

APENDICE I

**LISTA DE SISMOS QUE HAN CAUSADO ALGUN DAÑO EN EL VALLE
CENTRAL DE COSTA RICA, 1638-1903.**

MAPAS DE ISOSISTAS PARA SISMOS 1638-1903.

1638-1640¹ Reporte de daños en Iglesias de Cartago y edificios públicos en la parte central de Costa Rica.

1678¹ Reporte de daños en Iglesias de Cartago.

1728¹ Casas dañadas por sismos en el valle central.

1756¹ Julio 14, entre las 20h y las 21h . Un gran terremoto ocurre seguido de muchas réplicas. La gente en Cartago corre fuera de sus casas a orar en las calles y plazas, "uno de los pocos terremotos que se guarda en la memoria durante este siglo".

1780¹ Reporte de daños en Iglesias de Cartago y San José.

1822¹ Mayo 7, a las 7h 30min . Daños importantes en Cartago y San José, muchas casas destruidas por el terremoto. El sismo fue sentido también fuertemente en Matina y gran parte del Caribe, produciendo grandes grietas en el suelo con salida de agua y arenas (liquefacción del suelo?). También ocurrieron inundaciones en ríos y bahía. Al volcán Irazú se le señala como el responsable. El Palacio Municipal y la Iglesia de Cartago quedaron inservibles, el Palacio Municipal y la Iglesia en San José tuvieron que ser demolidos.

1841^{1*} Setiembre 2, a las 12h 30min . "El más catastrófico terremoto registrado en la historia". Cartago fue severamente dañada, 16 personas son reportadas como fallecidas. También se reportan daños de Tres Ríos y Curridabat, donde 15 personas murieron. En Cartago 391 casa de 600 y 5 de 7 Iglesias fueron destruidos. Daños fueron reportados en un radio de 30 km de Cartago. En total 4205 casas fueron dañadas más allá de su posible reparación en las ciudades de Cartago, San José, Heredia y Alajuela.

1851^{1*} Marzo 28, a las 13h 15min . Un gran terremoto es sentido desde la región central de Costa Rica hasta el extremo noroeste del país. En San José 145 casas sufrieron daños, de las cuales 18 tuvieron que ser demolidas. La torre de la Catedral tuvo que ser derribada debido a su inclinación. Este terremoto causó también serios daños en Alajuela principalmente pero también algunos en Heredia. Cartago, sin embargo, no sufrió daños serios como inicialmente fue reportado.

1882¹ Marzo 3, a las 13h 48min . Fuerte sismo sentido a lo largo de Costa Rica. En San José el terremoto causó daños a casas y edificios públicos, particularmente a la Catedral y a la Iglesia de la Merced. En Puntarenas el comercio fue el que sufrió mayormente. En otras provincias las iglesias fueron las que más sufrieron.

1888^{1*} Muchas réplicas fueron sentidas hasta el 30 de diciembre a las 10h 12min cuando ocurrió el terremoto. Algunas casas fueron completamente destruidas y hubo daños en edificios públicos en San José. Edificios también sufrieron daños en Alajuela y Heredia. Gran cantidad de monumentos, en diferentes cementerios locales, fueron rotados. En San José, Heredia y Alajuela un total de 200 casas colapsaron, 1215 fueron dañadas seriamente teniendo que ser destruidas y 2193 necesitaron reparaciones; un total de 12 edificios públicos fueron inutilizados y 39 necesitaron reparaciones. Este sismo fue también sentido en Limón.

¹ Información obtenida de González Viquez [1910]

* Evento con mapa de isosistas (este trabajo)

^ Tiempo mostrado en GMT (tiempo universal)

APENDICE II

**LISTA DE SISMOS QUE HAN CAUSADO ALGUN DAÑO EN EL VALLE
CENTRAL DE COSTA RICA, 1904-1988.**

MAPAS DE ISOSISTAS PARA SISMOS 1904-1988.

**LISTA DE SISMOS REGISTRADOS POR LAS REDES MUNDIALES EN COSTA RICA
1904-1988**

**LISTA DE SISMOS $m_b \geq 5.0$ RELOCALIZADOS PARA COSTA RICA
1964-1985**

1910^{1*} Abril 13, a las 18h 37min[^]. Un violento terremoto fue sentido en todo el valle central, principalmente en Cartago y San José. Muchos objetos cayeron en casas y tiendas. La mayor parte de los daños fueron producidos por deslizamientos de tierra. Gran cantidad de réplicas siguieron al terremoto.

1910^{1*} Mayo 5, a las 0h 50min[^]. Severa destrucción de Cartago y daños en los pueblos vecinos. Se reporta que 600 personas fallecieron. Daños se reportan en San José, Heredia, San Rafael, Turrazú y Orosí. En Cartago 60% de las casas y edificios públicos fueron destruidos, 20% de las casas fueron dañadas más allá de su posible reparación. También se reporta que 3 puentes cerca de Cartago se cayeron y que otros sufrieron daños.

1911^{2*} Agosto 29, a las 4h 6min[^]. Casas dañadas por terremoto en los Bajos del Toro, menor daño en Grecia y Alajuela. En San José se sintió fuertemente, pero no se reportan daños. La zona epicentral se estima está entre 6 y 9 km al noroeste del volcán Poás.

1912^{6*} Febrero 21, a las 8h 20min[^]. Un fuerte y repentino sismo fue sentido en el valle central. Tres Ríos fue el poblado más afectado, donde muchas casas resultaron dañadas.

1912^{3*} Junio 6, a las 18h 40min[^]. Reporte de daños en los poblados de Sarchí, San Pedro y Grecia, en el extremo noroeste del valle central.

1916^{4,6} Abril 26, a las 2h 21min[^]. Daños son reportados en Santa Barbara y Santo Domingo, con edificios y casas afectados por los temblores. Este daño puede estar relacionado con un importante terremoto ocurrido en las cercanías de Bocas del Toro y Almirante en Panamá y Sixola en Costa Rica, de donde se reportan daños de consideración. Un Tsunami se describe en asocio con este terremoto.

1916⁵ Mayo 1. Se reporta que 20 diferentes sismos fueron sentidos en San José con gran daño a edificios escolares e Iglesias.

1924^{6*} Marzo 4, a las 10h 7min[^]. Gran terremoto cerca de Orotina con daños extensos a edificios y casas en San José. Se reportan también algunos muertos a raíz del terremoto. Grandes daños se reportan de Alajuela y Heredia. Algún daño se indica para Puntarenas. No se reportaron premonitores, pero sí muchas réplicas.

1939⁶ Diciembre 5, a las 20h 54min[^]. Se reportan daños en San José, principalmente a edificios. Menor daño se reporta de otras poblaciones en el valle central. Fue sentido fuertemente en Turrubares, Atenas y San Mateo.

1951⁷ Agosto 22, a las 5h 41min[^]. Daños en la parte central de Costa Rica. Las poblaciones de Paraiso y Orosí sufren considerablemente, en San José se reportan algunos pequeños daños.

1952^{5,6*} Diciembre 30, a las 12h 7min[^]. Un gran terremoto ocurre en las faldas del volcán Irazú en el lugar conocido como Patillos. Los mayores daños producidos sobre las estructuras y animales los ocasionan grandes deslizamientos de tierra. Posteriormente se reportan 21 personas como fallecidas. Coronado fue la población mayormente afectada. Daños menores se reportan de Cartago.

1955⁵ Setiembre 1, a las 17h 33min[^]. Daños reportados de los Bajos del Toro, donde 10 personas resultan muertas y 500 damnificados. Los mayores daños son causados por grandes deslizamientos de tierra. Daños menores son reportados de Naranjo, la parte norte de la provincia de Alajuela y de Cartago.

1 González Viquez [1910]

2 Michaud, G. y P. Biolley [1912]

3 Tristán, J. F. et al. [1912]

4 Kirkpatrick [1920]

5 Bull. Seismol. Soc. Amer. Vol. 45, [1955]

6 Feldman, L. [1984, inédito]

7 Miyamura [1980]

* Evento con mapa de isosistas (este trabajo) ^ Tiempo mostrado en GMT (tiempo universal)

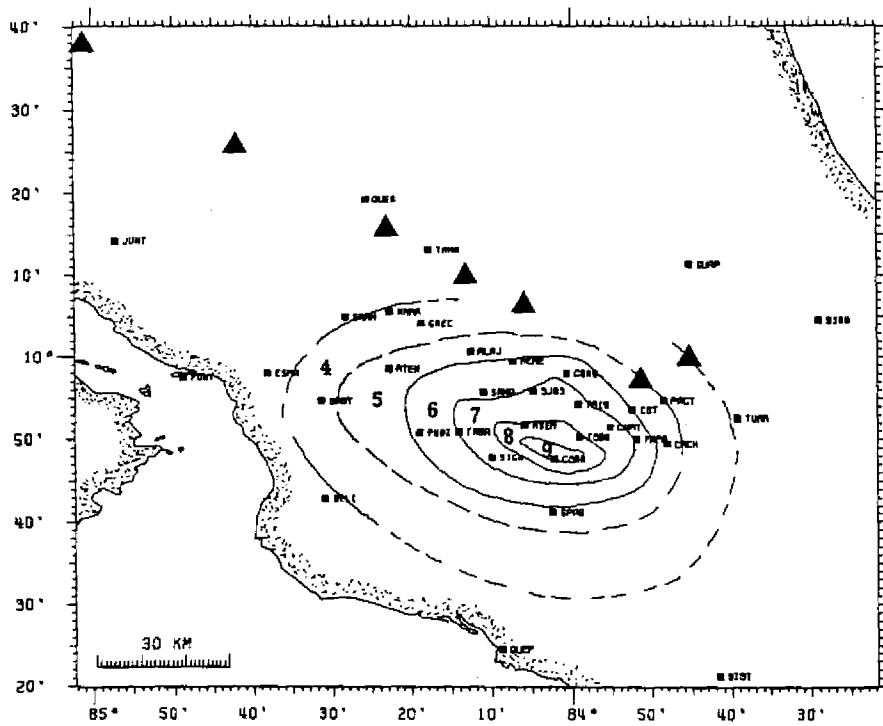


Fig. II-1. Mapa de isosistas para el terremoto de Corralillos del 13 de abril de 1910. Intensidades en MM. Información obtenida de González Viques [1910], Michaud [1912] y Feldman [1984, inédito].

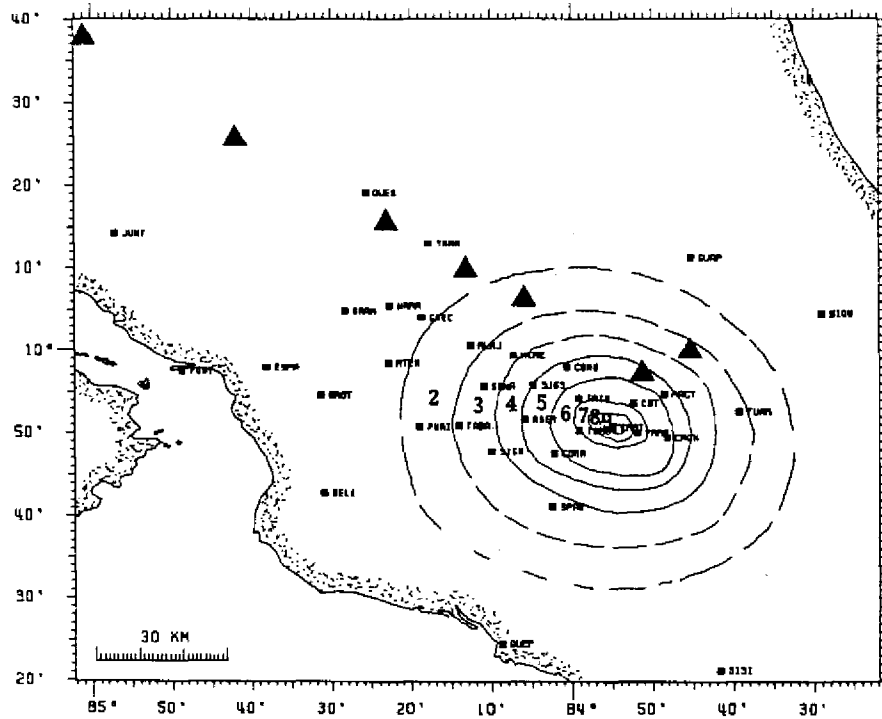


Fig. II-2. Mapa de isosistas para el terremoto de Cartago del 5 de mayo de 1910. Intensidad en MM. Información obtenida de González Viquez [1910], Michaud [1910], Fernández Guardia and Céspedes Marín [1910], Montero y Miyamura [1982] y Feldman [1984, inédito].

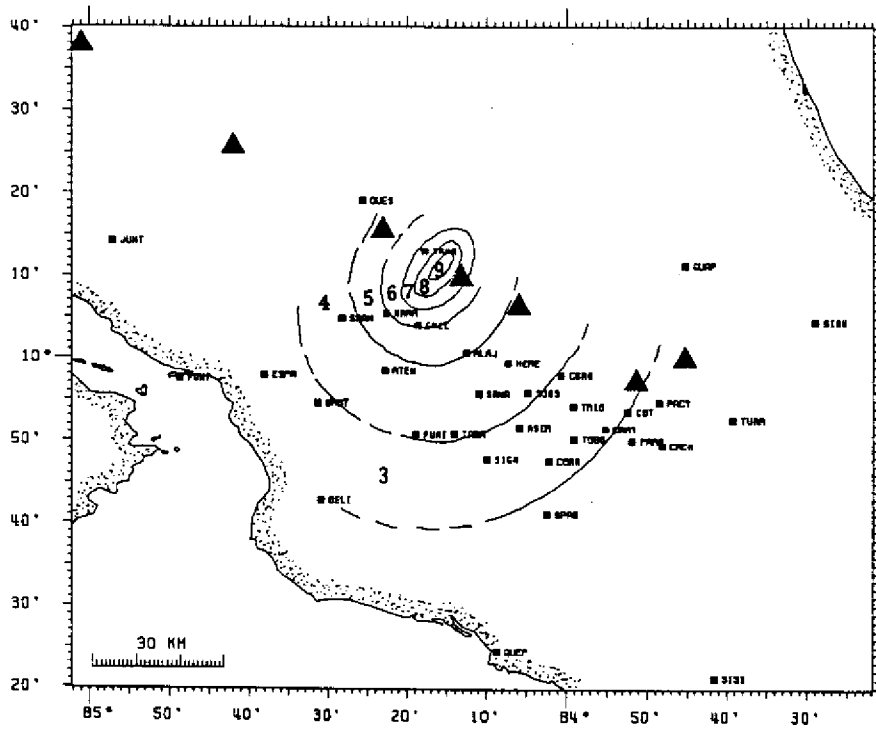


Fig. II-5. Mapa de isosistas para el terremoto de Sarchí del 6 de junio de 1912. Intensidad en MM. Información obtenida de Tristán et al. [1912].

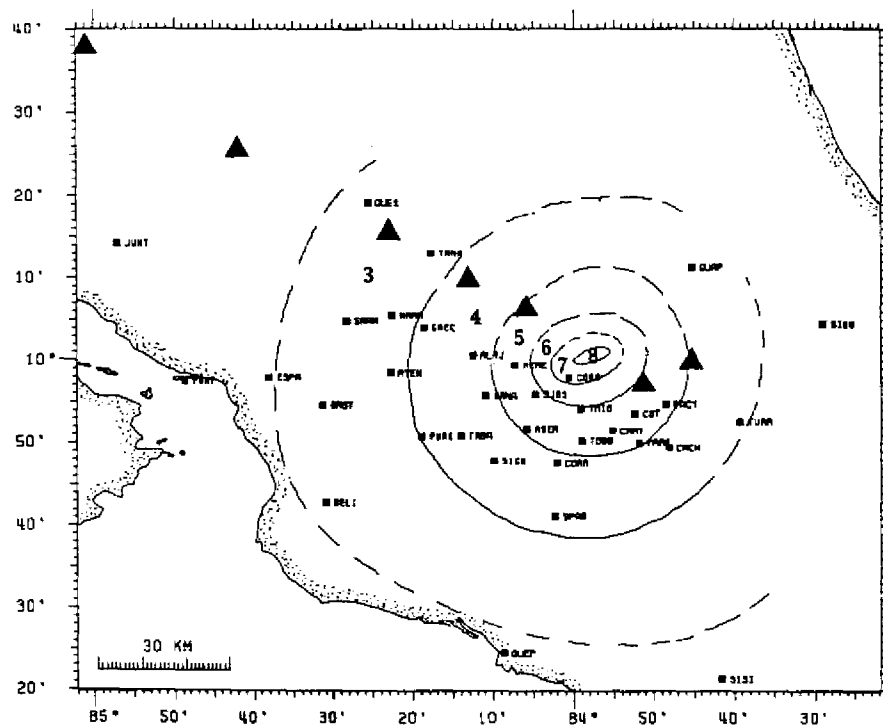


Fig. II-7. Mapa de isosistas para el terremoto de Patillos del 30 de diciembre de 1952. Intensidad en MM. Información obtenida de Feldman (1984, inédito).

