

Instituto Geofísico de los Andes Colombianos

BOLETIN SISMICO - Bogotá

Colegio de San Bartolomé, Apdo. 270 Bogotá, COLOMBIA © Longitud W Greenwich: 74° 03' 54", Latitud N: 4° 37' 23" Alt. 2648 mts.

Aparatos: Benioff Vertical Periodo corto (100 kilos) © Wiechert Péndulo Astático NS EW (200 kilos)

2653 / 25 NOV. 1946

No. 36

Enero de 1946

No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
				h	m	s		
885	Benioff	Enero 4	eP eS? i F	22	38	41 32 10 00	S?-P = 2400 kms.	
886		5	iP i i F	01	19	33 38 19 00		
887		5	eP e F	01	37	45 47 00		
888		5	eP e e F	07	41	30 24 41 00		
889		5	e F	20	16	10 00		Epicentro Lat. 16° S. Long. 167° E.
890		6	e F	06	57	58 00		
891		7	ePn iSn F	03	42	38 58 00	Sn-Pn = 760 Kms.	
892		7	eP F	06	34	07 00		
893		10	eP ePR1 ePR2 ePR3? i eS ePKP? eSR1 eSR2? F	07	11	43 06 12 18 10 34 46 28 35 00	S-P = 2400 kms.	
894		10	i e F	23	58	04 25 00		
895		11	iP ipP e F	01	51	29 32 35 00		
896		12	eP ePR1 F	20	37	34 35 00		
897		13	eP eS? F	07	04	56 24 00		

No.	Aparato	Fecha	Fase	Hora T.M.G.	Distancia	Observaciones
898	Benioff	Enero 13	ePn iP+ eSn iSg F	h m 3s 14 27 26 14 27 36 14 28 22 14 28 56 14 31 00	Sn-Pn = 530 kms.	
899		17	iP i e F	09 58 48 09 58 58 10 02 24 10 16 00		
900		20	iP i eS? F	06 49 18 06 49 29 06 51 32 06 57 00		
901		21	eP e F	19 53 09 19 57 10 20 03 00		
902		23	eP e e e F	06 25 55 06 26 17 06 28 56 06 29 36 06 35 00		
903		25	eP i e e i F	04 31 33 04 31 35 04 31 57 04 33 58 04 36 28 04 54 00		
904		26	iPn iP+ iPg iSn iS+ iSg F	06 45 40 06 45 47 06 45 59 06 46 27 06 46 36 06 46 49 06 51 00	Sn-Pn = 440 kms.	
905		28	iPn iSn F	05 21 04 05 21 30 05 23 00	Sn-Pn = 230 kms.	
906		28	eP F	06 59 18 07 04 00		
907		30	iPn iSn F	09 56 00 09 56 35 09 58 00	Sn-Pn = 320 kms.	

Director: J. E. Ramirez S. J.

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No. 37

Febrero de 1946

No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
				h	m	s		
908	Benioff	Febrero 1°	iPn iP+ iPg iSn iSg F	00 00 00 00 00 01	46 46 46 47 47 08	45 48 53 13 24 00	Sn-Pn = 250 kms.	
909		4	e e F	03 03 04	57 58 12	53 30 00		
910		6	iPn iP iSn iS F	23 23 23 23 23	26 26 27 27 38	21 29 01 10 00	Sn-Pn = 370 kms.	
911		9	e F	03 03	04 07	36 00		
912		10	e e F	01 01 01	18 22 27	53 04 00		
913		10	e e F	12 12 12	47 50 55	26 09 00		
914		10	e F	19 19	23 26	09 00		
915		13	eP e e F	21 21 21 21	26 30 30 36	23 16 55 00		
916		15	e F	23 23	27 31	51 00		
917		15	iP i i e F	16 16 16 16 17	55 55 55 59 10	07 12 55 53 00	Sentido en Seattle EE.UU. Epicentro: Lat.47.3°N. Long.122.7°W.	
918		15	iPn iP+ iPg iSn iPg F	20 20 20 20 20 20	47 47 47 47 47 48	07 13 19 42 45 00	Sn-Pn = 320 kms.	
919		17	e e F	08 08 04	54 58 01	28 01 00		
920		17	iPn i eSn? F	10 10 10 10	05 05 05 07	16 21 43 00		

No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
921	Benioff	Febrero 17	e i F	h. m s 11 44 14 11 44 38 11 48 00				
922		17	eP i e F	18 49 46 18 50 00 18 51 31 18 55 00				
923		20	eP i e F	04 01 47 04 01 52 04 03 27 04 13 00				
924		22	iP F	17 29 25 17 21 00				
925		24	e e F	09 49 00 09 49 57 09 53 00				
926		25	iPn iP+ iSn iS iSg F	00 09 26 00 09 29 00 09 50 00 09 52 00 09 58 00 12 00				
927		26	iPn iP+ iSn iS+ iSg F	15 51 34 15 51 44 15 52 17 15 52 31 15 52 38 15 57 00	Sn-Pn = 400 kms.			
928		27	iP? i e e F	06 11 16 06 11 22 06 11 37 06 15 52 06 24 00				
929		28	e e F	02 42 44 02 43 44 02 50 00				

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No. 38

Marzo de 1946

No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
930	Benioff	Marzo 3	eP eS? e F	05 05 05 05	00 04 06 11	44 46 12 00		
931		3	e e F	05 05 05	44 46 51	27 56 00		
932		3	ePn? eSn F	15 15 15	53 54 56	28 05 00	Sn-Pn?= 330 kms.	
933		7	iP ipP? iS isS? i F	09 09 09 09 09 10	55 55 56 56 56 02	26 34 24 32 43 00	S-P = 550? kms.	
934		7	e e F	22 22 22	00 00 04	36 58 00		
935		9	eP S? F	21 21 22	55 58 01	15 19 00		
936		10	eP e F	08 08 08	25 26 29	46 54 00		
937		11	i F	23 23	25 59	52 00		
938		13	i F	18 18	51 54	36 00		
939		15	e e F	03 03 03	22 24 30	23 50 00		
940		15	iP e ePRi e F	13 13 13 13 13	41 42 43 48 51	55 23 56 03 00	Sentido en Califor- nia	
941		15	e F	13 14	58 02	43 00		
942		16	eP e F	11 11 11	51 51 53	07 23 00		
943		17	iPn iSn iSg F	01 01 01 01	45 46 46 48	50 10 14 00	Sn-Pn = 160 kms.	
944		17	iPn iSn F	11 11 11	13 13 16	? 27 ? 00	Sn-Pn = 240 Kms.	
945		24	eP iP+ iPg eSn i iS+ iSg F	11 11 11 11 11 11 11 11	54 54 55 55 55 55 56 59	38 48 00 32 36 45 02 00		

No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
946	Benioff	Marzo 24	eP	h	m	s	S?-P = 680? Kms.	
			ipP?	21	19	22		
			i	21	19	32.5		
			eS?	21	19	40		
			i	21	20	29		
			i	21	20	36		
			i	21	21	03		
947		24	F	21	21	41	S+-P+ = 50 Kms.	
			iP+	21	33	00		
			iPn	22	15	33		
			iS+	22	15	35.5		
			iSn	22	15	40		
948		25	F	22	15	53	S-P = 1550 Kms.	
			iP	22	18	00		
			iPR1	08	51	16		
			iPR2	08	51	35		
			i	08	51	43		
			eS?	08	51	55		
			iSR1	08	54	07		
949		25	ePcP?	08	54	21		
			F	08	56	32		
			iP	08	59	00		
			iPR1?	22	21	17		
			i	22	21	31		
950		26	eS?	22	21	41		
			i	22	21	41		
			eS?	22	25	17		
			ePcP?	22	25	17		
951		27	F	22	26	18		
			iP	22	29	00		
			e	17	29	14		
			e	17	31	04		
			e	17	38	09		
952		27	F	17	46	00	Sn-Pn = 570 Kms.	
			iPn	00	12	35		
			iP+	00	12	50		
			iPg	00	13	00		
			iSn	00	13	35		
			iS+	00	13	51		
			iSg	00	14	01		
953		27	F	00	18	00		
			e	06	57	39		
954		27	F	06	59	00		Hay fases de otro temblor super- impuestas.
			iPn	18	33	10??		
			i	18	33	07??		
			i	18	33	15??		
			iSn	18	33	53??		
955		29	F	18	42	00	Sn-Pn = 550 Kms.	
			iPn	18	53	26?		
			i	18	53	36		
			iP+	18	53	42		
			iPg?	18	53	48		
			iSn	18	54	26		
			iS+	18	54	41		
956		29	iSg	18	54	54	Sn-Pn = 390 Kms.	Sentido fuertemente Popayán, Coconucos y Puracé, COLOMBIA. Causó daños en este y en los siguientes días el tiempo no es muy exacto, debido a un daño en el reloj.
			F	19	00	00		
			e	07	18	17?		
			iPn	07	18	18?		
			iP+	07	18	26?		
			iPg	07	18	42?		
			iSn	07	19	01?		
957		29	iS+	07	19	10?		
			i	07	41	00		
			F Seguido por					

