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tion: Oct. 6th-15 th .
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1902-6-20		Н	It was classified as a Tropical Storm. Duration in Guatemala: June 20 th . Total duration: June 19-28.
1902-10-24/25 (7-9 ? PM)	V. Santa María	V	Eruption of Santa María Volcano, and appearance of Santiaguito Volcano. Plinian type of eruption. About 6,000 deaths. It is called the Twenty Century's eruption (probably at world level). The power of the eruption was 32 times that of Mount Saint Helens, in Washington D.C. EEUU. It produced a crater of 1,000 length and 700m width, at the Southwest of the Volcano. At the critical moment the discharge of materials was of 380m³/sec., making a total volume of pyroclastic expulsion of 8 to 10 km³. It became a 35 km high of the explosive column. It produced a temporary change of temperature of 7°C at the world level. Five departments of Guatemala were strongly affected: Quetzaltenango, San Marcos, Totonicapán, Mazatenango y Retalhuleu. There was 8 days of darkness at the affected area. Volcanic ash reached México, United States and Canadá.
1912-6-12 12:43		Е	Mag.=6.8 ? EP=17.00°N-89.00°W
1913-3-8 8:55	Cuilapa, Santa Rosa	E	ML=5.9, Ms=5.9?, D=5-6.5 km. Earthquake that destroyed Cuilapa, Santa Rosa. SS= Minor faults in the eastern plateau, Jalpatagua?
1913-3-9 9:49	Santa Rosa, Cuilapa	Е	Strong earthquake felt in the central region of Santa Rosa and also in the Dept. of
1915-9-7 1:20	Сипара	E	Cuilapa. Felt over large part of the country. Many deaths and much destruction. Mag.=7.9? EP=14.00°N-89.00°W Heavy damage in Jutiapa. Felt strongly over large part of Guatemala and El Salvador
1916-9-1		Н	It was classified as a depression (dissipation). Duration in Guatemala: Sept.10., Total Duration: Aug.27-Sept.1.
1917-11-27	Villa Nueva	E	Earthquakes at the neighborhood of the capital, in the town of Villa Nueva. The activity continued until the earthquake of December 26 th .
1917-12-25 10:25 PM	Ciudad de Guatemala	E	ML=6+ IMM=VIII-IX A series of earthquakes that began on November 17, 1917, and continued until January 24 th ,1918. December 25 main event had magnitude of 6 plus and maximum Modified Mercalli intensity of VIII-IX. In Guatemala City cracks opened in the streets, and about 40 percent of the houses were destroyed or seriously damaged. The Colon Theatre collapsed while filled with people; school buildings, churches, asylums, hospitals, sugar mills, the post office, the railway station, and the British and American legation buildings were thrown down, and many occupants were killed or injured. Later destructive earthquakes occurred on Dec. 29 (14h), January 3, 1918 (22:37), and January 24 (19:30). The most destructive of this series was the January 3, 1918, earthquake.
1917-12-26 5:21:00	Ciudad de Guatemala	Е	ML= 5.8. Chain of earthquakes that destroyed the center of the Capital City and neighborhood. Results: 250 deaths
1917-12-29		Е	ML=5.7
1918-1-4 (4:30:10)	Guatemala City?	Е	ML=6.1. Chain of earthquakes
1918-1-11 (4:30:10)	Guatemala City?	E	IMM=VI
1918-1-24	Guatemala City	Е	Swarm of earthquakes Ms=6.2 ? SS= Minor faults at the Central Plateau
1918-1-25		Е	ML=6.2
1918-8-25		Н	It was classified as a depression (dissipation). Duration in Guatemala: Aug. 25, Total duration: Aug. 22-25.
1919-4-17 20:53:03 UTC		Е	EP=14.5N-91.7W ML=7.0
1921-2-4 08:22:44 UTC		Е	EP=15.0 N-91.0W D=120 ML=7.5
1921-6-17		Н	It was classified as a Tropical Storm. Duration in Guatemala: June 17-18. Total duration: June 15-26.
1922-2000	V. Santiaguito	V	
1924-1927	V. Acatenango	V	
1928-9-12/17		Н	Hurricane. Number of deaths: between 3,375 to 4,075. According to the NCEP (National Center for Environmental Prediction) it was the 9 th , deadliest Atlantic Tropical Cyclon from 1492.
