Haida Gwaii Quake Monitored by NEPTUNE Canada [1]

Submitted by Rory Lattimer Sun, 2012-10-28 00:00

Just after 8 pm on October 27, a magnitude 7.7 earthquake struck off the coast of BC, at a depth of 17 kilometres and centred 139 km south of Masset in the Haida Gwaii region.

Residents along the west coast?from Alaska to the lower mainland?also felt numerous aftershocks up to magnitude 5.8. No major damage or injuries have been reported.

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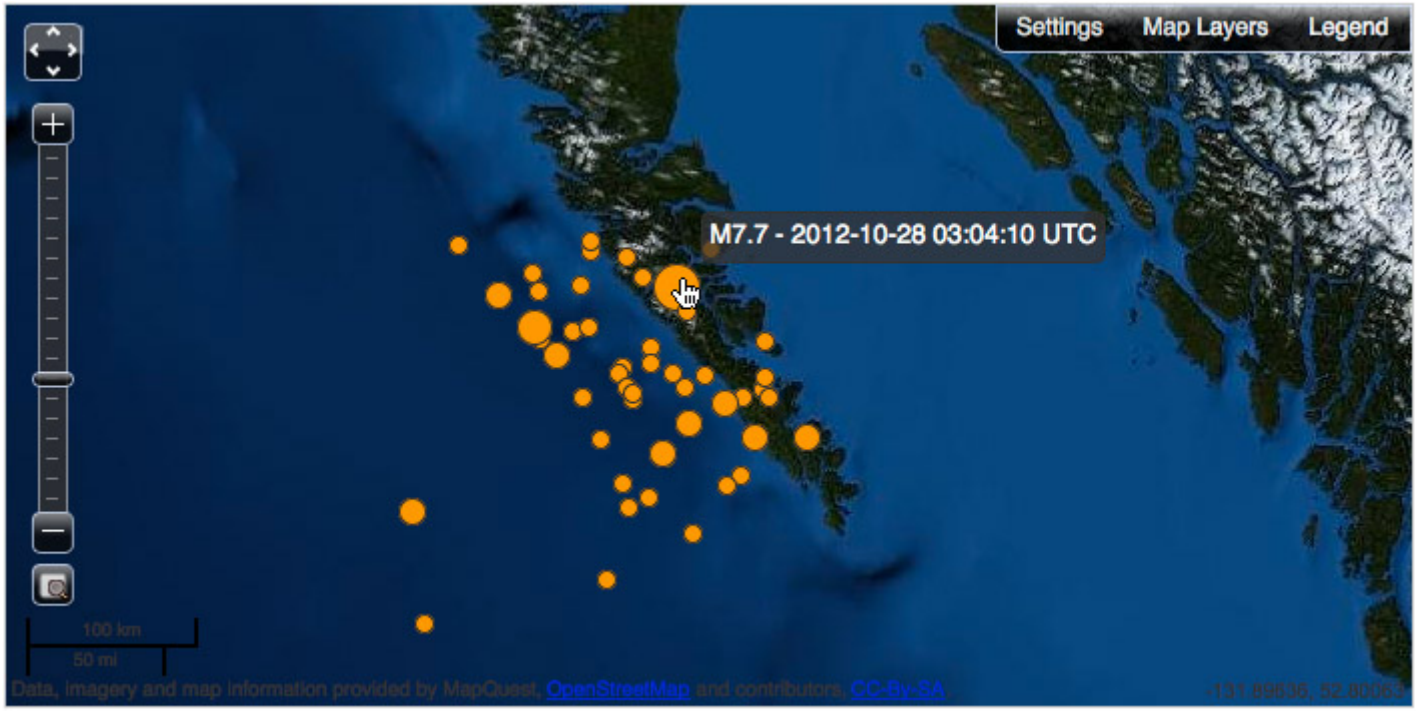

M	Location Click event below for details	Time UTC	Lat	Lon	D km
5.1	166km S of Masset, Canada	2012-10-28 19:16:55	52.544°N	132.580°W	47.2
5.5	190km S of Masset, Canada	2012-10-28 19:09:56	52.315°N	131.860°W	14.8
5.4	151km SSW of Masset, Canada	2012-10-28 19:03:24	52.742°N	132.901°W	32.8
6.3	159km SSW of Masset, Canada	2012-10-28 18:54:21	52.633°N	132.701°W	8.2
5.1	184km S of Masset, Canada	2012-10-28 16:17:04	52.380°N	131.664°W	15.0
4.0	185km SSE of Masset, Canada	2012-10-28 15:42:21	52.404°N	131.422°W	10.0
4.3	135km S of Masset, Canada	2012-10-28 15:24:22	52.803°N	132.113°W	10.0
4.0	166km S of Masset, Canada	2012-10-28 15:10:34	52.516°N	132.066°W	10.0
4.4	177km S of Masset, Canada	2012-10-28 15:06:55	52.417°N	132.169°W	10.0
4.0	164km SSE of Masset, Canada	2012-10-28 14:14:28	52.588°N	131.440°W	7.7
4.2	154km S of Masset, Canada	2012-10-28 14:04:27	52.635°N	132.403°W	10.0
4.8	176km S of Masset, Canada	2012-10-28 13:09:14	52.432°N	131.882°W	10.2
4.1	127km S of Masset, Canada	2012-10-28 12:38:46	52.870°N	132.204°W	10.1

Although similar in size to the earthquakes in Japan (2011) and Chile (2010) this event represents the first regional tsunami tracked by the NEPTUNE observatory.

"Ocean Networks Canada sensors at various locations and depths are designed to register and monitor these events, that are caused by a buildup of stresses in the earth?s crust," said Dr. Martin Heeseman, earthquake dynamics specialist with the Ocean Networks Canada Observatory. "Seismographs monitored the ground motion caused by these quakes, while bottom pressure recorders and the CORK pressure sensor measured the long (tsunami) waves that crossed over the 800 km cabled seafloor network."

These highly specialized, ultra-sensitive instruments provide real-time data that may provide vital information for emergency organizations and coastal residents.

The data from this earthquake, a sample of which is given above, is unique for the study of near-field tsunamis. ?This is the first time we have data from our offshore stations to test the models and response of the coast to these near-field waves,? said Dr Steve Milhaly, Ocean Networks Canada's specialist in ocean/climate dynamics. ?It?s these locally generated tsunami waves that will be the devastating ones for our coastal regions.?

Tsunami warnings originally issued for a large stretch of the North and Central coast, as well as the Haida Gwaii region and eastward to Hawaii, were later cancelled or downgraded. One wave that hit Langara Island, in the Haida Gwaii area, measured 69 centimetres.

This was the largest tremblor to hit Canada since 1949, when an 8.1-magnitude quake hit west of the Queen Charlotte Islands, in the same area. In January 1700, a 9.0-magnitude earthquake struck offshore of Vancouver Island.

For more information, visit the extended news release: Haida Gwaii Earthquake and Tsunami [2]

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