AÑO	FECHA	T. ORIGEN	LAT. N	LONG. W	PROF.*	MAGNITUD		
	MM-DD	HR:MI:SEG	GRAD.	GRAD.	KM	M	M _S	OTRA
1904 ¹	12-20	5:44:18.0	8.50	83.00	S	7.75 ¹	7.2 ³	M=8.3 ⁴
1909 ⁴	08-16	6:58:00.0	10.00	84.00	S	7.1 ⁴	6.8 ³	
1916 ¹	02-27	20:20:48.0	12.00	90.00	S	7.5 ¹		M=7.6 ⁴
1916 ¹	04-24	8:02:12.0	11.00	85.00	S	7.3 ¹	7.4 ²	M=7.6 ⁴
1916 ¹	04-26	2:21:30.0	10.00	85.00	S	7.3 ¹	7.1 ²	
1917 ¹²	06-30	17:50:08.0	8.00	84.00		6.7 ¹⁹		
1920 ¹	07-16	17:14:15.0	10.00	87.00	S	6.0 ¹		
1924 ¹	03-04	10:07:42.0	9.75	84.00	S	7.0 ¹		M=7.0 ⁴
1931 ¹	03-07	0:41:56.0	11.50	85.50	I	6.0 ¹		
1931 ¹	10-12	3:57:24.0	7.50	82.50	S	6.0 ¹		
1932 ¹	10-02	2:59:08.0	11.50	86.50	I	6.8 ¹		
1933 ¹	11-21	23:48:38.0	8.00	83.00	S	6.0 ¹		
1933 ¹	11-23	18:57:44.0	8.00	83.00	S	6.0 ¹		
1933 ¹	11-29	5:03:20.0	8.00	83.00	S	6.0 ¹		
1934 ⁸	07-18	1:36:23.2	8.14	82.38	S	7.7 ¹	7.6 ⁷	M=7.7 ⁴
1934 ⁸	07-18	4:00:37.1	7.89	82.88	S	6.5 ¹		
1934 ⁸	07-18	6:35:33.0	8.31	82.37	S	6.0 ¹		
1934 ⁸	07-18	16:09:49.4	7.91	82.26	S	6.0 ¹		
1934 ⁸	07-18	16:59:38.8	7.81	82.92	S	6.9 ¹		
1934 ⁸	07-21	10:39:08.6	8.48	82.52	S	6.8 ¹		
1934 ¹	12-22	14:29:31.0	11.50	87.00	S	6.5 ¹		
1937 ¹	03-09	15:40:20.0	9.00	83.50	S	6.4 ¹		
1939 ¹	06-18	16:46:05.0	10.00	83.00	I	6.5 ¹		
1939 ¹	10-20	20:06:02.0	8.00	83.00	S	6.0 ¹		
1939 ⁸	12-21	20:54:47.2	10.14	84.63	S	7.3 ¹		M=7.3 ⁴
1939 ⁸	12-22	4:43:58.1	9.80	84.55	S	6.8 ¹		
1940 ¹	10-05	14:38:43.0	9.50	84.25	S	6.3 ¹		
1940 ¹	10-27	5:35:37.0	9.75	84.50	S	6.8 ¹		
1941 ⁸	12-05	20:46:57.6	8.67	83.16	S	7.5 ¹	7.6 ⁷	M=7.5 ⁴
1941 ¹	12-06	1:25:01.0	10.50	85.25	S	6.0 ¹		
1941 ¹	12-06	21:24:40.0	8.50	84.00	S	6.9 ¹	7.0 ⁷	
1945 ¹²	06-03	13:05:33.0	8.40	82.70	S	7.0 ¹³		
1948 ¹	11-19	1:04:24.0	10.00	83.50	I	7.0 ¹		M=7.0 ⁴
1949 ¹²	08-18	13:33:24.0	8.40	82.70	S	6.5 ¹³		
1950 ¹⁶	10-05	16:09:30.5	10.08	85.57	30.7	7.7 ¹	7.7 ⁷	M=7.7 ⁴
1951 ¹²	09-28	12:07:00.0	11.50	86.30	I	6.0 ¹³		
1952 ¹²	02-26	15:39:28.0	11.50	86.30	I	7.2 ¹³		
1952 ¹²	05-13	19:31:45.0	10.30	85.30	S	6.9 ¹³		
1952 ¹⁶	09-09	12:54:43.9	8.72	84.25	20.0	6.8 ¹³		
1956 ¹¹	07-19	23:26:37.0	9.55	84.14	93.0	6.2 ¹⁰		
1956 ¹¹	07-19	23:38:14.0	9.52	83.98	81.0	6.2 ¹⁰		
1956 ⁹	11-10	0:08:25.0	10.66	86.00	18.0	6.0 ¹⁰		
1957 ¹¹	04-08	20:18:14.7	8.44	82.74	33.0	6.3 ¹⁰		
1957 ¹¹	07-10	9:04:11.4	7.69	82.64	15.0	6.7 ¹⁰		
1958 ¹¹	04-15	3:52:34.2	7.98	84.50	0.0	6.4 ¹⁰		
1958 ¹¹	06-06	9:11:15.4	7.91	84.49	0.0	6.6 ¹⁰		

ARO	FECHA	T. ORIGEN	LAT. N	LONG. W	PROF. *	MAGNITUD		
	MM-DD	HR:MI:SEG	GRAD.	GRAD.	KM	M	M _S	OTRA
1958 ¹¹	06-12	11:54:11.1	7.68	84.32	45.0	6.1	10 ⁰	
1958 ⁹	12-04	19:19:26.2	11.49	86.58	50.0	6.0	10	
1959 ⁹	04-24	9:31:37.0	11.38	86.49	19.0	6.2	10	
1960 ¹¹	03-28	0:13:41.5	7.58	81.72	20.0	6.5	10	
1960 ¹¹	12-06	8:56:14.0	8.61	82.74	46.0	6.0	10	
1961 ⁹	03-20	6:16:22.9	11.39	86.42	48.0	6.0	10	
1962 ¹¹	03-12	11:40:11.8	8.25	32.04	0.0	6.8	10	
1962 ¹¹	07-26	8:14:40.9	7.50	82.68	0.0	7.4	10	7.1 ⁷
1962 ¹¹	09-18	0:29:01.7	7.53	82.38	0.0	7.0	10	
1963 ¹⁰	07-09	9:24:33.3	8.50	83.00	31.0	6.1	10	
1964 ⁹	07-30	5:16:05.6	11.11	86.34	36.0	5.8	10	6.0 ¹⁵
1966 ¹⁸	03-27	18:53:37.5	8.58	83.49	25.7			6.3 ¹⁵
1966 ¹⁸	04-09	2:42:05.9	9.18	84.17	28.2			6.0 ¹⁵
1967 ¹⁸	10-03	18:15:57.6	10.49	86.22	6.3			6.2 ¹⁵
1973 ¹⁸	04-14	8:34:00.1	10.35	84.88	10.0			6.5 ¹⁴
1974 ¹⁸	02-28	20:20:06.2	8.96	84.17	33.6			6.2 ¹⁴
1978 ¹⁸	08-23	0:38:26.9	9.76	85.57	25.6			7.0 ¹²
1979 ¹⁸	07-01	20:37:59.6	7.93	83.03	15.3			6.4 ¹²
1979 ¹⁸	08-24	4:26:48.8	8.57	83.56	19.0			6.4 ¹²
1983 ¹⁸	04-03	2:49:57.1	8.43	83.18	24.9			7.2 ¹²
1983 ¹⁸	05-09	15:52:57.3	7.86	83.04	18.8			6.1 ¹²
1983 ¹⁸	07-03	17:14:21.6	9.58	83.67	12.0			6.1 ¹²
1983 ¹⁸	10-12	3:39:34.9	7.67	82.78	13.6			6.0 ¹⁵
1987 ¹⁸	10-04	8:15:12.5	10.29	86.37	23.5			6.0 ¹⁴
1988 ¹⁸	05-06	14:46:14.3	11.45	86.34	100.6			6.0 ¹⁵

M_N=7.4¹⁷

- (1) Gutenberg y Richter [1954]
- (2) Abe y Noguchi [1983a]
- (3) Abe y Noguchi [1983b]
- (4) Duda [1965]
- (5) Tristán [1916]
- (6) Kirkpatrick [1920]; Feldman [1984, inédito]
- (7) Abe [1981]
- (8) Kelleher et al. [1973]
- (9) Dewey y Algermissen [1974]
- (10) Rothé [1969]
- (11) Molnar y Sykes [1969]
- (12) ISS [1912--1963] and ISC [1964--1983]
- (13) Pasadena
- (14) NEIS
- (15) Relación M_S-m_b, Góndel [1986]
- (16) Góndel y McNally [1985, datos inéditos]
- (17) Houston y Kanamori [1986]
- (18) Góndel [1985]
- (19) Miyamura [1976]
- (*) Como lo define (1) 0 Km ≤ S < 60 Km , 60 Km ≤ I < 300 Km
- (^) Tiempo mostrado en GMT (tiempo universal)

LISTA DE SISMOS RELOCALIZADOS PARA COSTA RICA $M_b \geq 5.0$ ENTRE 1964 Y 1985

AA MM DD	HR MI SEG	LAT	LON	PROF.	MAG	ANG	A	B
65-10-16	14:22:51.80	8.66	83.49	34.82	5.0	47.0	13.4	7.5
65-12-15	23: 5:18.30	7.28	82.19	14.25	5.7	45.0	11.2	6.7
66-03-27	18:53:37.53	8.58	83.50	25.67	5.5	49.1	13.8	7.8
66-04-09	2:34:19.88	9.20	84.24	30.90	5.3	46.0	11.3	6.4
66-04-09	2:42: 5.90	9.19	84.17	28.18	5.7	47.2	11.4	6.3
67-04-22	14:43:20.28	7.93	82.77	39.61	5.1	42.3	13.7	7.7
67-10-03	18:15:57.63	10.49	86.22	6.32	5.6	47.2	12.8	6.3
67-10-04	6: 2:10.19	10.31	86.31	4.14	5.3	49.8	13.9	6.6
68-07-17	6:23:16.57	10.60	83.32	32.01	5.1	48.6	16.8	9.5
69-04-25	3:34:11.84	7.05	82.13	4.27	5.4	45.5	11.8	7.1
69-07-04	11:15:53.98	7.12	82.75	4.78	5.2	46.8	12.7	7.6
70-01-01	1:43:44.07	8.13	83.22	25.24	5.3	44.6	13.0	7.9
70-09-29	4:42:44.52	11.13	85.81	184.27	5.2	48.1	12.8	6.1
71-06-05	14:20:39.82	9.00	84.22	23.86	5.4	47.9	10.8	5.8
71-08-05	22:58: 4.67	9.21	84.25	32.46	5.0	47.9	14.3	8.1
71-09-28	5:47:12.15	9.39	86.49	19.51	5.0	45.3	13.1	6.8
72-02-07	19:14:43.82	8.22	83.94	4.45	5.6	42.9	11.3	6.5
73-04-14	8:34: 1.10	10.35	84.88	10.00	5.7			
73-04-24	21:16:40.56	6.92	82.41	17.47	5.4	46.3	11.4	6.6
73-08-04	0:44:42.16	9.46	84.86	38.05	5.1	44.5	13.2	6.9
73-10-02	21: 5: 0.88	10.05	85.49	59.11	5.0	48.3	14.1	6.6
73-10-18	1: 9: 0.29	8.85	84.11	22.15	5.4	48.8	10.8	5.7
74-02-28	20:15:31.78	8.78	84.20	37.53	5.3	50.2	13.3	6.5
74-02-28	20:20: 6.22	8.96	84.17	33.61	5.8	43.3	11.5	6.0
74-05-04	17:54: 0.96	7.30	82.74	4.52	5.0	46.4	11.1	6.4
74-08-16	12: 9: 8.25	8.07	82.80	40.87	5.1	35.8	15.5	8.7
74-10-07	17:10:31.72	11.13	85.77	194.93	5.0	52.1	14.9	7.1
74-12-06	13:58:32.87	7.86	82.89	14.36	5.4	46.4	11.5	6.3
75-04-16	4:46:16.50	10.12	86.05	34.31	5.3	46.6	14.3	6.8
75-07-15	15:53:51.19	7.39	82.86	23.12	5.0	51.3	12.0	6.4
75-07-19	23:48:41.40	8.04	82.96	26.94	5.3	44.8	11.9	6.9
75-09-01	21:50:34.35	8.31	83.21	25.40	5.2	51.9	10.8	6.2
76-02-25	16:28:57.70	10.00	85.47	52.61	5.3	43.1	13.3	6.5
76-10-09	12:31: 7.11	10.39	86.26	25.17	5.1	48.3	15.4	7.7
76-11-25	6:45:19.71	9.43	84.88	34.62	5.1	55.4	13.6	7.3
76-12-01	14:15:34.57	9.45	84.93	31.03	5.3	53.2	12.6	6.7
76-12-20	10:18:52.52	8.96	83.99	48.97	5.4	48.8	10.2	5.6
77-08-07	7: 8: 2.59	8.15	82.84	29.85	5.2	47.9	9.7	5.5
77-09-30	7:10:24.40	10.89	86.15	70.00	5.1	47.1	12.1	5.6
78-07-03	4:17:58.90	10.42	86.25	43.07	5.0	46.2	14.5	7.1
78-08-23	0:38:26.96	9.76	85.57	25.57	5.7			
78-08-23	0:50:24.42	9.89	85.50	41.92	5.3	46.4	13.3	7.5
79-07-01	20:37:59.63	7.93	83.03	15.34	5.5	46.9	9.7	5.5
79-07-02	6:18: 4.49	7.93	83.05	24.83	5.2	48.7	11.4	6.8
79-08-03	17: 7:46.57	7.81	82.97	18.35	5.0	27.7	15.5	9.8
79-08-24	4:26:48.84	8.57	83.56	19.01	6.1	45.6	10.1	5.6
80-03-06	0:52:41.54	7.01	83.11	8.32	5.0	47.7	15.1	6.2
81-05-01	6:17:18.21	9.57	85.02	40.27	5.1	60.4	18.8	9.7
82-03-26	22:49:46.41	10.36	86.11	46.87	5.0	49.9	16.9	7.0

AA MM DD	HR MI SEG	LAT	LON	PROF.	MAG	ANG	A	B
82-04-07	19:20:48.77	10.24	86.15	48.19	5.2	45.9	13.8	7.1
82-08-17	18:23:59.83	9.21	84.24	25.70	5.4	48.4	10.5	5.6
82-11-19	23:22: 0.63	10.74	86.21	9.19	5.0	52.5	16.7	9.6
83-02-09	21: 5:28.70	7.59	82.83	5.48	5.0	44.2	11.7	7.2
83-04-03	2:49:57.05	8.43	83.18	24.96	6.3	46.6	11.0	5.9
83-04-03	3: 0:33.67	8.69	83.39	27.40	5.5	69.8	19.7	7.4
83-04-03	3: 4:12.68	8.53	83.40	37.41	5.3	65.9	16.1	7.3
83-04-03	3:13:37.18	8.33	83.43	36.52	5.3	62.7	14.3	7.2
83-04-03	5: 4:49.34	8.49	83.53	14.48	5.2	52.1	11.9	5.9
83-04-03	5:49:25.21	8.46	83.48	15.18	5.3	52.2	11.2	5.6
83-04-03	14:46:41.16	8.81	84.11	5.18	5.2	43.3	14.7	7.6
83-04-04	13:11: 4.71	8.59	84.03	6.81	5.1	45.2	15.1	8.0
83-04-07	19:29: 9.27	7.66	82.77	14.98	5.4	46.1	10.4	5.8
83-04-07	20:46:36.95	7.62	82.82	18.76	5.2	48.6	10.8	6.0
83-05-09	15:52:57.28	7.86	83.04	18.83	5.5	50.7	10.3	5.5
83-05-16	15:51:54.65	8.79	83.36	20.76	5.0	43.9	12.8	6.4
83-07-03	17:13:43.10	9.50	83.67	12.00	5.0			
83-07-03	17:14:21.60	9.58	83.67	12.00	5.7			
83-09-23	23:44:24.19	8.10	83.46	14.79	5.7	54.9	10.9	5.4
83-09-29	15:21:11.09	10.59	85.90	49.00	5.0	49.6	16.4	8.1
83-10-12	3:39:34.89	7.67	82.78	13.66	5.7	50.7	10.1	5.7
83-11-01	11:53:42.51	8.65	83.58	18.11	5.0	47.0	17.9	7.1
84-01-28	22:52:38.02	8.98	83.89	19.32	5.0	53.7	12.7	6.1
84-04-09	12:49:27.02	8.12	83.09	14.33	5.0	57.9	14.1	6.6
85-05-18	3:12:54.15	8.12	82.79	28.52	5.1	51.9	14.4	7.6
85-09-25	12: 9:53.84	9.07	84.17	27.03	5.2	55.9	16.0	7.6

