

National Centre for Scientific Research of Vietnam
Institute of Geophysics

BULLETIN OF VIETNAMESE SEISMOLOGICAL STATIONS IN THE
PERIOD FROM 1981 TO 1986
(NEAR EARTHQUAKES)

SEISMOGRAPHIC STATION
UNIVERSITY OF CALIFORNIA
BERKELEY, CALIFORNIA 94720

Hanoi 1988

National Centre for Scientific Research of Vietnam
Institute of Geophysics

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Research of Vietnam
Institute of Geophysics
Nghia do - Tu Liem - Hanoi

Printed in Geofyzika Brno, Czechoslovakia

Introduction

The seismological bulletin in the period from 1981 to 1986 contains the results of the interpretation of records from the network of seismological stations on the territory of Vietnam:

Phu Lien (PLV), Bac Giang (BGV), Hoa Binh (HBV) and Tuyen Quang (TQV).

The records from the network were collected at the Institute of Geophysics of NCSR of Vietnam where they were analysed.

In the bulletin there are near earthquakes with epicentral distances from 0° to 7° . The time used in this bulletin was the Universal time (GMT). In determining hypocentral positions, the local time tables are used.

Magnitudes of earthquakes are computed by the duration of seismic records, namely:

$$M = 2.67 \log (F - P) - 2.49$$

where $F - P$ is the duration of seismic record in seconds.

It is a pleasure to acknowledge the valuable assistance and advice generously given by Dr. K. Cidlinsky of the Geofyzika Brno, ČSSR and Dr. M. Hashizume of UNESCO, Paris, France.

List of seismic phases

P_n, S_n longitudinal and transverse waves refracted below the crust
 P_b, S_b waves in the lower crust
 P_g, S_g waves in the upper crust

List of abbreviations used in this Bulletin

t_0 origin time in GMT
 h depth of focus in km
 E eastern longitude in degrees
 N northern latitude in degrees
 δE an accuracy of epicentral distances
 δt_0 an accuracy of origin time
 e poorly distinguishable beginning of a phase
 i impulsive beginning of a phase
 T and $-$ are compressional or dilatational motion in a longitudinal wave
 V static magnification

Explanation to Fig. 1 - 19

—— vertical component
 - - - - EW component
 - . . . - NS component

Coordinates of the Seismological Stations

Station	Latitude	Longitude	Altitude	Lithological foundation
Phu Lien (PLV)	$20^{\circ}48'21.7''$ N	$106^{\circ}37'44.4''$ E	90 m	Quartzite
Bac Giang (BGV)	$21^{\circ}17'38.9''$ N	$106^{\circ}13'42.9''$ E	15 m	Bed of sand
Hoa Binh (HBV)	$20^{\circ}49'33.3''$ N	$105^{\circ}21'06.9''$ E	30 m	Bed of sand
Tuyen Quang (TQV)	$21^{\circ}49'42.0''$ N	$105^{\circ}12'30.0''$ E	35 m	Quartzite
Nha Trang (NHA)	$12^{\circ}16'00.0''$ N	$109^{\circ}15'00.0''$ E		Rhyolit

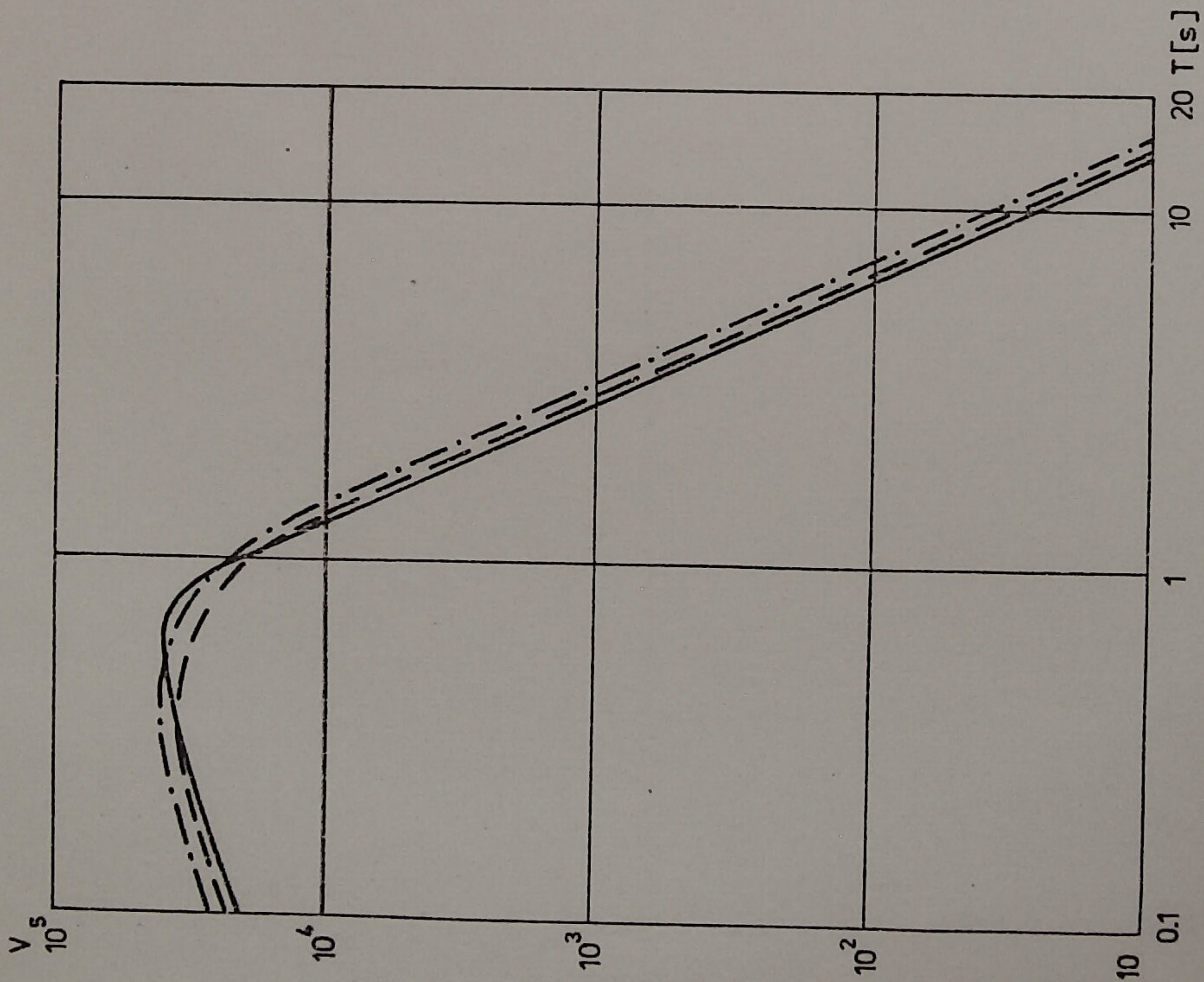


FIG. 1 (May 1980 - June 1981)

Amplitude response for IQV station

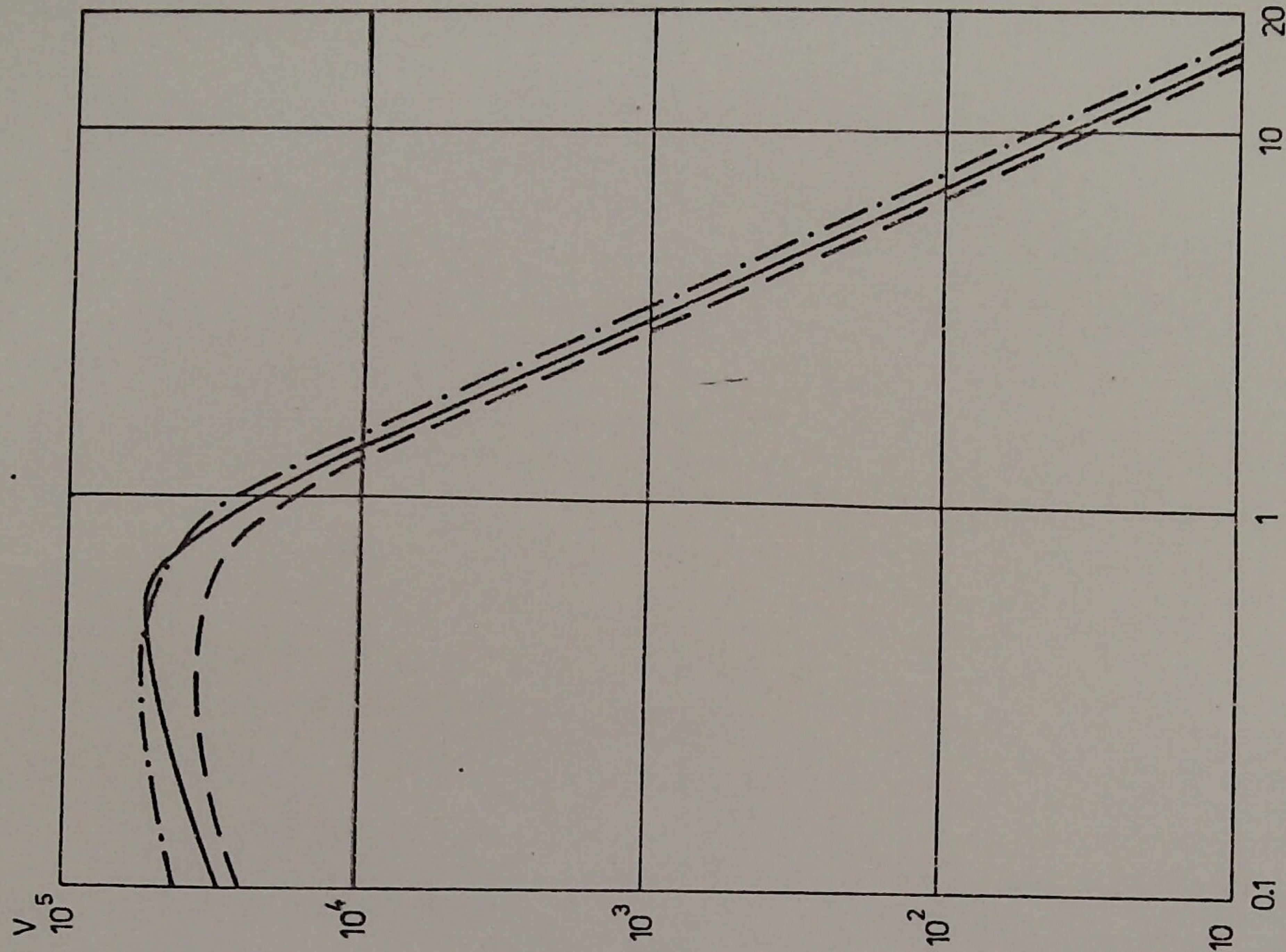


FIG. 2 (June 1981 - Oct. 1982)

