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Digital Recordings of Aftershocks of the October 17, 1989, Loma Prieta, California, earthquake: Santa Cruz, Los Gatos, and surrounding areas

by

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Digital Recordings of Aftershocks of the October 17, 1989, Loma Prieta, California, earthquake: Santa Cruz, Los Gatos, and surrounding areas

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INTRODUCTION

On October 17, 1989, a magnitude 7.1 M_s earthquake occurred beneath the southern Santa Cruz Mountains near Loma Prieta, California. The Loma Prieta earthquake was the largest earthquake in northern California since the great San Francisco earthquake of 1906. This was one of the nation's most costly disasters with 61 confirmed fatalities, 3,100 injuries, more than 10,000 people left homeless, and property losses and recovery costs estimated at $5.6 billion by the California Office of Emergency Services. Eleven portable digital seismographs were deployed in the epicentral region from October 18, 1989, through January 16, 1990. A total of 161 aftershocks were recorded by three or more seismographs. The instruments were moved frequently so that 101 different recording sites were occupied for varying lengths of time. This report is intended to serve as a user's guide to the Loma Prieta aftershock data that we recorded.

The field effort was divided into five study areas: Santa Cruz, Rebecca Ridge in the Santa Cruz Mountains, Los Gatos, the Watsonville-Salinas area, and Robinwood Lane near Summit Road in the Santa Cruz Mountains (fig. 1). Each of these experiments is described in more detail below. Generally, our intent was to record seismic ground motion to determine relative site response to ground shaking between several nearby locations.

This report includes five appendices which facilitate use of the data from the study areas. The first four appendices include a list of the station locations; a list of the aftershocks recorded by three or more stations showing which stations recorded them; and a listing of the HYPO71 event summary cards for each of the aftershocks. Seismograms are included in the appendices for each aftershock recorded by three or more stations. The fifth appendix is an example of an event as it is represented in the data set on the CD-ROM.

INSTRUMENTATION AND FIELD PROCEDURE

Each seismograph station consisted of a Sprengnether DR-200 (any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS) portable, self-triggering, digital recorder equipped with an S-6000 triaxial seismometer. The operating characteristics of this seismograph package have been described in detail by Carver and others (1986).

The S-6000 seismometers are velocity transducers. Their nominal response characteristics are: natural frequency of 1.7 Hz, damping coefficient of 0.6, and an effective motor constant of 1.18 v/cm/s. Calibration of each individual component was performed each time recording tapes were changed. The DR-200 internal calibration routine consists of a positive and a negative 0.05 v constant current pulse followed by a positive and a negative 2.5 v constant current pulse. After the field effort, we performed a relative calibration of all of the seismometers. The seismometers were buried in a rectangular grid with 10-cm spacing between their casings. Four small explosions were detonated 100 m away at two different azimuths. Spectral ratios of the resulting seismograms

indicated that the response of the horizontal components varied less than 10 percent and two-thirds of them varied less than 6 percent in the frequency band of 5-25 Hz. We believe that this experiment gives a good indication of the precision of the DR-200-S-6000 seismograph system as it was installed in the field. The record headers in the data set reflect the instrumental constants specified by the manufacturer corresponding to each seismometer component.

The DR-200 recording parameters were set up the same way for almost all installations. The recording parameters used by the seismograph at the time of an event are written in the event header. Signals were high pass filtered at 0.2 Hz and low pass filtered (anti-alias) at 50 Hz with a 7-pole Butterworth filter. Sampling was done at 200 samples per second per channel. Gains were almost always x10. The 12-bit gain-ranged A/D has four gain levels (three steps) with a magnification of four (2 bits) per step and has an ideal dynamic range of 18 bits (however, we have processed only the most significant 16 bits). Seismograms are clipped above 0.43 cm/s.

The trigger algorithm was a simple short-term average versus long-term average (STA/LTA). Both of the horizontal channels were required to exceed a 6 or 9 dB signal-to-noise ratio before an event was recorded. This algorithm has been found to work well in seismically noisy urban environments. The pre-event memory was set at 6.8 s, but since many triggers were on S-waves the actual pre-P-wave arrival time was often only about 3.6 s. Total duration of recording varied from 20 to 40 s.

Most seismometer placements were buried with the top of the case being visible. This allowed frequent checks to insure that the seismometer was level. LP5 was the only sensor found outside level specification on day 015. When site conditions prohibited burial of the seismometers, they were epoxied to a concrete pad (such as a garage floor). Seismometers were always oriented with channel 2, the North-South component, aligned with magnetic North. All of the seismometers were wired such that the North-South components had reversed polarity; that is, north motion would yield a negative voltage (downward trace). The amplitude polarity was reversed during post-processing so that north motion yields the more conventional positive signal.

A portable master clock was used to determine seismograph clock corrections. Each day the drift of the master clocks (typically less than 2 ms per day) was calculated by comparison with a GOES satellite standard time signal. The seismograph clocks were compared each day with the master clocks, and clock corrections for both the seismograph clocks and the master clock were recorded. The major exception to this routine came during the first few days of the program. During those days, a combination of WWV radio- and telephone-transmitted standard time signals were used to set the master clock. It was later proven that these time sources had variable time delays from UTC due to propagation path effects. Also, during the first few days the master clock failed nonlinearly. For these reasons, time is not well-determined before October 30, 1989 (Julian day 303).

Final clock corrections to the event-trigger times were made in the event headers by first correcting the seismograph clock corrections for master clock drift. The appropriate seismograph clock correction was then derived by linear interpolation between the two clock corrections closest to the trigger time. This procedure yielded corrected event trigger times that are estimated to be accurate to within $\pm$10 ms of UTC. The typical operation procedure was to install a station and start the internal clock automatically with a pulse from the master clock. Thus, the clocks started with a time correction of zero. The stations were visited daily to change recording tape (if necessary), check

the system operation, and determine the seismograph's clock drift. Notes were taken in the field and later entered into the computer so that the time corrections could be computed.

FIELD OPERATIONS

Deployment of 11 portable digital seismographs began the day after the mainshock in Santa Cruz, California. During the next 14 days, we installed seismographs at 43 sites (fig. 2). Since our main research objective was to characterize site response in Santa Cruz, sites were chosen that would best differentiate ground motion on the major lithologic units within the city. Also during the first few days after the mainshock, a subarray of three seismographs was installed at the Moss Landing Power Plant, and three other seismographs were collocated with strong motion accelerographs at Salinas, Halls Valley, and Saratoga. These recording sites are shown in figure 1 and they are included in Appendix A since they were operated contemporaneously with the Santa Cruz sites.

A major subexperiment (Cranswick and others, (1990)) in Santa Cruz was an 11-station array, approximately 3-1/2 km long, across the downtown area in the flood plain of the San Lorenzo River (fig. 3). Accurate time determinations were critical for this experiment because travel times between the array stations were short so clock corrections were determined twice daily for this array.

On November 4, 1989, we moved all 11 seismographs to the Rebecca Ridge study area in the mountains north of Santa Cruz (fig. 4). At several locations in the Santa Cruz Mountains, houses built on ridge crests were much more severely damaged than those constructed nearby but lower on the ridge. This observation raised the question as to whether or not topographic amplification of the seismic waves could have influenced damage patterns. At Rebecca Ridge, seismographs were installed along the ridge crest, down the hillside, and on bedrock in the streambeds on both sides of the ridge. The maximum elevation difference was 252 m between station REB at the top of the ridge and station IRW on the banks of the San Lorenzo River. The Rebecca Ridge station locations, associated earthquake data (recorded at three or more sites), and associated seismograms are shown in Appendix B.

Another site-response experiment was conducted at Los Gatos, where 11 seismographs were installed throughout the city from November 10, 1989, to November 18, 1989, and then again from December 8, 1989, to December 17, 1989. The surficial geology of Los Gatos is not well known; therefore fieldwork was accomplished without the aid of geologic maps. Sites were selected that were representative of various surficial geologic units, and they also cover the severely damaged areas of town. During the second effort in December, an L-shaped array was installed that centered on the most severely damaged downtown area of Los Gatos. Station locations, and associated earthquake hypocenters (recorded at three or more sites) and their seismograms are shown in Appendix C.

An array of seven seismographs was installed in the Watsonville-Salinas area at sites where liquefaction occurred during the mainshock (fig. 1). The instruments ran unattended from November 20, 1989, through December 16, 1989. No time corrections were possible for this array because the batteries had been discharged by December 16. The station locations, and the

associated earthquake hypocenters (recorded at three or more sites) and associated seismograms are included with the Los Gatos data in Appendix C.

On December 18, 1989, we installed a very closely spaced array in the Summit Road area about 3 km southeast of the Hester Creek Church at Robinwood Lane (fig. 6). Again the instruments ran unattended and the batteries discharged. Because of this, time is not reliable for the earthquakes recorded in December and early January. After January 9, 1990, the clock corrections were determined daily. The Robinwood Lane array was another attempt to gather data showing topographic amplification of ground shaking. Two seismographs were installed on top of the ridge where several modern houses had been severely damaged. Five other seismographs were painstakingly installed at about 10- to 30-m intervals over the side of the hill. There was a 109-m elevation difference between LP0 of the bottom and LP6 at the top of the ridge. Care was taken to insure that the seismometers were buried in the same lithologic unit and at depths that exhibited about the same degree of weathering. The sites were later surveyed so that the locations are precisely known, at least relative to each other. For the Robinwood Lane station locations, the recorded aftershocks by three or more seismographs and their seismograms are shown in Appendix D.

DATA SET DESCRIPTION

A total of 2,926 three-component digital seismograms was recorded from October 18, 1989, through January 16, 1990. All seismograph triggers have been included in the data set, regardless of whether or not they could be associated with a located earthquake. The calibration records made at the beginning of most tapes are also preserved in the data set.

The original data cassettes recorded by the seismographs were played into an IBM-compatible PC using software called OL_V200 that was written by Leland Bond for the University of Washington. The data on the PC were then transferred to a micro-Vax computer via PC-link where it was converted to a compact block-binary (DR-100) format. Each single-component file consists of a 512

byte header followed by data blocks. There is one real leader block (128 four-byte real), followed by one or more integer data blocks (256 two-byte integer).

Appendix E is a printout of an example data file as it is written on the CD-ROM disk. Each seismic record is stored as a separate file, whose name is a unique 13-character string constructed from the trigger time (UTC), component, and station name. Characters 1-3 represent day of year (001-366), characters 4-5 = hour (00-23), characters 6-7 = minute (00-59), character 8 = second code (A-T, where A = 0.000 - 2.999, B = 3.000 - 5.999, ... T = 57.000 - 59.999), character 9 is the component code (4 is vertical-component velocity, 5 and 6 are North-South and East-West horizontal component velocity, character 10 is ".", and characters 11-13 are the three-letter station names. The binary data files have been converted to ASCII for distribution on a CD-ROM optical disk (compact disk - read-only memory). The file names on the CD have been shortened from the nine characters described above to eight characters by substituting a letter for the two-digit hour code (A = 00, B = 01, ... X = 23) to make them PC compatible. The CD-ROM has been written using the ISO-9660 standard and is available by contacting:

Open-file Services
U.S. Geological Survey, MS 517
Denver Federal Center
Denver, CO 80225

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We would especially like to thank Robert Banfil of Small Systems Support for his assistance in doing data playbacks and his expert software support. Thanks to Mark Meremonte who was very helpful in the field and transcribed most of the field notes into the computer. Thanks also to Todd McCormick and Arch Johnston of the Tennessee Earthquake Information Center for loaning us equipment, to Leland Bond of Prime Focus for providing playback software, and to Dave Oppenheimer, who provided information on the earthquake hypocenters. Carl Stepp (EPRI) arranged and consulted on the installation of the instruments of the Moss Landing Power Plant.

Our thanks to the Mayors and all of the city employees of Santa Cruz and Los Gatos who were very helpful during an extremely difficult time for them. We are grateful to all of the people who allowed us to use their garages and backyards for seismograph stations--without their goodwill this would have been impossible. The young men of the Ben Lomond camp of the California Youth Conservation Corps. were most helpful during the installation and removal of the Robinwood Lane array. Our thanks again to them.

REFERENCES

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Clark, J.C., Geologic map and sections of the Felton-Santa Cruz area, Santa Cruz County, California: U.S. Geological Survey Professional Paper 1168, Plate 2, 1981.

Cranswick, E., King, K., Carver, D., Worley, D., Williams, R., Spudich, P., and Banfil, R., 1990, Site response across downtown Santa Cruz, California: Geophysical Research Letters, v. 17, no. 10, p. 1793-1796.

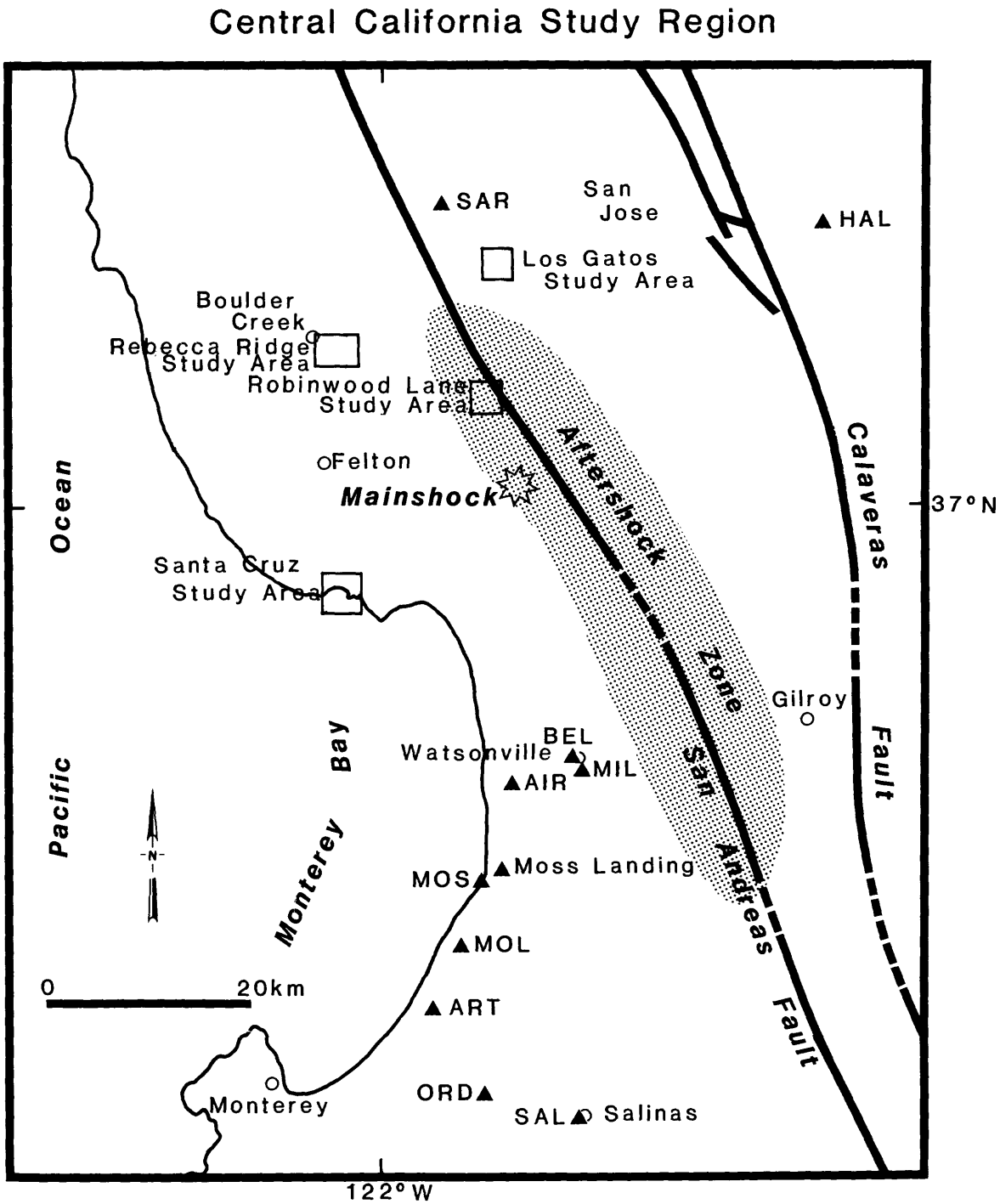

Fig. 1. Map of central California showing coastline, faults, mainshock, mainshock rupture area, study areas (shown in greater detail in figures 2, 3, 4, 5, and 6,), and several outlying station locations.

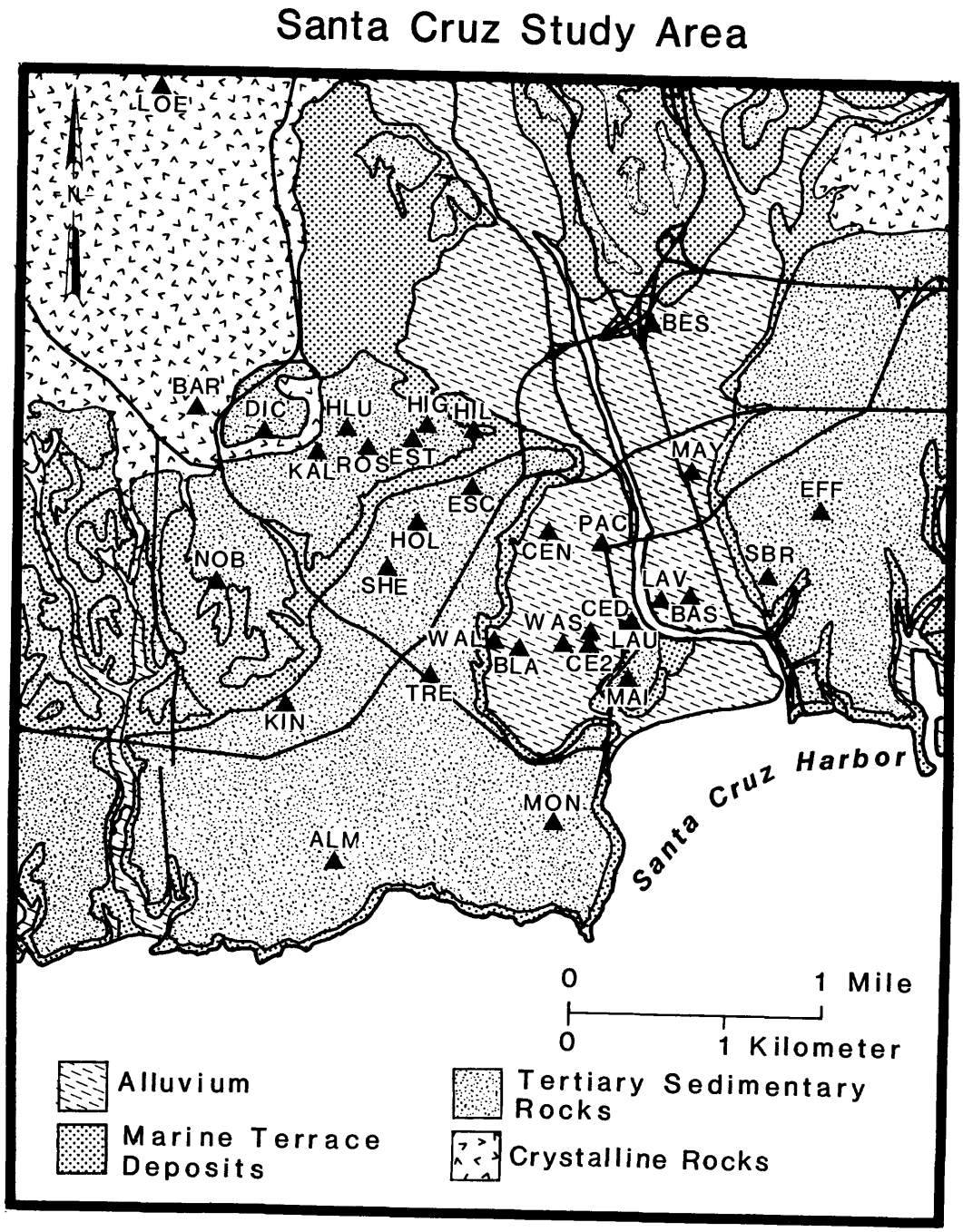

Fig. 2. Map of the Santa Cruz, California, study area showing seismograph station locations, and general surficial geology (adapted from Clark, 1981).

Santa Cruz Flood Plain Array

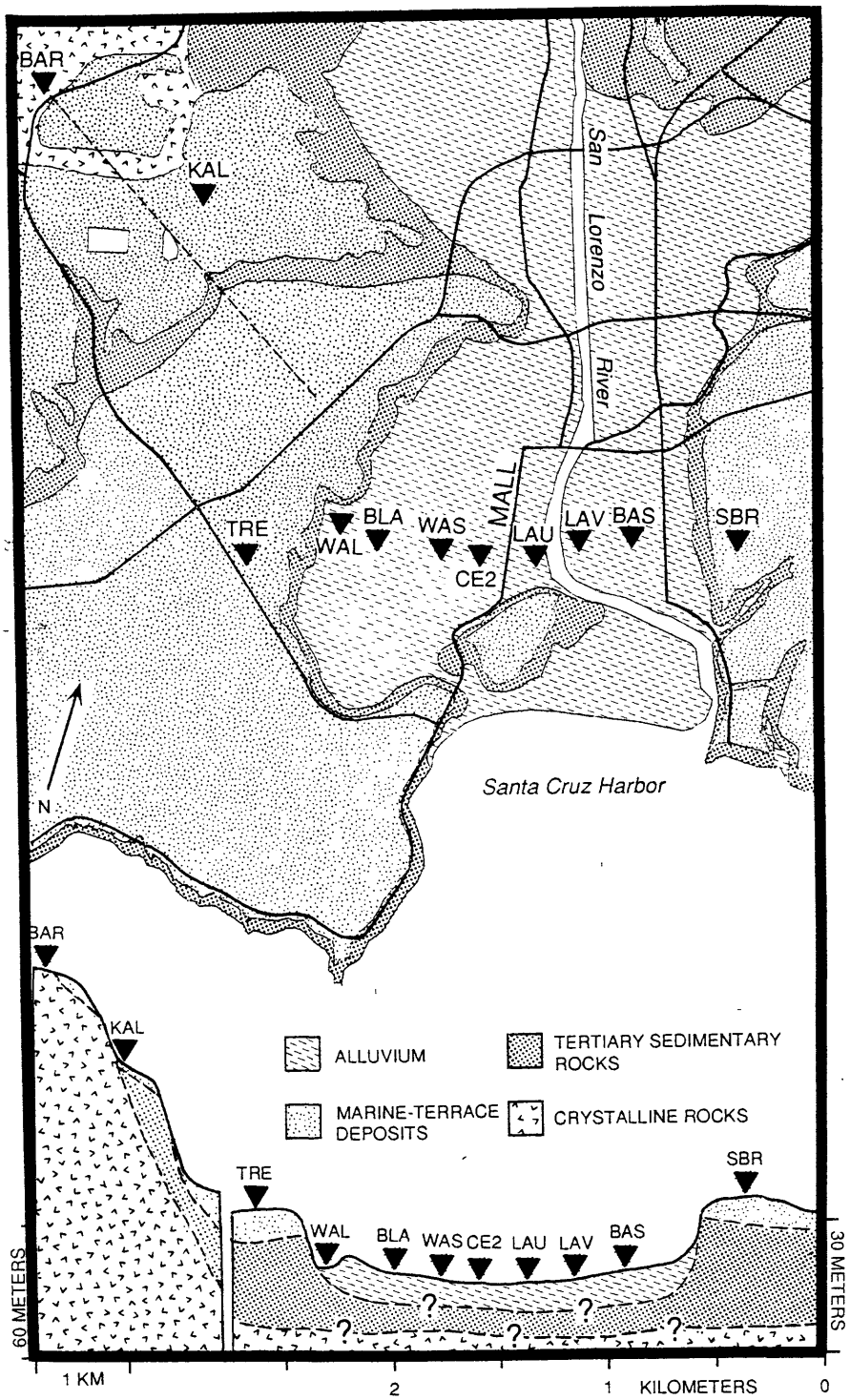

Fig. 3. Top: Geologic map of Santa Cruz, California, (adapted from Clark, 1981). Note the nine seismograph station locations across the terrace/flood plain/terrace and the two rock sites to the northwest.
Bottom: Idealized cross-section along the downtown array which is divided into two parts, the dotted line along the rock sites and the terrace/flood plain/terrace line, and plotted at different horizontal and vertical scales.

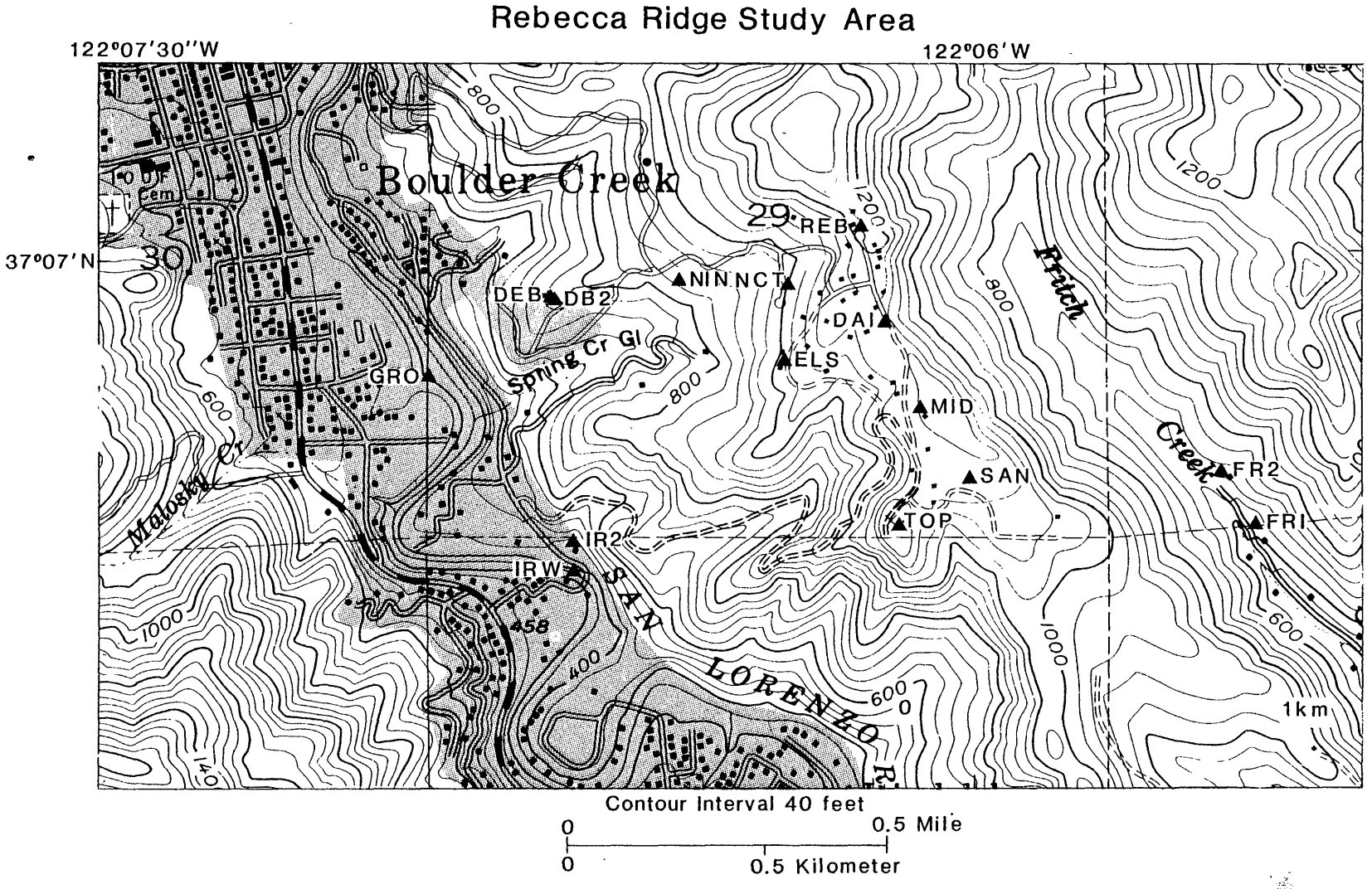

Fig. 4. Map of the Rebecca Ridge study area showing seismograph station locations.

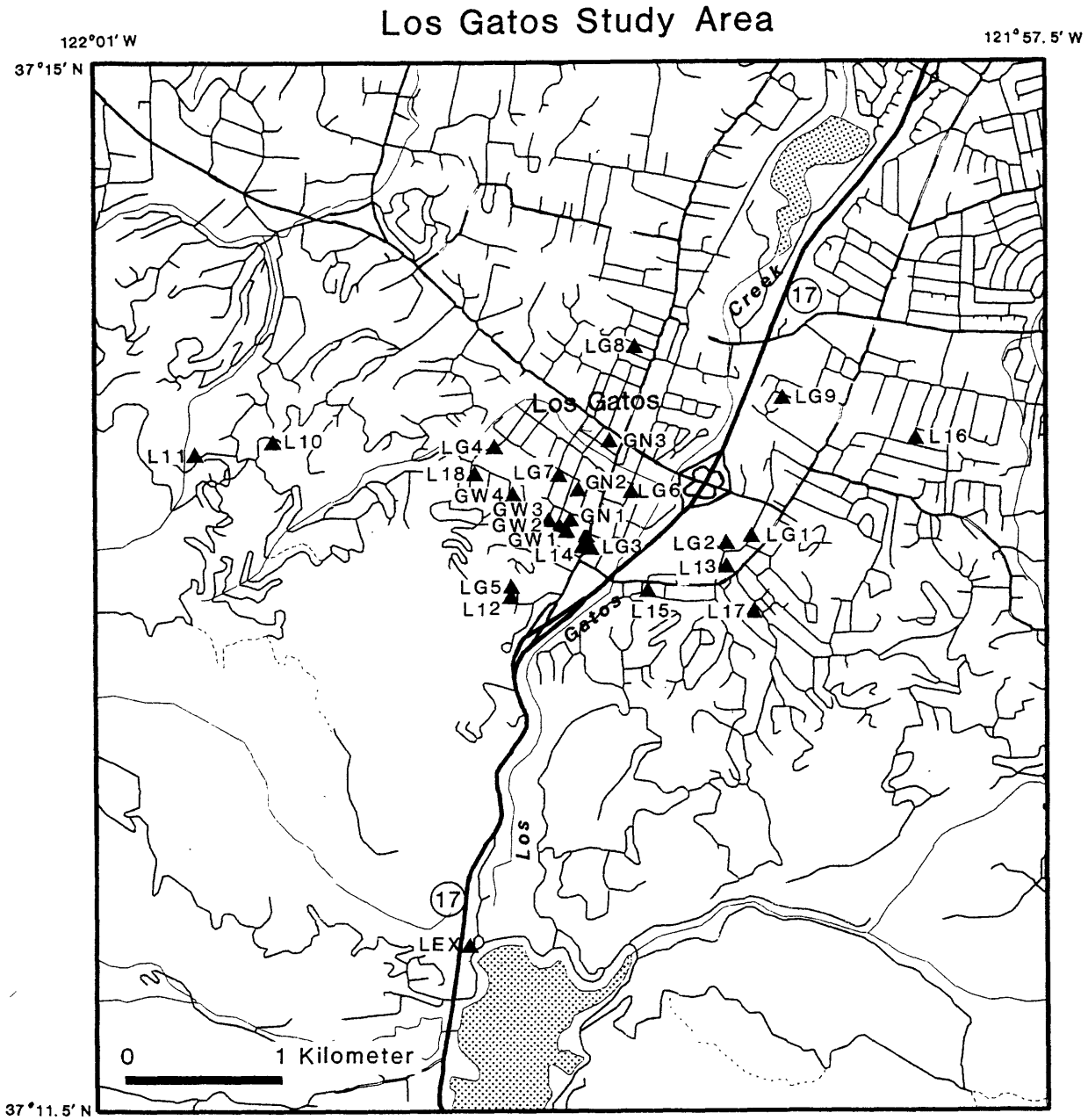

Fig. 5. Map of Los Gatos seismograph stations.

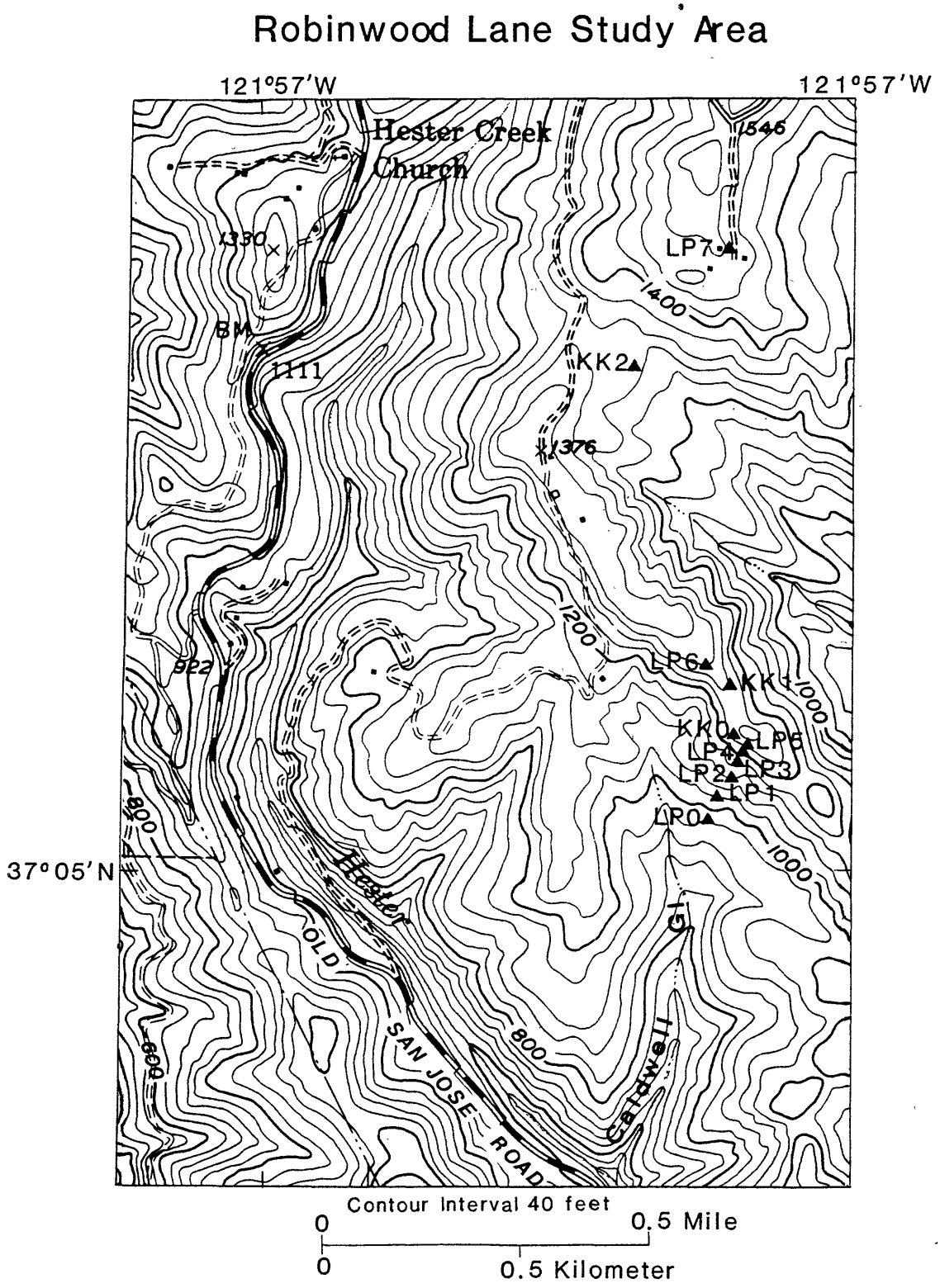

Fig. 6. Map of Robinwood Lane study area seismograph array.

APPENDIX A. Santa Cruz and contemporaneous station data

Santa Cruz and contemporaneous seismograph station locations. The sensor column is used to indicate whether the seismometer was buried or glued, as described in the text. The geology column indicates the geologic unit that the station was located upon as indicated on the map by Clark (1981). Quaternary alluvium is listed as Qal; Quaternary marine terrace deposit is Qm; Tertiary Purisma formation is Tp; Mesozoic or Paleozoic shists are Sch; Mesozoic or Paleozoic marble is M; station geology unknown is Unk. Coordinates are referenced to the 1927 North American Datum.

STA	LATITUDE (N)	LONGITUDE (W)	ELEV. (M)	SENSOR	GEOL.	ADDRESS
ALM	+36:57.29	-122:02.53	012	Buried	Qm	407 Almar Ave., Santa Cruz
BAR	+36:58.87	-122:03.18	112	Buried	m	Barn off G. Coolidge Dr., S. Cruz
BAS	+36:58.26	-122:01.08	004	Glued	Qal	313 Barson St., Santa Cruz
BES	+36:59.18	-122:01.25	012	Buried	Qal	126 Plymouth St., Santa Cruz
BLA	+36:58.07	-122:01.82	006	Buried	Qal	223 Blackburn St., Santa Cruz
CAB	+36:48.29	-121:46.90	022	Glued	unk	Cabinet, Moss Landing Control Room
CBL	+36:58.32	-121:59.66	012	Glued	Qm	738 Cable St., Santa Cruz
CE2	+36:58.09	-122:01.50	003	Buried	Qal	121 Cedar St., Santa Cruz
CED	+36:58.12	-122:01.50	003	Buried	Qal	205 Cedar St., Santa Cruz
CEN	+36:58.46	-122:01.69	005	Buried	Qal	809 Center St., Santa Cruz
CO1	+36:48.29	-121:46.90	020	Glued	unk	Floor, Moss Landing Control Room
DIC	+36:58.79	-122:02.89	111	Buried	Qm	224 Dickens Way, Santa Cruz
EFF	+36:58.56	-122:00.52	019	Buried	Qm	126 Effey St., Santa Cruz
ESC	+36:58.62	-122:01.94	030	Glued	Qm	110 Escalona Dr., Santa Cruz
EST	+36:58.78	-122:02.26	079	Buried	Qm	621 Highland Ave., Santa Cruz
FRE	+36:48.12	-121:46.12	003	Buried	unk	Free Field, Moss Landing Power Sta.
GIL	+36:59.41	-122:00.47	052	Buried	Qm	116 Gilbert Ct., Santa Cruz
HAL	+37:20.28	-121:42.84		Glued	unk	SMA at Grant Park, Halls Valley
HIG	+36:58.80	-122:02.18	078	Buried	Qm	548 Highland Ave., Santa Cruz
HIL	+36:58.78	-122:01.94	074	Buried	Tp	139 Hillcrest Terrace, Santa Cruz
HLU	+36:58.80	-122:02.51	082	Buried	Qm	1504 Laurent St., Santa Cruz
HOL	+36:58.48	-122:02.20	029	Buried	Qm	125 Hollywood Ave., Santa Cruz
KAL	+36:58.73	-122:02.61	079	Buried	Qm	112 Kalkar Dr., Santa Cruz
KEY	+36:59.13	-122:00.58	028	Buried	Qm	215 Keystone St., Santa Cruz
KIN	+36:57.83	-122:02.77	026	Glued	Qm	1722 King St., Santa Cruz
LAU	+36:58.16	-122:01.32	002	Buried	Qal	SE corner Laurel & Front, S. Cruz
LAV	+36:58.23	-122:01.23	002	Buried	Qal	105-111 Barson St., Santa Cruz
LO2	+37:00.02	-122:03.37	243	Buried	sch	Lick Instrument Lab. UCSC
LOE	+37:00.03	-122:03.37	243	Glued	sch	SMA at Lick Instrument Lab. UCSC
MAI	+36:57.96	-122:01.28	014	Buried	Qm	315 Main St., Santa Cruz
MAY	+36:58.67	-122:01.07	007	Buried	Qal	224 May Ave., Santa Cruz
MON	+36:57.45	-122:01.58	013	Glued	Qm	137 Monterey St., Santa Cruz
NOB	+36:58.23	-122:03.09	073	Buried	Qm	340 Nobel Dr., Santa Cruz
NPA	+36:58.78	-122:01.58	004	Buried	Qal	2117 N. Pacific Ave., Santa Cruz
PAC	+36:58.40	-122:01.48	003	Buried	Qal	Pacific Ave. @ Soquel, S. Cruz
ROS	+36:58.76	-122:02.39	081	Buried	Qm	721 Highland Ave.
SAL	+36:40.26	-121:38.52		Glued	unk	SMA at John & Work St., Salinas
SAR	+37:15.30	-122:00.54		Glued	unk	SMA at Aloha Ave., Saratoga
SBR	+36:58.31	-122:00.76	018	Buried	Qm	239 Branciforte Ave, Santa Cruz
SHE	+36:58.33	-122:02.33	027	Glued	Qm	122 Sherman St., Santa Cruz
TRE	+36:57.95	-122:02.17	020	Buried	Qm	154 Trescony St., Santa Cruz
WAL	+36:58.08	-122:01.93	007	Buried	Qal	116 Walti St., Santa Cruz
WAS	+36:58.10	-122:01.64	005	Buried	Qal	333 Washington St., Santa Cruz

List of aftershocks recorded by three or more seismograph stations at Santa Cruz and contemporaneous stations. Aftershock records were identified by a computer algorithm that found multiple triggers in a 13 s sliding-time window. Earthquakes are listed by the start time of the earliest associated record (day, hour, minute are characters one through seven in the filename). Records (for a given three letter station code) are indicated by the corresponding second-bin character, i.e., character eight in the filename - A = 0.000 - 2.999, B = 3.000 - 5.999, ...T = 57.000 - 59.999.

The computer algorithm also extracted hypocenter information for associated earthquakes from U.S. Geological Survey summary files. The hypocenter data were provided by D. Oppenheimer and are listed in HYPO71 format. We used versions of the summary files that were current at the time of writing this report in September 1990. These hypocenters will be refined during the lifetime of this report and are provided here only to help readers make preliminary correlations between earthquakes and seismograph recordings.

EVENT	MAG	ALM	ABR	BAS	BES	BLA	CAB	CBL	CE2	CED	CEN	CO1	DIC	EF	ESC	EST	FRE	GIL	HAL	HIG	HIL	HLU	HOL	KAL	KEY	KIN	LAU	LAV	LO2	LOE	MAI	MAY	MON	NOB	NPA	PAC	ROS	SAL	SAR	SBR	SHE	TRE	WAL	WAS
2940011	2.5			D									D		D															F														
2940049	4.1			N		M						M	N		N		M		Q											Q						N		P						
2940102	2.6			O									P		O															R														
2940344	2.3			Q									Q		Q															T														
2940832	2.7			F									G		G															I														
2941057	2.6			B											B															D														
2941254	3.1			N								N	N		N		N													P														
2941452	2.5												I		I															K														
2942214	4.5					Q			R			Q					Q		T				R	R											R		C	T						
2950031	2.5								F														E	F											F									
2950749	2.2								T														T												T									
2950817	2.6								D														C												D									
2950944	3.4					R			T			R					Q						T												T									
2951424	3.7					J			L								J		O				L	L											L			O						
2961514	3.0																G													H					J									
2962127	3.0																								M			M		M					M					M				
2970403	2.1								I																			I							I					I				
2970448	3.2								D																E			D		D					D					D				
2970702	2.8								I																I			H		D					I					H				
2970856	2.5								E																F			E		I					E					E				
2971445	2.3								C																C			C		E					C					C				
2971453	1.8																											C		C					B					C				
2971833	1.9																													B					E					E				
2972226	2.5			E					F																F					E										E				
2972342	2.3			G																										F										F				
2980127	4.4	I	I	I																			I		I					I							J			I				
2980313	2.4		D																				D							C										C				
2980314	2.2		N																				O		P					N										O				
2980538	2.8	O	N	N																			O		O					N														
2981227	2.3	C	C																				C							C														
2981300	3.8	O	O	O																			O		O					O														
2981510	2.7	R	S	R																			R		R					S														
2981630	2.8	Q	Q	Q																			Q		Q																			
2981926	2.1	M	M																				M		M					M														
2982201	3.7	P	P	P																			P							P		P												
2982244	2.7	N	N	N																			N							O		N												
2990901	3.6	I	I	I																			I							I	I	I												
2991100	1.9	L	K																				K								K	K												
2991218	2.2	N	N	N																			N							N	N	K												
2991326	2.4	O	N	N																			N							N	N	O												
2991330	2.1	E	E																				E																					
2991508	2.0		M																				M							M														
2991613	2.9	J	J	J																			I							J	J													
3000728	2.2		K		K																																					K		
3001108	1.6		T		T																										T											T		
3001329	3.0		Q	Q	Q																									Q	Q											Q		
3002215	2.9		A	A	S																									A												A		
3010001	2.1		T	T	T																									T												T		
3010120	1.8		R	S	R																									R												S		
3010308								D																		C	C																	
3010526								L																		L	L																	
3011120	2.0		J		J			J																		J																		
3011332	1.8				J			J																		J																J		
3011548	2.2		J		J																									J									J				
3011948	2.1		C		C																									C											D	C	
3012127	3.3		Q		S																									Q									S		S	Q	P
3020029	2.0				T			T																															T		T		
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3040650 2.2   C C   C     C                             C     C C                       C   C D
3040834 3.4   Q Q   Q     Q                             Q     Q Q                       Q   Q Q Q
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3041811 2.5   T     A   A A                               T                                 A A
3050535 2.5   N         N                         N     N N N               N             N
3050616 2.3   B                                   B     B B C               B             B
3050803 3.7 F F         F                         F     F F F               F             F
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3060550 4.5   C         C     C             C     C     C C             C   D C
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3071047 3.0   S               S                   S S   S               S   S     S
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3071145 1.9   C                                   C                         C
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3080604 1.6                   N                         N                   O
3080716 3.6                   E         E       E E     I               E   E