APENDICE III

**HOJA SAN JOSE, ESCALA 1:200.000 MOSTRANDO SISMICIDAD REGISTRADA
POR EL OVSICORI-UNA ENTRE ABRIL 1984 Y JULIO 1988.**

APENDICE IV

LISTADO SUMARIO DE LOS SISMOS REGISTRADOS POR EL OVSICORI-UNA
ENTRE ABRIL 1984 Y JULIO 1988, CORRESPONDIENTE A LA HOJA SAN JOSE

NUM	FECHA AA-MM-DD	T.ORIGEN HH:MM:SEG	LAT. N. GRAD:MIN	LONG.O. GRAD:MIN	PROF. KM	MAG.	No	DM KM	GAP GRAD	RMS SEG	ERH KM	ERZ KM
1	84- 4-16	0:12:49.27	9:40.61	84:57.01	14.90	2.45	8	52.0	313	0.20	2.0	2.4
2	84- 4-20	1:21:41.25	9:51.89	84:32.07	12.47	2.13	8	14.6	209	0.29	1.2	1.8
3	84- 4-27	14:44:40.48	9:44.11	83:56.14	8.65	2.68	10	27.4	121	0.22	0.7	17.1
4	84- 4-29	16:54:32.26	9:47.75	84: 6.51	19.14	2.36	11	33.2	85	0.18	0.6	4.8
5	84- 4-30	11:39:35.75	9:58.09	83:46.89	0.01	2.44	9	9.3	262	0.28	4.8	2.1
6	84- 4-30	22:14:20.36	9:35.45	84:46.41	12.01	2.54	9	44.0	291	0.29	2.1	2.4
7	84- 5- 2	14:51:22.43	9:49.06	84:57.41	11.59	2.53	11	43.8	307	0.16	1.2	1.2
8	84- 5-13	0: 6:22.03	9:39.83	84:53.10	12.91	2.43	6	48.0	327	0.08	1.3	1.4
9	84- 6-16	19:47:40.91	9:40.56	84:56.35	12.04	2.60	10	51.1	299	0.18	1.7	1.8
10	84- 6-28	21:21: 2.17	9:40.71	83:54.60	15.23	3.47	13	20.9	122	0.25	0.9	1.8
11	84- 6-28	21:29:23.25	9:40.41	83:54.42	12.05	2.37	12	20.3	123	0.21	0.6	2.7
12	84- 6-29	18: 7:29.68	9:39.45	84:55.85	12.85	2.33	6	51.9	329	0.11	1.3	1.5
13	84- 7- 2	16:23:25.86	9:19.24	84:53.69	10.63	2.58	7	73.2	300	0.13	2.6	1.7
14	84- 7- 3	9:45:47.20	9:40.38	83:54.92	8.00	2.30	8	34.0	275	0.26	1.8	24.0
15	84- 7-10	3: 4:55.86	9:48.39	84: 4.98	8.16	2.16	9	22.0	153	0.12	0.6	12.7
16	84- 7-10	7:21:49.91	9:45.09	84: 5.51	7.91	2.90	7	27.9	236	0.10	1.8	13.4
17	84- 7-11	0:39:26.28	9:48.94	84: 5.86	14.39	2.50	14	20.8	81	0.19	0.5	1.4
18	84- 7-11	16:13: 2.23	9:47.34	84: 6.73	6.69	2.19	12	23.6	88	0.16	0.5	1.4
19	84- 7-11	16:31:23.84	9:49.14	84: 6.55	10.13	2.49	12	20.3	81	0.15	0.5	5.7
20	84- 7-12	6:56: 6.59	9:40.57	83:54.02	13.65	2.42	13	20.0	126	0.17	0.6	1.7
21	84- 7-13	7:51: 6.30	9:47.52	84: 7.57	7.93	2.15	7	23.3	267	0.16	1.9	15.7
22	84- 7-18	22:49:22.15	9:46.32	84:49.17	12.61	2.30	7	34.2	304	0.24	1.5	1.5
23	84- 8- 2	18:16:59.70	10:12.21	83:57.60	15.14	2.56	13	27.5	258	0.28	1.5	1.2
24	84- 9- 9	16: 1:50.74	9:39.74	84:47.67	8.30	2.42	9	78.1	298	0.18	1.5	2.1
25	84- 9-22	18:44:42.31	9:50.58	83:57.57	9.62	2.35	7	24.4	185	0.09	1.3	6.9
26	84-10- 5	14:28:31.97	10: 2.00	84:18.49	18.83	2.43	13	16.6	136	0.27	0.8	2.5
27	84-10-18	14:11: 7.54	9:47.53	83:43.74	8.92	2.55	7	25.2	225	0.08	1.2	7.9
28	84-11-12	8:45:49.44	9:45.02	83:59.07	29.91	2.93	8	28.1	128	0.16	0.9	2.7
29	84-11-16	8:33: 0.11	9:40.19	83:50.04	7.93	2.13	6	14.7	154	0.09	1.0	13.3
30	84-11-27	20: 5:40.84	9:49.07	84: 6.66	8.99	2.36	9	22.9	207	0.16	0.9	6.0
31	84-12-13	3:12:44.96	9:42.95	84:55.05	11.86	2.50	13	20.5	185	0.24	1.6	1.5
32	85- 1- 4	2: 1:37.61	9:42.09	84:53.02	15.33	2.73	13	24.1	192	0.24	1.4	1.2
33	85- 1-10	22: 2:42.73	9:51.43	84: 3.21	12.26	2.41	17	19.8	79	0.16	0.4	1.7
34	85- 1-12	4:34:42.57	9:53.30	83:54.24	6.73	2.18	12	10.4	134	0.19	1.4	1.5
35	85- 1-19	7:11:27.79	9:47.99	83:57.42	8.24	2.52	17	21.9	115	0.17	0.4	2.2
36	85- 2-12	10:37:14.01	10:12.20	83:56.74	19.19	2.18	8	26.9	261	0.17	1.8	3.1
37	85- 2-13	6:32:25.41	9:55.60	84:49.13	18.21	2.58	14	25.3	140	0.16	0.9	2.2
38	85- 2-14	2:50:13.08	9:58.78	84:48.67	17.71	2.89	13	23.6	148	0.29	1.3	3.4
39	85- 2-19	0:28:51.89	9:54.66	83:45.06	1.85	2.60	14	14.4	243	0.15	2.1	1.0
40	85- 2-20	16:54:54.58	9:46.48	83:59.67	7.22	2.33	13	26.3	133	0.16	0.6	3.7
41	85- 2-21	1: 7:21.05	9:46.36	84: 0.33	7.02	2.26	15	27.1	98	0.24	0.6	1.6
42	85- 3- 9	21:41:39.25	9:43.04	83:50.21	9.51	2.20	13	19.6	162	0.14	0.8	7.1
43	85- 3-18	15:32:51.41	9:37.42	84:57.24	12.08	2.41	12	18.5	205	0.21	1.4	1.4
44	85- 4- 7	7:39:48.97	9:40.77	84:53.05	21.21	2.49	16	24.1	180	0.27	1.3	2.6
45	85- 4-25	13:45:54.06	9:43.61	83:48.70	11.19	2.46	13	19.8	177	0.24	1.1	3.2
46	85- 6- 1	8:16:46.39	9:38.30	83:48.50	7.05	2.30	9	10.4	162	0.32	3.6	4.7
47	85- 6- 7	0:49:20.59	9:55.64	84: 2.97	6.33	2.80	12	13.0	177	0.11	0.6	0.6
48	85- 6-16	4:25:45.57	9:41.49	84:47.37	0.19	2.53	14	34.4	175	0.31	1.1	0.6
49	85- 7- 4	12:32:15.64	9:58.88	84: 0.03	9.22	2.56	14	11.4	148	0.13	0.5	1.5
50	85- 7-16	14: 3:46.20	10: 9.54	84:11.79	5.52	2.60	9	2.4	257	0.08	1.5	0.3
51	85- 7-21	4:38:53.07	9:39.69	84: 3.46	18.88	2.47	11	29.9	119	0.33	1.1	7.3
52	85- 7-21	19:25:12.59	10: 1.45	84:37.85	13.89	2.53	12	5.6	115	0.13	0.6	0.5
53	85- 7-23	9:29:42.36	10: 2.30	84:37.54	11.90	2.56	14	6.5	118	0.19	0.6	0.7
54	85- 8- 2	21:14:42.92	9:44.28	83:55.89	13.79	2.37	14	26.0	130	0.18	0.6	2.0
55	85- 8- 7	0:39:49.76	10: 5.48	84: 3.16	21.41	2.43	7	10.3	197	0.25	3.0	1.7
56	85- 8- 7	9:55:56.50	10:13.23	84:46.41	12.94	2.43	9	32.4	244	0.14	1.2	1.4
57	85- 8- 7	20:31:35.33	9:56.89	84:10.37	15.11	2.36	10	10.4	110	0.25	1.0	1.7
58	85- 8-19	6:40: 1.51	9:50.09	84: 7.61	11.42	2.74	13	21.0	134	0.20	0.6	1.9
59	85- 8-19	6:42:13.70	9:50.42	84: 8.49	7.41	2.18	7	20.6	133	0.09	0.5	14.3
60	85- 8-22	19: 2:32.76	9:52.35	84:26.88	14.17	2.50	18	9.6	91	0.25	0.6	0.7

NUM	FECHA AA-MM-DD	T.ORIGEN HH:MM:SEG	LAT. N. GRAD:MIN	LONG. O. GRAD:MIN	PROF. KM	MAG.	No	DM KM	GAP GRAD	RMS SEG	ERH KM	ERZ KM
61	85- 8-24	9:26:54.16	9:42.21	83:55.22	8.00	2.23	8	29.6	276	0.25	1.8	23.1
62	85- 8-26	9:14:31.27	9:41.85	84:52.37	0.02	2.58	9	25.3	193	0.14	1.4	0.7
63	85- 8-27	19:30:36.64	9:52.10	84:14.12	3.07	2.20	6	21.6	290	0.06	1.0	0.5
64	85- 9- 1	20:20:33.41	9:37.67	84:49.50	21.59	2.52	14	31.6	192	0.15	1.1	2.1
65	85- 9- 3	4:17:21.17	9:41.11	84:54.60	27.68	2.54	10	21.3	198	0.18	1.6	2.1
66	85- 9- 6	2: 9:41.81	9:43.02	84:25.64	14.83	2.12	10	8.1	205	0.20	1.3	0.7
67	85- 9-14	23:36:36.37	9:46.46	84: 8.18	5.72	2.56	18	27.8	87	0.15	0.4	1.1
68	85- 9-21	17:37:16.02	10:20.33	83:59.69	23.37	2.23	11	32.0	283	0.27	1.9	3.5
69	85-10-11	21:55:48.78	9:39.12	84:55.36	15.75	2.83	18	20.6	179	0.22	1.0	1.5
70	85-10-26	21: 9:29.55	9:41.70	83:52.41	21.97	2.53	15	19.5	146	0.30	1.0	3.4
71	85-10-27	21:29:41.09	9:41.36	83:53.98	6.99	2.48	16	20.9	135	0.28	0.7	1.7
72	85-11- 2	5:53:21.21	10: 5.20	83:56.83	12.50	2.28	10	14.2	233	0.20	1.7	2.3
73	85-11- 6	15: 9:39.40	9:47.09	84: 4.77	7.09	2.30	11	26.9	222	0.21	0.9	1.8
74	85-11- 6	17: 1:28.12	10: 1.40	84:57.34	10.05	2.58	16	39.3	155	0.22	0.8	1.9
75	85-11- 7	0:36:36.60	9:48.13	84:33.18	7.45	2.36	9	13.9	165	0.10	0.7	11.5
76	85-11- 8	18:44:51.85	9:42.49	84:54.86	14.13	3.21	20	20.7	157	0.28	0.8	1.2
77	85-11-11	21:11:41.29	9:59.02	84:12.87	22.53	2.38	10	11.6	136	0.28	1.3	2.2
78	85-11-15	5:54:44.36	9:50.06	83:58.91	21.11	2.19	14	17.6	111	0.16	0.6	2.1
79	85-11-23	2:57:19.49	10: 4.94	84:12.92	13.58	2.49	14	7.8	110	0.20	0.9	1.0
80	85-11-23	10:14:34.94	10: 1.72	84:41.90	14.50	2.37	14	12.1	204	0.13	1.1	0.6
81	85-11-28	8:27:34.39	9:42.61	84:55.69	14.38	2.21	13	19.2	157	0.18	1.2	0.9
82	85-12- 1	22: 6:40.51	9:47.92	84: 5.81	5.73	2.76	16	25.1	79	0.18	0.5	1.3
83	85-12- 5	4:32:38.64	9:38.48	84:54.70	11.99	2.59	14	22.1	194	0.32	1.6	2.0
84	85-12- 5	6:28:49.94	9:41.07	84:55.57	14.19	2.87	18	19.5	167	0.28	1.1	1.2
85	85-12- 5	6:58: 2.10	9:41.06	84:55.68	14.30	3.50	17	19.3	167	0.25	1.0	1.3
86	85-12- 5	7:19:59.86	9:39.26	84:55.23	20.12	2.51	13	20.7	191	0.20	1.3	2.2
87	85-12- 5	7:47:54.43	9:39.08	84:54.83	14.51	2.69	14	21.5	191	0.27	1.6	1.2
88	85-12-17	8:11:37.72	9:46.60	84: 7.88	7.38	2.14	15	27.5	65	0.13	0.4	3.9
89	85-12-17	17:30: 5.18	9:54.49	84:17.89	13.49	2.37	15	19.2	92	0.18	0.5	1.0
90	85-12-18	10:38:23.28	9:45.92	83:45.35	9.10	2.38	14	23.4	217	0.17	0.8	2.1
91	85-12-23	8:28: 1.34	9:38.65	84:55.41	20.73	2.51	15	20.7	194	0.22	1.3	2.0
92	85-12-23	23:42:15.43	9:39.29	84:55.49	14.00	2.51	16	20.3	178	0.21	0.9	0.8
93	85-12-24	14: 1:25.17	9:52.19	84:16.99	7.03	2.41	20	18.1	79	0.19	0.4	1.2
94	85-12-30	1: 5:37.40	9:45.20	84: 1.49	1.13	2.58	15	27.8	97	0.29	0.6	1.1
95	86- 1- 3	19:56:51.61	9:42.19	84:48.96	13.84	2.84	18	31.5	156	0.32	1.1	1.5
96	86- 1- 3	20:30:27.15	9:42.60	84:49.36	14.74	2.46	15	30.8	155	0.27	1.1	1.4
97	86- 1- 4	1:17:32.38	9:43.53	84:49.00	12.56	3.09	18	31.6	151	0.26	1.0	1.4
98	86- 1- 6	16: 5:27.04	9:43.94	84:48.73	13.94	3.19	18	32.1	148	0.24	0.9	1.3
99	86- 1- 6	16:15:20.49	9:43.11	84:49.04	13.08	2.26	12	31.4	152	0.26	1.1	1.6
100	86- 1- 6	16:34:46.48	9:42.06	84:49.33	19.84	2.40	12	30.8	158	0.27	1.3	3.6
101	86- 1- 6	16:41:23.05	9:41.05	84:48.27	21.57	2.25	8	32.8	200	0.20	1.5	3.3
102	86- 1- 6	16:42: 4.38	9:43.49	84:48.65	14.43	2.18	10	32.2	167	0.26	1.4	1.7
103	86- 1- 9	23:23:20.99	9:43.58	83:56.72	8.98	2.80	15	27.4	123	0.26	0.7	3.0
104	86- 1-18	20: 2:52.68	9:40.25	84:51.88	14.44	2.43	12	26.4	182	0.23	1.5	1.2
105	86- 1-27	17: 7:51.68	9:59.29	84:48.93	20.46	2.52	14	24.0	150	0.27	1.5	2.5
106	86- 1-31	7:34:26.95	9:40.94	84:48.86	14.89	2.36	16	31.7	177	0.26	1.1	1.2
107	86- 2- 1	1:30:16.28	9:39.21	84:55.89	23.73	2.50	12	19.6	192	0.28	1.6	2.2
108	86- 2- 6	6:12:45.42	9:43.05	84:48.86	12.56	3.50	14	31.7	169	0.28	1.2	1.7
109	86- 2- 6	7:41:18.91	9:41.77	84:48.90	14.10	2.80	12	31.6	175	0.29	1.5	1.8
110	86- 2- 6	10:58:56.14	9:41.63	84:49.75	15.33	2.89	15	30.1	175	0.32	1.1	1.3
111	86- 2- 7	8:24: 7.78	9:42.33	84:49.37	14.95	2.51	12	30.8	172	0.26	1.2	1.2
112	86- 2- 8	15: 7:27.45	9:44.99	84:50.18	11.98	2.60	13	29.8	176	0.24	2.9	3.0
113	86- 2-10	0:44:55.08	9:40.78	83:53.70	8.21	2.54	10	19.8	148	0.23	0.9	17.8
114	86- 2-10	4:28:29.21	9:42.51	84:49.55	21.74	2.39	12	30.5	171	0.28	1.5	3.2
115	86- 2-14	23:56:26.29	9:57.48	83:45.62	13.53	2.58	10	15.1	247	0.16	1.6	0.8
116	86- 2-19	1:36:59.11	9:42.65	84:48.84	15.36	2.60	15	31.7	171	0.27	1.1	1.3
117	86- 2-20	1:21:33.01	10:18.83	84:13.71	7.43	2.30	9	16.5	265	0.18	1.6	18.1
118	86- 2-23	22:10:10.35	9:41.18	84:48.56	2.33	2.43	16	32.2	176	0.24	1.0	1.6
119	86- 3- 5	18:12:53.76	9:52.71	84: 4.28	20.06	2.57	13	16.9	79	0.24	0.7	2.2
120	86- 3-11	0:21: 4.94	9:51.84	84:24.29	16.26	2.66	13	8.6	108	0.27	0.8	1.9