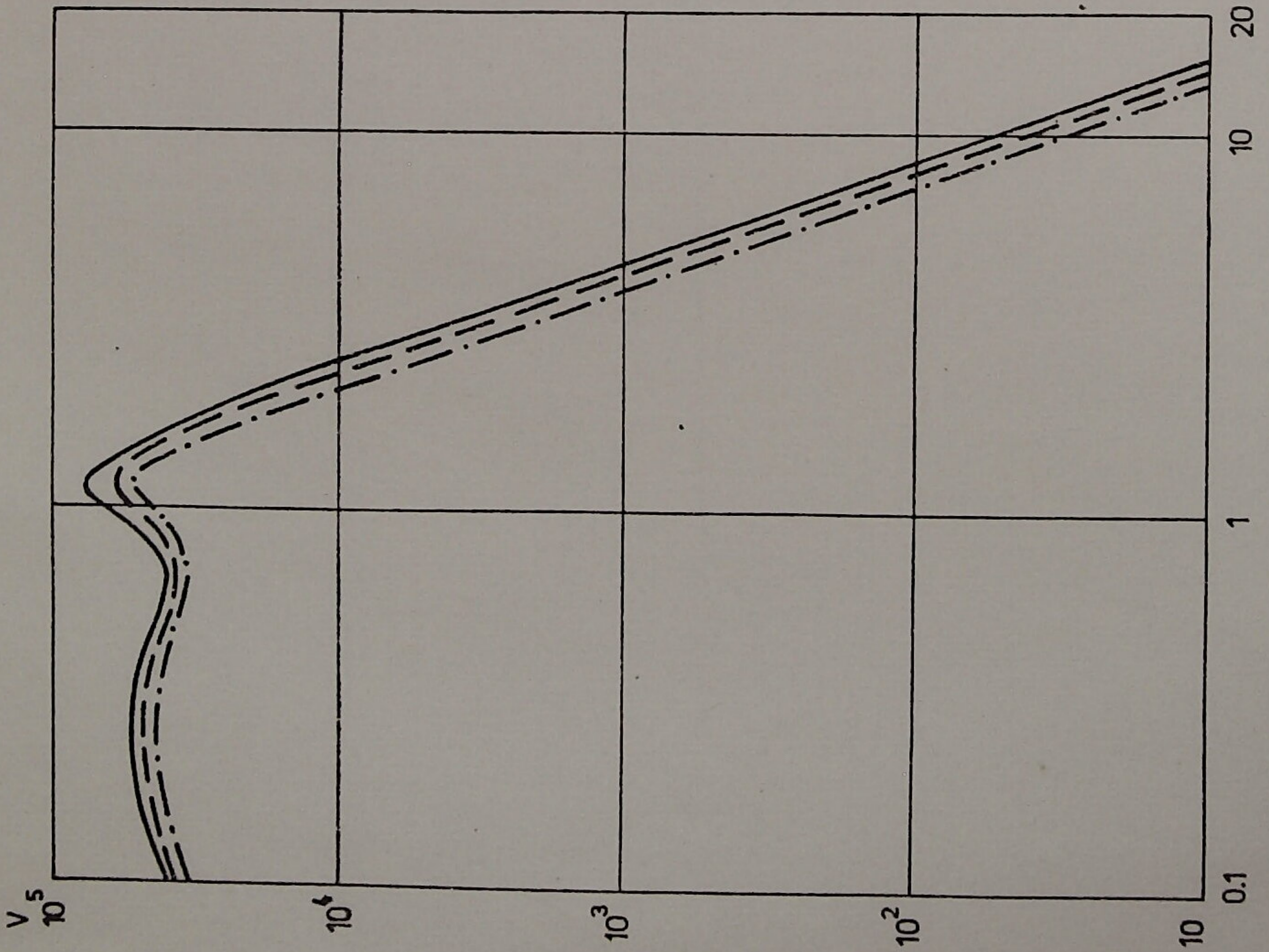
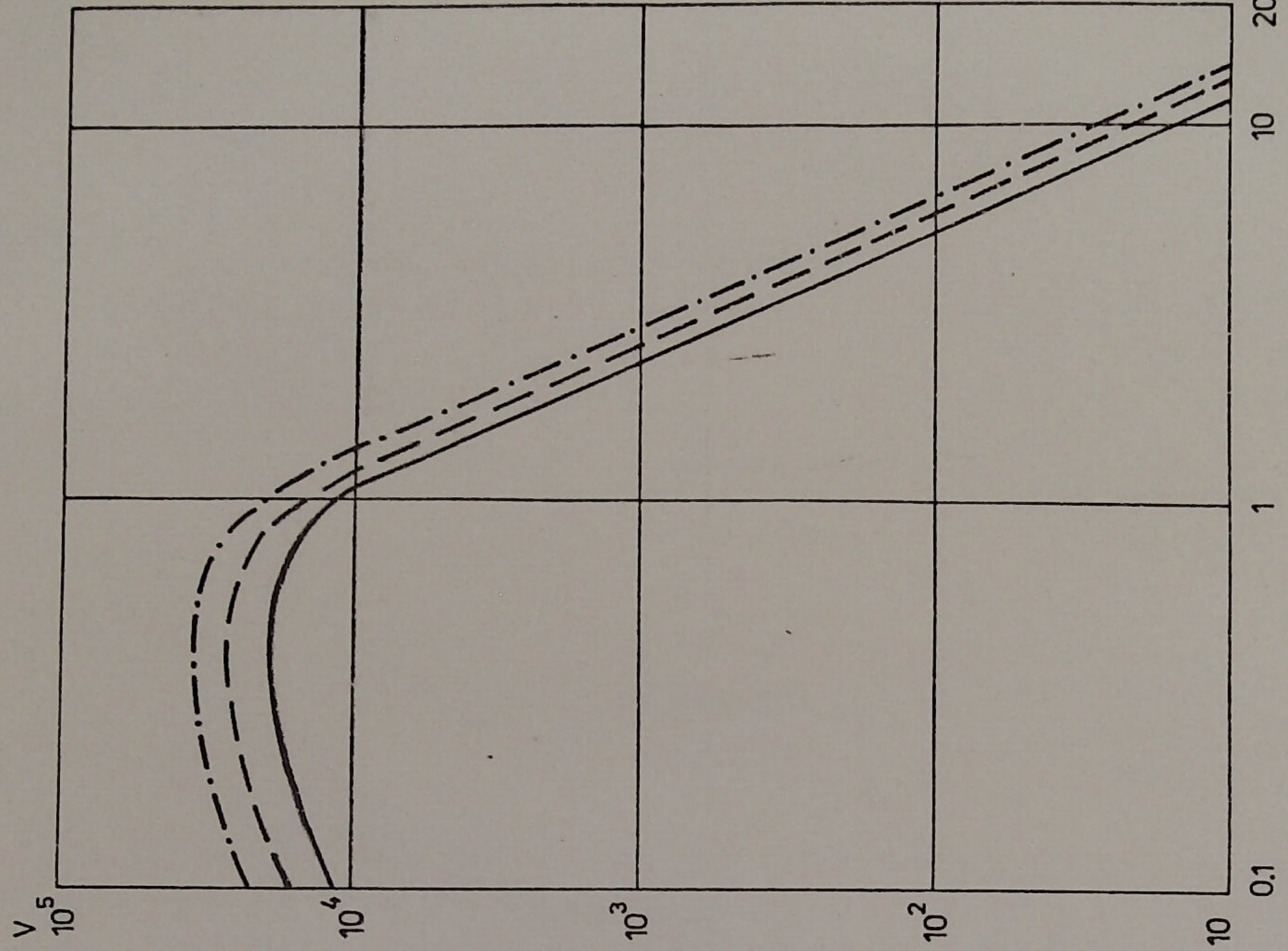


FIG. 3 (003. 1982 - June 1983)



Amplitude response for TQV station

FIG. 4 (004. 1983 - July 1984)

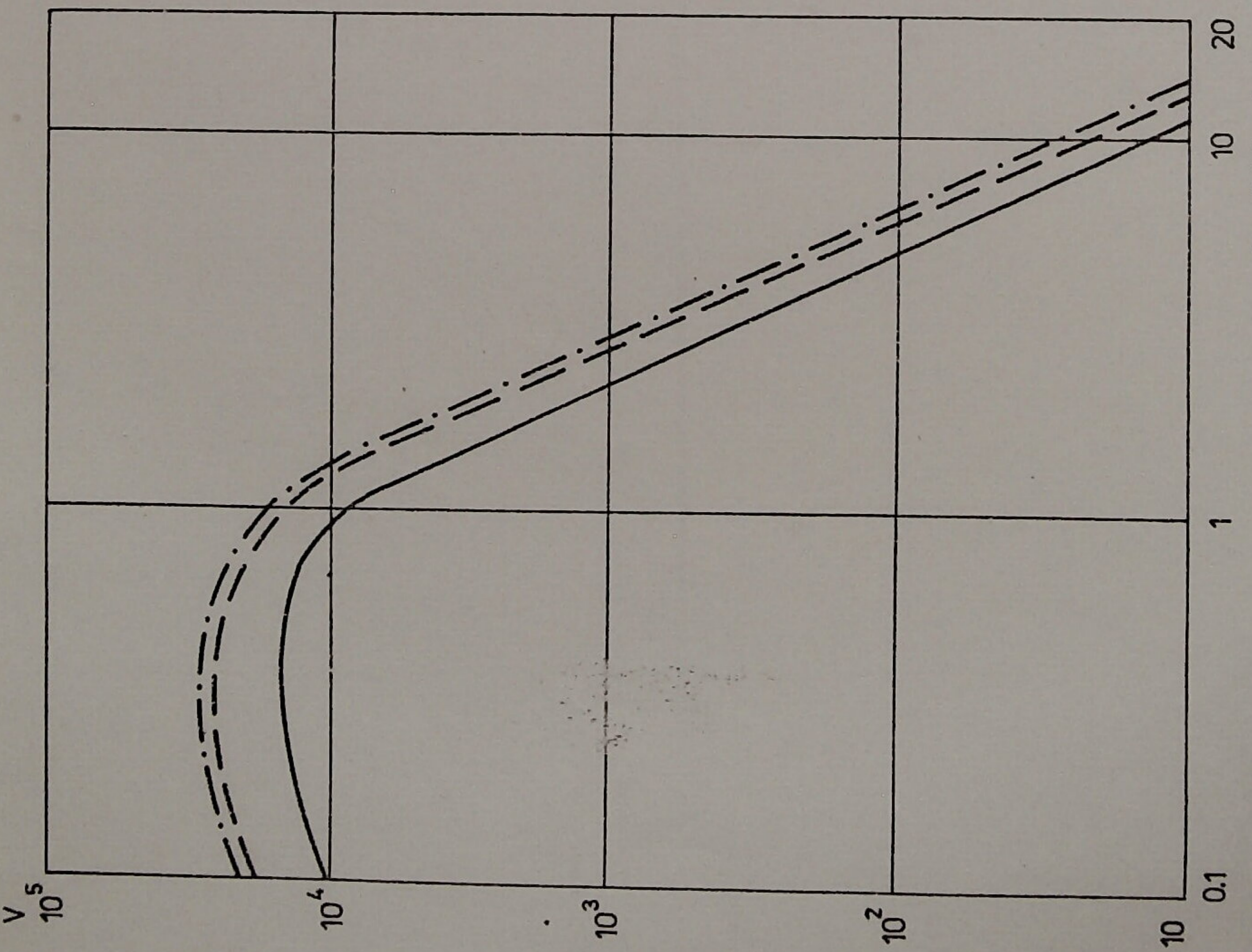


FIG. 5 (JULY 1984 - OCT. 1985)