1929-01-17 19:00: UTC	Puerto Barrios	Е	Considerable damages in Puerto Barrios

1929-9-15	11711-	T	
1929-9-13	Whole Guatemala	Н	Hurricane. Heavy rainfall at the whole country, damages in 24% of the country. Destruction of the railroad of Los Altos (Quetzaltenango-San Marcos Area). Duration in Guatemala: Sept. 15-16. Total duration: Sept. 12-16. Affected road sections: 33, bridges: 24, towns: 18
1929	V. Santiaguito	V	Eruption of Santiaguito volcano. The Pelean type eruption killed about 2,500 persons. Many of the materials have been swept along the rivers producing the <i>lahars</i> . This situation forced the moving of the town El Palmar to other place.
1931-9-10		Н	Hurricane. Duration in Guatemala Sept. 10 th . Total duration: Sept. 5 th -12 th .
1931-9-26	<u> </u>	E	EP=15.0N-92.0W
19:50:30 UTC			D=60 ML=6.0
1931-9-26 20:03:07 UTC		E	EP=15.5N-91.5W
1932-5-22	- <u>-</u>	E	ML=6.25 EP=14.2N-90.0W
22:40:02 UTC			D=80 ML=6.0
1932	V. de Fuego	V	Eruption of Fuego volcano. Violent Vulcanian type of eruption. It rose columns of ash from 5 to 10 km height, producing deposits of 40 cm thick on the vicinity and 2 cm thick on several hundred kilometers away.
1933-9-11	Whole Guatemala	Н	Tropical storm. Duration in Guatemala Sept. 11 th -13 th . Total duration: Sept. 10 th -15 th . Affected road sections: 47, bridges: 50, railroads: 9, inundated towns: 64, tumbled houses: at least 110, settlements and crackings: 9, deaths: 59 persons, affected public facilities: 21.Damages in 37% of the country, this includes the effects of the other two hurricanes which affected from July 26th through Oct. 12 th .
1933-9-30		Н	Depression (dissipation). Duration in Guatemala: Sept.30 th . Total duration: Sept.28-30
1934-5-19 10:47:37 UTC		Е	EP=14.0N-91.2W D=120 ML=6.25
1934-6-5	<u></u>	Н	<u></u>
1934-12-3	Guatemala-	E	Tropical storm. Duration in Guatemala: June 5 th -8 th . Total duration: June 4 th -21th.
	Honduras		Ms=6.25 SS=Jocotán-Chamelecón fault O.G. Flores B. mention this event as having happened near Santa Rosa, Copán (Honduras), however the epicenter is unknown.
1939-9-28 14:58:27 UTC		Е	EP=15.5N-91.5W D=110
1939-12-05		E	ML=6.25 EP=14.5N-91.5W
08:30:07 UTC		E	ML=6.75
1940-7-27 13:32:30 UTC		Е	EP=14.2N-91.5W D=90 ML=6.75
1941-9-28	-	Н	Hurricane. Duration in Guatemala: Sept.28th-29 th . Total duration: Sept.23th30 th .
1942-4-11		E	EP=14.7N-91.5W
01:25:12 UTC		L	D=140 ML=6.5
1942-8-6	Central Plateau	Е	EP=13.9N-90.8W
23:36:59 UTC	and South Coast		ML=8.3, Ms=8.3?, D=60 km.
			SS=Subduction
			The biggest earthquake up to now, in terms of energy liberation. Main damages were
			recorded at Guatemala, Sacatepequez, Chimaltenango, San Marcos, Totonicapán, EL
			Quiché, Escuintla and Huehuetenango. In the Department of Guatemala the damages are described as follows:
			-Amatitlán: 253 houses with light damages, 99 destroyed, 196 with considerable
	ļ		damages.
			-Villa Nueva: Walls of some houses break down. No deaths
	}		-San Pedro Sacatepequez: Municipal buildings and several houses with damages
			Rest of Municipios felt it but damages were small.