NUM	FECHA AA-MM-DD	T.ORIGEN HH:MM:SEG	LAT. N. GRAD:MIN	LONG.O. GRAD:MTN	PROF. KM	MAG.	No	DM KM	GAP GRAD	RMS SEG	ERH KM	ERZ KM
121	86- 3-11	0:56:54.43	9:49.16	84:24.39	12.92	2.30	11	4.0	98	0.23	0.8	1.3
122	86- 4- 5	5:55:21.87	9:41.98	84:49.05	13.96	2.91	18	31.4	174	0.29	1.0	1.3
123	86- 4-13	22: 9:53.24	9:50.38	84:23.11	10.58	2.08	11	7.2	109	0.26	0.8	1.9
124	86- 4-17	22:44:10.50	9:39.36	84:53.33	14.90	2.17	8	24.1	210	0.26	3.1	3.4
125	86- 4-25	11: 5:56.61	10:11.02	84:13.04	3.18	2.35	8	3.5	265	0.25	2.0	1.0
126	86- 5- 1	4:21:51.80	10: 4.61	83:55.55	15.29	2.53	12	12.4	238	0.23	1.9	0.8
127	86- 5- 2	9:57:55.89	9:42.02	83:43.26	11.21	2.08	9	16.9	229	0.08	1.5	3.3
128	86- 5- 4	3:33:29.66	9:40.77	84:55.44	23.32	2.58	13	19.8	181	0.17	1.3	1.8
129	86- 5- 5	19:21:26.03	10: 0.97	84: 5.61	7.61	2.05	8	2.7	144	0.09	1.3	0.6
130	86- 5-12	9:48:12.53	9:45.23	83:58.50	8.56	2.32	9	25.4	114	0.19	0.7	16.7
131	86- 5-23	10:59:20.80	9:45.14	84:14.41	9.43	2.40	13	20.8	104	0.25	0.7	2.7
132	86- 5-24	18:23:26.60	9:45.41	83:57.66	24.61	2.70	15	24.6	120	0.17	0.5	1.3
133	86- 6- 2	9:10:59.14	9:42.66	83:55.29	7.25	2.29	14	24.3	130	0.17	0.5	19.2
134	86- 6- 8	12:55:46.76	10: 0.97	84:39.99	20.17	3.08	18	8.3	109	0.29	0.9	1.5
135	86- 6- 9	5: 7:56.71	9:59.20	84:38.08	14.37	2.40	8	31.6	290	0.13	1.4	0.9
136	86- 6-10	12: 2:44.15	9:47.21	83:58.04	19.72	2.60	11	21.6	119	0.13	0.5	1.2
137	86- 6-11	10: 5: 8.27	9:47.71	84: 0.32	3.64	2.95	11	22.6	121	0.20	1.0	3.0
138	86- 6-11	10:52:31.41	9:46.03	83:58.80	13.82	2.46	10	24.2	114	0.18	0.5	2.2
139	86- 6-16	1: 2:49.72	9:45.16	84: 0.09	0.03	3.20	12	26.6	105	0.18	0.4	0.6
140	86- 6-16	1:27:31.88	9:46.15	83:57.11	16.63	2.20	8	23.0	124	0.13	1.1	5.4
141	86- 6-16	1:43:49.56	9:45.79	83:56.80	17.26	2.38	8	23.5	126	0.12	1.1	4.4
142	86- 6-20	3: 0:46.72	9:45.79	83:59.34	7.68	2.70	15	25.0	110	0.18	0.5	2.4
143	86- 6-27	17:33:44.15	10:10.95	83:55.18	14.85	2.42	8	27.9	256	0.23	1.4	1.6
144	86- 7- 2	18:29:52.54	9:41.52	84:49.69	12.84	2.65	16	30.1	160	0.25	0.9	1.3
145	86- 7- 8	5:27: 9.20	9:46.91	84: 8.68	5.97	2.53	16	27.1	88	0.23	0.5	1.4
146	86- 7- 8	6:56: 5.95	10:14.18	84:24.71	11.41	2.69	16	18.8	203	0.31	1.2	2.1
147	86- 7-15	16:50:38.99	9:41.12	84:50.24	12.16	2.20	12	29.2	162	0.27	1.1	1.8
148	86- 7-16	3:33:26.54	9:43.80	84:55.15	16.02	2.53	15	20.5	163	0.35	2.0	5.8
149	86- 7-17	8:20:52.25	9:38.17	84:55.47	24.46	2.56	16	20.9	197	0.24	1.5	1.9
150	86- 7-26	5:20:40.57	9:43.40	83:55.21	10.21	2.04	10	25.2	132	0.13	0.6	7.5
151	86- 7-26	7:45:52.09	9:41.16	83:55.88	4.76	2.58	14	23.3	122	0.24	0.7	2.2
152	86- 8- 2	22:41: 1.29	9:46.00	83:57.53	20.35	2.87	17	23.5	122	0.19	0.5	1.4
153	86- 8- 3	19:35: 8.14	9:44.81	83:59.63	14.64	2.93	17	26.9	107	0.21	0.6	1.3
154	86- 8-12	3:14:35.64	10:29.43	84: 4.52	12.23	2.95	16	39.8	263	0.18	1.0	1.2
155	86- 8-13	12: 7:55.00	9:43.30	83:54.68	11.14	2.48	12	24.4	136	0.17	0.6	3.4
156	86- 8-19	23:20:46.17	9:44.71	83:59.60	1.74	2.63	19	27.0	108	0.17	0.4	0.6
157	86- 8-23	19:16: 0.09	9:55.84	84:10.21	4.41	2.47	12	11.9	66	0.17	0.4	0.7
158	86- 8-28	16:39: 3.89	10:20.44	84:15.93	1.07	2.27	10	18.3	272	0.21	1.2	1.4
159	86- 9- 9	2: 8:12.07	9:59.00	83:59.95	13.56	2.36	11	11.2	149	0.17	0.8	1.0
160	86- 9- 9	2:26:21.57	10: 1.64	83:58.67	8.34	2.47	17	10.9	186	0.22	1.0	1.8
161	86- 9- 9	2:35:57.96	9:58.27	84: 0.29	9.80	2.08	11	11.7	155	0.14	0.9	3.1
162	86- 9-11	18:36:54.92	10:27.65	84:16.19	13.42	2.73	9	31.6	288	0.21	2.2	2.2
163	86- 9-12	18:32:56.71	10:24.92	84:14.67	2.27	2.17	5	5.3	324	0.39	5.8	26.7
164	86- 9-12	21: 3:26.25	10:22.71	84:17.05	0.28	1.30	5	1.6	140	0.23	0.9	1.1
165	86- 9-12	21:41: 4.90	10:23.75	84:16.76	0.23	1.67	6	0.9	176	0.02	0.5	0.6
166	86- 9-12	21:43:17.04	10:23.59	84:17.22	0.72	1.90	5	0.1	149	0.06	0.5	0.4
167	86- 9-13	7: 5:10.23	10:23.86	84:17.63	0.02	1.00	5	1.0	229	0.13	1.0	1.0
168	86- 9-14	8: 2: 4.97	10:23.46	84:17.02	0.03	1.20	6	0.3	145	0.16	0.6	1.3
169	86- 9-14	9:36:16.55	10:24.47	84:17.43	0.36	1.16	8	1.8	154	0.18	0.5	1.4
170	86- 9-14	9:36:26.79	10:23.05	84:17.17	0.39	2.16	9	0.9	107	0.49	0.8	1.2
171	86- 9-16	12: 6:51.19	9:41.31	83:54.18	13.65	2.68	12	21.1	133	0.22	0.8	1.8
172	86- 9-18	8:48: 1.24	9:41.90	83:53.14	8.20	2.17	12	20.6	142	0.15	0.6	13.0
173	86- 9-20	2:13:24.23	10:19.18	83:46.38	0.01	2.70	8	41.4	285	0.25	6.8	3.0
174	86-10- 1	14:31:33.17	9:46.03	83:56.64	28.73	2.22	12	23.0	128	0.18	0.7	2.2
175	86-10-12	19:43:59.68	10: 8.57	84: 5.07	5.31	2.44	9	13.7	240	0.20	1.3	0.8
176	86-11- 4	4:31:49.39	9:54.68	83:52.41	14.25	2.42	12	6.9	185	0.17	1.8	1.6
177	86-11-11	18:59:53.12	9:42.03	84:54.08	23.73	2.67	16	22.1	160	0.31	1.3	2.3
178	86-11-20	14:14:51.70	9:42.47	84:53.71	13.59	2.54	14	22.8	157	0.29	0.9	1.2
179	86-11-21	14: 4:19.74	9:41.35	84:48.34	13.55	2.59	16	32.7	160	0.21	0.8	1.2
180	86-11-22	21:45:20.01	9:42.06	84:48.29	20.37	2.20	10	32.7	157	0.29	1.6	3.9

NUM	FECHA AA-MM-DD	T.ORIGEN HH:MM:SEG	LAT. N. GRAD:MIN	LONG.O. GRAD:MIN	PROF. KM	MAG.	No	DM KM	GAP GRAD	RMS SEG	ERH KM	ERZ KM
181	86-11-26	7:48:12.27	9:39.81	84:53.06	24.78	3.89	16	24.4	171	0.31	1.3	2.8
182	86-11-27	8: 6:32.75	9:59.07	84: 1.16	9.84	2.50	18	6.3	140	0.23	0.7	0.9
183	86-11-27	12: 2:58.07	9:59.79	83:59.21	7.87	2.20	5	10.2	185	0.06	2.5	7.1
184	86-12- 4	5:12:13.32	9:49.16	84:22.57	11.09	2.53	18	6.4	89	0.28	0.6	1.4
185	86-12- 7	16:55:42.96	10:17.48	83:58.23	14.98	2.54	14	33.2	276	0.25	1.4	1.1
186	86-12- 9	10:20:54.76	9:50.82	84: 7.80	7.27	2.29	14	17.3	78	0.20	0.5	4.0
187	86-12-19	5:30:35.20	10: 7.08	83:47.36	3.87	3.12	16	20.4	244	0.31	1.2	1.0
188	86-12-23	6:45:58.31	10: 3.93	83:47.07	1.46	2.71	10	16.4	272	0.22	1.2	1.7
189	87- 1- 6	2:17:36.14	9:54.64	83:55.13	11.05	2.08	10	6.8	138	0.16	1.2	2.3
190	87- 1- 6	9:25:34.92	9:54.58	83:54.17	11.36	2.45	8	6.6	154	0.19	1.3	2.4
191	87- 1- 7	1:21: 9.97	9:53.70	83:55.53	11.69	2.44	13	8.8	135	0.27	1.0	2.8
192	87- 1- 7	1:24:51.98	9:54.85	83:55.83	12.40	2.13	11	7.1	125	0.30	1.3	2.8
193	87- 1- 7	4:32: 7.84	9:55.28	83:54.85	13.38	2.23	11	5.6	139	0.23	1.1	2.0
194	87- 1- 7	6:31:57.54	9:52.34	83:56.08	4.26	2.03	7	11.5	159	0.15	1.8	1.9
195	87- 1- 7	11: 1:19.24	9:40.21	84:53.79	24.19	2.60	18	23.0	170	0.23	0.8	2.1
196	87- 1-11	4:55:23.11	9:40.09	84:56.73	25.68	2.51	18	17.7	174	0.19	0.9	1.2
197	87- 1-24	16:53: 2.55	9:40.65	84:52.58	21.90	3.02	24	25.1	153	0.27	0.9	1.8
198	87- 1-24	17: 3:13.49	9:40.35	84:53.56	19.02	2.48	16	23.3	169	0.18	0.9	2.0
199	87- 1-29	7: 1:17.29	9:39.63	84:54.13	18.18	2.77	17	22.5	174	0.25	1.1	2.7
200	87- 1-31	16:22:36.19	9:40.40	83:58.11	11.27	3.18	18	25.8	107	0.17	0.5	1.5
201	87- 2- 1	0:49:55.97	9:48.17	84:32.40	8.63	2.29	15	12.6	126	0.27	0.8	4.1
202	87- 2- 3	11:25:42.62	9:54.42	84:33.85	18.11	2.39	19	9.7	110	0.21	0.6	0.9
203	87- 2-11	11:57:36.09	9:45.16	83:57.89	18.27	2.18	9	25.1	118	0.21	1.0	5.2
204	87- 2-15	5:39:14.58	9:45.03	83:57.34	21.95	2.22	10	25.1	122	0.17	0.7	3.0
205	87- 2-26	16: 0:37.53	10: 9.79	83:54.50	7.01	2.16	14	21.6	254	0.24	2.6	3.0
206	87- 3- 7	11:34:52.92	10:29.67	84:34.77	12.43	3.35	23	11.0	197	0.23	0.9	0.8
207	87- 3- 7	11:39:47.85	10:30.70	84:35.74	12.78	3.26	22	9.9	198	0.26	0.8	0.7
208	87- 3- 7	15: 8: 2.96	10:28.25	84:36.72	12.39	3.87	23	7.2	192	0.30	1.1	0.8
209	87- 3- 7	15:30:22.42	10:27.51	84:36.93	11.89	3.02	22	7.0	190	0.25	0.7	0.9
210	87- 3- 7	16: 8:19.95	10:27.92	84:36.92	10.46	2.81	20	6.8	192	0.28	1.0	0.7
211	87- 3- 7	16:16: 1.27	10:25.99	84:38.86	13.11	2.76	18	5.5	158	0.32	1.0	0.8
212	87- 3- 8	1:56:10.71	9:54.18	84:32.99	12.99	2.23	18	10.7	110	0.18	0.5	0.7
213	87- 3-14	18:56:34.45	10:17.21	84: 8.13	14.60	2.46	14	17.6	264	0.30	2.4	1.2
214	87- 3-23	0: 3:48.79	10: 5.16	83:56.34	15.24	2.26	12	13.8	233	0.27	2.0	0.9
215	87- 4-10	23: 9:33.44	10:10.18	84:16.49	8.64	2.17	11	2.7	191	0.32	2.3	1.6
216	87- 4-12	5: 3:10.09	10: 0.32	84: 3.15	6.13	2.18	8	7.3	176	0.04	1.2	0.5
217	87- 4-13	17:11:18.75	9:53.46	83:38.39	10.22	2.37	8	29.5	273	0.07	1.0	1.5
218	87- 4-22	0:49:53.07	9:49.28	84:37.43	13.58	2.51	15	18.8	126	0.22	0.6	1.1
219	87- 4- 2	62:34:30.40	9:44.61	84:58.44	17.85	2.18	8	14.9	167	0.25	1.7	2.8
220	87- 5- 8	16: 0: 1.23	9:43.71	84:49.00	20.85	2.58	12	31.6	166	0.17	1.0	2.1
221	87- 6- 5	23:39: 9.26	9:55.51	84:32.86	4.66	2.24	10	8.8	123	0.18	0.7	0.5
222	87- 6- 8	16:55:26.20	9:53.86	84:34.22	15.44	2.73	18	10.4	112	0.27	0.6	0.7
223	87- 6-11	16:35:47.15	9:41.69	84:49.26	20.58	2.55	11	31.0	159	0.26	1.2	3.2
224	87- 6-22	4:17:39.44	9:42.16	84:55.74	13.90	2.50	12	19.1	173	0.21	1.0	1.0
225	87- 7- 2	13: 3:43.34	9:44.03	84:25.46	21.11	2.27	13	6.2	130	0.19	0.7	1.0
226	87- 7-27	0: 2:36.10	9:43.51	84:53.33	13.93	2.41	16	23.6	166	0.19	0.8	0.9
227	87- 7-30	14: 0:47.38	9:39.46	84:54.91	14.31	2.53	12	50.7	214	0.25	1.2	1.9
228	87- 7-30	20:13:21.91	9:55.87	84:32.93	13.24	2.35	17	8.2	142	0.22	0.6	0.8
229	87- 8- 5	19: 7:53.56	9:41.43	84:53.81	23.40	2.77	18	22.6	163	0.18	0.7	1.6
230	87- 8- 7	11:11:23.41	9:45.76	84:53.77	0.02	2.95	20	23.7	118	0.23	0.6	0.5
231	87- 8-19	23:26:27.22	10:11.09	83:56.36	1.07	2.49	12	24.5	270	0.16	1.1	1.0
232	87- 8-20	10:16:33.69	10: 4.10	83:52.42	2.81	2.65	15	11.4	254	0.35	1.5	1.0
233	87- 8-22	21: 2:53.36	10: 4.42	83:56.91	0.02	2.13	12	12.9	251	0.22	2.4	0.9
234	87- 8-22	21: 5:28.89	10: 8.54	83:58.21	14.79	2.96	13	20.8	261	0.20	1.4	0.9
235	87- 8-22	22:24:54.91	10: 9.08	83:56.70	5.33	2.40	13	21.0	267	0.15	2.4	2.6
236	87- 8-23	0: 1:45.26	10: 8.99	83:57.61	3.23	2.21	12	21.3	265	0.14	0.9	0.6
237	87- 8-23	4:33:28.99	10: 7.63	83:58.01	7.29	2.19	12	19.1	258	0.14	1.2	3.3
238	87- 8-23	4:51:44.31	10:11.28	83:56.78	7.93	2.96	13	25.0	271	0.15	1.1	3.6
239	87- 8-25	5:25:55.59	10: 1.46	84: 2.54	10.18	2.24	9	8.2	201	0.23	2.1	1.6
240	87- 8-29	8:22:51.80	9:48.65	83:42.96	5.27	2.76	16	26.6	239	0.22	1.7	2.2