No.	Aparato	Fecha	Fase	Hora T. M. G.	Distancia	Observaciones
956	Benioff	Marzo 29	iP	h m s 07 18 14?	S?-P = 1300 Kms.	Guayaquil, ECUADOR?
			iPR ₁ ?	07 18 16?		
			i	07 18 32?		
			i	07 18 46?		
			iS?	07 20 31?		
			iSR ₁ ?	07 20 44?		
			i	07 21 57?		
			iPcP	07 22 34?		
F	08 10 00?	S?-P = 1300 Kms.				
957		29	iPn	09 20 00?	Sn-Pn = 380 Kms.	
iSn	09 20 40?					
F	09 22 00					
958		29	iPn	15 02 53?	Sn-Pn = 350 Kms.	Region de Popayán
			iP ⁺	15 03 00?		
			iSn	15 03 30?		
			iS ⁺	15 03 43?		
			F	15 06 00		
959		29	iPn	17 35 18?	Sn?-Pn = 350 Kms.	
			iSn?	17 35 55?		
			F	17 38 00		
960		29	iPn	19 56 00?		Fuerte temblor en Popayán
			iSn	19 56 53?		
			F	20 06 00?		
961		29	iPn	20 08???	Sn-Pn = 480 Kms.	
			iP ⁺	20 08?09?		
			iSn	20 08?53		
			F	20 16 00		
962		30	iPn	00 04 00?	Sn-Pn = 420 Kms.	Réplica de Popayán
			iP ⁺	00 04 10?		
			iSn	00 04 46?		
			iS ⁺	00 04 59?		
			iSg	00 05 09?		
F	00 14 00?					
963		30	iPn	04 56 00?	Sn-Pn = 400 Kms.	De Popayán
			iP ⁺	04 56 09?		
			iPg	04 56 19?		
			iSn?	04 56 44		
			iS ⁺	04 56 55		
			iSg	04 57 07		
F	05 10 00					
964		30	iPn	06 23?00?	Sn-Pn = 450 Kms.	Débil
			iSn	06 23?50?		
			F	06 23 00		
965		30	iPn	17 08 33	Sn-Pn = 390 Kms.	
			i	17 08 36		
			iP ⁺	17 08 42		
			iSn	17 09 16		
			iS ⁺	17 09 25		
			Sg	17 09 35		
F	17 24 00					
966		30	iP	23 54 06?	Sn-Pn = 430 Kms.	
			i	23 54 13?		
			iP ⁺	23 54 17?		
			iSn	23 54 54?		
			iS ⁺	23 55 02?		
			i	23 55 06?		
F	23 59 00					

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No. 39

25 NOV. 1946

Abril de 1946

No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
967	Benioff	Abril 1	i F	h 06	m 11	s 21		
968		1	eP i e F	12 12 12 13	41 42 46 02	49 06 03 00		
969		1	i F	13 13	08 15	29 00		
970		1	iPn iP ⁺ iSn iS ⁺ iSg F	13 13 13 13 13 13	15 15 16 16 16 24	47 54 33 38 46 00	Sn-Pn = 390 Kms.	Débil
971		1	iPn iP ⁺ iSn i iSg? F	14 14 14 14 14 14	54 54 55 55 55 59	41 49 26 32 41 00	Sn-Pn = 400 Kms.	
972		1	e e F	19 19 19	10 10 16	22 29 00		
973		2	e F	04 04	26 34	26 00		
974		2	i e F	05 05 05	50 53 58	57 57 00		
975		2	i F	06 06	09 16	50 00		
976		2	iPn i iP ⁺ iSn iS ⁺ i i F	10 10 10 10 10 10 10 10	53 53 53 54 54 54 54 59	48 52 56 33 44 50 57 00	Sn-Pn = 400 Kms.	
977		3	iPn iP ⁺ iSn iS ⁺ i F	00 00 00 00 00 00	02 02 03 03 03 05	49 52 16 19 23 00	Sn-Pn = 240 Kms.	
978		3	e e F	03 03 03	32 42 46	55 17 00		
979		3	iPn iP ⁺ iPg iSn iS ⁺	13 13 13 13 13	05 05 05 06 06	12 21 32 03 14 00	Sn-Pn = 470 Kms.	



No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
980	Benioff	Abril 4	e	h	m	s		
			e	15	51	35		
			i	15	54	30		
			F	15	54	53		
				16	01	00		
981		4	i	21	38	23		
			F	21	43	00		
982		5	ePn	14	20	31	Sn-Pn = 400 Kms.	
			iPg	14	20	47		
			iSn	14	21	16		
			iS+	14	21	26		
			iSg	14	21	36		
			F	14	23	00		
983		6	e	03	25	14		
			F	03	36	00		
984		6	e	05	44	50		
			e	05	47	01		
			e	05	48	12		
			F	05	51	00		
985		6	iPn	08	26	42	Sn-Pn = 230 Kms.	
			iP+	08	26	45		
			i	08	26	48		
			iPg	08	26	50		
			iSn	08	27	08		
			iS+	08	27	10		
			iSg	08	27	17		
			F	08	30	00		
986		6	e	13	57	45		
			F	14	02	00		
987		7	e	03	46	44		
			e	03	50	23		
			i	03	50	30		
			i	03	51	15		
			i	03	51	23		
			i	03	51	40		
			F	04	00	00		
988		7	ePn	03	08	51	Sn-Pn = 300 Kms.	
			iP+	03	08	54		
			iSn	03	09	30		
			iSg	03	09	37		
			i	03	09	45		
			F	03	12	00		
989		8	iP	00	28	12		
			iPR ₂ ?	00	28	17		
			i	00	28	47		
			eS?	00	30	32		
			e	00	30	59		
			e	00	31	12		
			e	00	33	40		
			F	00	40	00		
990		11	iP	02	02	30		
			i	02	02	32.5		
			i	02	02	51		
			i	02	03	04		
			eS?	02	11	04		
			e	02	14	02		
			eL?	02	25	44		
			eM?	02	28	44		
			eM?	02	30	00		
			F	03	56	00		

No.	BAparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
991	Benioff	Abril 11	e F	h m s 09 48 25 09 51 00				
992		13	e e F	01 35 37 01 36 57 01 40 00				
993		13	ePn iP+ eSn eS+ eSg? F	21 26 17 21 26 24 21 27 00 21 27 03 21 27 27 21 29 00		Sn-Pn = 400 Kms.		
994		13	eP e F	23 29 14 23 30 18 23 32 00				
995		14	iPn iS+ iSn iSg. F	10 53 19 10 53 34 10 53 35.5 10 53 38 10 54 44		Sn-Pn = 130 Kms.		
996		16	e F	13 45 13 13 48 00				
997		16	iPn iP+ eSn iS+ iSg F	14 51 46 14 51 53 14 52 31 14 52 41 14 52 50.5 14 54 00		Sn-Pn = 400 Kms.		
998		16	eP+ ePg iS+ eSg iSn F	01 50 07 01 50 10 01 50 19.5 01 50 21 01 50 23 01 52 00		Sn-Pn = 80 Kms.		
999		18	e F	08 46 18 08 48 00				
1,000		18	iPn i iSn iS+ iSg F	11 22 11 11 22 13 11 22 39 11 22 42 11 22 50 11 25 00		Sn-Pn = 250 Kms.		
1,001		21	iPn iP+ iPg iSn i iS+ iSg F	18 23 43 18 23 51 18 24 00 18 24 31 18 24 34 18 24 44 18 24 55 18 40 00		Sn-Pn = 450 Kms.	Probablemente de Popayán	
1,002		23	iP+ iPn iS+ iSg iSn i F	23 04 12.5 23 04 14 23 04 18 23 04 19.5 23 04 22 23 04 33 23 08 00		S+P+ = 50 Kms.		

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No. 40.

131 4701 NAR 86 Mayo de 1946

No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
1,008	Benioff	Mayo 2	iPn iSn i F	h 10	m 34	s 34 17 22 00	Sn-Pn = 400 Kms.	
1,009		3	e F	22	07	50 00		
1,010		3	e e F	22	23	42 11 00		
1,011		3	iP iPKP ePR ₁ iSKP eSKS F	22	40	16 06 38 40 43 00		Epicentro: Lat. 9° S. Long. 153° E.
1,012		4	e e i F	13	08	52 59 35 00		
1,013		6	e e F	05	27	09 05 00		
1,014		6	iPn eS? e F	09	07	15 04 11 00		
1,015		8	iP e L F	05	39	?? ?? 00 00		
1,016		8	iP e F	09	04	?? 06 00		
1,017		8	iP i e e e F	15	59	18 40 41 16 55 00		
1,018		9	iP iPR ₁ iPR ₂ eS iSR ₁ F	04	56	00 19 44 54 26 00	S-P = 4150 Kms.	Epicentro: Lat. 22° N. Long. 108° O.
1,019		9	e e F	23	32	49 24 00		
1,020		15	iP i e F	22	16	06 11 50 00		Epicentro: Lat. 16° N. Long. 96° O.

