

RECENT SEISMICITY ($m_b \geq 5.4$) IN NORTHWESTERN VENEZUELA: REGIONAL TECTONIC IMPLICATIONS

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RESUMEN: El análisis de la sismicidad de magnitud moderada ($5.4 \leq m_b \leq 5.9$) ocurrida recientemente en el Occidente de Venezuela, ha permitido determinar los parámetros focales de esos sismos y su relación con la tectónica regional. Los resultados obtenidos muestran que dicha sismicidad está asociada principalmente a los

TECTONIC SETTING

The main tectonic features of Western Venezuela are associated with the interaction between the Caribbean and South American plates. There are several models that explain the relative motion between the

zone, where it is difficult to correlate it with a specific fault. However, the regional trend in Lake Maracaibo shows several en-echelon, left-lateral strike-slip faults oriented in a N-S direction, and pull-apart basins developing between the faults. We suspect this event beneath Lake Maracaibo was probably associated with one of these pull-apart basins. The event of October 18, 1981 (10) is located near the place where Soulas (1985) ...

TABLE 1. COMPILATION OF FOCAL MECHANISM SOLUTIONS

Event	Date	Strike°	Dip°	Rake°	Depth(km)	Mo(10^{18} Nm)	Fault
1	650719	38	82	172	14	0.11	Boconó
2	681117	58	90	-82	166	0.81	Subduction
3	691020	16	73	-22	8	0.63	El Tigre
4	700127*	36	61	171	12	-	Caparo
5	730830	183	86	107	175	2.82	Bucaramanga
6	750305	184	47	93	14	0.29	SE Piedemonte
7	750405	21	75	-2	10	0.95	Humocaro
8	771211	173	42	75	8	1.06	SE Piedemonte
9	790505**	28	88	155	16	-	Caparo