NUM	FECHA AA-MM-DD	T.ORIGEN HH:MM:SEG	LAT. N. GRAD:MIN	LONG.O. GRAD:MTN	PROF. KM	MAG.	No	DM KM	GAP GRAD	RMS SEG	ERH KM	ERZ KM
241	87- 8-29	12:58:58.47	9:41.25	84:57.27	20.56	2.47	14	16.4	180	0.26	1.3	2.2
242	87- 8-31	6:57:10.93	9:43.32	84:53.39	1.45	2.12	11	23.5	167	0.20	1.0	0.8
243	87- 9- 3	2:52:22.19	9:44.45	84:43.71	12.78	2.04	10	31.1	163	0.13	0.8	1.1
244	87- 9- 4	4:51:11.77	9:45.26	84:43.46	10.24	2.85	22	29.5	134	0.18	0.5	1.0
245	87- 9- 5	6:29:30.89	9:43.07	84:48.48	15.51	2.52	19	32.5	152	0.22	0.7	1.0
246	87- 9- 9	22: 3:46.63	9:39.83	84:55.77	20.23	2.62	20	19.5	175	0.19	0.7	1.8
247	87- 9-14	0:57:55.80	10:13.00	83:55.57	12.10	2.24	10	27.8	275	0.11	1.0	2.0
248	87- 9-18	7:16:23.16	9:40.22	84:58.02	22.98	2.53	18	15.4	176	0.16	0.8	1.3
249	87- 9-21	2:18:24.17	9:45.13	83:59.10	27.47	2.58	10	26.0	136	0.21	1.4	3.1
250	87- 9-22	1:12:43.03	9:41.59	83:48.22	15.05	2.28	15	15.9	182	0.18	1.0	1.2
251	87- 9-22	18:29:14.09	10:13.21	84:10.31	10.81	2.66	18	9.9	194	0.20	1.1	0.9
252	87- 9-28	13:16: 4.11	9:54.56	84:57.95	4.18	2.15	10	27.6	135	0.32	1.4	2.8
253	87-10- 1	3:46:34.44	9:42.40	84:53.32	11.55	2.67	20	23.6	157	0.21	0.7	1.1
254	87-10- 5	19:15:15.42	9:41.18	84:48.02	9.66	2.11	15	33.3	160	0.12	0.8	1.4
255	87-10-10	9:51:50.58	9:38.97	83:40.14	7.13	2.23	11	14.9	261	0.21	3.0	3.9
256	87-10-17	15:58:48.18	9:40.31	84: 0.93	23.79	2.30	13	30.3	94	0.18	0.5	2.5
257	87-10-21	18:48:19.12	9:40.27	84:54.50	9.81	2.34	15	21.6	170	0.20	1.0	1.9
258	87-10-21	18:49:29.23	9:43.20	84:53.97	0.33	2.17	13	22.5	167	0.13	0.9	0.5
259	87-10-26	4: 9:18.94	9:40.01	84:50.49	24.72	2.18	8	29.0	205	0.17	1.4	2.3
260	87-10-30	21: 6:56.00	9:53.51	83:47.92	6.24	2.35	9	13.8	225	0.19	2.4	1.1
261	87-11- 7	8:18: 2.77	10: 6.62	84: 5.80	4.73	2.36	13	9.9	191	0.16	0.7	0.5
262	87-11- 7	10:26:10.53	10: 6.82	84: 5.53	4.94	2.41	13	10.4	194	0.17	0.7	0.5
263	87-11- 9	12:41:13.02	9:41.84	84:42.26	13.80	2.23	11	32.2	173	0.16	0.7	1.1
264	87-11-11	15:31: 1.90	9:44.65	84:52.29	1.61	2.27	11	25.9	161	0.12	0.9	0.7
265	87-11-12	0:40:39.44	9:42.58	84:52.79	5.03	2.20	11	24.5	170	0.18	1.2	1.5
266	87-11-13	21:48: 3.84	10:13.25	83:59.57	11.26	2.40	14	25.8	258	0.16	1.1	1.8
267	87-11-13	21:49: 9.23	10: 8.82	84: 2.69	3.64	2.13	11	15.8	221	0.19	0.9	0.7
268	87-11-13	22: 3: 4.61	10: 7.03	84: 2.73	10.92	2.29	12	13.0	208	0.15	0.9	1.3
269	87-11-13	22:51: 0.32	10: 7.13	84: 1.17	4.14	1.90	10	15.0	216	0.22	1.0	0.7
270	87-11-28	1:12:11.14	9:40.84	84:53.13	21.34	2.20	8	24.0	200	0.07	0.9	1.6
271	87-12-18	10:27:53.49	9:41.64	83:47.98	9.54	2.22	12	15.9	185	0.15	0.8	1.9
272	87-12-27	1: 3:47.55	10: 6.20	84:50.10	15.52	2.87	17	29.1	117	0.20	0.7	1.2
273	87-12-31	3:16:48.95	9:42.99	83:50.98	6.70	2.26	13	20.1	162	0.16	0.6	1.4
274	88- 1- 5	12: 8:45.05	9:55.31	84:52.64	6.79	2.33	11	31.6	146	0.11	0.8	1.4
275	88- 1-16	18:48: 2.87	9:49.61	84: 0.99	6.97	2.22	13	20.5	98	0.25	0.6	1.7
276	88- 1-20	17:13: 2.46	9:41.41	84:52.53	14.38	2.68	16	25.0	162	0.15	0.6	1.1
277	88- 1-23	16:15:38.90	9:38.41	84:47.04	1.80	2.31	14	35.7	171	0.22	0.9	0.7
278	88- 1-24	16:19: 0.44	9:36.49	84:55.37	16.54	2.25	8	22.3	229	0.11	2.0	2.7
279	88- 1-25	6:54:11.28	9:40.69	84:55.24	17.15	2.62	17	20.2	169	0.26	1.1	2.8
280	88- 1-26	0: 9:15.33	9:40.83	84:49.95	12.67	2.60	16	29.8	164	0.22	0.9	1.2
281	88- 1-26	9:35:58.68	9:54.41	84:17.87	7.11	2.63	16	19.2	83	0.20	0.6	1.4
282	88- 2-16	2:57:49.54	9:40.17	84:51.18	12.97	2.67	13	27.6	182	0.10	0.7	1.1
283	88- 2-17	21:46:55.75	9:48.28	83:51.33	23.67	2.53	7	18.8	174	0.23	1.8	3.1
284	88- 2-18	23:26:50.34	9:54.49	84: 4.25	12.00	1.95	9	13.8	113	0.21	1.5	5.0
285	88- 2-22	2: 3:21.78	10: 2.33	83:58.34	16.47	2.49	12	11.3	218	0.14	1.6	0.8
286	88- 2-26	5:24:44.04	9:45.61	84: 1.06	7.28	2.36	16	26.7	100	0.31	0.7	4.3
287	88- 2-26	14:43:14.03	9:45.74	84: 0.02	7.07	2.03	14	25.6	105	0.26	0.6	1.7
288	88- 2-27	8:18:11.88	9:47.11	84:48.90	10.92	2.40	9	32.9	165	0.14	1.2	2.9
289	88- 2-29	8:28:56.29	10: 1.29	83:58.66	12.52	2.34	13	10.7	184	0.28	1.2	1.5
290	88- 3-12	1:49:54.62	9:44.48	84: 0.23	6.81	2.52	12	27.9	140	0.11	0.4	1.1
291	88- 3-14	8:47: 9.73	9:42.10	84:54.40	13.88	2.67	13	21.6	191	0.14	1.2	0.9
292	88- 3-16	3: 3:38.53	9:39.69	84:55.96	27.38	3.71	14	19.2	209	0.27	1.6	2.8
293	88- 3-22	1:54:35.14	9:40.61	84:56.75	27.00	3.71	9	17.5	302	0.16	2.0	3.3
294	88- 3-27	9:58:57.27	9:52.04	84:32.88	15.64	2.18	10	14.4	132	0.13	0.6	0.5
295	88- 4- 7	0:10:33.70	9:40.70	84:31.04	19.62	1.97	6	15.9	235	0.10	1.2	2.7
296	88- 4-11	18:36:14.88	9:38.85	84:53.73	14.36	2.03	7	23.6	213	0.21	1.7	2.3
297	88- 4-11	18:36:43.63	9:38.15	84:53.64	14.92	2.20	7	24.1	217	0.23	2.0	1.6
298	88- 4-13	0:40:25.33	9:46.84	84: 7.41	3.91	2.08	11	27.0	144	0.18	0.7	1.7
299	88- 4-15	2:32:49.38	9:44.89	84:14.24	12.94	2.62	16	21.2	104	0.25	0.6	1.8
300	88- 4-17	0:33:18.70	9:40.11	84:55.02	18.79	3.01	12	20.8	206	0.19	1.2	2.2

NUM	FECHA AA-MM-DD	T.ORIGEN HH:MM:SEG	LAT. N. GRAD:MIN	LONG.O. GRAD:MIN	PROF. KM	MAG.	No	DM KM	GAP GRAD	RMS SEG	ERH KM	ERZ KM
301	88- 4-21	5:30:46.22	9:42.10	83:51.67	12.05	2.03	13	19.4	154	0.18	0.8	1.8
302	88- 4-24	10: 6:39.63	9:42.56	83:57.55	7.24	2.15	11	27.2	142	0.14	0.6	4.4
303	88- 4-27	20: 9: 4.80	9:39.69	84:53.78	22.81	2.98	14	23.1	174	0.17	0.8	1.6
304	88- 4-27	21:46:19.06	9:40.29	84:53.01	14.65	3.02	19	24.3	169	0.27	0.9	1.1
305	88- 4-30	7:58:36.31	9:41.92	84:53.58	21.85	2.40	12	23.1	174	0.16	1.1	1.9
306	88- 5- 3	10: 7:41.82	9:40.08	84:56.27	14.25	2.52	11	18.5	187	0.23	1.2	1.4
307	88- 5- 3	13:40:56.83	9:40.36	84:55.42	21.23	2.73	14	20.0	171	0.08	0.7	1.2
308	88- 5- 8	18:58: 5.35	9:52.65	84:31.89	6.45	2.43	11	14.2	123	0.18	0.8	1.0
309	88- 5-12	5:10:42.75	9:43.29	84:55.01	17.05	2.53	13	20.6	166	0.20	1.1	3.0
310	88- 5-12	7:24:30.34	9:47.55	84:55.51	1.54	2.39	10	22.0	142	0.25	1.1	1.4
311	88- 5-19	21:14:52.98	9:47.62	84:37.77	19.33	2.20	6	21.9	168	0.09	1.0	3.6
312	88- 5-25	0:37:39.07	9:46.43	84: 2.64	21.09	2.30	12	27.0	104	0.19	0.7	3.1
313	88- 5-26	0:14: 4.47	9:46.43	84: 1.24	7.16	2.31	12	25.6	100	0.24	0.6	1.7
314	88- 5-29	12:46:40.03	9:39.82	84:56.92	25.14	2.47	6	17.5	208	0.24	2.5	3.8
315	88- 5-29	12:47:42.43	9:42.00	84:57.25	28.91	2.47	6	16.4	191	0.15	2.0	2.4
316	88- 5-30	17:54:34.03	9:45.11	84:45.70	19.38	2.33	7	31.9	179	0.07	1.0	3.2
317	88- 6- 4	4:26:58.26	9:39.43	84:51.38	13.53	2.64	11	27.5	209	0.17	1.4	1.3
318	88- 6- 8	9:23:24.69	9:37.88	84:53.08	23.69	2.72	15	25.2	195	0.25	1.2	2.0
319	88- 6-16	15:47:29.50	9:42.72	84:54.37	5.01	2.55	12	21.6	170	0.11	0.6	1.1
320	88- 6-26	13: 2:29.66	9:41.43	83:44.64	9.22	2.58	15	15.3	218	0.33	1.5	2.7
321	88- 6-27	3:39:17.03	9:44.54	83:54.26	1.23	2.82	20	25.2	142	0.26	0.5	0.9
322	88- 6-28	14:35:31.65	9:43.75	84: 0.53	4.36	2.44	12	29.3	144	0.16	0.6	1.4
323	88- 7- 3	3:53:59.84	9:41.27	84:52.98	21.02	2.53	11	24.2	178	0.15	0.9	2.2
324	88- 7- 5	4:15: 7.01	9:42.27	84:56.30	12.26	2.58	13	18.1	172	0.13	0.7	1.1
325	88- 7- 5	21:35:14.45	10:13.18	84:54.65	10.49	2.28	11	9.2	133	0.17	0.6	1.6
326	88- 7- 8	7:16:56.04	9:43.48	84:54.06	10.76	2.46	15	22.4	166	0.29	1.0	1.9
327	88- 7-14	12:27:41.57	9:42.59	84:53.58	13.10	2.53	13	23.1	171	0.20	0.8	1.3
328	88- 7-17	16:54:26.61	9:42.97	83:49.32	5.72	2.32	10	19.0	177	0.18	1.0	1.6
329	88- 7-18	14: 1:52.76	9:41.62	83:51.92	6.46	2.25	11	18.9	150	0.17	0.6	1.5
330	88- 7-24	0:18:58.10	9:40.05	84:52.27	19.95	2.58	8	25.7	239	0.25	1.5	3.8
331	88- 7-30	11:32:30.97	9:41.48	84:56.14	19.92	2.58	15	18.4	178	0.18	0.8	1.7