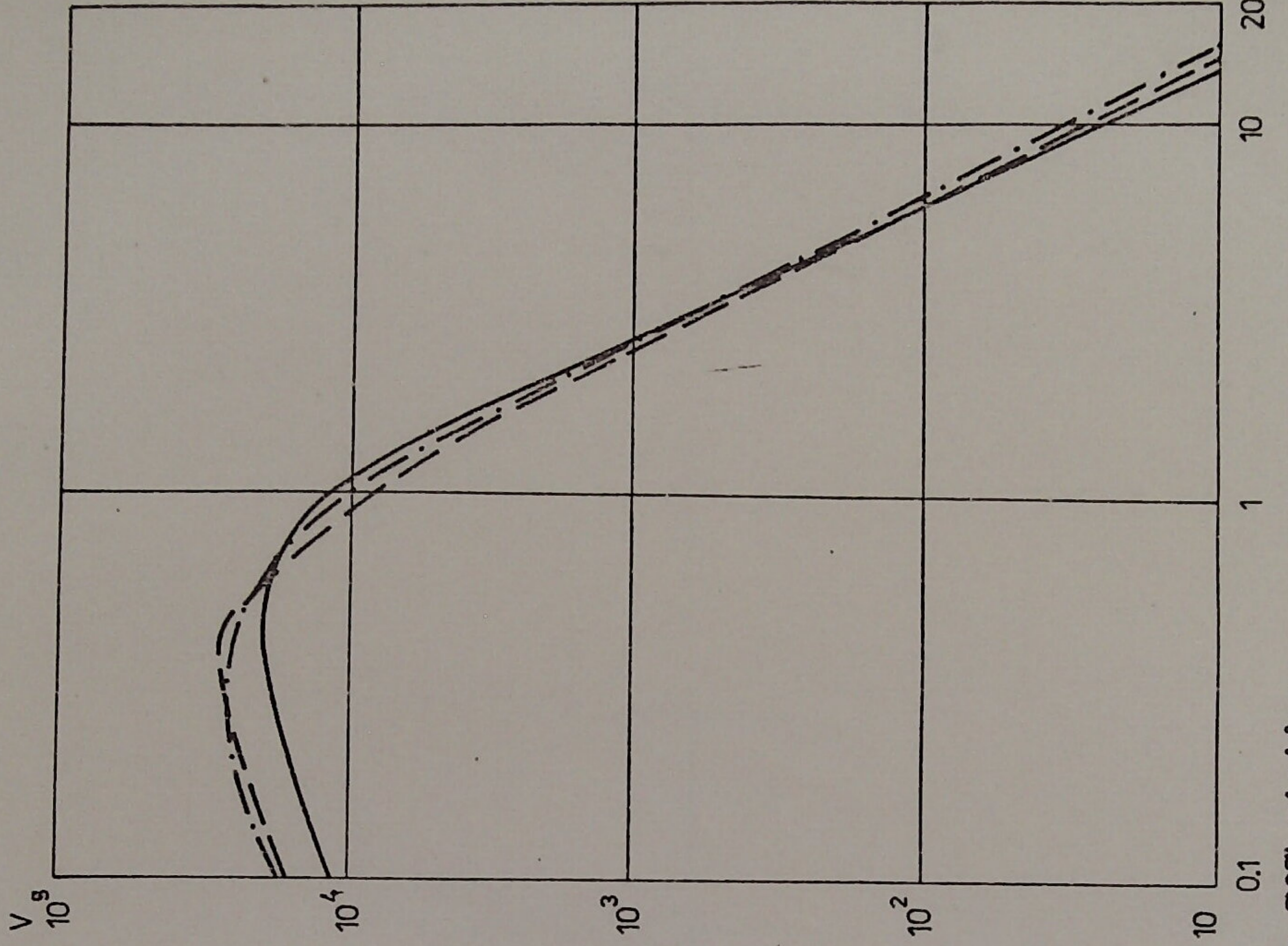


FIG. 6 (OCT. 1985 - JAN. 1986)

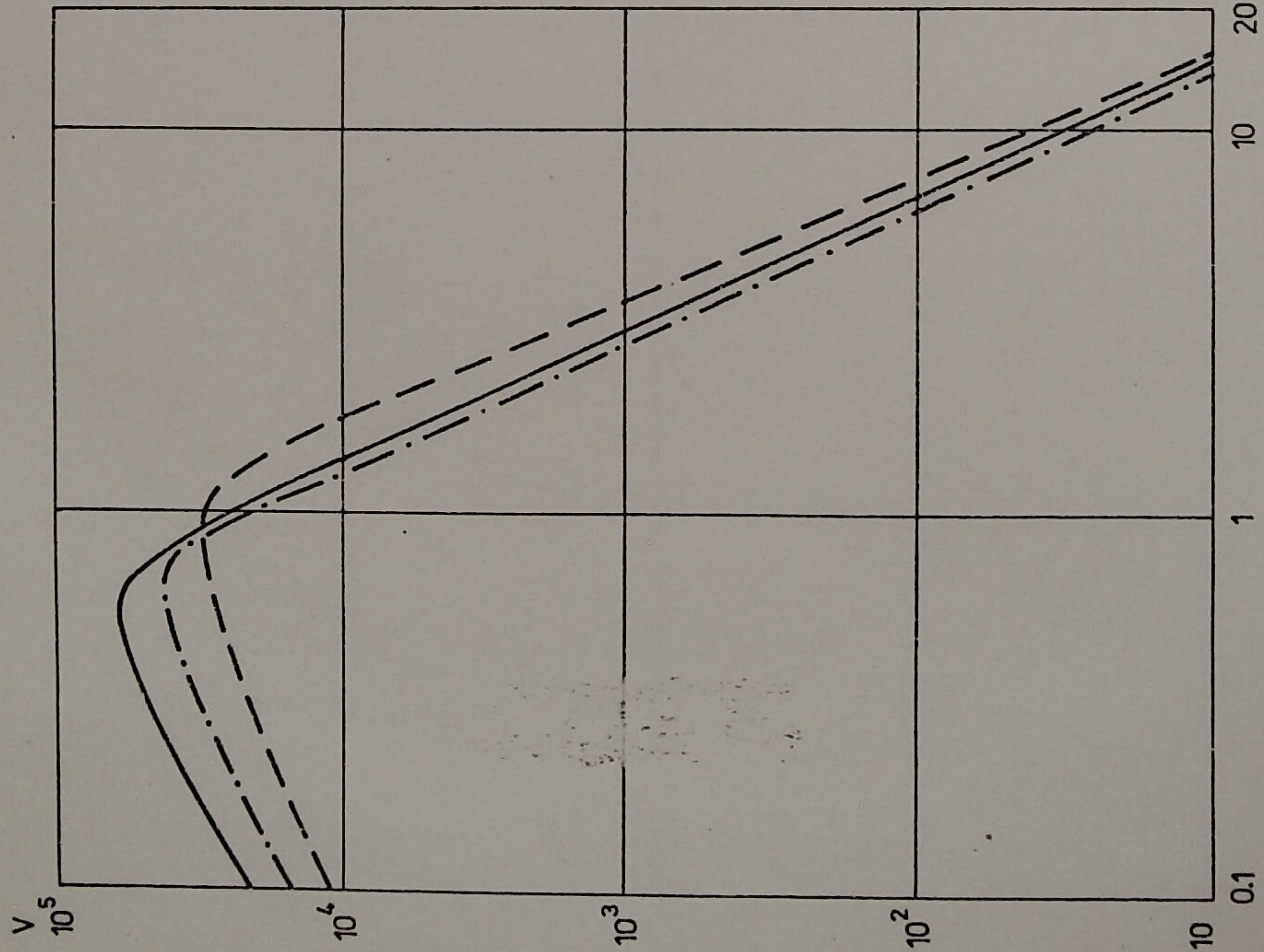


FIG. 7 (April 1980 - Dec. 1981)

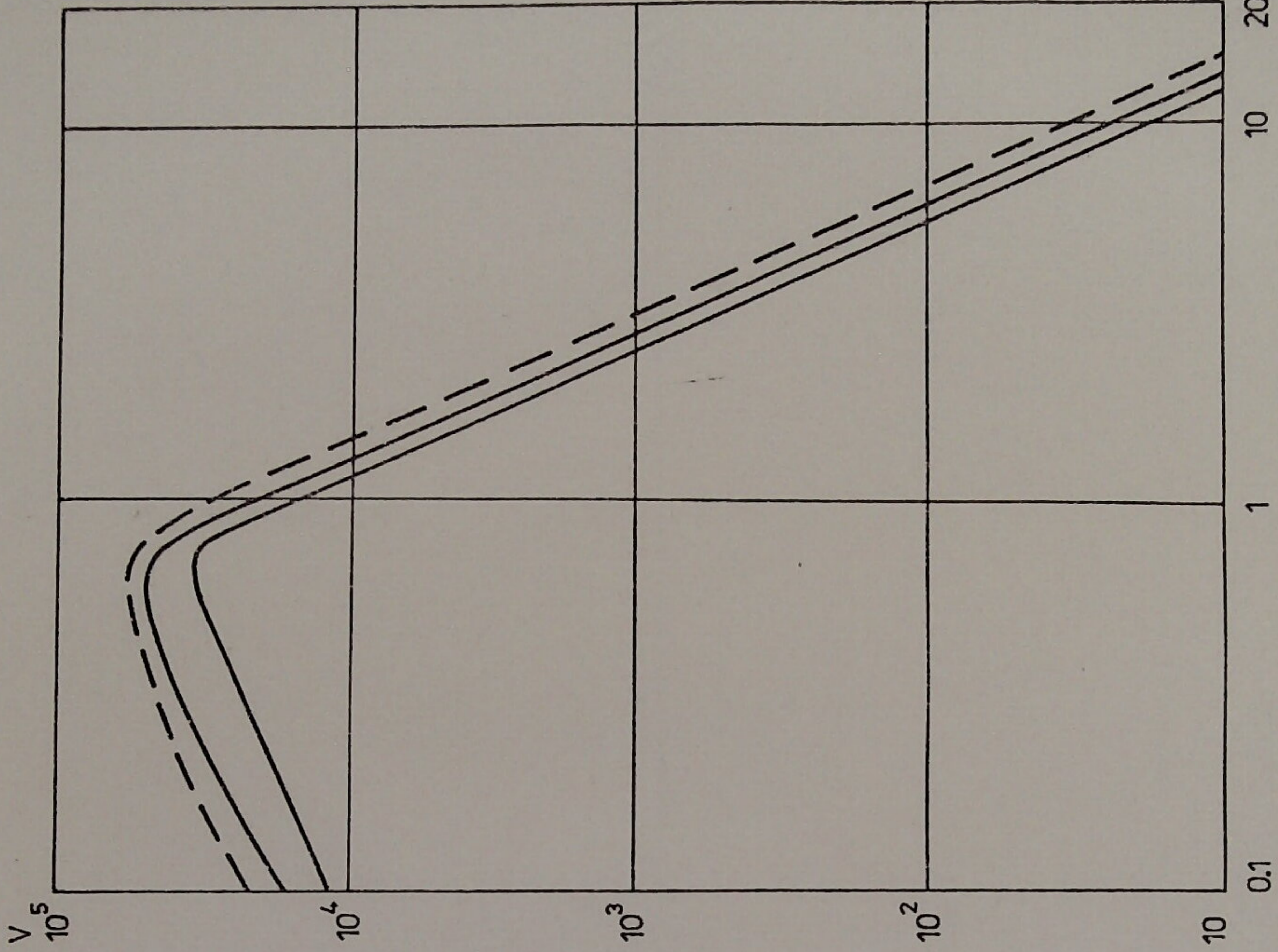


FIG. 8 (Dec. 1981 - March 1983)

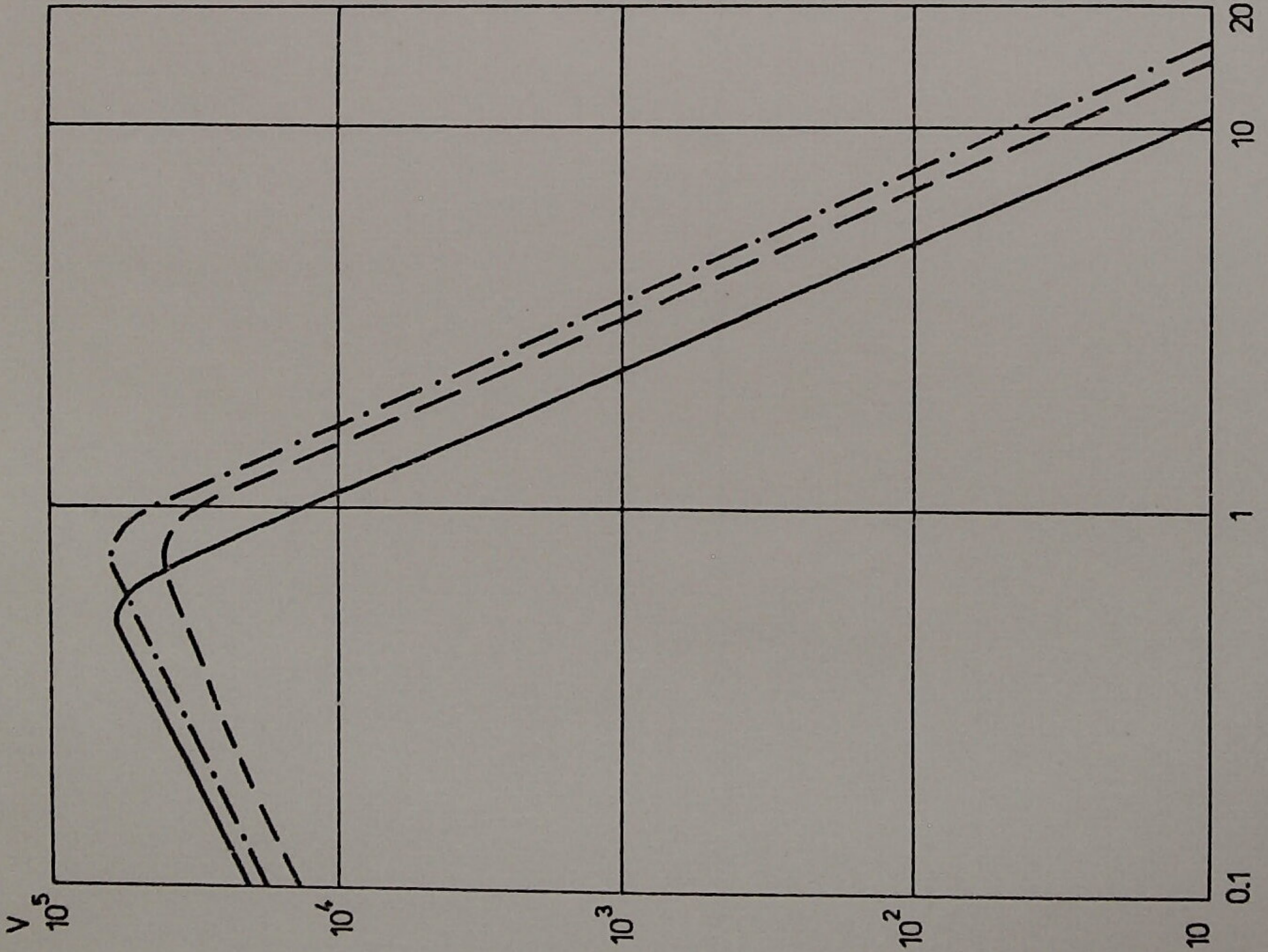


FIG. 9 (March 1983 - Nov. 1983)