            A B B B B C C C C C C D E E E F G H H H H H K K K L L L L M M M N N P R S S S S T W W
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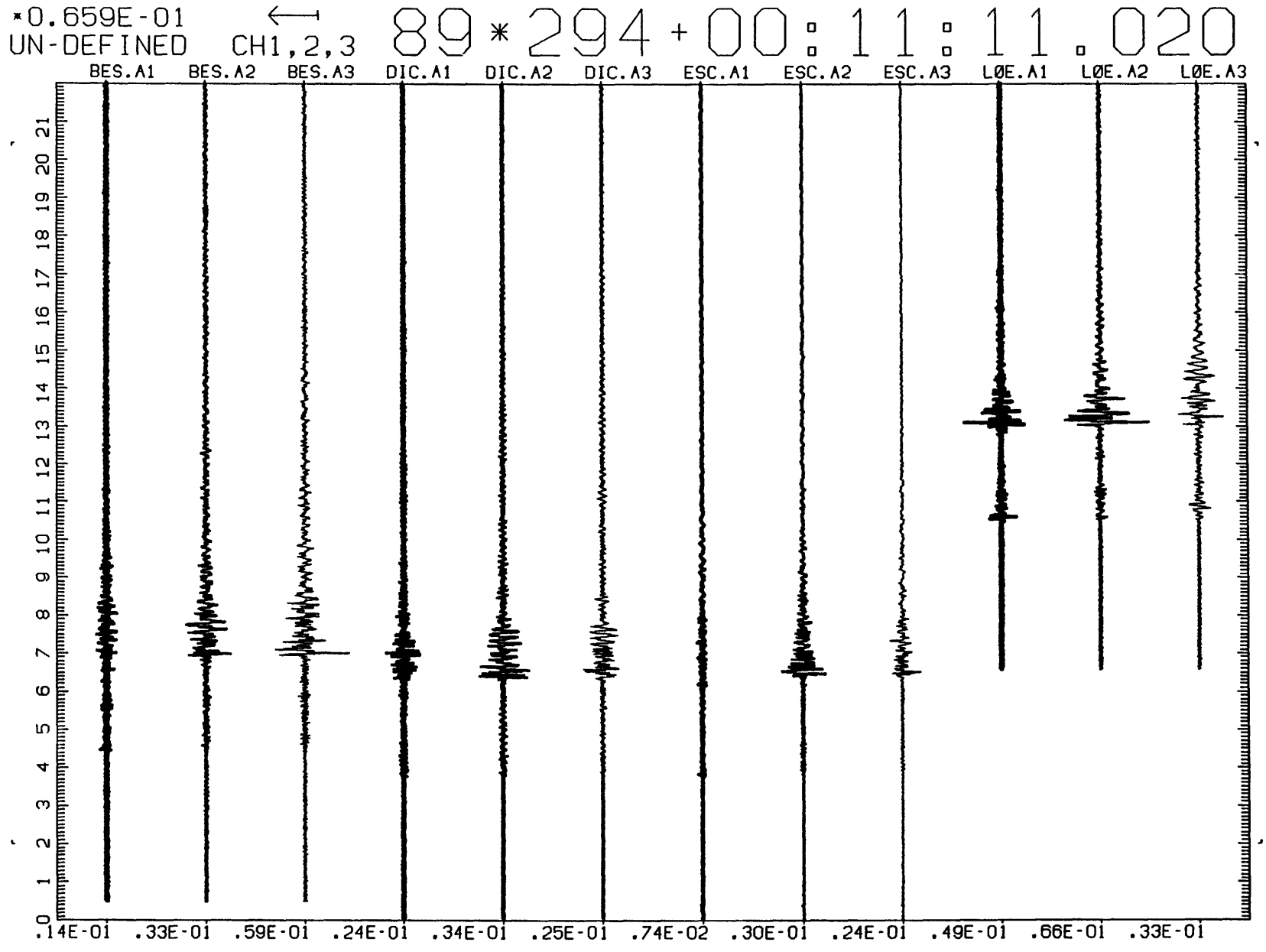
Seismograms of aftershocks recorded at three or more stations in Santa Cruz and at contemporaneous stations. Each seismogram plotted has been limited to 22 s, although the actual records may be longer. Three components are plotted for each station that recorded the aftershock. The traces are identified on the right by station name and component. A1 is the vertically oriented component; A2 is horizontally oriented North; A3 is horizontally oriented East. The peak velocity (expressed in cm/s) of the trace is shown in the left margin. All traces for each event are plotted at the same scale. Time proceeds from left to right and the numbers indicated are seconds from the time of the first sample of the record.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LØE.A2
LØE.A3
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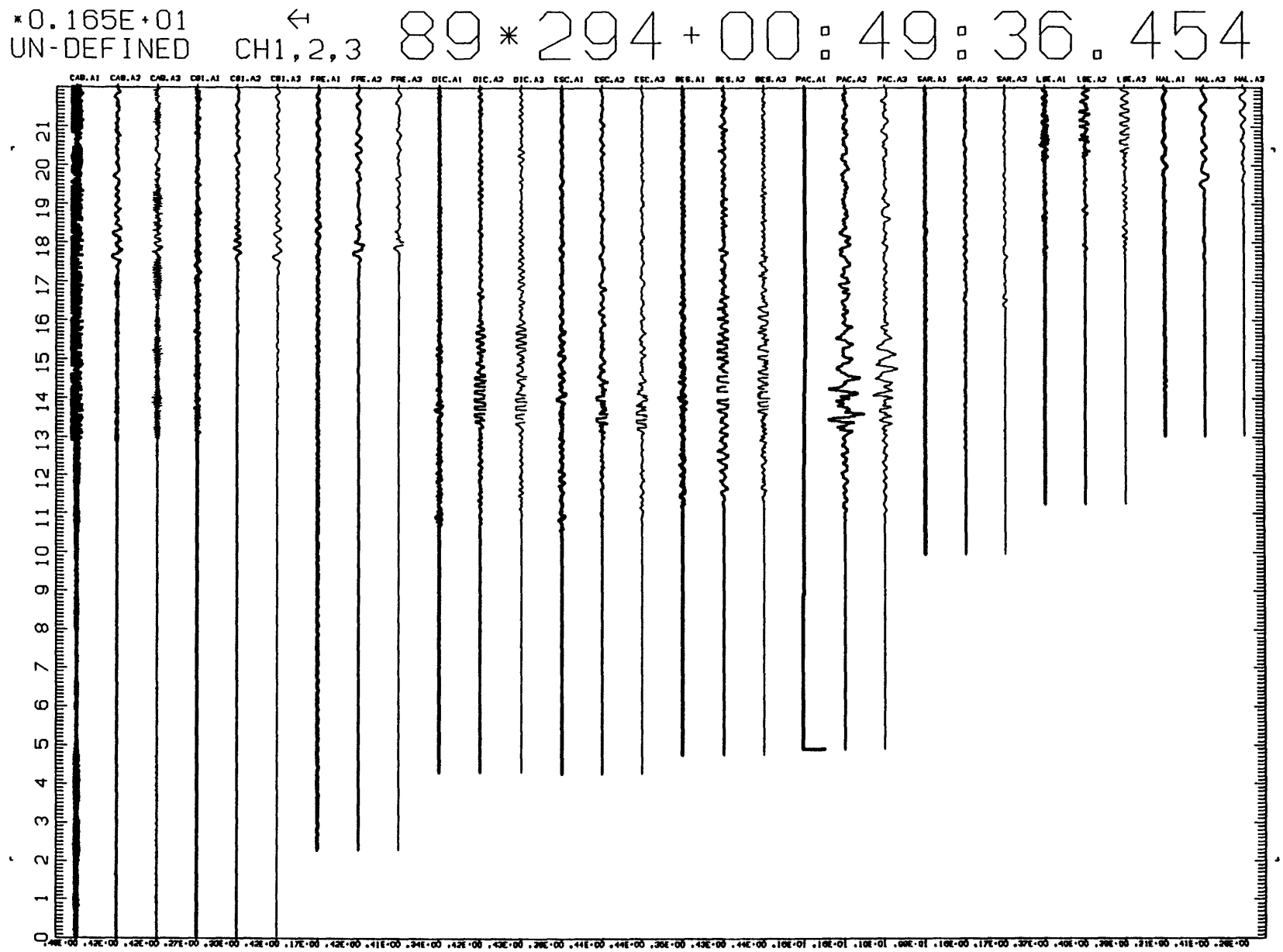
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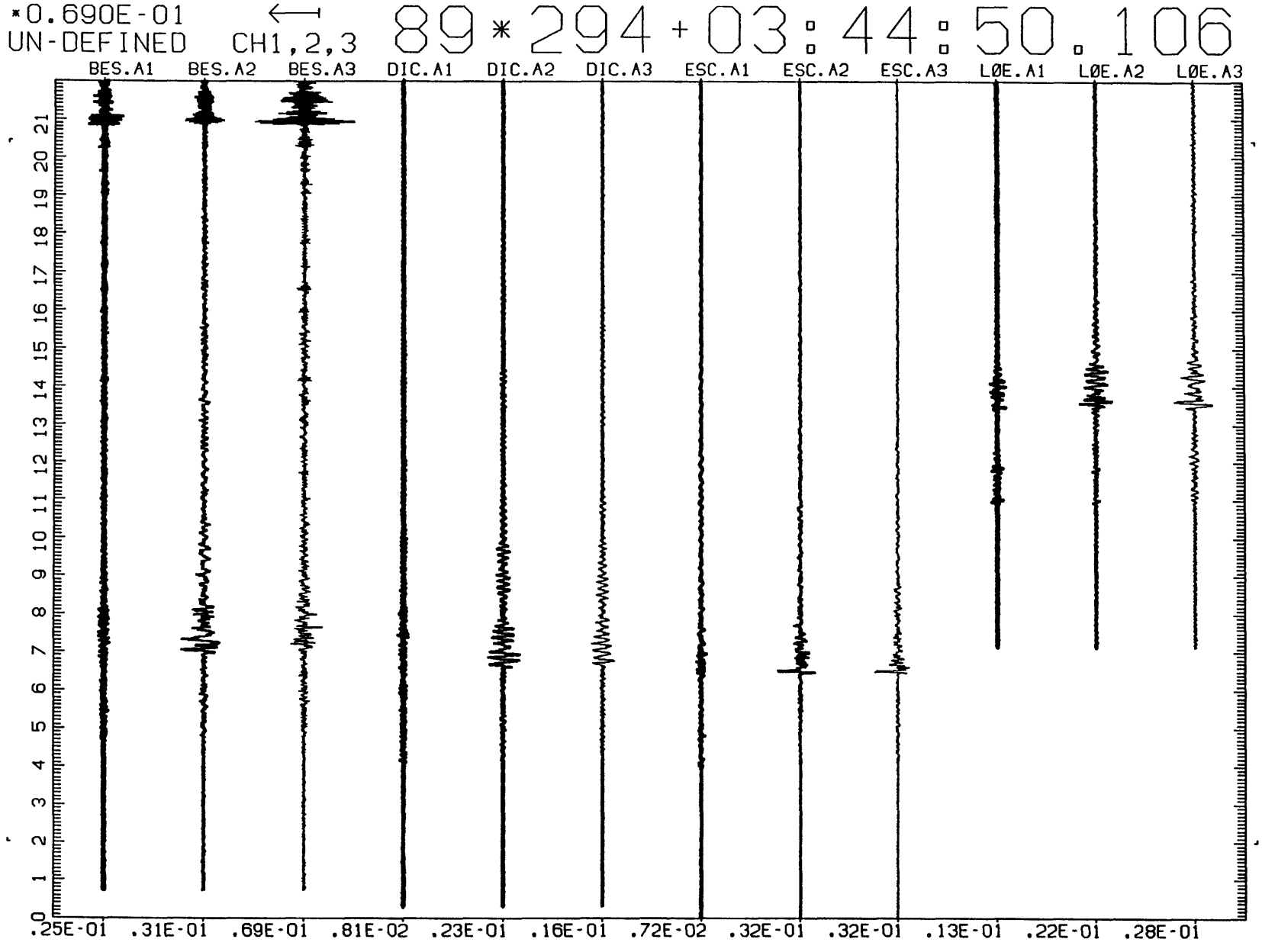
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DIC.A3
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ESC.A2
ESC.A3
LØE.A1
LØE.A2
LØE.A3
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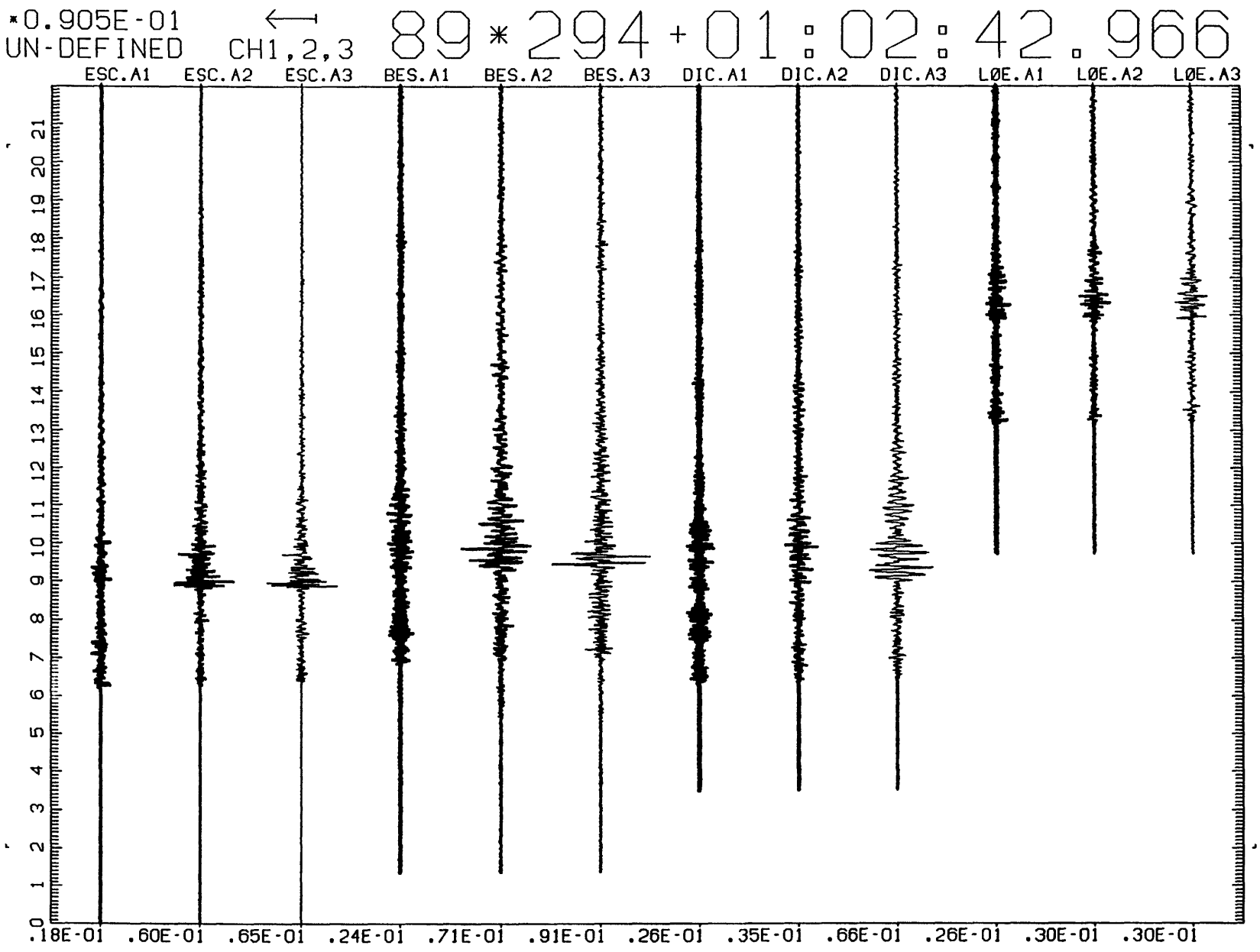
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LØE.A2
LØE.A3
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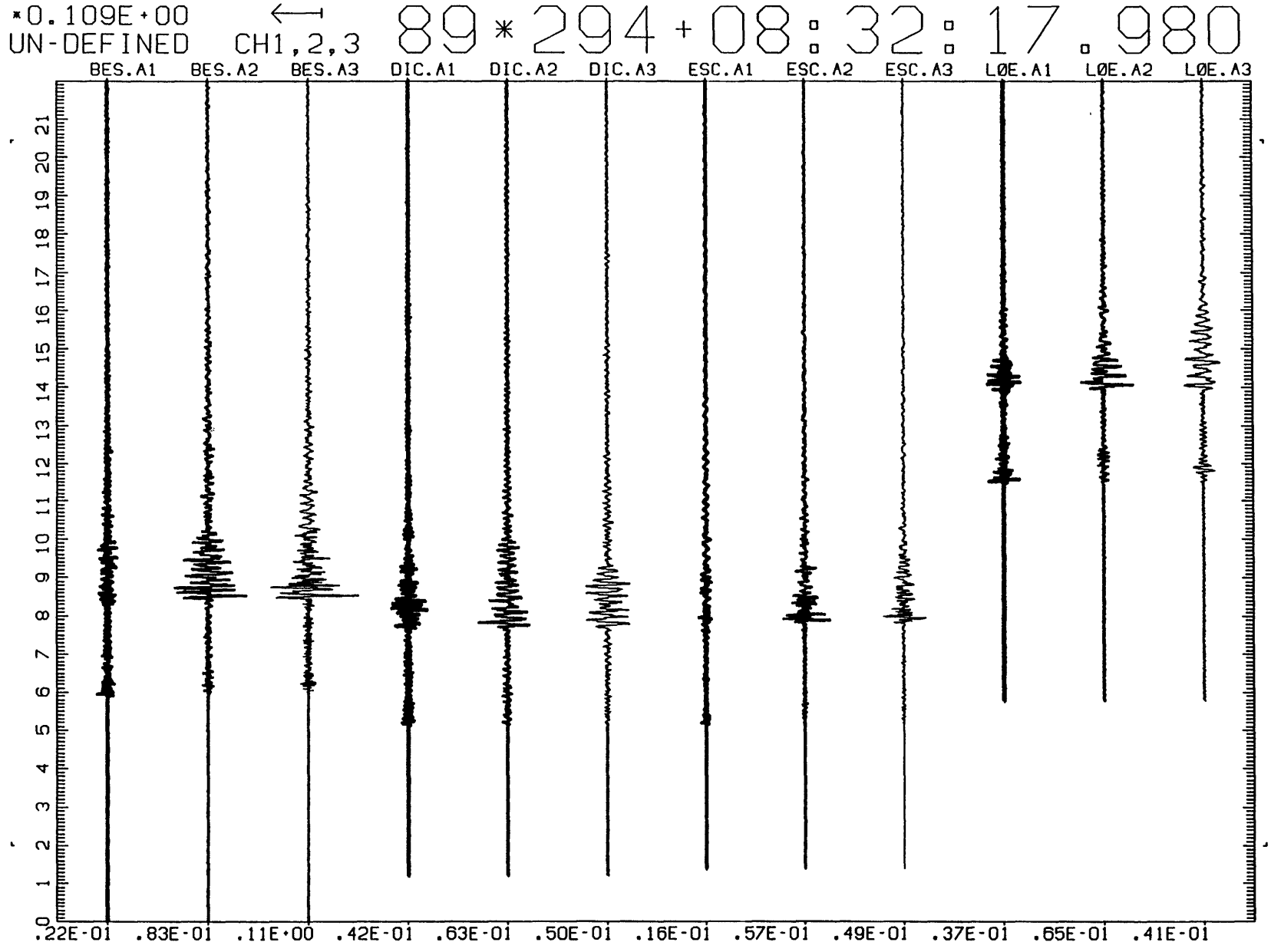
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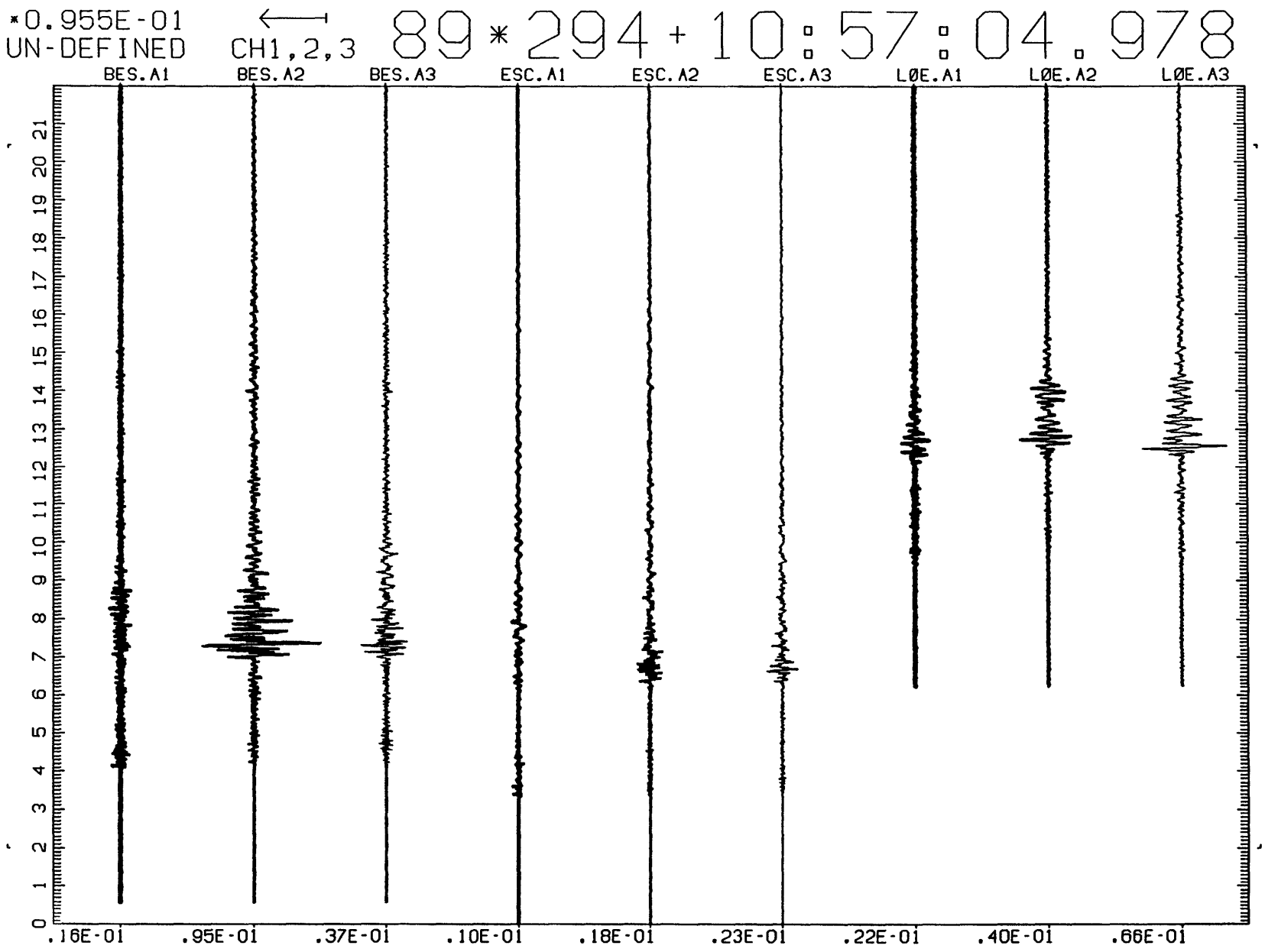
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ESC.A3
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LØE.A2
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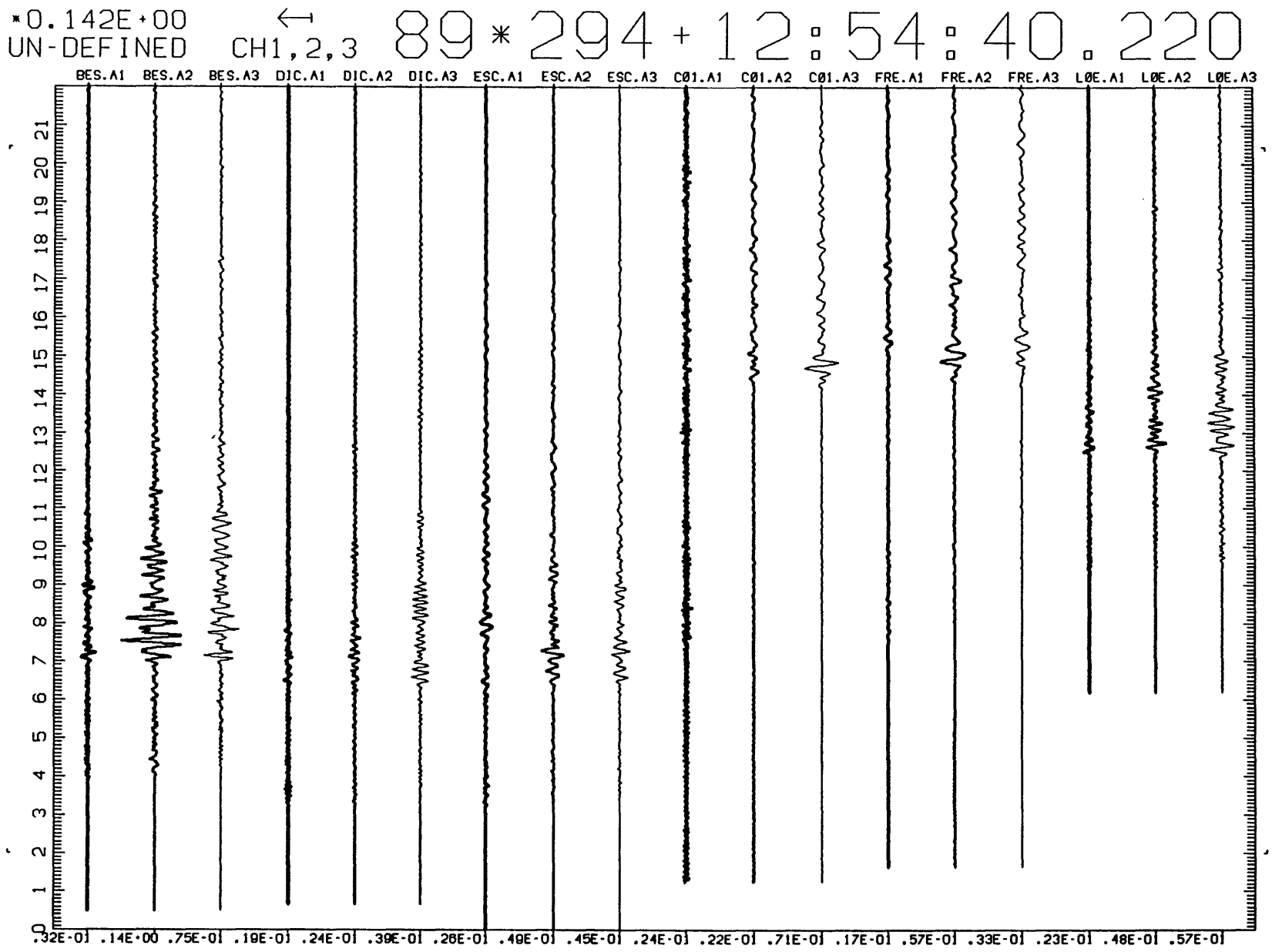
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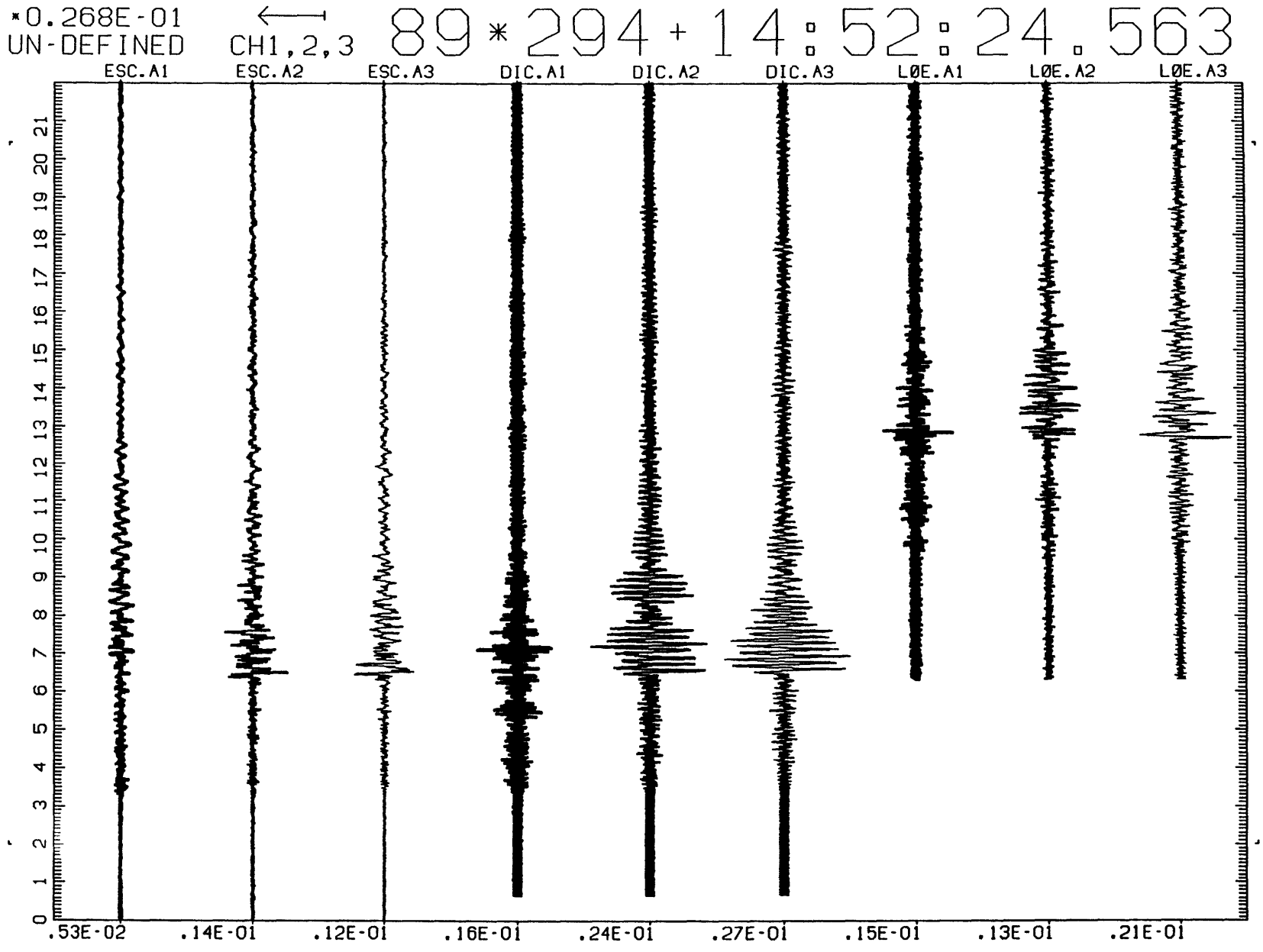
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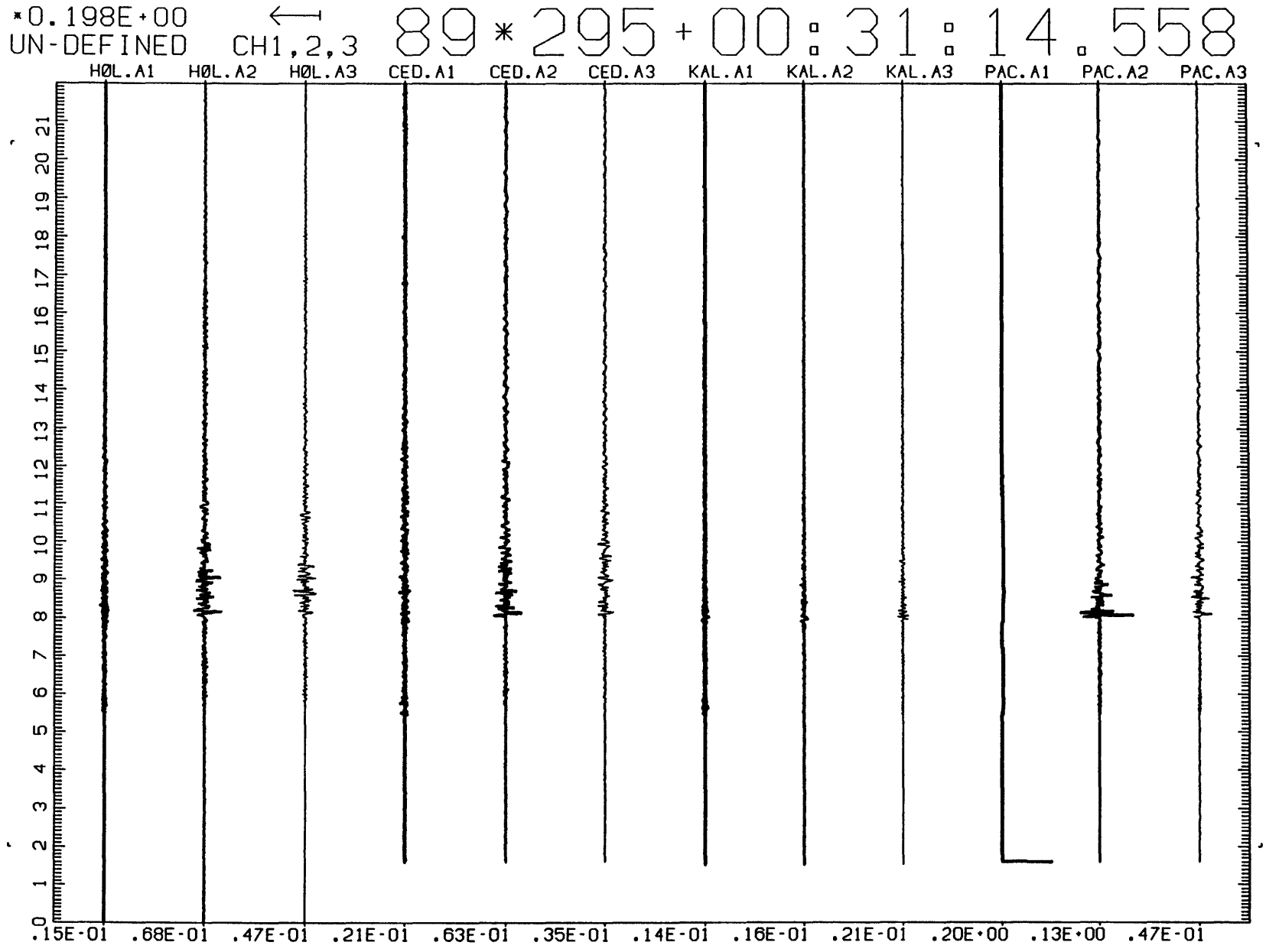
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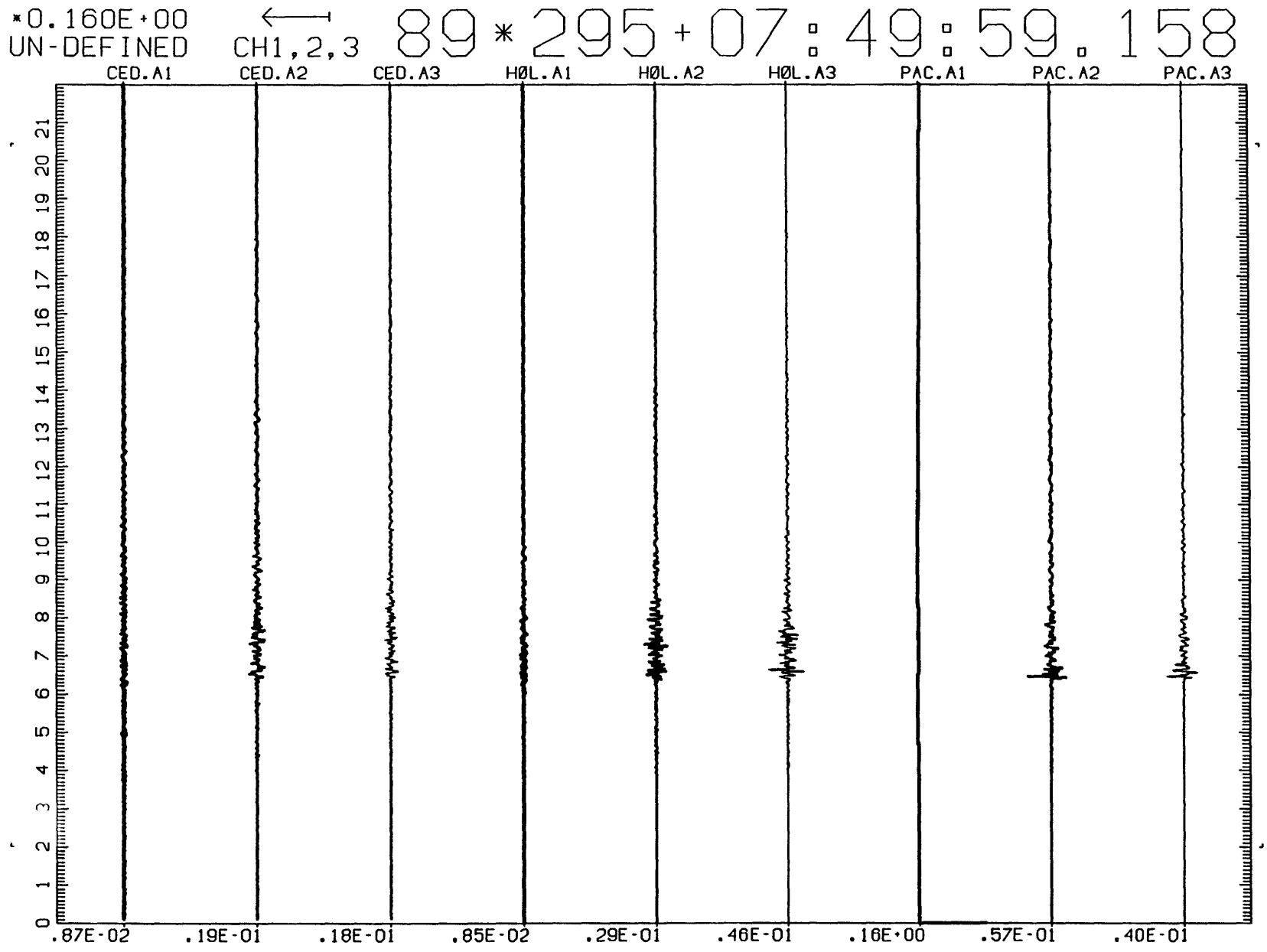
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.85E-02
.29E-01
.46E-01
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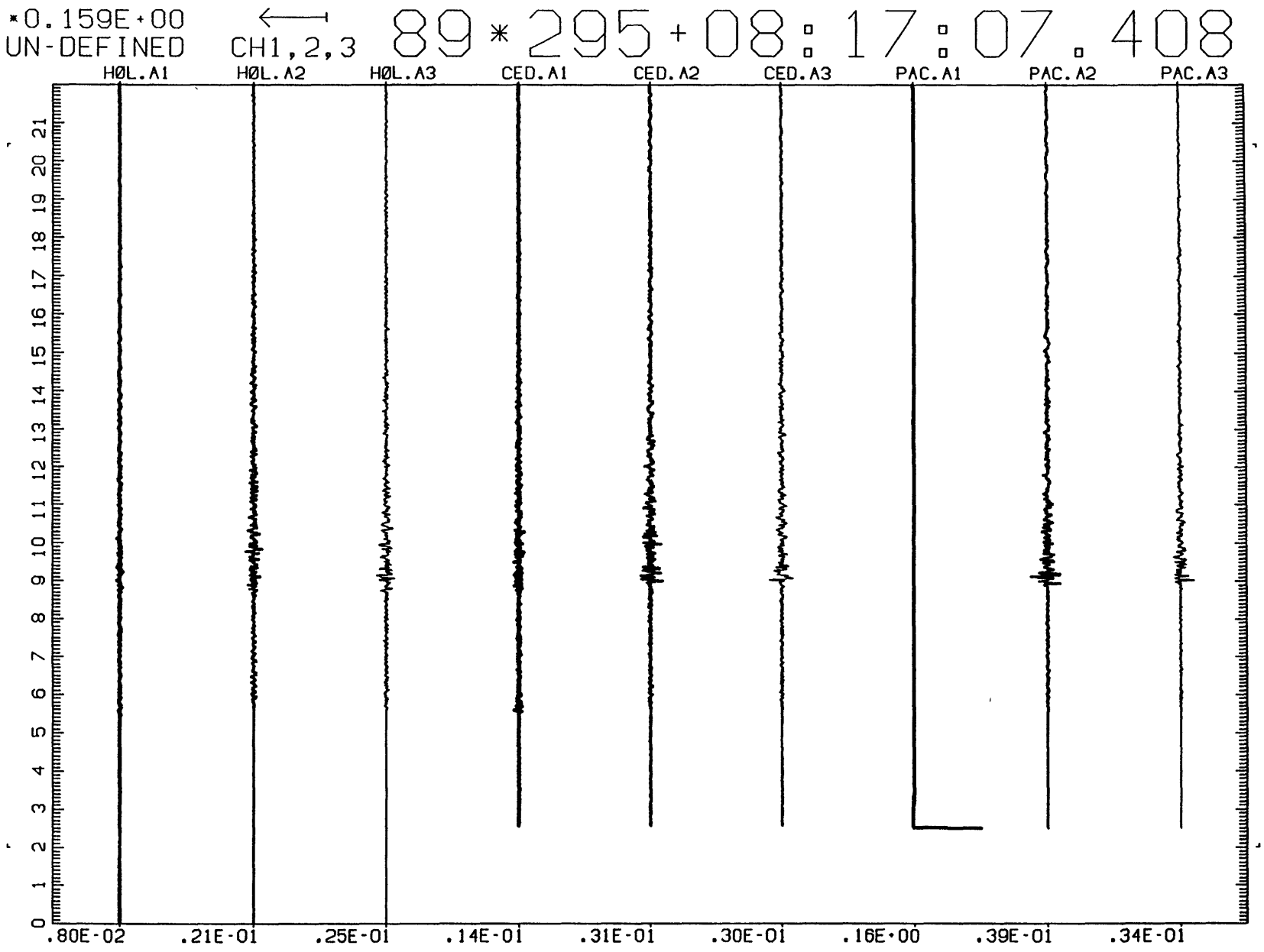
.40E-01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CH1,2,3
89*295+08:17:07.408
HØL.A1
HØL.A2
HØL.A3
CED.A1
CED.A2
CED.A3
PAC.A1
PAC.A2
PAC.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.80E-02
.21E-01
.25E-01
.14E-01
.31E-01
.30E-01
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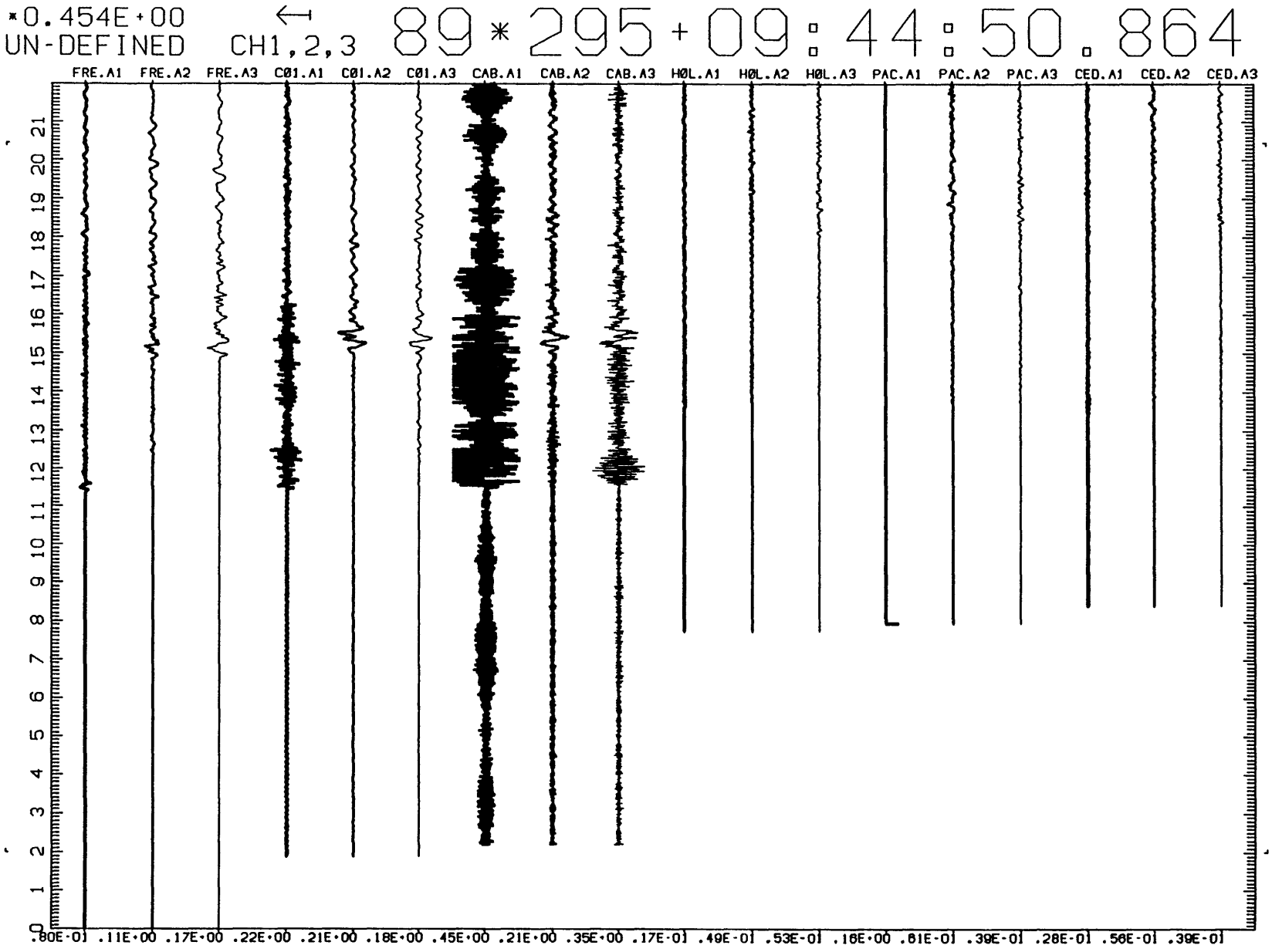
.34E-01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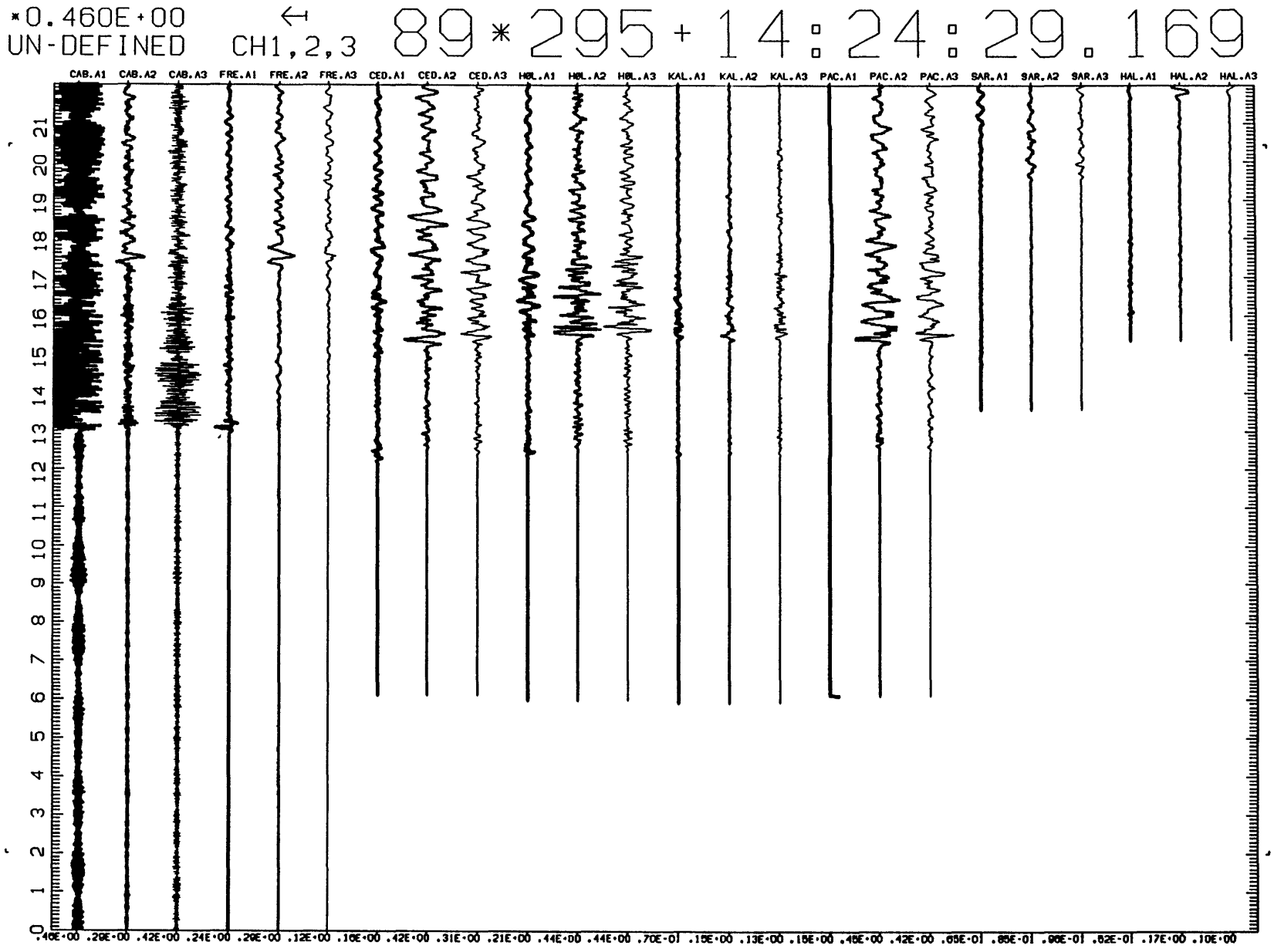
CH1,2,3
89*295+09:44:50.864
FRE.A1 FRE.A2 FRE.A3 CØ1.A1 CØ1.A2 CØ1.A3 CAB.A1 CAB.A2 CAB.A3 HØL.A1 HØL.A2 HØL.A3 PAC.A1 PAC.A2 PAC.A3 CED.A1 CED.A2 CED.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.80E-01 .11E+00 .17E+00 .22E+00 .21E+00 .18E+00 .45E+00 .21E+00 .35E+00 .17E-01 .49E-01 .53E-01 .16E+00 .81E-01 .39E-01 .28E-01 .56E-01 .39E-01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UN-DEFINED
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89*295+14:24:29.169
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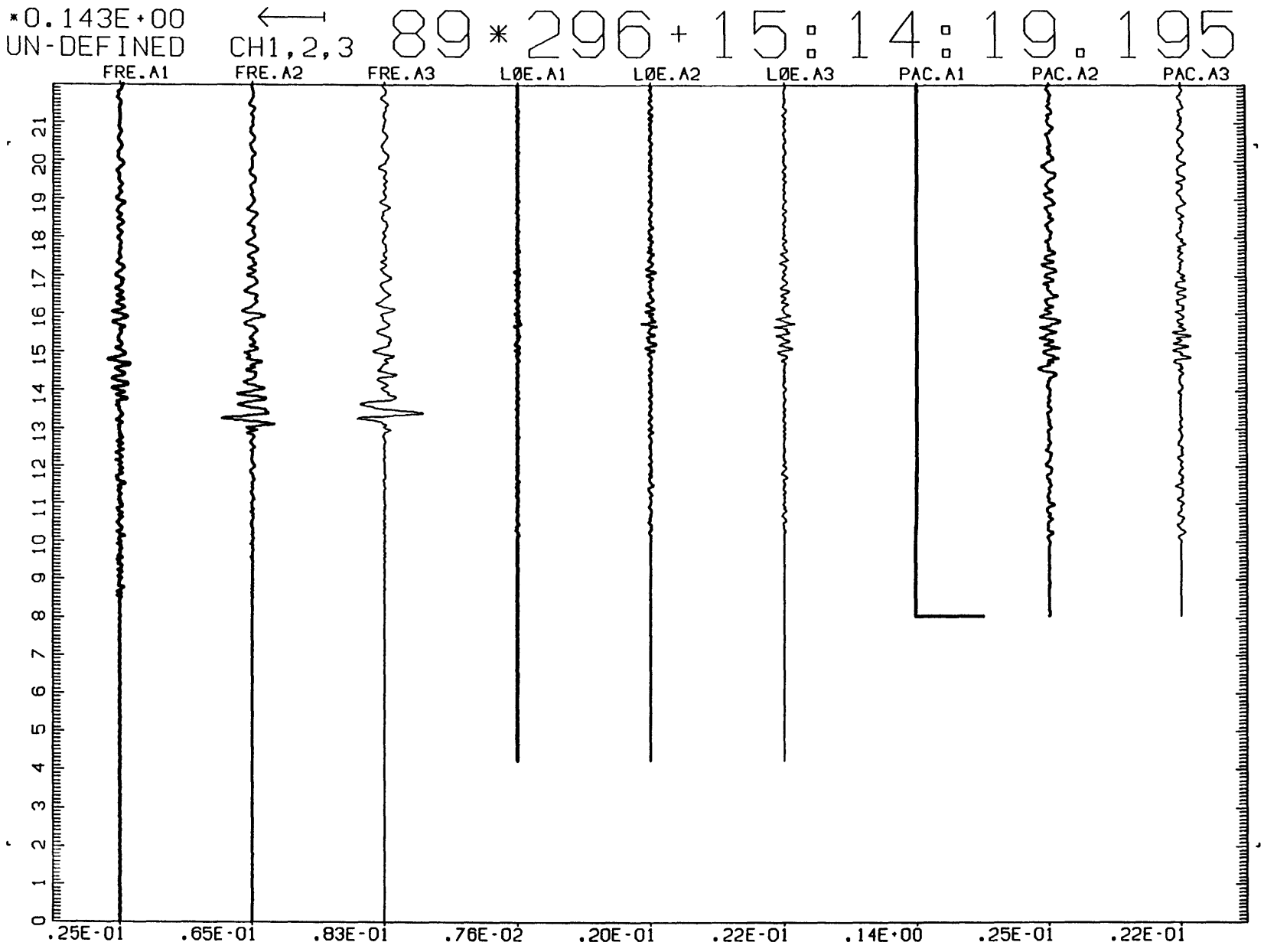
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.40E+00 .29E+00 .42E+00 .24E+00 .29E+00 .12E+00 .10E+00 .42E+00 .31E+00 .21E+00 .44E+00 .44E+00 .70E-01 .15E+00 .13E+00 .15E+00 .48E+00 .42E+00 .65E-01 .85E-01 .98E-01 .62E-01 .17E+00 .10E+00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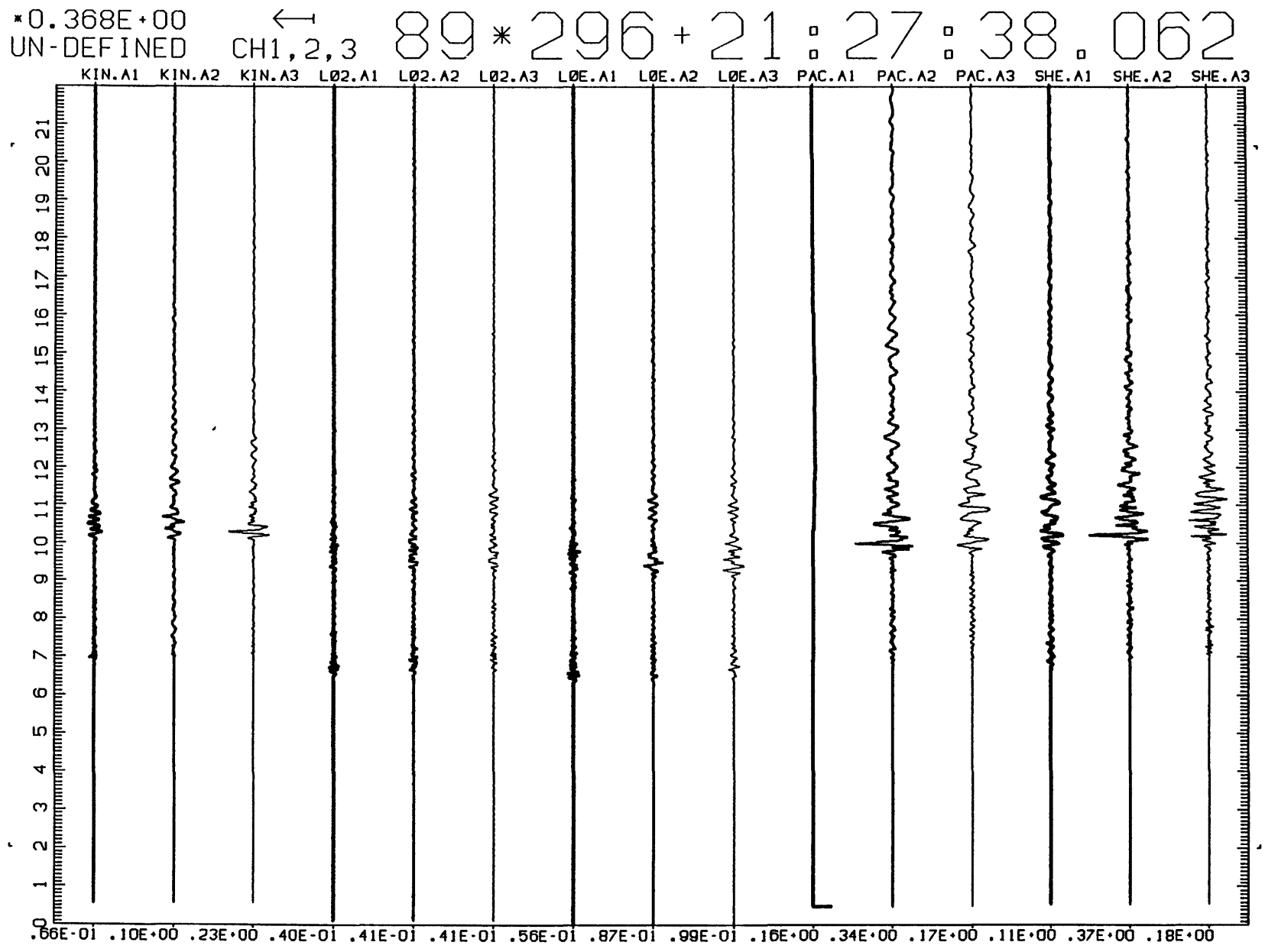
UN-DEFINED
CH1,2,3
89*296+15:14:19.195
FRE.A1
FRE.A2
FRE.A3
LØE.A1
LØE.A2
LØE.A3
PAC.A1
PAC.A2
PAC.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.25E-01
.65E-01
.83E-01
.76E-02
.20E-01
.22E-01
.14E+00
.25E-01
.22E-01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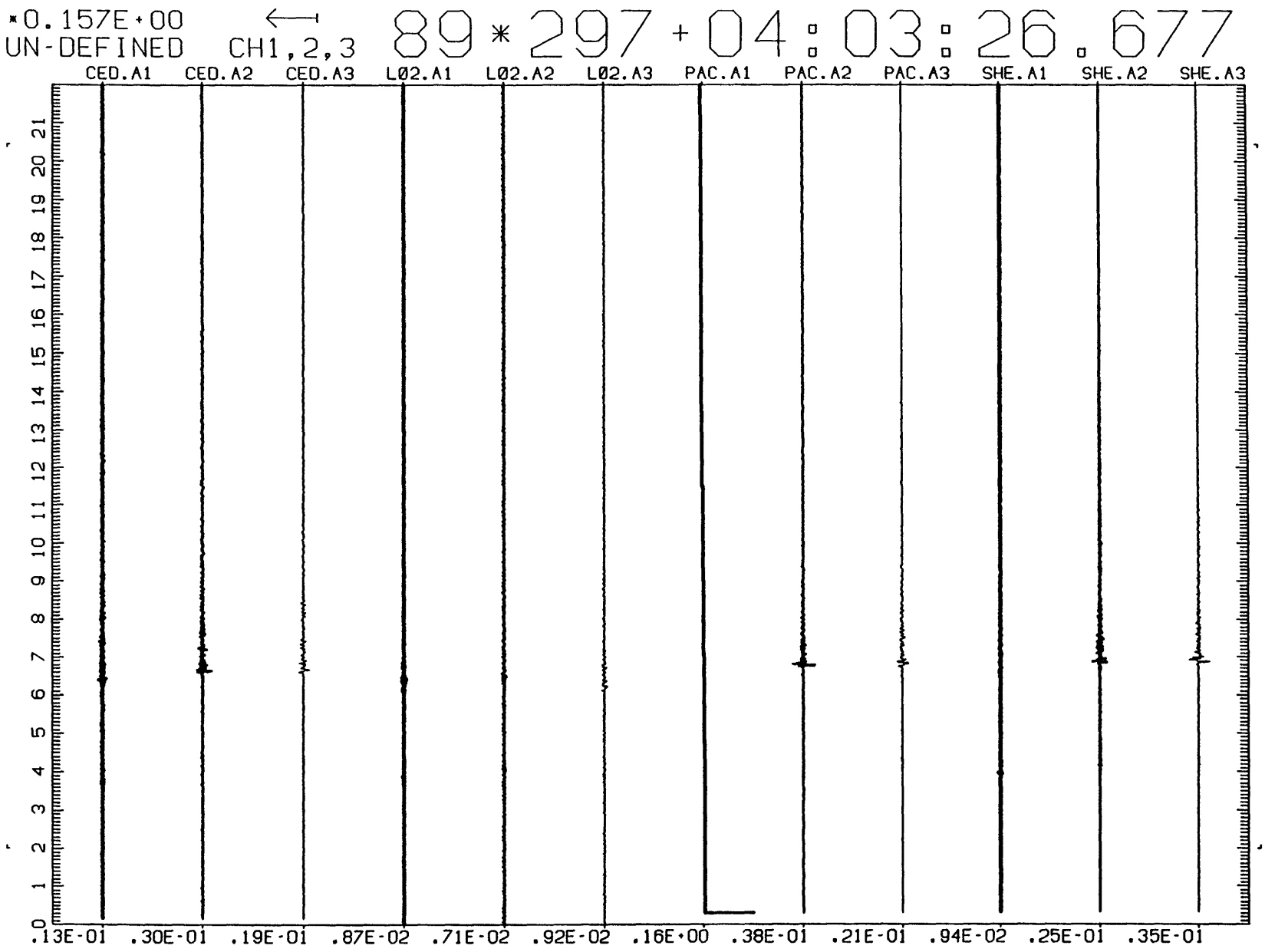
UN-DEFINED
CH1,2,3
89*296+21:27:38.062
KIN.A1
KIN.A2
KIN.A3
LØ2.A1
LØ2.A2
LØ2.A3
LØE.A1
LØE.A2
LØE.A3
PAC.A1
PAC.A2
PAC.A3
SHE.A1
SHE.A2
SHE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.66E-01 .10E+00 .23E+00 .40E-01 .41E-01 .41E-01 .56E-01 .87E-01 .99E-01 .16E+00 .34E+00 .17E+00 .11E+00 .37E+00 .18E+00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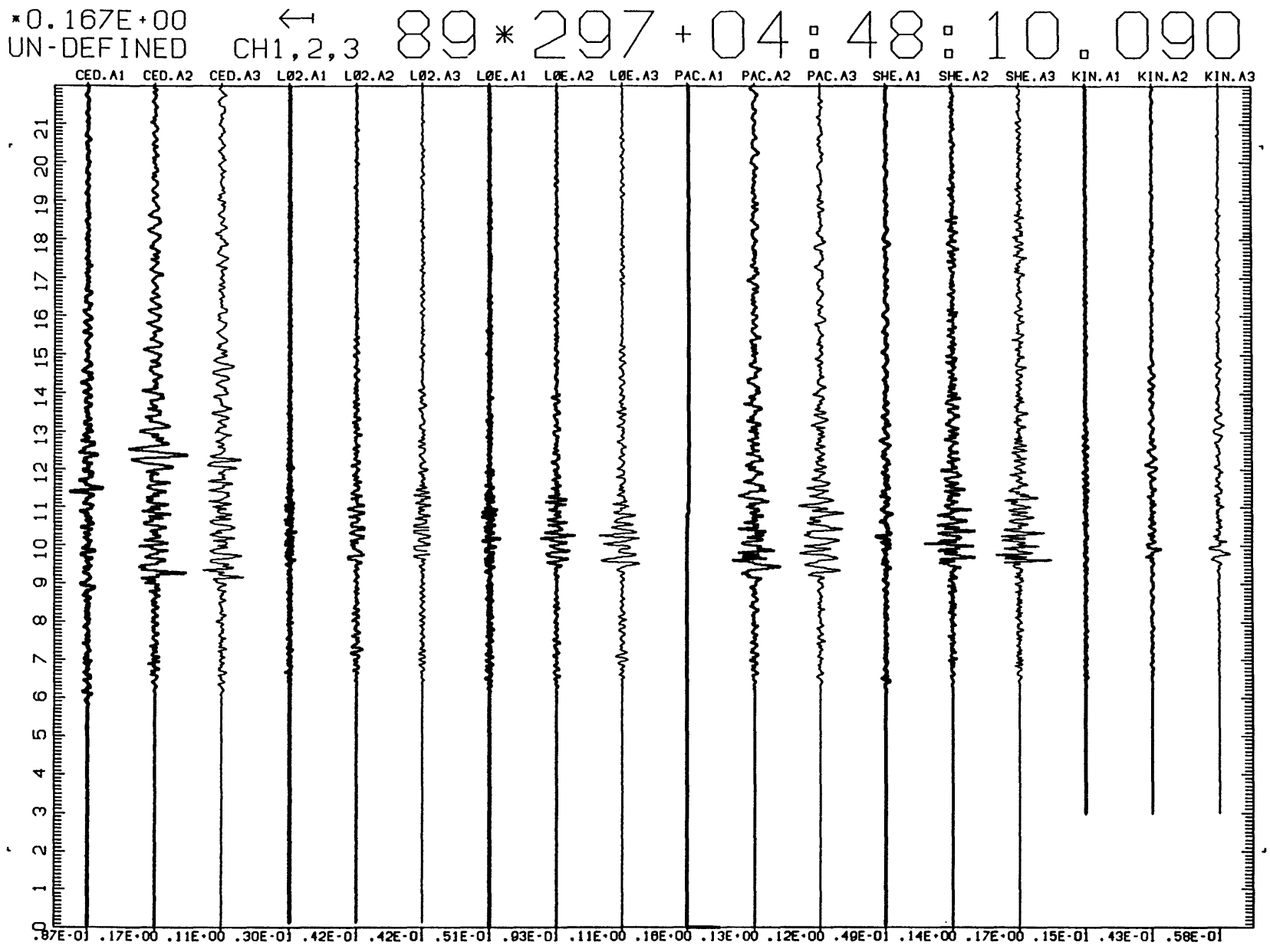
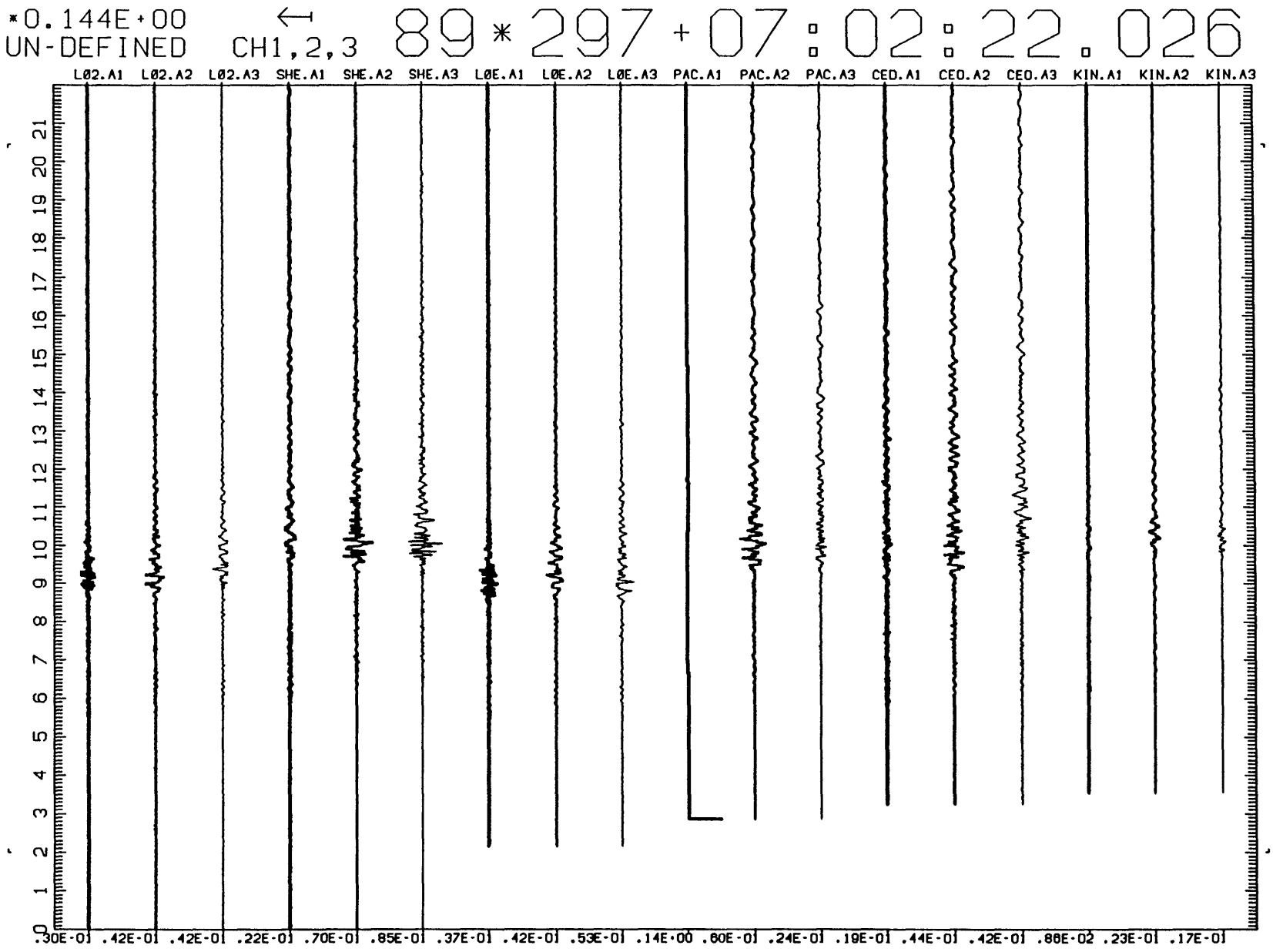
UN-DEFINED
CH1,2,3
89*297+04:03:26.677
CED.A1
CED.A2
CED.A3
L02.A1
L02.A2
L02.A3
PAC.A1
PAC.A2
PAC.A3
SHE.A1
SHE.A2
SHE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.13E-01
.30E-01
.19E-01
.87E-02
.71E-02
.92E-02
.16E+00
.38E-01
.21E-01
.94E-02
.25E-01
.35E-01