No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.M.G.				
				h	m	s		
1,021	Benioff	Mayo 15	iP i e F	22 22 22 22	29 29 34 38	48 57 33 00		Parece una Réplica del anterior
1,022		17	iPn i Sn i F	02 02 02 02 02	18 18 18 18 20	36 41 51.5 44.5 00		Sn-Pn = 120 Kms.
1,023		19	iP i i F	13 13 13 13	12 12 13 17	49 54 42 00		
1,024		20	eP F	08 08	33 38	01 00		
1,025		21	iP i iPR1 eS i eSR1 iPcP i F	09 09 09 09 09 09 09 09 09	20 20 20 23 23 24 24 26 45	41 47 53 46 57 07 59 29 00		S-P = 1800 Kms. Epicentro: Lat. 14.2° N. Long. 60.8° O.
1,026		26	iPn iSn F	20 20 20	25 25 26	10 28 00		Sn-Pne = 140 Kms.
1,027		29	e e F	19 19 19	44 44 47	01 08 00		

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No. 41

Junio de 1946

No.	Aparato	Fecha	Fase	Hora			Distancia	Observacion
				T.	M.	G.		
1,028	Benioff	Junio 1	ePn?	h	m	s	Sn-Pn = 590 Kms.	
			e	05	54	07		
			iP+	05	54	12		
			iPg	05	54	18		
			iSn	05	54	35		
			i	05	55	10		
			iS+	05	55	19		
			iSg	05	55	27		
			i	05	55	46		
			F	05	56	16		
1,029		2	iPn	06	01	00	Sn-Pn = 400 Kms.	
			i	07	37	04		
			iP+	07	37	07		
			iPg	07	37	10		
			iSn	07	37	21		
			iS+	07	37	47		
			i	07	37	57		
			iSg	07	38	04		
			F	07	38	08		
			F	07	44	00		
1,030		4	iPn	10	30	46	Sn-Pn = 500 Kms.	
			iP+	10	30	58		
			iPg	10	31	07.5		
			iSn	10	31	40.5		
			iS+?	10	31	59		
			iSg	10	32	08		
			F	10	38	00		
1,031		5	eP	01	11	55		
			e	01	15	26		
			F	01	18	00		
1,032		5	eP	13	28	09	Sn-Pn = 300 Kms.	
			iP+	13	28	14		
			iSn	13	28	43		
			iS+	13	28	51		
			iSg	13	28	58		
			F	13	32	00		
1,033		6	iP	06	09	41		
			i	06	13	56		
			F	06	19	00		
1,034		6	iPn	07	17	23	Sn-Pn = 470 Kms.	
			iP+	07	17	33		
			eSn	07	18	12		
			eS+	07	18	27		
			F	07	20	00		
1,035		6	iP	07	48	20		
			i	07	48	39		
			F	07	55	00		
1,036		6	e	10	47	24		
			L	11	11	41		
			F	11	23	00		
1,037		7	eP	04	18	20		
			iP	04	18	25		
			iPR ₁ ?	04	18	36		
			i	04	19	27		
			i	04	20	29		
			i	04	23	55		
			F	04	47	00		



No.	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
1,038	Benioff	Junio 7	eP	h	m	s		
			e	07	02	05		
			e	07	02	32		
			F	07	04	51		
			F	07	10	00		
1,039		9	iPn	15	32	21.5		
			F	15	36	00		
1,040		10	eP	17	07	56		
			PR ₁ ?	17	08	07		
			e	17	08	18		
			iS?	17	11	10		
			iSR ₁ ?	17	11	34		
			SR ₃ ?	17	11	48		
			ePcP?	17	13	03		
			F	17	19	00		
1,041		11	iPn	06	10	50		Sentido por muchos en Santa Marta, Colombia
			iPg	06	11	28		
			iSN	06	12	11		
			i	06	12	40		
			iSg?	06	12	59		
			F	06	21	00		
						Sn-Pn = 760 Kms.		
1,042		12	ePn	06	46	09		
			i	06	46	13.5		
			iP+	06	46	18		
			iPg	06	46	31		
			iSn	06	46	00		
			iSg	06	47	22		
			F	06	50	00		
						Sn-Pn = 460 Kms.		
1,043		15	e	01	05	55		
			e	01	06	42		
			i	01	08	57		
			F	01	13	00		
1,044		20	iPn	19	45	49		
			iP+	19	45	54		
			eSn?	19	46	32		
			F	19	47	00		
1,045		23	iP	17	23	49		Epicentro: Lat. 49.9° N. Long. 125.3° O.
			i	17	24	05		
			iPcP	17	24	32		
			ePR ₁	17	26	33		
			eS	17	32	20		
			e	17	32	54		
			eScS	17	33	20		
			e	17	55	05		
			F	18	05	00		
1,046		24	e	00	14	33		
			i	00	15	03		
			F	00	25	00		
1,047		25	iPn	11	26	35		
			iP+	11	26	44		
			iSn	11	27	25		
			F	11	31	00		
						Sn-Pn = 460 Kms.		
1,048		26	e	02	12	57		
			F	02	17	00		
1,049		26	iP	07	58	06		
			i	07	58	16.5		
			e	08	02	06		
			e	08	05	59		
			e	08	09	48		
			F	08	15	00		
1,050		30	eP	05	04	52		
			e	05	08	26		
			F	05	12	00		

Instituto Geofísico de los Andes Colombianos

BOLETIN SISMICO - Bogotá

Colegio de San Bartolomé, Apdo. 270 Bogotá, COLOMBIA © Longitud W Greenwich: 74° 03' 54", Latitud N: 4° 37' 23" Alt. 2648 mts.

Aparatos: Benioff Vertical Período corto (100 kilos) © Wiechert Péndulo Astático NS EW (200 kilos)

No. 42

Julio de 1946

No.	Aparato	Fecha	Fase	Hora T. M. G.	Distancia	Observacion
1,051	Benioff	Julio. 1	eP i F	22 54 48 22 58 21 23 01 00		
1,052		2	e F	13 14 06 13 16 00		
1,053		4	eP e e F	04 43 19? 04 47 15? 04 49 12? 04 56 00		
1,054		7	e F	05 21 56 05 27 00		
1,055		8	iP i F	01 35 18 01 36 53 01 43 00		
1,056		8	e F	15 16 08 15 19 00		
1,057		8	eP iS? i iPcP? F	14 52 55 15 03 34 15 03 40 15 04 17 15 10 00		
1,058		9	iPn i iSn iSg F	02 17 48 02 17 55 02 18 06 02 18 09 02 20 00	Sn-Pn = 150 Kms.	
1,059		9	eP F	15 36 06 15 42 00		
1,060		11	iP i e eS eScS? F	04 51 46 04 52 54 04 54 08 04 55 50 05 02 52 05 07 00		Epicentro: Lat. 17° N. Long. 94° O.
1,061		12	i F	18 08 11 18 11 00		
1,062		12	iP i i F	23 31 18 23 31 29 23 33 05 23 39 00		
1,063		13	e e e F	12 41 29 12 43 54 12 45 06 12 48 00		
1,064		16	i i F	03 41 26? 03 41 44? 03 47 00		
						No se obtuvo sismo- grama en el día 17- 18, 1946.



No.	Aparato	Fecha	Fase	Hora T. M. G.	Distancia	Observaciones
1,065	Benioff	Julio 22	iPn iP+ iSn iSg iS+ F	05 15 47 05 15 53 05 16 22 05 16 28 05 16 40 05 19 00	Sn-Pn = 320 Kms.	
1,066		26	iP i i e e e e F	06 50 07? 06 50 12? 06 50 31? 06 54 37 06 55 47 06 56 48 06 57 22 07 14 00		
1,067		27	iPn eS+ eSg e eSn eS+ eSg F	09 50 57 09 51 11 09 51 22 09 51 44 09 51 58 09 52 15 09 52 26 09 55 00	Sn-Pn = 560 Kms.	
1,068		28	iPn i F	01 15 56 01 16 03 01 18 00		
1,069		30	iPn iSn F	04 44 52 04 45 29 04 47 00	Sn-Pn = 300 Kms.	
1,070		31	iP i i i F	01 32 43 01 33 00 01 35 30 01 36 37 01 50 00		

Director: J.E. Ramirez S.J.

INSTITUTO GEOFISICO DE LOS ANDES COLOMBIANOS, BOGOTA
 Special Seismic Bulletin Benioff Vertical, Short Period

	Phase	G. C. T.		
		h	m	s
Earthquake of Juni 26 1946	e	02	12	57
	F	02	17	00
" " " " "	iP	07	58	06
	i	07	58	16.5
	e	08	02	06
	e	08	05	59
	e	08	09	48
	F	08	15	00
" " " 30 "	eP	05	04	52
	e	05	08	26
	F	05	12	00
" " July 1 "	eP ¹²	22	54	48
	i	22	58	21
	F	23	01	00
" " " 2 "	e	13	14	06
	F	13	16	00
" " " 4 "	eP	04	43	19?
	e	04	47	15?
	e	04	49	12?
	F	04	56	00
" " " 7 "	e	05	21	56
	F	05	27	00
" " " 8 "	eP	01	35	18
	i	01	36	53
	F	01	43	00
" " " 8 "	e	15	16	08
	F	15	19	00
" " " " "	eP	14	52	55
	iS?	15	03	34
	i	15	03	40
	iPcP?	15	04	17
	F	15	10	00
" " " 9 "	eP	15	36	06
	F	15	42	00

2204
 -7 SEPT. 1946

JERamirez P.

N.B. El Prof. Brunet me ha enviado de Quito sus artículos sobre Colombia, gracias a la intervención de Ud. Mil gracias.

Attns. JER

Instituto Geofísico de los Andes Colombianos

Agosto, 1946

BOLETIN SISMICO - Bogotá

Colégio de San Bartolomé, Apdo. 270 Bogotá, COLOMBIA © Longitud W Greenwich: 74° 05' 54", Latitud N: 4° 37' 23" Alt. 2648 mts.