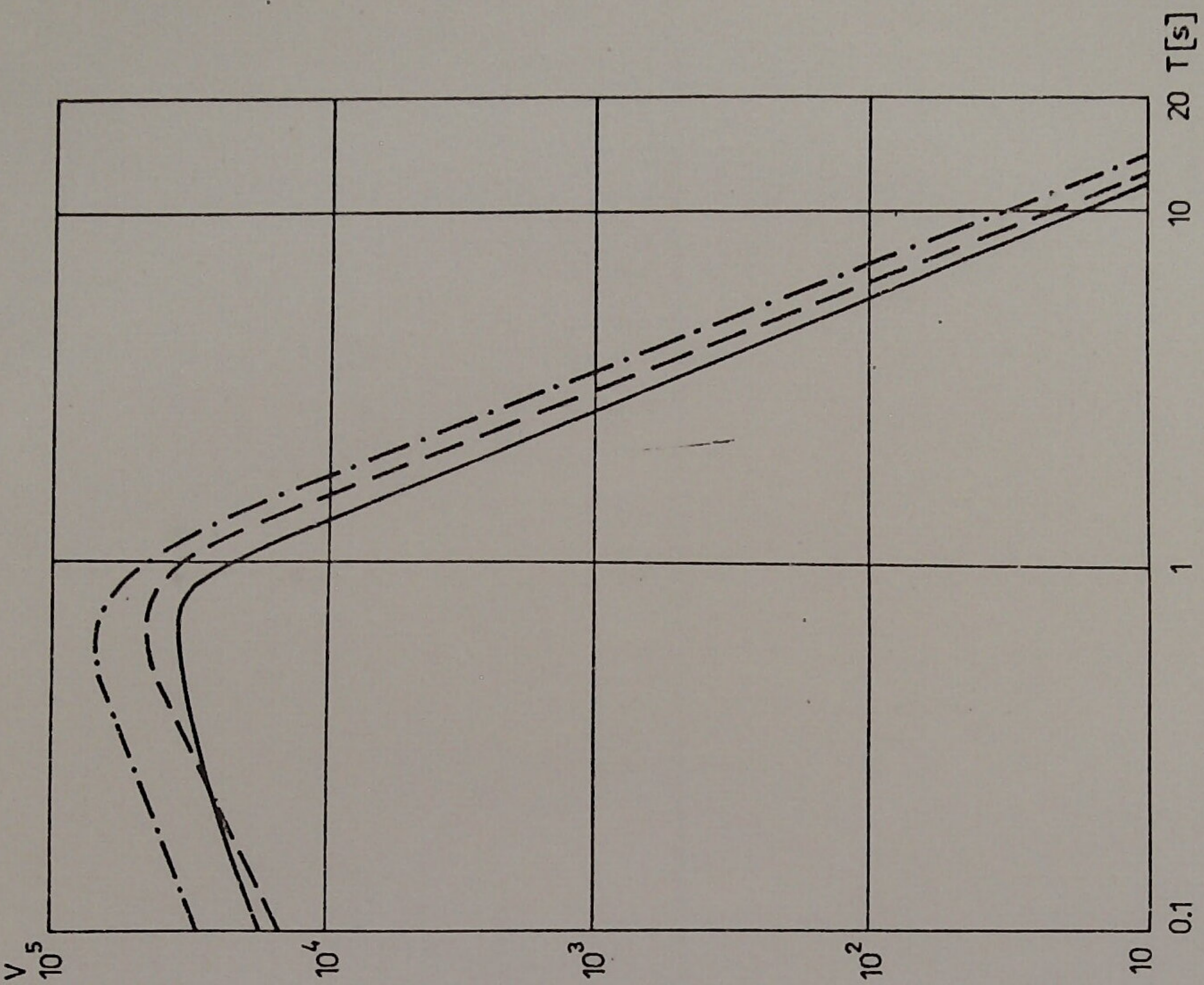


FIG. 10 (Oct. 1989 - Nov. 1984)

Amplitude response for HV station

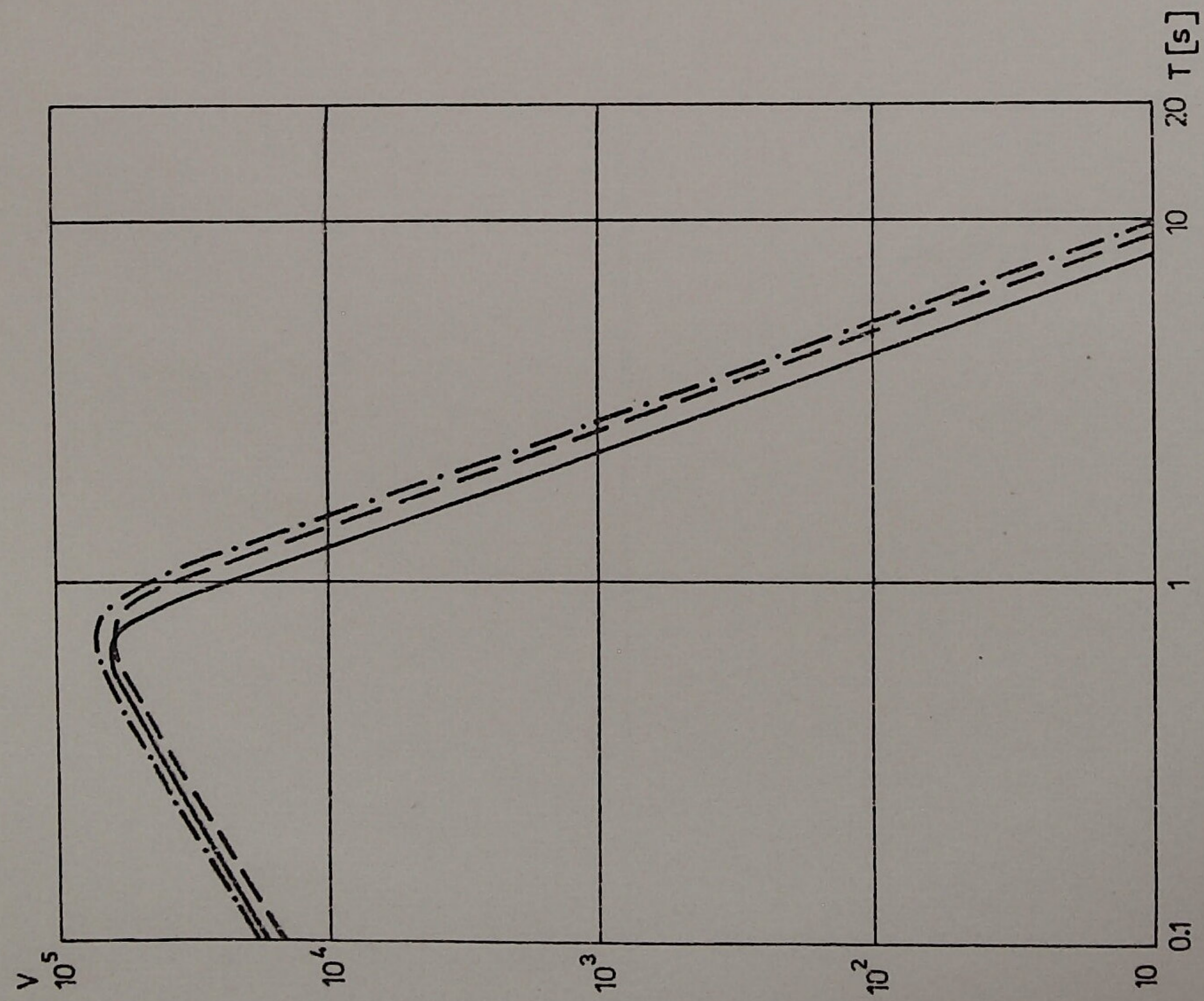


Fig. 11 (Nov. 1984 - April 1985)

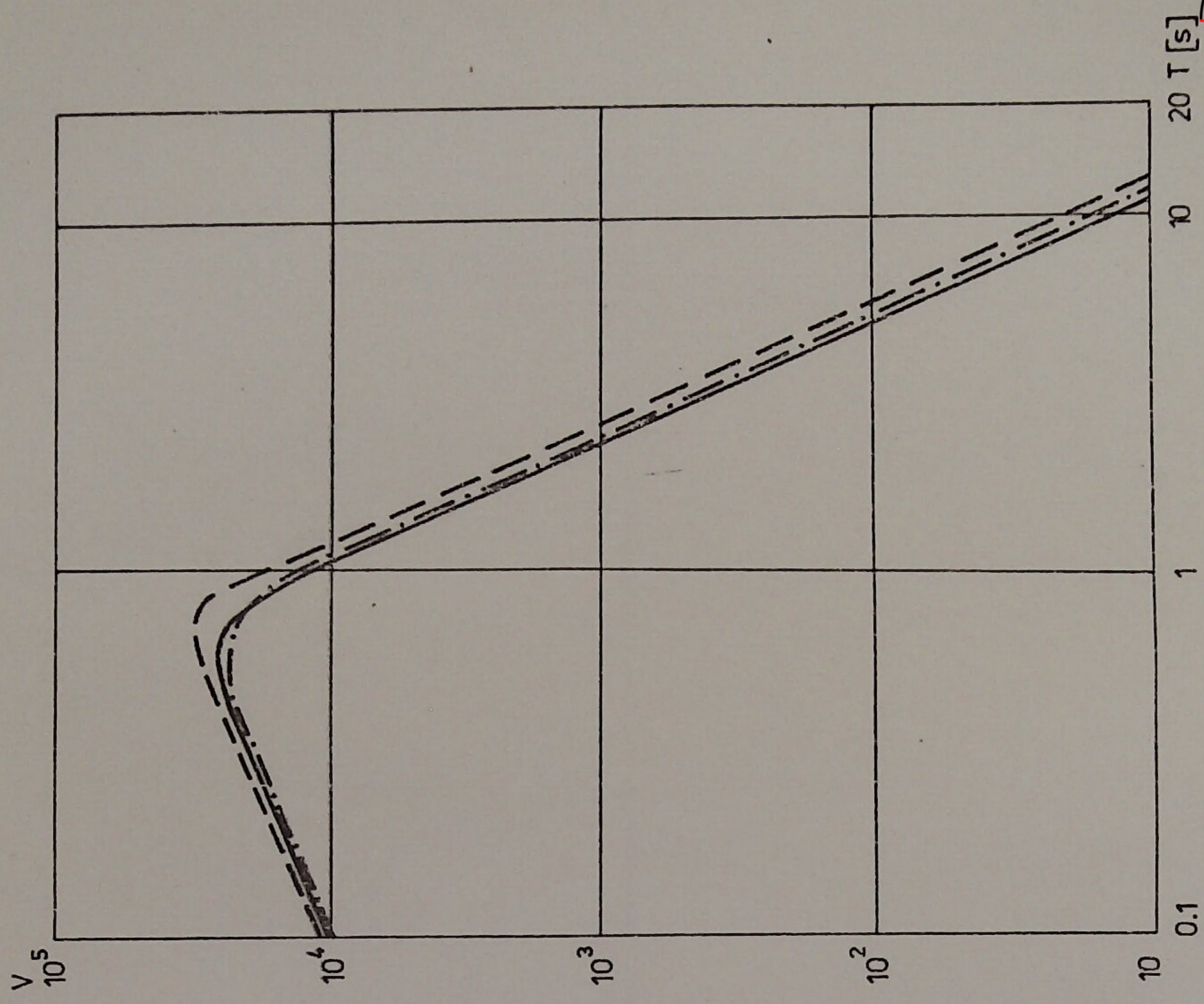


Fig. 12 (April 1985 - Jan. 1986)