*0.167E+00
UN-DEFINED
CH1,2,3
89*297+04:48:10.090
CED.A1
CED.A2
CED.A3
LØ2.A1
LØ2.A2
LØ2.A3
LØE.A1
LØE.A2
LØE.A3
PAC.A1
PAC.A2
PAC.A3
SHE.A1
SHE.A2
SHE.A3
KIN.A1
KIN.A2
KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.07E-01 .17E+00 .11E+00 .30E-01 .42E-01 .42E-01 .51E-01 .03E-01 .11E+00 .10E+00 .13E+00 .12E+00 .49E-01 .14E+00 .17E+00 .15E-01 .43E-01 .58E-01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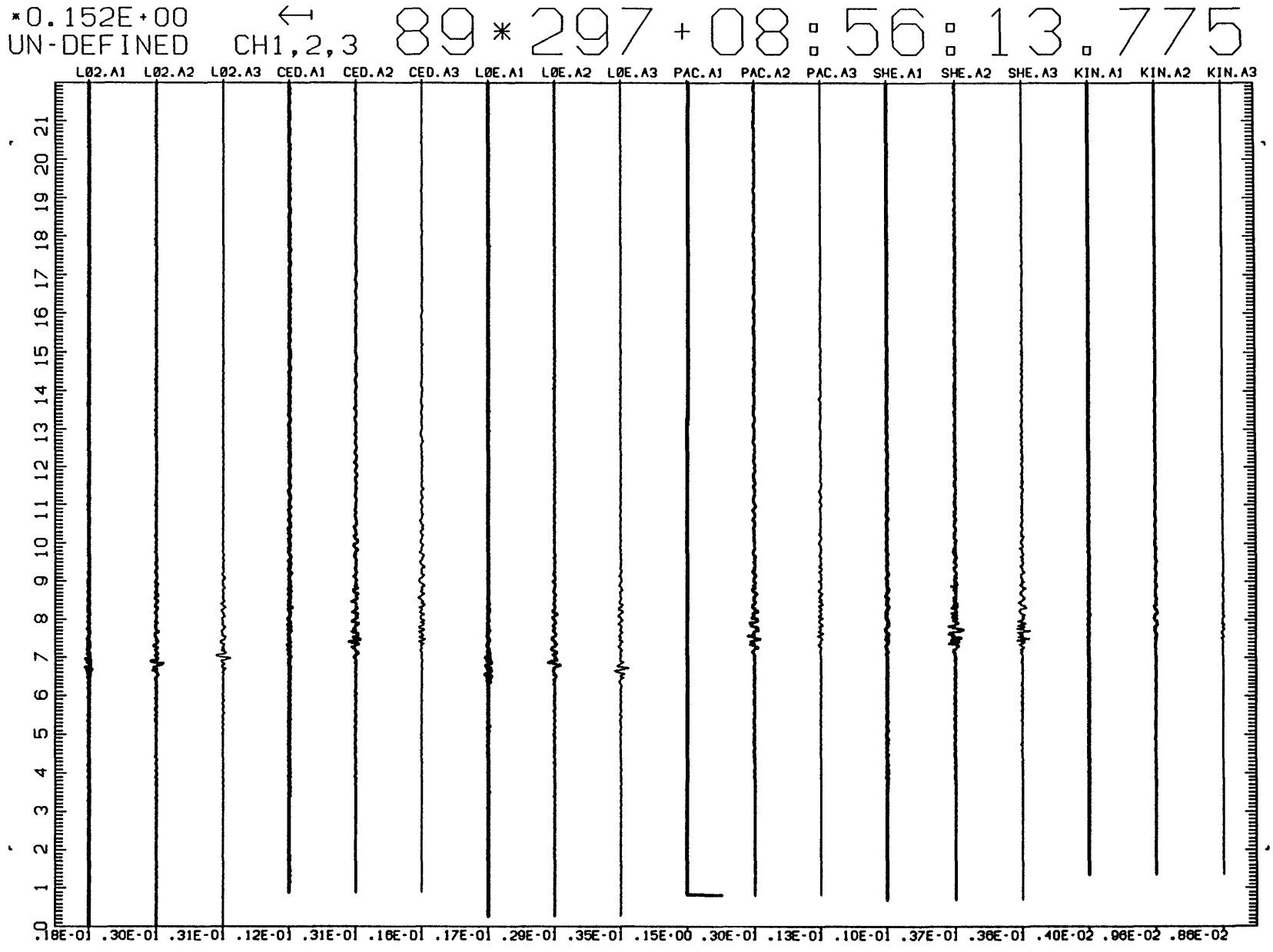
UN-DEFINED
CH1,2,3
89*297+07:02:22.026
L02.A1
L02.A2
L02.A3
SHE.A1
SHE.A2
SHE.A3
L0E.A1
L0E.A2
L0E.A3
PAC.A1
PAC.A2
PAC.A3
CED.A1
CED.A2
CED.A3
KIN.A1
KIN.A2
KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.30E-01 .42E-01 .42E-01 .22E-01 .70E-01 .85E-01 .37E-01 .42E-01 .53E-01 .14E+00 .60E-01 .24E-01 .19E-01 .44E-01 .42E-01 .88E-02 .23E-01 .17E-01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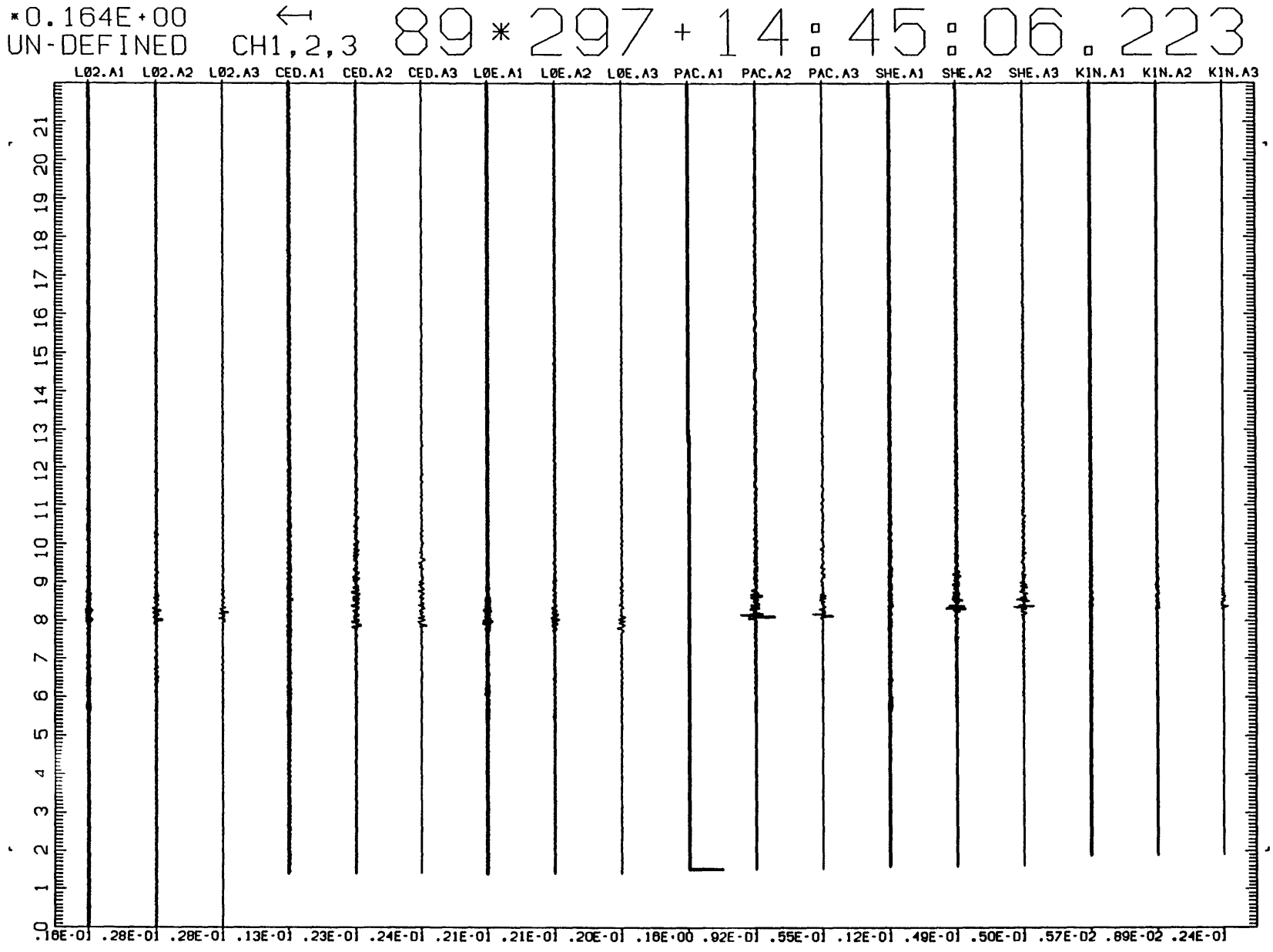
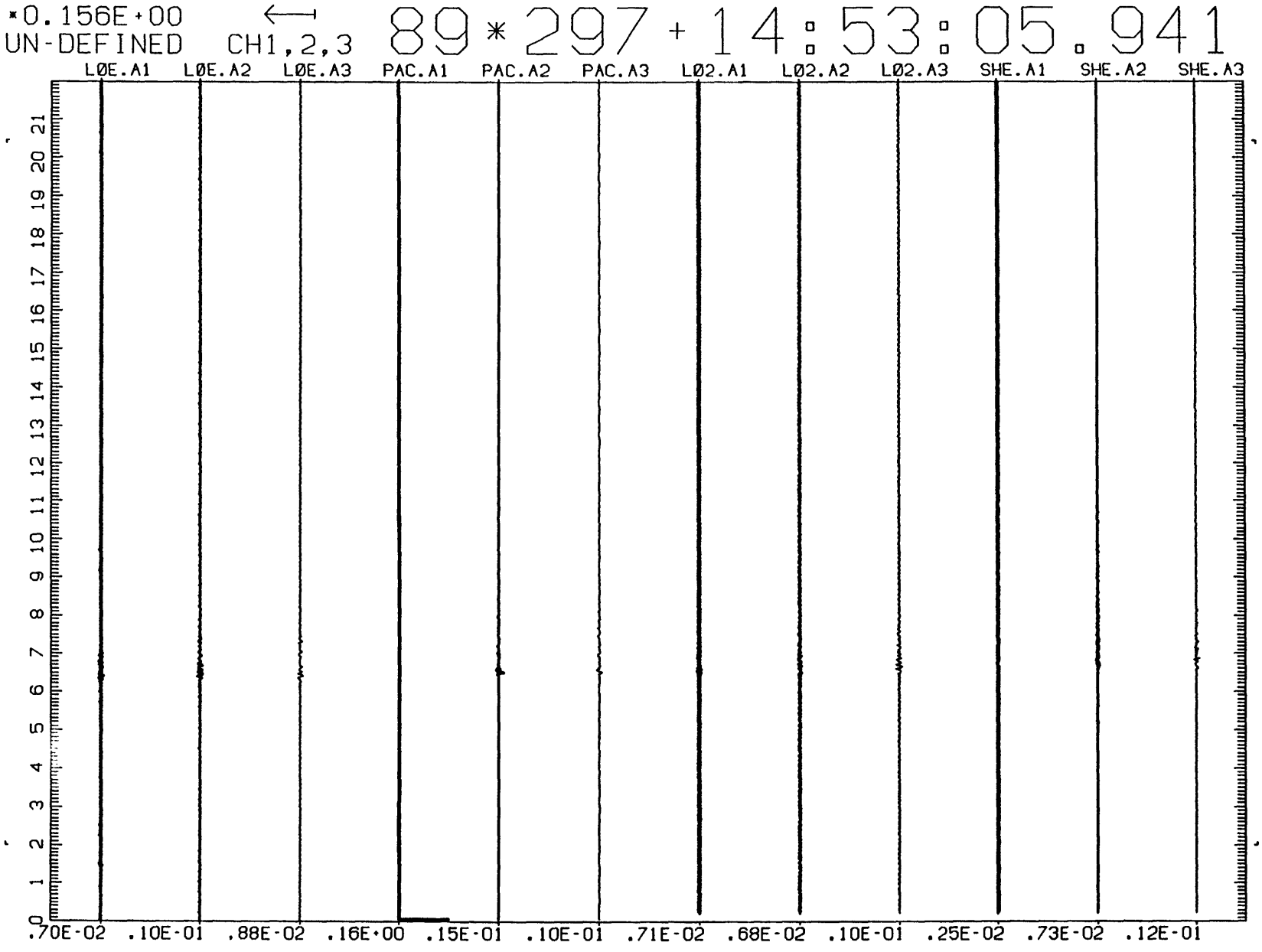
UN-DEFINED
CH1,2,3
89*297+08:56:13.775
L02.A1 L02.A2 L02.A3 CED.A1 CED.A2 CED.A3 L0E.A1 L0E.A2 L0E.A3 PAC.A1 PAC.A2 PAC.A3 SHE.A1 SHE.A2 SHE.A3 KIN.A1 KIN.A2 KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.18E-01 .30E-01 .31E-01 .12E-01 .31E-01 .16E-01 .17E-01 .29E-01 .35E-01 .15E-00 .30E-01 .13E-01 .10E-01 .37E-01 .38E-01 .40E-02 .96E-02 .86E-02


*0.164E+00
UN-DEFINED
CH1,2,3
89*297+14:45:06.223
L02.A1 L02.A2 L02.A3 CED.A1 CED.A2 CED.A3 L0E.A1 L0E.A2 L0E.A3 PAC.A1 PAC.A2 PAC.A3 SHE.A1 SHE.A2 SHE.A3 KIN.A1 KIN.A2 KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.16E-01 .28E-01 .28E-01 .13E-01 .23E-01 .24E-01 .21E-01 .21E-01 .20E-01 .18E+00 .92E-01 .55E-01 .12E-01 .49E-01 .50E-01 .57E-02 .89E-02 .24E-01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UN-DEFINED
CH1,2,3
89*297+14:53:05.941
LØE.A1
LØE.A2
LØE.A3
PAC.A1
PAC.A2
PAC.A3
LØ2.A1
LØ2.A2
LØ2.A3
SHE.A1
SHE.A2
SHE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.70E-02
.10E-01
.88E-02
.16E+00
.15E-01
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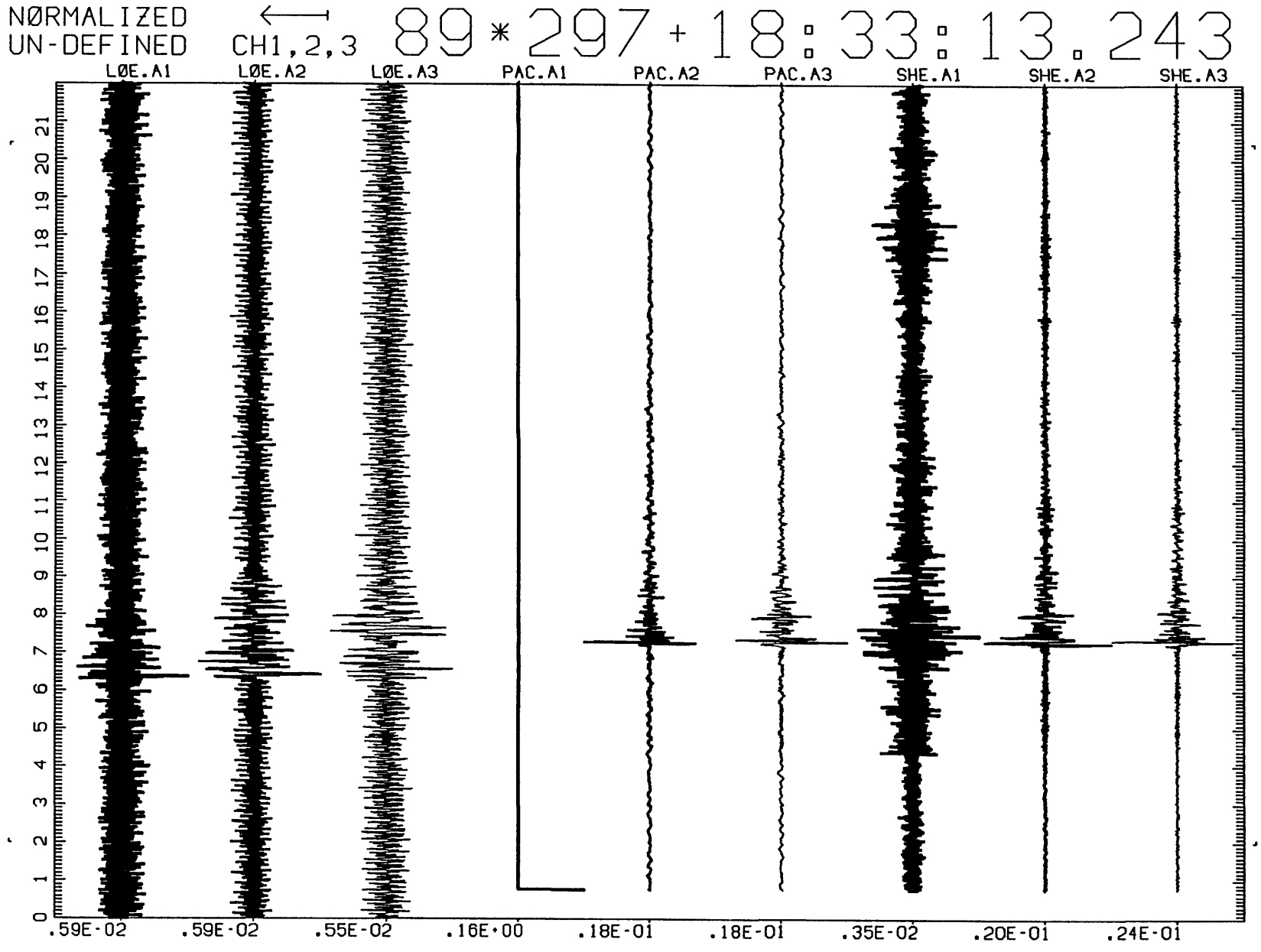
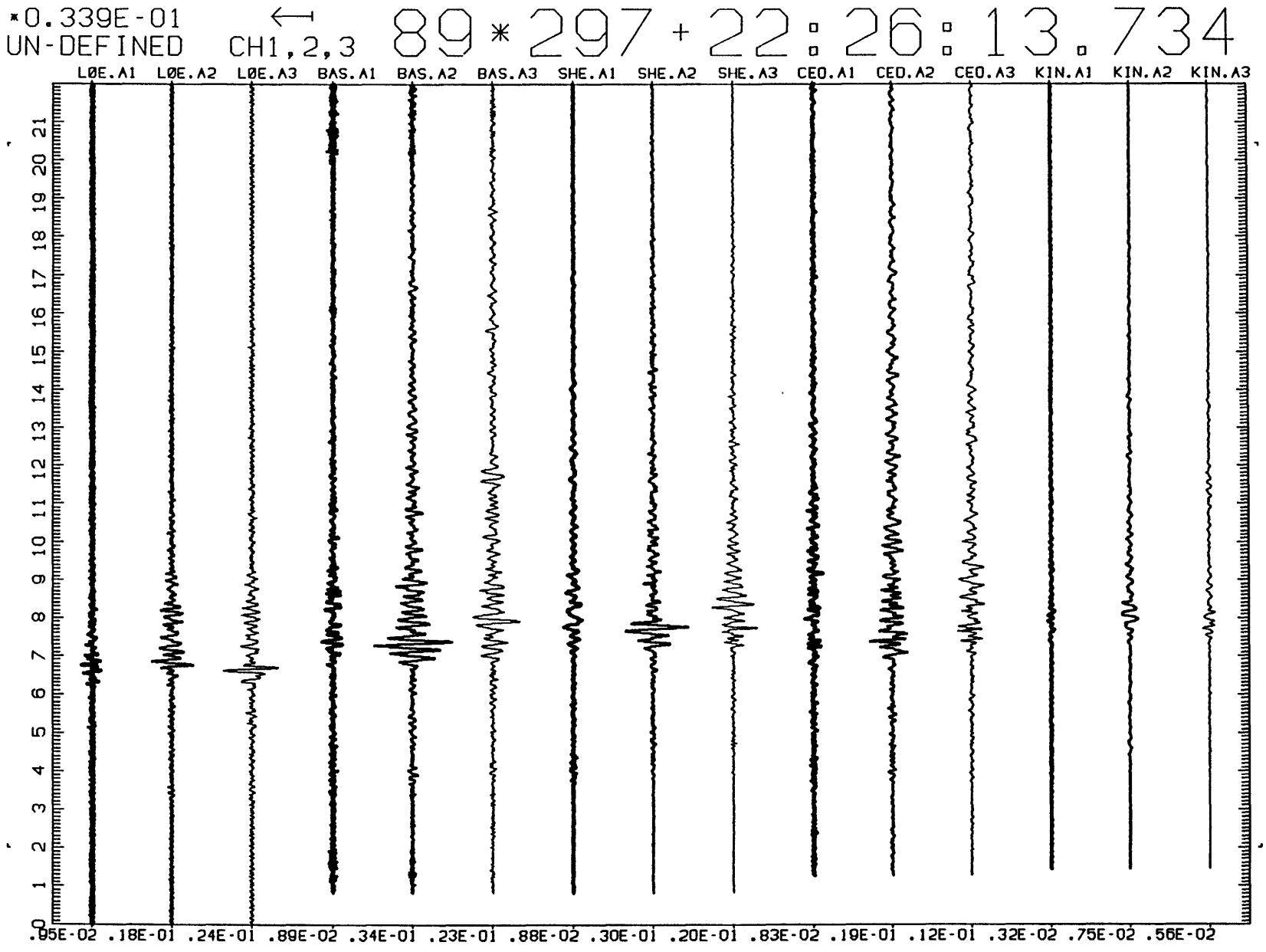
.10E-01
.25E-02
.73E-02
.12E-01


NØRMALIZED
UN-DEFINED
CH1,2,3
89*297+18:33:13.243
LØE.A1
LØE.A2
LØE.A3
PAC.A1
PAC.A2
PAC.A3
SHE.A1
SHE.A2
SHE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.59E-02
.59E-02
.55E-02
.16E+00
.18E-01
.18E-01
.35E-02
.20E-01
.24E-01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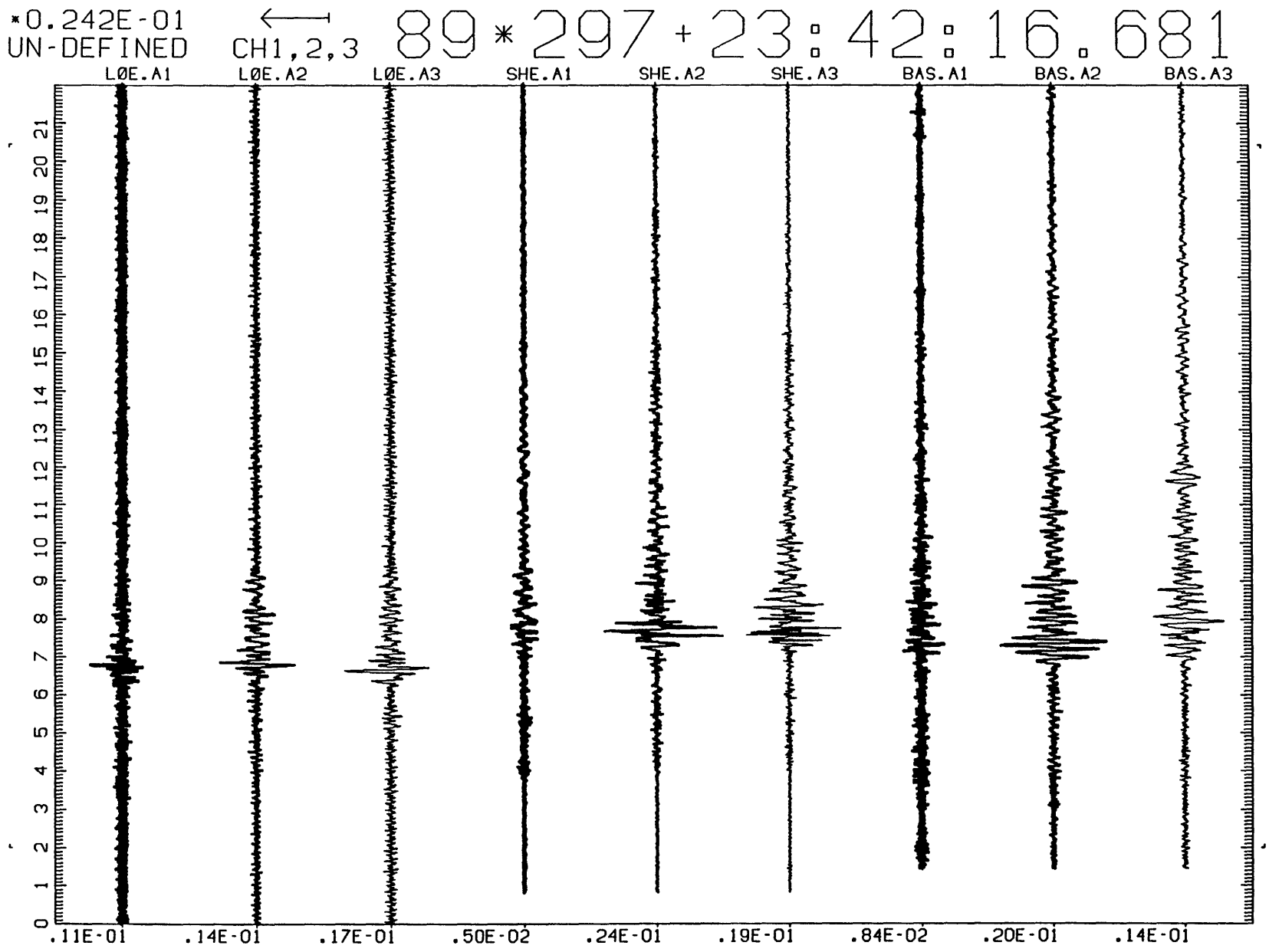
UN-DEFINED
CH1,2,3
89*297+22:26:13.734
LØE.A1 LØE.A2 LØE.A3 BAS.A1 BAS.A2 BAS.A3 SHE.A1 SHE.A2 SHE.A3 CEO.A1 CEO.A2 CEO.A3 KIN.A1 KIN.A2 KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.95E-02 .18E-01 .24E-01 .89E-02 .34E-01 .23E-01 .88E-02 .30E-01 .20E-01 .83E-02 .19E-01 .12E-01 .32E-02 .75E-02 .56E-02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UN-DEFINED
CH1,2,3
89*297+23:42:16.681
LØE.A1
LØE.A2
LØE.A3
SHE.A1
SHE.A2
SHE.A3
BAS.A1
BAS.A2
BAS.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.11E-01
.14E-01
.17E-01
.50E-02
.24E-01
.19E-01
.84E-02
.20E-01
.14E-01

*0.433E+00
UN-DEFINED
CH1,2,3
89*298+01:27:24.112
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
ALM.A1
ALM.A2
ALM.A3
BAR.A1
BAR.A2
BAR.A3
BAS.A1
BAS.A2
BAS.A3
KAL.A1
KAL.A2
KAL.A3
KIN.A1
KIN.A2
KIN.A3
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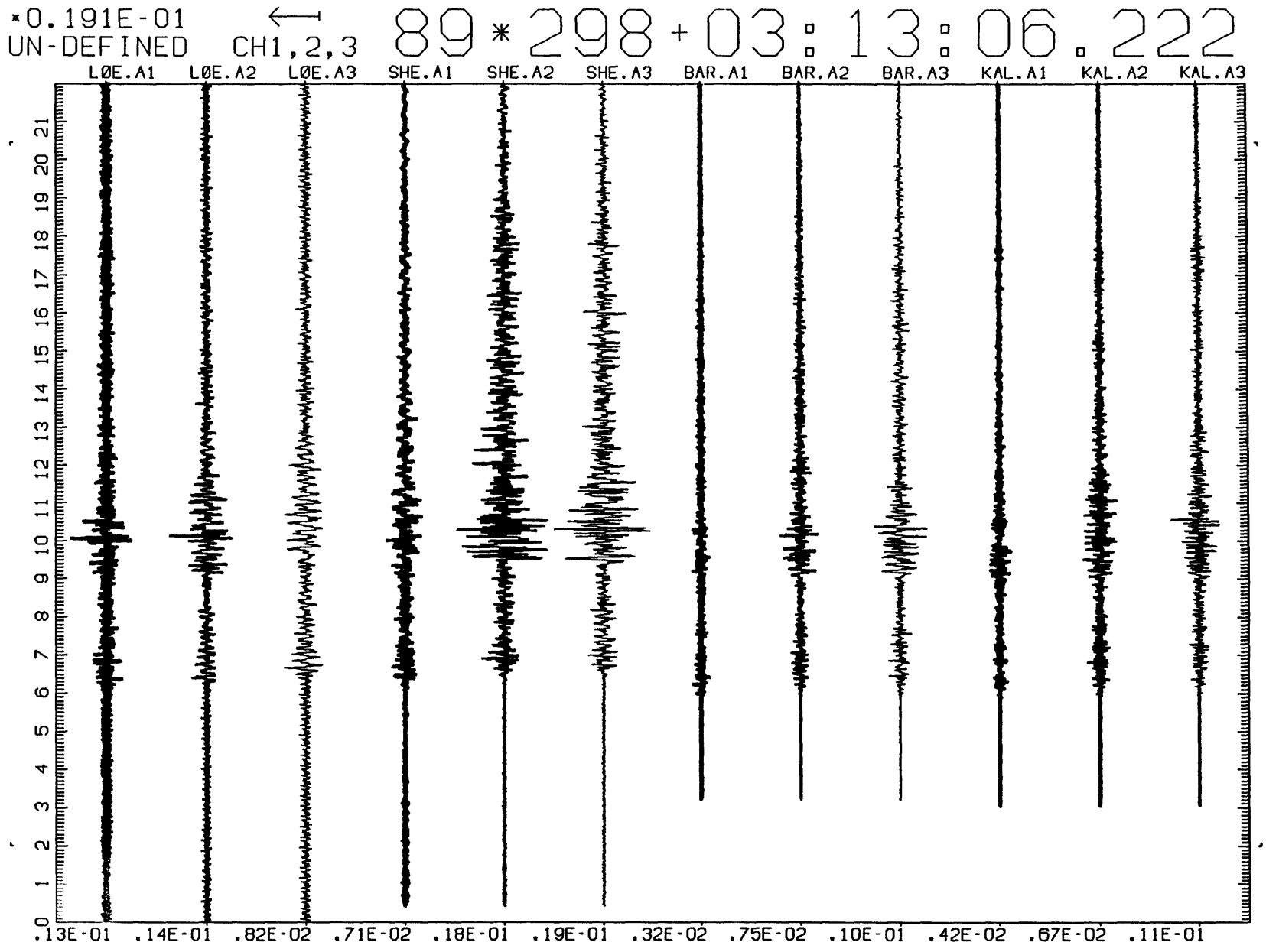
SHE.A3
SAL.A1
SAL.A2
SAL.A3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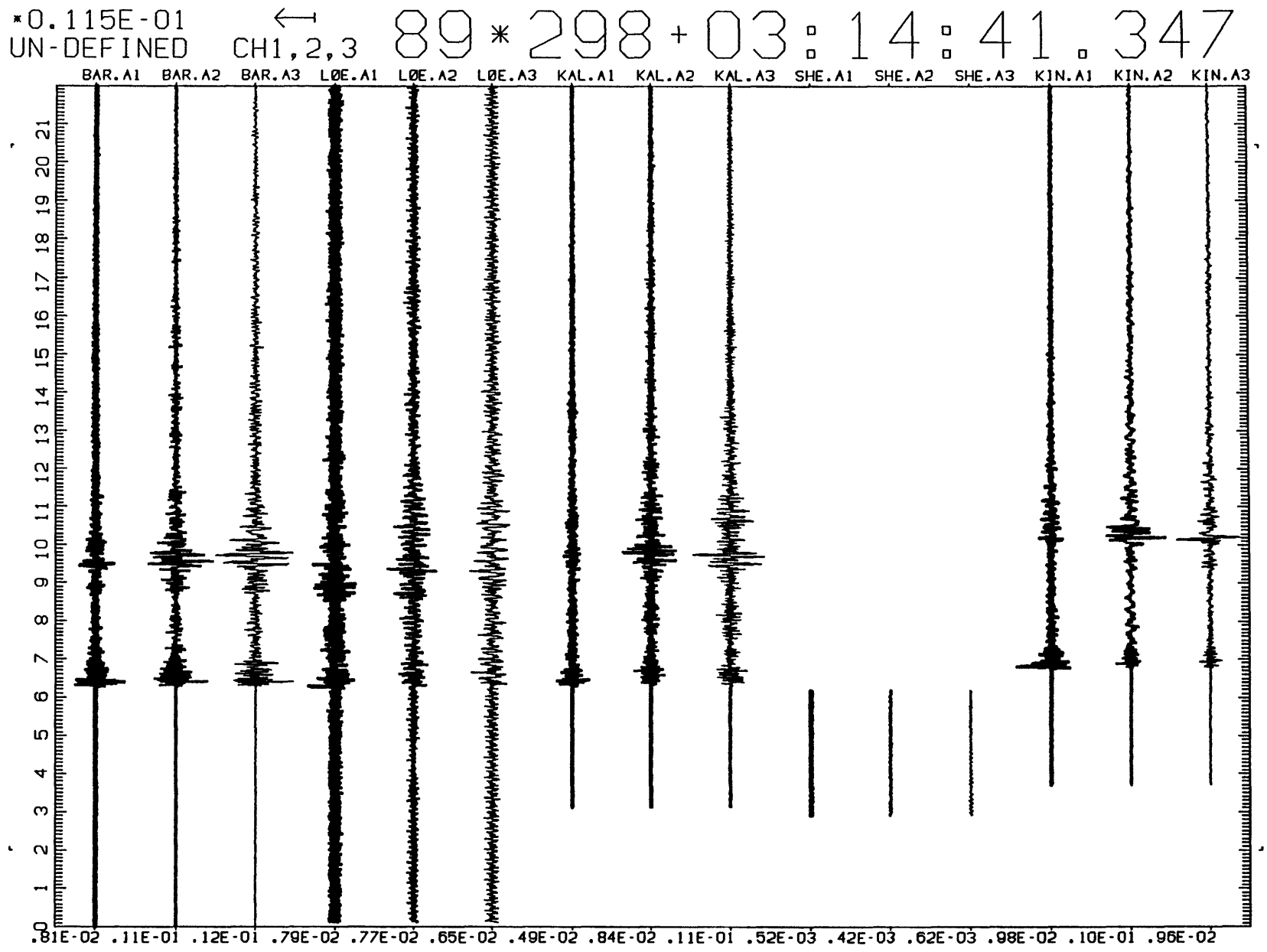
UN-DEFINED
CH1,2,3
89*298+03:13:06.222
LØE.A1
LØE.A2
LØE.A3
SHE.A1
SHE.A2
SHE.A3
BAR.A1
BAR.A2
BAR.A3
KAL.A1
KAL.A2
KAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.13E-01
.14E-01
.82E-02
.71E-02
.18E-01
.19E-01
.32E-02
.75E-02
.10E-01
.42E-02
.67E-02
.11E-01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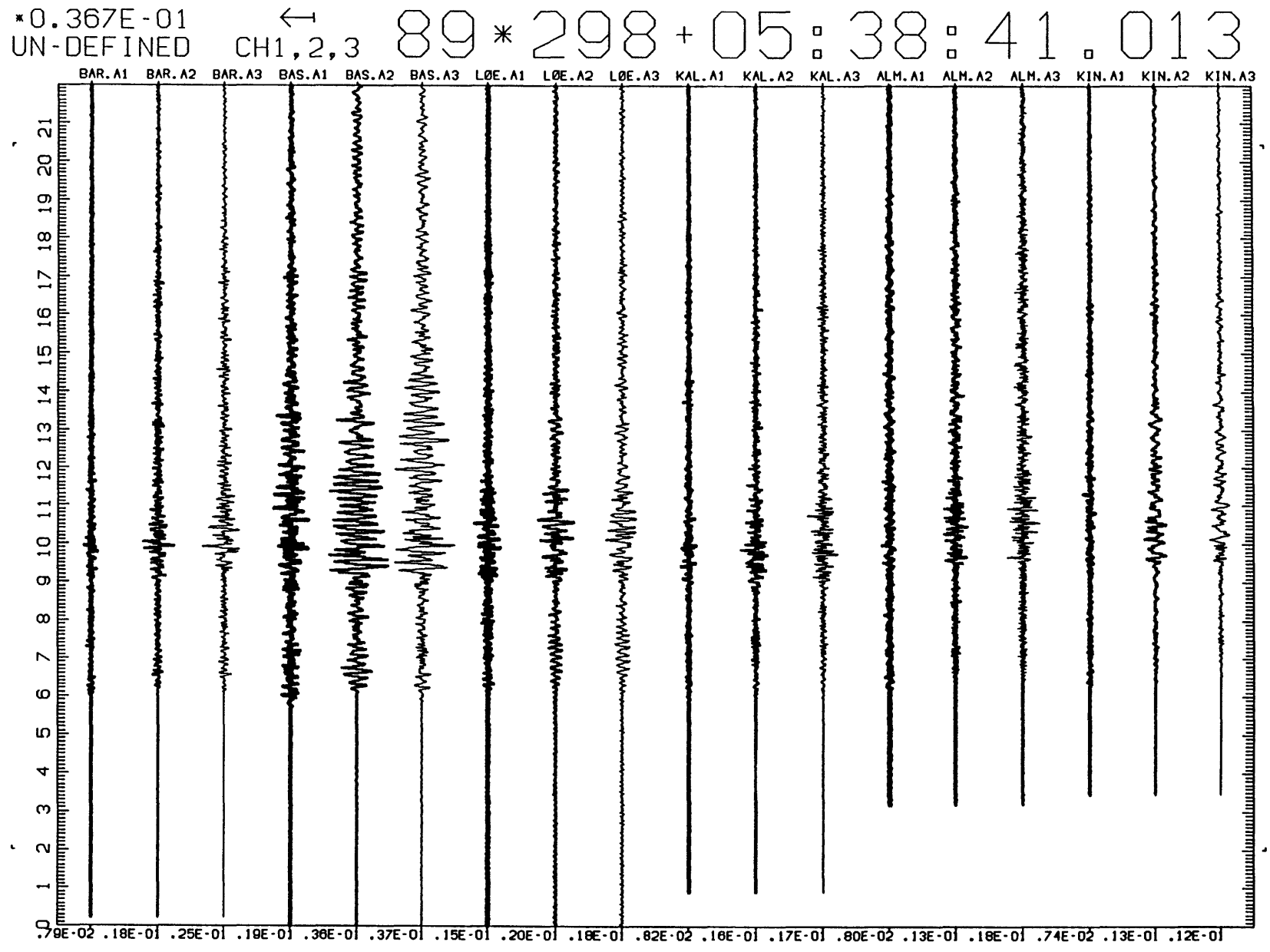
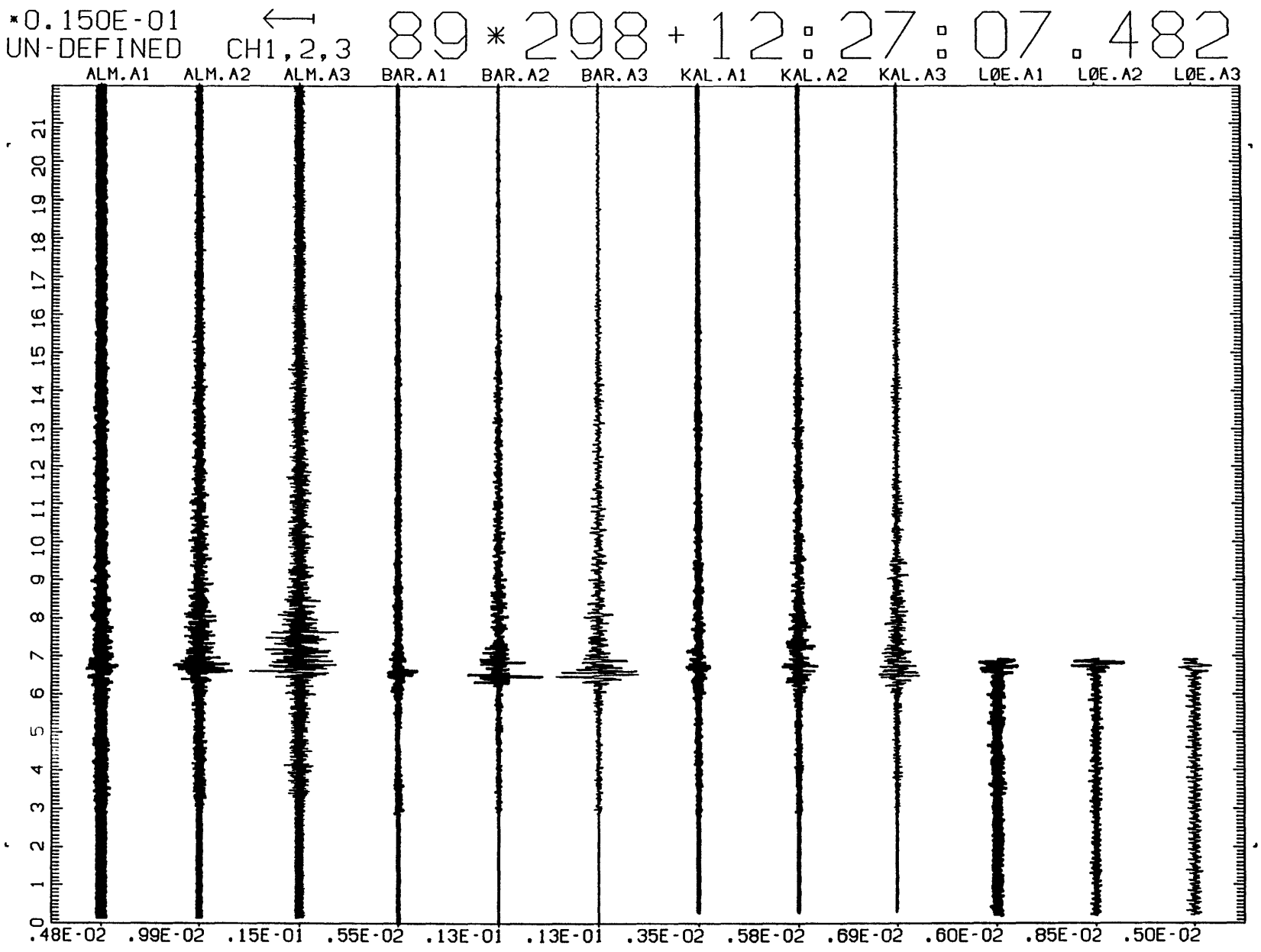
UN-DEFINED
CH1,2,3
89*298+03:14:41.347
BAR.A1
BAR.A2
BAR.A3
LØE.A1
LØE.A2
LØE.A3
KAL.A1
KAL.A2
KAL.A3
SHE.A1
SHE.A2
SHE.A3
KIN.A1
KIN.A2
KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.81E-02 .11E-01 .12E-01 .79E-02 .77E-02 .65E-02 .49E-02 .84E-02 .11E-01 .52E-03 .42E-03 .62E-03 .98E-02 .10E-01 .96E-02