1942-8-8		E	EP=14.2N-91.5W
22:36:44 UTC			ML=6.5
1943-8-31 16:10:40		E	EP=14.2N-91.5W
10.10.70			D=80 ML=6.75
1943-9-23		Е	EP=15.0N-91.5W
15:00:44 UTC			D=110
			ML=6.75
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1944-10-02		E	EP=14.5N-89.8W
17:22:00			D=160
			ML=6.5
1944-1977	V. de Fuego	V	
1945-8-10	Quiriguá	Е	EP=15.4N-88.8W
11:20:03 UTC	-		Numerous earth cracks near Quiriguá and significant (moderate) damage in Quiriguá.
			Felt in Departments of Chiquimula, Zacapa, and part of Izabal.
1945-10-4		Н	Tropical storm. Duration in Guatemala: Oct.4 th . Total duration: Oct.2 nd -5 th .
1945-10-27		Е	EP=15.0N-91.2W
11:24:41 UTC			D=200
			ML=6.75
1946-01-05		E	EP=15.0N-91.0W
01:15:11 UTC		_	D=210
			ML=6.0
1946-06-26		Е	EP=14.7N-90.8W
07:53:40			D=90
			ML=6.5
1948-7-16		Е	EP=14.6N-91.2W
07:12:28 UTC			ML=6.25
1948-7-16	•	Е	EP=14.3N-91.2W
07:19:39 UTC		_	ML=6.75
1949-07-08		E	EP=14.0N-91.5W
12:40:47		1 ~	D=100
-2,			ML=6.0
1949-9-28	Whole country	H	Tropical storm. Heavy rainfall at the whole country, damaging 22% of the country,
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	``	13.6 million Quetzales in losses. Duration in Guatemala: Sept. 28 th -30 th . Total duration
			Sept. 27-Oct.6 th . Total economical losses: 13,600,000 Quetzales. Affected road
Ì]	sections: 30, bridges: 27, railroads: 4, inundated towns: 41, affected public and private
			facilities: 16.
1949-1950	V. Tacaná	V	Addition 10.
1950-2-17	7. I dodina	E	EP=13.9N-90.8W
03:47:16 UTC		-	ML=6.25-6.50
1950-10-23		E	Near the coast of Guatemala. Damage in San Marcos area.
16:13:20 UTC		"	EP=14.5N-91.5W
10.13.20 010			ML=7.1
1950-10-23		E	EP=14.5N-92.0W
17:47:51 UTC			ML=6.5
1950-10-23	-	E	EP=14.3N-91.7W
23:38:43 UTC			ML=6.1
1950-10-24		Е	EP=15.0N-92.0W
00:52:03 UTC		~	ML=6.2
1950-10-24		E	EP=14.5N-92.0W
05:50:15 UTC		~	ML=6.0
1950-10-28		E	EP=14.3N-91.7W
22:15:47 UTC		L	D=64
1			
1950-11-05	-	F	ML=6.2
1950-11-05 16:35:20 UTC		E	ML=6.2 EP=14.5N-92.0W
16:35:20 UTC			ML=6.2 EP=14.5N-92.0W ML=6.25
		E E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that
16:35:20 UTC 1951-1-middle		E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area.
16:35:20 UTC 1951-1-middle 1951-7-25			ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W
16:35:20 UTC 1951-1-middle		E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC		E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC		E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC		E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC		E E E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC		E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5 EP=13.8N-91.8W
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC		E E E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5 EP=13.8N-91.8W ML=7.25-7.50
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC 1953-11-17 13:29:52 UTC		E E E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5 EP=13.8N-91.8W ML=7.25-7.50 Near the coast of Guatemala.
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC		E E E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5 EP=13.8N-91.8W ML=7.25-7.50 Near the coast of Guatemala. Depression (dissipation). Duration in Guatemala Sept. 27. Total duration: Sept. 24 th -
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC 1953-11-17 13:29:52 UTC		E E E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5 EP=13.8N-91.8W ML=7.25-7.50 Near the coast of Guatemala. Depression (dissipation). Duration in Guatemala Sept.27. Total duration: Sept.24 th -27 th .