Amplitude response for MBV station



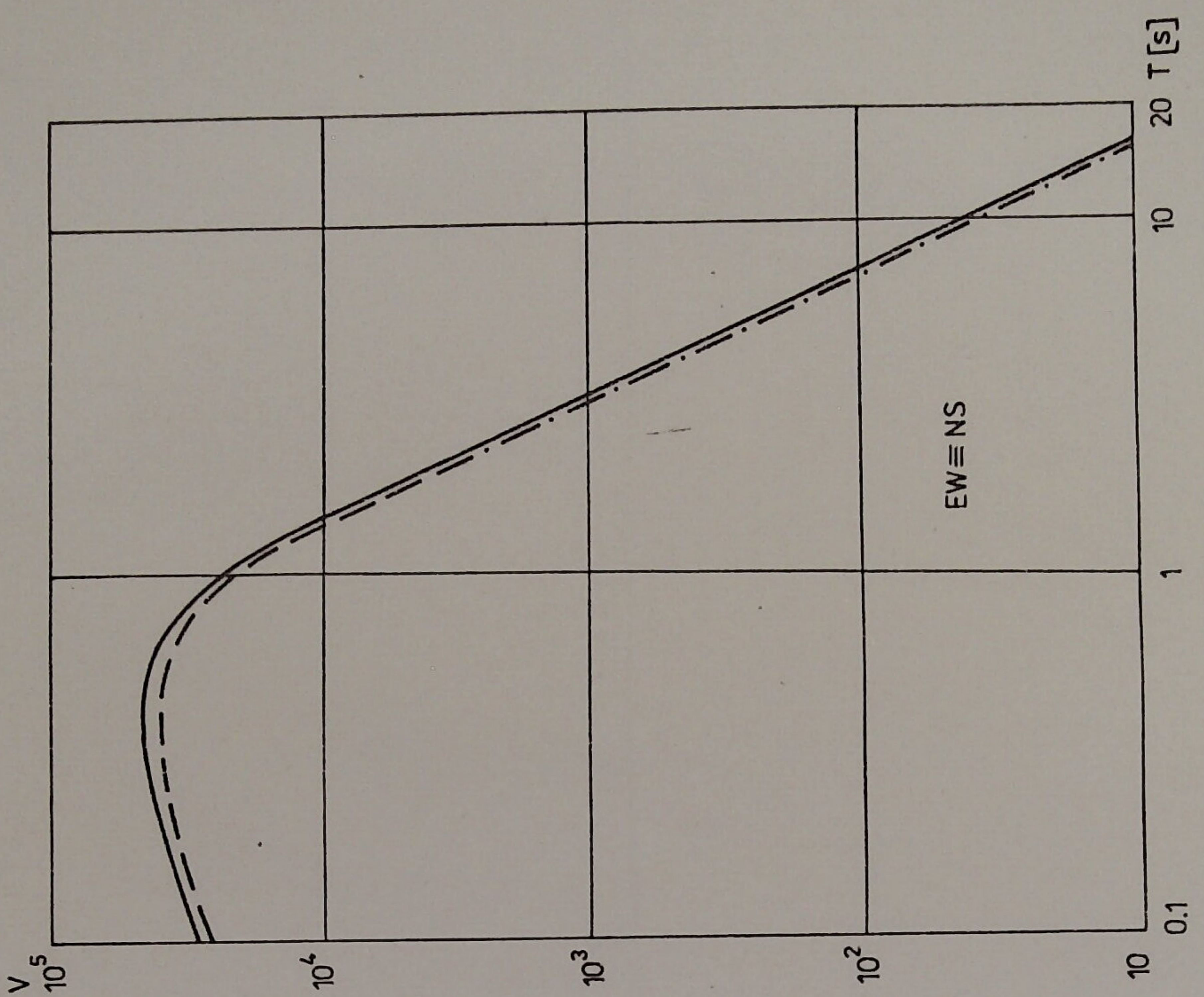


FIG. 14 (Nov. 1982 - Oct. 1984)

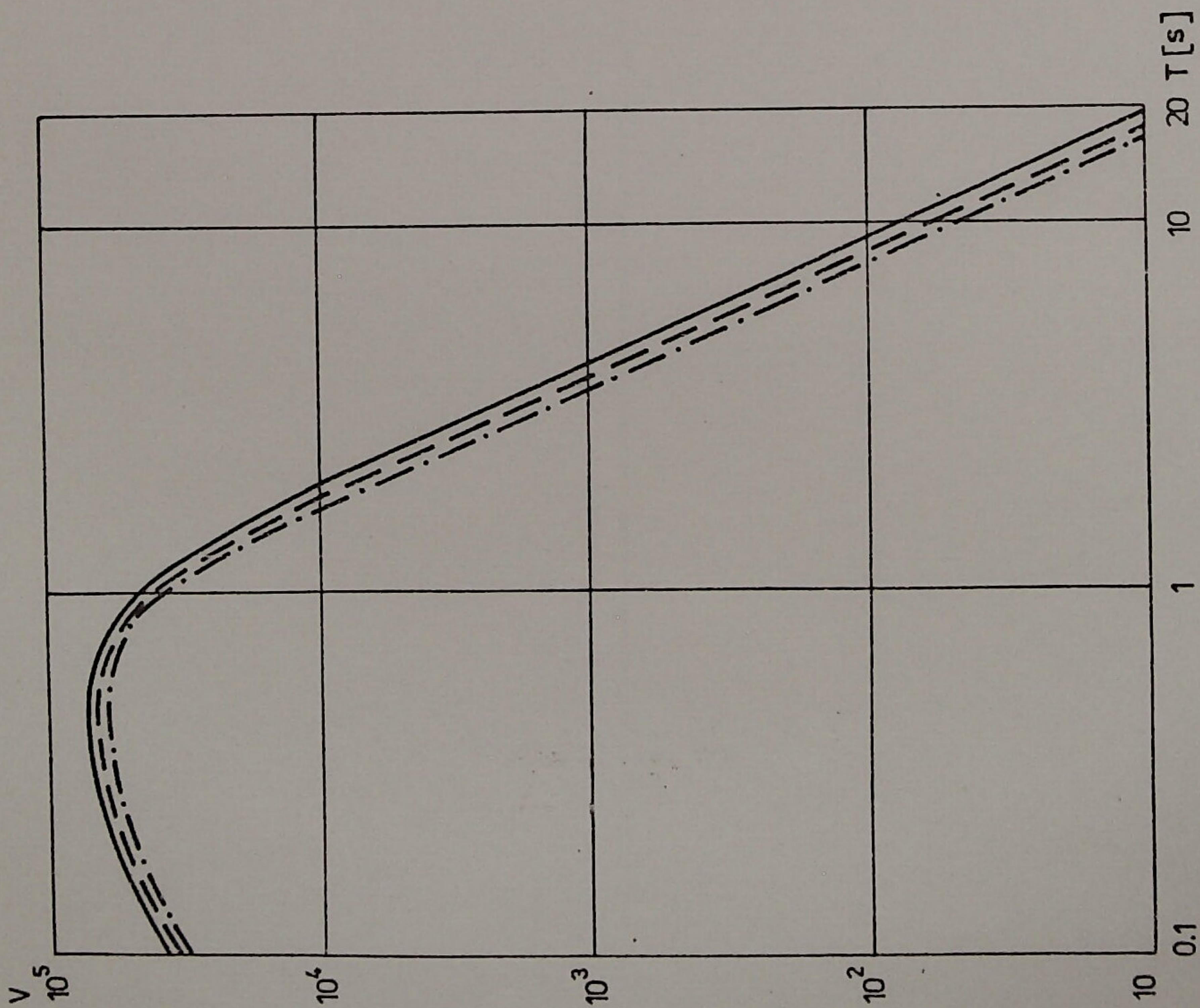


FIG. 13 (August 1980 - Nov. 1982)