*0.367E-01
UN-DEFINED
CH1,2,3
89*298+05:38:41.013
BAR.A1
BAR.A2
BAR.A3
BAS.A1
BAS.A2
BAS.A3
LØE.A1
LØE.A2
LØE.A3
KAL.A1
KAL.A2
KAL.A3
ALM.A1
ALM.A2
ALM.A3
KIN.A1
KIN.A2
KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.79E-02 .18E-01 .25E-01 .19E-01 .36E-01 .37E-01 .15E-01 .20E-01 .18E-01 .82E-02 .16E-01 .17E-01 .80E-02 .13E-01 .18E-01 .74E-02 .13E-01 .12E-01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UN-DEFINED
CH1,2,3
89*298+12:27:07.482
ALM.A1
ALM.A2
ALM.A3
BAR.A1
BAR.A2
BAR.A3
KAL.A1
KAL.A2
KAL.A3
LØE.A1
LØE.A2
LØE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.48E-02
.99E-02
.15E-01
.55E-02
.13E-01
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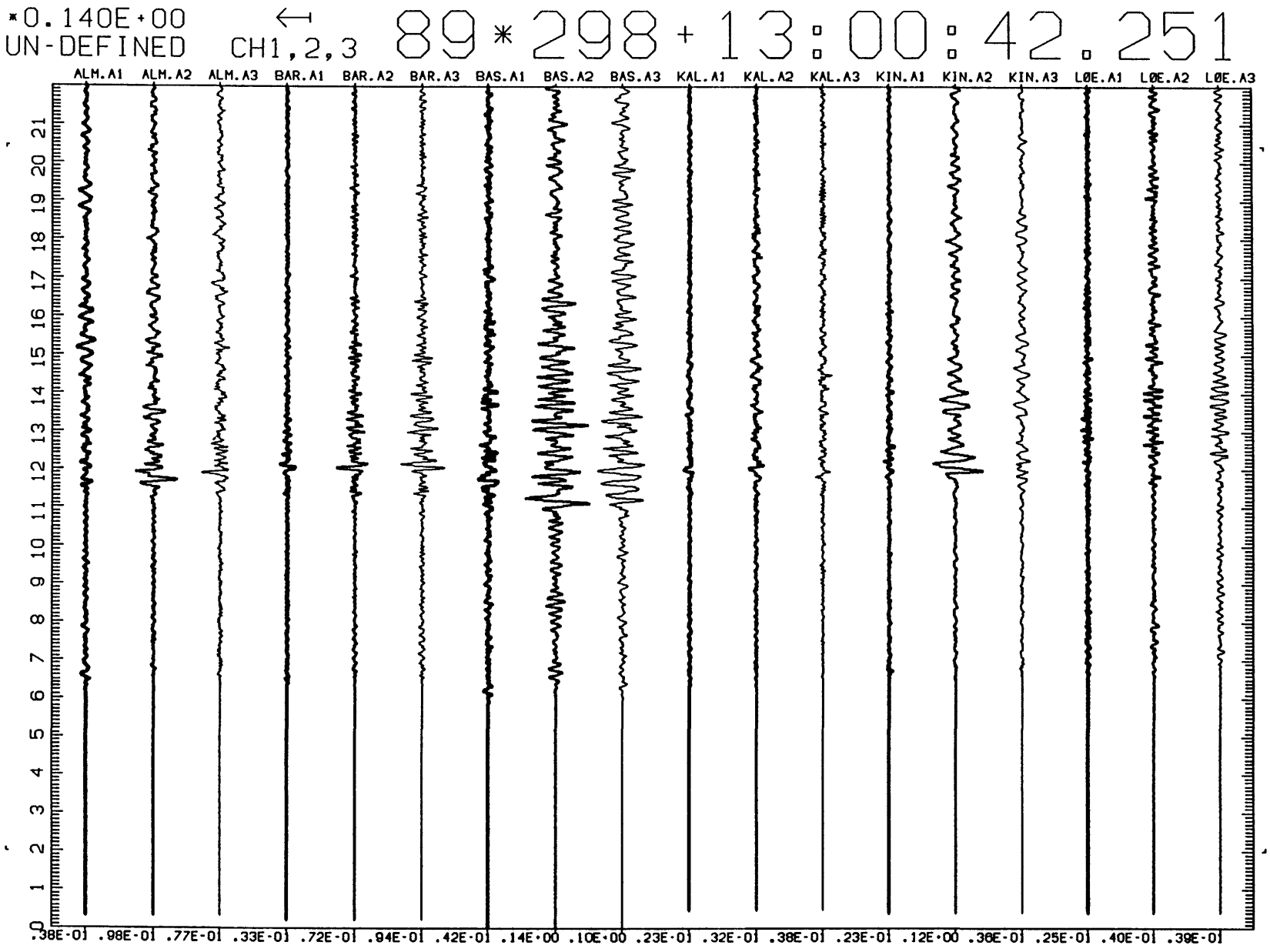
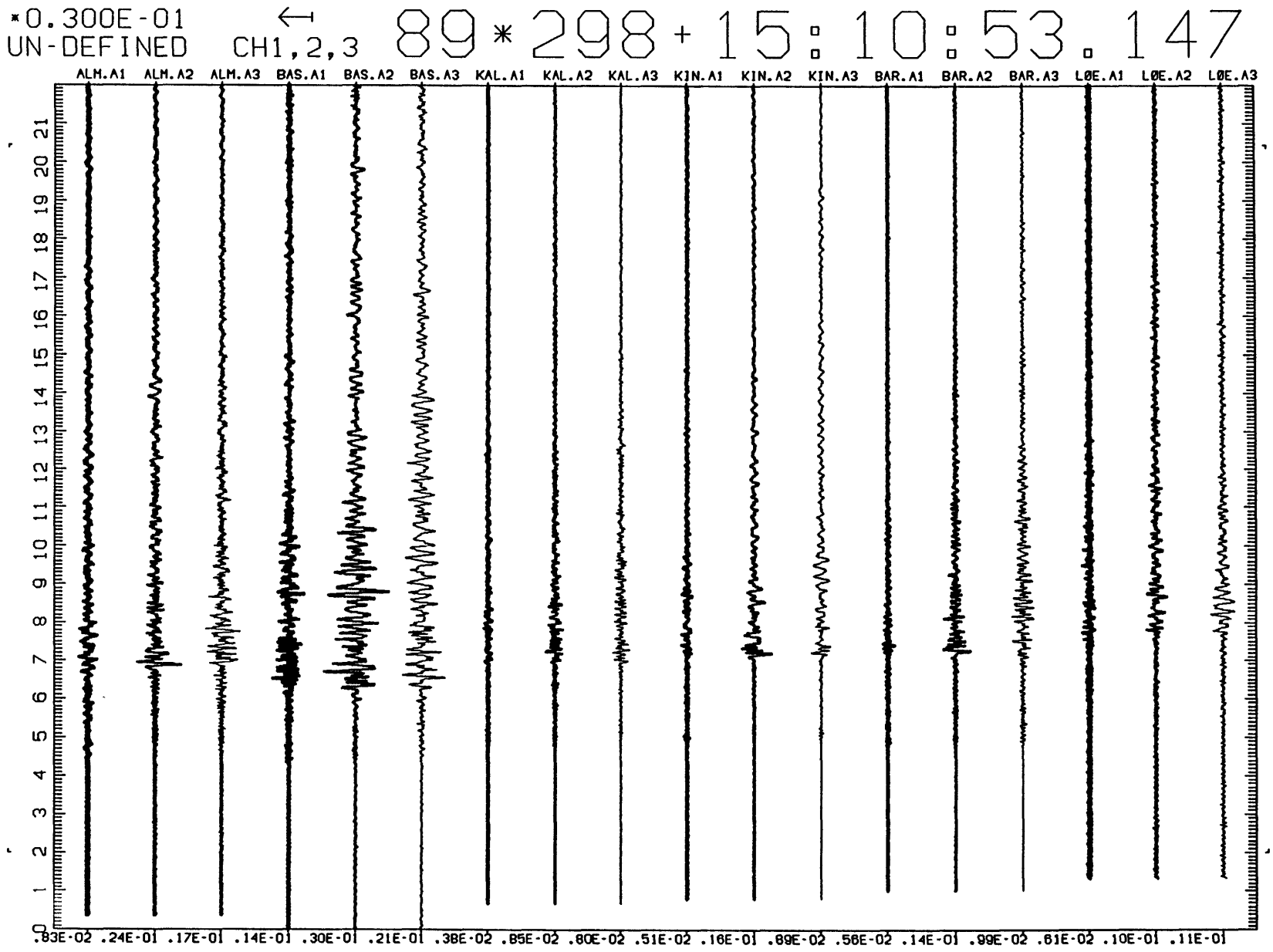
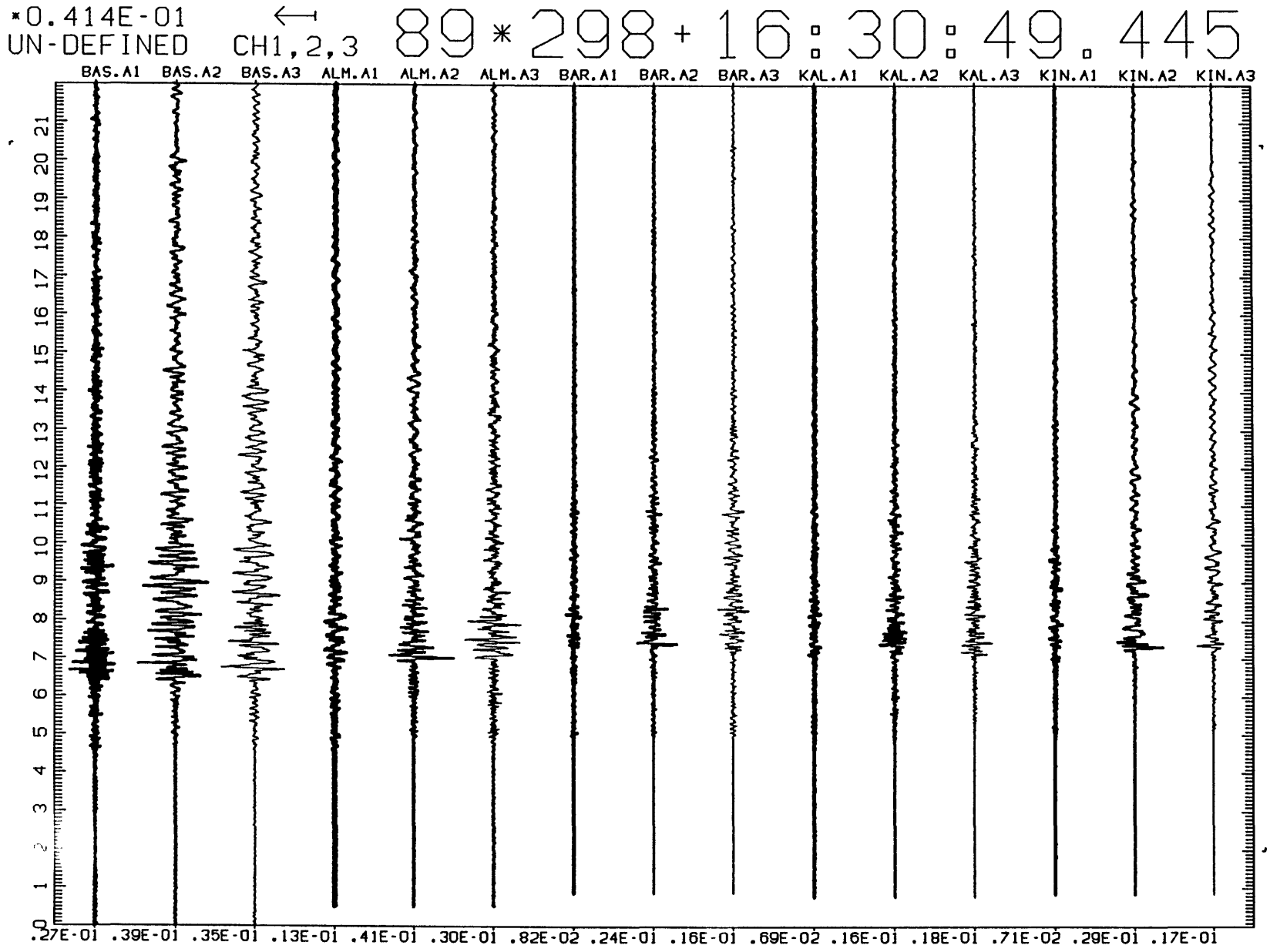
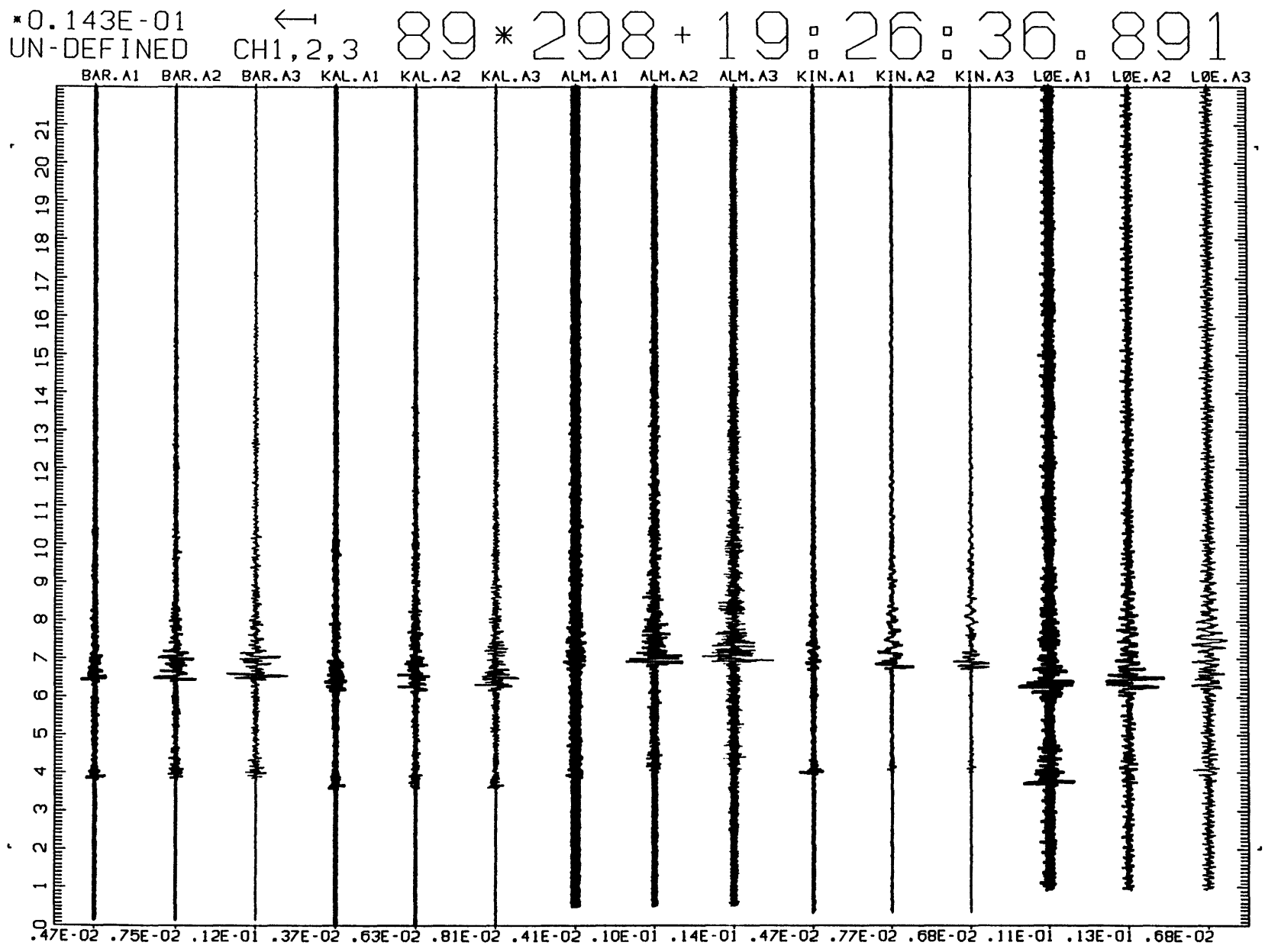
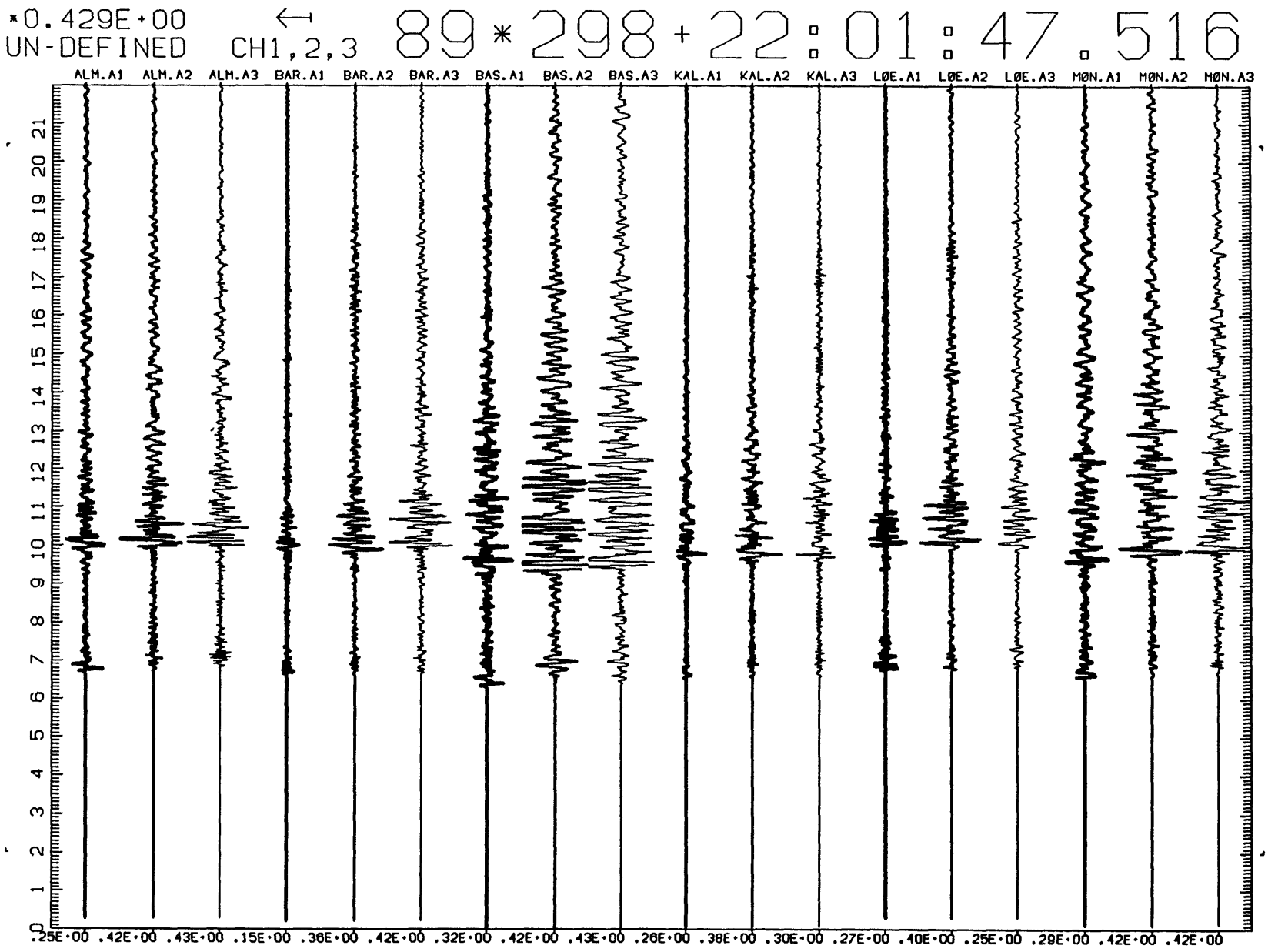
.69E-02
.60E-02
.85E-02
.50E-02


*0.140E+00
UN-DEFINED
CH1,2,3
89*298+13:00:42.251
ALM.A1 ALM.A2 ALM.A3 BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 KAL.A1 KAL.A2 KAL.A3 KIN.A1 KIN.A2 KIN.A3 LØE.A1 LØE.A2 LØE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.38E-01 .98E-01 .77E-01 .33E-01 .72E-01 .94E-01 .42E-01 .14E+00 .10E+00 .23E-01 .32E-01 .38E-01 .23E-01 .12E+00 .38E-01 .25E-01 .40E-01 .39E-01


*0.300E-01
UN-DEFINED
CH1,2,3
89*298+15:10:53.147
ALM.A1 ALM.A2 ALM.A3 BAS.A1 BAS.A2 BAS.A3 KAL.A1 KAL.A2 KAL.A3 KIN.A1 KIN.A2 KIN.A3 BAR.A1 BAR.A2 BAR.A3 LØE.A1 LØE.A2 LØE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.83E-02 .24E-01 .17E-01 .14E-01 .30E-01 .21E-01 .38E-02 .85E-02 .80E-02 .51E-02 .16E-01 .89E-02 .58E-02 .14E-01 .99E-02 .61E-02 .10E-01 .11E-01


*0.414E-01
UN-DEFINED
CH1,2,3
89*298+16:30:49.445
BAS.A1 BAS.A2 BAS.A3 ALM.A1 ALM.A2 ALM.A3 BAR.A1 BAR.A2 BAR.A3 KAL.A1 KAL.A2 KAL.A3 KIN.A1 KIN.A2 KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.27E-01 .39E-01 .35E-01 .13E-01 .41E-01 .30E-01 .82E-02 .24E-01 .16E-01 .69E-02 .16E-01 .18E-01 .71E-02 .29E-01 .17E-01


*0.143E-01
UN-DEFINED
CH1,2,3
89*298+19:26:36.891
BAR.A1
BAR.A2
BAR.A3
KAL.A1
KAL.A2
KAL.A3
ALM.A1
ALM.A2
ALM.A3
KIN.A1
KIN.A2
KIN.A3
LØE.A1
LØE.A2
LØE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.47E-02 .75E-02 .12E-01 .37E-02 .63E-02 .81E-02 .41E-02 .10E-01 .14E-01 .47E-02 .77E-02 .68E-02 .11E-01 .13E-01 .68E-02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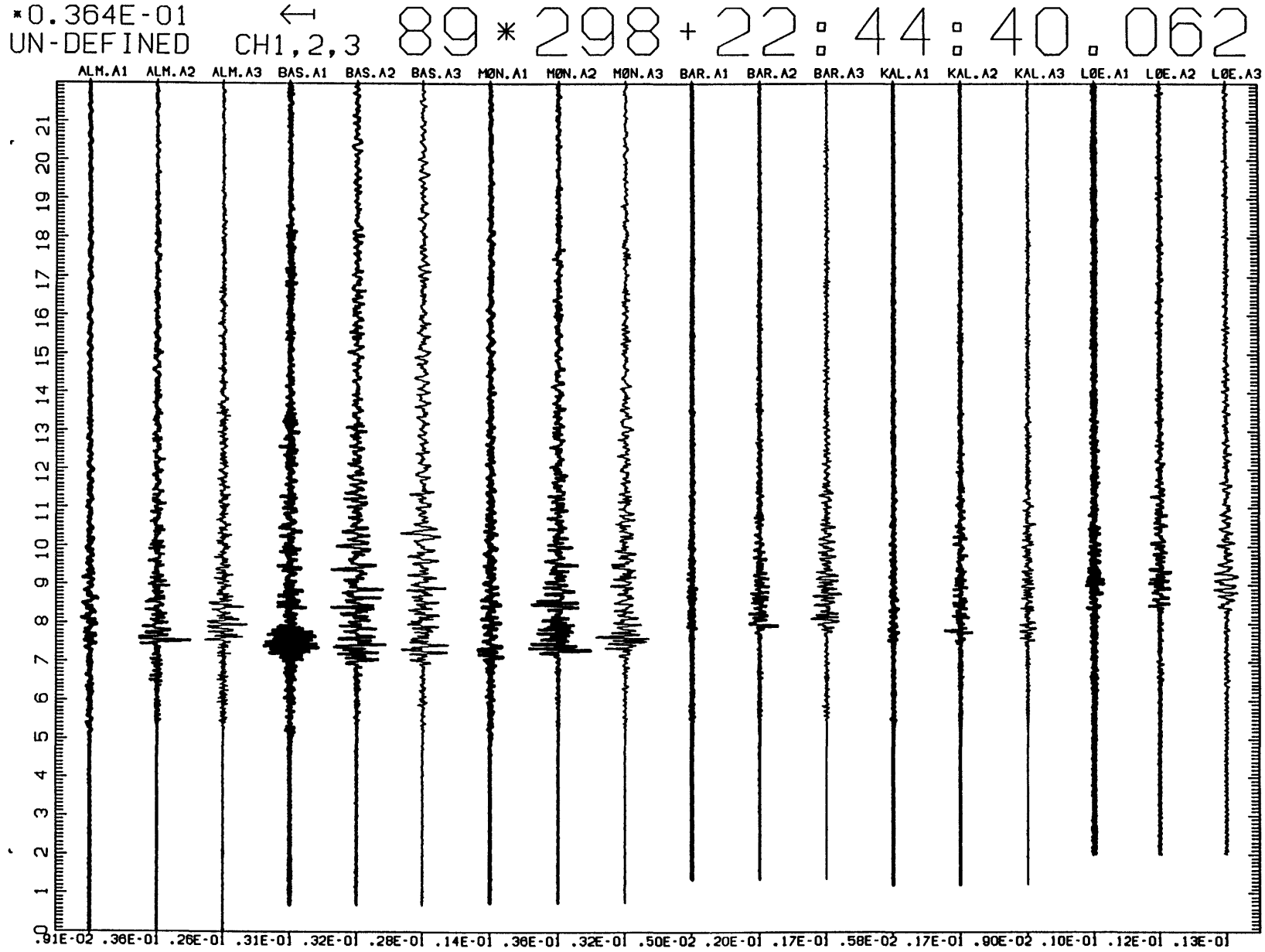
UN-DEFINED
CH1,2,3
89*298+22:01:47.516
ALM.A1 ALM.A2 ALM.A3 BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 KAL.A1 KAL.A2 KAL.A3 LØE.A1 LØE.A2 LØE.A3 MØN.A1 MØN.A2 MØN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.25E+00 .42E+00 .43E+00 .15E+00 .36E+00 .42E+00 .32E+00 .42E+00 .43E+00 .26E+00 .38E+00 .30E+00 .27E+00 .40E+00 .25E+00 .29E+00 .42E+00 .42E+00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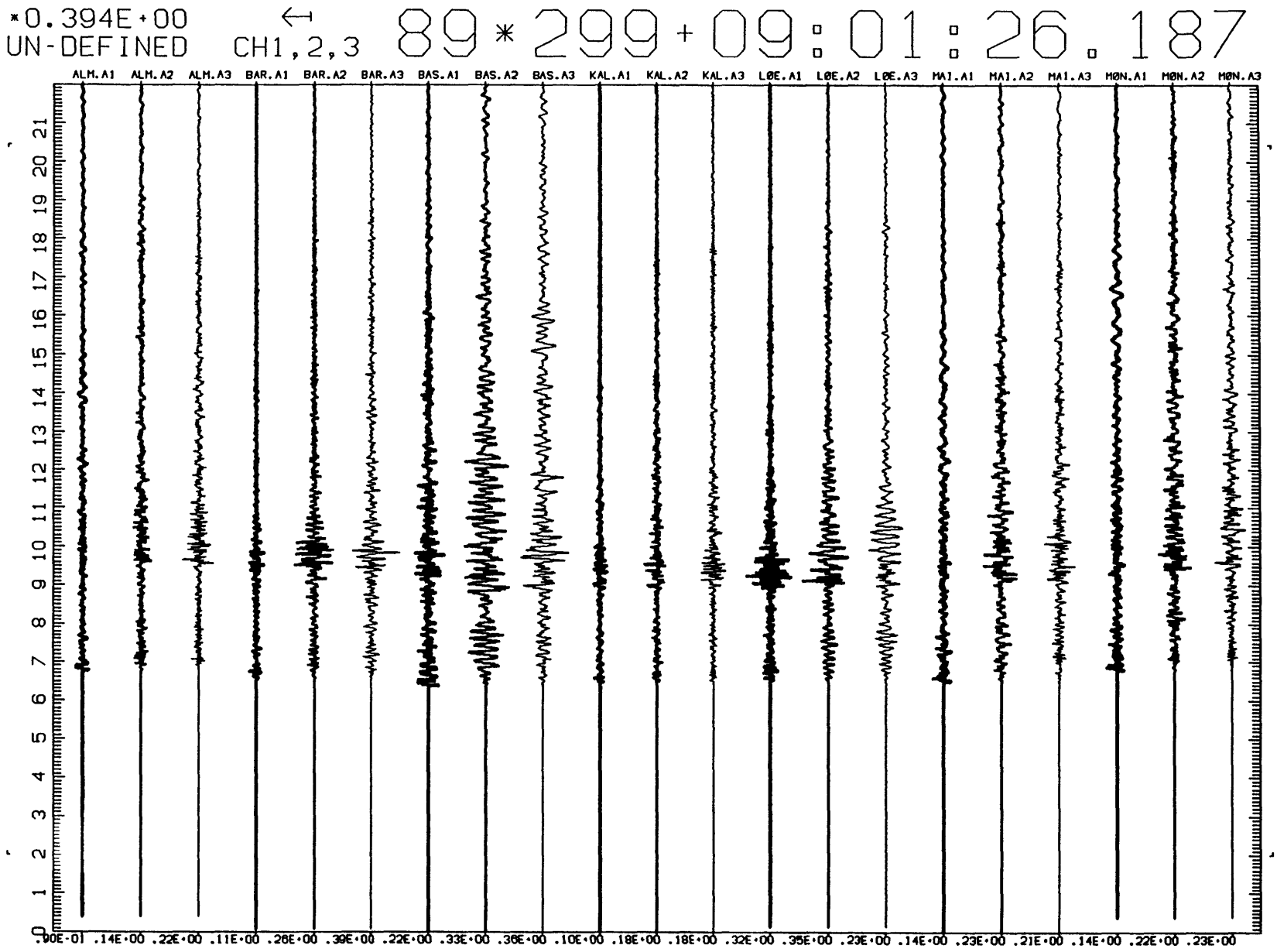
UN-DEFINED
CH1,2,3
89*298+22:44:40.062
ALM.A1 ALM.A2 ALM.A3 BAS.A1 BAS.A2 BAS.A3 MØN.A1 MØN.A2 MØN.A3 BAR.A1 BAR.A2 BAR.A3 KAL.A1 KAL.A2 KAL.A3 LØE.A1 LØE.A2 LØE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.91E-02 .36E-01 .26E-01 .31E-01 .32E-01 .28E-01 .14E-01 .36E-01 .32E-01 .50E-02 .20E-01 .17E-01 .58E-02 .17E-01 .90E-02 .10E-01 .12E-01 .13E-01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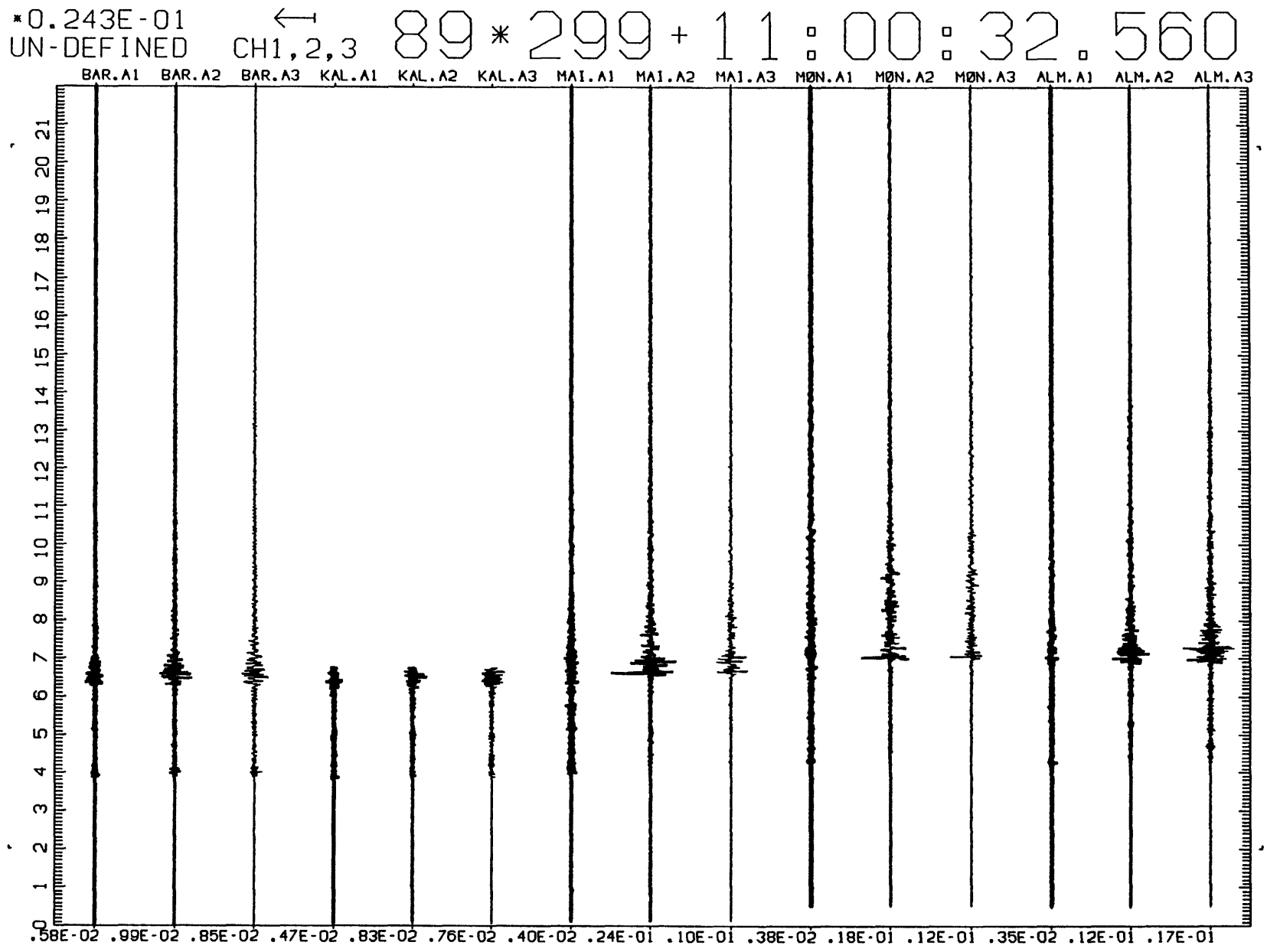
UN-DEFINED
CH1,2,3
89*299+09:01:26.187
ALM.A1 ALM.A2 ALM.A3 BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 KAL.A1 KAL.A2 KAL.A3 LØE.A1 LØE.A2 LØE.A3 MA1.A1 MA1.A2 MA1.A3 MØN.A1 MØN.A2 MØN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.90E-01 .14E+00 .22E+00 .11E+00 .26E+00 .39E+00 .22E+00 .33E+00 .36E+00 .10E+00 .18E+00 .18E+00 .32E+00 .35E+00 .23E+00 .14E+00 .23E+00 .21E+00 .14E+00 .22E+00 .23E+00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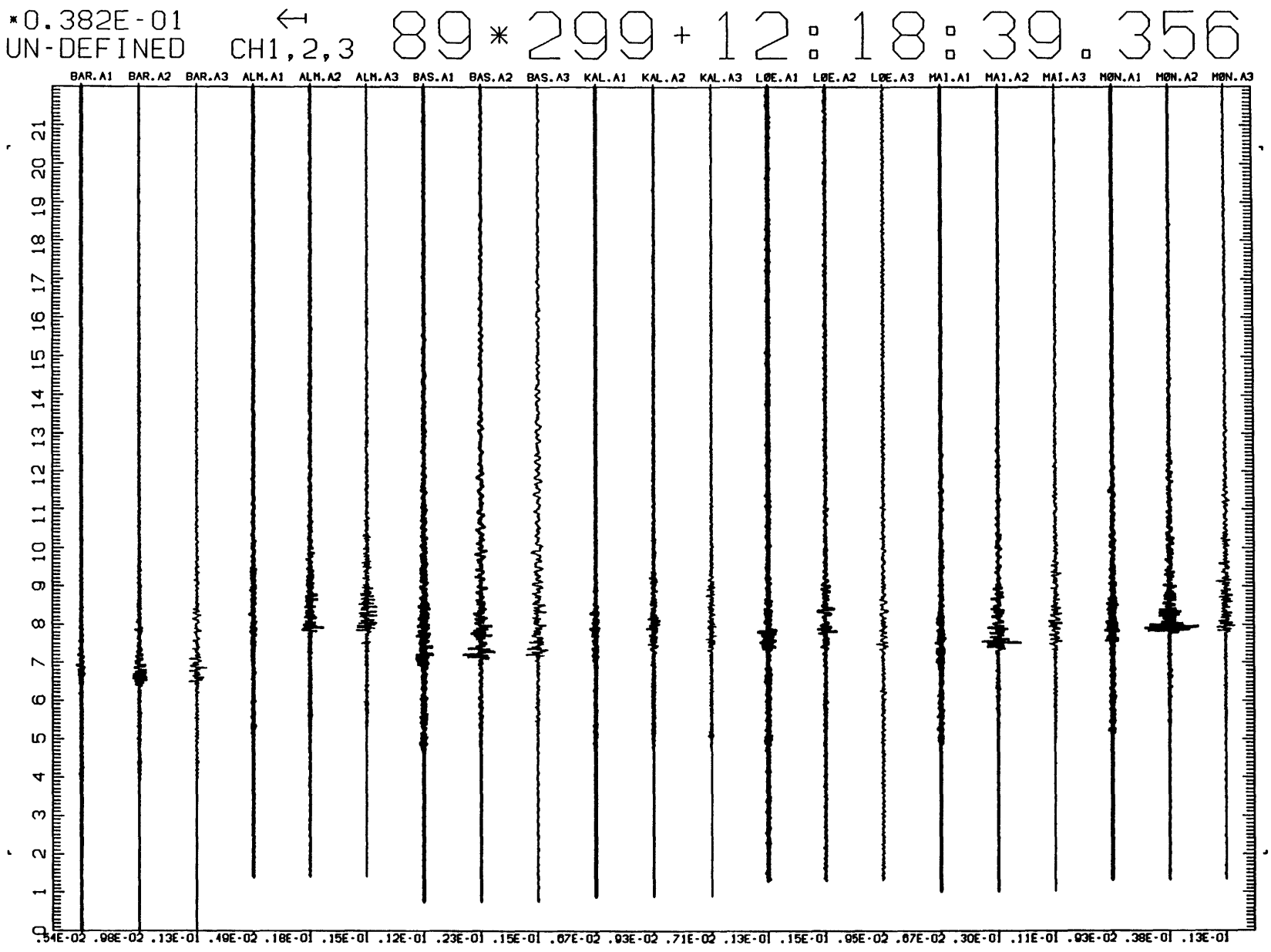
UN-DEFINED
CH1,2,3
89*299+11:00:32.560
BAR.A1
BAR.A2
BAR.A3
KAL.A1
KAL.A2
KAL.A3
MAI.A1
MAI.A2
MAI.A3
MØN.A1
MØN.A2
MØN.A3
ALM.A1
ALM.A2
ALM.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.58E-02 .99E-02 .85E-02 .47E-02 .83E-02 .76E-02 .40E-02 .24E-01 .10E-01 .38E-02 .18E-01 .12E-01 .35E-02 .12E-01 .17E-01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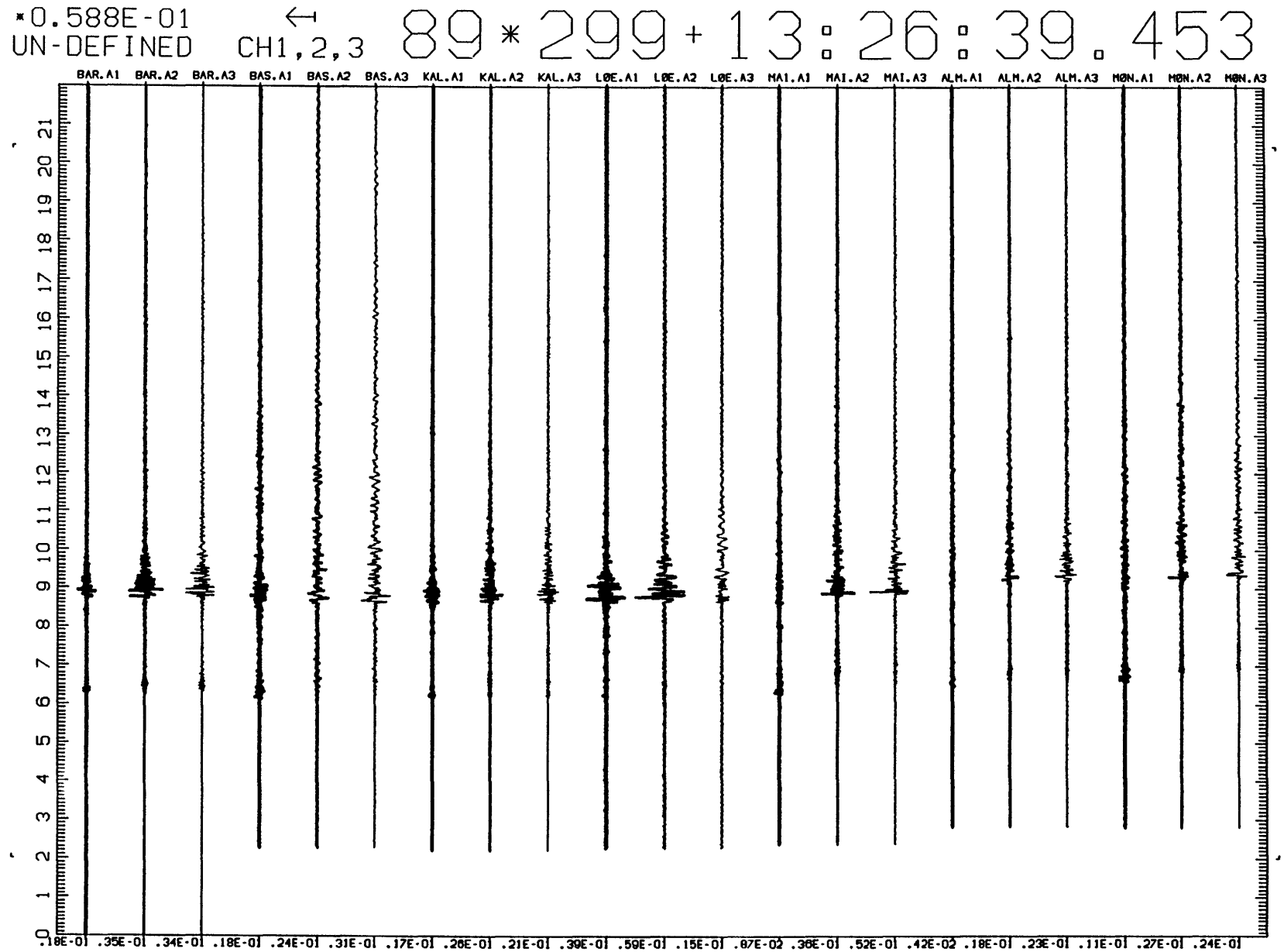
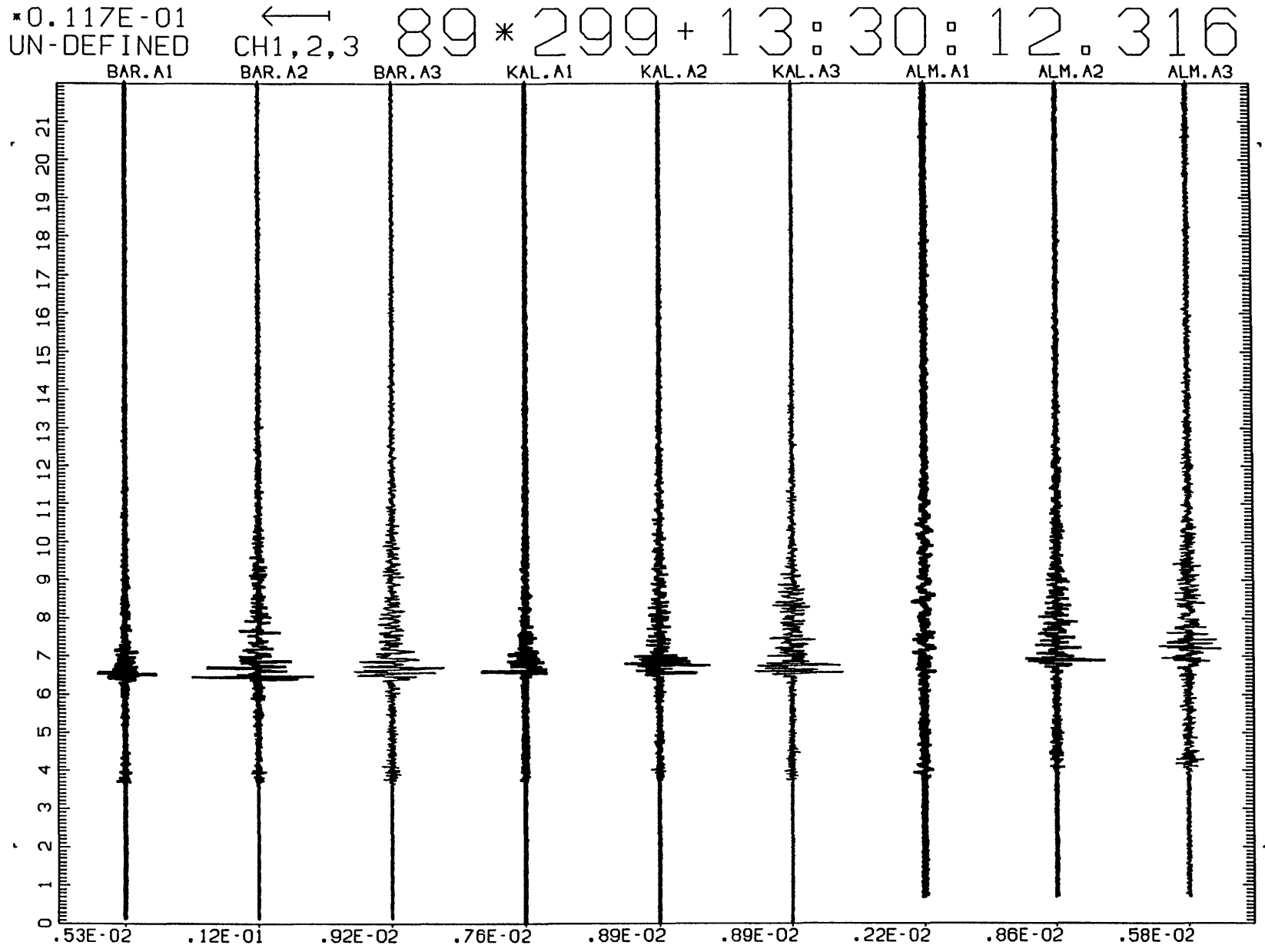
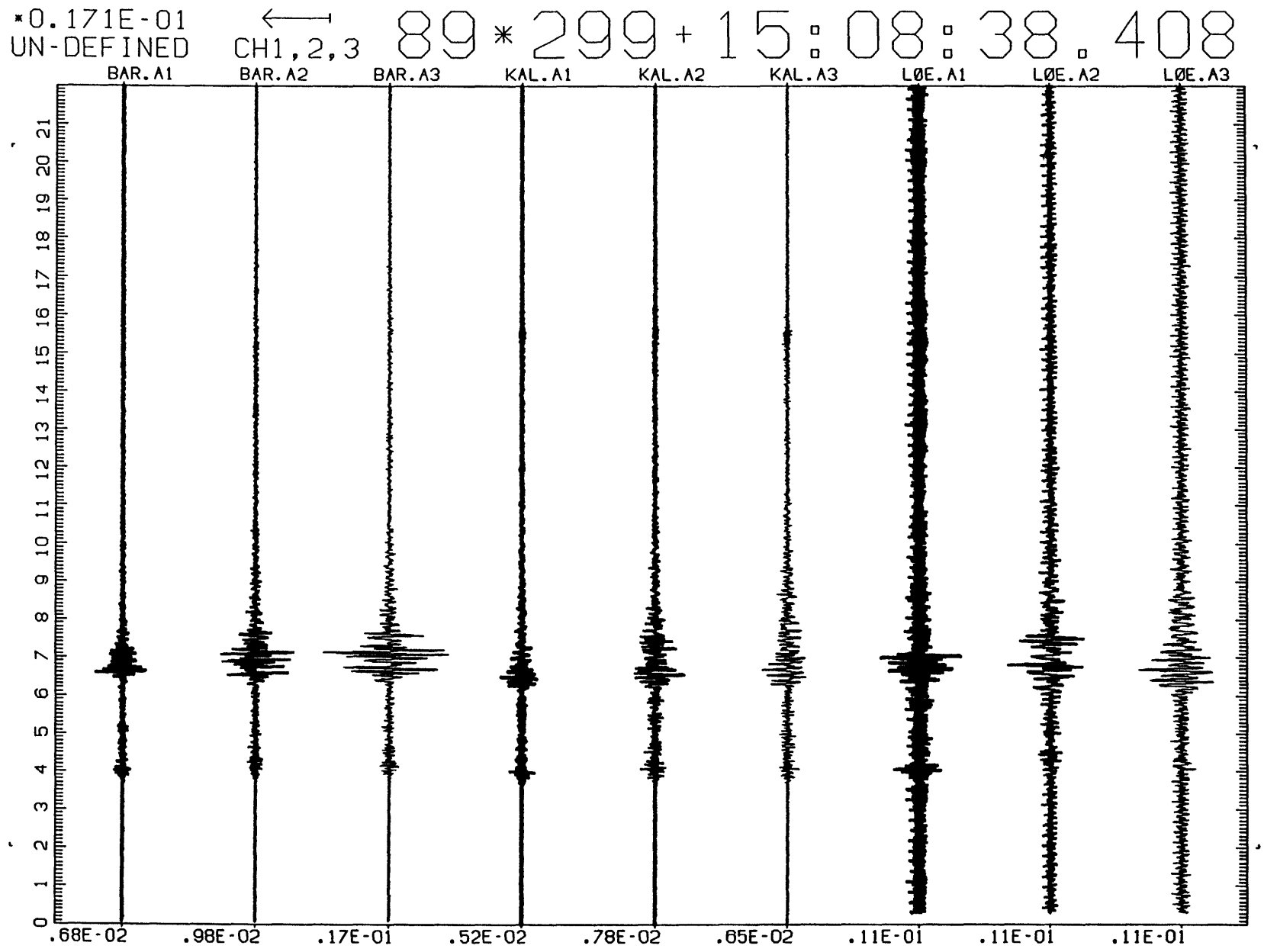
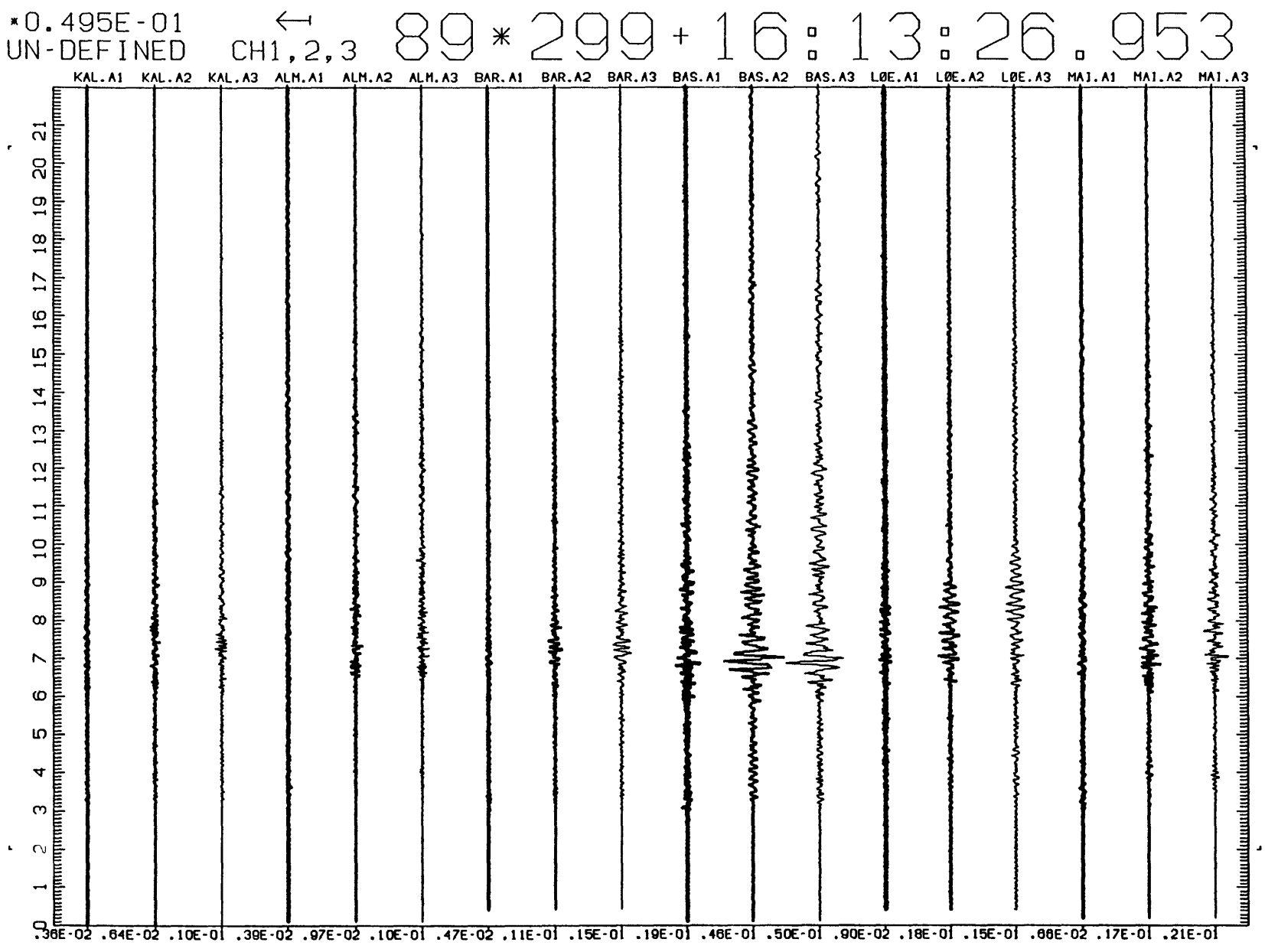
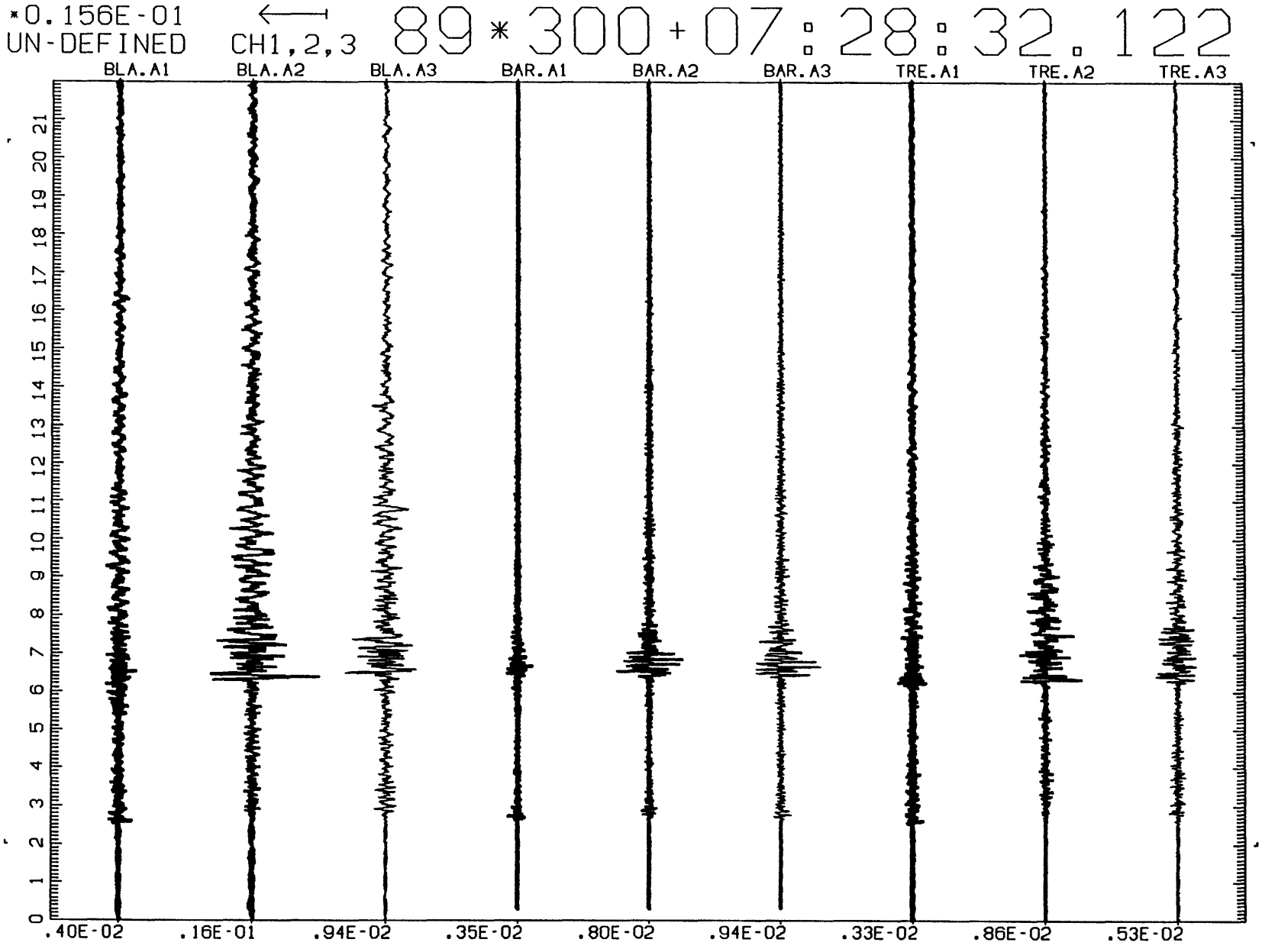
UN-DEFINED
CH1,2,3
89*299+12:18:39.356
BAR.A1 BAR.A2 BAR.A3 ALM.A1 ALM.A2 ALM.A3 BAS.A1 BAS.A2 BAS.A3 KAL.A1 KAL.A2 KAL.A3 LØE.A1 LØE.A2 LØE.A3 MAI.A1 MAI.A2 MAI.A3 MØN.A1 MØN.A2 MØN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.54E-02 .98E-02 .13E-01 .49E-02 .18E-01 .15E-01 .12E-01 .23E-01 .15E-01 .67E-02 .93E-02 .71E-02 .13E-01 .15E-01 .95E-02 .67E-02 .30E-01 .11E-01 .93E-02 .38E-01 .13E-01

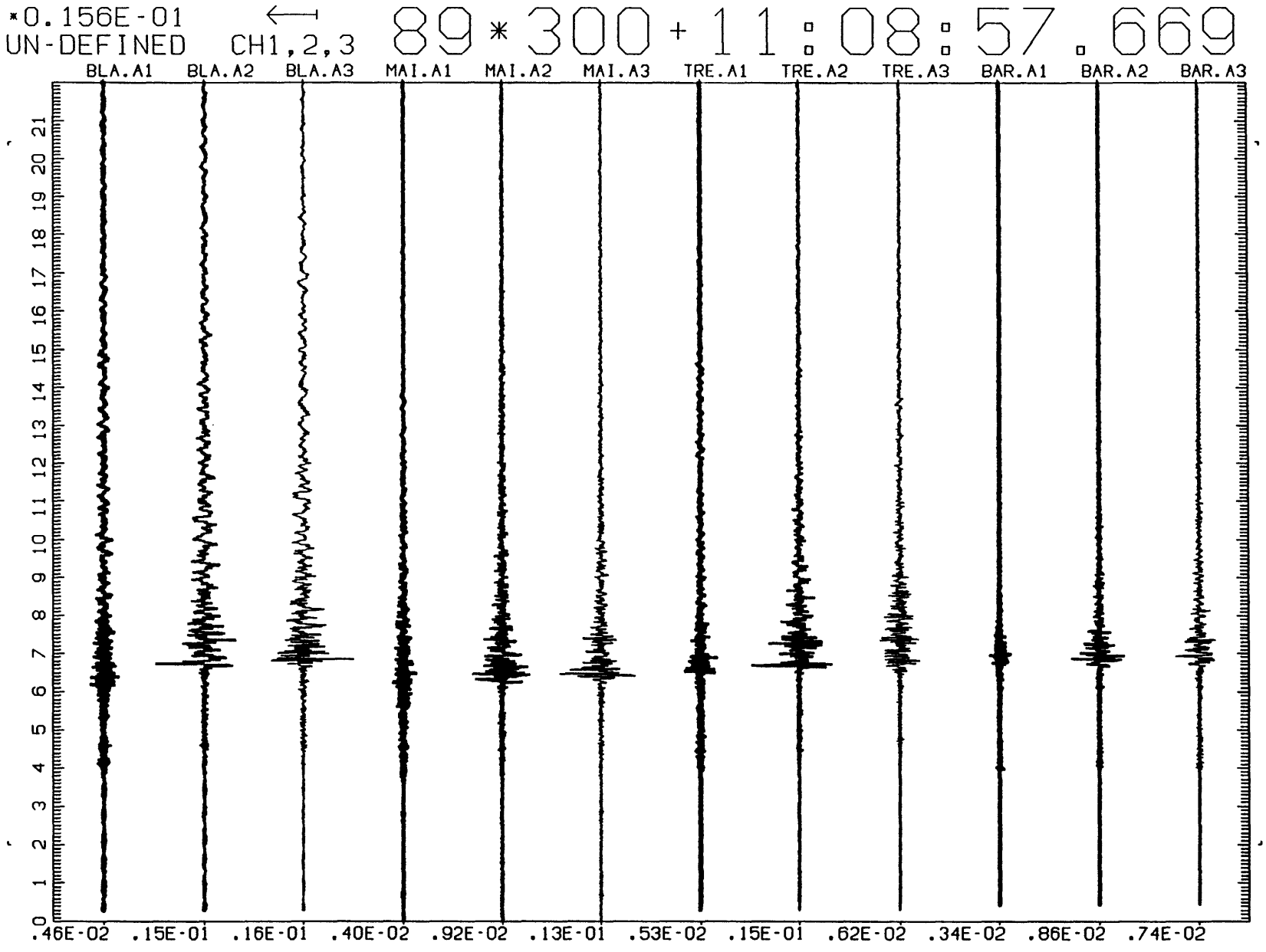

*0.588E-01
UN-DEFINED
CH1,2,3
89*299+13:26:39.453
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 KAL.A1 KAL.A2 KAL.A3 LØE.A1 LØE.A2 LØE.A3 MAI.A1 MAI.A2 MAI.A3 ALM.A1 ALM.A2 ALM.A3 MØN.A1 MØN.A2 MØN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.18E-01 .35E-01 .34E-01 .18E-01 .24E-01 .31E-01 .17E-01 .26E-01 .21E-01 .39E-01 .59E-01 .15E-01 .07E-02 .36E-01 .52E-01 .42E-02 .18E-01 .23E-01 .11E-01 .27E-01 .24E-01

