 miles north-northeast of Chatsworth. Both were felt, the M3.9 as far away as Culver City and Thousand Oaks.

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**09:24 PDT, Wednesday, June 17**

Let me recap the activity last night. There were two quakes of 'feelable' size in the Big Bear Lake area. The final magnitudes of both are slightly higher than the original (automatic) estimates. They were: a M3.0 at 8:19 pm and a M3.3 at 8:45 pm. Both were located 4 miles west-northwest of the town of Big Bear Lake. The focal mechanisms were almost pure strike-slip. The quakes might have been felt, but we've gotten no reports.

These were followed by another quake, M2.8 at 11:36 pm, located 7 miles north-northwest of Banning.

It had an oblique normal focal mechanism.

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**20:58 PDT, Tuesday, June 16**

Oops ... posted too soon!

There have been two small quakes this evening in the Big Bear Lake area: a M2.9 at 8:19 pm and a M3.2 at 8:45 pm, both located 4 miles west-northwest of the town of Big Bear Lake.

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**20:32 PDT, Tuesday, June 16**

There has also been a M2.9 at 8:19 pm Tuesday, located 4 miles west-northwest of the town of Big Bear Lake. Situated, as is was, during TV prime time, someone somewhere probably felt it.

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**10:24 PDT, Tuesday, June 16**

A M3.3 occurred at 8:42 am this morning, located 9 miles northeast of Borrego Springs, in the complex San Jacinto Fault zone. The focal mechanism was strike-slip.

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**17:26 PDT, Monday, June 15**

Another Landers aftershock topped M2.5 at 8:07 am today. It had a magnitude of M2.5 and was located 24 miles east-northeast of Lucerne Valley, near the northern end of the Landers rupture zone.

Thanks to the readers of this web page, I have learned that the Costa Mesa quake last night was indeed felt.

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**08:47 PDT, Monday, June 15**

Since the offshore M3.7 yesterday, there have been only a pair of M2.7's. The first one occurred at 9:55 pm yesterday, in the Costa Mesa area, 3 miles north-northeast of Newport Beach. The other one was a Landers aftershock at 2:07 am, located 13 miles north of Yucca Valley. Neither was, as far as we know, felt by the public.

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**13:02 PDT, Sunday, June 14**

The most recent quake of interest was a M3.7 at 10:33 am this morning, located 30 miles south-southwest of Dana Point. This puts it offshore, approximately equidistant from Dana Point, Catalina Island, and San Diego. There were inquiries from the San Diego area. The offshore area, although not the most active area in the coverage region, can be prolific at times. In 1986, the ML5.4 Oceanside quake, which occurred about 7 miles away (south-southeast) from today's epicenter, produced a record number of aftershocks for its magnitude. Due to the time lapse, however, today's quake is not considered an Oceanside aftershock.

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**18:03 PDT, Thursday, June 11**

We recorded and analysed 304 earthquakes in the past week. Click here to see a summary and map .

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**14:47 PDT, Wednesday, June 10**

There continue to be small Coso Range quakes. The largest recently have both been M2.5's. The first occurred at 2:01 pm yesterday, 6 miles east-northeast of Coso Junction. The second occurred at 6:01 am today, located 19 miles east of Coso Junction.

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**10:13 PDT, Tuesday, June 09**

At 10:14 pm last night, there was another Coso Range quake, located 17 miles east of Coso Junction. The magnitude was M3.2.

In addition, there was significant seismic activity at Mammoth Lakes, in the form of a M5.1 with its associated aftershock sequence. For further information on this activity, see the U.S. Geological Survey at Menlo Park's web site .

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**13:02 PDT, Monday, June 08**

Here is an update on the Coso Range aftershocks above M2.5 so far.

As I mentioned before, the M3.9 was at 9:08 am. At 9:11 am, there was a M2.7 at the same location, 19 miles east of Coso Junction. At 9:33 am, there was a M2.5 at the same location. Then, at 10:20 am, there was a M3.0 at a new location 13 miles southeast of Coso Junction. This was followed at 10:39 am by a M2.9 13 miles southeast of Coso Junction. So we have a total of three Coso Range locations going, now. As a point of reference, all three M5+ Coso Range quakes since mid-1996 were near the same location at today's M3.9. These were: a M5.3 on November 27, 1996, a M5.2 on March 6, 1998, and a M5.0 on March 7, 1998.

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**09:41 PDT, Monday, June 08**

Oops. We just had another one: this time, a M3.9 located 19 miles east of Coso Junction. The time was 9:08 am. This is a different location than the weekend events, but it is a common source of Coso Range activity. Because of its magnitude, it might have been felt in some of the nearby towns, but we have not received any inquiries.

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**08:50 PDT, Monday, June 08**

Over the weekend, we had a couple of quakes of note in the Coso Range area. The first was a M2.5 at 1:27 pm on Saturday, located 6 miles east-northeast of Coso Junction. The second was a M2.8 at 2:27 am on Sunday, at the same location. Since this area is very sparsely populated, neither quake was reported felt.

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**16:16 PDT, Friday, June 05**

Actually, there were a couple of others above M2.5 that I failed to mention. They were not felt. The first was a M2.5 under Loma Linda at 1:43 am today. The second was a M2.7 located 12 miles south-southeast of Santa Rosa Island (one of the Channel Islands), at 1:56 am today.

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**09:01 PDT, Friday, June 05**

We had another "feelie" last night at 6:40 pm, this time in Orange County, 3 miles east-southeast of Fullerton. It had a magnitude of M2.7, had a strike-slip focal mechanism, and was felt in the epicentral area.

We also had a small Northridge aftershock at 8:58 pm, magnitude M2.4. This one was located 2 miles west-southwest of Reseda, but we got no inquiries.

During the one-week period ending at 5 pm on Thursday (yesterday), we recorded and processed 193 earthquakes. Click here to see a summary and map .

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**11:56 PDT, Thursday, June 04**

By the way ... there is a new and fun feature, called Community Internet Intensity Maps or "Did you feel it?", on the U.S. Geological Survey (Southern California) web site. If you feel an earthquake, go to

http://www-socal.wr.usgs.gov/

and click on "Did you feel it?". Fill out the questionaire, and then I will be able for figure out where the quake was felt!

You can also do the same for the Northridge mainshock.

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**09:32 PDT, Thursday, June 04**

We had another "felt" earthquake at 11:07 pm last night: this one was a M3.7 located 6 miles north of Mt. Palomar Observatory. The focal mechanism was strike-slip. We got inquiries from Temecula and the Pauma Valley area. Looking at the fault map, we see that there are a number of small faults in the area that might be responsible. Usually, however, we have difficulty assigning quakes less than about M5 to a particular fault, since small quakes have small rupture areas and seldom show any surface rupture.

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**09:46 PDT, Wednesday, June 03**

A M3.0 was felt in the southern San Fernando Valley last night, at 10:22 pm. The epicenter was 3 miles south-southeast of Encino, which is well outside of the Northridge aftershock zone. Focal mechanism was strike-slip on either a north-south or an east-west striking fault plane. (Remember that there are always two possible solutions for a focal mechanism, and it is impossible to tell from first-motion readings alone which is right!)

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*Last updated 18:15 PDT June 29, 1998*
*Send comments and suggestions to:kate@bombay.gps.caltech.edu*