No. 43 Aparatos: Benioff Vertical Periodo corto (100 kilos) © Wiechert Péndulo Astático NS EW (200 kilos)

No	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.M.G.	h.	m.		
1,071	Benioff	Agosto 1	iP	20	59	26	S-P = 1600 Kms.	
			iPR ₃	20	59	38		
			eS	21	02	15		
			F	21	04	00		
1,072		2	iPn	05	16	22	Sn-Pn = 310 Kms.	Sentido en Bucaramanga, Charalá, etc. (Colombia)
			iP+	05	16	27		
			iSn	05	16	57		
			i	05	17	22		
			F	05	30	00		
1,073		2	iP	19	25	08	S-P = 3500 Kms.	Norte de Chile
			i	19	25	11		
			iPcP	19	27	57		
			eS	19	30	14		
			eScS	19	35	58		
			eM	19	38	08		
			F	19	58	00		
1,074		4	eP	17	54	42		Destructor en la Isla de Santo Domingo. Seguido de 25 réplicas el mismo día
			i	17	54	44.5		
			iPR ₁	17	54	46		
			iS?	17	56	58		
			iPcP	17	59	52		
			iScP?	18	03	16		
			iScS?	18	06	39		
			e	18	16	26		
			F	19	40	00		
1,075		4	eP	20	57	10	S-P = 1720 Kms.	Réplica
			i	20	57	12.5		
			iS	21	00	08		
			i	21	00	33		
			F	21	11	00		
1,076		4	eP	21	53	21.5		
			i	21	53	25		
			iPR ₁	21	53	30		
			i	21	55	30		
			iS?	21	56	05		
			e	21	58	25		
			F	22	04	00		
1,077		5	eP	20	12	34	S-P = 1680 Kms.	
			e	20	12	36.5		
			eS	20	15	29		
			eSR ₁	20	15	50		
			F	20	18	00		
1,078		6	eP	06	00	57	S-P = 1680 Kms.	
			iPR ₁	06	01	06		
			eS	06	03	33		
			iSR ₂	06	04	28		
			F	06	13	00		
1,079		7	eP	05	36	43		
			iPR ₁ ?	05	36	48		
			e	05	39	27		
			eS?	05	39	51		
			F	05	44	00		
1,080		7	eP	06	21	01		
			i	06	21	07		
			F	06	26	00		
1,081		7	eP	09	36	43		
			iPR ₁	09	36	49		
			F	09	43	00		
1,082		7	iPn	14	53	23	Sn-Pn = 380 Kms.	
			iSn	14	54	05		
			F	14	57	00		
1,083		7	iP	18	15	03		
			i	18	15	10		
			i	18	15	14		
			i	18	17	49		
			F	18	24	00		
							S? - P = 1.600 Kms.	



No	Aparato	Fecha	Fase	Hora			Distancia	Observaciones
				T.	M.	G.		
1084	Benioff	Agosto 7	iP	19	25	09		
			i	19	25	22		
			i	19	25	30		
			eS?	19	26	49		
			e	19	27	10		
			F	19	35	00		
1,085		7	iP	19	52	19		
			i	19	52	33		
			e	19	54	59		
			e	19	55	17		
			F	19	58	00		
1,086		7	eP	21	30	44		
			iPR ₁ ?	21	30	50		
			F	21	37	00		
1,087		7	eP	22	18	44		S--P = 1,700 Kms.
			iPR ₁	22	18	52		
			e	22	21	28		
			eS	22	21	40		
			F	22	24	00		
1,088		8	cP	01	05	01		
			i	01	05	06		
			eS?	01	07	45		
			F	01	09	00		
1,089		8	iP	01	30	11		S?--P = 1,600 Kms.
			i	01	30	16		
			eS?	01	32	59		
			F	01	36	00		
1,090		8	eP	03	44	30		
			e	03	44	35.5		
			F	03	49	00		
1,091		8	iP	08	35	54		S--P = 1,660 Kms.
			i	08	35	59		
			e	08	38	39		
			iS	08	38	45		
			i	08	39	30		
			F	08	41	00		
1,092		8	iP	13	32	10		S?--P = 1,600 Kms.
			iPR ₁	13	32	19		
			eS?	13	34	55		
			iPcP?	13	37	38		
			eScP?	13	41	44		
			eScS?	13	45	06		
			c	13	46	13		
			F	13	50	00		
1,093		8	iP	14	32	21		
			i	14	32	24		
			e	14	35	02		
			eS	14	35	16		
			F	14	42	00		
1,094		8	eP	15	45	18		
			iPR ₁	15	45	27		
			e	15	48	04		
			F	15	51	00		
1,095		8	eP	16	09	43		Se omiten varias réplicas pequeñas
			i	16	09	46		
			e	16	12	16		
			i	16	12	34		
			F	16	17	00		
1,096		8	iP	17	27	44		S?--P = 1,600 Kms.
			i	17	27	46		
			iPR ₁	17	27	50		
			eS?	17	30	29		
			e	17	30	39		
			F	17	44	00		
1,097		9	eP	00	46	18		S?--P = 1,600 Kms.
			i	00	46	23		
				00	48	55		
				00	49	06		
			F	00	53	00		

No	Aparato	Fecha	Fase	Hora T.M.G.	Distancia	Observaciones
1,098	Benioff	Agosto 9	eP iPR ₁ e eS? F	h. m. s. 03 47 54 03 48 00 03 50 42 03 50 52 03 54 00		
1,099		9	eP i iPR ₁ c iS? F	08 29 22 08 29 28 08 29 31 08 31 50 08 32 12 08 42 00	S?-P = 1650 Kms.	
1,100		9	iP iPR ₁ e e iS F	20 10 24 20 10 33 20 12 49 20 13 05 20 13 16 20 21 00	S-P = 1,650 Kms.	
1,101		9	iP i iPR ₁ e eS F	20 56 13 20 57 06 20 57 12 20 59 44 20 59 55 21 03 00	S-P = 1,650 Kms.	
1,102		9	iP i iPR ₁ iS? F	23 19 34 23 19 39 23 19 42 23 22 18 23 25 00		
1,103		10	eP iPR ₁ i eS? e eSR ₁ F	02 14 06 02 14 14 02 14 28 02 16 46 02 17 00 02 17 09 02 22 00	S?-P = 1,600 Kms.	
1,104		10	eP i eS F	06 45 29 06 45 32.5 06 48 18 06 51 00		
1,105		10	eP iPR ₁ ? e e F	07 02 21 07 02 28 07 04 48 07 05 38 07 08 00		
1,106		10	eP iPR ₁ e oS iSR ₁ F	09 03 56 09 04 05 09 06 41 09 06 50 09 07 09 09 14 00	S-P = 1,700 Kms.	
1,107		10	eP iPR ₁ iPR ₃ e iS F	11 49 25 11 49 31 11 49 34.5 11 52 13 11 52 17 11 59 00	S-P = 1,680 Kms.	
1,108		10	eP iPR ₁ iPR ₃ eS eSR ₁ F	14 22 13 14 22 22 14 22 26.5 14 24 56 14 25 12 14 29 00	S-P = 1,600 Kms.	
1,109		11	iP i oS iSR ₁ F eP oS F	03 44 41 03 44 44.5 03 47 35 03 47 49 03 52 00 13 16 20 13 19 13 13 22 00	S-P = 1,600 Kms. S-P = 1,680 Kms.	

No.	Aparato	Fecha	Fase	T.S.G. h. m. s.	Distancia	Observaciones
1,111	Benioff	Agosto 11	cP i F	13 34 51.5 13 34 57 13 40 00		
1,112		12	eP i ePR ₂ eS e F	02 42 58 02 42 59 02 43 09 02 45 50 02 46 36 02 50 00	S-P = 1,650 Kms.	
1,113		12	eP i iPR ₃ eS e F	09 35 27 09 35 32.5 09 35 42.5 09 38 14 09 38 23 09 43 00	S-P = 1,600 Kms.	
1,114		14	eP iPR ₁ eS eSR ₁ F	00 59 42 00 59 50 01 02 27 01 02 45 01 06 00	S-P = 1,600 Kms.	
1,115		16	eP eS eSR ₁ F	02 25 48 02 28 37 02 28 56 02 32 00		
1,116		17	eP iPR ₁ eS eSR ₁ F	04 48 21 04 48 28.5 04 51 08 04 51 24 04 54 00	S-P = 1,600 Kms.	
1,117		17	eP i iPR ₁ e iS F	11 23 30 11 23 36 11 23 41 11 26 02 11 26 19 11 45 00	S-P = 1,600 Kms.	
1,118		18	eP iPR ₃ oS F	02 19 15 02 19 29 02 21 59 02 25 00	S-P = 1,600 Kms.	
1,119		18	eP i eS F	17 13 00 17 13 05.5 17 15 50 17 18 00	S-P = 1,630 Kms.	
1,120		19	eP iPR ₁ iPR ₃ eS F	04 06 45 04 06 53 04 06 59 04 09 31 04 13 00	S-P = 1,600 Kms.	
1,121		19	eP iPR ₁ iPR ₃ eS F	05 44 27 05 44 35 05 44 40 05 47 20 05 53 00	S-P = 1,650 Kms.	
1,122		20	cP iPR ₁ iPR ₃ eS eSR ₁ i F	12 52 59 12 53 07.5 12 53 15 12 55 47 12 55 56 12 56 48 12 59 00	S-P = 1,600 Kms.	
1,123		21	eP eS F	14 33 27 14 36 15 14 38 00	S-P = 1,600 Kms.	
1,124		21	eP iPR ₁ eS F	19 02 58 19 03 06 19 05 46 19 08 00	+S-P = 1,600 Kms.	