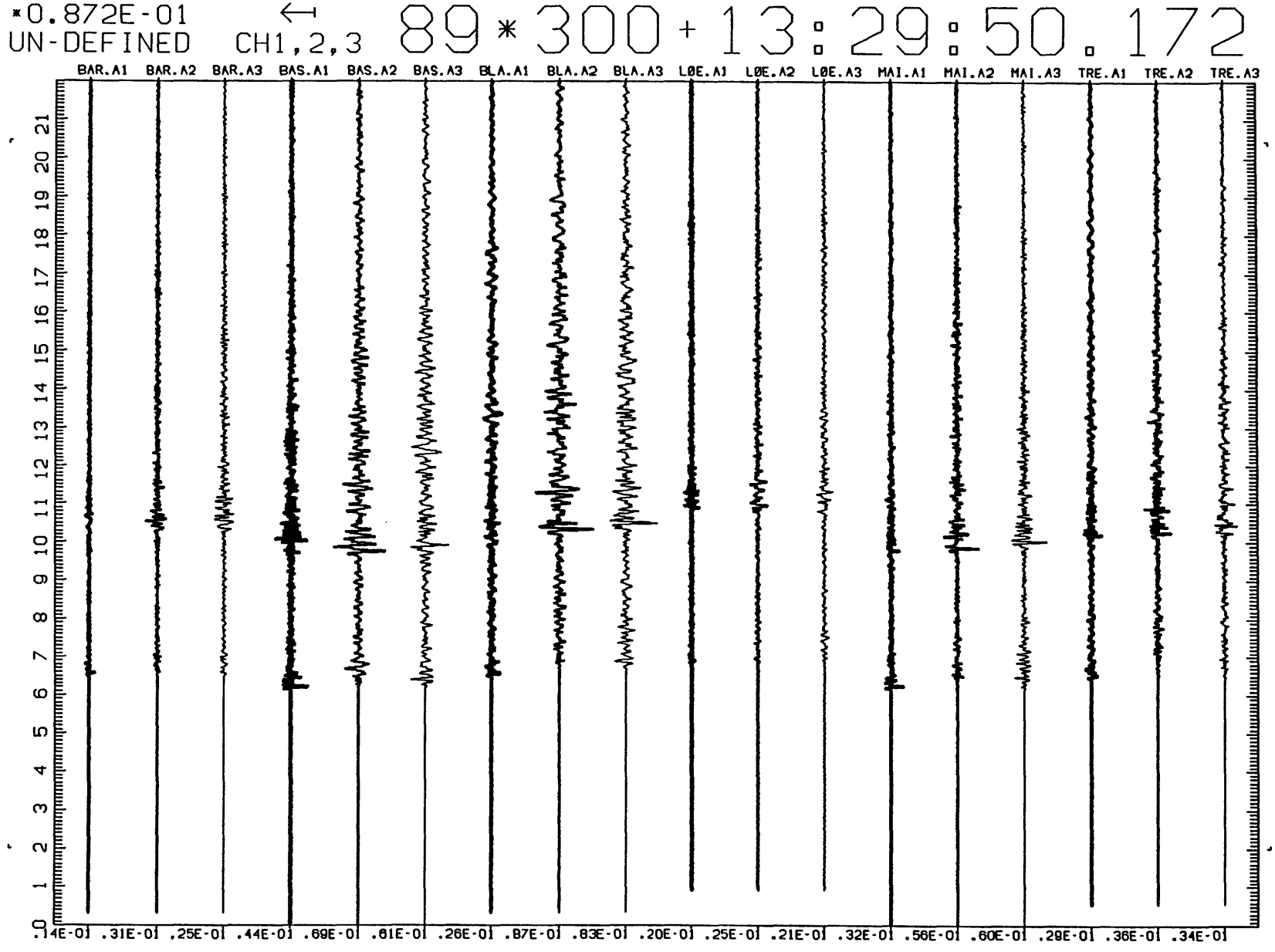

*0.117E-01
UN-DEFINED
CH1,2,3
89*299+13:30:12.316
BAR.A1
BAR.A2
BAR.A3
KAL.A1
KAL.A2
KAL.A3
ALM.A1
ALM.A2
ALM.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.53E-02
.12E-01
.92E-02
.76E-02
.89E-02
.89E-02
.22E-02
.86E-02
.58E-02

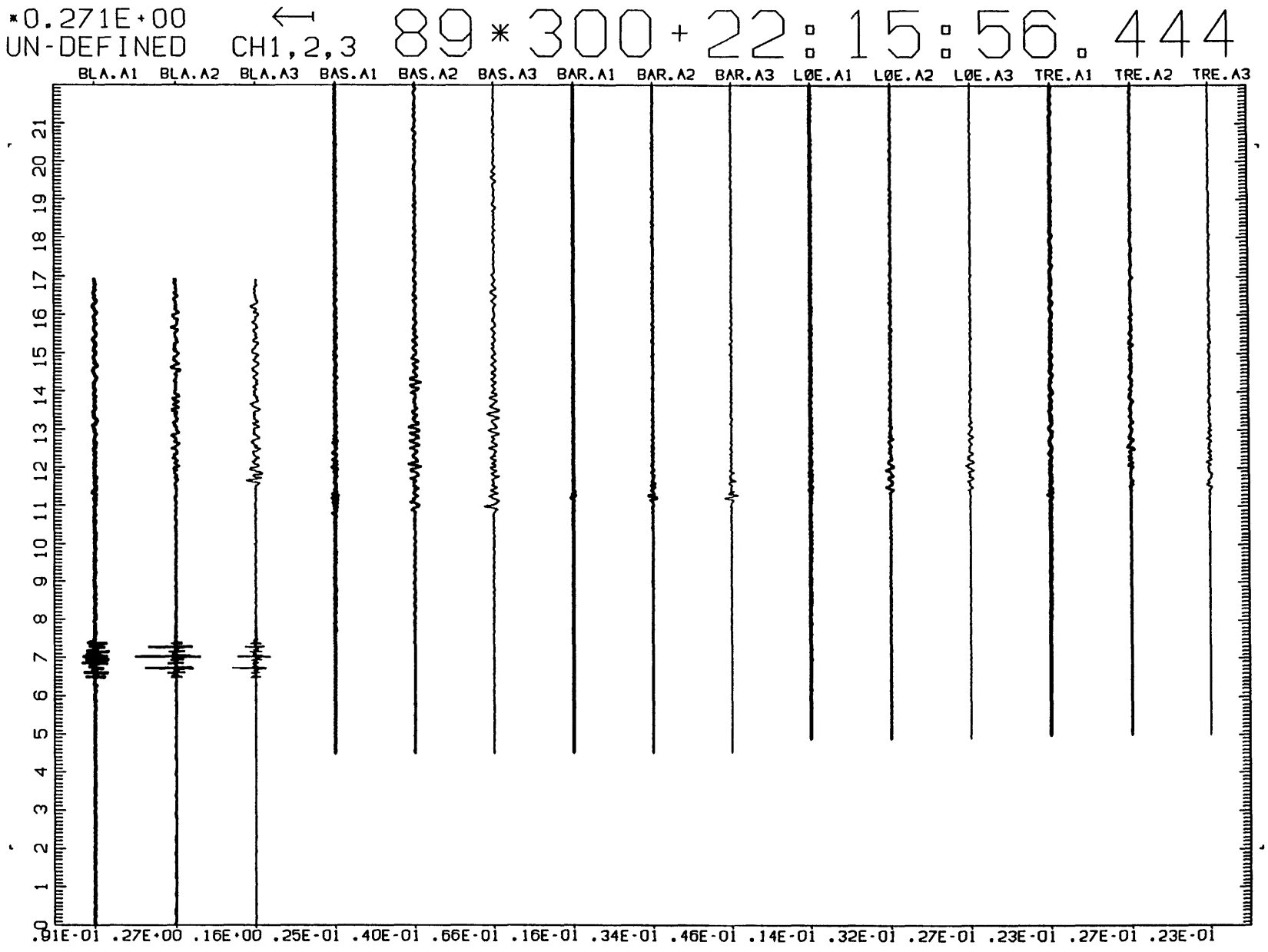

*0.171E-01
UN-DEFINED
CH1,2,3
89*299+15:08:38.408
BAR.A1
BAR.A2
BAR.A3
KAL.A1
KAL.A2
KAL.A3
LØE.A1
LØE.A2
LØE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.68E-02
.98E-02
.17E-01
.52E-02
.78E-02
.65E-02
.11E-01
.11E-01
.11E-01

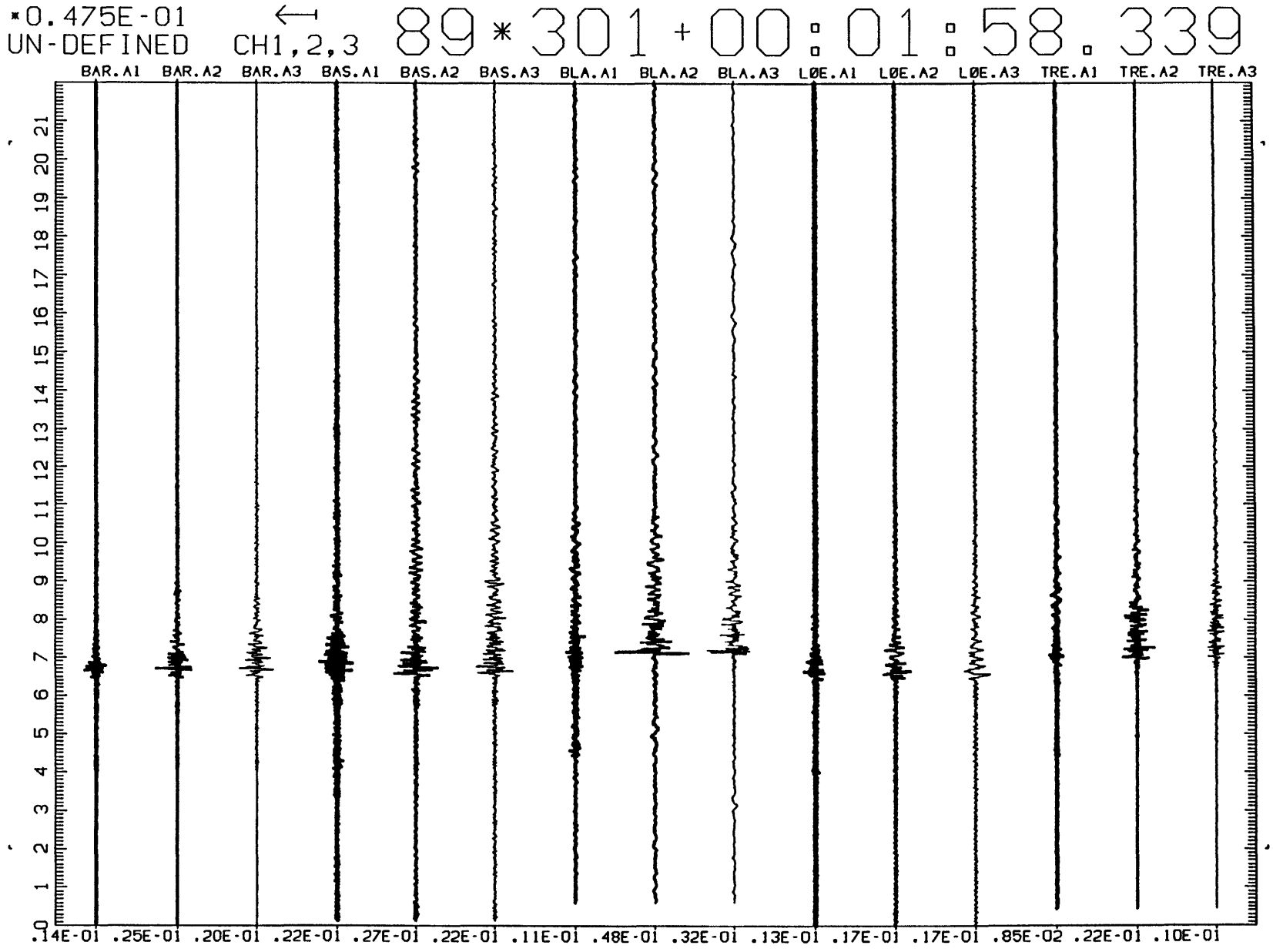

*0.495E-01
UN-DEFINED
CH1,2,3
89*299+16:13:26.953
KAL.A1 KAL.A2 KAL.A3 ALM.A1 ALM.A2 ALM.A3 BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 LØE.A1 LØE.A2 LØE.A3 MAJ.A1 MAJ.A2 MAJ.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.36E-02 .64E-02 .10E-01 .39E-02 .97E-02 .10E-01 .47E-02 .11E-01 .15E-01 .19E-01 .46E-01 .50E-01 .90E-02 .18E-01 .15E-01 .66E-02 .17E-01 .21E-01


*0.156E-01
UN-DEFINED
CH1,2,3
89*300+07:28:32.122
BLA.A1
BLA.A2
BLA.A3
BAR.A1
BAR.A2
BAR.A3
TRE.A1
TRE.A2
TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.40E-02
.16E-01
.94E-02
.35E-02
.80E-02
.94E-02
.33E-02
.86E-02
.53E-02


*0.156E-01
UN-DEFINED
CH1,2,3
89*300+11:08:57.669
BLA.A1
BLA.A2
BLA.A3
MAI.A1
MAI.A2
MAI.A3
TRE.A1
TRE.A2
TRE.A3
BAR.A1
BAR.A2
BAR.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.46E-02
.15E-01
.16E-01
.40E-02
.92E-02
.13E-01
.53E-02
.15E-01
.62E-02
.34E-02
.86E-02
.74E-02


*0.872E-01
UN-DEFINED
CH1,2,3
89*300+13:29:50.172
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 LØE.A1 LØE.A2 LØE.A3 MAI.A1 MAI.A2 MAI.A3 TRE.A1 TRE.A2 TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.14E-01 .31E-01 .25E-01 .44E-01 .69E-01 .61E-01 .26E-01 .87E-01 .83E-01 .20E-01 .25E-01 .21E-01 .32E-01 .56E-01 .60E-01 .29E-01 .36E-01 .34E-01


*0.271E+00
UN-DEFINED
CH1,2,3
89*300+22:15:56.444
BLA.A1 BLA.A2 BLA.A3 BAS.A1 BAS.A2 BAS.A3 BAR.A1 BAR.A2 BAR.A3 LØE.A1 LØE.A2 LØE.A3 TRE.A1 TRE.A2 TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.91E-01 .27E+00 .16E+00 .25E-01 .40E-01 .66E-01 .16E-01 .34E-01 .46E-01 .14E-01 .32E-01 .27E-01 .23E-01 .27E-01 .23E-01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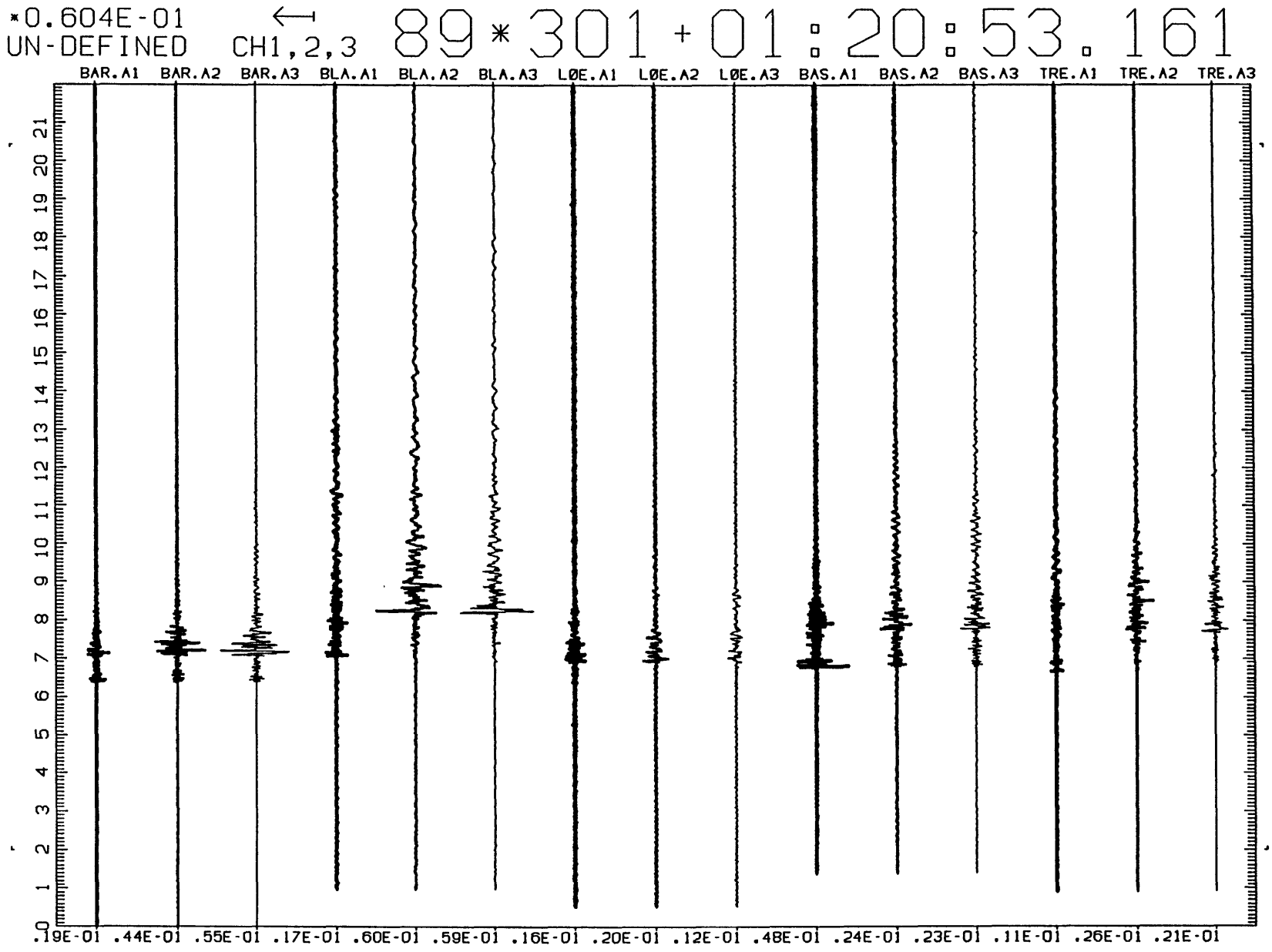
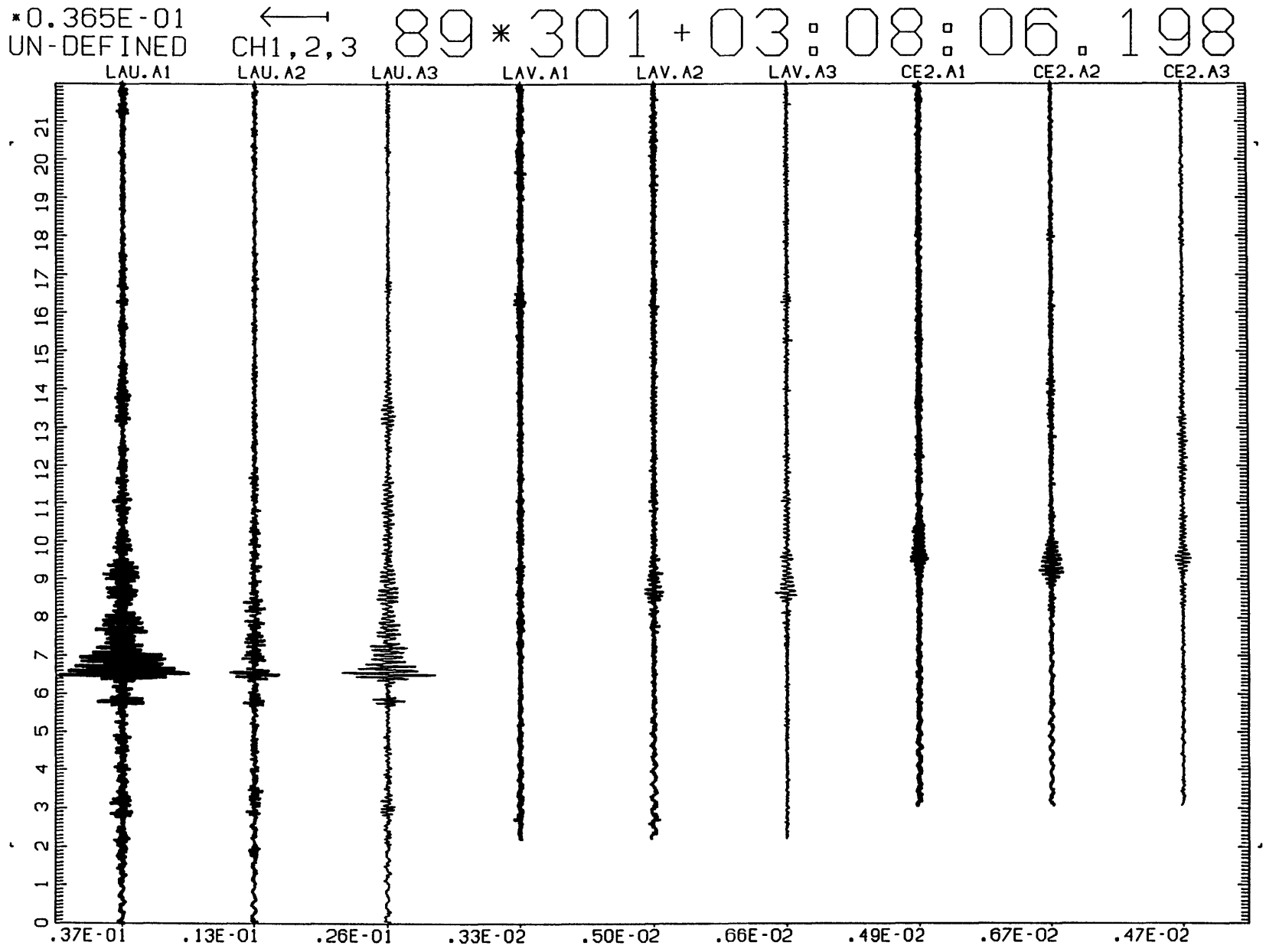
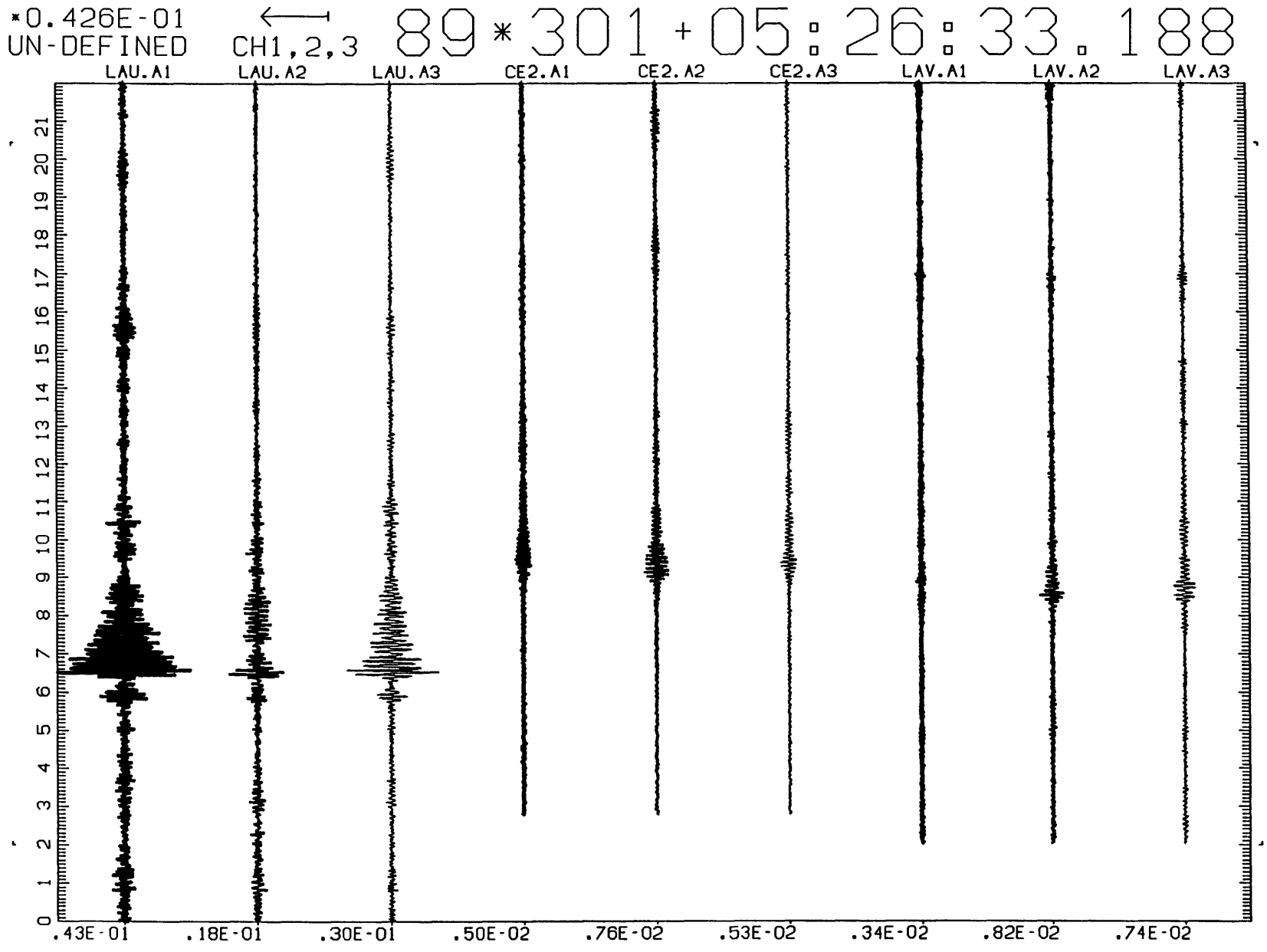
UN-DEFINED
CH1,2,3
89*301+00:01:58.339
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 LØE.A1 LØE.A2 LØE.A3 TRE.A1 TRE.A2 TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.14E-01 .25E-01 .20E-01 .22E-01 .27E-01 .22E-01 .11E-01 .48E-01 .32E-01 .13E-01 .17E-01 .17E-01 .85E-02 .22E-01 .10E-01


*0.604E-01
UN-DEFINED
CH1,2,3
89*301+01:20:53.161
BAR.A1
BAR.A2
BAR.A3
BLA.A1
BLA.A2
BLA.A3
LØE.A1
LØE.A2
LØE.A3
BAS.A1
BAS.A2
BAS.A3
TRE.A1
TRE.A2
TRE.A3
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
.19E-01
.44E-01
.55E-01
.17E-01
.60E-01
.59E-01
.16E-01
.20E-01
.12E-01
.48E-01
.24E-01
.23E-01
.11E-01
.26E-01
.21E-01


*0.365E-01
UN-DEFINED
CH1,2,3
89*301+03:08:06.198
LAU.A1
LAU.A2
LAU.A3
LAV.A1
LAV.A2
LAV.A3
CE2.A1
CE2.A2
CE2.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.37E-01
.13E-01
.26E-01
.33E-02
.50E-02
.66E-02
.49E-02
.67E-02
.47E-02


*0.426E-01
UN-DEFINED
CH1,2,3
89*301+05:26:33.188
LAU.A1
LAU.A2
LAU.A3
CE2.A1
CE2.A2
CE2.A3
LAV.A1
LAV.A2
LAV.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.43E-01
.18E-01
.30E-01
.50E-02
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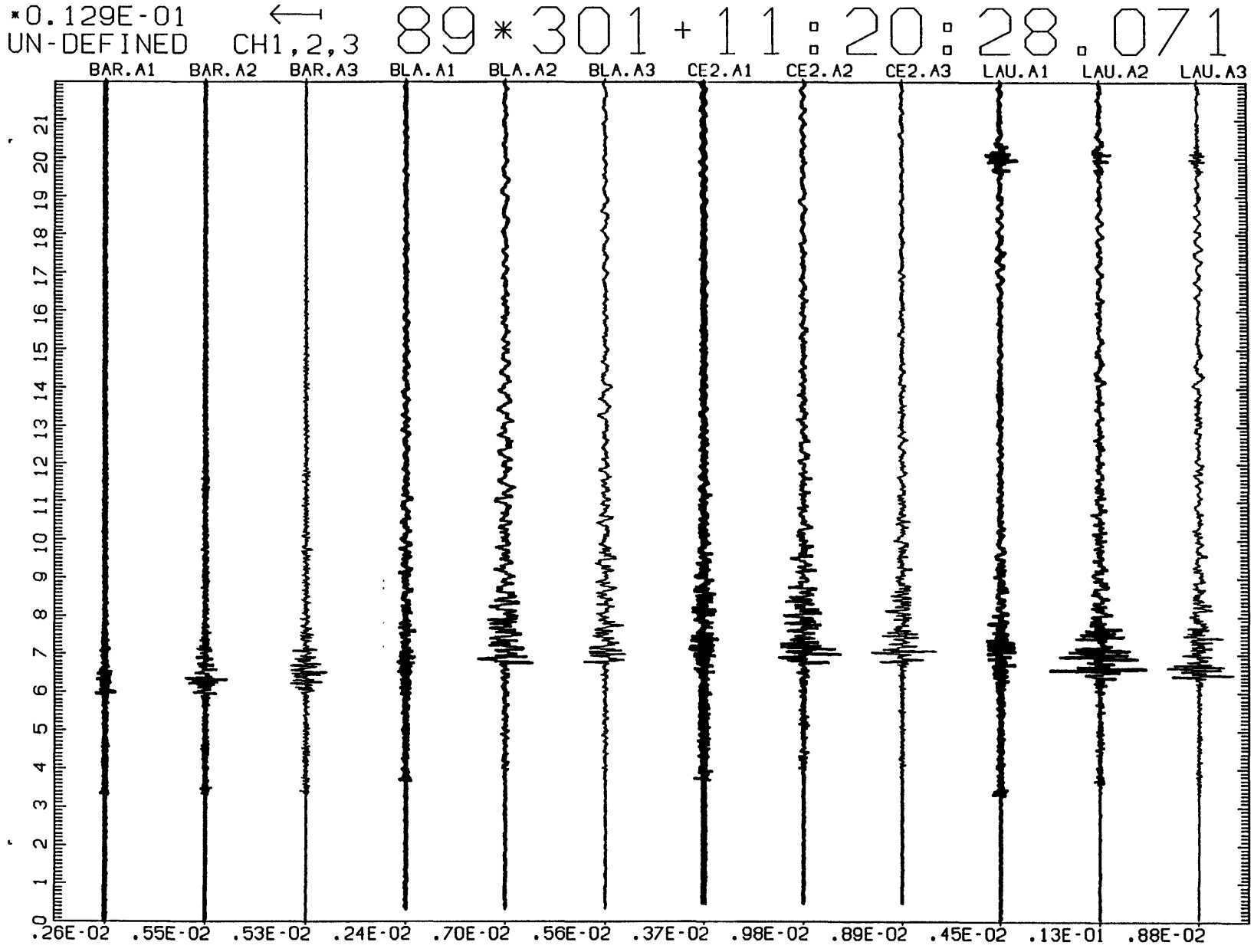
.53E-02
.34E-02
.82E-02
.74E-02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UN-DEFINED
CH1,2,3
89*301+11:20:28.071
BAR.A1
BAR.A2
BAR.A3
BLA.A1
BLA.A2
BLA.A3
CE2.A1
CE2.A2
CE2.A3
LAU.A1
LAU.A2
LAU.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.26E-02
.55E-02
.53E-02
.24E-02
.70E-02
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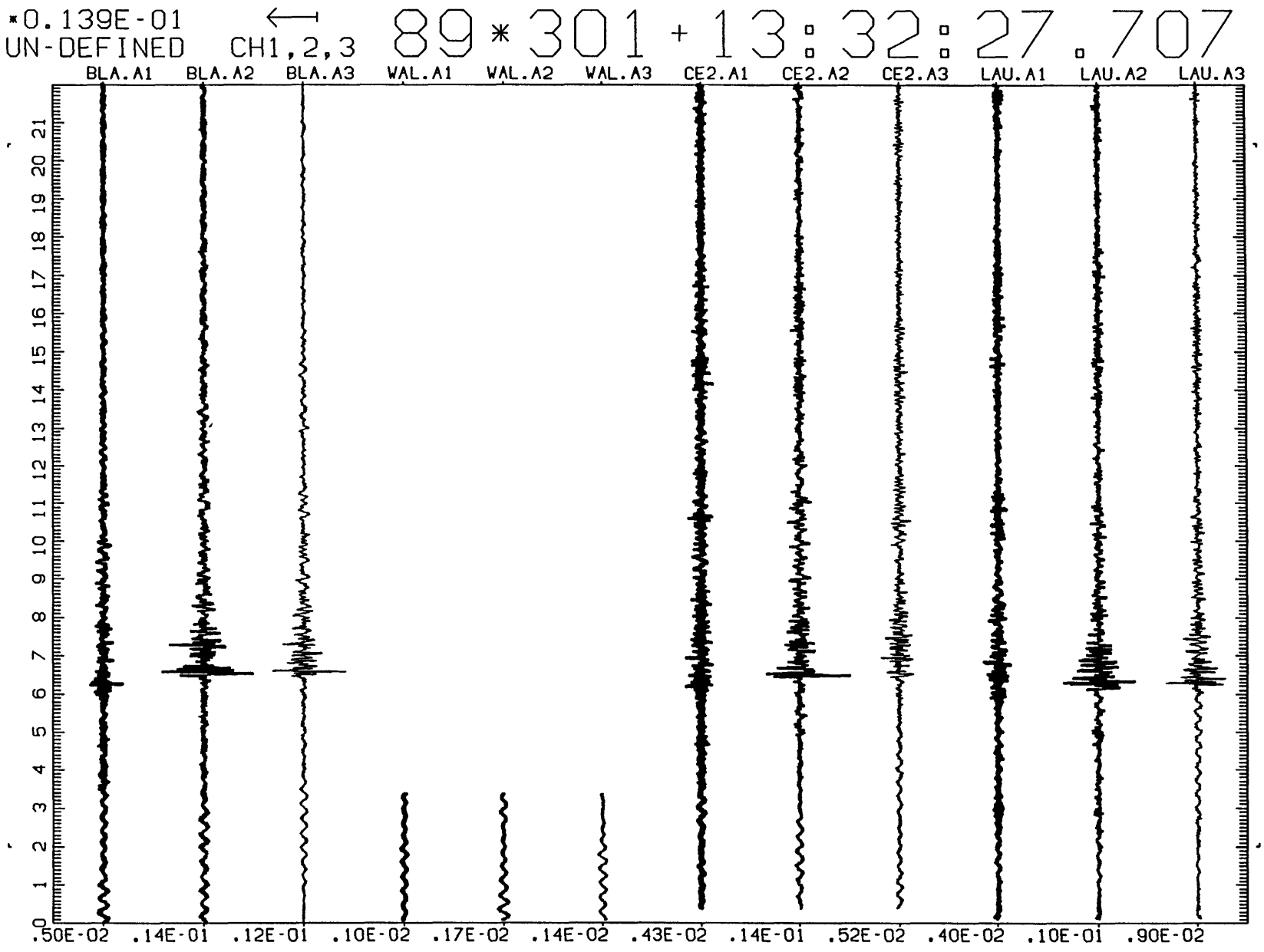
.89E-02
.45E-02
.13E-01
.88E-02


*0.139E-01
UN-DEFINED
CH1,2,3
89*301+13:32:27.707
BLA.A1
BLA.A2
BLA.A3
WAL.A1
WAL.A2
WAL.A3
CE2.A1
CE2.A2
CE2.A3
LAU.A1
LAU.A2
LAU.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.50E-02
.14E-01
.12E-01
.10E-02
.17E-02
.14E-02
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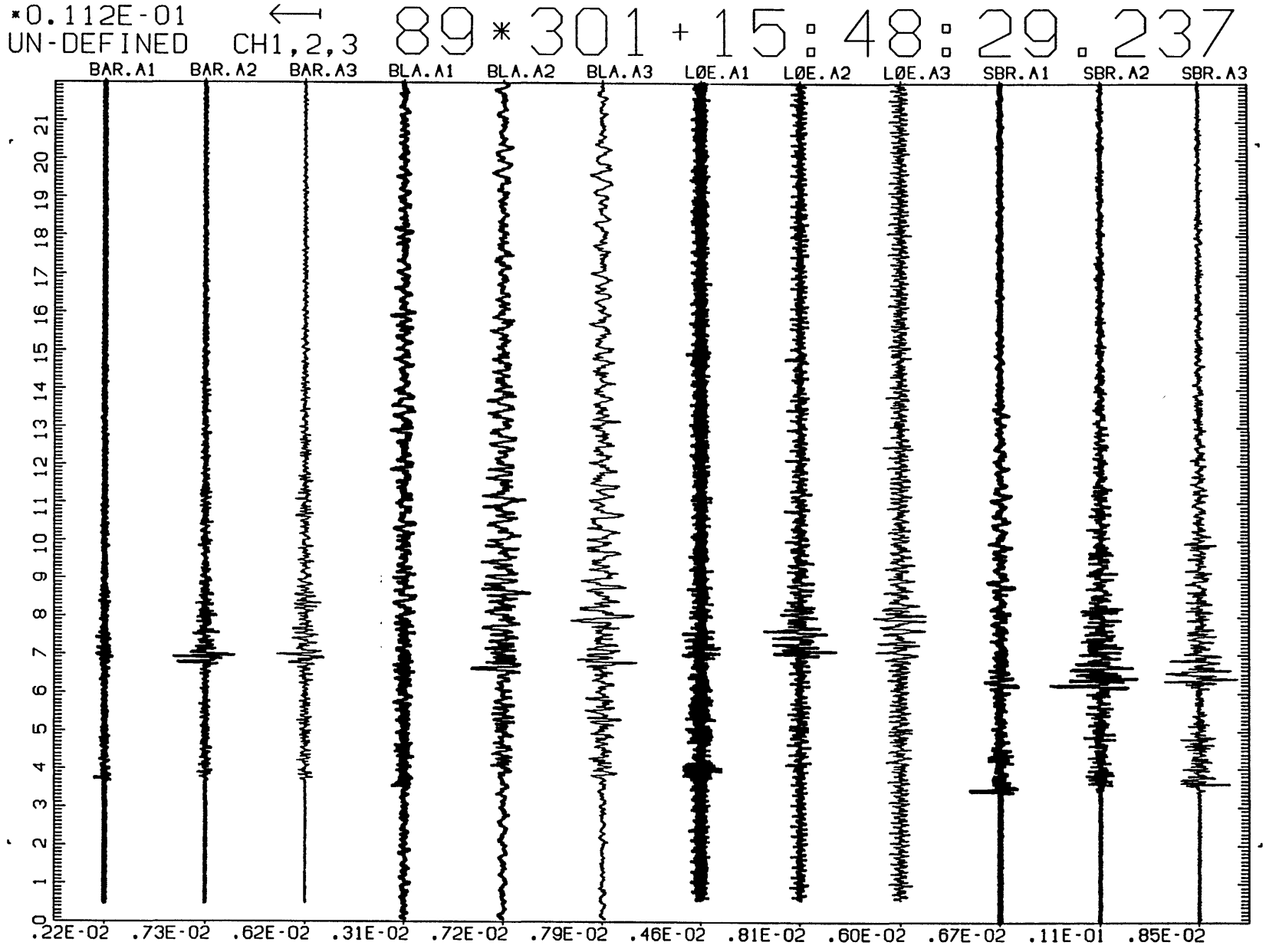
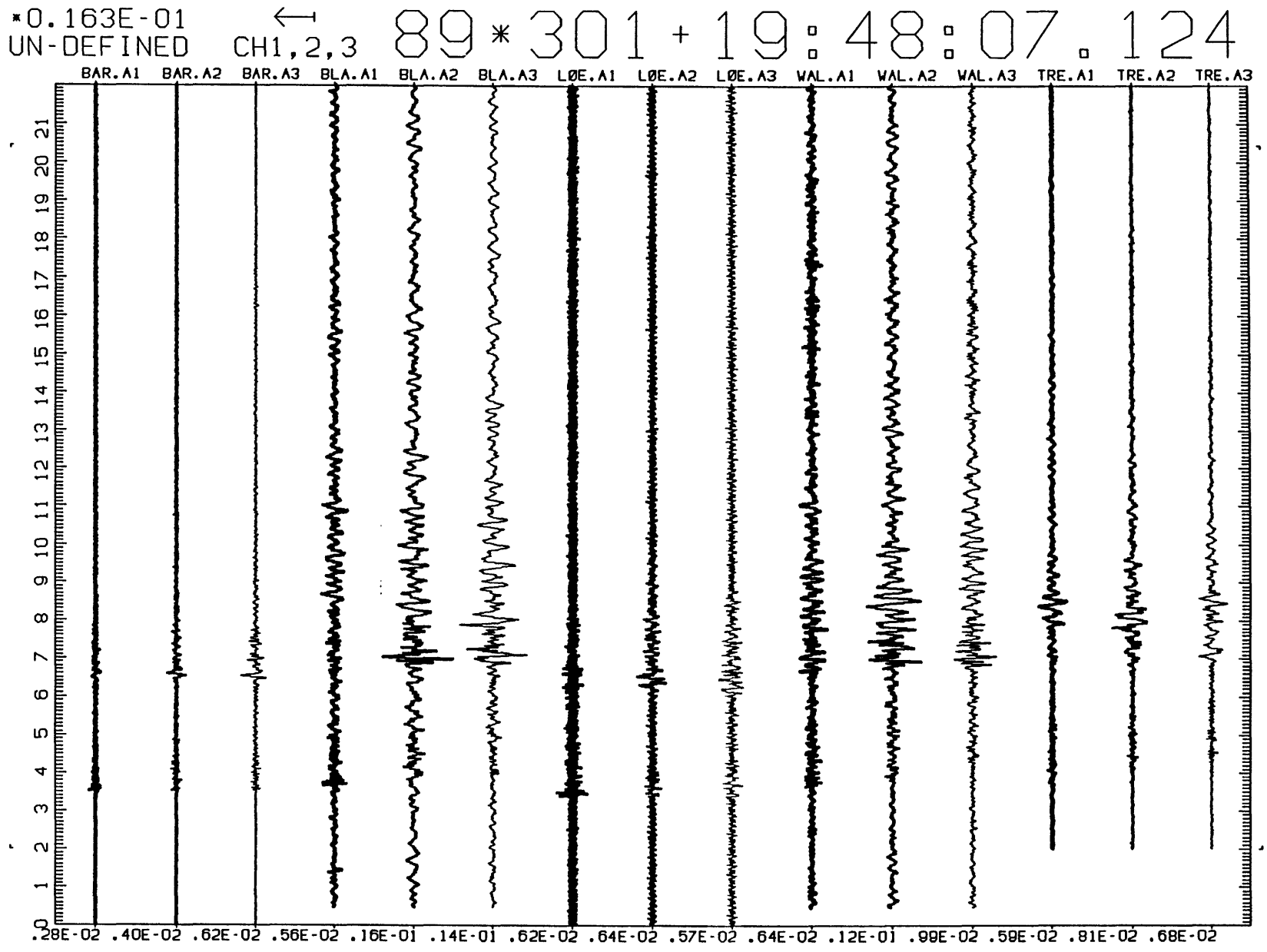
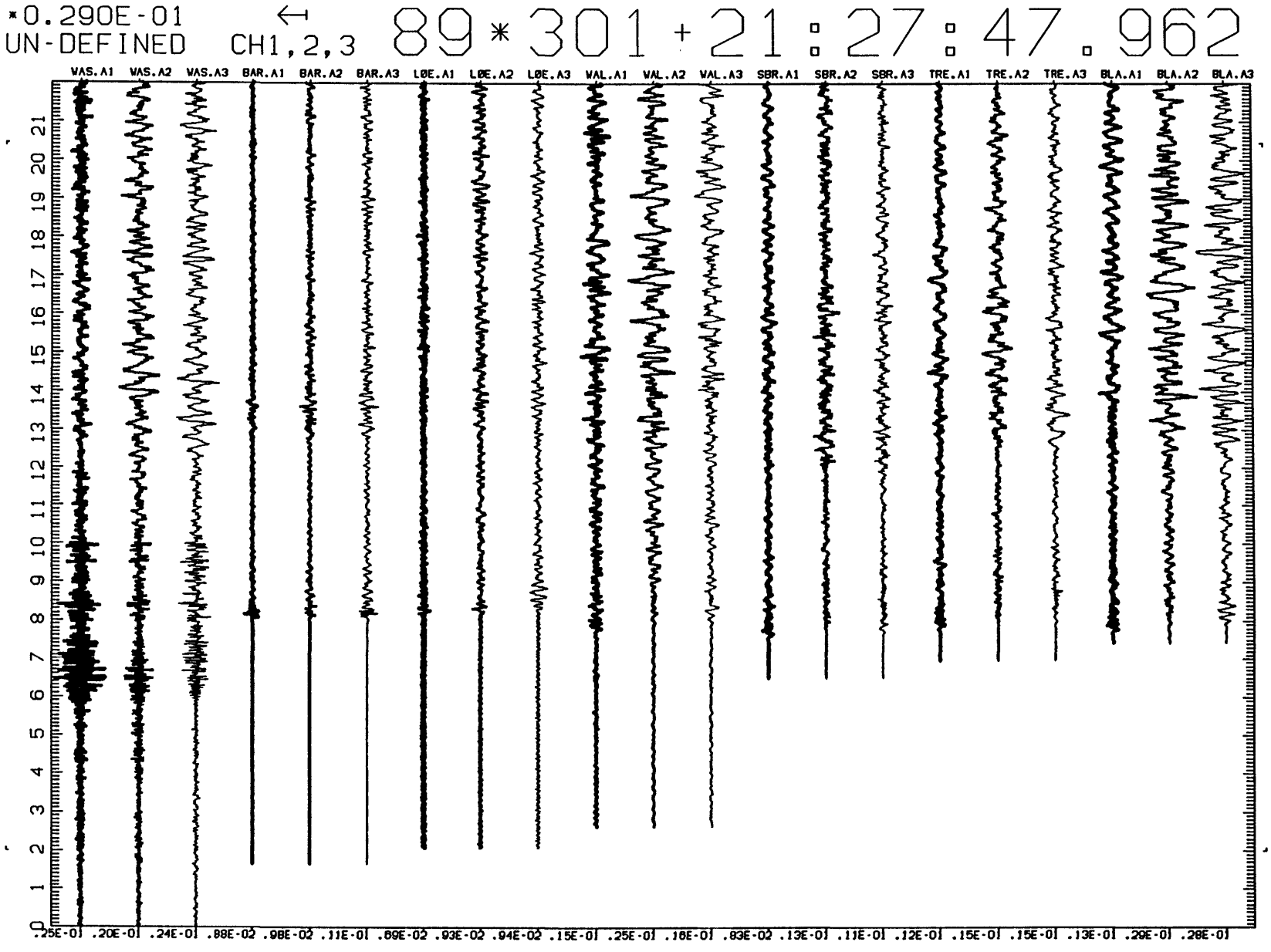
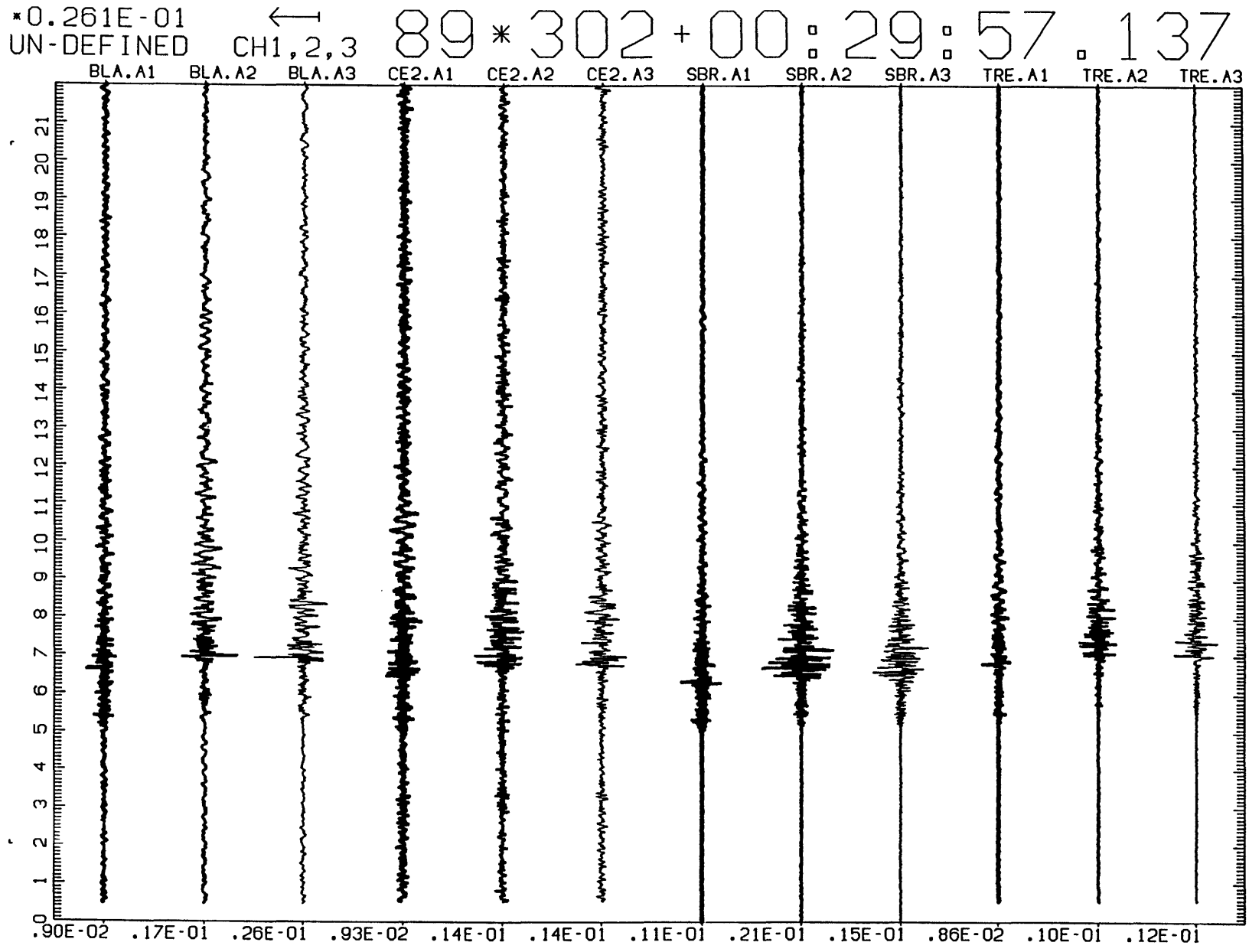
.52E-02
.40E-02
.10E-01
.90E-02


*0.112E-01
UN-DEFINED
CH1,2,3
89*301+15:48:29.237
BAR.A1
BAR.A2
BAR.A3
BLA.A1
BLA.A2
BLA.A3
LØE.A1
LØE.A2
LØE.A3
SBR.A1
SBR.A2
SBR.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.22E-02
.73E-02
.62E-02
.31E-02
.72E-02
.79E-02
.46E-02
.81E-02
.60E-02
.67E-02
.11E-01
.85E-02


*0.163E-01
UN-DEFINED
CH1,2,3
89*301+19:48:07.124
BAR.A1 BAR.A2 BAR.A3 BLA.A1 BLA.A2 BLA.A3 LØE.A1 LØE.A2 LØE.A3 WAL.A1 WAL.A2 WAL.A3 TRE.A1 TRE.A2 TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.28E-02 .40E-02 .62E-02 .56E-02 .16E-01 .14E-01 .62E-02 .64E-02 .57E-02 .64E-02 .12E-01 .99E-02 .59E-02 .81E-02 .68E-02