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC 1953-11-17 13:29:52 UTC 1954-9-27		E E E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5 EP=13.8N-91.8W ML=7.25-7.50 Near the coast of Guatemala. Depression (dissipation). Duration in Guatemala Sept.27. Total duration: Sept.24 th -27 th . EP=13.9N-90.6W
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC 1953-11-17 13:29:52 UTC 1954-9-27 1954-10-21 06:51:44 UTC		E E E H	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5 EP=13.8N-91.8W ML=7.25-7.50 Near the coast of Guatemala. Depression (dissipation). Duration in Guatemala Sept.27. Total duration: Sept.24 th -27 th . EP=13.9N-90.6W ML=6.5
16:35:20 UTC 1951-1-middle 1951-7-25 18:42:19 UTC 1953-8-24 13:21:02 UTC 1953-11-17 13:29:52 UTC 1954-9-27		E E E	ML=6.2 EP=14.5N-92.0W ML=6.25 A series of strong earthquakes in the region of Ixhuatan in Dept. of Santa Rosa that caused considerable damage in the area. EP=14.5N-90.5W D=64 ML=6.25 EP=14.1N-91.4W D=96 ML=6.5 EP=13.8N-91.8W ML=7.25-7.50 Near the coast of Guatemala. Depression (dissipation). Duration in Guatemala Sept.27. Total duration: Sept.24 th -27 th . EP=13.9N-90.6W

1955-09-03 E EP=13.8N-90.8W	
12:36:21 UTC D=64	
ML=6.5-6.75	
1956-8-11/12 H Hurricane "Betsy". Also att	acked Puerto Rico. Deaths (in total): 27-34
1957-07-08 EP=14.5N-91.0W	
15:30:33 UTC D=150	
ML=6.0 1959-2-20 Ixcán, Quiché E Farthquake that affected the	
20 Mily and Miles	north of the country, especially the town of Ixcán, Quiché.
18:16:20 UTC EP=15.9N-90.6W D=48	
ML=6.5, Ms=6.5?	
SS=North faulting	
1959-03-09 E EP=15.1N-91.0W	
22:03:03 UTC D=171	
ML=6.3	
1960-04-13 12:37:43 UTC E EP=15.5N-92.0W	
ML=6.0	1.00
also damage at Huehuetenan	one killed, 14 injured, and damage to the San Marcos area;
1960-08-20 E EP=14.5N-91.5W	go
00:19:35.2UTC D=115	
ML=6.0	
1961-06-17 E EP=14.2N-92.0W	
15:07:33.7UTC D=85	
ML=6.0 1961-09-01 F FP=13.6N-92.5W	
1961-09-01 18:50:35.4UTC EP=13.6N-92.5W D=37	
ML=6.5	
1961 V. Pacaya V This year started the last eyel	e of activity after some 76 years of rest of Pacaya volcano
1965-08-05 E EP=14.8N-91.0W	to or activity after some 76 years of fest of Pacaya Volcano
19:05:07.7UTC D=59	
ML=4.0	
One killed and four injured a	t a hydroelectric project when several workers were buried
under dirt.	
1966-8-18 10:33:17.7UTC EP=14.6N-91.7W D=85	
ML=6.0	
1969-4-21 E EP=14.1N-91.0W	
02:19:07.1UTC D=82	
ML=6.0	
1969-9-3 H Hurricane Francelia attacked	to the whole country. Duration in Guatemala: Sept.3-4 th .
Total duration: Aug. 31th-Sept	t.4".
roads, and there was great de	nages to the infrastructure, floods. It strongly affected the struction of houses. Bridges of Achiguate and Pantaleón
rivers were dragged down. Dr	ue to it the National Emergency Committee "CONE", was
organized on September, 8th.	1969.
Total economical losses: 6,47	6,865 Quetzales.
1971 V. de Fuego V Eruption of Fuego volcano. V	violent Vulcanian type of eruption. It rose columns of ash
Irom 5 to 10 km height, produ	ucing deposits of 40 cm thick on the vicinity and 2 cm
thick on several hundred kilon 1971-9-20 Pantaleón River H Hurricane Olivia, Duration in	meters away.