APENDICE V

**MECANISMOS FOCALES COMPUESTOS, HEMISFERIO INFERIOR
(REFIERASE A LA TABLA 3 Y A LA FIGURA 3).**

SECUENCIA Nº1

NAVARRO SE

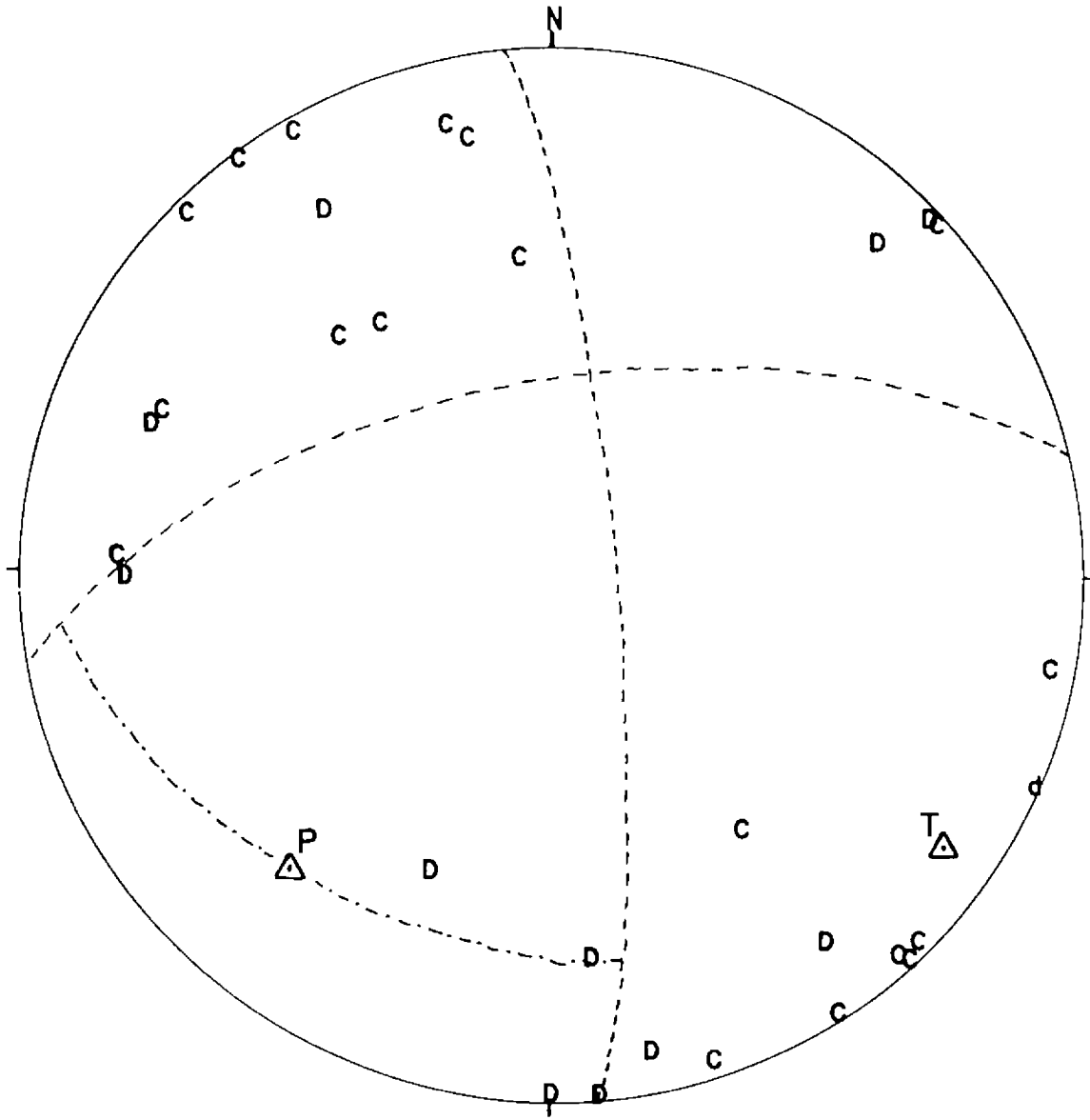


FIGURA V-1

FIGURA Nº 2

NAVARRO CENTRO

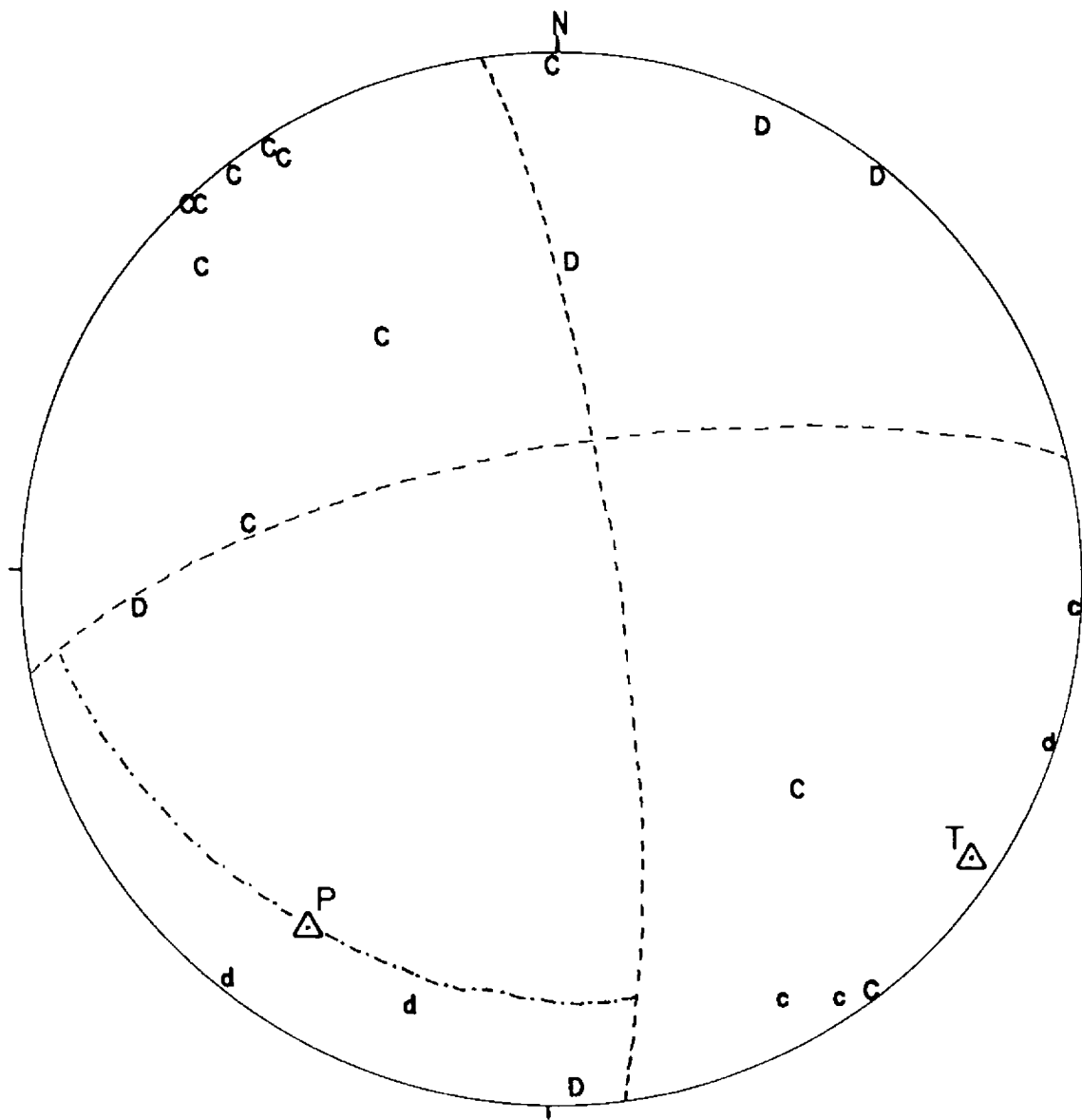


FIGURA V-2

SECUENCIA Nº 3

NAVARRO

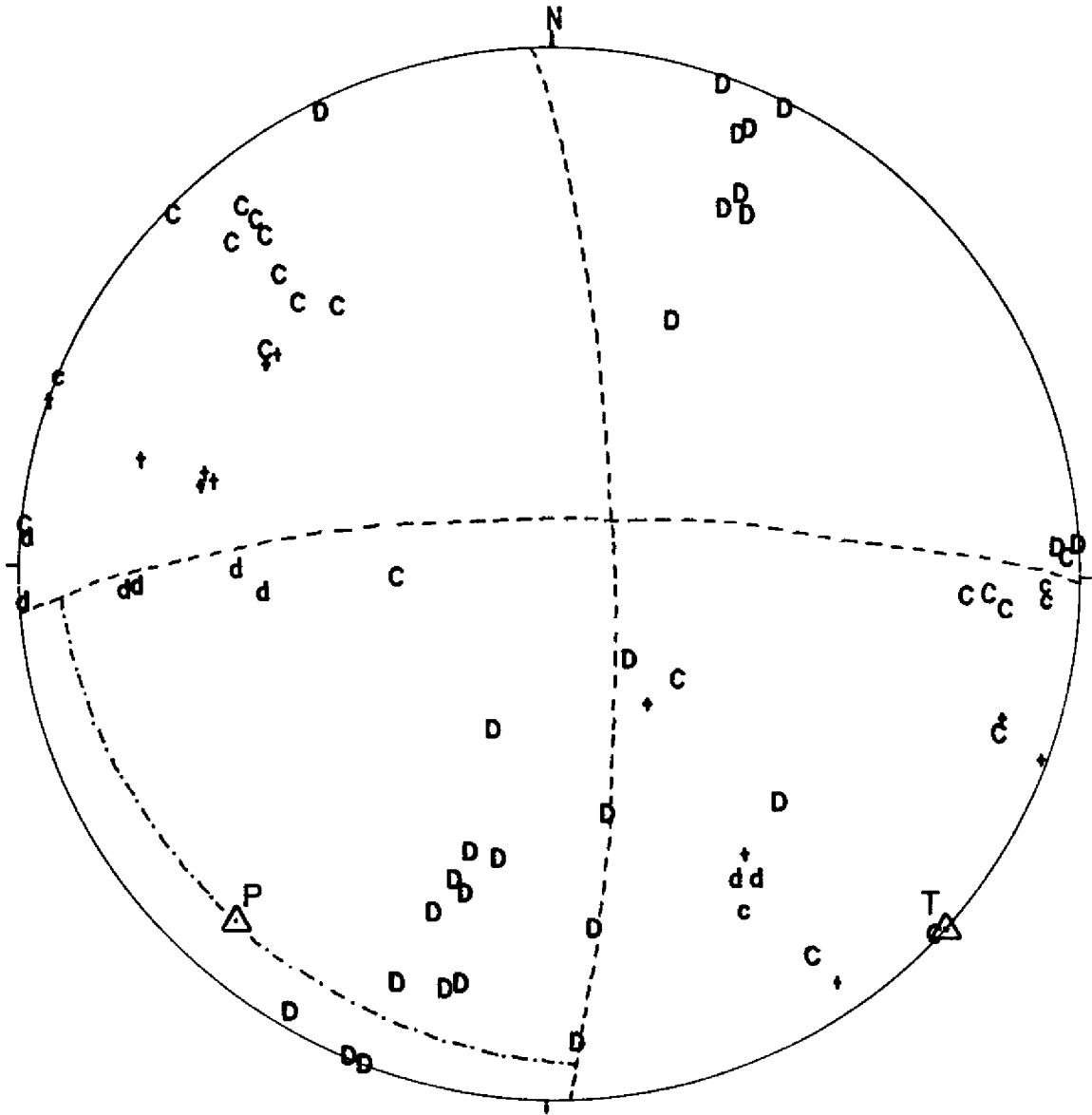


FIGURA V-3