*0.290E-01
UN-DEFINED
CH1,2,3
89*301+21:27:47.962
WAS.A1 WAS.A2 WAS.A3 BAR.A1 BAR.A2 BAR.A3 LØE.A1 LØE.A2 LØE.A3 WAL.A1 WAL.A2 WAL.A3 SBR.A1 SBR.A2 SBR.A3 TRE.A1 TRE.A2 TRE.A3 BLA.A1 BLA.A2 BLA.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.25E-01 .20E-01 .24E-01 .88E-02 .98E-02 .11E-01 .89E-02 .93E-02 .94E-02 .15E-01 .25E-01 .16E-01 .83E-02 .13E-01 .11E-01 .12E-01 .15E-01 .15E-01 .13E-01 .29E-01 .28E-01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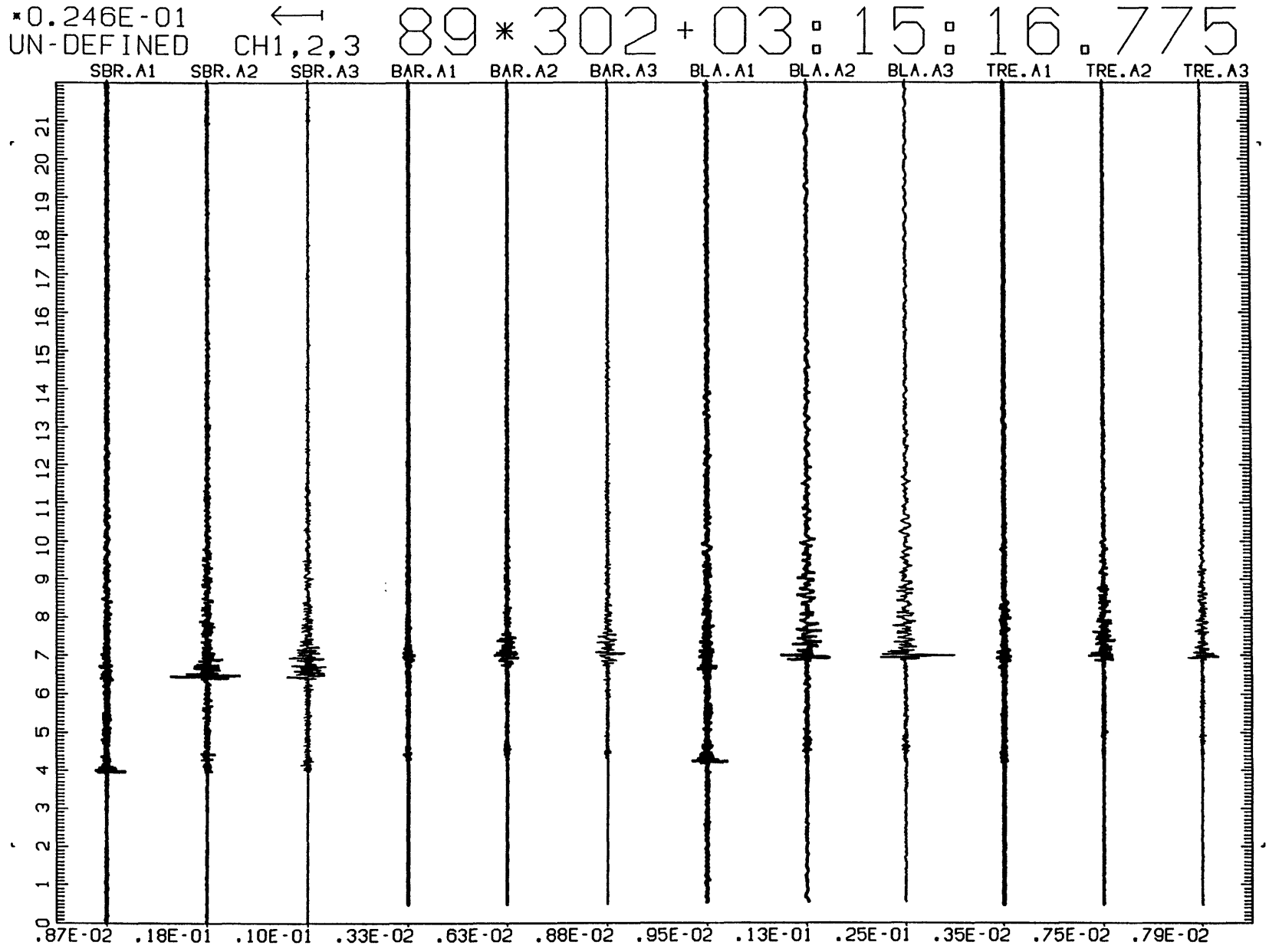
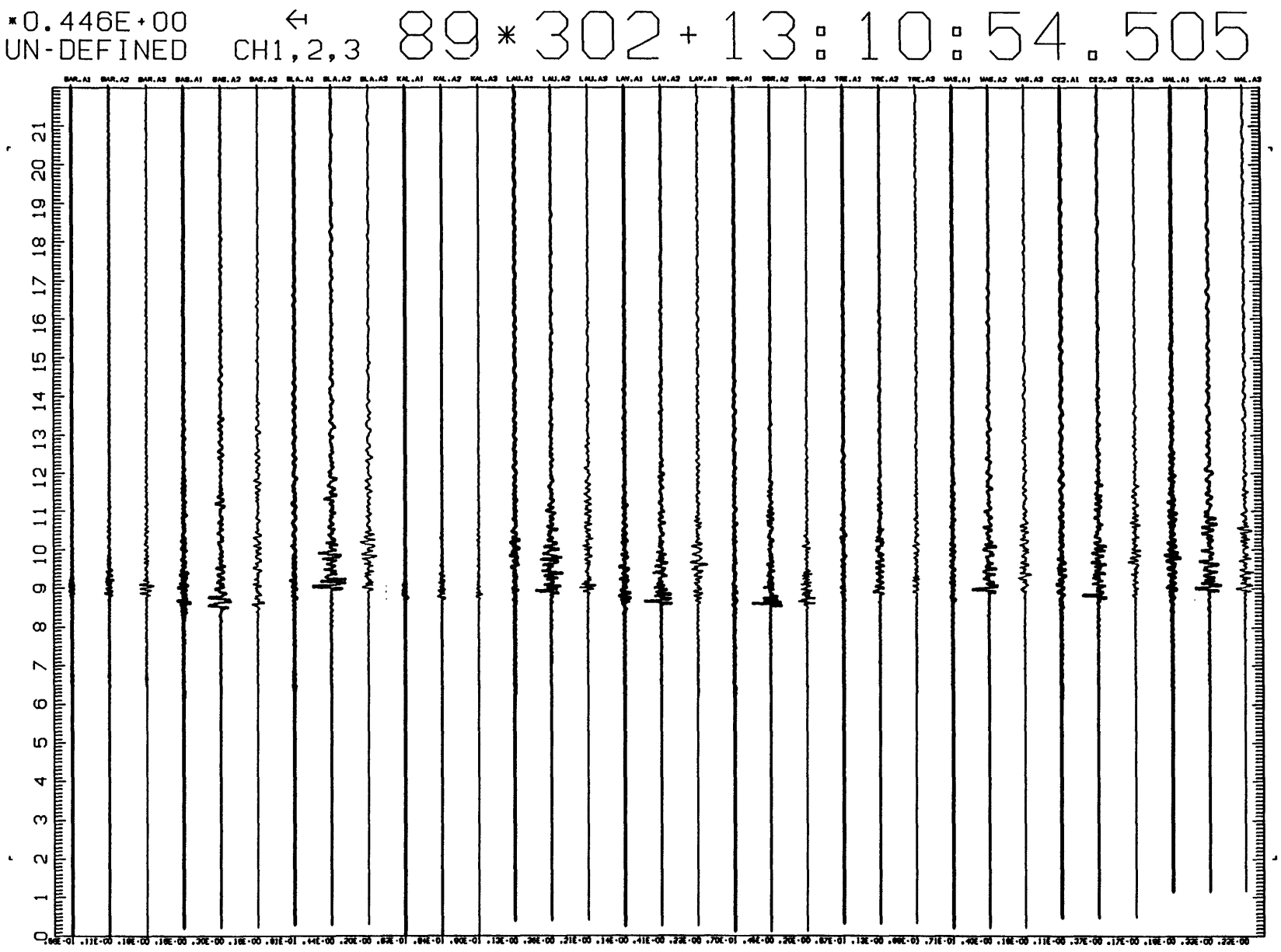
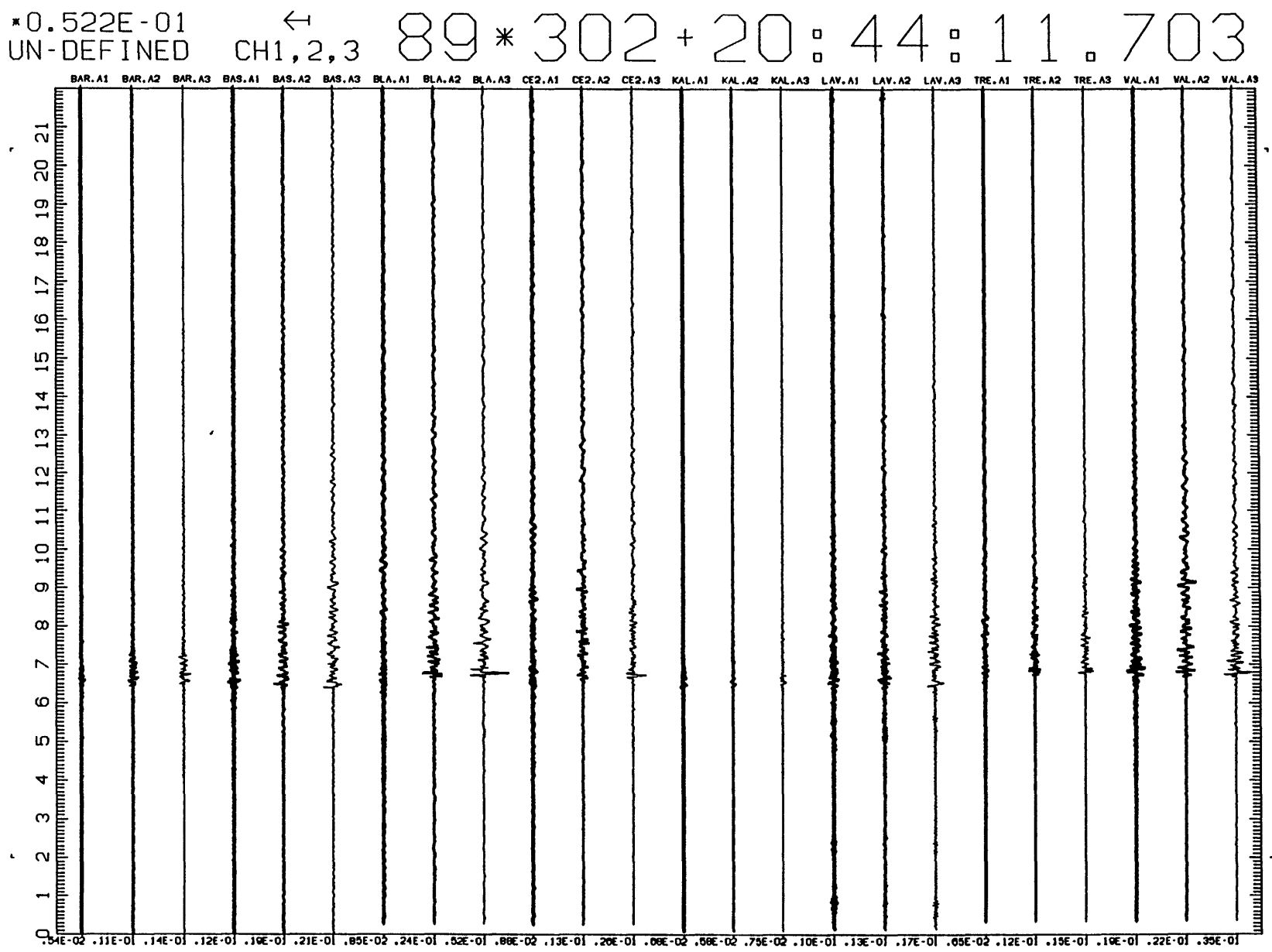
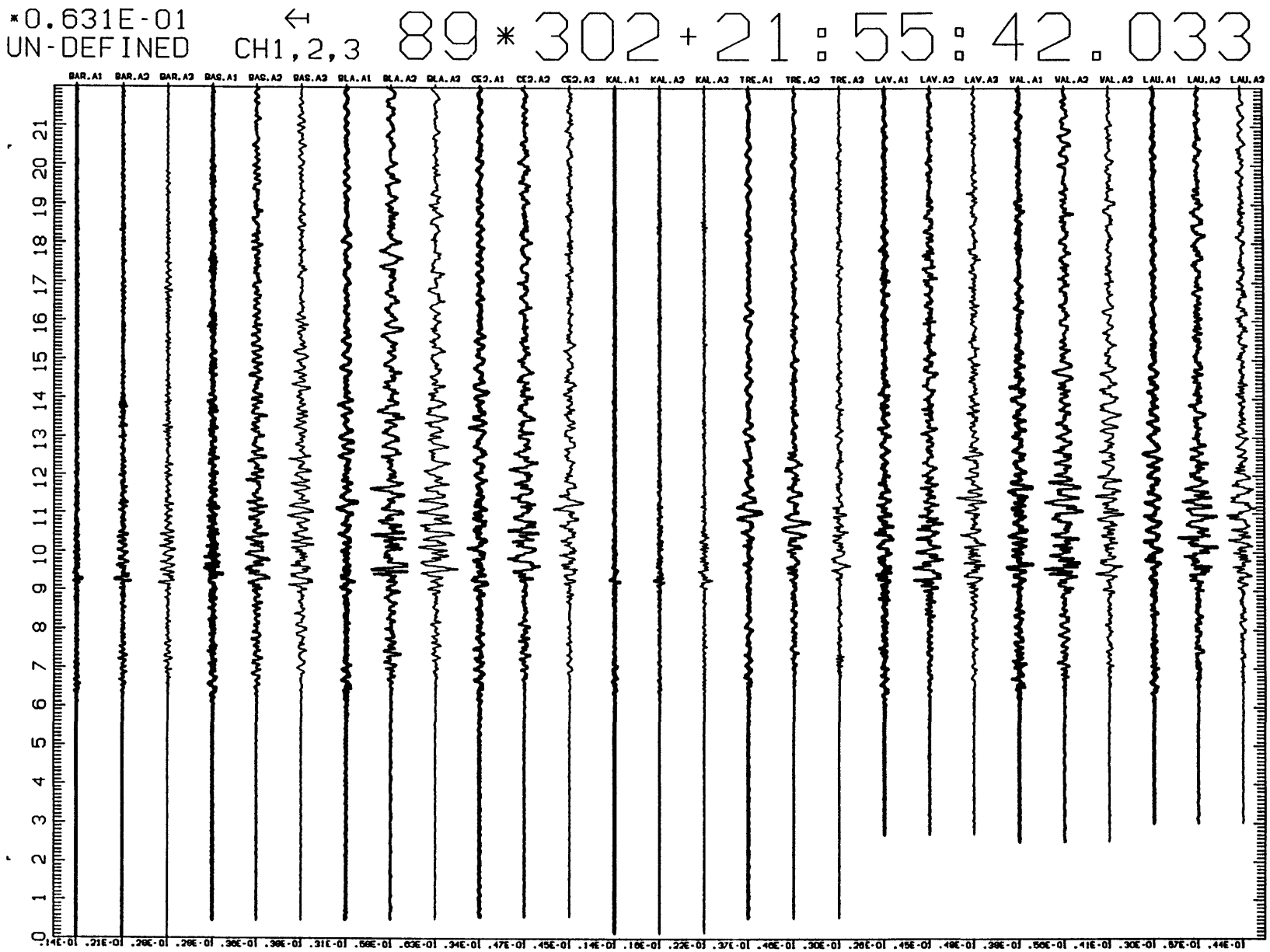
UN-DEFINED
CH1,2,3
89*302+00:29:57.137
BLA.A1
BLA.A2
BLA.A3
CE2.A1
CE2.A2
CE2.A3
SBR.A1
SBR.A2
SBR.A3
TRE.A1
TRE.A2
TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.90E-02
.17E-01
.26E-01
.93E-02
.14E-01
.14E-01
.11E-01
.21E-01
.15E-01
.86E-02
.10E-01
.12E-01

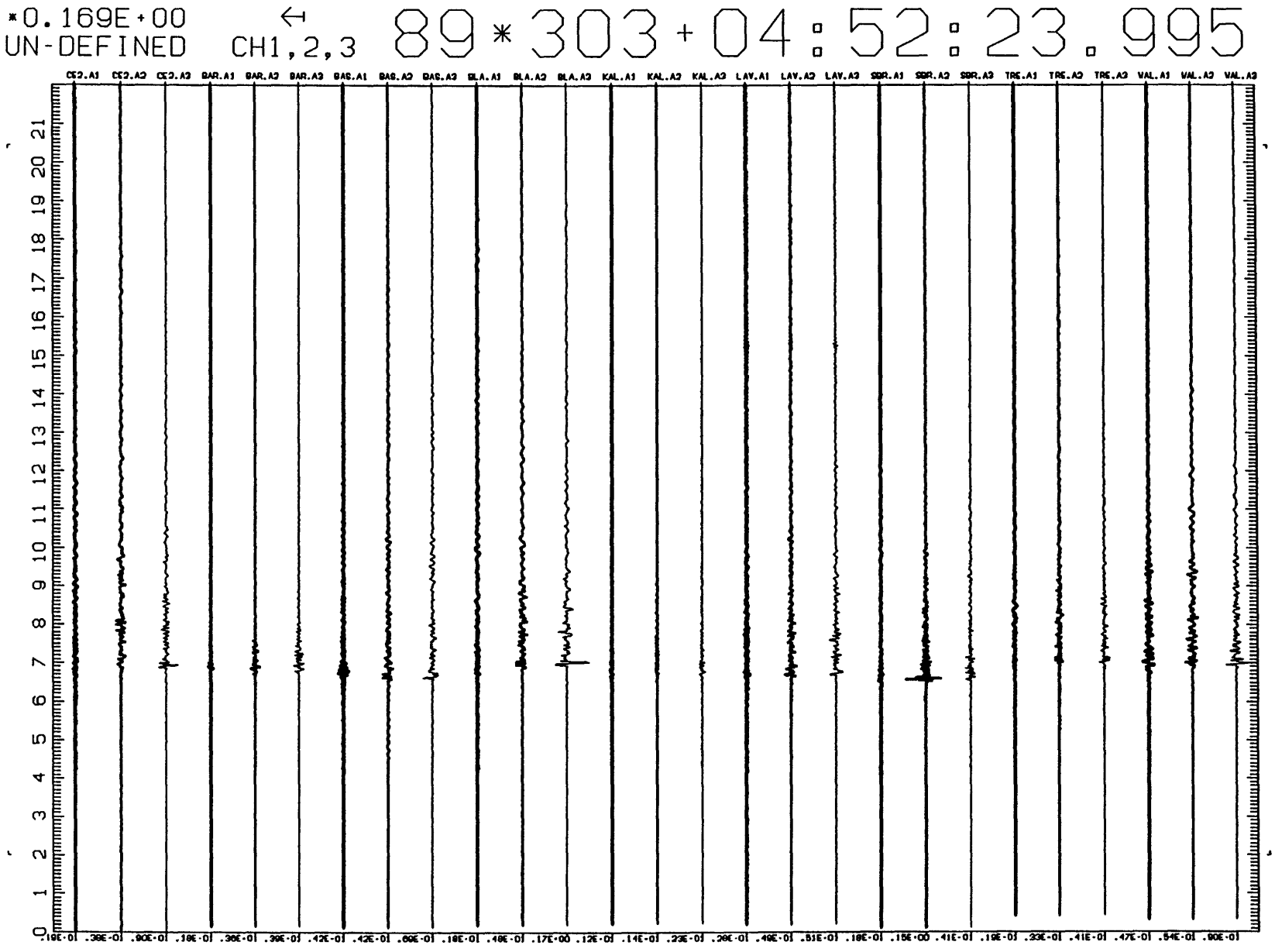

*0.246E-01
UN-DEFINED
CH1,2,3
89*302+03:15:16.775
SBR.A1
SBR.A2
SBR.A3
BAR.A1
BAR.A2
BAR.A3
BLA.A1
BLA.A2
BLA.A3
TRE.A1
TRE.A2
TRE.A3
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
.87E-02
.18E-01
.10E-01
.33E-02
.63E-02
.88E-02
.95E-02
.13E-01
.25E-01
.35E-02
.75E-02
.79E-02

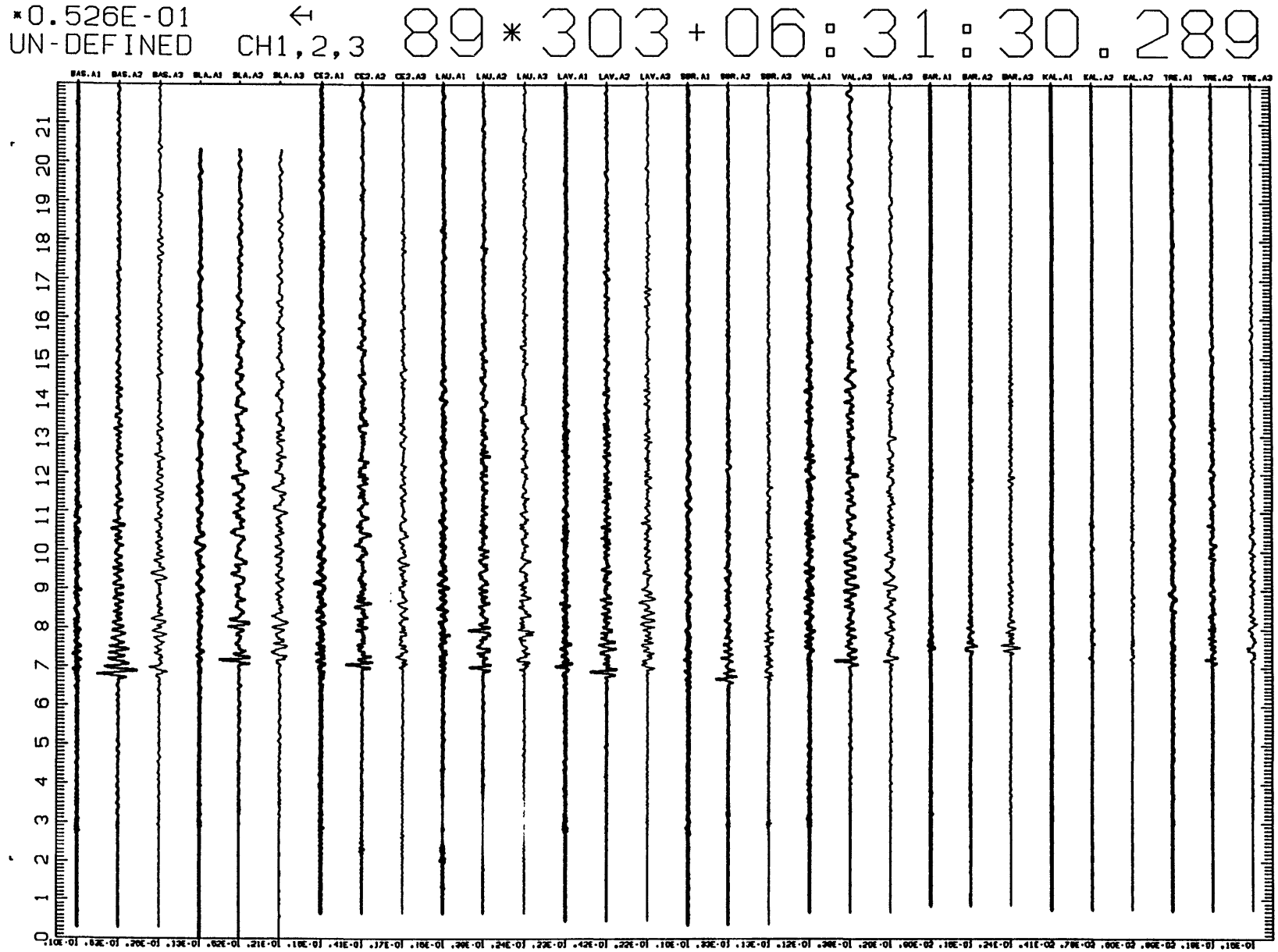

*0.446E+00
UN-DEFINED
CH1,2,3
89*302+13:10:54.505
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

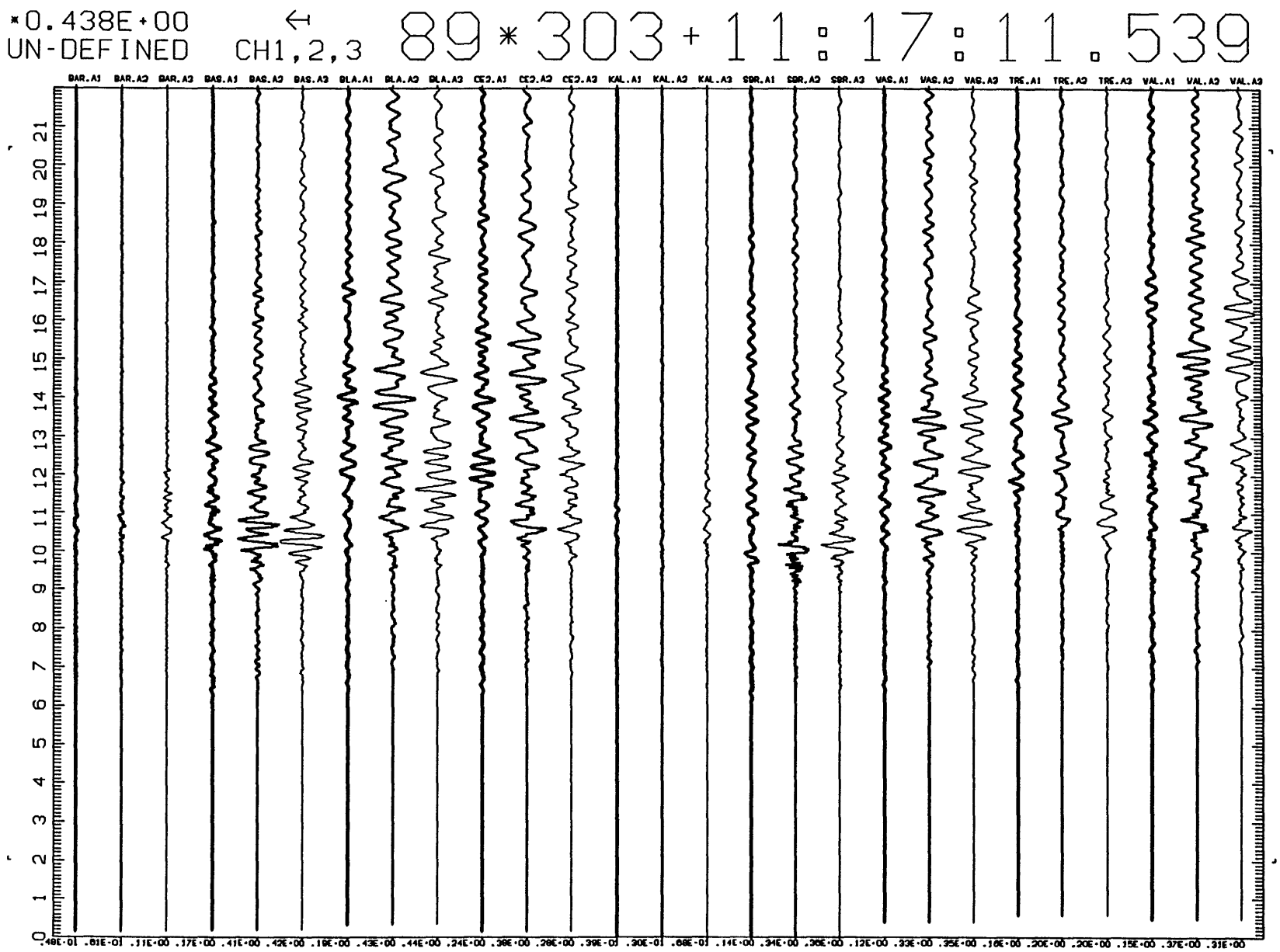
*0.268E-01
UN-DEFINED
CH1,2,3
89 * 302 + 19 18 21 37
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.11E-01 BAS.A1
.15E-01 BAS.A2
.16E-01 BAS.A3
.15E-01 BLA.A1
.15E-01 BLA.A2
.27E-01 BLA.A3
.30E-02 KAL.A1
.43E-02 KAL.A2
.77E-02 KAL.A3
.10E-01 SBR.A1
.10E-01 SBR.A2
.13E-01 SBR.A3
.32E-02 BAR.A1
.78E-02 BAR.A2
.87E-02 BAR.A3

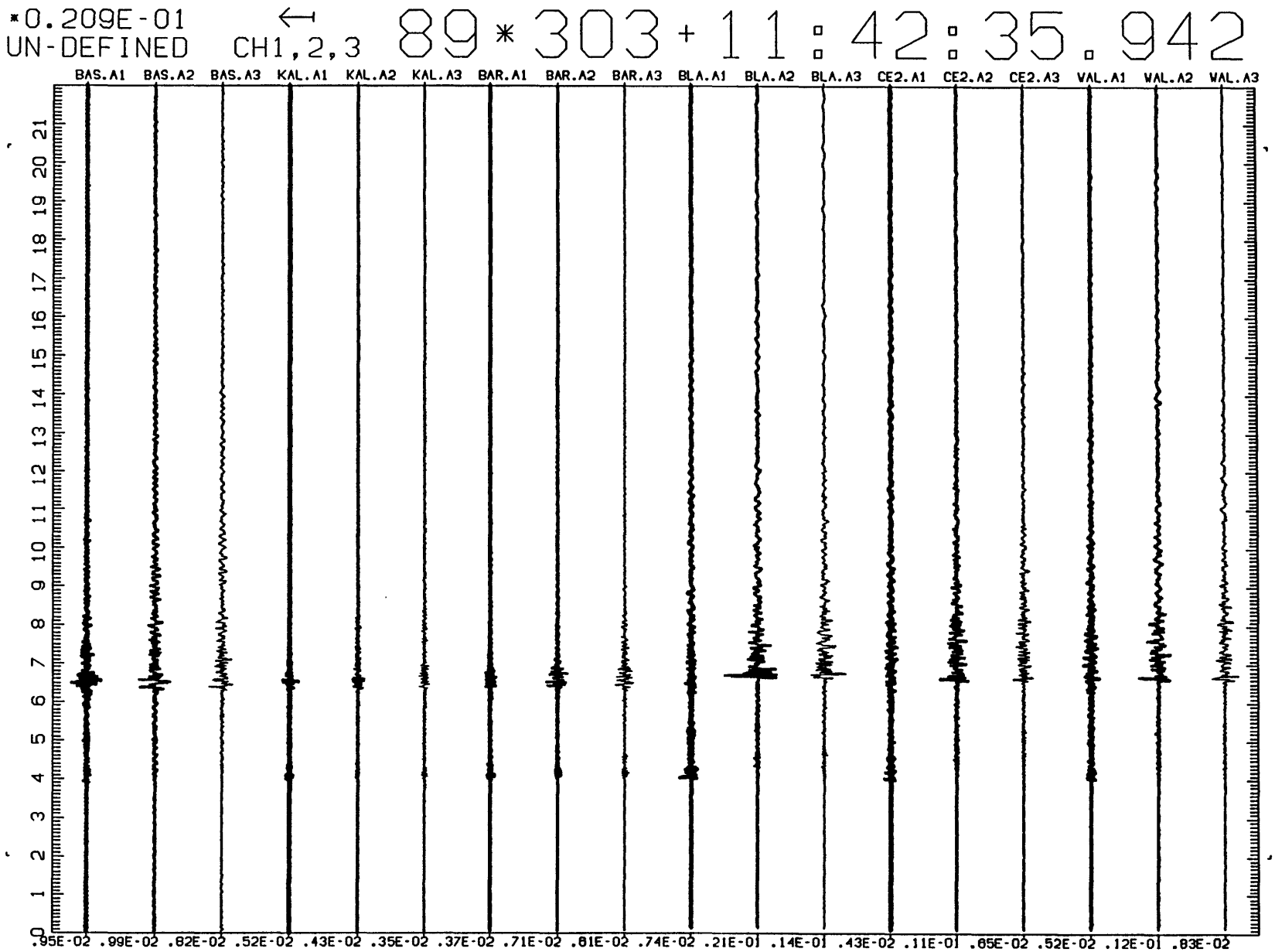

*0.522E-01
UN-DEFINED
CH1,2,3
89*302+20:44:11.703
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 CE2.A1 CE2.A2 CE2.A3 KAL.A1 KAL.A2 KAL.A3 LAV.A1 LAV.A2 LAV.A3 TRE.A1 TRE.A2 TRE.A3 VAL.A1 VAL.A2 VAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.54E-02 .11E-01 .14E-01 .12E-01 .19E-01 .21E-01 .85E-02 .24E-01 .52E-01 .88E-02 .13E-01 .26E-01 .68E-02 .68E-02 .75E-02 .10E-01 .13E-01 .17E-01 .65E-02 .12E-01 .15E-01 .19E-01 .22E-01 .35E-01

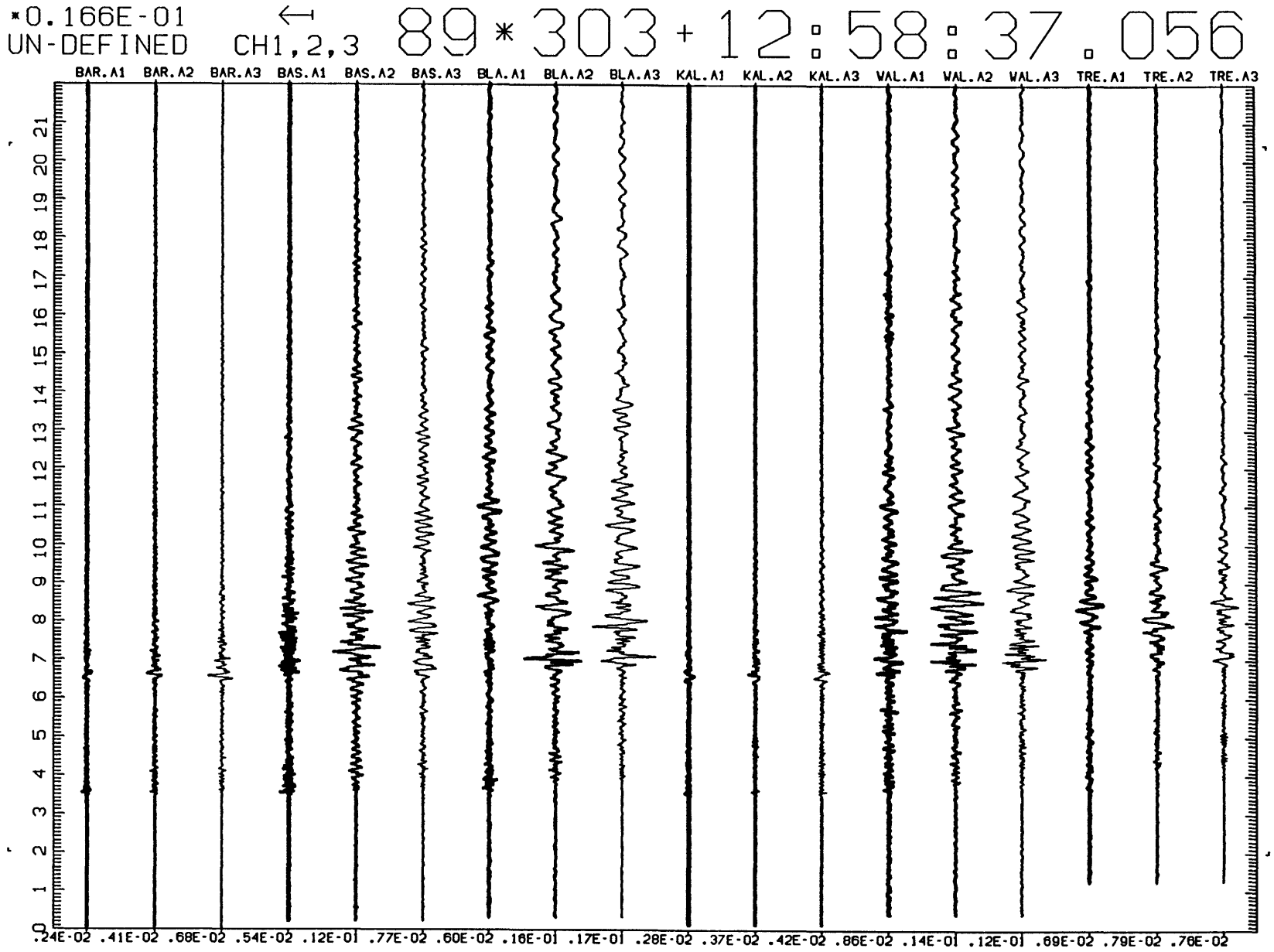

*0.631E-01
UN-DEFINED
CH1,2,3
89*302+21:55:42.033
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 CE2.A1 CE2.A2 CE2.A3 KAL.A1 KAL.A2 KAL.A3 TRE.A1 TRE.A2 TRE.A3 LAV.A1 LAV.A2 LAV.A3 VAL.A1 VAL.A2 VAL.A3 LAU.A1 LAU.A2 LAU.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

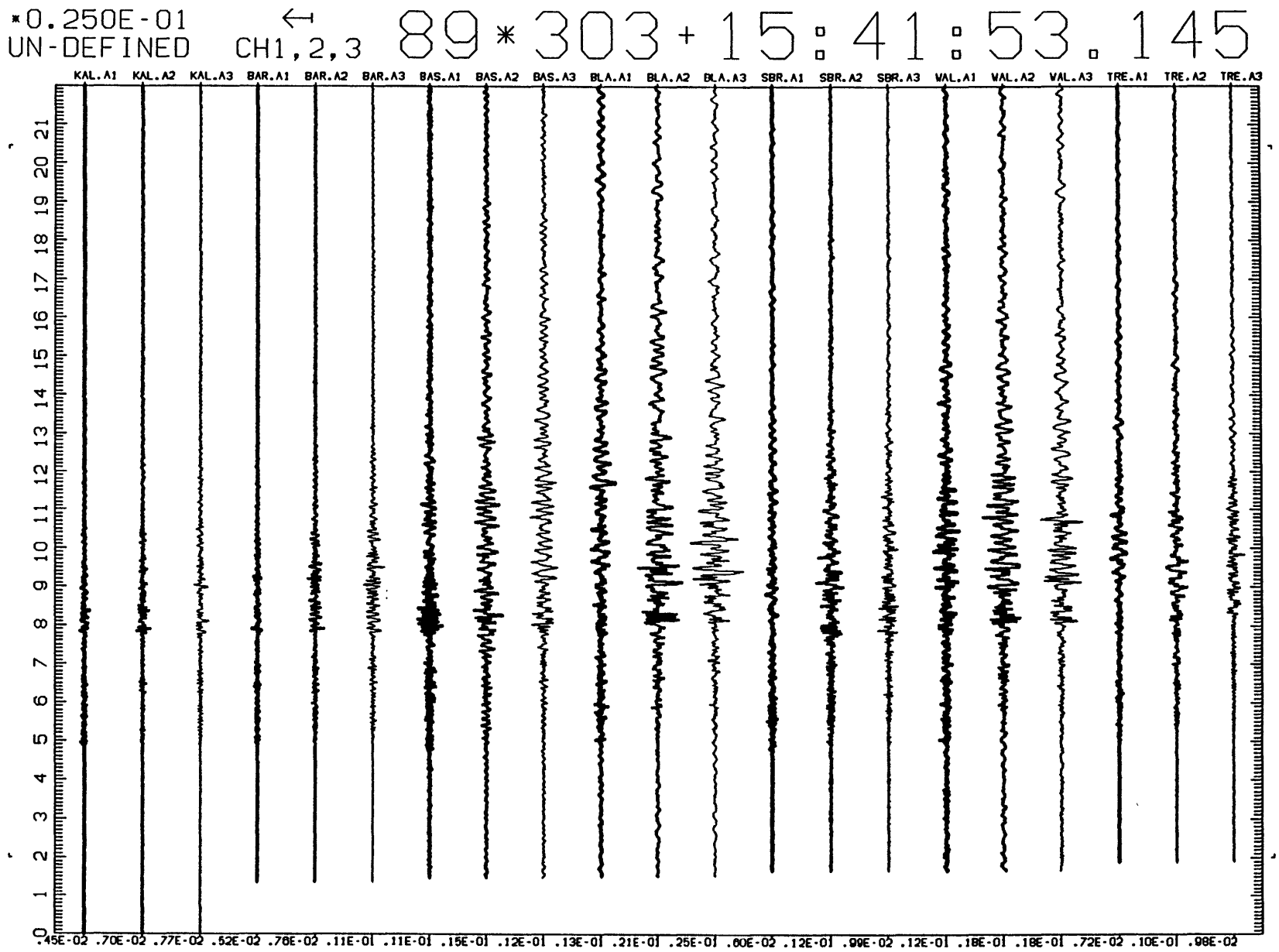

*0.169E+00
UN-DEFINED
CH1,2,3
89*303+04:52:23.995
CE2.A1 CE2.A2 CE2.A3 BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 KAL.A1 KAL.A2 KAL.A3 LAV.A1 LAV.A2 LAV.A3 SBR.A1 SBR.A2 SBR.A3 TRE.A1 TRE.A2 TRE.A3 VAL.A1 VAL.A2 VAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.19E-01 .30E-01 .90E-01 .10E-01 .30E-01 .30E-01 .42E-01 .42E-01 .60E-01 .10E-01 .40E-01 .17E+00 .12E-01 .14E-01 .23E-01 .20E-01 .40E-01 .51E-01 .10E-01 .15E+00 .41E-01 .19E-01 .33E-01 .41E-01 .47E-01 .54E-01 .90E-01

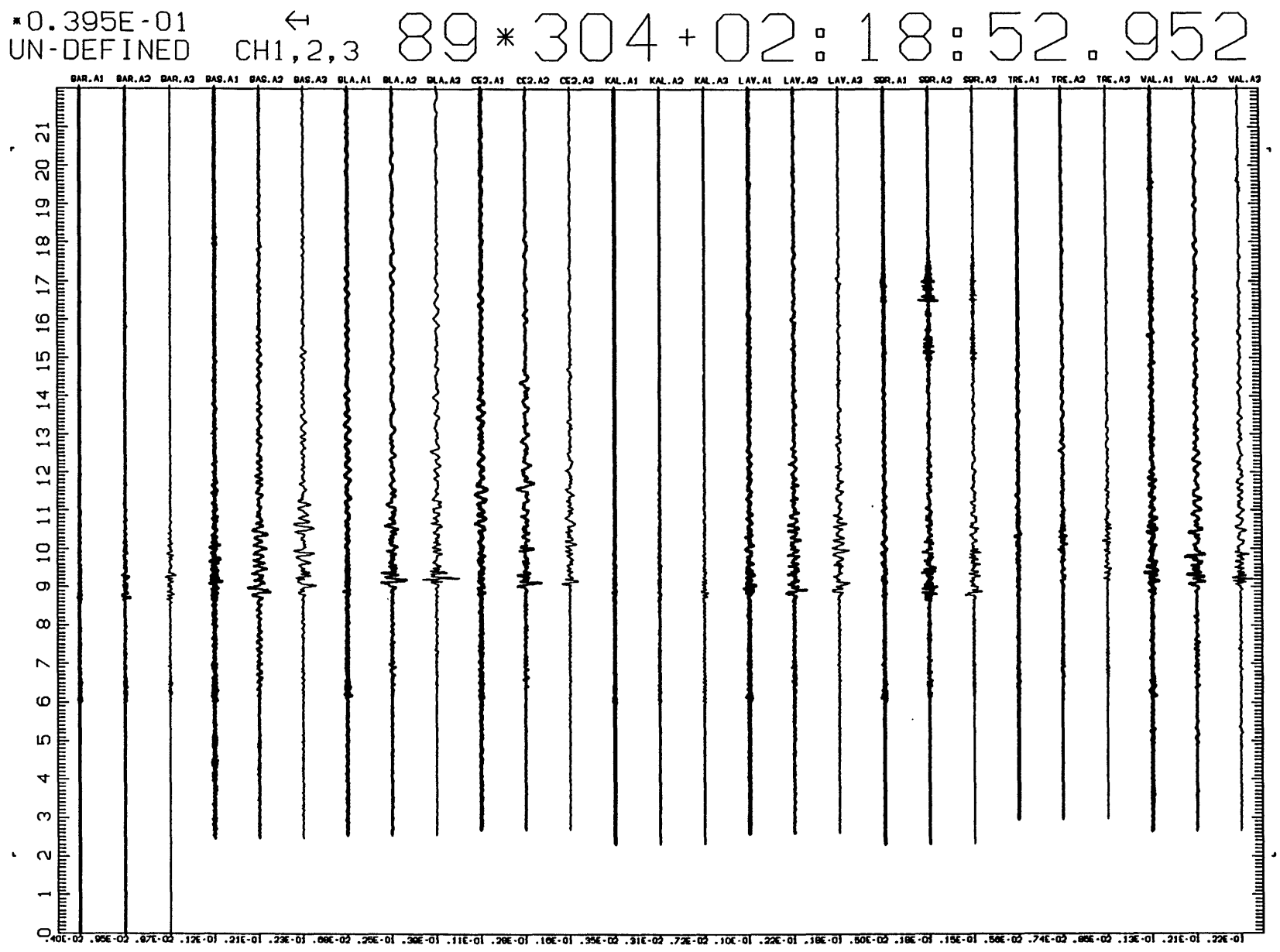

*0.526E-01
UN-DEFINED
CH1,2,3
89*303+06:31:30.289
BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 CE2.A1 CE2.A2 CE2.A3 LAU.A1 LAU.A2 LAU.A3 LAV.A1 LAV.A2 LAV.A3 SBR.A1 SBR.A2 SBR.A3 VAL.A1 VAL.A2 VAL.A3 BAR.A1 BAR.A2 BAR.A3 KAL.A1 KAL.A2 KAL.A3 TRE.A1 TRE.A2 TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

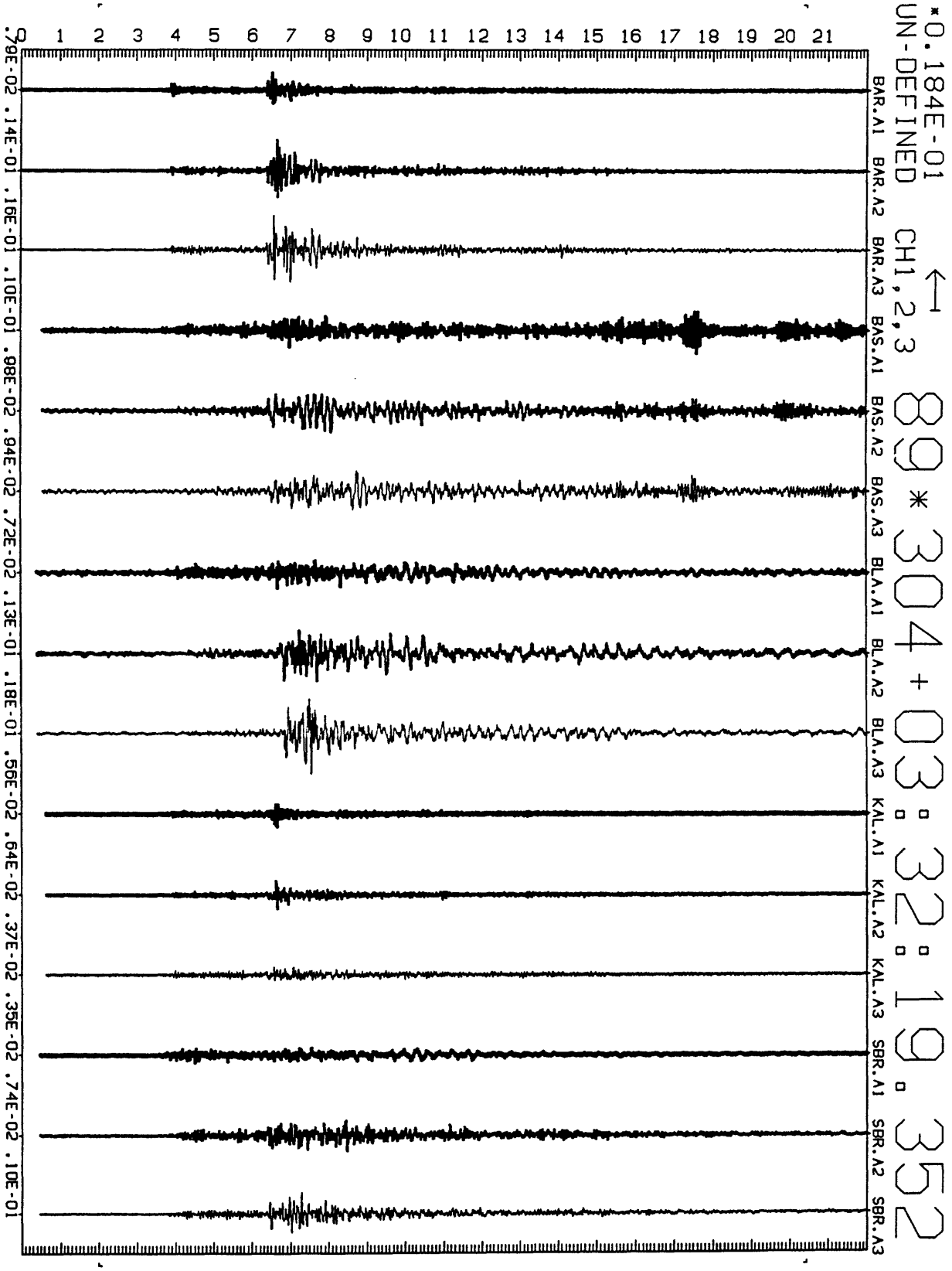

*0.438E+00
UN-DEFINED
CH1,2,3
89*303+11:17:11.539
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 CE2.A1 CE2.A2 CE2.A3 KAL.A1 KAL.A2 KAL.A3 SBR.A1 SBR.A2 SBR.A3 VAS.A1 VAS.A2 VAS.A3 TRE.A1 TRE.A2 TRE.A3 VAL.A1 VAL.A2 VAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.48E-01 .61E-01 .31E+00 .17E+00 .41E+00 .42E+00 .19E+00 .43E+00 .44E+00 .24E+00 .38E+00 .26E+00 .99E-01 .30E-01 .68E-01 .14E+00 .34E+00 .36E+00 .12E+00 .33E+00 .35E+00 .16E+00 .20E+00 .20E+00 .15E+00 .37E+00 .31E+00

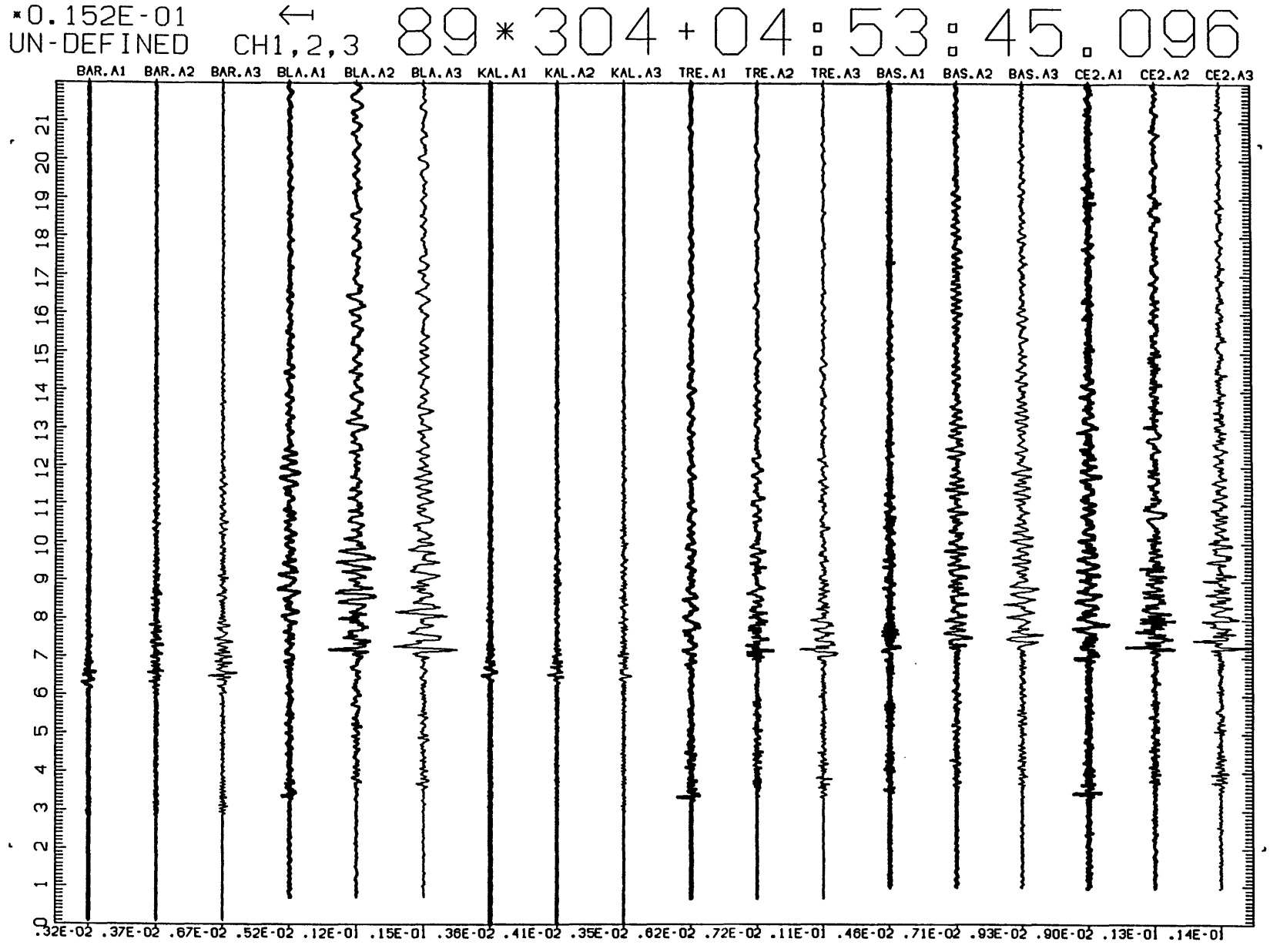

*0.209E-01
UN-DEFINED
CH1,2,3
89*303+11:42:35.942
BAS.A1 BAS.A2 BAS.A3 KAL.A1 KAL.A2 KAL.A3 BAR.A1 BAR.A2 BAR.A3 BLA.A1 BLA.A2 BLA.A3 CE2.A1 CE2.A2 CE2.A3 VAL.A1 VAL.A2 VAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.95E-02 .99E-02 .82E-02 .52E-02 .43E-02 .35E-02 .37E-02 .71E-02 .61E-02 .74E-02 .21E-01 .14E-01 .43E-02 .11E-01 .65E-02 .52E-02 .12E-01 .83E-02


*0.166E-01
UN-DEFINED
CH1,2,3
89*303+12:58:37.056
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 KAL.A1 KAL.A2 KAL.A3 WAL.A1 WAL.A2 WAL.A3 TRE.A1 TRE.A2 TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.24E-02 .41E-02 .68E-02 .54E-02 .12E-01 .77E-02 .60E-02 .16E-01 .17E-01 .28E-02 .37E-02 .42E-02 .86E-02 .14E-01 .12E-01 .69E-02 .79E-02 .76E-02


*0.250E-01
UN-DEFINED
CH1,2,3
89*303+15:41:53.145
KAL.A1 KAL.A2 KAL.A3 BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 SBR.A1 SBR.A2 SBR.A3 VAL.A1 VAL.A2 VAL.A3 TRE.A1 TRE.A2 TRE.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.45E-02 .70E-02 .77E-02 .52E-02 .76E-02 .11E-01 .11E-01 .15E-01 .12E-01 .13E-01 .21E-01 .25E-01 .60E-02 .12E-01 .99E-02 .12E-01 .18E-01 .18E-01 .72E-02 .10E-01 .98E-02


*0.395E-01
UN-DEFINED
CH1,2,3
89*304+02:18:52.952
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 CE2.A1 CE2.A2 CE2.A3 KAL.A1 KAL.A2 KAL.A3 LAV.A1 LAV.A2 LAV.A3 SBR.A1 SBR.A2 SBR.A3 TRE.A1 TRE.A2 TRE.A3 VAL.A1 VAL.A2 VAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.40E-02 .95E-02 .67E-02 .12E-01 .21E-01 .23E-01 .68E-02 .25E-01 .30E-01 .11E-01 .20E-01 .16E-01 .35E-02 .31E-02 .72E-02 .10E-01 .22E-01 .18E-01 .50E-02 .18E-01 .15E-01 .56E-02 .74E-02 .86E-02 .13E-01 .21E-01 .22E-01