No.	Aparato	Fecha	Fase	Hora T.S.G.	Distancia	Observaciones
1,125	Benioff	Agosto 21	eP	h. m. s. 19 21 20	S-P = 1,630 Kms.	Fuerte
			i	19 21 24		
			iPR ₁	19 21 28.5		
			oS?	19 24 10		
			iSR ₁	19 24 28		
			ScP	19 29 07		
F	19 30 00					
1,126		21	eP	21 55 58	S-P = 1750 Kms.	
			i	21 56 04		
			iPR ₁	21 56 13		
			eS	21 59 02		
			F	22 02 00		
1,127		21	eP	23 04 09	S-P = 1,720 Kms.	
			i	23 04 14		
			eS	23 07 07		
			F	23 10 00		
1,128		22	eP	01 21 24	S-P = 1,600 Kms.	
			iPR ₁	01 21 31		
			eS	01 24 11		
			F	01 26 00		
1,129		22	cP	01 48 45	S-P = 1,600 Kms.	
			i	01 48 50		
			eS?	01 51 31		
			F	01 55 00		
1,130		24	eP	02 45 37		
			i	02 45 43.5		
			F	02 51 00		
1,131		24	ePn	07 57 45	Sn-Pn=470 Kms.	
			i	07 57 51		
			iP+	07 57 56		
			iPg	07 58 06		
			iSn	07 58 37		
			IS+	07 58 51		
			iSg	07 59 04		
			F	08 07 00		
1,132		24	eP	14 21 57	S-P = 1,600 Kms.	
			i	14 21 59		
			iPR ₁	14 22 05		
			iPR ₂	14 22 07		
			eS	14 24 41		
			e	14 24 51		
			eSR ₁	14 24 59		
			F	14 32 00		
1,133		25	eP	01 11 00		
			e	01 11 50		
			eS?	01 13 54		
			c	01 14 38		
			F	01 22 00		
1,134		27	cPn	07 48 48.5	Sn-Pn= 420 Kms.	
			iP+	07 48 55		
			eSn	07 49 35		
			F	07 52 00		
1,135		27	eP	08 39 29	S-P = 2,300 Kms.	
			ePR ₁	08 39 48		
			ePR ₂	08 39 55		
			eS	08 43 14		
			iPcP	08 43 43		
			eSR ₂	08 44 14		
			F	08 52 00		
1,136		28	eP	22 30 08	S-P = 1,700 Kms.	
			i	22 30 11		
			i	22 30 42		
			iS	22 33 03		
			F	22 ?? ??		

No.	Aparato	Fecha	Fase	Hora T.S.G. h. m. s.	Distancia	Observaciones
1,137	Benioff	Agosto 28	iP	22 34 06	S-P = 2,850 Kms.	
			i	22 34 56		
			e	22 35 45		
			eS	22 38 27		
			i	22 38 44		
			i	22 38 50		
			eSR1?	22 39 24		
			eScS	22 44 20		
		F	22 53 00			
1,138		30	iP+	06 27 21	S+-P+ = 120 Kms.	
			iPn	06 27 21.5		
			iS+	06 27 37		
			iSn	06 27 38		
			iSg?	06 27 39		
			F	06 29 00		
1,139		30	eP	07 12 30	S?-P = 1,650 Kms.	
			eS?	07 12 21		
			F	07 13 00		

Director: J.E. Ramirez S.J.

2165/30

30 AOUT 1946

INSTITUTO GEOFISICO DE LOS ANDES COLOMBIANOS
Special Seismic Bulletin, Benioff Vertical, Short Period

Earthquake of July 9, 1946,	Phase	G.C.T.	
	iPn	02 ^h 17 ^m 48 ^s	
	i	02 17 55	Sn-Pn =150 kms.
	iSn	02 18 06	
	iSg	02 18 09	
	F	02 20 00	
" " " 9, 1946	eP	15 36 06	
	F	15 42 00	
" " " 11, "	iP	04 51 46	
	i	04 52 54	
	i	04 53 18	
	e	04 55 03	
	e	04 57 36	
	eS?	05 02 52	
	F	05 07 00	
" " " 12 "	i	18 08 11	
	F	18 11 00	
" " " 12 "	iP	23 31 18	
	i	23 31 29	
	i	23 33 05	
	F	23 39 00	
" " " 13 "	e	12 41 29	
	e	12 43 54	
	e	12 45 06	
	F	12 48 00	
" " " 16 "	i	03 41 26?	
	i	03 41 44?	
	F	03 47 00	

The record was lost on the 17-18, 1946.

Instituto Geofísico de los Andes Colombianos

BOLETIN SISMICO - Bogotá

Colegio de San Bartolomé, Apdo. 270 Bogotá, COLOMBIA © Longitud W Greenwich: 74° 03' 54", Latitud N: 4° 37' 23" Alt. 2648 mts.

Aparatos: Benioff Vertical Período corto (100 kilos) © Wiechert Péndulo Astático NS EW (200 kilos)

No. 44		Septiembre de 1946				
No.	Aparato	Fecha	Fase	Hora T. M. G.	Distancia	Observaciones
1,140	Benioff	Sept. 1	eP e eS? F	h. m. s. 08 29 11 08 29 21 08 31 54 08 34 00		
1,141		1	iPn iSn iSg F	09 21 40 09 21 58 09 22 01.5 09 24 00	Sn.-Pn= 150 Kms.	
1,142		6C	eP iPR ₁ eS F	02 47 12 02 47 19 02 49 57 02 52 00	S-P = 1,600 Kms.	
1,143		6	eP iPR ₁ eS eSR ₁ ? F	22 02 53.5 22 03 00 22 05 42 22 05 54 22 10 00	S-P = 1,600 Kms.	
1,144		7	ePn i iP+ iSn eS+ F	10 54 22 10 54 25 10 54 30 10 55 10 10 55 21 11 00 00	Sn-Pn= 450 Kms.	
1,145		7	ePn i eS? F	21 53 10 21 53 12 21 54 03 21 57 00		
1,146		12	iP' iPKP ₁ iPR ₁ iSKP ₁ iSKP ₂ iSKS ePR ₃ L F	15 32 07 15 37 16 15 40 06 15 40 09 15 40 17 15 44 58 15 45 24 16 40 00 17 30 00	Distancia: 16.200 Kms. Noroeste de Bengala	
1,147		12	iP i iPR ₁ iPR ₃ eS eSR ₁ ? ePcP? F	17 43 17 17 43 21 17 43 27 17 43 32 17 46 08 17 46 22 17 48 23 18 00 00	S-P = 1,650 Kms.	
1,148		13	eP e eS? ePcP? F	08 12 35 08 12 44 08 14 06 08 16 45 08 21 00		
1,149		15	iPn iP+ iSn iS+ iSg? F	05 22 27 05 22 32 05 23 07 05 23 17 05 23 27 05 32 00	Sn-Pn= 370 Kms.	
1,150		15	i F	16 16 34 16 20 00		El principio se per- dio en el cambio del papel



No.	Aparato	Fecha	Fase	Hora		Distancia	Observaciones
				T. M. G.	h. m. s.		
1,151	Benioff	Sept. 16	eP ePR ₁ eS F	07 36 04 07 36 13 07 38 52 17 42 00		S-P = 1,620 Kms.	
1,152		18	oP iPR ₁ eS e F	08 37 20 08 37 26 08 40 09 08 40 14 08 44 00		S?-P = 1,630 Kms.	
1,153		19	eP iPR ₁ iPR ₂ eS? F	02 05 31 02 05 37 02 05 39 02 08 13 02 12 00		S?-P = 1,560 Kms.	
1,154		19	eP i e c F	07 00 48 07 00 50 07 03 50 07 04 03 07 09 00			
1,155		20	eP e e F	02 34 56 02 37 54 02 38 09 02 40 00			
1,156		20	oP iPR ₁ iPR ₂ eS oSR ₁ F	17 39 44 17 39 50 17 39 52 17 42 35 17 42 55 17 46 00		S-P = 1,650 Kms.	
1,157		22	e F	06 09 24 06 13 00			
1,158		23	iP iPR ₁ eS? eSR ₁ ? e F	14 02 56 14 03 08 14 05 44 14 05 59 14 06 42 14 10 00		S?-P = 1,600 Kms.	
1,159		23	eP' iPKP ₂ e ePR ₁ eSKP ₂ ePSKS F	23 49 15 23 49 20 23 50 02 23 52 19 23 52 55 00 01 56 00 04 00		Distancia = 16,000 Kms.	Epicentro: Lat. 3° S. Long. 144° E.
1,160		24	eP iPR ₁ eS? e F	04 16 23 04 16 30 04 19 09 04 19 36 04 21 00			
1,161		24	oP iPR ₁ i eS F	18 16 24 18 16 30.5 18 16 59 18 19 13 18 23 00		S-P = 1,630 Kms.	
1,162		24	iP eS? c e F	21 19 19 21 23 05 21 23 26 21 25 23 21 31 00			
1,163		25	iP ipP? iPR ₁ iPR ₂ e is	10 09 25 10 09 29 10 09 32 10 09 35 10 11 52 10 12 12 10 12 18 10 14 04 10 26 00		S-P = 1,600 Kms.	

No.	Aparato	Fecha	Fase	Hora		Distancia	Observaciones
				T. M.G.	h. m. s.		
1,164	Benioff	Sept. 25	iP	15	01	37	S?-P = 1,630 Kms.
			ipP?	15	01	40	
			eS	15	04	27	
			isS?	15	04	35	
			i	15	04	56	
			F	15	11	00	
1,165		28	e	11	58	38	Debil
			e	12	03	55	
			F	12	10	00	
1,166		28	i	19	49	44	
			i	19	50	30	
			e	19	54	12	
			F	19	56	00	
1,167		29	eP?	03	22	??	El relójs se paró
			iP'?	03	26	??	
			L	04	15	00	
			F	04	50	00	
1,168		30	iP	01	03	52	S-P = 1,900 Kms.
			iPR1	01	04	04	
			iPR2	01	04	08.5	
			i	01	04	39.5	
			eS	01	07	04	
			eSR1	01	07	30	
			eSR2	01	07	42	
			iPcP	01	08	31	
			i	01	09	37	
			iM?	01	09	52	
			eScP	01	11	29	
			F	01	27	00	

Director: J.E. Ramirez S.J.