12 12 12 12 12 12 12 12 12 12 12 12 12 1	Guatemala: Sept. 20th-26 th . Flood in Pantaleón river and
precipitation in that hasin (50	thought the flood was not due so much because of the mm on Sept. 24th) but due to the sediment deposited at
the head of basin by the erupt	ion of Fuego volcano on Setp. 14 th , that was transported
downstream during the rains.	ton of range voicano on scip. 14, mai was transported
1971-10?-12? Huehuetenango E N15.8-91.2W	
09:44:59.3UTC D=36	
ML=6.0, Ms=6.0?	
Mexico-Guatemala region SS= North faulting	
1972 V. Acatenango V Eruption of Acatenango volca	no
1972-1-22 E 14.0N-91.0W	110
13:08:50.3UTC D=102	
ML=6.0 Felt (intensity V) at San Salva	

1072 (07			TD 14 201 02 001
1973-6-07 18:32:42.9UTC		Е	EP=14.3N-92.0W D=78
16:32:42.9010			ML=6.2
			Felt in Guatemala City area.
1974	V. de Fuego	V	
	v. de ruego		Eruption of Fuego volcano.
1974-3-20		Н	Rainfall? Maize and rice crops were damaged in Izabal, with a cost of US\$ 6 million. Besides, the banana crops were also damaged and 15 houses destroyed.
1974-9/14-19	Izabal, Petén,	Н	Hurricane Fifi. This hurricane was classified (before Mitch) by the NCEP in third place
	Alta Verapaz,		of the most deadliest tropical cyclones in the Atlantic from 1492. The number of deaths
	Baja Verapaz		was estimated between 8,000 y 10,000. Specific data on Guatemala are still
	and north of		unavailable, however, it is known the damaged places were: Izabal, Petén, Alta
	Huehuetenango		Verapaz, Baja Verapaz and north of Huehuetenango. Cobán became isolated of
		İ	communications due to the cutting of power, because of the strong wind and rainfall.
			The secondary road network of south and north areas were considerably affected.
1974-10-5/8		Н	Damages in Guatemala were estimated to be around US\$ 30 millions.
19/4-10-3/8		н	In Puerto Barrios there are five days of rainfall, thus the roads were inundated and the rivers Motagua and San Francisco overflowed. Thus about 600 families became
			isolated.
1974-11-21		Н	Rainfall ?: In the harbour of San José water rose 2 meters, so the communication
17/4-11-21		11	between Escuintla and the harbour was disconnected.
1974-11-22		V	Eruption of the Fuego volcano, destroyed several houses and buried the towns of San
17/4-11-22		'	Pedro Yepocapa, Chimaltenango.
1974-12-31		E	EP=14.1N-91.8W
20:21:09.0UTC		_	D=39
			ML=6.0
			Felt in Guatemala City area
1975-9-9	Puerto San José	Н	Puerto San José was inundated when Achiguate and Guacalate rivers overflowed
1975-11-11	Región Sur	Н	Heavy rainfall at the south region. Traffic is interrupted from Km 78 to 100 due
			overflow of Achiguate river.
1976-2-4	Los Amates,	Е	IMM=IX, ML=7.5, Ms=7.5, D=5 km.
(3h:03m:33s)	Dpto. Izabal		SS=North faulting, Motagua fault
	_		Epicenter in Los Amates, Dept. of Izabal. 22,778 deaths and 76,465 injured, 254,751
			houses destroyed (1,066,063 people left without house). Economic losses of 1,250
:			million Quetzales (1,250 million dollars). Duration of movement was about 25 to 30
			seconds. Earth moved one meter from Los Amates (Izabal) up to Chimaltenango area
			(in some places up to 3m width). Length of the fissure was more than 200 Km. The
!			earthquake affected 60,000 km ² of the 108,000 km ² of the country (i.e. 55%),
			corresponding to 20 of the 22 departments of it. Intensity was distributed as follows: 9 (Gualán, Zacapa and some points at the Capital
			Valley), 8 (Chimaltenago and El Progreso), 7 El Quiché. It is classified as the most
:			destructive earthquake in this century in Guatemala. Activation of Motagua fault by the
			Caribbean plate.
1977-9-26	V. de Fuego	V	Eruption during 3 days. Coffee and sugar cane crops were lost. Also there were several
151,7 5 20	v. de l'acgo	,	houses damaged.