*0.184E-01
UN-DEFINED
CH1,2,3
89 * 304 + 03 0 32 0 19 0 352
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.79E-02 .14E-01 .16E-01 .10E-01 .98E-02 .94E-02 .72E-02 .13E-01 .18E-01 .56E-02 .64E-02 .37E-02 .35E-02 .74E-02 .10E-01
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 KAL.A1 KAL.A2 KAL.A3 SBR.A1 SBR.A2 SBR.A3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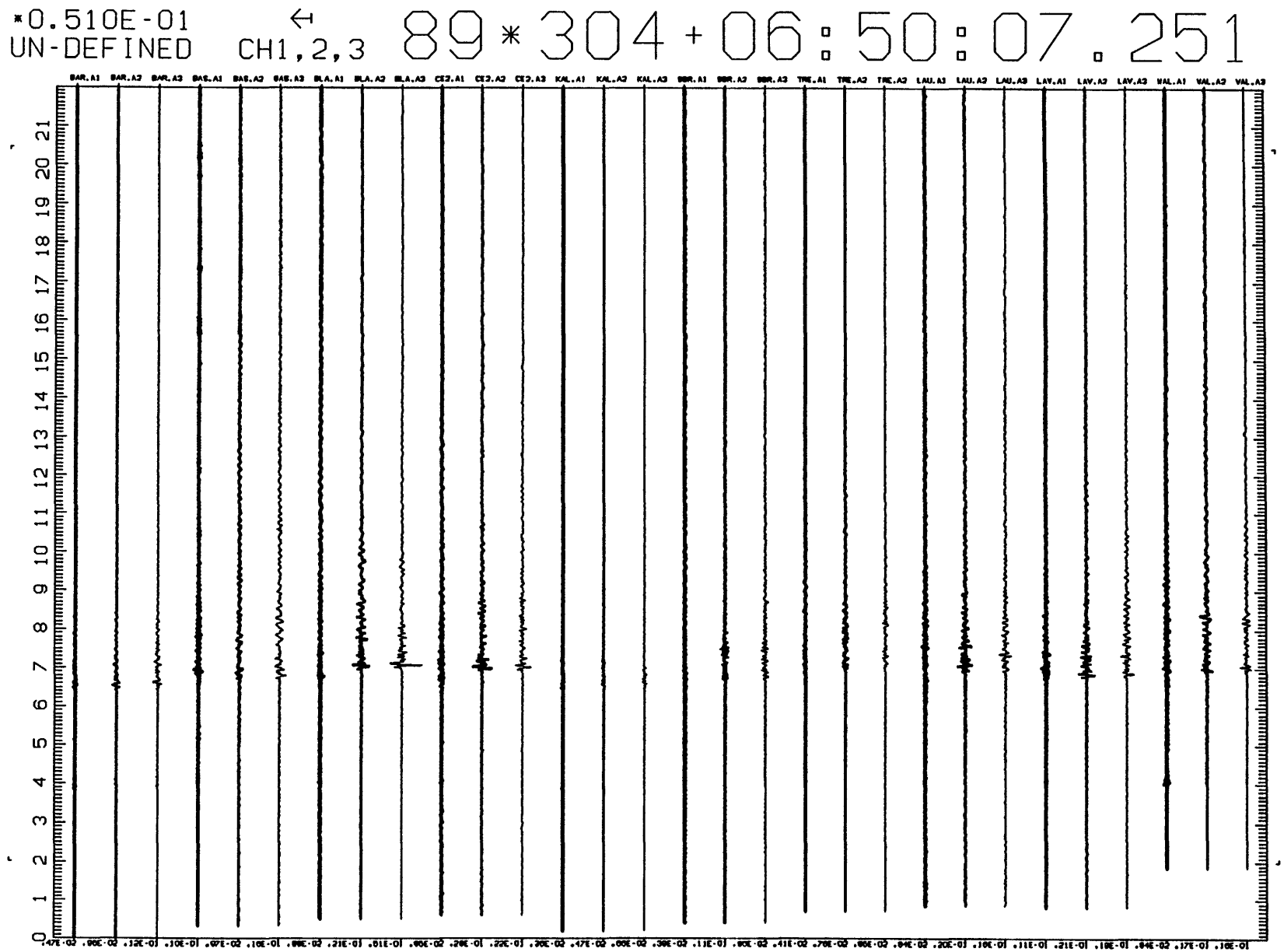
UN-DEFINED
CH1,2,3
89*304+04:53:45.096
BAR.A1 BAR.A2 BAR.A3 BLA.A1 BLA.A2 BLA.A3 KAL.A1 KAL.A2 KAL.A3 TRE.A1 TRE.A2 TRE.A3 BAS.A1 BAS.A2 BAS.A3 CE2.A1 CE2.A2 CE2.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.32E-02 .37E-02 .67E-02 .52E-02 .12E-01 .15E-01 .36E-02 .41E-02 .35E-02 .62E-02 .72E-02 .11E-01 .46E-02 .71E-02 .93E-02 .90E-02 .13E-01 .14E-01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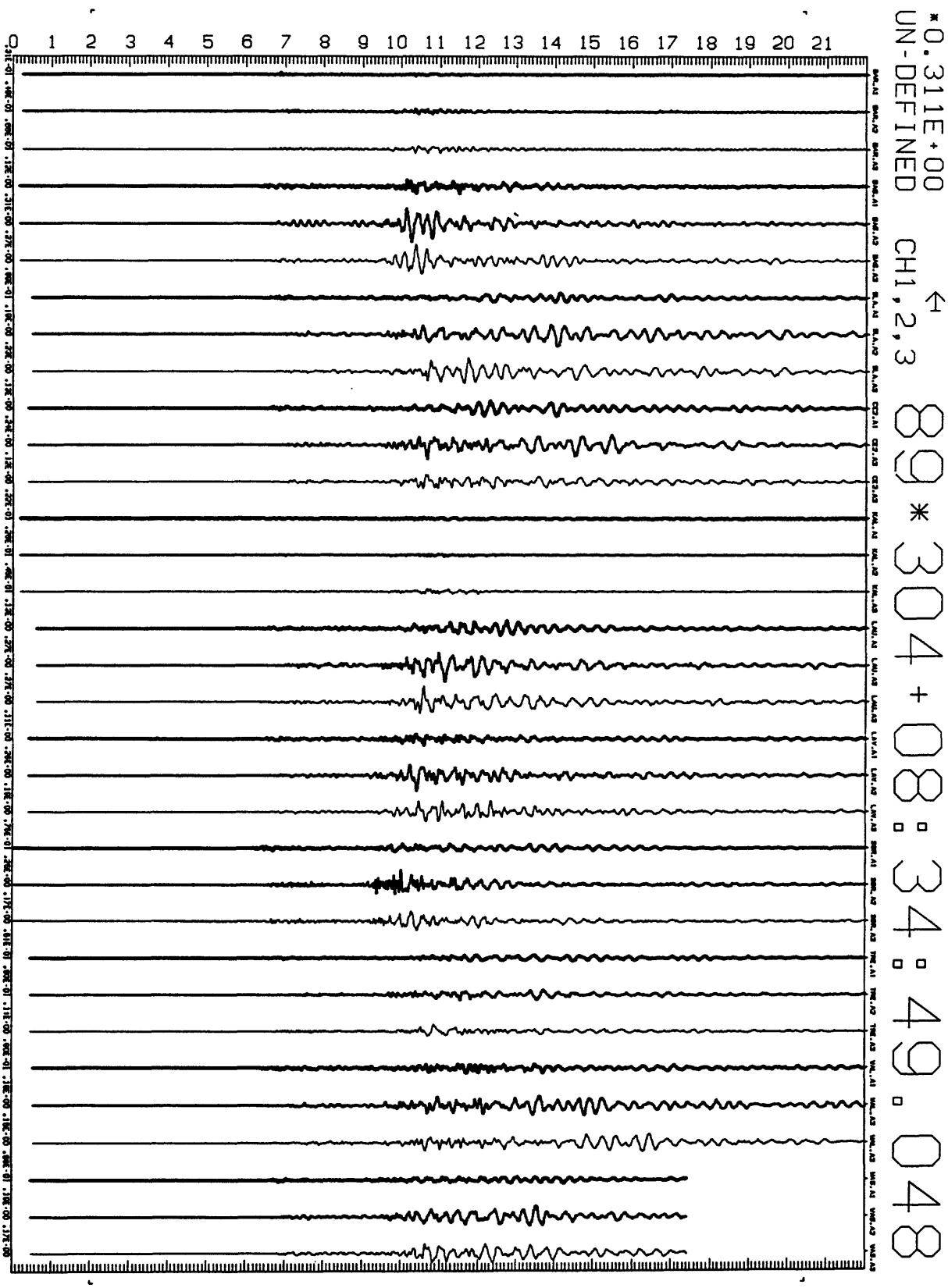
UN-DEFINED
CH1,2,3
89*304+06:50:07.251
BAR.A1 BAR.A2 BAR.A3 BAS.A1 BAS.A2 BAS.A3 BLA.A1 BLA.A2 BLA.A3 CE2.A1 CE2.A2 CE2.A3 KAL.A1 KAL.A2 KAL.A3 BBR.A1 BBR.A2 BBR.A3 TRE.A1 TRE.A2 TRE.A3 LAU.A1 LAU.A2 LAU.A3 LAV.A1 LAV.A2 LAV.A3 VAL.A1 VAL.A2 VAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21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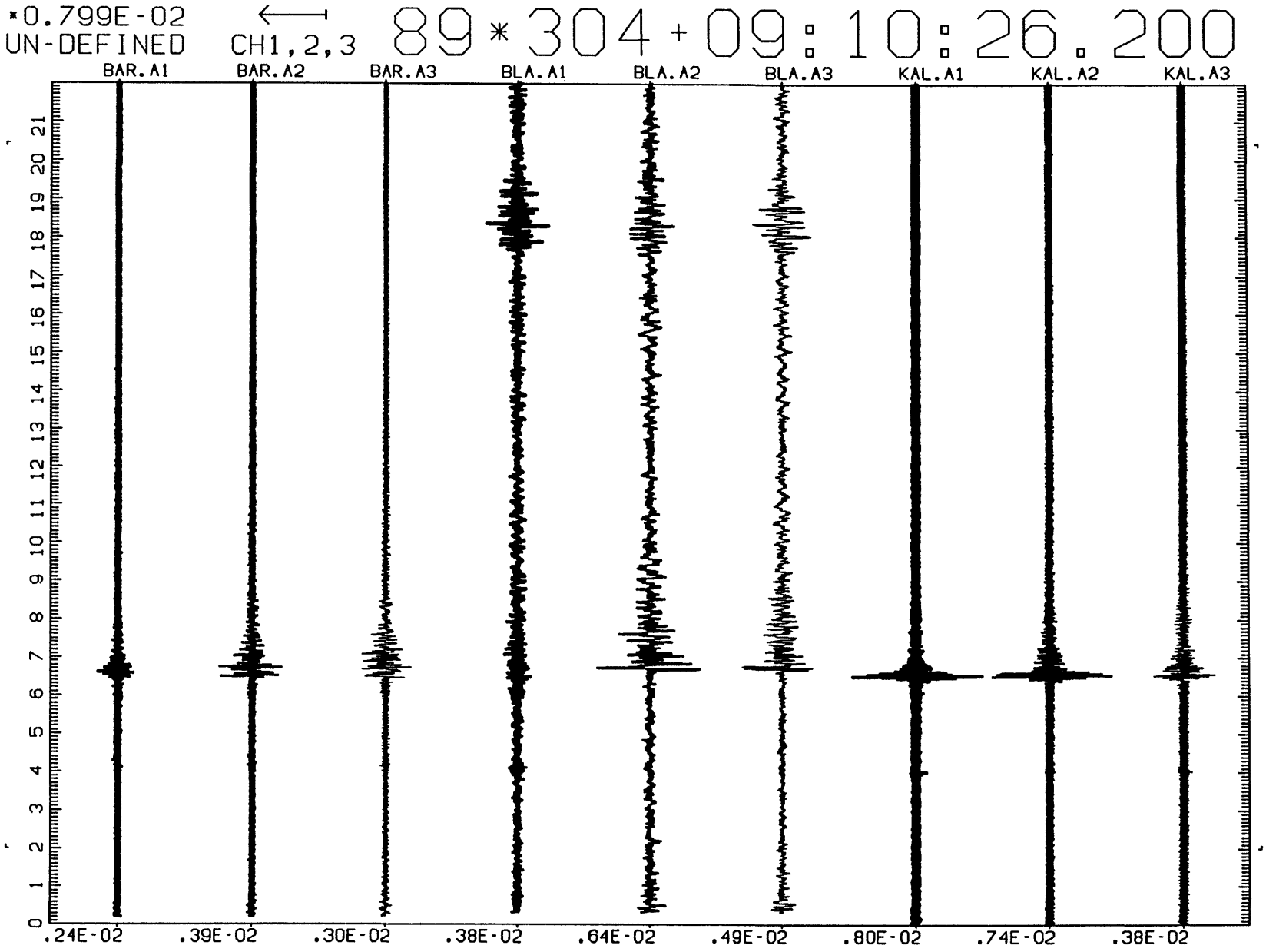
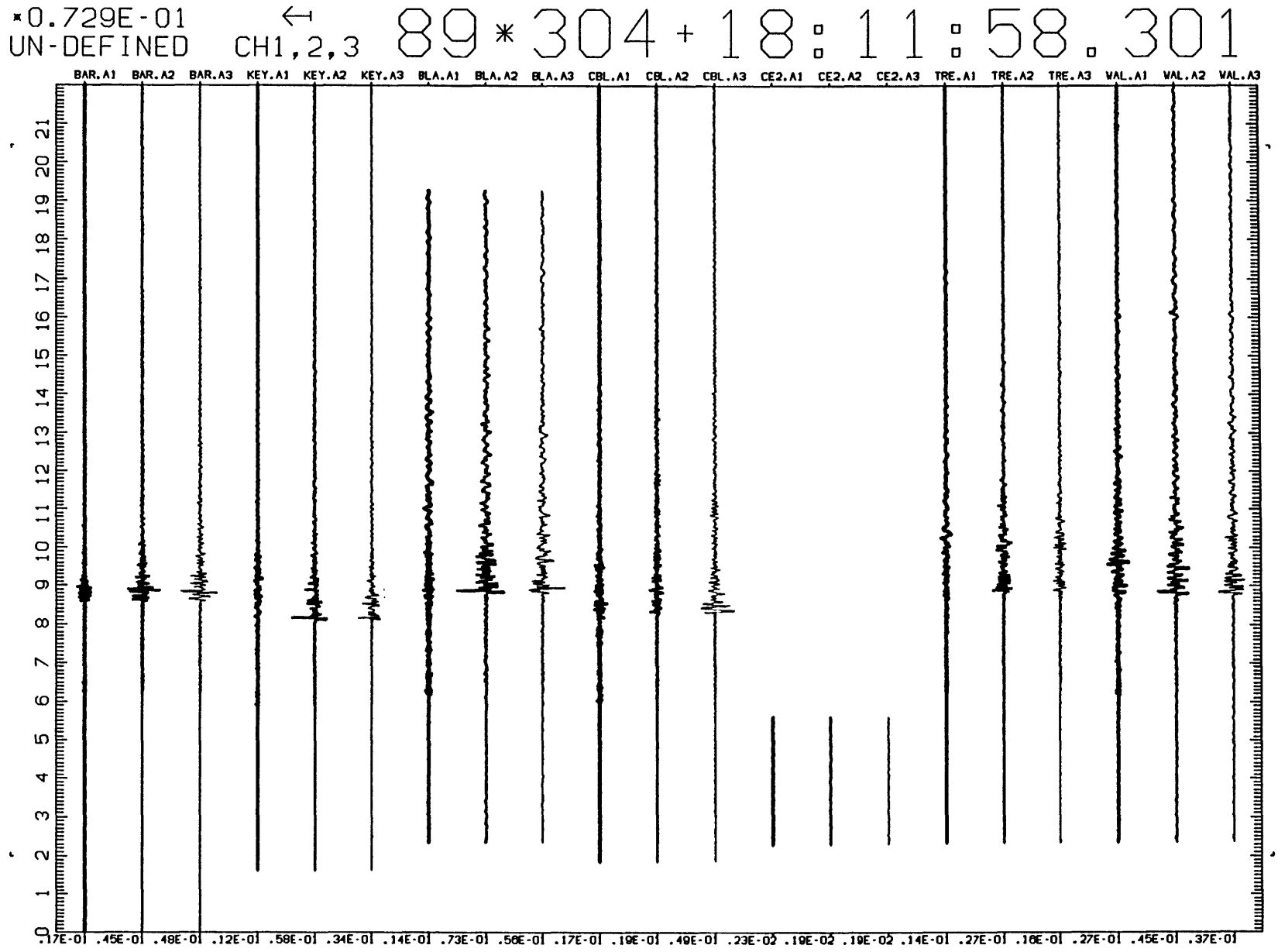
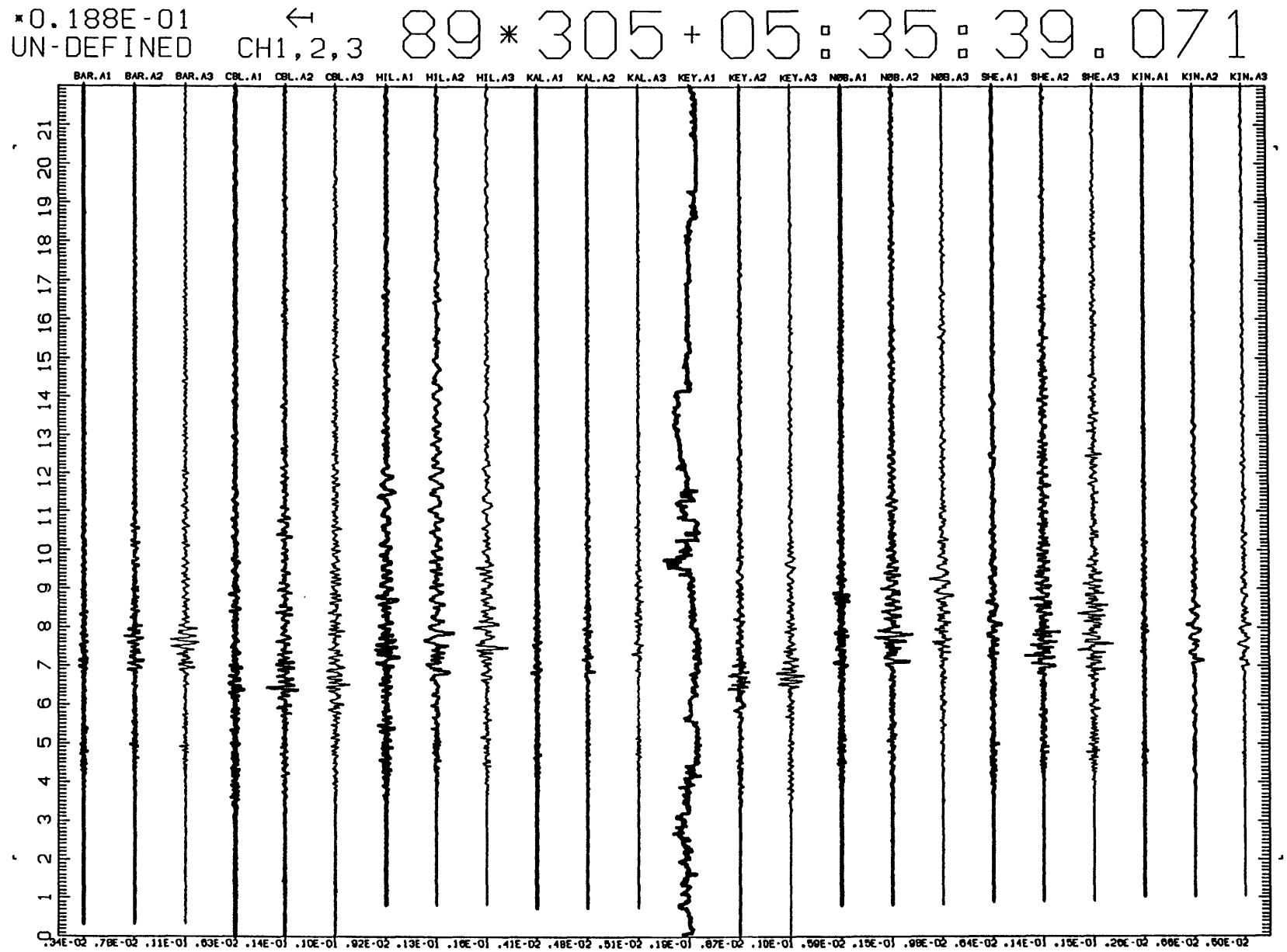
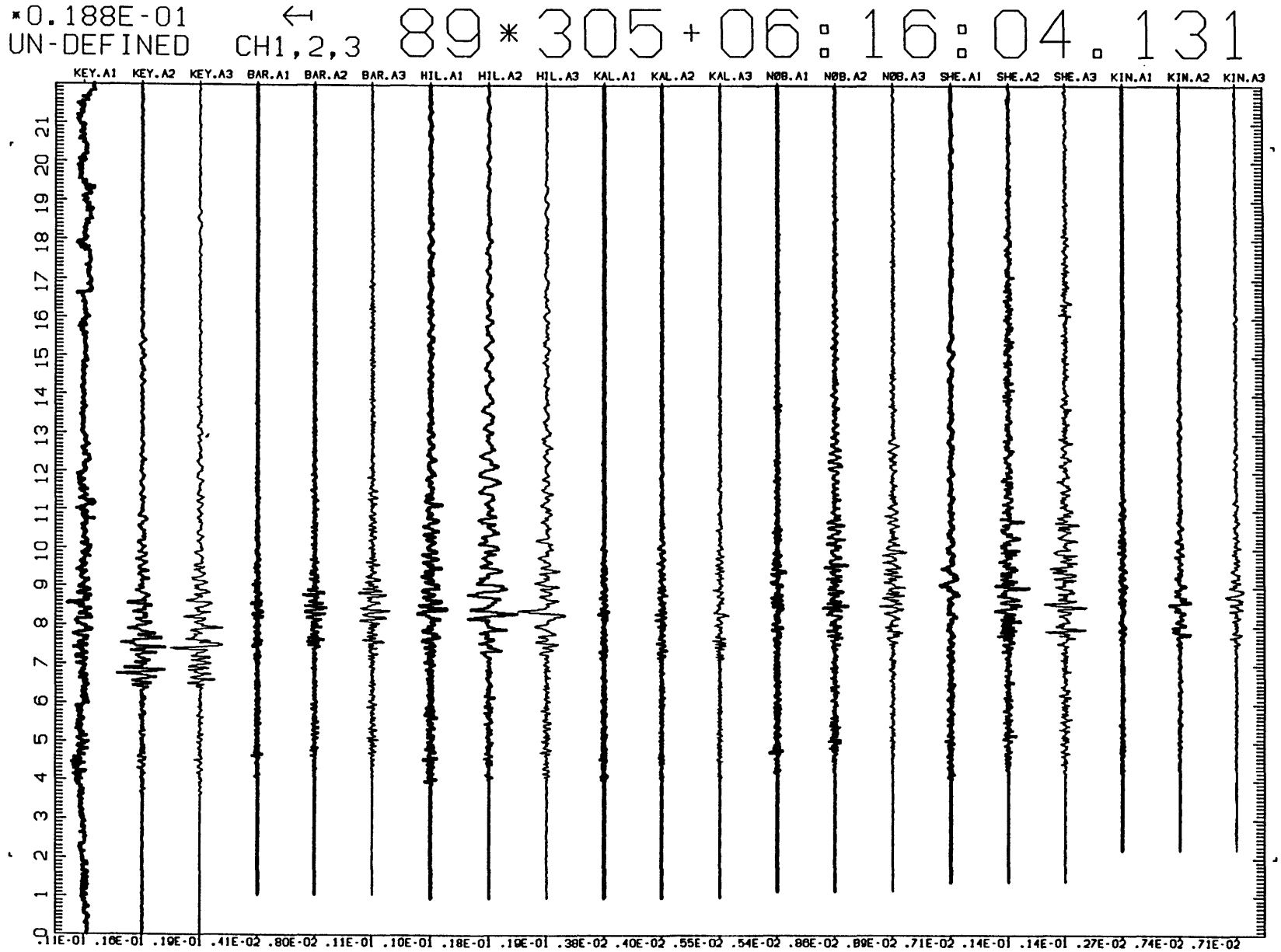
UN-DEFINED
CH1, 2, 3
89 * 304 + 08. 34. 49. 048
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

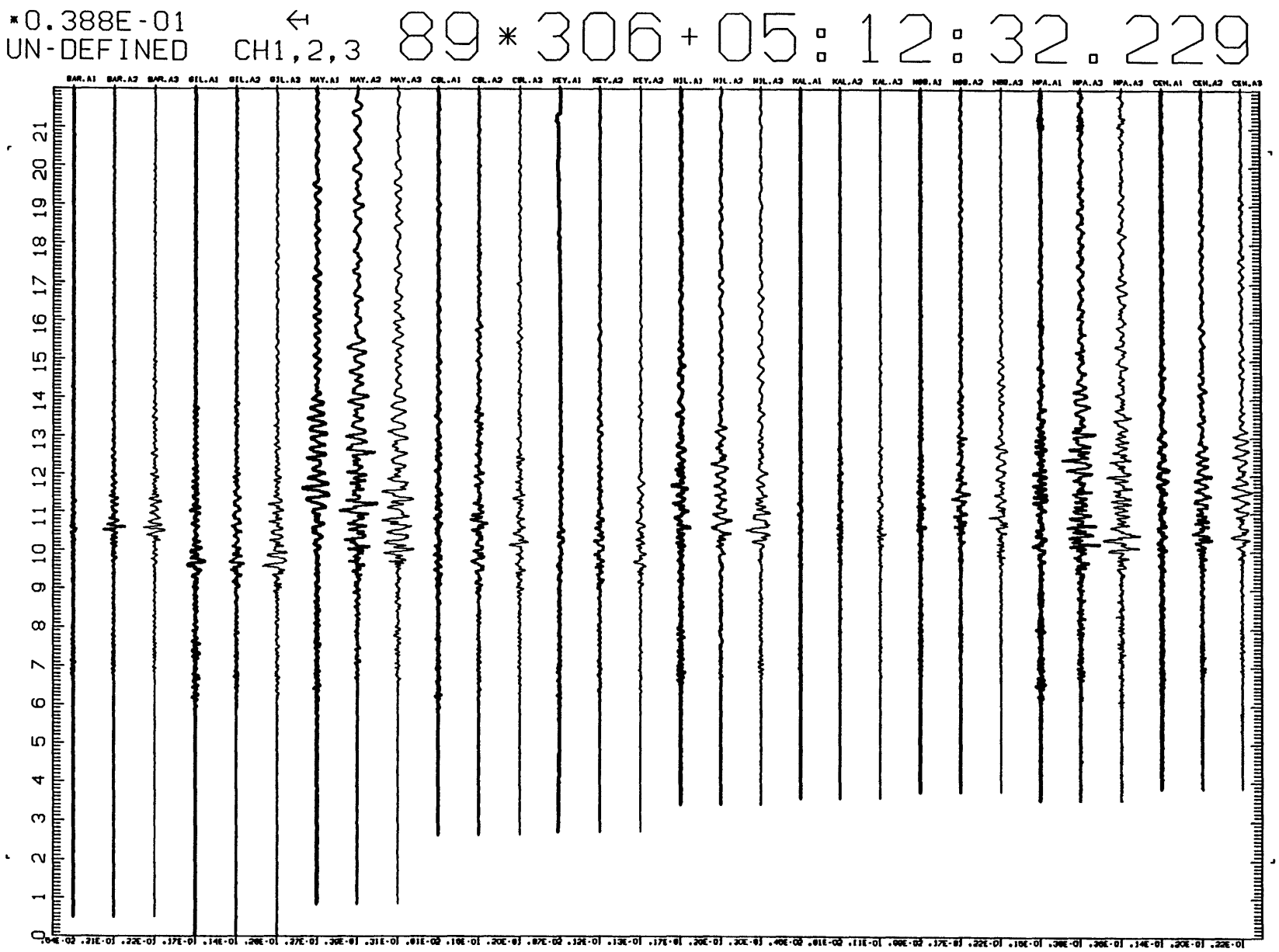

*0.799E-02
UN-DEFINED
CH1,2,3
89*304+09:10:26.200
BAR.A1
BAR.A2
BAR.A3
BLA.A1
BLA.A2
BLA.A3
KAL.A1
KAL.A2
KAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.24E-02
.39E-02
.30E-02
.38E-02
.64E-02
.49E-02
.80E-02
.74E-02
.38E-02


*0.729E-01
UN-DEFINED
CH1,2,3
89*304+18:11:58.301
BAR.A1 BAR.A2 BAR.A3 KEY.A1 KEY.A2 KEY.A3 BLA.A1 BLA.A2 BLA.A3 CBL.A1 CBL.A2 CBL.A3 CE2.A1 CE2.A2 CE2.A3 TRE.A1 TRE.A2 TRE.A3 WAL.A1 WAL.A2 WAL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.17E-01 .45E-01 .48E-01 .12E-01 .58E-01 .34E-01 .14E-01 .73E-01 .58E-01 .17E-01 .19E-01 .49E-01 .23E-02 .19E-02 .19E-02 .14E-01 .27E-01 .16E-01 .27E-01 .45E-01 .37E-01

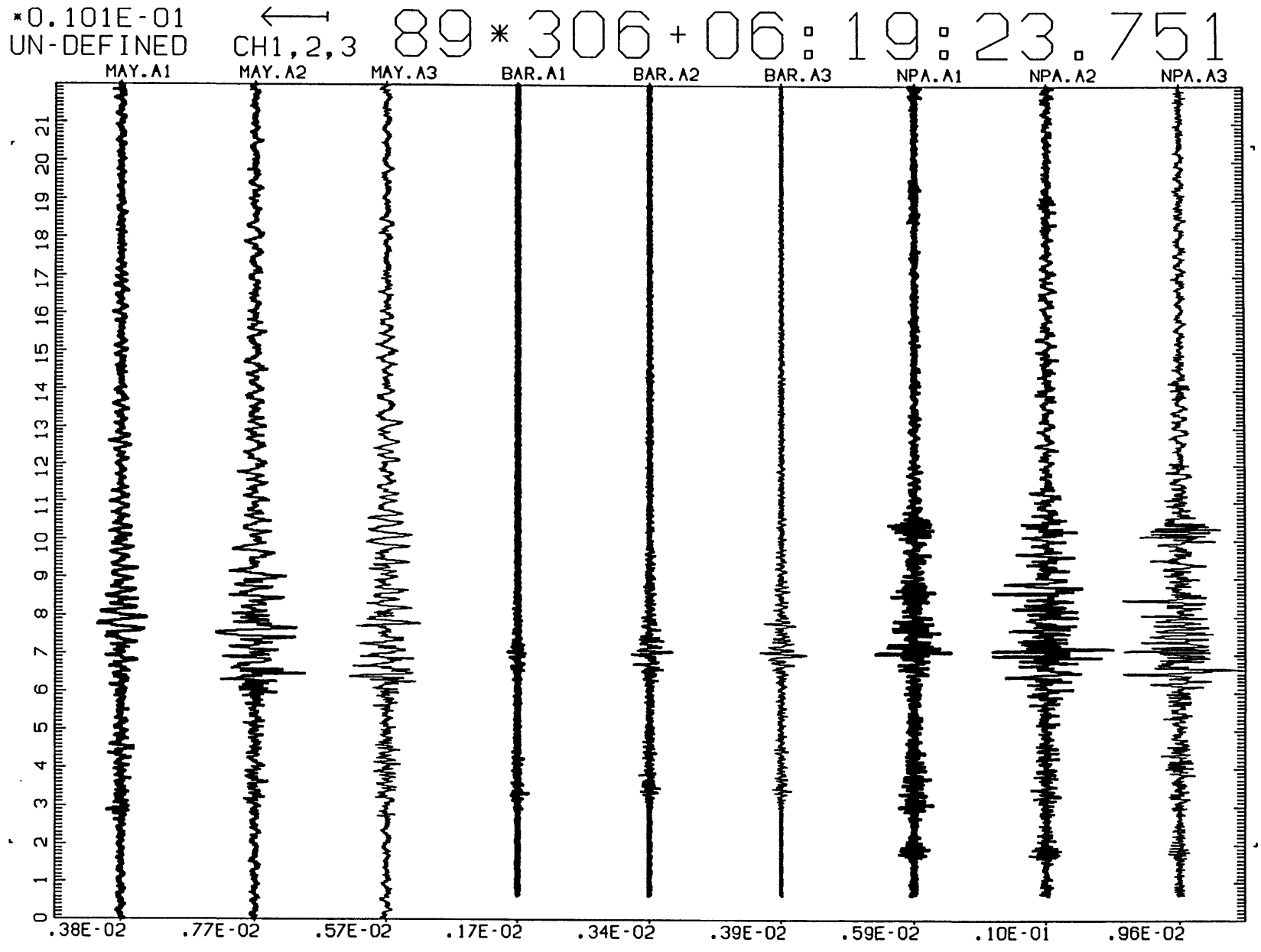

*0.188E-01
UN-DEFINED
CH1,2,3
89*305+05:35:39.071
BAR.A1 BAR.A2 BAR.A3 CBL.A1 CBL.A2 CBL.A3 HIL.A1 HIL.A2 HIL.A3 KAL.A1 KAL.A2 KAL.A3 KEY.A1 KEY.A2 KEY.A3 NØB.A1 NØB.A2 NØB.A3 SHE.A1 SHE.A2 SHE.A3 KIN.A1 KIN.A2 KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.34E-02 .78E-02 .11E-01 .63E-02 .14E-01 .10E-01 .92E-02 .13E-01 .16E-01 .41E-02 .48E-02 .51E-02 .19E-01 .87E-02 .10E-01 .59E-02 .15E-01 .98E-02 .64E-02 .14E-01 .15E-01 .20E-02 .66E-02 .50E-02


*0.188E-01
UN-DEFINED
CH1,2,3
89*305+06:16:04.131
KEY.A1 KEY.A2 KEY.A3 BAR.A1 BAR.A2 BAR.A3 HIL.A1 HIL.A2 HIL.A3 KAL.A1 KAL.A2 KAL.A3 NØB.A1 NØB.A2 NØB.A3 SHE.A1 SHE.A2 SHE.A3 KIN.A1 KIN.A2 KIN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.11E-01 .16E-01 .19E-01 .41E-02 .80E-02 .11E-01 .10E-01 .18E-01 .19E-01 .38E-02 .40E-02 .55E-02 .54E-02 .86E-02 .89E-02 .71E-02 .14E-01 .14E-01 .27E-02 .74E-02 .71E-02

*0.247E+00
UN-DEFINED
CH1, 2, 3
89 * 305 + 08 : 03 : 15 . 032
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
BAR.A1
BAR.A2
BAR.A3
CBL.A1
CBL.A2
CBL.A3
HIL.A1
HIL.A2
HIL.A3
KAL.A1
KAL.A2
KAL.A3
KEY.A1
KEY.A2
KEY.A3
NBB.A1
NBB.A2
NBB.A3
SKE.A1
SKE.A2
SKE.A3
ALM.A1
ALM.A2
ALM.A3
KIN.A1
KIN.A2
KIN.A3


*0.388E-01
UN-DEFINED
CH1,2,3
89*306+05:12:32.229
BAR.A1 BAR.A2 BAR.A3 BIL.A1 BIL.A2 BIL.A3 MAY.A1 MAY.A2 MAY.A3 CBL.A1 CBL.A2 CBL.A3 KEY.A1 KEY.A2 KEY.A3 HJL.A1 HJL.A2 HJL.A3 KAL.A1 KAL.A2 KAL.A3 MBB.A1 MBB.A2 MBB.A3 MPA.A1 MPA.A2 MPA.A3 CEN.A1 CEN.A2 CEN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

*0.460E+00
UN-DEFINED
CH1,2,3
89*306+05.50.08.380
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21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MAY.A2
MAY.A3
BAR.A1
BAR.A2
BAR.A3
NPA.A1
NPA.A2
NPA.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
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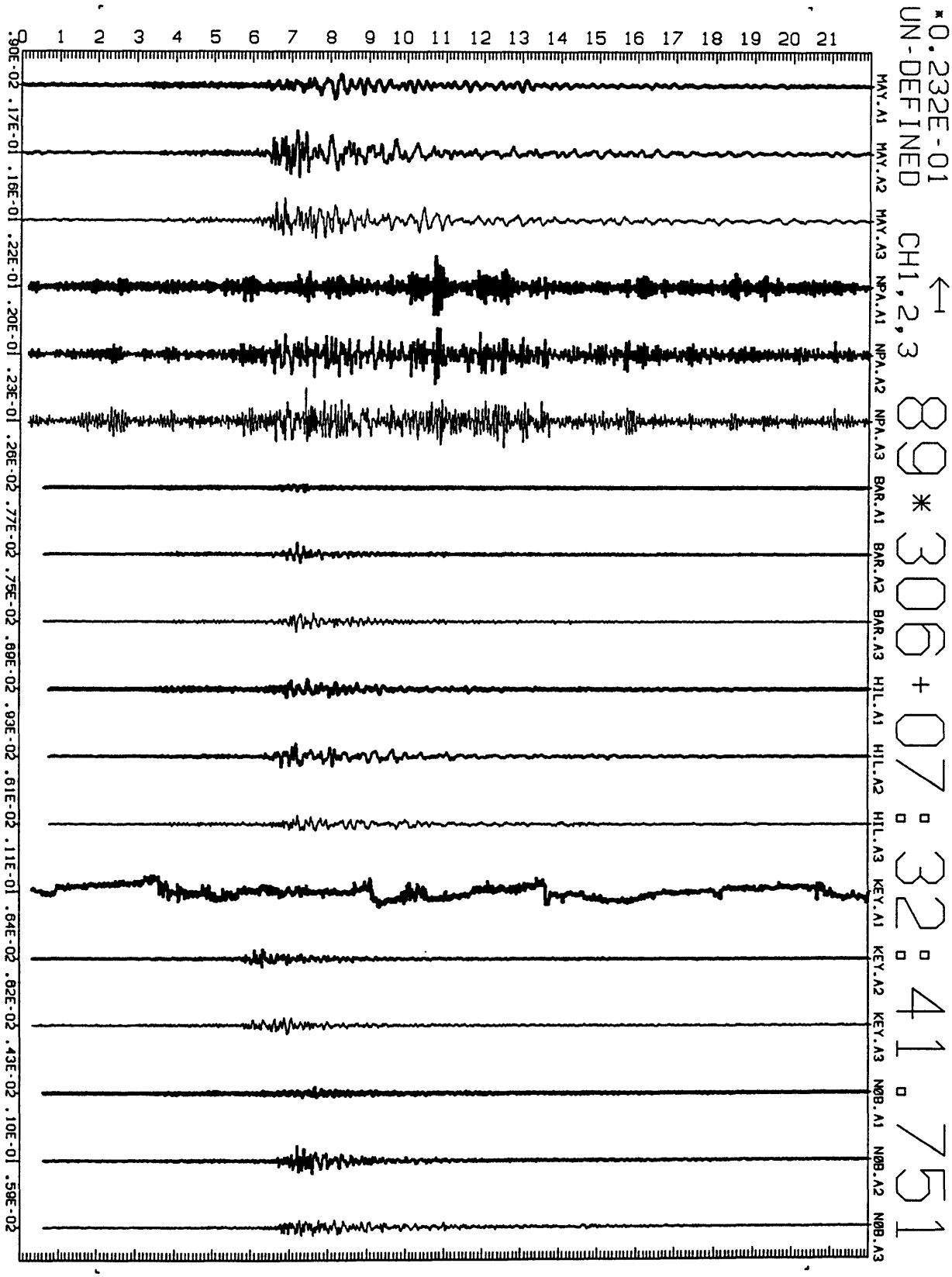
.96E-02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.16E-01
.22E-01
.20E-01
.23E-01
.26E-02
.77E-02
.75E-02
.89E-02
.93E-02
.61E-02
.11E-01
.64E-02
.82E-02
.43E-02
.10E-01
.59E-02
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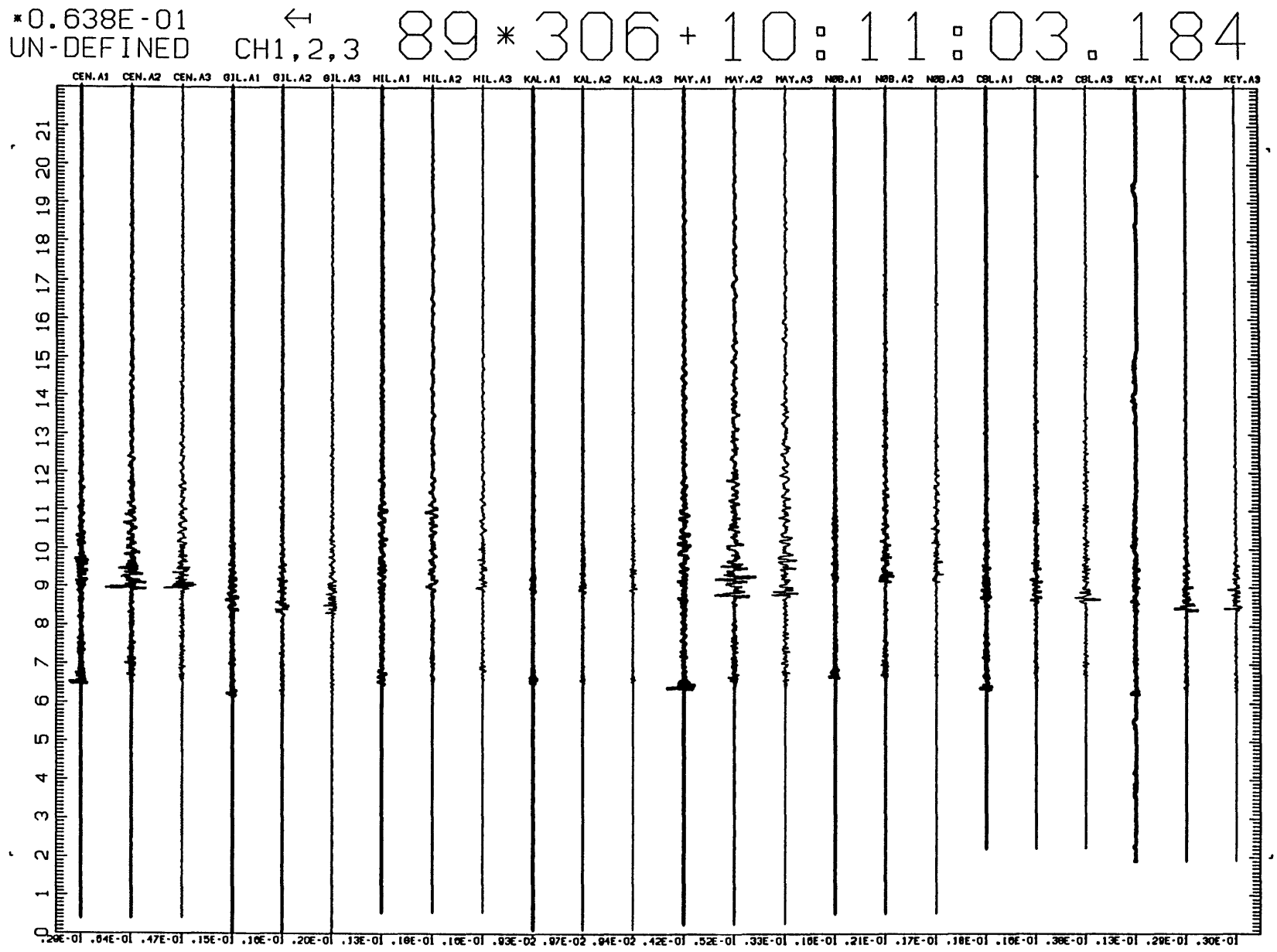
MAY.A2
MAY.A3
NPA.A1
NPA.A2
NPA.A3
BAR.A1
BAR.A2
BAR.A3
HIL.A1
HIL.A2
HIL.A3
KEY.A1
KEY.A2
KEY.A3
NØB.A1
NØB.A2
NØB.A3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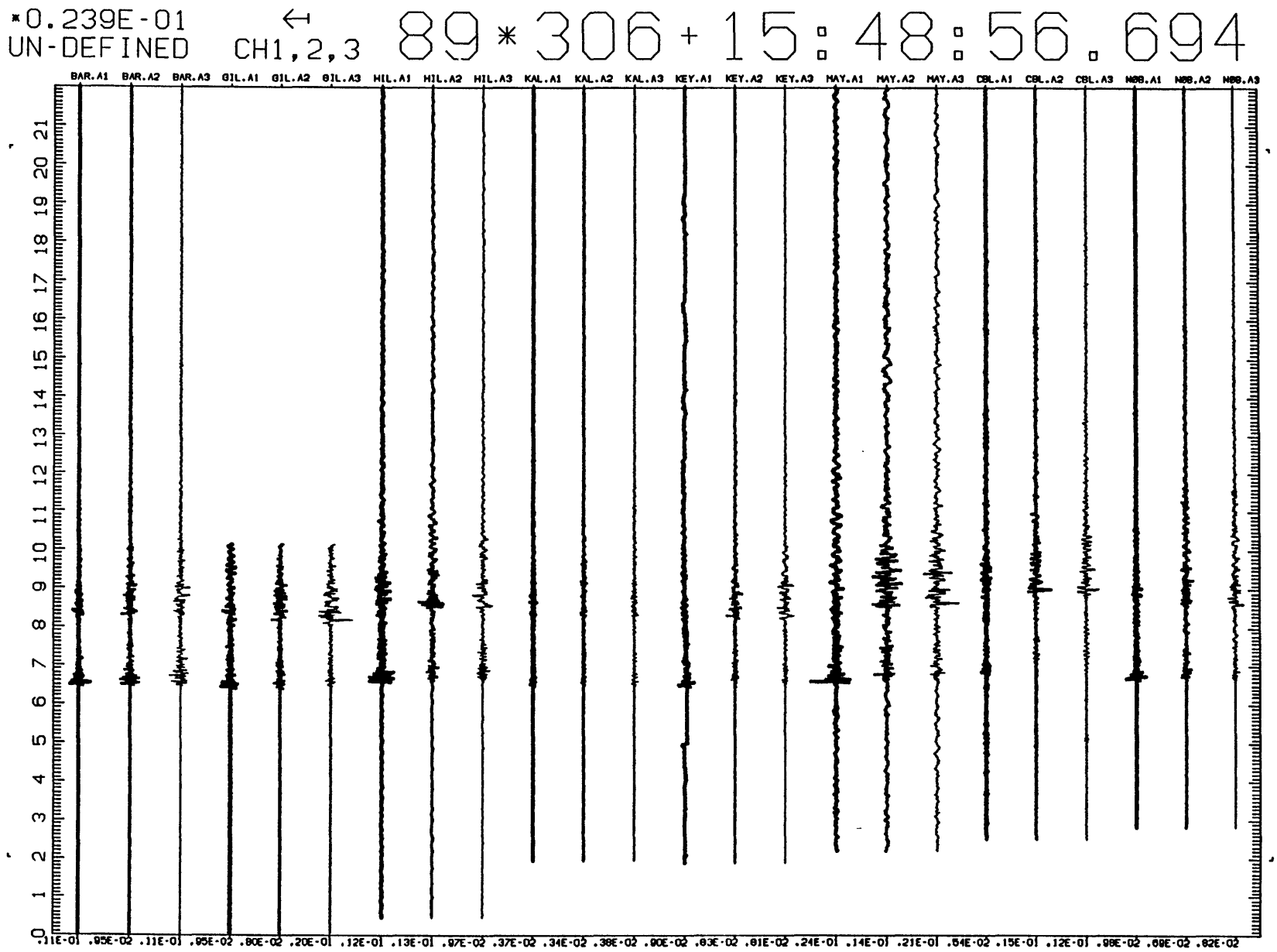
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.20E-01 .04E-01 .47E-01 .15E-01 .16E-01 .20E-01 .13E-01 .10E-01 .10E-01 .93E-02 .97E-02 .94E-02 .42E-01 .52E-01 .33E-01 .10E-01 .21E-01 .17E-01 .18E-01 .10E-01 .38E-01 .13E-01 .29E-01 .30E-01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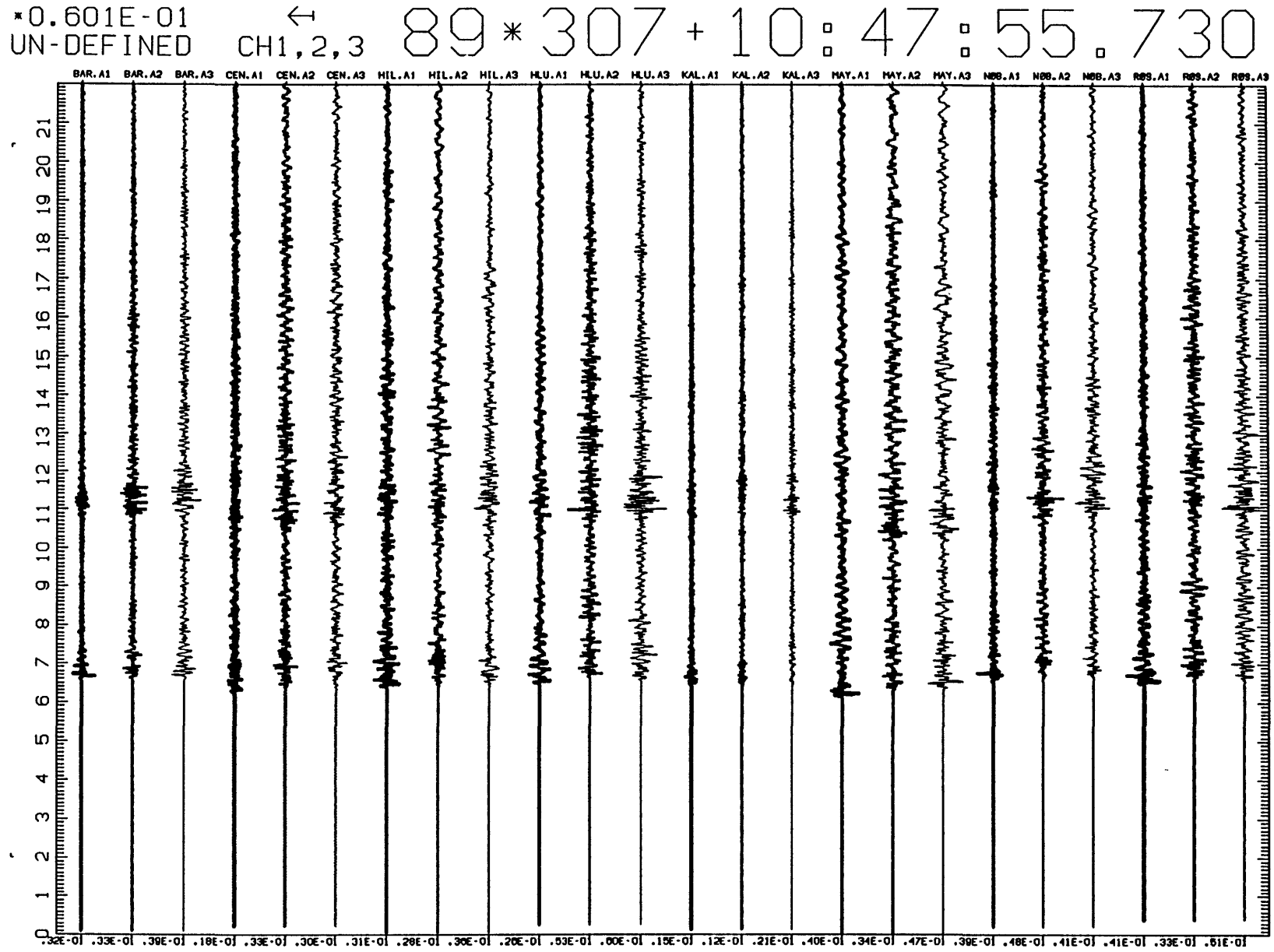
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.11E-01 .95E-02 .11E-01 .95E-02 .80E-02 .20E-01 .12E-01 .13E-01 .97E-02 .37E-02 .34E-02 .38E-02 .90E-02 .63E-02 .61E-02 .24E-01 .14E-01 .21E-01 .54E-02 .15E-01 .12E-01 .98E-02 .69E-02 .82E-02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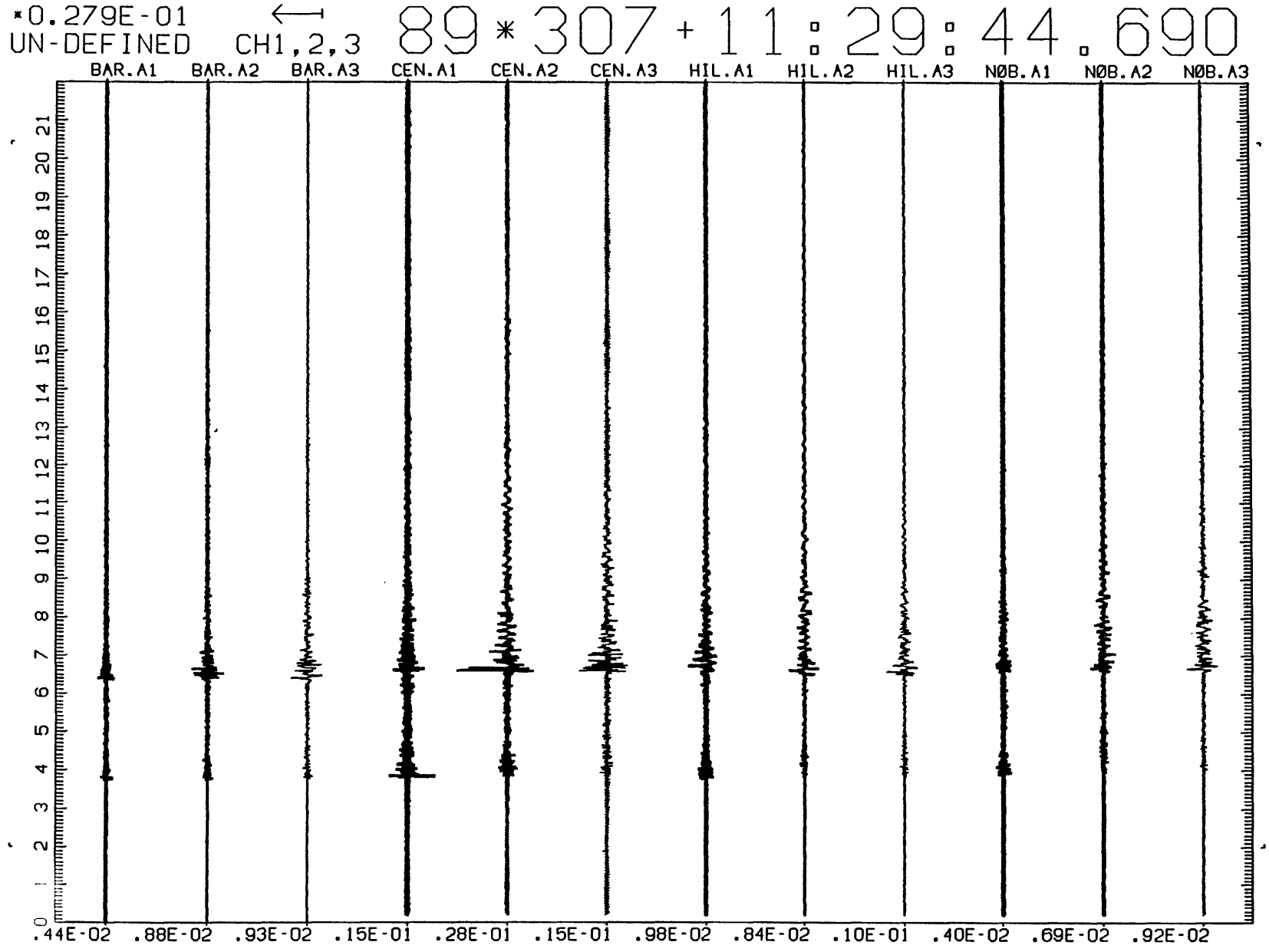
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.32E-01 .33E-01 .39E-01 .18E-01 .33E-01 .30E-01 .31E-01 .28E-01 .36E-01 .20E-01 .53E-01 .60E-01 .15E-01 .12E-01 .21E-01 .40E-01 .34E-01 .47E-01 .39E-01 .48E-01 .41E-01 .41E-01 .33E-01 .61E-01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CH1,2,3
89*307+11:29:44.690
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BAR.A2
BAR.A3
CEN.A1
CEN.A2
CEN.A3
HIL.A1
HIL.A2
HIL.A3
NØB.A1
NØB.A2
NØB.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
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.88E-02
.93E-02
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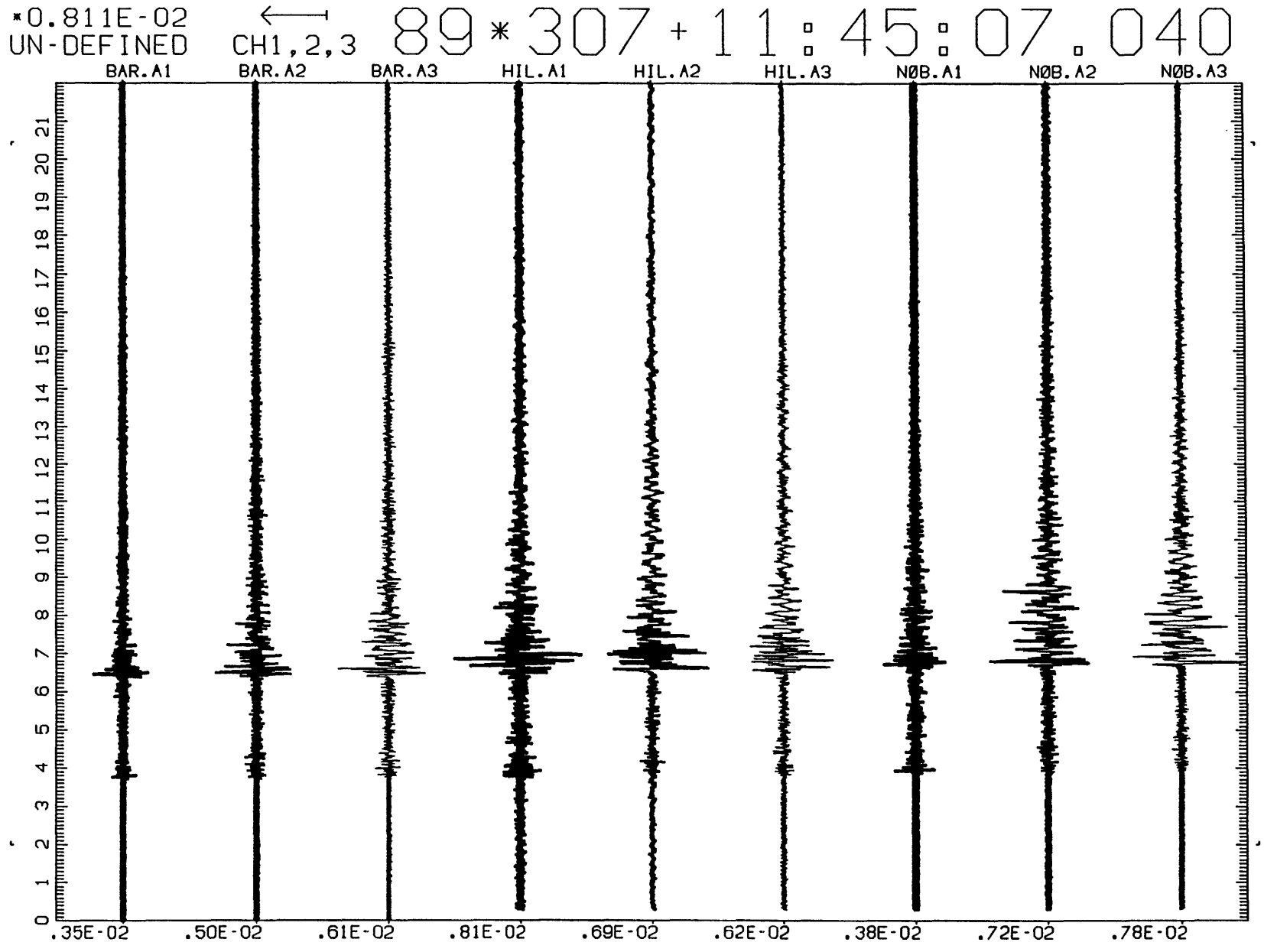
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CH1,2,3
89*307+11:45:07.040
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BAR.A2
BAR.A3
HIL.A1
HIL.A2
HIL.A3
NØB.A1
NØB.A2
NØB.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
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.50E-02
.61E-02
.81E-02
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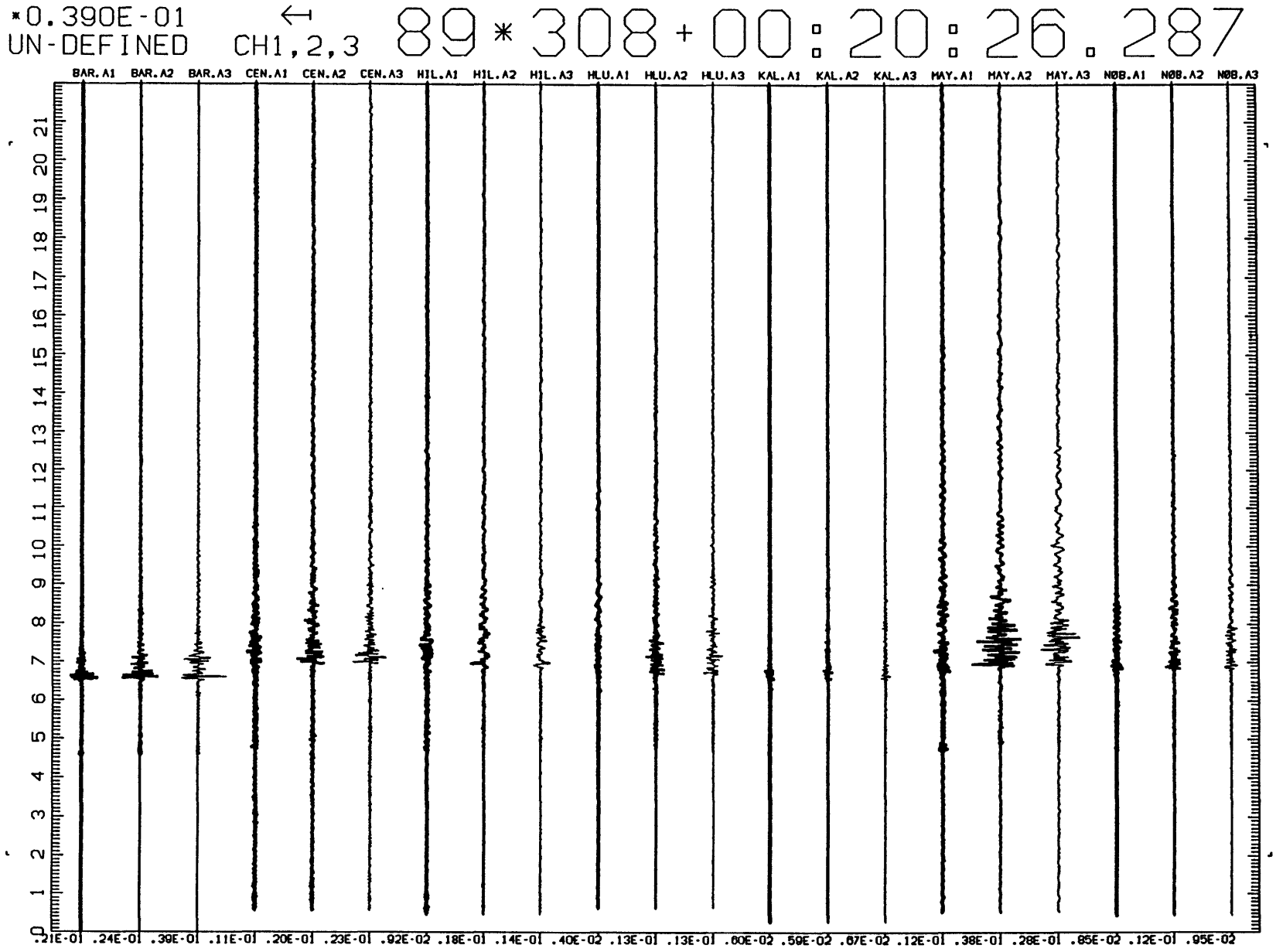
.62E-02
.38E-02
.72E-02
.78E-02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89*308+00:20:26.287
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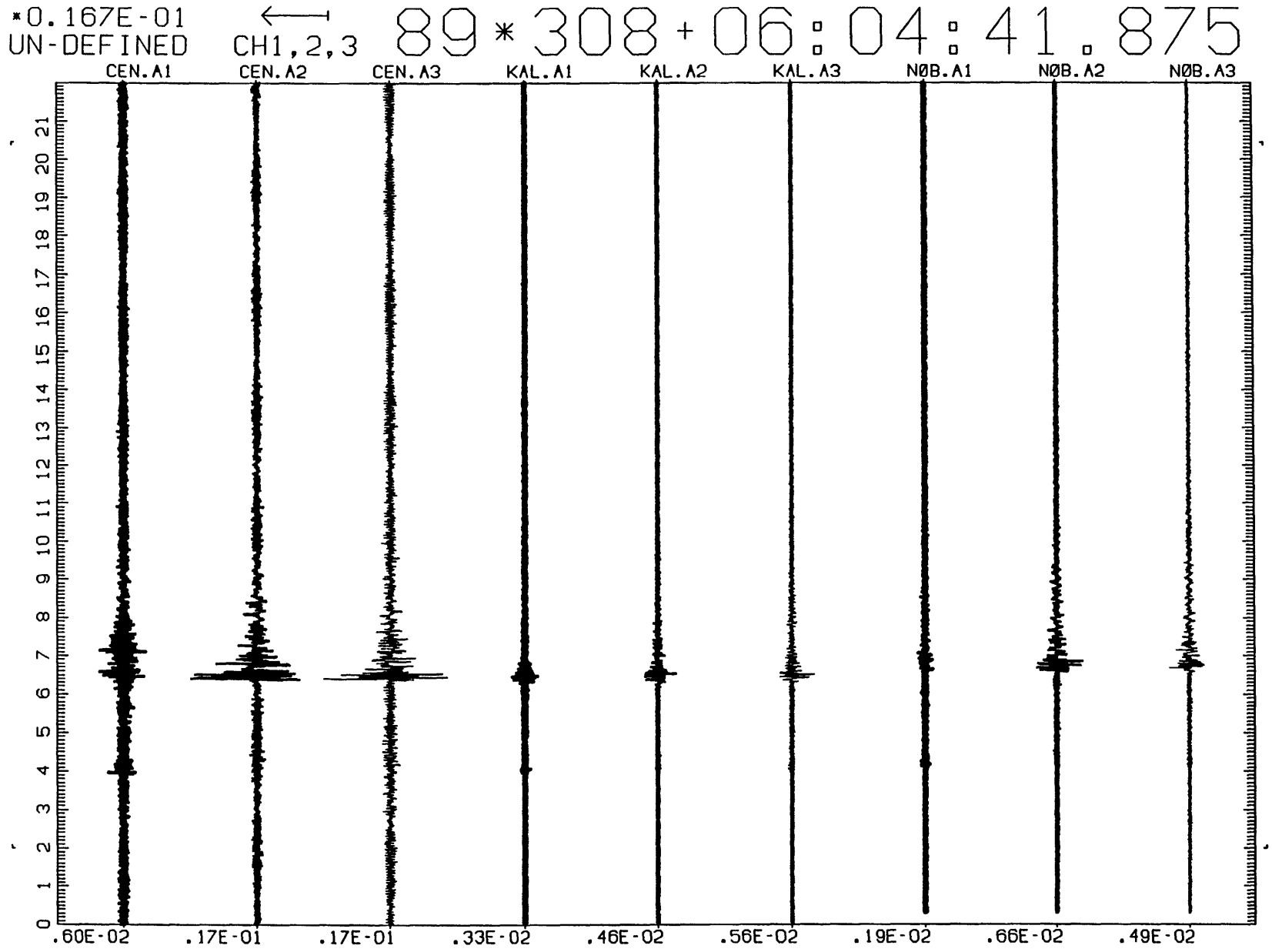
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.21E-01 .24E-01 .39E-01 .11E-01 .20E-01 .23E-01 .92E-02 .18E-01 .14E-01 .40E-02 .13E-01 .13E-01 .60E-02 .59E-02 .67E-02 .12E-01 .38E-01 .28E-01 .85E-02 .12E-01 .95E-02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CEN.A2
CEN.A3
KAL.A1
KAL.A2
KAL.A3
NØB.A1
NØB.A2
NØB.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.60E-02
.17E-01
.17E-01
.33E-02
.46E-02
.56E-02
.19E-02
.66E-02
.49E-02

*0.562E-01
UN-DEFINED
CH1, 2, 3
89 * 308 + 07 : 16 : 13 930
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.11E-01
.23E-01
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.41E-01
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N0B.A2
N0B.A3
CEN.A1
CEN.A2
CEN.A3
EST.A1
EST.A2
EST.A3
HIG.A1
HIG.A2
HIG.A3
HIL.A1
HIL.A2
HIL.A3
MAY.A1
MAY.A2
MAY.A3

APPENDIX B. Rebecca Ridge study area station data.