Amplitude response for EQV station

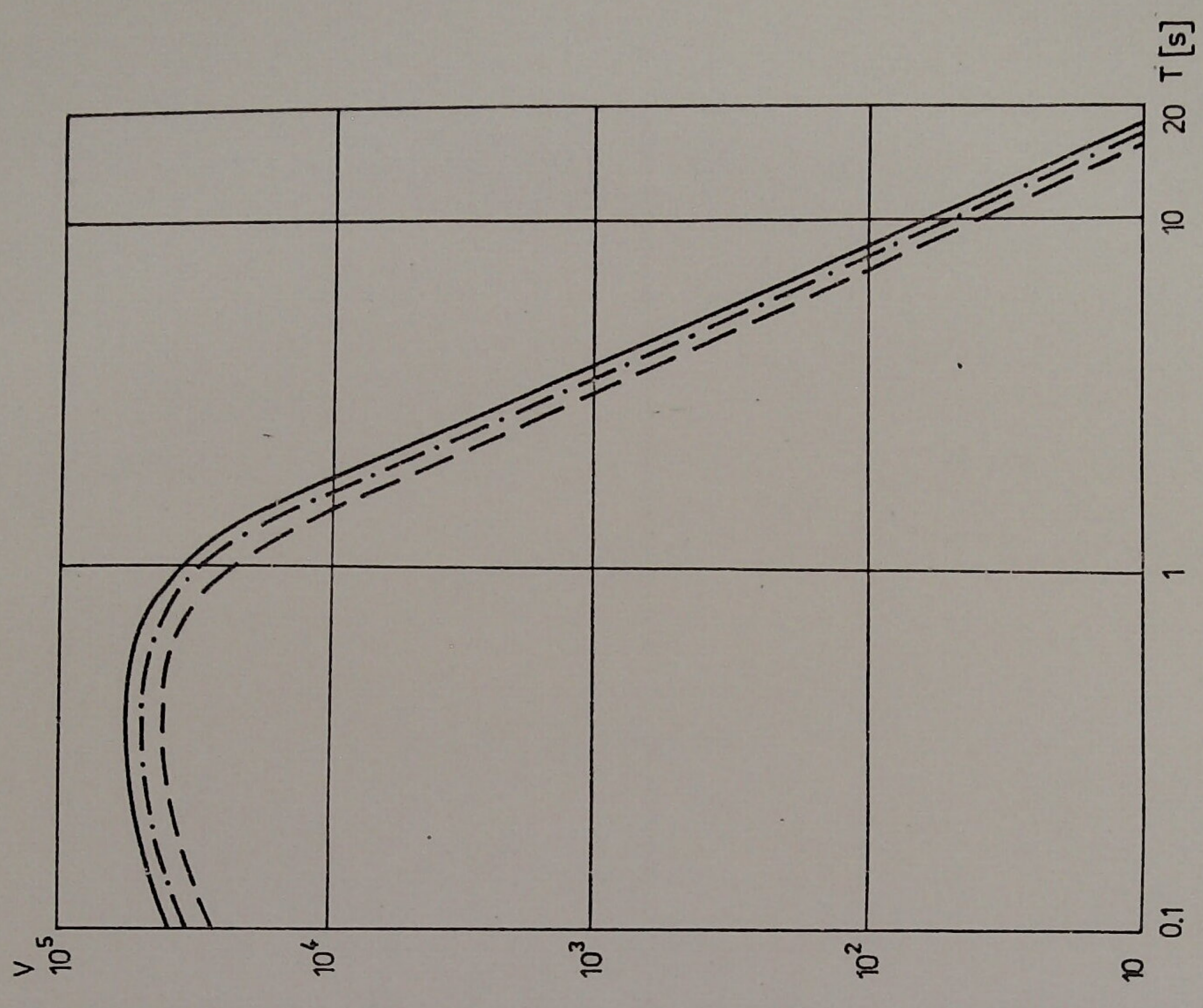
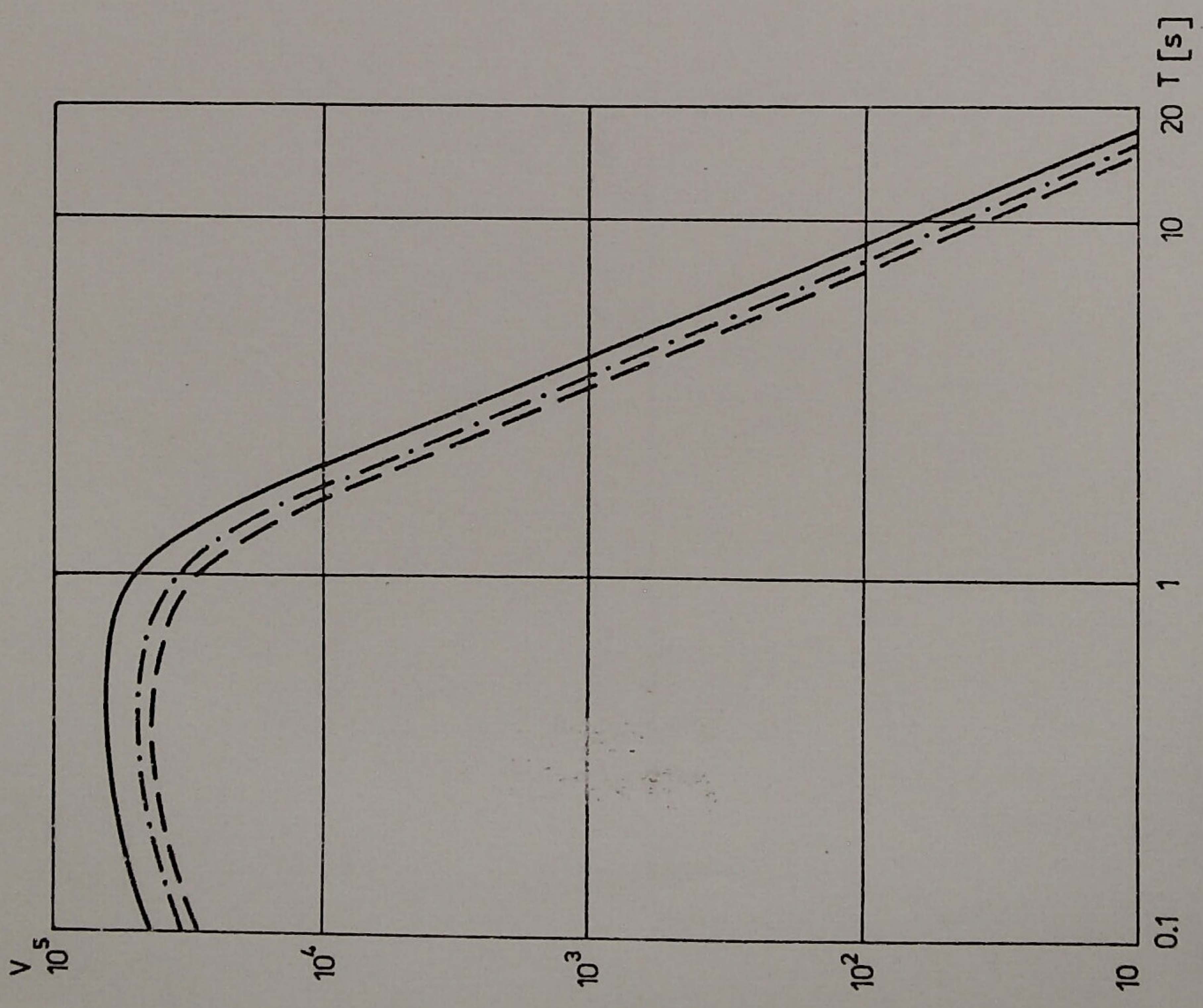


FIG. 15 (Oct. 1984 - Dec. 1984)

FIG. 16 (Dec. 1984 - August 1986)

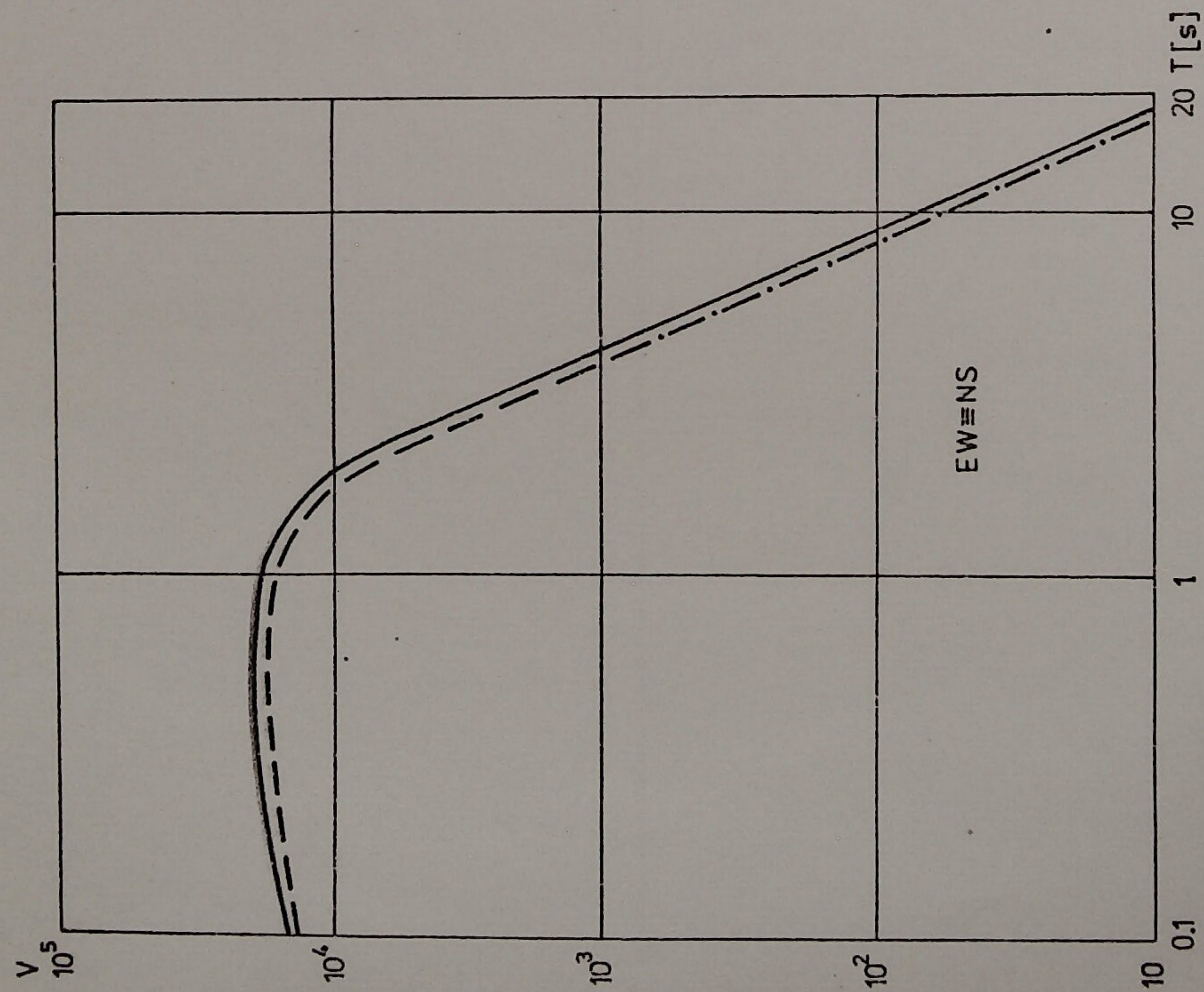


FIG. 17 (Sept. 1979 - Feb. 1982)

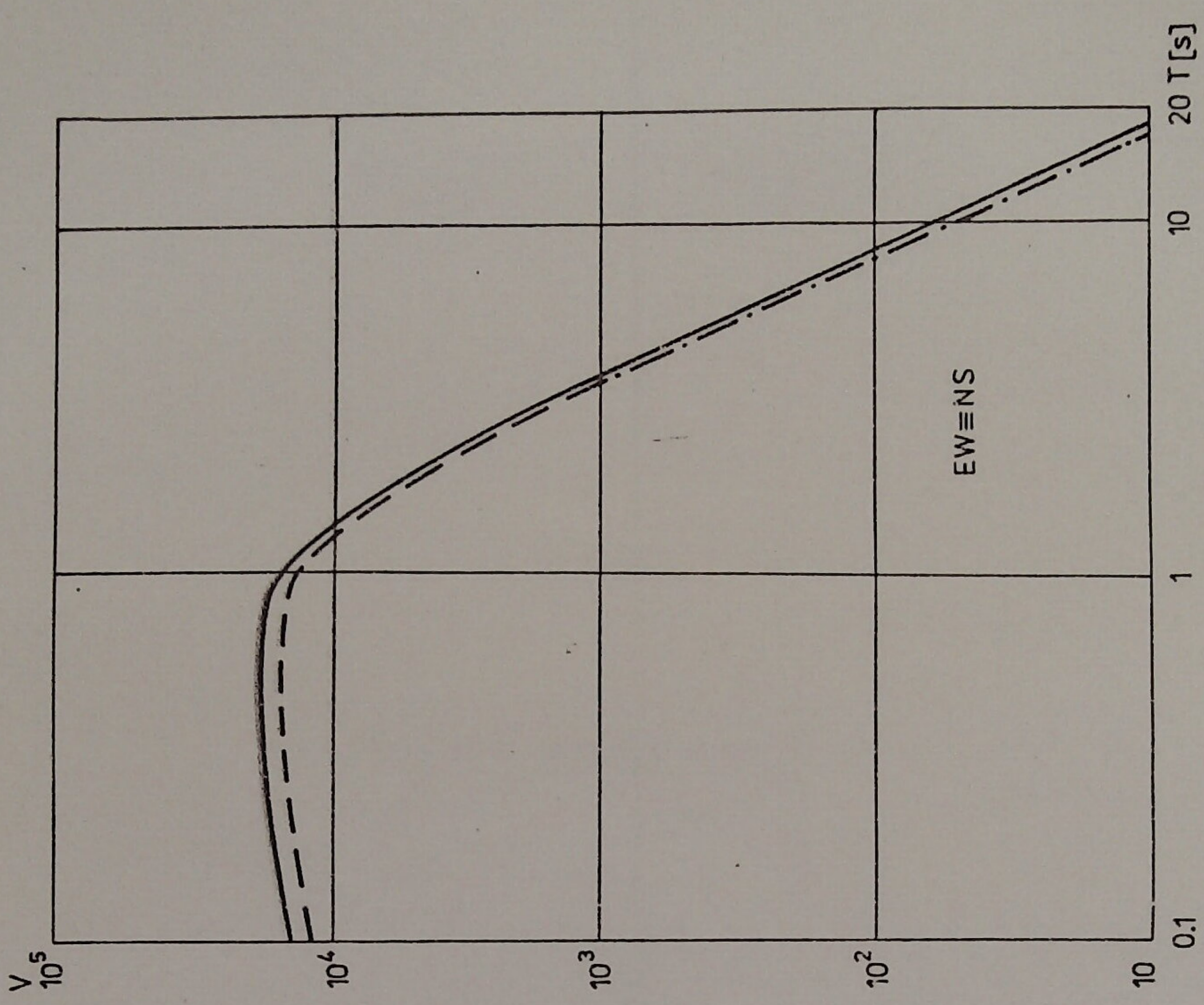
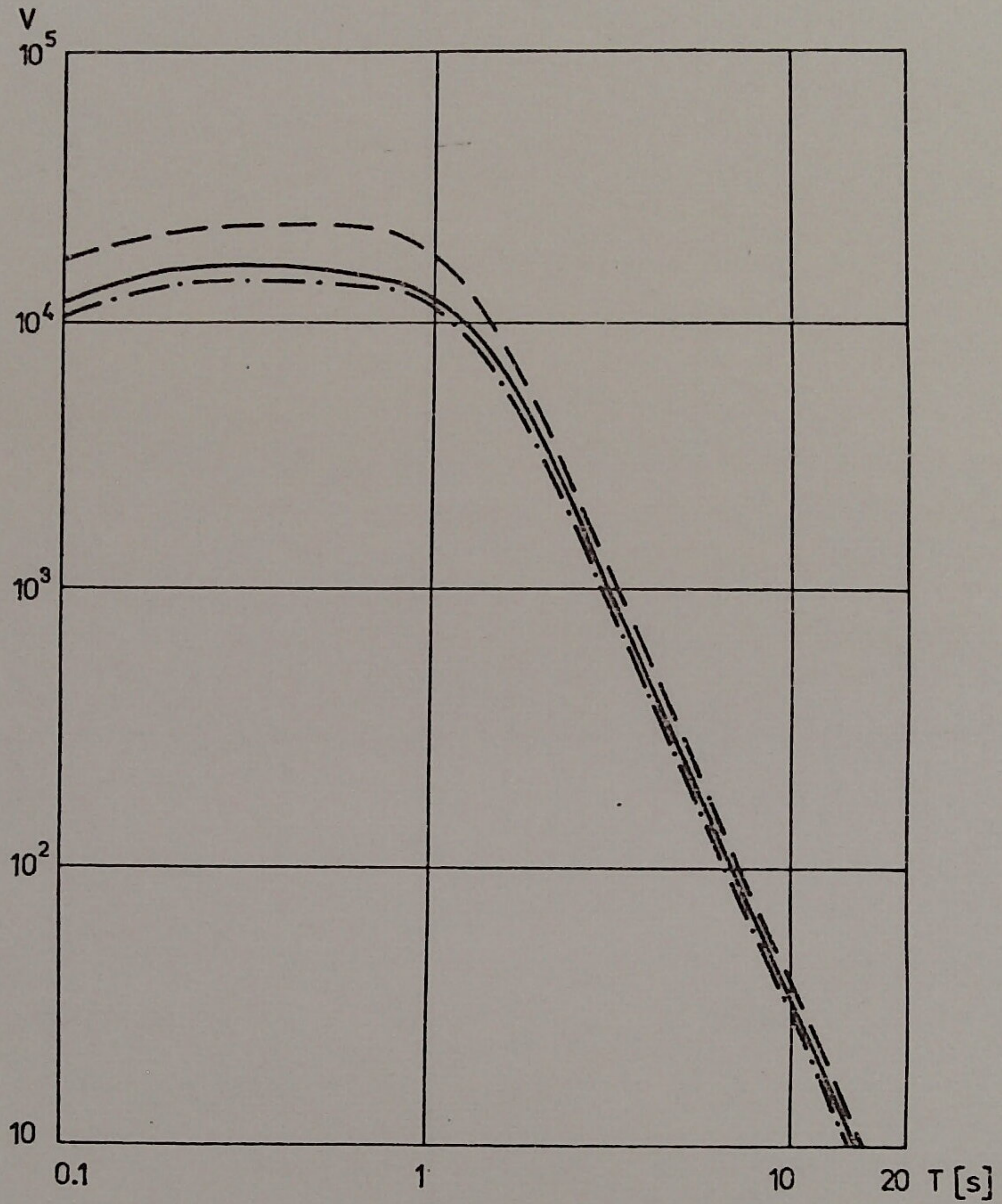