1978-7-23	V. Santiaguito	v	Collapse of bridges at the rivers Tambor, Nimá I, Nimá II due to lahars or mudflows
27.07.20		<u> </u>	from Santiaguito Volcano. Damages at agricultural lands.
1982-6-19	Jalpatagua	Е	ML=6.0
1982-9-20	Puerto San José	Н	Floods in San José harbour. On Set-19 in Guatemala City there was a precipitation of
			300mm. The following day Sept-20 a precipitation of 150mm was produced at
			Escuintla and Puerto San José. This precipitation combined producing the floods.
1983 rainy	V. Santiaguito	V	Complete destruction of a dozen of houses due to lahars and mud flows along rivers
season			Nimá I, Nimá II, El Palmar. Several hundreds were evacuated.
1984-9-25	Samalá River	Н	Floods producing damages at San Sebastián. The water level rose during the period 18
			to 20 and again from 24 to 27. Heavy rains registered in Asintal, Chojoja in the period
			17 to 18 and 23 to 27 corresponding to the period of rising of water level.
1985-10-10	Uspantán,	Е	ML=5.0?, 5.7?, D=5 km. Activation of Chixoy-Polochic fault by the North America
	Quiché		plate.
1985-10-11	Uspantán,	Е	EP=15.3°N-90.9°W
(3h:39m:17s)	Quiché		Ms=5.0, D=5
			SS=North faulting, Chixoy-Polochic
			It was an earthquake of minor magnitude but with destructive effects.
1986-10-10		Е	ML=5.7
1986-1987	V.Tacaná	V	The eruption of May/1986 produced a small crater at the north-east of the volcano.
1987	V. de Fuego	V	
1007 1 26	V. Pacaya	V	More than 15 injured and 3,000 evacuated; 63 dwellings damaged and livestock dead
1987-1-25	1.1.2.00		
1987-1-25	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		due to blocks and ash fall due to blocks and ash fall, in the areas of El Caracol, Patrocinio, Los Pocitos.

1987-5-20	V. Pacaya	V	Estrombolian type eruption. It rose columns of ash from 1 to 8 km height above the crater.
1987-9-11/12	Achiguate River	Н	Floods of some 500 dwellings by Achiguate River and Canal Chiquimulilla. Rain started on Sept-9 but it had rained in previous days. In Escuintla the precipitation was 106mm/day by Sept-11. In Puerto San José the precipitation was 400mm/day by Sept-10. However, the main cause of the flood is assumed to be the precipitation at the mountain area.
1987-9-30 7:00-7:30 PM	Huehuetenango	H, L	Heavy rainfall of some 3 hours that originated a debris flow in El Paraíso village of La Libertad, Huehuetenango. Toll: 30 persons dead.
1988-5/6		E	ML=4.5. During May/June of this year several earthquakes happened as consequence of activation of the faults of Mixco, Ciudad San Cristóbal and Monte María.
1988-9-2	Samalá River	Н	Floods along Samalá River. About 2,000 dwellings were isolated in the neighboring basin of Champerico.
1988 rainy season	V. Santiaguito	V	Damages in bridge pier closing of CA-2 along Samalá River. Damages of flood at Ixpatz River.
1989-9-16/22		Н	Hurricane "Hugo". Heavy rainfalls attacked the country, producing hard impact to the roads network. Several deaths.
1991-7	V. Santiaguito	V	Destruction of a bridge pier near San Felipe, along Samalá River, due to lahars and mud flow from Santiaguito Volcano.
1991-9-18 (3h:48m:13s)	Pochuta, Dept. Chimaltenango	Е	IMM=VII at Pochuta area. IMM=IV at Guatemala City ML=5.3, Ms=5.3?, D=32? 75? SS=Minor faulting at the Plateau Earthquake that destroyed 80% of the town of San Miguel Pochuta, Chimaltenango. There were 23 deaths, 185 injured and 2,300 houses destroyed. There was an obstruction of the rivers El Jiote and Nicán due to the earth collapses (mud flow) around it. Most of the mass movements were related to rock falls and mud flows. Pochuta had a population of 23,000 inhabitant. Damages on households (333): adobe, destroyed 185 (55%), block: destroyed 31 (9%), cracked 73 (22%), intact 38 (11%), wood: intact 6 (2%). Estimation for reconstruction: Q28.8 millions
1995-6-7	V. Pacaya	V	Many people were evacuated and some roads and bidges were damaged due to lahars at the area of Patrocinio and Los Ríos.