SECUENCIA Nº 4

NORTE DE CARTAGO

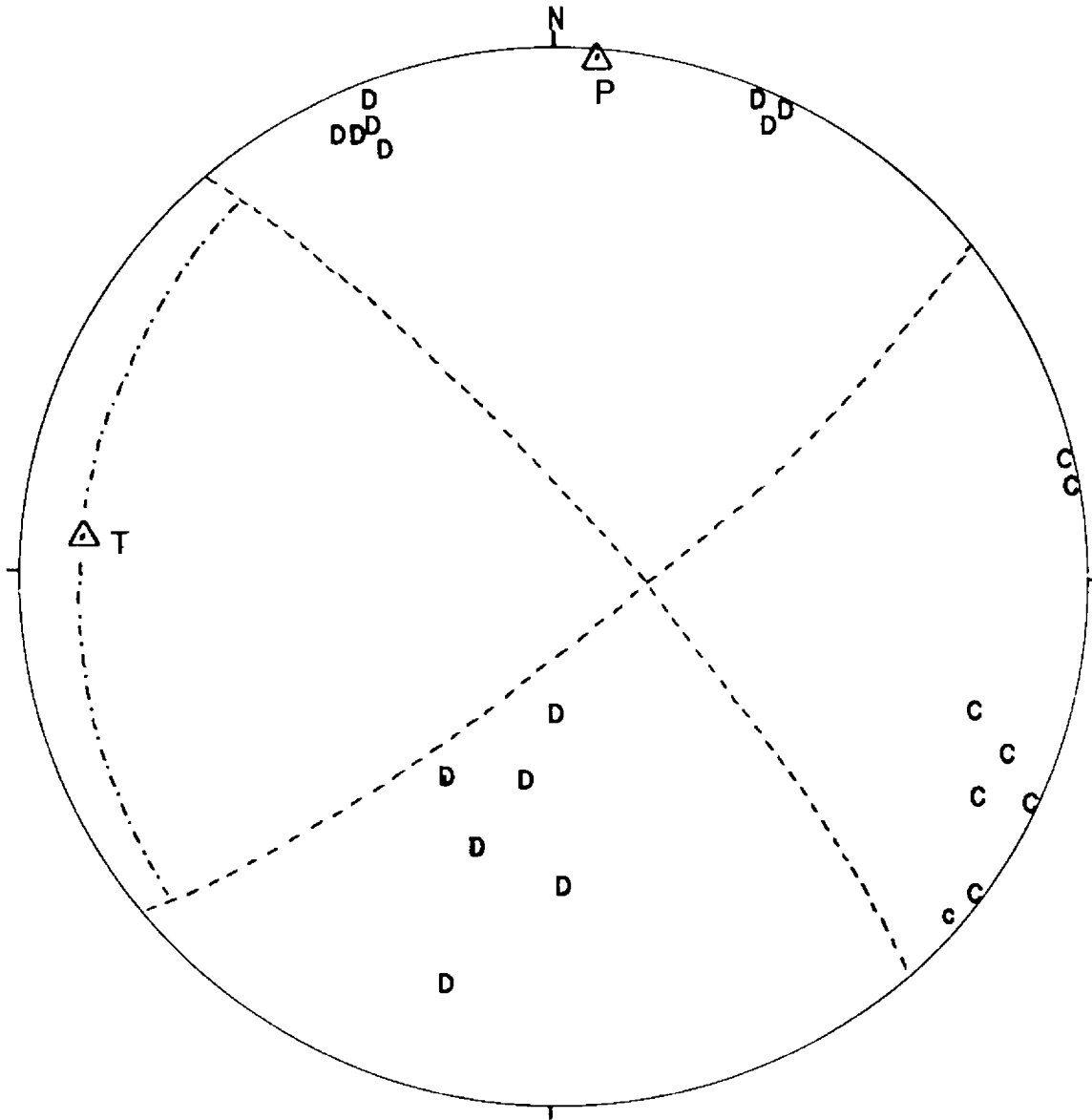


FIGURA V-4

SECUENCIA Nº 5

SAN JOSE-CORONADO

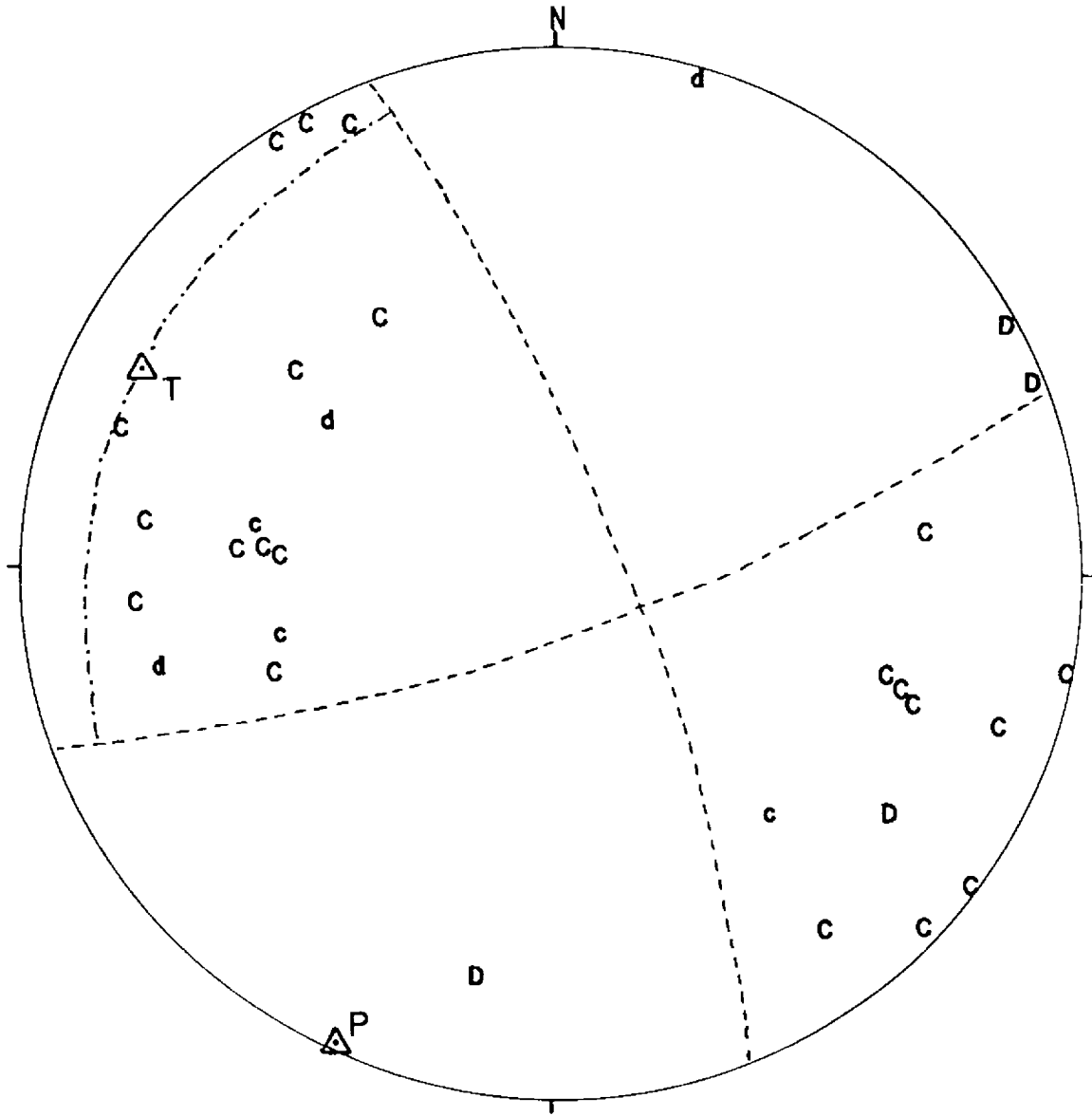


FIGURA V-5

SECUENCIA Nº 6

ZURQUI

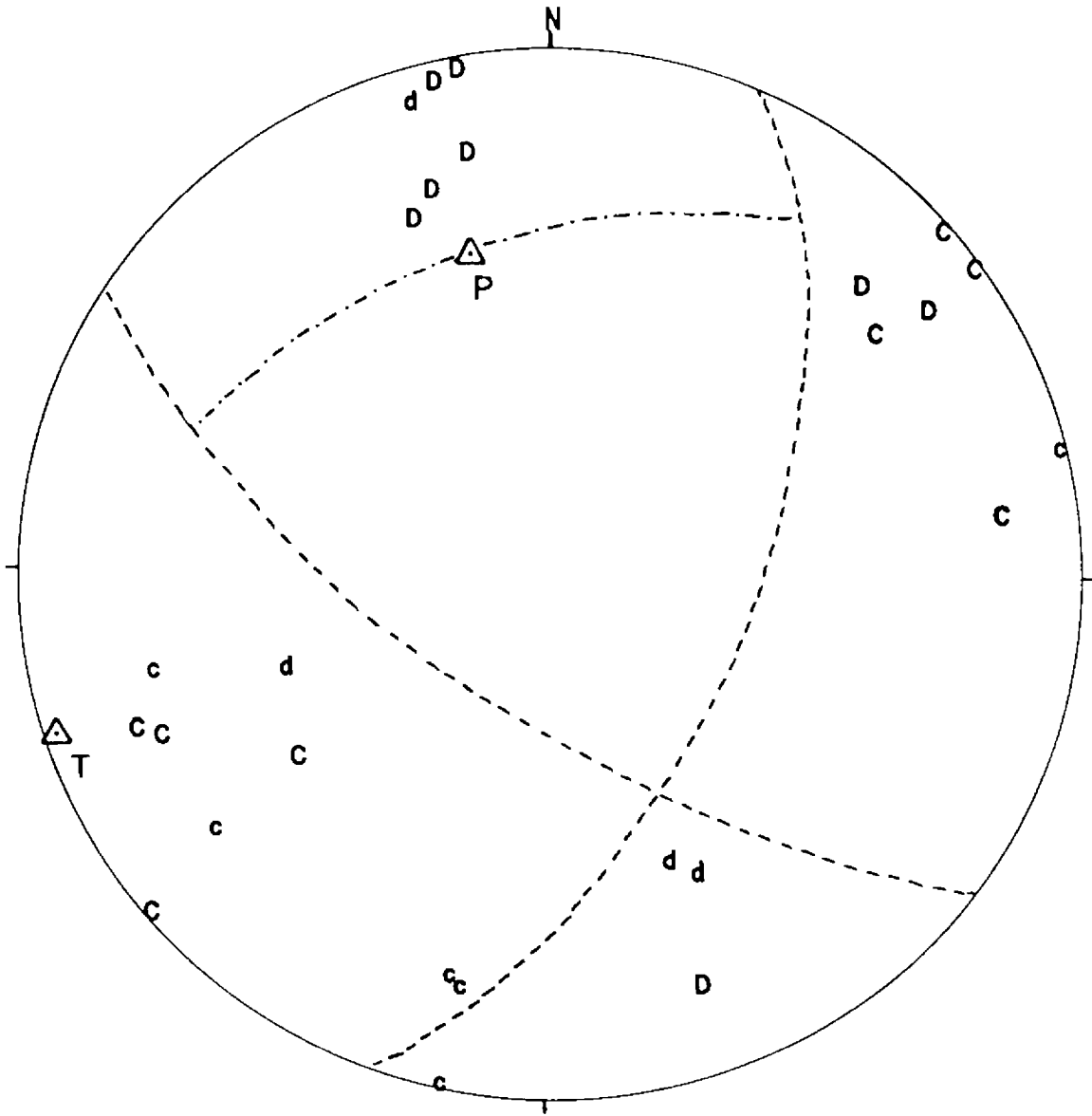


FIGURA V-6

SECUENCIA Nº 7

BARVA

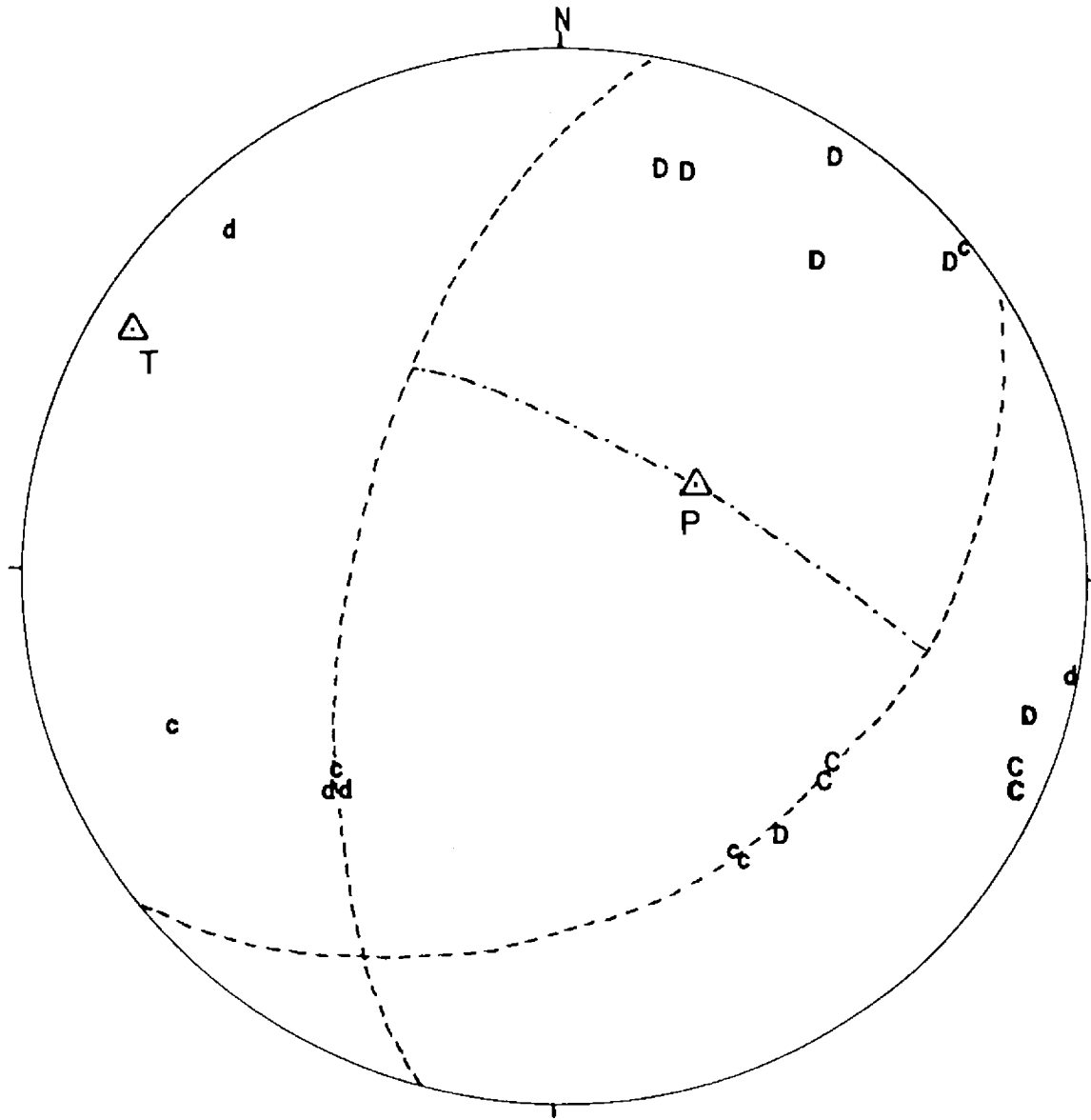
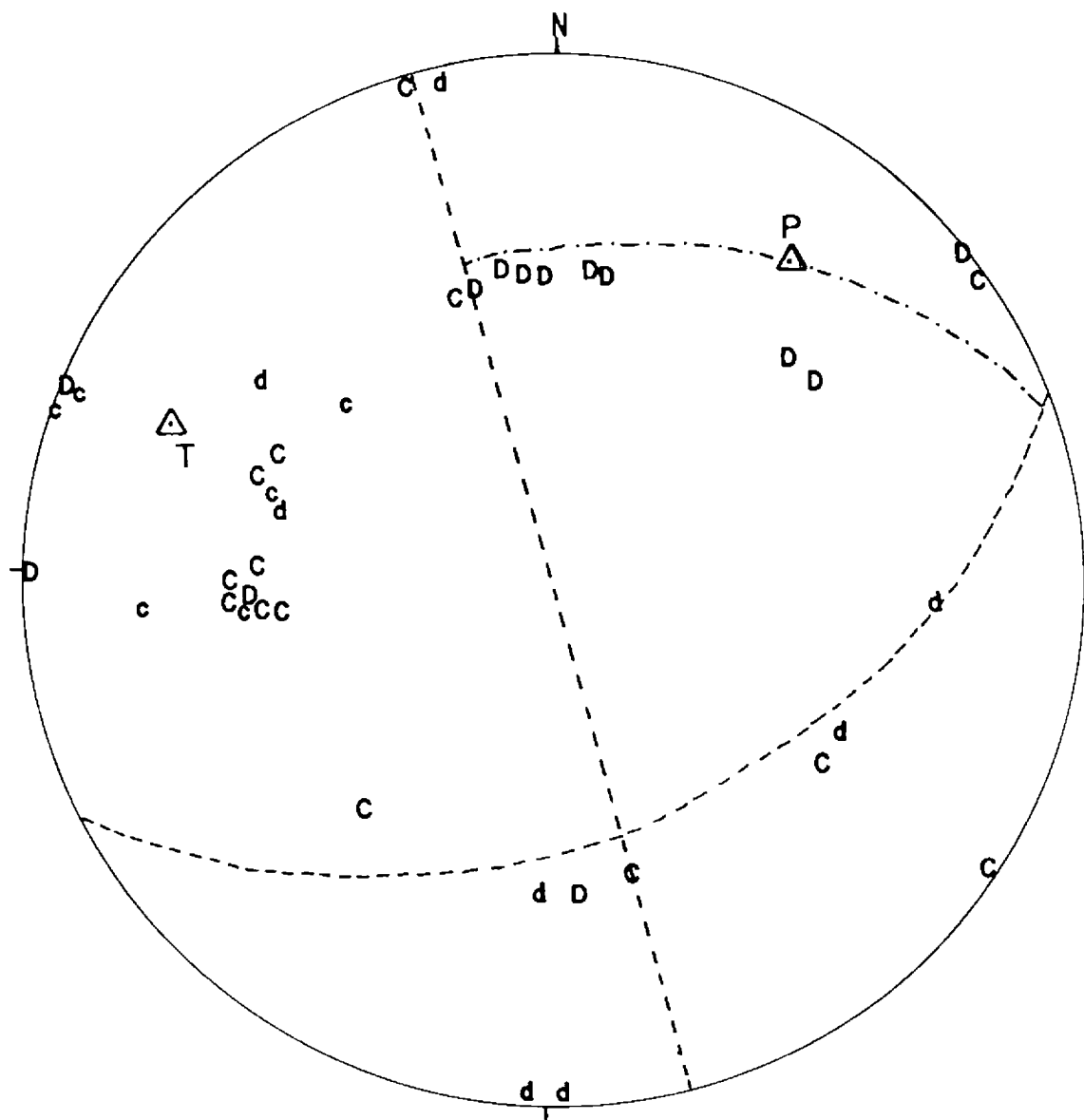