FIG. 18 (Feb. 1982 - August 1984)



Amplitude response for PLV station

Fig. 19 (August 1984 - May 1985)

No.	Date		Station	Phase	Time			Paxon	Amplitude			Δ	t_0			$\pm \delta t_0$	ϕ_0	λ_0	$\pm \delta E$	M	Remarks	
	h	m			s	EW	NS		Z	h	m		s	h	m							s
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
01	1	7	BGV TQV	oPg ePg 1SG	18 18	44 44	05.4 18.9 37.9	0.6	0.5	0.3	0.3	160								3.1		
02	1	14	TQV	1Pn 1PG 1SG	04 04	30 30	16.7 18.9 30.2 54.8	0.3 0.5		0.4 0.8		90	04	30	02.9	2.2				3.3		
03	1	14	HBV TQV	1Pn 1PG 1SG 1Pn 1PG 1SG	04 11 11	30 41 41	01.9 04.4 29.9 05.6 21.4 58.5	0.7 0.5 0.7		0.17 0.17	0.01 0.17 0.18	205	11	40	41.1	3.8	23.67	104.40	20	4.0		
04	1	16	HBV TQV	1Pn 1PG 1SG 1Pn 1PG 1SG	11 22 22	42 24 25	16.9 09.5 38.6 05.8	0.3 0.8		0.01 0.02	0.01 0.06	370	22	23	28.0	3.6				3.0		
05	1	17	HBV TQV	1Pn 1PG 1SG	10	59	13.3 34.9	0.2 0.8				90	10	58	56.8	2.2					2.4	
06	1	23	HBV TQV	1Pn 1SG oPn 1PG 1SG	08 10 08	09 10 09	45.8 28.5 43.0 53.9 36.4	0.8		0.03 0.02	0.01	317	0.8	0.8	53.2	4.7	18.80	104.70		3.6		
07	1	31	TQV	1SG 1PG 1SG 1Pn 1SG	00 14 15	14 17.7 47.6 39.2 21.6	0.5 0.8 0.7 0.8		0.2 0.01 0.02	0.03 0.03 0.03	0.02 0.01 0.01 0.02	245	00	13	36.8	4.2	21.57	102.58		3.4		
08	2	4	TQV	1PG 1SG 1PG	06 27	26 27	49.5 18.5	0.4 0.8				235	06	26	10.3	3.6					3.3	
09	2	11	HBV BQV TQV	1SG 1SG 1PG	06 06 12	27 27 54	09.3 53.2 29.7	0.3	0.01			10	12	54	27.6	1.4					2.1	
10	2	12	TQV	1SG 1Pn 1PG	03	41	18.2 28.9	0.3			0.13 0.01 0.02	410									3.3	
11	2	13	HBV	1SG	42	42	19.6	0.5		0.01	0.02	440										
12	2	18	HBV	1SG	10	21	35.2	0.5		0.03	0.02	445										
13	2	19	HBV	1 oPn oSG oPn	09 21 23 22	49 22 37.8 52.3	0.6 0.8 1.0	0.6 0.8 1.0	0.29 0.02 0.16	0.01 0.02	0.01 0.02	440	21	21	33.6	5.6	20.75	101.50		3.6		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
14	3	11	NHA	1PG	21	24	58.8	0.5	0.08	0.01	0.01										
15	3	12	HBV	1SG	01	08	40.8	0.6	0.01	0.01	0.01									2.9	
16	3	16	HBV	eP	02	28	18.5														
17	3	16	HBV	1SG	10	03	28.5														
18	3	16	BGV	eP	10	52	12.3														
19	3	17	HBV	eP	13	00	55.4	0.9	0.04	0.02	0.03										
20	3	20	HBV	1SG	13	00	23.0	1.0	0.02	0.02	0.01										
21	3	23	TQV	1SG	13	00	53.6	0.6	0.04	0.02	0.02										
22	3	27	HBV	eP	09	52	37.6	0.6	0.01	0.01	0.01										
23	4	20	TQV	eSn	04	41	22.7	0.5	0.01	0.01	0.01										
24	4	21	TQV	eSG	18	59	47.1	0.8	0.01	0.06	0.01										
25	4	21	BGV	eSG	19	00	50.6	0.6	0.01	0.02	0.01										
26	4	21	TQV	1PG	14	39	16.2	0.3	0.01	0.03	0.03										
27	4	25	BGV	1PG	17	27	48.5	0.2	0.01	0.01	0.02										
28	4	26	TQV	e	16	35	19.9	0.5	0.01	0.01	0.01										
29	4	30	BGV	eSG	19	05	42.2	0.8	0.04	0.05	0.03										
30	5	8	HBV	eSG	19	06	43.6	0.8	0.01	0.01	0.01										
			TQV	eSG	19	06	23.3	0.6	0.03	0.10	0.10										
			PLV	1PG	19	07	27.3	0.5	0.13	0.32	0.24										
			TQV	1SG	19	07	30.1	0.7	0.06	0.02	0.08										
			HBV	1PG	19	06	01.8	0.6	0.17	0.10	0.22										
			TQV	1PG	19	07	07.8	0.5	1.1	0.9	0.90										
			TQV	eP	19	11	58.8	1.2	0.06	0.08	0.02										
			BGV	eSG	19	12	31.3	0.8	0.06	0.08	0.02										
			BGV	eP	01	09	00.3	0.6	0.02	0.02	0.01										
			HBV	eSG	01	10	31.1	0.8	0.02	0.02	0.02										
			TQV	eP	01	09	42.2	0.6	0.01	0.01	0.01										
			TQV	eSG	16	43	33.5	0.5	0.01	0.01	0.01										
			BGV	1SG	16	44	15.5	0.8	0.02	0.02	0.03										
			BGV	eSG	16	44	44.2	0.5	0.01	0.01	0.01										
			BGV	eP	08	01	47.4	0.5	0.03	0.01	0.01										
			HBV	eSG	08	02	14.1	0.5	0.03	0.01	0.01										
			BGV	eSG	08	56	04.2	0.5	0.03	0.01	0.02										
			TQV	eSG	08	56	37.8	0.5	0.03	0.01	0.03										
			TQV	eSG	08	56	23.9	0.5	0.03	0.01	0.03										
			TQV	eSG	08	56	38.8	0.5	0.03	0.01	0.03										