1995-9/30- 10/04		Н	Hurricane "Opal". Attacked Guatemala, Mexico and U.S.A. Deaths (in total): 59
1995-12-19 (14h:56m:06s)	Tucurú	Е	IMM=IV, ML=5.3, P=10 km. Earthquake that affected Tucurú, Alta Verapaz. Results: one dead, several injured by earth collapses. Some houses were damaged in San Miguel Tucurú and Tamahú. Also there were several landslides in the epicenter area. Maximum intensity of IV was reported at Cobán, Alta Verapaz and was felt in Guatemala City with intensity of III.
1996-12-19	Tucurú, Tamahú, Dept. Alta Verapaz	E	Ms=5.3, SS=North faulting, Chixoy-Polochic
1998-1-10 (2h:20m:10s)		E	IMM=VII, ML=5.8, D=33 km. Caused damages in several departments. Aftershocks were felt up to January 20 th . All earthquakes had epicenters at the subduction zone near Retalhuleu y Suchitepéquez. Main earthquake and aftershocks produced damages in the whole area from Quetzaltenango to the capital city, and some areas in neighbor countries (Tapachula in México, and El Salvador.). Results: 4 persons injured, 520 persons affected by destruction of houses, 5 houses affected severely, 8 earth collapses.
1998-3-2 (20:24:46)		E	ML=5.6. Epicenter was located at the subduction zone near Retalhuleu y Suchitepéquez. Seismic activity continued up to March 7 th . No deaths were reported but material damages were reported in Quetzaltenango, Retalhuleu, Suchitepéquez, San Marcos and Capital City.
1998-5-20	V. Pacaya	V	Eruption of Pacaya volcano. It throw ash on the Capital City, causing the closing of the International Airport during 3 days. Two people injured due to falling of scoria bombs at San Francisco de Sales.
1998-9-18	V. Pacaya.	V	Eruption of Pacaya volcano. Estrombolian type eruption. It rose columns of ash from 1 to 8 km height above the crater.
1998-10-08	South-West	Е	Ms=6.2
1998-10-27/30		Н	Hurricane Mitch. Affected all Central América. In Guatemala, the damages are as follows: 202 deaths, 63 injured, 46 missing persons, 56,125 evacuees, 2,087 houses damaged (565 destroyed) and 46 bridges damaged. Water supply system was severely damaged in 396 communities. Total economic costs: US\$748 millions.
1998-8	V. Santiaguito	V	Destruction of a cathedral due to lahars and mud flows from Santiaguito Volcano along River Nimá I at El Plamar.

1999-5-21	V. de Fuego.	V	Eruption of Fuego volcano. Violent Vulcanian type of eruption. It rose columns of ash from 5 to 10 km height, producing deposits of 40 cm thick on the vicinity and 2 cm thick on several hundred kilometers away.
1999-7-11	Puerto Barrios	Ė	Earthquake that caused damages to the dock foundation and damaged the customs building so badly that it is unsafe to use.
2000-1-16	V. Pacaya	V	Eruption of Pacaya volcano. Estrombolian type eruption. It rose columns of ash from 1 to 8 km height above the crater. Ash falling. Closing of La Aurora Airport. 1,500 evacuees at near villages.
2000-5-20	Escuintla	H	Overflow of Aguas Negras River in Escuintla, inundating one district, Colonia Popular.
2000-5-22	V. de Fuego	V	Fuego volcano activity increased. No damages.
2000-5-23		Н	Overflow of rivers Achiguate, Acome, Pantaleón and El Naranjo, causing inundations in several towns.
2001-01-13	Pacific area	E	ML=7.6. Earthquake at the subduction zone near El Salvador shoreline. In Guatemala it produced 6 deaths and more than 500 houses damaged in the area of Jutiapa, South of the country, especially in the town of Jalpatagua, and in less extension the towns of Moyuta, Yupiltepeque, Jerez, and Atescatempa.