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				Phase	G. C. T.			
					h	m	s	
Earthquake of August	I7	I946		eP	04	48	21	
				iPR ₁	04	48	28.5	
				eS	04	51	08	
				eSR ₁	04	51	24	S-P = 1.600 Kms.
				F	04	54	00	
"	"	"	"	eP	11	23	30	
				iPR ₁	11	23	36	
				iPR ₂	11	23	41	
				eS	11	26	02	
				iSR ₁	11	26	19	S-P = 1.600 Kms.
				F	11	45	00	
"	"	"	I8	eP	02	19	15	
				iPR ₃	02	19	29	
				eS	02	21	59	S-P = 1.600 Kms.
				F	02	25	00	
"	"	"	"	eP	17	13	00	
				i	17	13	05.5	
				eS	17	15	50	S-P = 1.600 Kms.
				F	17	18	00	
"	"	"	I9	eP	04	06	45	
				iPR ₁	04	06	53	
				iPR ₃	04	06	59	
				eS	04	09	31	S-P = 1.600 Kms.
				F	04	13	00	
"	"	"	"	eP	05	44	27	
				iPR ₁	05	44	29	
				iPR ₃	05	44	40	
				eS	05	47	20	S-P = 1.600 Kms.
				F	05	53	00	
"	"	"	20	eP	12	52	59	
				iPR ₁	12	53	07.5	
				iPR ₃	12	53	15	
				eS	12	55	47	
				eSR ₁	12	55	56	
				i	12	56	48	S-P = 1.600 Kms.
				F	12	59	00	
"	"	"	21	eP	14	33	27	
				eS	14	36	15	S-P = 1.600 Kms.
				F	14	38	00	
"	"	"	"	eP	19	02	58	
				iPR ₁	19	03	06	
				eS	19	05	46	S-P = 1.600 Kms.
				F	19	08	00	
"	"	"	"	eP	19	21	20	
				i	19	21	24	
				iPR ₁	19	21	28.5	
				eS?	19	24	10	
				iSR ₁	19	24	28	Strong
				M?	19	29	07	S-P = 1.630 Kms.
				F	19	30	00	

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				Phase	G. C. T.	
Earthquake of August 10 1946				eP	06 45 29	
				i	06 45 32.5	
				e	06 48 18	
				F	06 51 00	
"	"	"	"	eP	07 02 21	
				iPR ₁ ?	07 02 28	
				e	07 04 48	
				e	07 05 38	
				F	07 08 00	
"	"	"	"	eP	09 03 56	
				iPR ₁	09 04 05	
				eS	09 06 41	
				e	09 06 50	
				i	09 07 09	S-P = 1.600 Kms.
				F	09 14 00	
"	"	"	"	eP	11 49 25	
				iPR ₁	11 49 31	
				iPR ₃	11 49 34.5	
				eS	11 52 13	
				i	11 52 17	S-P = 1.600 Kms.
				F	11 59 00	
"	"	"	"	eP	14 22 13	
				iPR ₁	14 22 22	
				iPR ₃	14 22 26.5	
				eS	14 24 56	
				eSR ₁	14 25 12	S-P = 1.600 Kms.
				F	14 29 00	
"	"	"	11	iP	03 44 41	
				i	03 44 44.5	
				eS	03 47 35	
				iSR ₁	03 47 49	S-P = 1.600 Kms.
				F	03 52 00	
"	"	"	"	eP	13 16 20	
				eS	13 18 08	S-P = 1.600 Kms.
				F	13 22 00	
"	"	"	"	eP	13 34 51.5	
				i	13 34 57	
				eS	13 37 19	S-P = 1.600 Kms.
				F	13 40 00	
"	"	"	12	eP	02 42 58	
				i	02 42 59	
				ePR ₂	02 43 09	
				eS	02 45 50	
				e	02 46 36	S-P = 1.600 Kms.
				F	02 50 00	
"	"	"	"	eP	09 35 27	
				i	09 35 32.5	
				iPR ₃	09 35 42.5	
				eS	09 38 14	
				e	09 38 23	S-P = 1600 Kms.
				F	09 43 00	
"	"	"	14	eP	00 59 42	
				iPR ₁	00 59 50	
				eS	01 02 27	
				eSR ₁	01 02 45	S-P = 1.600 Kms.
				F	01 06 00	
"	"	"	16	eP	02 25 48	
				eS	02 28 37	
				e	02 28 51	
				F	02 32 00	

				Phase	G. C. T.	
					h m s	
Earthquake of August 8	1946			iP	14 32 21	
				i	14 32 24	
				eS?	14 35 02	
				e	14 35 16	
				F	14 42 00	
"	"	"	"	eP	15 45 18	
				iPR	15 45 27	
				e	15 48 04	
				F	15 51 00	
"	"	"	"	eP	16 09 43	Many small replicas
				i	16 09 46	are omitted.
				e	16 12 16	
				i	16 12 34	
				F	16 17 00	
"	"	"	"	iP	17 27 44	
				i	17 27 46	
				iPR ₁	17 27 50	
				eS?	17 30 29	
				e	17 30 39	S?-P = 1,600 Kms.
				F	17 44 00	
"	"	"	9	eP	00 46 18	
				i	00 46 23	
				eS?	00 48 55	S?-P = 1,600 Kms.
				F	00 53 00	
"	"	"	"	eP	03 47 54	
				iPR ₁	03 48 00	
				e	03 50 42	
				e	03 50 52	
				F	03 54 00	
"	"	"	"	eP	08 29 22	
				i	08 29 28	
				iPR ₁	08 29 31	
				e	08 31 50	
				i	08 32 12	
				F	08 42 00	
"	"	"	"	iP	20 10 24	
				iPR ₁	20 10 33	
				e	20 12 49	
				eS	20 13 05	
				i	20 13 16	S-P = 1,600 Kms.
				F	20 21 00	
"	"	"	"	iP	20 56 13	
				i	20 57 06	
				iPR ₁	20 57 12	
				eS	20 59 44	
				e	20 59 55	S-P = 1,600 Kms.
				F	21 03 00	
"	"	"	"	iP	23 19 34	
				i	23 19 39	
				iPR ₁	23 19 42	
				iS	23 22 18	S-P = 1,600 Kms.
				F	23 25 00	
"	"	"	10	eP	02 14 04	
				iPR ₁	02 14 14	
				i	02 14 28	
				eS	02 16 46	S-P = 1,600 Kms.
				eSR ₁	02 17 00	
				e	02 17 09	
				F	02 22 00	

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INSTITUTO GEOFISICO DE LOS ANDES COLOMBIANOS, BOGOTA
Special Seismic Bulletin, Benioff Vertical, Short Period

					Phase	G. C. T.	
						h m s	
Earthquake of August 7 11946					eP	09 36 43	
					i	09 36 49	
					F	09 43 00	Sn-Pn = 380 Kms.
"	"	"	"	"	iPn	14 53 23	
					iSn	14 54 05	Sn-Pn = 380 Kms.
					F	14 57 00	
"	"	"	"	"	iP	18 15 03	
					i	18 15 10	
					iPR ₁ ?	18 15 14	
					eSR?	18 17 49	
					F	18 24 00	S?-P = 1,600 Kms.
"	"	"	"	"	iP	19 25 09	
					i	19 25 22	
					i	19 25 30	
					eS?	19 26 49	
					e	19 27 10	
					F	19 35 00	
"	"	"	"	"	iP	19 52 19	
					i	19 52 33	
					e	19 54 59	
					e	19 55 17	
					F	19 58 00	
"	"	"	"	"	eP	21 30 44	
					iPR ₁ ?	21 30 50	
					F	21 37 00	
"	"	"	"	"	eP	22 18 44	
					iPR ₁ ?	22 18 52	
					eS	22 21 28	
					e	22 21 40	S?-P = 1,600 Kms.
					F	22 24 00	
"	"	"	8	"	eP	01 05 01	
					i	01 05 06	
					eS	01 07 45	
					F	01 09 00	S?-P = 1,600 Kms.
"	"	"	"	"	iP	01 50 11	
					i	01 50 16	
					eS	01 52 59	S-P = 1,600 Kms.
					F	01 56 00	
"	"	"	"	"	eP	03 01 30	
					e	03 01 34	
					F	03 06 00	
"	"	"	"	"	eP	03 44 30	
					e	03 44 35.5	
					F	03 49 00	
"	"	"	"	"	iP	08 35 54	
					i	08 35 59	
					eS?	08 38 39	
					i	08 38 45	
					i	08 39 30	S-P = 1,600 Kms.
					F	08 41 00	
"	"	"	"	"	iP	13 32 10	
					iPR ₁	13 32 19	
					eS?	13 34 55	
					iPcP?	13 37 38	
					eScP?	13 41 44	
					eScS?	13 45 06	S?-P = 1,600 Kms.
					e	13 46 13	
					F	13 50 00	

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 Special Seismic Bulletin, Benioff Vertical, Short Period