h = 10 km

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
31	5	8	PLV	1SG	09	28	58.0	2.0			0.01	480	08	00	12.9	4.5					
32	5	11	TQV	ePG 1Sn	00	01	11.5 38.5	0.7			0.02 0.05									3.3	
33	5	14	PLV TQV	1SG 1Pa 1SG	07 07	33 33 34	40.0 27.0 20.3	1.6 0.6 0.8			0.50 0.01 0.03	435	07	32	10.9	5.5				5.5	
34	5	18	EGV TQV HBV	e ePG eSG	07 21 21	33 55 55	37.2 11.6 15.6	0.8	0.03		0.06	25	21	55	05.9	2.5	22.00	105.38	20	2.2	h = 10 km
35	5	19	HBV	eSG	21	55	19.6	0.6			0.02	133									
36	5	26	EGV	eSG	21	55	46.3 39.8	0.6	0.01		0.02	118									
37	5	27	TQV HBV HBV	eSG eSG ePG	11 08 08	06 11 12	35.2 20.2 39.5	0.8	0.06		0.08 0.01 0.02	155								2.3 3.1	
38	5	28	TQV BGV TQV	eSG ePG eSG	21 15 15	12 10 10	02.5 23.4 53.9	0.6 0.6 0.3	0.07	0.01		284	21	10	38.1	4.4	20.27	102.65	2.5	3.1	
39	5	29	HBV	eSG	13	38	03.8	1.0	0.02	0.03	0.04	330	15	09	42.3	4.0	23.32	107.07		3.1	h = 20 km
40	6	8	PLV BGV	1SG ePa eSn	00 00	39 39	30.0 04.0	2.0	1.6		0.9	715	00	37	00.0	8.7	22.45	103.05	50	4.2	
41	6	8	TQV	eSn eSG ePa	00	40	00.5 32.5 18.5	0.8 1.0 0.6	0.01 0.14	0.01 0.10	0.01 0.07	800									
42	6	16	HBV BGV TQV	eSn 1SG ePa 1SG	09 09 14 14	14 05 05	14.5 56.0 34.0	0.8 1.2 1.1	0.01 0.2 0.22	0.02 0.30	0.09 0.30	811	09	110.2		4.3				3.2	
43	6	16	HBV PLV TQV	e e 1Pa 1Sn 1SG	09 14 14	14 05 05	59.3 10.5 00.5	0.8 1.0 0.6	0.03 0.01	0.12 0.01	0.01 0.02	330	14	04	02.6	5.1	22.48	108.35	25	3.4	
44	6	18	BGV BGV HBV	1SG 1Pa ePG eSG	13 13	32 33 33	59.7 27.4 43.6	0.7 0.8 1.0	0.05 0.03 0.70	0.01 0.03	0.03 0.03	445	13	32	20.1	3.5	23.26	105.80	23	3.3	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
45	6	19	PLV BGV	1Sn	14 SG SG 14	29 -Pg -Pn 29 30 30	51.3 -30.0 -40.0 49.4 29.9 00.0 39.5 30.9 50.4 11.6 24.9 04.1	1.0		0.50	0.7	245	14	29	15.6	3.7				3.8		
46	6	21	HBV	ePn eSG ePn 1SG ePG eSG 1Pn 1PG 1SG	19 22 08	58 15 16 09	30.9 50.4 11.6 24.9 04.1	1.0	0.02 0.10	0.02 0.10	0.08 0.25	160	19	58	03.0	2.8					3.7	
47	6	22	TQV	eSG ePn 1SG ePG eSG 1Pn 1PG 1SG	22	15	11.6 24.9 04.1	0.5	0.02 0.08	0.03 0.16	0.02 0.20	320	22	14	15.6	4.4					4.4	
48	6	25	BGV	ePG eSG	08	09	07.7 36.7	0.8	0.01 0.02	0.35	0.25	240	08	08	28.2	3.6					2.9	
49	7	7	TQV	e ePG eSG ePn ePG eSn eSG ePG eSG 1Pn 1PG 1SG	02	30 31 32 31 32 33 01 02	52.4 24.4 57.4 13.4 41.4 46.4 42.9 50.1 07.8	0.8 0.9 1.1 0.7 0.8 1.0 1.0 0.8	0.01 0.05 0.12 0.01 0.03 0.06 0.09	0.02 0.09 0.19 0.02 0.03 0.03 0.08	0.01 0.06 0.50 0.02	755	02	29	00.0	3.9	24.76	98.74			4.6	
50	7	8	TQV	ePG eSG	05	01 02	50.1 07.8	0.8	1.3	0.6	0.01 0.06	145	05	01	25.0	2.7					2.7	
51	7	11	PLV BGV	1SG ePG	03	02 02	31.2 19.2	0.6			0.50 0.02	180 240	03	01	37.8	4.3	20.55	108.40	30		3.5	
52	7	18	TQV	eSG ePG eSG eP eSG ePG eSG	10	55 56 55 56 29	47.7 13.2 51.8 19.8 32.0 35.8	0.8 0.8			0.04 0.13	250 230	10	55	11.8	3.4					3.7	
53	7	22	HBV	eSG ePG eSG ePG eSG	18	29	32.0 35.8				0.01 0.02	30 90	18	29	28.0	1.9	21.05	105.30	8		2.4	
54	7	23	TQV	ePn eSG ePn eSG 1Pn ePG eSn 1Pn 1PG 1SG	05	48 49 48 49 34 35	25.6 09.6 38.6 30.1 59.3 07.3 43.5 15.6 32.9 28.6	0.8 0.8 0.8 0.8 0.5 0.5 0.7 0.3 0.6 0.6	0.03 0.08	0.02	0.03 0.09	360	05	47	22.6	5.1	22.75	101.84	35		3.7	
55	7	30	TQV	eSG ePn 1Pn ePG eSn 1Pn 1PG 1SG	14	35	07.3 43.5 15.6 32.9 28.6	0.5	0.01 0.03 0.30 0.02 0.01 0.02	0.02	0.04 0.01 0.02 0.02	420	14	30	05.7	5.4					3.8	
56	8	1	TQV	e ePG eP eSG e eSG eP eSG	00	45 46 46 47 46 47 01 02	51.5 00.0 10.7 07.0 16.0 20.5 15.0	0.5	0.5	0.01	0.01	360	00	44	57.0		24.11	102.70	30		3.4	h = 20 km
57	8	1	TQV	e eSG e eSG	02	01	15.0	0.7	0.7	0.01	0.02	460										
58	8	14	BGV	eSG eP eSG	16	08 09	22.6 05.6	0.6 0.5	0.6 0.5	0.01 0.01	0.03 0.01 0.01	350									3.3	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
59	8	14	TQV	ePn ePg eSg	15	18 19 18	09.5 24.5 21.5	0.2 0.8 0.9	0.01 0.13	0.02 0.03 0.08	465	15	17	17	03.1	5.8	20.04	101.16	35	4.0	h = 20 km
60	8	18	BGV HBV HBV TQV	e e eSg eSg e ePg eSg e	15 17 17 17	19 19 12 11 12 11 12	37.4 41.9 13.7 09.0 03.9 31.9 46.8 50.4	0.7 1.0 1.0 1.1 0.8 0.9	0.01 0.10 0.15 0.06 0.04	0.02 0.04	535	17	17	17	22.6	4.0	20.45	102.97	20	4.0	
61	8	18	HBV TQV	eSg ePn	17 17	14 14	37.0 11.9	1.0 0.6	0.02 0.06	0.02 0.06	247 280	17	13	13	22.6	4.0	20.45	102.97	20	4.0	
62	8	18	BGV HBV TQV	eSg eSg ePn	17 17 17	15 20 19 20	05.4 18.0 20.4 34.4	0.03	0.02	0.02	347 470	17	18	18	20.5	4.1				3.7	
63	8	25	BGV TQV	eSg eP	17 07	20 56	49.9 39.5	39.5	0.01 0.05	0.01 0.03	490	07	56	56	04.5	6.1				3.5	
64	9	4	TQV	ePn	13	49	50.5	0.3	0.01	0.01	300	13	49	49	07.9	4.2				3.7	
65	9	4	BGV TQV	ePg eSg e ePn ePg eSg ePn ePg eSg ePn eSg	13 05	50 51 26 27 28 26 27 28	59.0 35.5 07.3 41.3 00.3 10.8 41.6 07.6 17.6 54.7 25.2 21.2 18.7 43.7 55.7 55.5 21.0 04.5 19.5 14.5	0.9 0.8 0.6 0.7 0.8 0.9 1.0 0.8 0.9 1.0 0.8 1.0 0.7 0.7 0.9 0.8 0.8 1.1	0.08 0.10 0.08 0.01 0.07 0.01 0.01 0.08 0.08 0.10 0.02 0.11 0.20	0.09 0.12	560	05	25	25	28.0	6.9	22.31	99.80	40	5.0	h = 20 km
66	9	13	HBV BGV	ePn ePg eSg ePn ePg eSg ePn eSg	05 05	26 27 28 26 27 28 44	17.6 54.7 25.2 21.2 18.7 43.7 55.7 55.5 21.0 04.5 19.5 14.5	0.8 0.9 1.0 0.8 0.9 1.0 0.8 0.8 1.0 0.7 0.7 0.9 0.8 0.8 1.1	0.02 0.11 0.20	0.05 0.15	595	10	42	42	57.0	7.2			4.0		
67	9	19	HBV	ePn ePg eSg ePn eSg ePn eSg ePn eSg ePn eSg	06 06	52 53 52 53 51 54 55 55	04.5 19.5 14.5 10.2 25.2 31.2 53.4 25.5 19.1 38.1	0.01 0.03 0.07 0.01 0.03 0.03 0.12	0.01 0.03 0.07	450	06	50	50	55.8	6.1	22.97	101.55		5.2	h = 10 km	
68	9	28	TQV TQV HBV	ePn eSg e	18 18	54 55	25.5 19.1	0.6 0.7	0.01 0.02	0.01 0.02	440	18	54	54	02.5	5.6				3.7	
69	10	15	BGV TQV	ePn eSg ePn eSg	03 03	01 02 01 02	24.6 18.9 31.4 16.9	0.5 0.7 0.3 0.7	0.01 0.01 0.09 0.01	0.02 0.02	445	03	00	00	07.2	6.9	24.79	108.06	30	3.5	h = 20 km

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
70	10	21	HBV	eSG ePn eSG	03	01 02	25.9 40.3 45.3	0.7	0.01 0.01 0.05	0.04	0.06	530									
71	10	21	BGV	e e eSG	23	01 02	09.3 49.1 03.0 16.2 27.2	0.6 0.3 0.5	0.01	0.02	0.15 0.05	290	15	27	08.9	4.6	22.83	108.57	25	3.9	h = 20 km
72	11	25	HBV	eSG	23	02	03.0					355									
73	11	30	TQV	eSG	15	27	58.9	0.5	0.01	0.02	0.01	395	10	41	48.7	2.5				2.2	
74	11	30	TQV	ePn eSG	21	49	45.3	0.4	0.01	0.06	0.01	530	21	48	30.7	4.0				4.0	
75	11	30	TQV	ePn eSG	22	51	07.3	0.5	0.02		0.05	480	22	56	37.5	3.9				3.9	
76	12	1	TQV	e ePn eSG	23	56 58 59	45.8 01.8 00.8	0.3 0.6 0.7	0.01 0.01 0.08	0.04 0.12 0.03	0.01 0.02 0.10 0.01 0.02	605								3.7	
77	12	1	TQV	1 1SG	23	56 57	36.6 35.6	0.8 0.8	0.02		0.02	710								3.6	
78	12	4	TQV	ePn 1SG	08	52	25.4	0.9	0.01		0.02	470								3.7	
79	12	6	TQV	1SG 1Pn 1SG	08 08 09	53 54 58	39.4 09.8 53.9	1.0 0.9 0.6	0.03 0.06		0.08 0.04 0.02 0.04	605								3.7	
80	12	16	TQV	eSG ePn 1SG	22	00	08.2	0.8	0.02		0.04	80	13	02	12.4	1.3				2.4	
81	12	18	TQV	eSG ePn eSG	22	59	36.7	0.5	0.01		0.01	220	14	59	08.8	3.4	23.36	103.80	20	3.2	
82	12	18	TQV	eSG ePn eSG	22	00	14.4	0.3	0.02		0.01	325								3.2	
83	12	26	TQV	eSG ePn eSG	22	00	04.5	0.7	0.02		0.07	325								3.2	
				eSG ePn eSG	22	45	44.5	0.4	0.01		0.01	325								3.3	
				eSG ePn eSG	22	46	51.5	0.8	0.01		0.01	240								3.1	
				eSG ePn eSG	22	46	30.2	0.5	0.05		0.09	335								3.1	
				eSG ePn eSG	22	46	56.5	0.9	0.05		0.05	335								3.1	
				eSG ePn eSG	22	46	03.5	0.5	0.05		0.05	335								3.1	
				eSG ePn eSG	22	46	23.4	0.5	0.05		0.05	335								3.1	
				eSG ePn eSG	22	46	52.4	0.8	0.05		0.05	335								3.1	
				eSG ePn eSG	22	46	41.8	0.5	0.05		0.05	335								3.1	
				eSG ePn eSG	22	46	19.3	0.5	0.05		0.05	335								3.1	
				eSG ePn eSG	22	46	43.5	0.5	0.05		0.05	335								3.1	
				eSG ePn eSG	22	46	23.5	0.2	0.03		0.01	240								3.1	
				eSG ePn eSG	22	46	00.2	0.5	0.02		0.02	335								3.1	
				eSG ePn eSG	22	46	28.7	0.7	0.07		0.03	350								3.1	
				eSG ePn eSG	22	46	10.0	0.7	0.07		0.03	350								3.1	
				eSG ePn eSG	22	46	47.8	0.8	0.02		0.02	355								3.1	
				eSG ePn eSG	22	46	20.8	0.8	0.02		0.02	355								3.1	
				eSG ePn eSG	22	46	03.5	0.8	0.02		0.02	355								3.1	
				eSG ePn eSG	22	46	17.3	0.8	0.02		0.02	355								3.1	
				eSG ePn eSG	22	46	58.3	1.0	0.02		0.03	355								3.1	
				eSG ePn eSG	22	46	13.6	1.0	0.02		0.03	355								3.1	
				eSG ePn eSG	22	46	13.6	1.0	0.02		0.03	355								3.1	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
84	12	28	HBV HBV TQV	IPG ISG EPA ESE EPG ESG EPG ESG	08 14 14	02 01 02 52 52	24.5 05.0 34.8 26.3 02.0 08.0 11.9 23.9	0.9 0.8 0.8	0.01 0.04 0.04	0.02 0.08 0.05	0.02 0.03 0.04 2.3 2.3	450 45 100	14 51 54.0	51	54.0	4.2						2.3