2001-6-1	Santiaguito V.	V	Large lahar along the River Nimá I. It caused a flow of sediment into the dwellings in the area of Finca El Faro, damaging furniture.
2001-7-11	Puerto Barrios	Е	Damages to the dock foundation and the customs building, in such a way that at present it is unsafe.
2002-6-13 evening	V. de Agua	L	Debris flow that damaged several dwellings at Ciudad Vieja. Two children dead. At the INSIVUMEH climatological station in Volcán de Agua the daily accumulated rain before this event (Sat/8 th -Fri/13 th) was 130.5mm distributed as follows (mm):5.9, 2.5, 8.8, 22.5, 19.0, 71.8. The debris flow destroyed several crops along the way and finally dammed up the Guacalate River downstream for about 3-4 days. The debris accumulated at the road at the entrance of the Ciudad Vieja, stopping traffic for about one day. More than 10 has. of crops were inundated.
2002-9-12	Sololá	L	Mud and debris flow (lahar) at the east hillside of Atitlán Volcano. It killed 38 persons and 6 missed at El Porvenir, San Lucas Tolimán, Sololá. Almost 22 dwellings destroyed and the local church. Triggering factor: heavy rain during about 2 hours
2003-4-23 5 AM	San Marcos	L	Landslide. 22 persons dead, 6 dwellings washed out at Cerro Cocol, Caserío Chichicaste, Aldea Chim, San Pedro Sacatepequez, San Marcos.

Sources:

- 1) Cifuentes, I., White, R., Harlow, 1980. Master List of Historic (Pre-1840) Earthquakes and Volcanic Eruptions in Central America
- CONRED, Unidad Ejecutora de Proyectos con Cooperación Internacional.
- 3) De Montessus F., 1884. Temblores y Erupciones Volcánicas en Centro América. San Salvador.
- 4) Díaz V.M., Commociones Terrestres en la América Central 1469-1930.
- 5) Feldman, L. Master List of Historic (Pre 1840) Earthquakes and Volcanic Eruptions in Central America
- 6) Feldman, L., 1988. Guatemalan Temblores y Terremotos, a Catalogue. Academia Geografía e Historia de Guatemala
- 7) Geological Survey Professional Paper 1002, The Guatemalan Earthquake of February 4, 1976, a Preliminary Report
- 8) IGN/Univ. de San Carlos Guatemala, 1972, Evaluación de Crecidas en la República de Guatemala.
- 9) ISIVUMEH, Unidad de Investigación y Servicios Geofísicos
- 10) Molina, E., Mayol, P., Bungum, H. 1999. Reducción de Desastres Naturales en Centro América, Mitigación de la Amenaza Sísmica, Fase II: 1996-2000, Parte 2, Reporte Técnico (Preliminar) Amenaza Sísmica en el Valle de la Ciudad de Guatemala, INSIVUMEH/NORSAR, Norway
- 11) Montero, W., Peraldo, G., Rojas, W., 1997. Proyecto de Amenaza Sísmica de América Central. IPGH, IDR-Canada, CEPREDENAC
- 12) NCEP, 1997. The Deadliest Atlantic Tropical Cyclones
- 13) Peraldo, G., Montero, W., Universidad de Costa Rica, 1999. Sismología Histórica de América Central, Pub. No. 513, Instituto Panamericano de Geografía e Historia México.
- 14) White, R., 1988. Catalog of Historic Seismicity in the Vicinity of the Chixoy-Polochic and Motagua Faults, Guatemala. USGS/INSIVUMEH
- 15) Flores Beltetón, O.G., 2000? Amenaza Sísmica y su Relación con Amenaza por Deslizamiento en los Asentamientos Ubicados en el Valle de Guatemala.
- 16) Several Local Newspapers
- 17) Smithsonian Homepage

Nomenclature:

IMM=Modified Mercalli Intensity, ML=Local or "Ritcher" Magnitude, Ms=Surface Wave Magnitude, Mw= Moment Magnitude, Mag=Magnitude (no specification), SS= Seismic Source, EP= Epicenter, D=Depth, E=Earthquake, V=Volcanic Eruption or related volcanic hazard (lahar, mudflow), H= Hurricane, L=Landslides