FIGURA V-7

SECUENCIAS Nº 8 y 9

SAN GABRIEL SW-NE, SE-NW



FIGURAS V-8, V-9

SECUENCIA Nº 10

PURISCAL

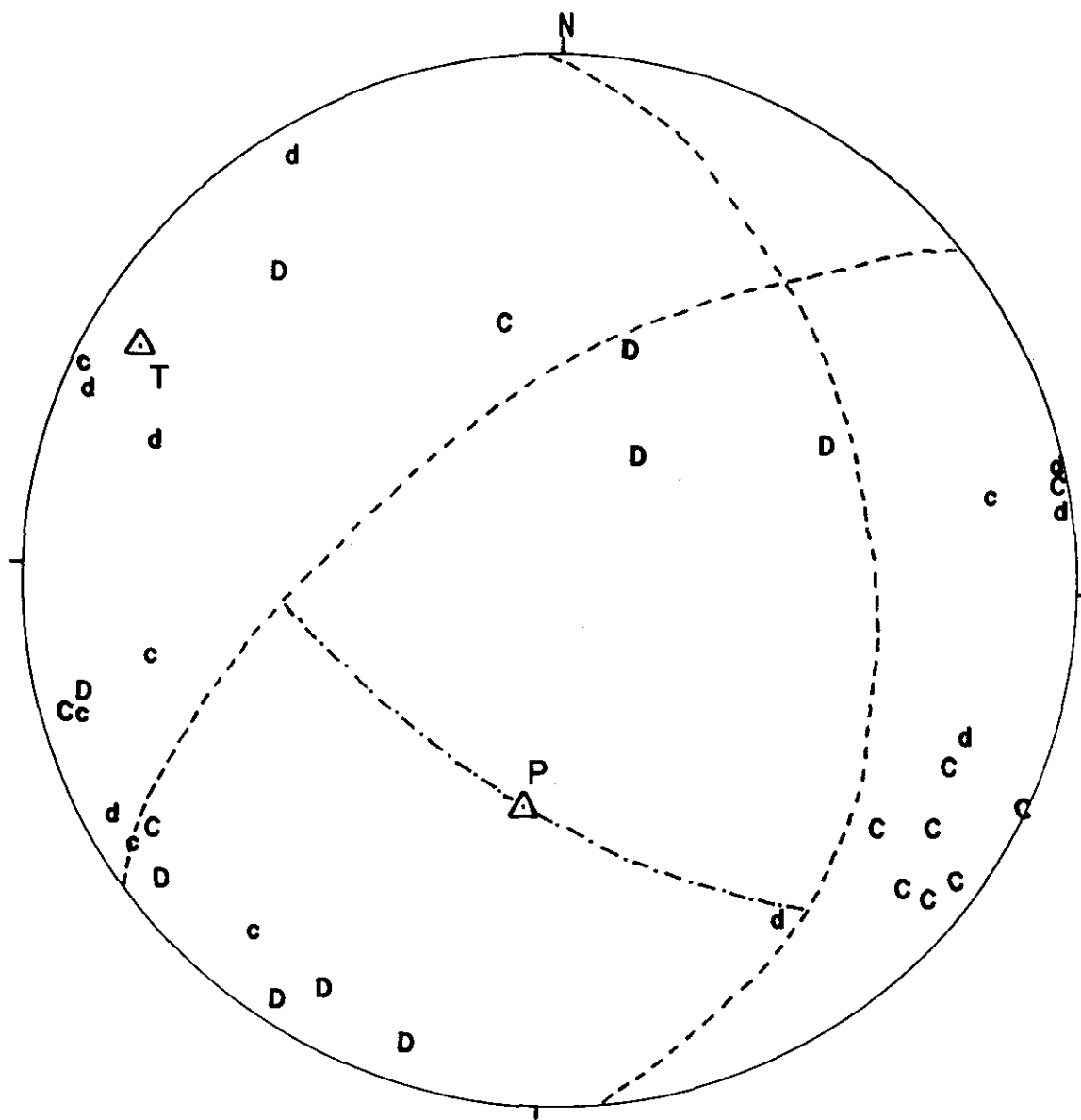


FIGURA V-10

SECUENCIA Nº 11

OROTINA

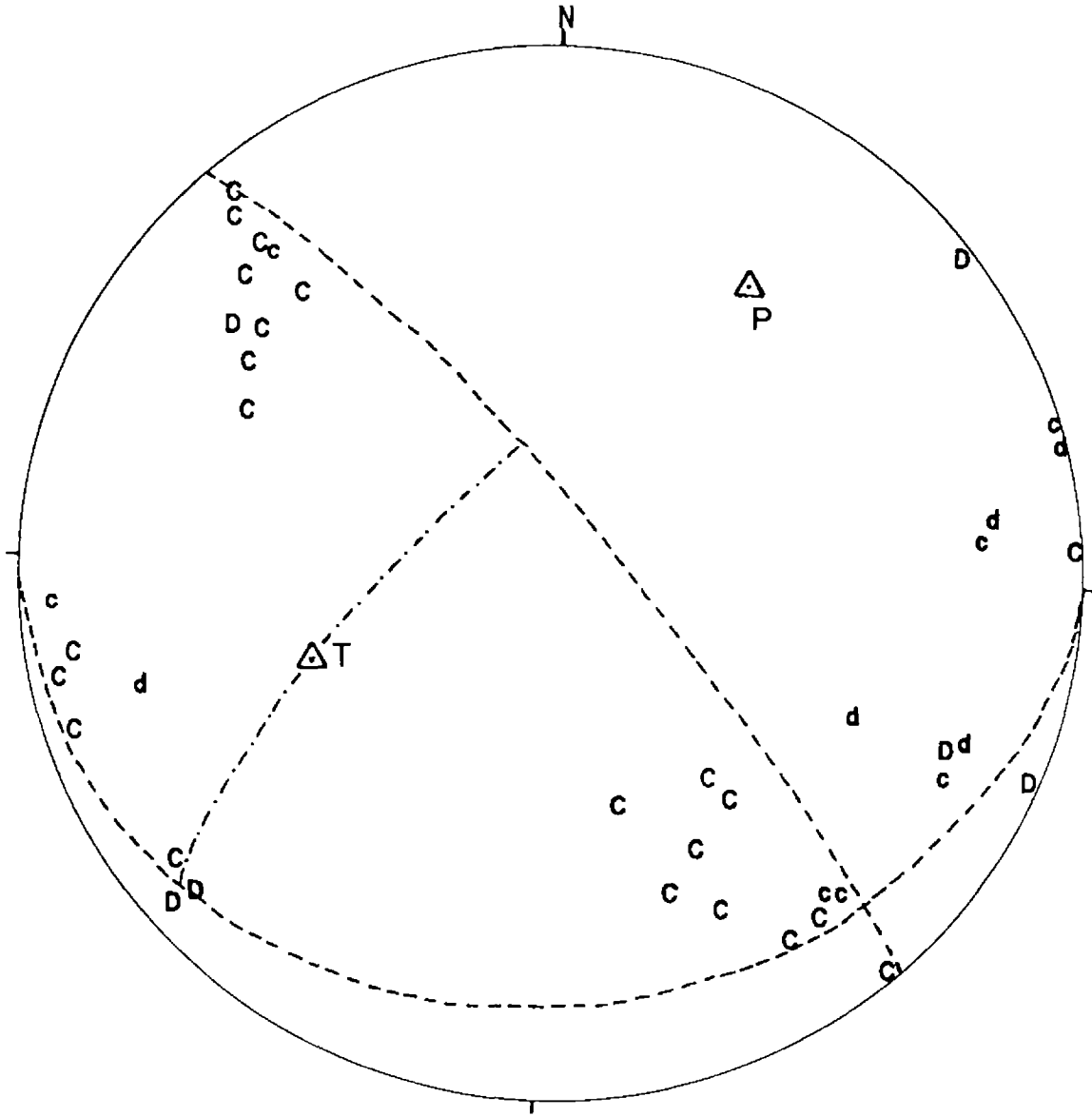


FIGURA V-11

SECUENCIA Nº 12

ENTRADA GOLFO NICOYA

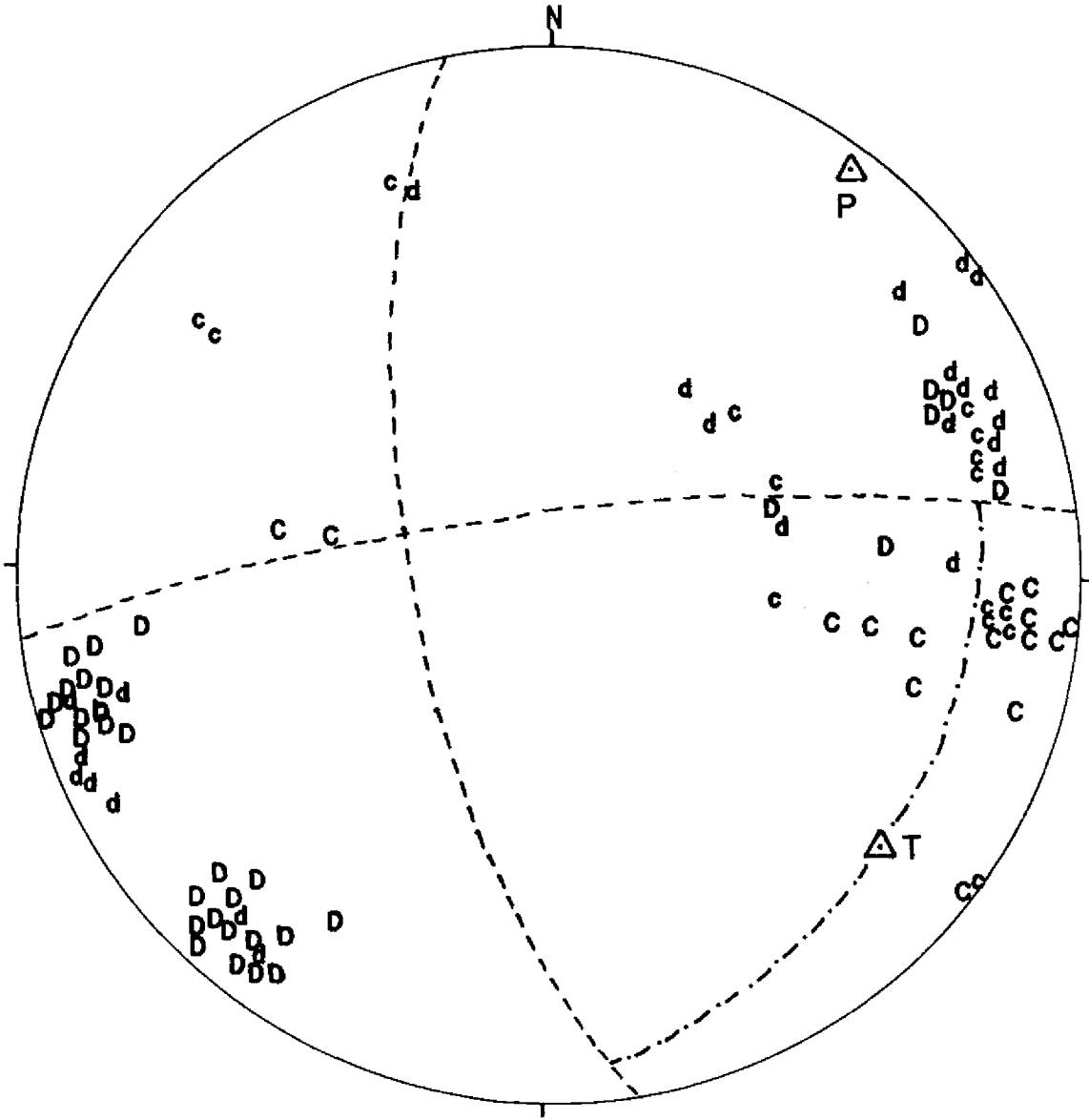


FIGURA V-12

SECUENCIA Nº 13

ESPARZA

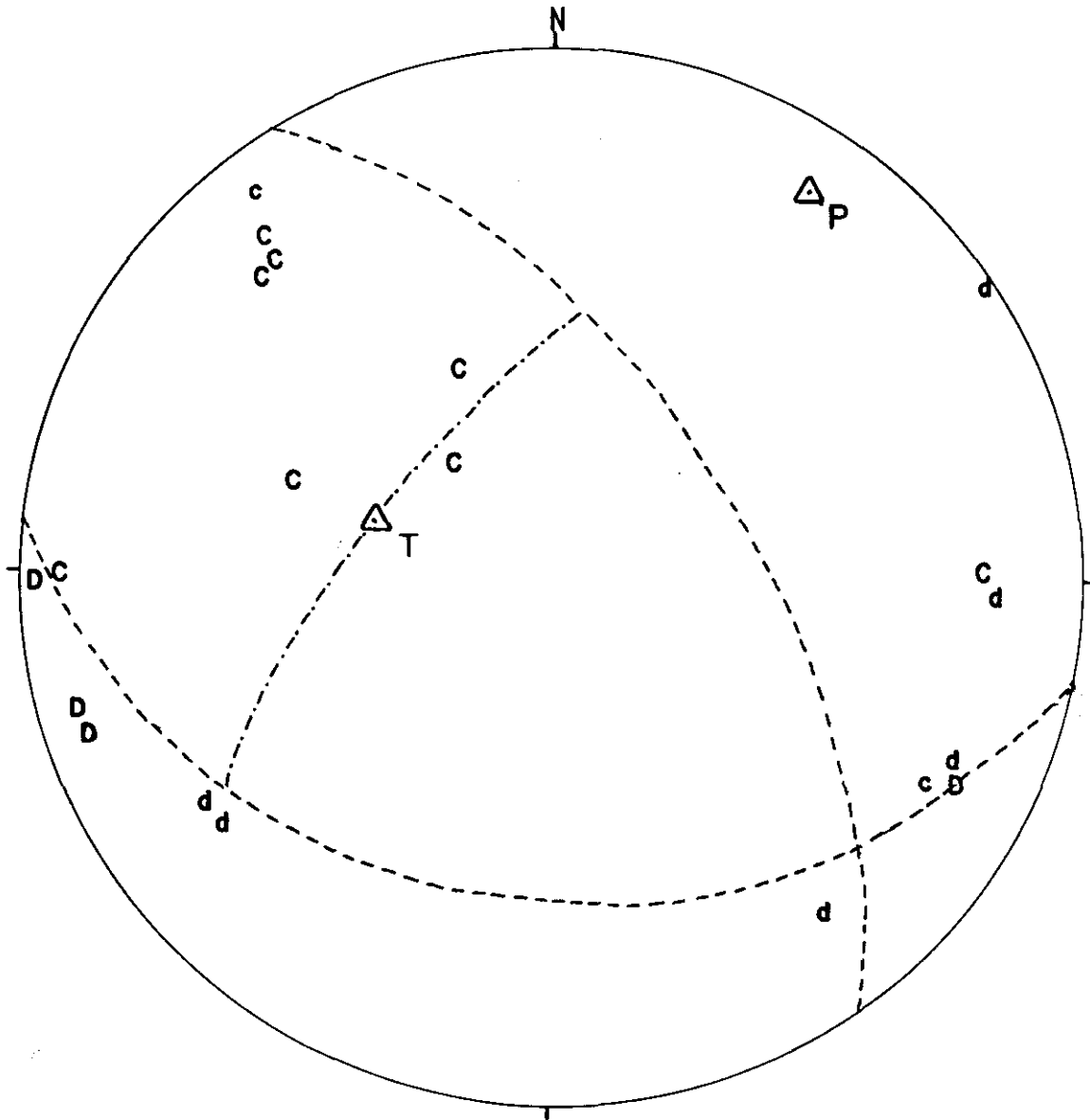


FIGURA V-13

SECUENCIA Nº 14

FORTUNA

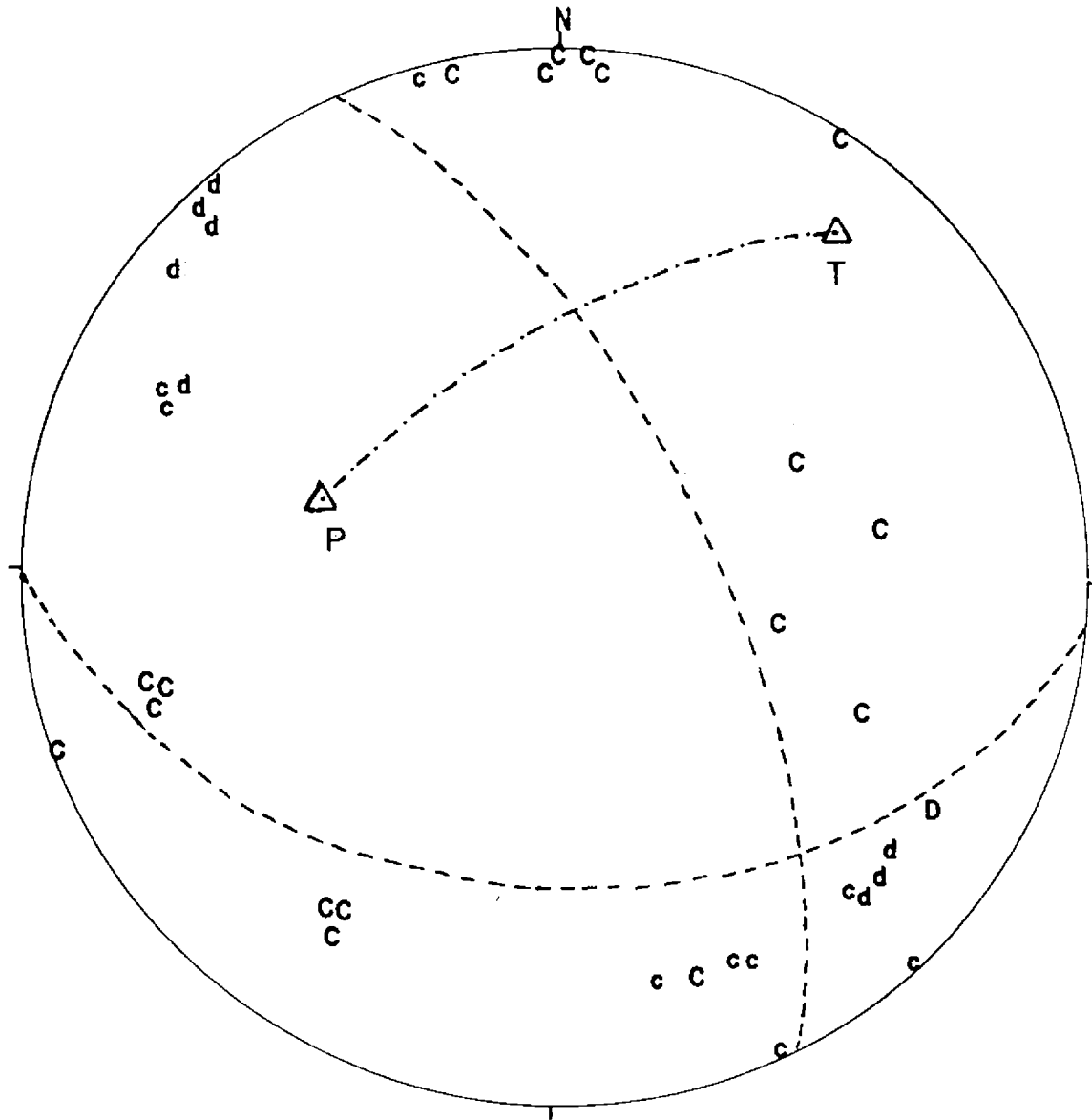


FIGURA V-14