		Phase	G. C. T.	
			h m s	
Earthquake of August 28 1946		iP	22 34 06	
		i	22 34 56	
		e	22 35 45	
		eS?	22 38 27	
		i	22 38 44	
		i	22 38 50	
		e	22 39 24	
		e	22 43 27	
		F	22 53 00	
"	" " 30 "	iP*	06 27 21	
		iPn	06 27 21.5	
		iS*	06 27 37	
		iSn	06 27 38	
		iSg?	06 27 39	S*-P* = 120 Kms.
		F	06 29 00	
"	" " " "	eP	07 09 30	
		eS?	07 12 31	
		F	07 16 00	
"	" Sept. 1 "	eP	08 29 11	
		e	08 29 21	
		eS?	08 31 54	
		F	08 34 00	
"	" " " "	iPn	09 21 40	
		iSn	09 21 58	
		iSg	09 22 01.5	Sn.Pn = 150 kms.
		F	09 24 00	
"	" " " "	eP	12 50 39	
		eS?	12 53 18	
		e	12 54 05	
		F	12 58 00	
"	" " 6 "	eP	02 47 12	
		i	02 47 19	
		eS	02 49 57	S-P = 1600 Kms.
		F	02 52 00	
"	" " " "	eP	22 02 53.5	
		iPR 1	22 03 00	
		eS	22 05 35	
		eSR1	22 05 54	S-P = 1550 Kms.
		F	22 10 00	
"	" " 7 "	ePn	10 54 22	
		i	10 54 25	
		iP*	10 54 30	
		iSn	10 55 10	
		eS*	10 55 21	Sn-Pn = 450 Kms.
		F	11 00 00	
"	" " " "	ePn	21 53 10	
		i	21 53 12	
		eS?	21 54 03	
		F	21 57 00	
"	" " 10 "	eP	00 28 05	
		eS	00 30 51	S-P = 1600 Kms.
		F	00 32 00	

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1.21 NOV. 1946

INSTITUTO GEOPISICO DE LOS ANDES COLOMBIANOS, BOGOTA
Special Seismic Bulletin, Benioff Vertical, Short Period

				Phase	G. C. T.	
					h m s	
Earthquake of August 22	1946			eP	21 55 58	
				iP	21 56 04	
				iPR ₁	21 56 13	
				eS	21 59 02	S-P = 1750 Kms.
				F	22 02 00	
"	"	"	"	eP	23 04 09	
				iP	23 04 14	
				eS	23 07 07	S-P = 1720 Kms.
				F	23 10 00	
"	"	"	"	eP	01 21 24	
				iP	01 21 31	
				iPR	01 21 37	
				eS	01 24 11	S-P = 1600 Kms.
				F	01 26 00	
"	"	"	"	eP	01 48 45	
				iP	01 48 50	
				eS?	01 51 31	S-P = 1600 Kms.
				F	01 55 00	
"	"	"	24	eP	02 45 37	
				iP	02 45 43.5	
				F	02 51 00	
"	"	"	"	ePn	07 57 45	
				i	07 57 51	
				iP*	07 57 56	
				iPg	07 58 06	
				iSn	07 58 37	
				iS*	07 58 51	
				iSg	07 59 04	Sn-Pn = 470 Kms.
				F	08 07 00	
"	"	"	"	eP	14 21 57	
				iP	14 21 59	
				iPR ₁	14 22 05	
				iPR ₂	14 22 07	
				eS	14 24 41	
				eSR ₁	14 24 51	
				eSR ₁ ?	14 24 59	S-P = 1600 Kms.
				F	14 32 00	
"	"	"	25	eP	01 11 00	
				e	01 11 50	
				e	01 13 54	
				e	01 14 38	
				F	01 22 00	
"	"	"	27	ePn	07 48 48.5	
				iP*	07 48 55	
				eSn	07 49 35	Sn-Pn = 420 Kms.
				F	07 52 00	
"	"	"	"	eP	08 39 29	
				ePR ₁	08 39 48	
				ePR ₂	08 39 55	
				eS?	08 43 14	
				iPcP?	08 43 43	
				eSR ₂	08 44 14	S?-P = 2300 Kms.
				F	08 52 00	
"	"	"	28	eP	22 30 08	
				iP	22 30 11	The end is masked
				i	22 30 42	by the next one.
				iS	22 33 03	
				F	22 33 ??	

Instituto Geofísico de los Andes Colombianos

BOLETIN SISMICO - Bogotá

1373/ 13 JUN 1947

Colegio de San Bartolomé, Apdo. 270 Bogotá, COLOMBIA © Longitud W Greenwich: 74° 03' 54", Latitud N: 4° 37' 23" Alt. 2648 mts.

Aparatos: Benioff Vertical Período corto (100 kilos) © Wiechert Péndulo Astático NS EW (200 kilos)

No. 45		Octubre de 1946			
No.	Fecha	Fase	Hora G.C.T.	Distancia	Observaciones
			h. m. s.		
1,169	Octubre 2	iPn (Z) iSn (Z) F	04 24 27 04 24 56 04 28 00	Sn-Pn = 250 Kms.	
1,170	4	(Wiechert)			Se perdió un temblor en el cambio de papel.
1,171	8	iP+ (EN) iPg (EN) iPn (EN) iS+ (EN) iSn (EN) F	05 06 16 05 06 17.5 05 06 18.5 05 06 24 05 06 25.5 05 08 00	S - P = 60 Kms.	
1,172	9	iPn (Z) iSn (Z) F	19 56 54 19 57 09 20 00 00	Sn-Pn = 120 Kms.	Sentido en Bogotá como un débil temblor.
1,173	10	eP (Z) i (Z) e (Z) F	09 29 07 09 29 13 09 30 41 09 34 00		
1,174	13	eP (ZN) e (ZN) e (ZN) F	23 18 45 23 18 52 23 23 35 23 33 00		No hubo registro el día 10 a 11.
1,175	14	iPn (Z) iP+ (Z) iPg (Z) iSn (Z) iSg (Z) F	09 43 52 09 43 53 09 43 56 09 44 11 09 44 16 09 48 00	Sn-Pn = 160 Kms.	
1,176	18	eP (N) eS (N) F	00 32 46 00 34 11 00 47 00	S-P = 800 Kms.	Primer temblor registrado en los nuevos aparatos Macelwane-Sprengnether.
1,177	19	eP (ZN) e (ZN) eS? (ZN) F	09 58 45 09 59 10 10 01 26 10 03 00	S?-P = 1550 Kms.	
1,178	21	eP (Z) e (Z) e (Z) F	13 47 29 13 47 42 13 49 19 13 54 00		
1,179	22	ePn (Z) iP+ (Z) iSn (Z) iS+ (Z) F	05 52 30 05 52 54 05 54 11 05 54 30 05 59 00	Sn-Pn = 980 Kms.	
1,180	22	iPn (Z) iSn (Z) F	23 24 02 23 24 33 23 28 00	Sn-Pn = 280 Kms.	
1,181	24	eP (ZN) e (ZN) e (ZN) S? (ZN)	02 37 42 02 38 02 02 40 31 02 40 35 02 45 00	S?-P = 1600 Kms.	

No.	Fecha	Fase	Hora	Distancia	Observaciones
			G.C.T.		
			h. m. s.		
1,182	Octubre 25	iP+ (Z)	05 55 07.5	S+-P+ = 70 Kms.	
		iPg (Z)	05 55 10		
		iS+ (Z)	05 55 15.5		
		iSg (Z)	05 55 19.5		
		F	05 57 00		
1,183	26	iP (ZN)	00 32 27.5	S?-P = 7750 Kms.	
		ePR1 (Z)	00 35 07		
		ePR2 (Z)	00 36 25		
		eS? (N)	00 41 40		
		F	02 00 00		
1,184	27	e (Z)	10 47 06		
		F	10 49 00		
1,185	29	iPn (Z)	22 14 01	Sn-Pn = 120 Kms.	
		iSn (Z)	22 14 16		
		iSg (Z)	22 14 18		
		F	22 16 00		
1,186	30	eP (Z)	08 00 18	S - P = 9100 Kms.	
		ipP (N)	08 00 30		
		ePR1 (N)	08 03 50		
		iS (N-E)	08 10 39		
		iPS (N-E)	08 11 29		
		eSR1 (N)	08 16 30		
		ePKKP (N)	08 18 50		
		eL (N)	08 30 00		
		eM (N)	08 45 00		
		F	09 15 00		
1,187	31	iPn	00 53 11	Sn-Pn = 240 Kms.	
		iP+	00 53 16		
		iPg	00 53 20		
		iSn	00 53 38		
		iS+	00 53 41		
		iSg	00 53 48		
		F	00 56 00		

Sub-Director: Wladimiro Escobar S.J.

Director: J.E. Ramirez S.J.

INSTITUTO GEOFISICO DE LOS ANDES COLOMBIANOS, BOGOTA
 Special Seismic Bulletin, Beiloff Vertical, Short Period

					Phase	G. C. T.			
						h	m	s	
Earthquake of Sept. 12 1946					iP	15	37	03	
					iPR1	15	37	16	
					iPR2	15	37	22	
					i	15	40	06	
					i	15	40	17	
					e	15	44	58	S-P = 700 Kms.
					F	15	57	00	
"	"	"	"	"	iP	17	43	17	
					i	17	43	21	
					iPR1	17	43	27	
					iPR3	17	43	32	
					eS	17	46	08	
					eSR1?	17	46	22	
					ePcP	17	48	23	S-P = 1650 Kms.
					F	18	00	00	
"	"	"	I3	"	eP	08	12	35	
					e	08	12	44	
					eS?	08	14	06	
					e	08	16	45	
					F	08	21	00	
"	"	"	I5	"	iPn	05	22	27	
					iP*	05	22	32	
					iSn	05	23	07	
					iS*	05	23	17	
					iSg?	05	23	27	Sn-Pn = 370 kms.
					F	05	32	00	
"	"	"	"	"	P Lost in the changing of the paper				
					iS	16	16	34	
					F	16	20	00	
"	"	"	I6	"	eP	07	36	04	
					ePR1	07	36	13	
					eS	07	38	52	S-P = 1600 Kms.
					F	07	42	00	

Instituto Geofísico de los Andes Colombianos

BOLETIN SISMICO - Bogotá

Colegio de San Bartolomé, Apdo. 270 Bogotá, COLOMBIA © Longitud W Greenwich: 74° 03' 54", Latitud N: 4° 37' 23" Alt. 2648 mts.

Aparatos: Benioff Vertical Período corto (100 kilos) © Wiechert Péndulo Astático NS EW (200 kilos)

También Aparatos: Macelwane-Sprengnether Componentes N-S, E-O. Período largo.

No 46 Noviembre de 1946

No.	Fecha	Fase	Hora		Distancia	Observaciones
			G.C.T.	h. m. s.		
1,188	Noviembre 1	iPn	07 50	51	Sn-Pn= 330 Kms.	
		iPg	07 51	06		
		iSn	07 51	27		
		F	07 53	00		
1,189	1	iP (Z)	11 27	41		
		i (Z)	11 27	52		
		ePR ₁ (Z)	11 31	40		
		eS (Z)	11 38	18		
		ePS (Z)	11 39	15		
		F	11 45	00		
1,190	2	ePn (Z)	00 59	24		
		eSn? (Z)	01 00	16		
		F (Z)	01 01	00		
1,191	2	i (Z)	14 23	57		
		e (Z)	14 28	07		
		F	14 30	00		
1,192	2	iP ^l (Z)	18 47	34		
		e (Z)	18 48	28		
		i (Z)	18 49	17		
		eS (Z)	19 01	07		
		F	19 15	00		
1,193	2	eP (N)	23 03	36		
		F	23 07	00		
1,194	3	eP (N)	06 16	09		
		e (N)	06 19	02		
		e (N)	06 19	25		
		F	06 20	00		
1,195	3	iP (Z)	19 43	24	S-P = 6300 Kms.	
		i (Z)	19 43	32		
		ePR ₁ (Z)	19 45	06		
		eS (Z)	19 51	03		
		F	19 54	00		
1,196	3	iP (Z)	20 10	25		
		F	20 12	00		
1,197	4	eP ^l (N)	22 06	26	S-P = 12.900 Kms.	Muchas y fuertes ondas dificiles de descifrar
		eP (Z-N)	22 07	26		
		eS (E)	22 15	16		
		M (N-E)	22 30	00		
		F	00 20	00		
1,198	5	iPn (Z)	03 46	07		
		iP+ (Z)	03 46	12		
		iPg (Z)	03 46	17		
		iSn (Z)	03 46	44		
		iSg? (Z)	03 46	55		
		F	03 48	00		
1,199	5	iP (ZE)	07 05	37		
		iS? (E)	07 10	25		
		eSR ₁ ? (E)	07 11	53		
		eScS? (E)	07 17	06		
		M?	07 18	35		
		F	07 34	00		
1,200	7	iP (Z)	18 09	42	S-P = 1600 Kms.	
		ipP? (Z)	18 09	46		
		iPR ₁ (Z)	18 09	51		
		i (Z)	18 09	56		
		eS (Z)	18 12	27		
		F	18 17	00		
1,201	9	iP (ZE)	13 01	50		
		iPcP? (ZE)	13 02	27		
		iS? (ZE)	13 07	08		
		iS? (E)	13 08	06		
		F	13 38	00		

No.	Fecha	Fase	Hora		Distancia	Observaciones
			G.	C. T.		
1,202	Noviembre 10	iP (Z)	17	46 08	S-P = 1580 Kms.	Destructor en el Perú
		iPR ₁ (Z)	17	46 17		
		iPR ₃ Wiechert	17	46 26		
		iS "	17	48 56		
		iSR ₁ "	17	49 12		
		i "	17	50 44		
		iPcP "	17	53 04		
F	17	30 00				
1,203	10	iP (Z)	18	52 51	1550 Kms.	Réplica
		iS (Z)	18	55 34		
		F	19	03 00		
1,204	10	iP (Z)	19	03 16	S-P = 1580 Kms.	Réplica
		iPR ₁ (Z)	19	03 25		
		iS (Z)	19	06 01		
		F	19	10 00		
1,205	10	iP (Z)	19	54 10	S-P = 1550 Kms.	Réplica
		iS (Z)	19	56 53		
		F	20	03 00		
1,206	10	iP (Z)	21	05 48		Réplica
		iS? (Z)	21	08 34		
		F	21	20 00		
1,207	10	iP (Z)	22	05 45		Réplica
		iPR ₂ (Z)	22	05 56		
		iPR ₃ ? (Z)	22	06 00		
		iS? (Z)	22	08 18		
		iSR ₁ ? (Z)	22	08 38		
		F	22	18 00		
1,208	11	iP (Z)	00	58 37		Réplica
		iPR ₁ (Z)	00	58 47		
		eS (Z)	01	01 10		
		F	01	10 00		
1,209	11	iP (Z)	12	07 39	S-P = 1540 Kms.	Réplica
		eS (Z)	12	10 22		
		iSR ₁ (Z)	12	10 42		
		F	12	16 00		
1,210	11	iP (Z)	13	18 31		Réplica
		iPR ₁ ? (Z)	13	18 43		
		eS? (Z)	13	21 10		
		F	13	27 00		
1,211	11	iP (ZE)	17	25 32		Réplica
		iS? (ZE)	17	27 43		
		e (Z)	17	28 13		
		e (ZE)	17	28 40		
		F	17	34 00		
1,212	11	iP (ZE)	21	57 54		Réplica
		iS? (ZE)	22	00 37		
		i (ZE)	22	02 09		
		F	22	07 00		
1,213	12	iP (ZE)	05	01 22		Réplica
		eS? (ZE)	05	04 16		
		i (ZE)	05	04 35		
		i (ZE)	05	06 16		
		F	05	15 00		
1,214	12	iP (Z)	06	38 04	S-P = 600 Kms.	
		i (Z)	06	38 16		
		i (Z)	06	38 34		
		iS (ZE)	06	39 08		
		iS+ (Z)	06	39 25		
		iSg (Z)	06	39 45		
		F	06	50 00		
1,215	12	eP (Z)	17	42 35		
		e (Z)	17	42 53		
		e (ZE)	17	46 42		
		eS? (E)	17	53 20		
)	18	01 16		
)	18	08 00				
)	18	16 00				
)	18	40 00				

No.	Fecha	Fase	Hora		Distancia	Observaciones
			G.	C. T.		
1,216	Noviembre 14	eP (ZE)	03	09 58		
		ePR ₁ (ZE)	03	10 06		
		eS (ZE)	03	12 45		
		F	03	19 00		
1,217	14	eP (ZE)	11	38 21	S?-P = 1500 Kms.	
		ePR ₁ (ZE)	11	38 30		
		iPR ₂ (ZE)	11	38 32		
		iPR ₃ (ZE)	11	38 36		
		eS? (ZE)	11	41 02		
		iSR ₁ ? (E)	11	41 27		
		ePcP? (E)	11	44 57		
		F	11	08 00		
1,218	15	iPn (Z)	22	03 19.5	Sn-Pn = 340 Kms.	
		iSn (E)	22	03 57		
		F	22	08 00		
1,219	16	ePn (ZE)	07	37 22	Sn-Pn = 1060 Kms.	
		i (ZE)	07	37 31		
		eSn (ZE)	07	39 12		
		eS+ (E)	07	39 58		
		F	07	45 00		
1,220	16	eP (ZE)	21	33 14?		La hora no es exacta
		iPR ₁ (ZE)	21	33 20?		
		eS (ZE)	21	37 50?		
		F	21	42 00		
1,221	17	iPn (ZE)	04	47 32?	Sn-Pn = 460 Kms.	
		i (ZE)	04	47 37?		
		iPg (ZE)	04	47 58?		
		iSn (ZE)	04	48 22?		
		iSg (ZE)	04	48 45?		
		F	04	58 00		
1,222	17	eP (ZE)	22	15 32?		
		F	22	39 00?		
1,223	20	iP (ZE)	05	27 41?		La hora no es exacta
		iPR ₁ (ZE)	05	27 53?		
		e (ZE)	05	30 28?		
		iS? (ZE)	05	30 40?		
		iL? (ZE)	05	30 50?		
		iPcP? (ZE)	05	32 28?		
		F	05	45 00?		
1,224	20	eP (Z)	21	00 57		
		eS? (Z)	21	02 38		
		i (Z)	21	03 25		
		e (E)	21	03 40		
		F	21	14 00		
1,225	22	eP (ZE)	11	59 32	S?-P = 2400 Kms.	
		eS? (E)	12	03 33		
		F	12	10 00		
1,226	22	L	16	54 00		
		F	18	50 00		
1,227	25	eP (N)	14	46 26		
		eS? (N)	14	47 34		
		e (N)	14	47 56		
		F	14	55 00		
1,228	25	L (N)	17	25 00		
		F	17	40 00		
1,229	26	i (N)	12	09 09		
		F	12	14 00		
1,230	28	e (N)	16	15 04		
		F	16	35 00		

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