Rebecca Ridge study area seismograph station locations. The sensor column is used to indicate whether the seismometer was buried or glued as described in the text. Coordinates are referenced to the 1927 North American Datum.

STA	LATITUDE (N)	LONGITUDE (W)	ELEV. (M)	SENSOR	ADDRESS
DAI	+37 07.14	−122 06.16	0340	Buried	1055 Rebecca Dr.
DB2	+37 07.15	−122 06.73	0231	Buried	524 Debbie Ct.
DEB	+37 07.17	−122 06.73	0371	Buried	525 Debbie Ct.
ELS	+37 07.08	−122 06.33	0310	Buried	915 Elsie May Dr.
FR2	+37 06.93	−122 05.59	0207	Buried	Clinton Ranch
FRI	+37 06.86	−122 05.52	0191	Buried	Fritch Creek
GRO	+37 07.06	−122 06.93	0122	Buried	250 Grove Ct.
IR2	+37 06.84	−122 06.69	0134	Buried	Irwin Rd.
IRW	+37 06.80	−122 06.68	0119	Buried	Irwin Rd.
MID	+37 07.02	−122 06.10	0353	Buried	850 Rebecca Dr.
NCT	+37 07.19	−122 06.33	0304	Buried	Nina Court.
NIN	+37 07.20	−122 06.51	0255	Buried	726 Nina Dr.
REB	+37 07.27	−122 06.20	0371	Buried	1200 Rebecca Dr.
SAN	+37 06.93	−122 06.01	0340	Buried	310 Santa Cruz Dr.
TOP	+37 06.86	−122 06.13	0356	Buried	650 Rebecca Dr.

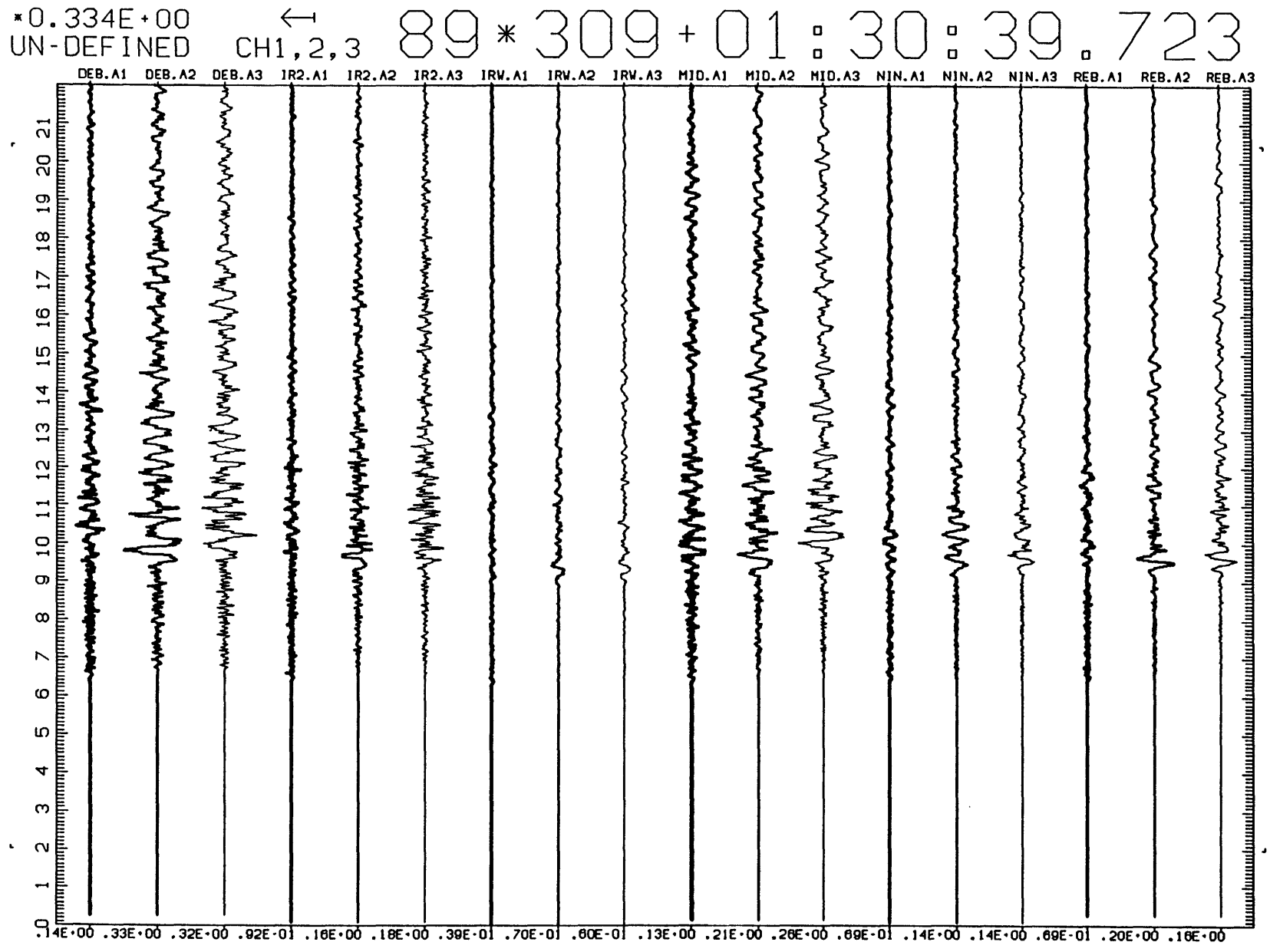
List of aftershocks recorded of three or more seismograph stations of the Rebecca Ridge study area. Seismic records were identified by a computer algorithm that found multiple triggers in a 13 s sliding-time window. Earthquakes are listed by the start time of the earliest associated record (day, hour, minute are characters one through seven in the filename). Records (for a given three-letter station code) are indicated by the corresponding second-bin character, i.e., character eight in the filename - A = 0.000 - 2.999, B = 3.000 - 5.999, ...T = 57.000 - 59.999.

The computer algorithm also extracted hypocenter information for associated earthquakes from U.S. Geological Survey summary files. The hypocenter data were provided by D. Oppenheimer and are listed in HYPO71 format. We used versions of the summary files that were current at the time of writing this report in September 1990. These hypocenters will be refined during the lifetime of this report and are provided here only to help readers make preliminary correlations between earthquakes and seismograph recordings.

EVENT	MAG	DAI	DB2	DEB	ELS	FR2	FRI	GRO	IR2	IRW	MID	NCT	NIN	RES	SAN	TOP
3090130	3.7			N					N	N	N		N	N		
3090342	2.7			T					S		S			S		
3091337	3.8			K					K	K	K		K	K		
3092321	2.3			C			B		C		C					
3100201	2.2	B		B			B		B	C	B		C	C	B	B
3100622	2.7	S		S			R		S	S	S		S	S	S	R
3100827	2.6	F		F			E		F	F			F	F	F	E
3101548	2.4	F		F			F		G					G	G	F
3101953	1.7	K		K	L						L				K	L
3102337					N						N				N	
3110429	1.7			T	A		A				A		A		A	A
3110820	2.2			P	P		P	P			P		P	P	P	P
3111423	1.7			S	S		S	S			S				S	S
3112322	2.8			D			D	D		D	D		D	D		D
3112342	4.0			L			L	L		L	L		L	L		L
3120633	1.4						A	A			B	A				A
3122103	2.7					I					K	L				
3122234	2.2					M					O	O				
3131855	2.3		N									N				N
3140031	2.6		H					G				H		H		H
3140211	2.2		S					S								S

DAI	DB2	DEB	ELS	FR2	FRI	GRO	IR2	IRW	MID	NCT	NIN	RES	SAN	TOP						
8911050130418537		430121	-5497		142335		96	49	6	1324482		33	48	6	2237LOM		12		4
8911050342519337		217121	-4787		632	0	84	38	2	925378		24	5011		1527LOM		10		0
8911051337338337		364121	-5362		138837		90	62	4	1224983		33	49	6	2238LOM		13		0
8911052321009836		5891121	-4379		1111	0	73	65	4	1124180		34	54	8	2223SAR		13		0
8911060201087637		1153122	- 266		1180	0	66	56	4	1124172		44	4917		2122BLM		15		2
8911060622509736		5955121	-4634		1578	0	84	55	5	924481		28	55	8	1927LOM		11		0
8911060827048637		700121	-5318		389	0	18	69	5	7	5075	6521714			26 0LOM		19		0
8911060827151137		691121	-5335		394	0	79	45	5	12	3679	29233	9		1726LOM		11		0
8911061548183537		428121	-5413		1417	0	78	54	5	821182		30	45	7	1824LOM		12		0
8911061953336637		1111121	-5895		1100	0	29	39	2	720066		57	923		2617BLM		21		0
8911070430025437		1126122	- 201		1014	0	26	57	3	8	1089	56	13	0	2717BLM		20		0
8911070820468137		1088121	-5776		442	0	54	47	3	1023380		29	52	9	1622LOM		14		1
8911071423571537		1221122	- 328		1234	0	20	52	5	719880		67	97	1	2917BLM		27		0
8911072322133336		5765122	-1412		693	0	99187		17	25	5174	17523615			6028MON		25		1
8911072342372937		1396122	- 169		97037		86	42	5	1123480		41	49	9	1640BLM		11		4
8911080633060637		573122	- 321		977	0	14113		8	721780		98	77	7	3614MON		28-		0
8911082103206336		5814121	-3502		328	0	70	34	1	1118585		32	55	2	1627SAR		11		0
8911082234364437		101121	-4628		1012	0	68	35	4	927181		29	57	6	1822LOM		12		0
8911091855372837		383121	-4789		935	0	80	26	2	1122982		32	53	7	1723LOM		12		2
8911100031152736		5825121	-4353		1504	0	79	72	3	10	3586	36230	3		2126SJB		12		1
8911100211595737		1409122	- 162		817	0	64	42	5	1024181		39	48	8	1622BLM		13		1

Seismograms recorded by three or more stations at the Rebecca Ridge study area. Each seismogram plotted has been limited to 22 s, although the actual records may be longer. Three components are plotted for each station that recorded the aftershock. The traces are identified on the right by station name and component. A1 is the vertically oriented component; A2 is horizontally oriented North; A3 is horizontally oriented East. The peak velocity (expressed in cm/s) of the trace is shown in the left margin. All traces for each event are plotted at the same scale. Time proceeds from left to right and the numbers indicated are seconds from the time of the first sample of the record.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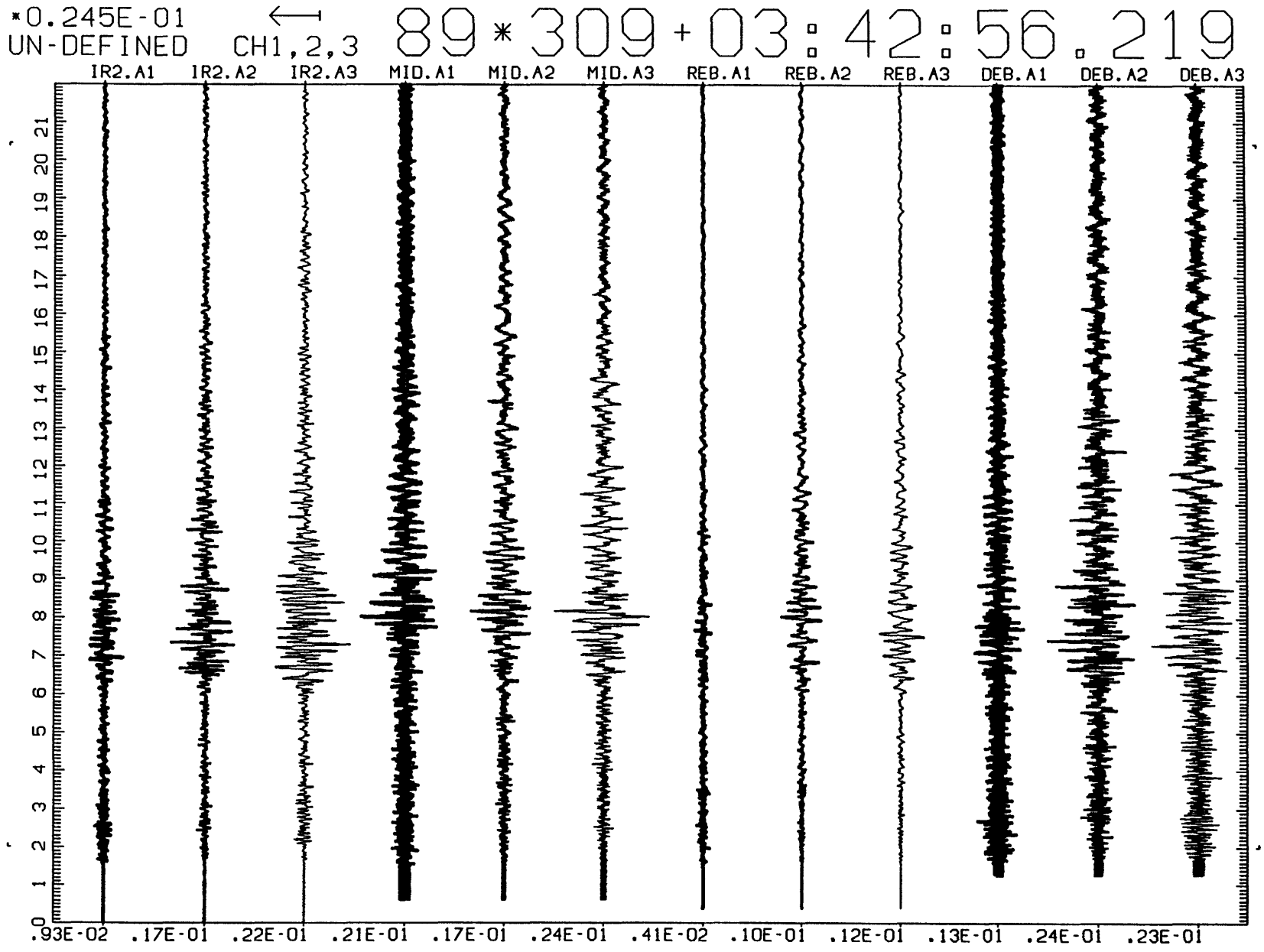
DEB.A2
DEB.A3
IR2.A1
IR2.A2
IR2.A3
IRW.A1
IRW.A2
IRW.A3
MID.A1
MID.A2
MID.A3
NIN.A1
NIN.A2
NIN.A3
REB.A1
REB.A2
REB.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.14E+00 .33E+00 .32E+00 .92E-01 .16E+00 .18E+00 .39E-01 .70E-01 .60E-01 .13E+00 .21E+00 .26E+00 .69E-01 .14E+00 .14E+00 .69E-01 .20E+00 .16E+00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IR2.A2
IR2.A3
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MID.A2
MID.A3
REB.A1
REB.A2
REB.A3
DEB.A1
DEB.A2
DEB.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.93E-02
.17E-01
.22E-01
.21E-01
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.13E-01
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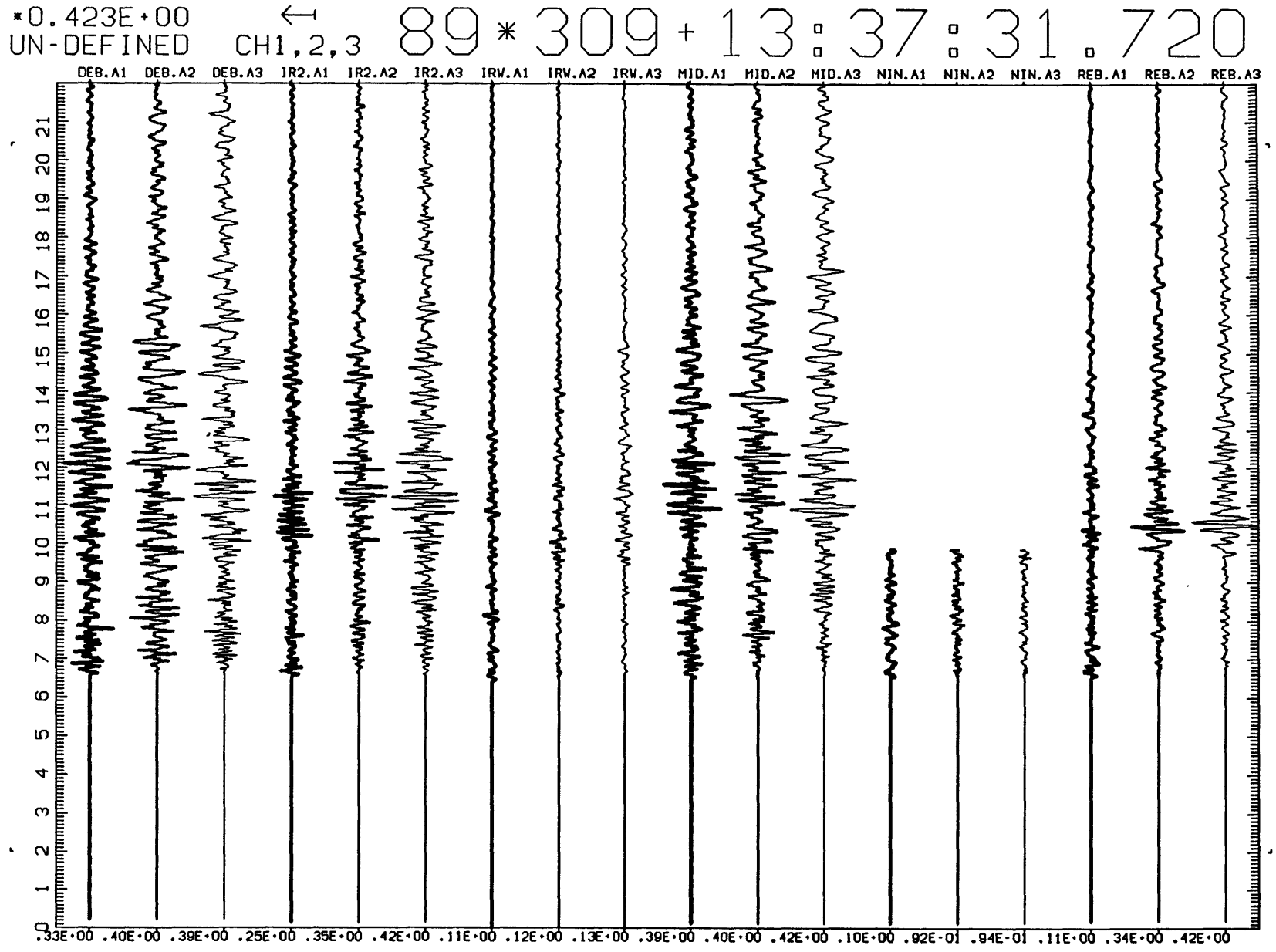
.23E-01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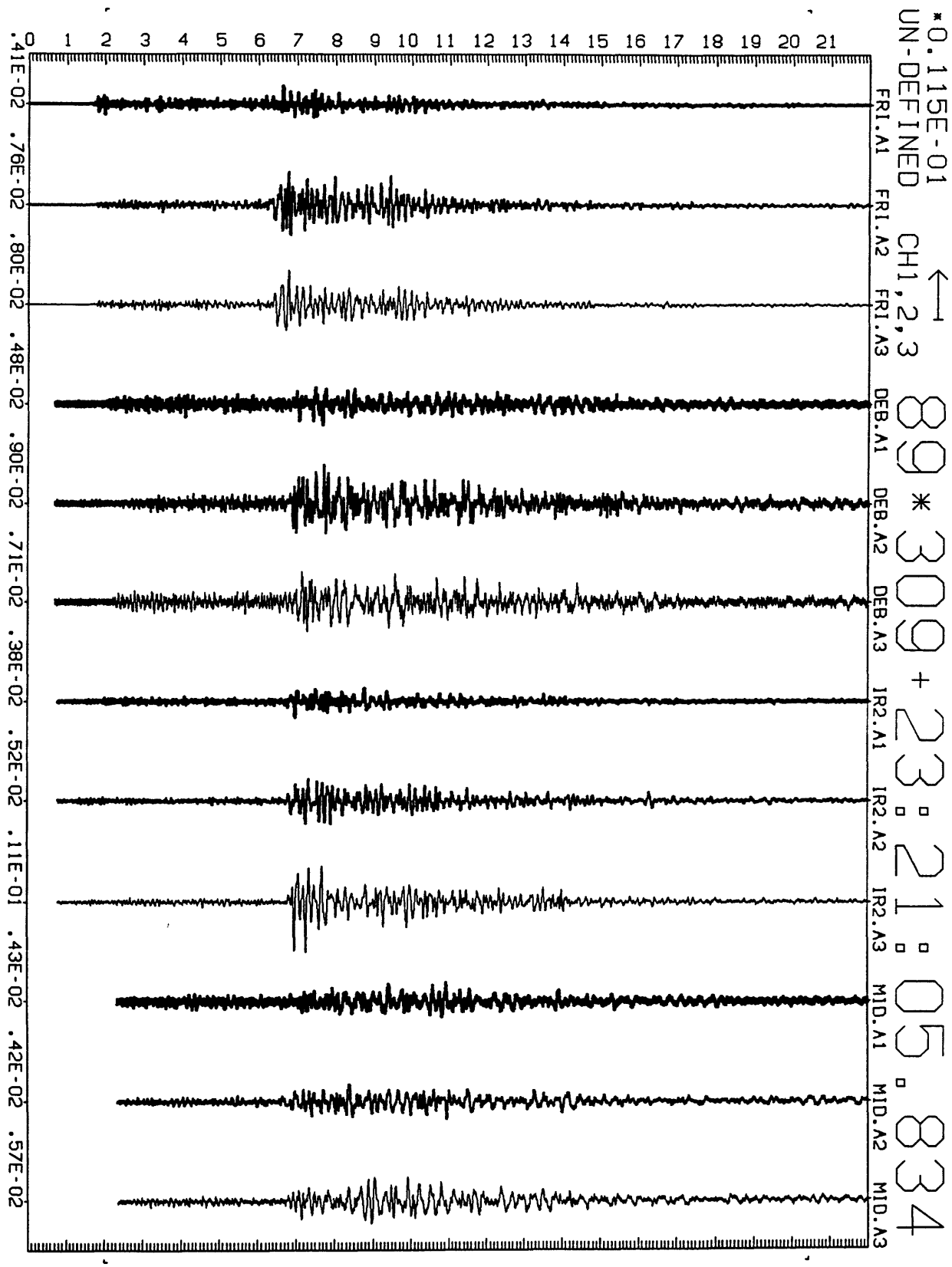
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.33E+00 .40E+00 .39E+00 .25E+00 .35E+00 .42E+00 .11E+00 .12E+00 .13E+00 .39E+00 .40E+00 .42E+00 .10E+00 .92E-01 .94E-01 .11E+00 .34E+00 .42E+00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CH1,2,3
89 * 309 + 23. 21. 05. 834
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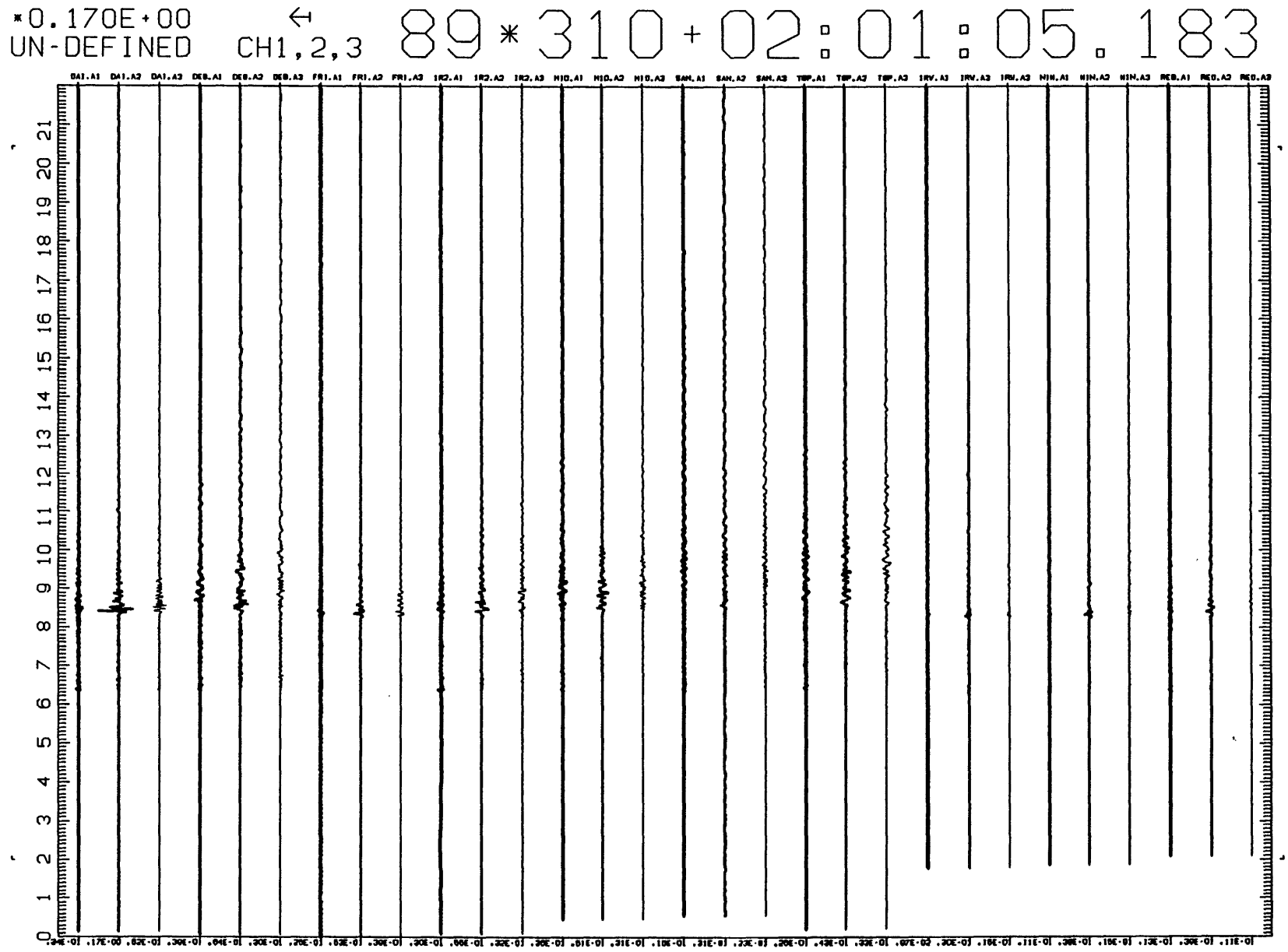
.76E-02
.80E-02
.48E-02
.90E-02
.71E-02
.38E-02
.52E-02
.11E-01
.43E-02
.42E-02
.57E-02
FRI.A1
FRI.A2
FRI.A3
DEB.A1
DEB.A2
DEB.A3
IR2.A1
IR2.A2
IR2.A3
MID.A1
MID.A2
MID.A3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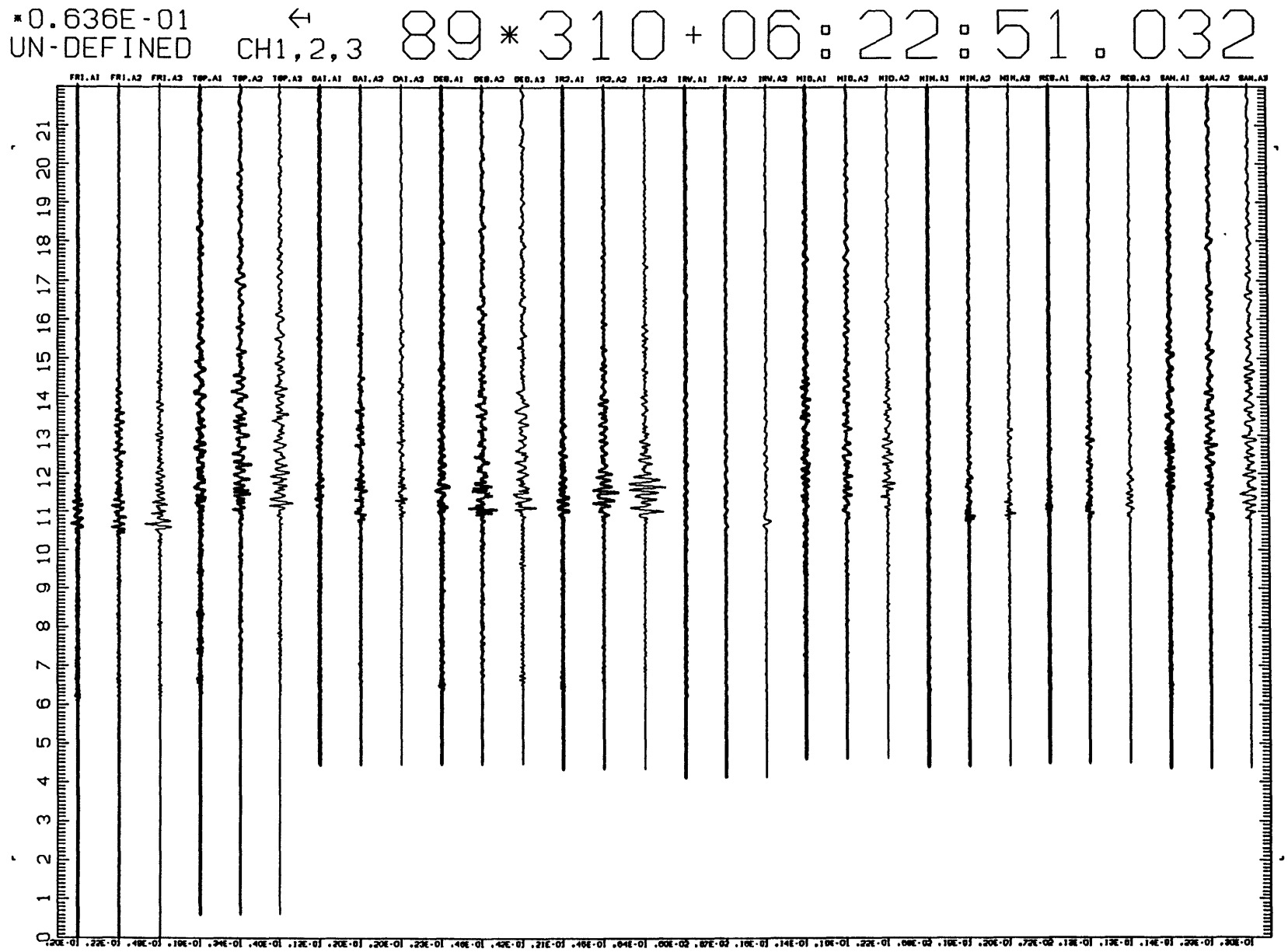
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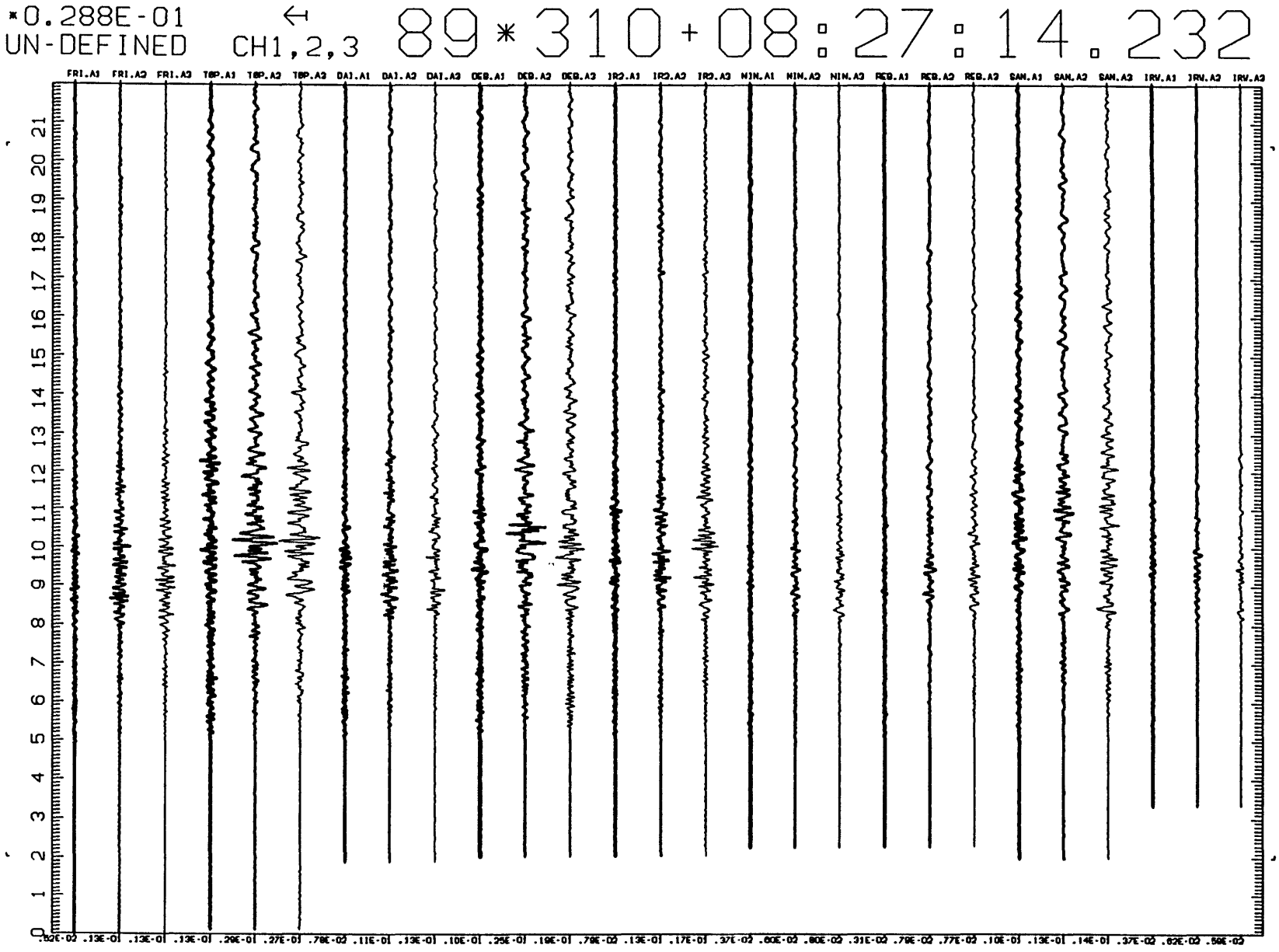
FRI.A1 FRI.A2 FRI.A3 TBP.A1 TBP.A2 TBP.A3 BAI.A1 BAI.A2 BAI.A3 DEB.A1 DEB.A2 DEB.A3 IR2.A1 IR2.A2 IR2.A3 IRV.A1 IRV.A2 IRV.A3 MID.A1 MID.A2 MID.A3 MIN.A1 MIN.A2 MIN.A3 REB.A1 REB.A2 REB.A3 SAN.A1 SAN.A2 SAN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21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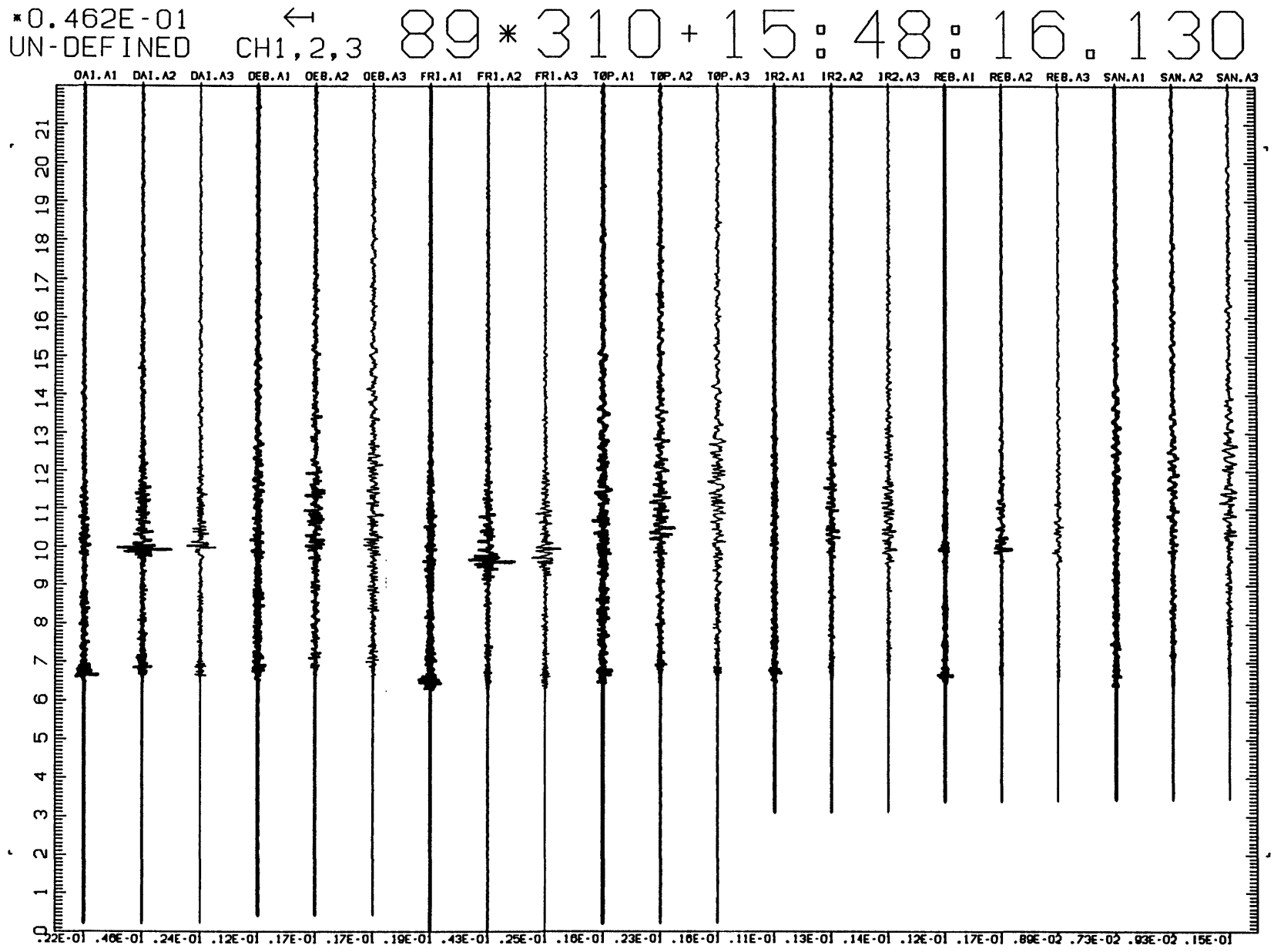
CH1,2,3
89*310+08:27:14.232
FRI.A1 FRI.A2 FRI.A3 TBP.A1 TBP.A2 TBP.A3 DA1.A1 DA1.A2 DA1.A3 DEB.A1 DEB.A2 DEB.A3 IR2.A1 IR2.A2 IR2.A3 MIN.A1 MIN.A2 MIN.A3 REB.A1 REB.A2 REB.A3 SAN.A1 SAN.A2 SAN.A3 IRV.A1 IRV.A2 IRV.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21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UN-DEFINED
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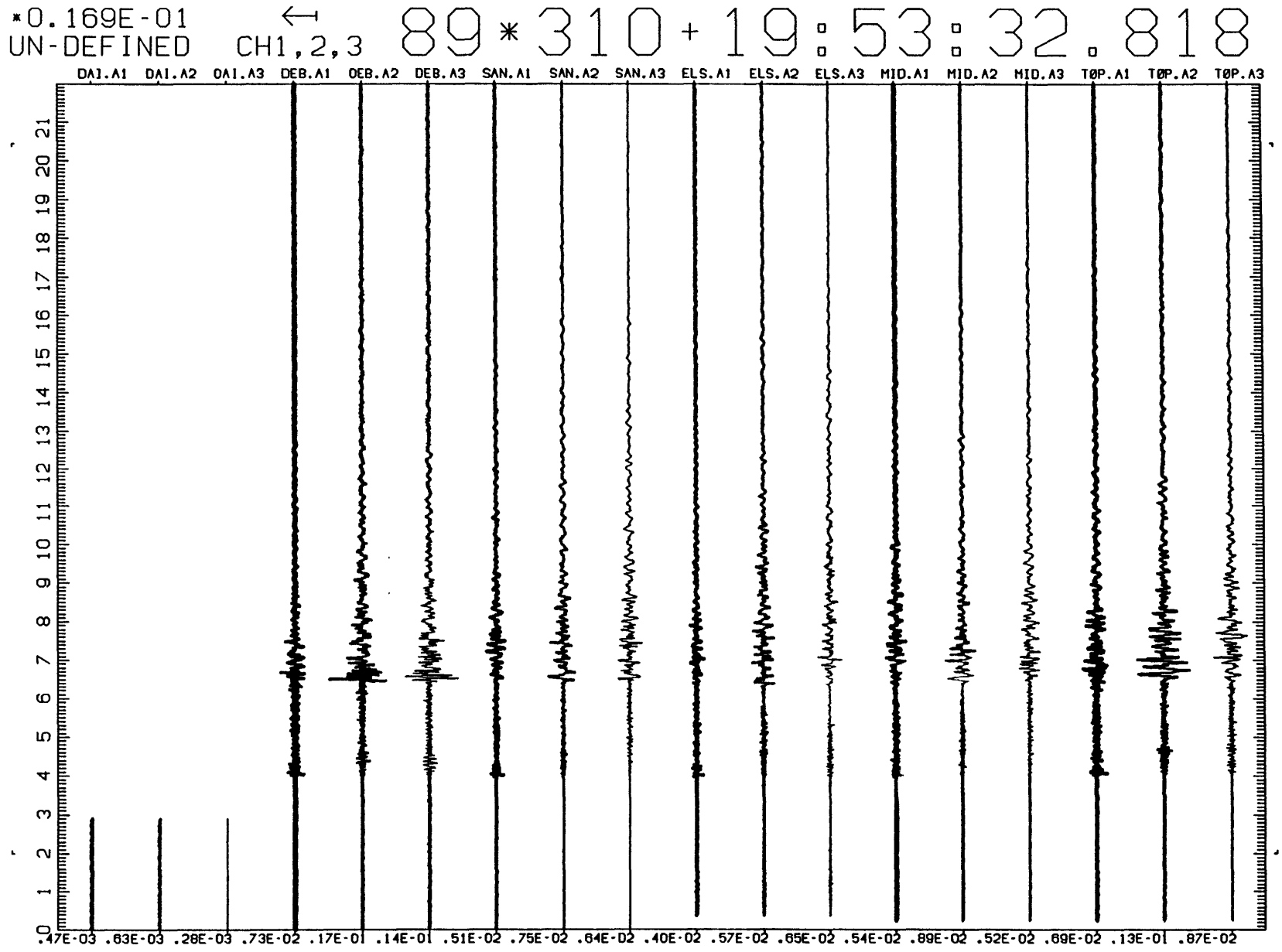
89*310+15:48:16.130
OA1.A1 DA1.A2 DA1.A3 OE8.A1 OE8.A2 OE8.A3 FR1.A1 FR1.A2 FR1.A3 TØP.A1 TØP.A2 TØP.A3 IR2.A1 IR2.A2 IR2.A3 RE8.A1 RE8.A2 RE8.A3 SAN.A1 SAN.A2 SAN.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.22E-01 .46E-01 .24E-01 .12E-01 .17E-01 .17E-01 .19E-01 .43E-01 .25E-01 .16E-01 .23E-01 .16E-01 .11E-01 .13E-01 .14E-01 .12E-01 .17E-01 .89E-02 .73E-02 .93E-02 .15E-01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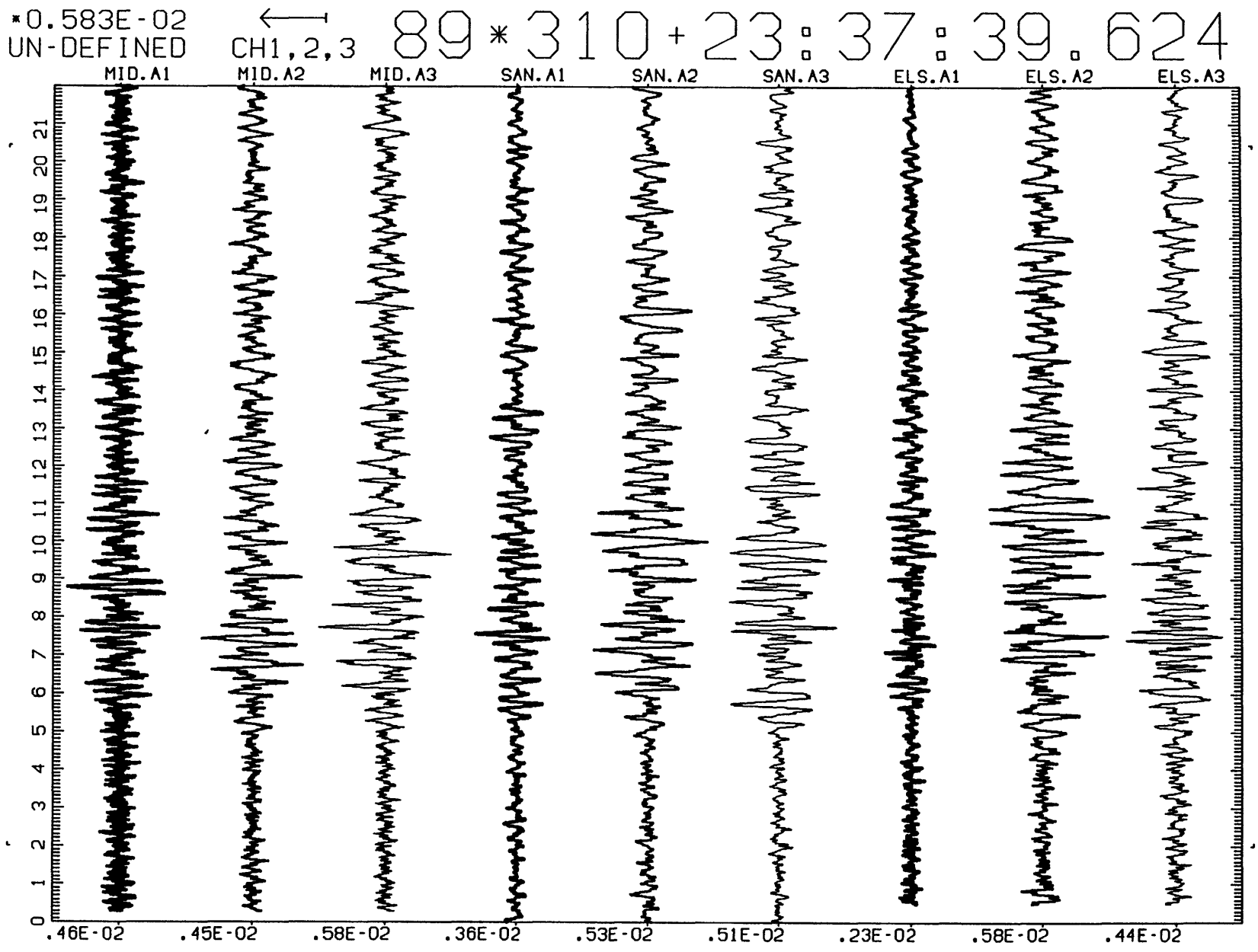
UN-DEFINED
CH1,2,3
89*310+19:53:32.818
DAI.A1 DAI.A2 DAI.A3 DEB.A1 DEB.A2 DEB.A3 SAN.A1 SAN.A2 SAN.A3 ELS.A1 ELS.A2 ELS.A3 MID.A1 MID.A2 MID.A3 TØP.A1 TØP.A2 TØP.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.47E-03 .63E-03 .28E-03 .73E-02 .17E-01 .14E-01 .51E-02 .75E-02 .64E-02 .40E-02 .57E-02 .65E-02 .54E-02 .89E-02 .52E-02 .69E-02 .13E-01 .87E-02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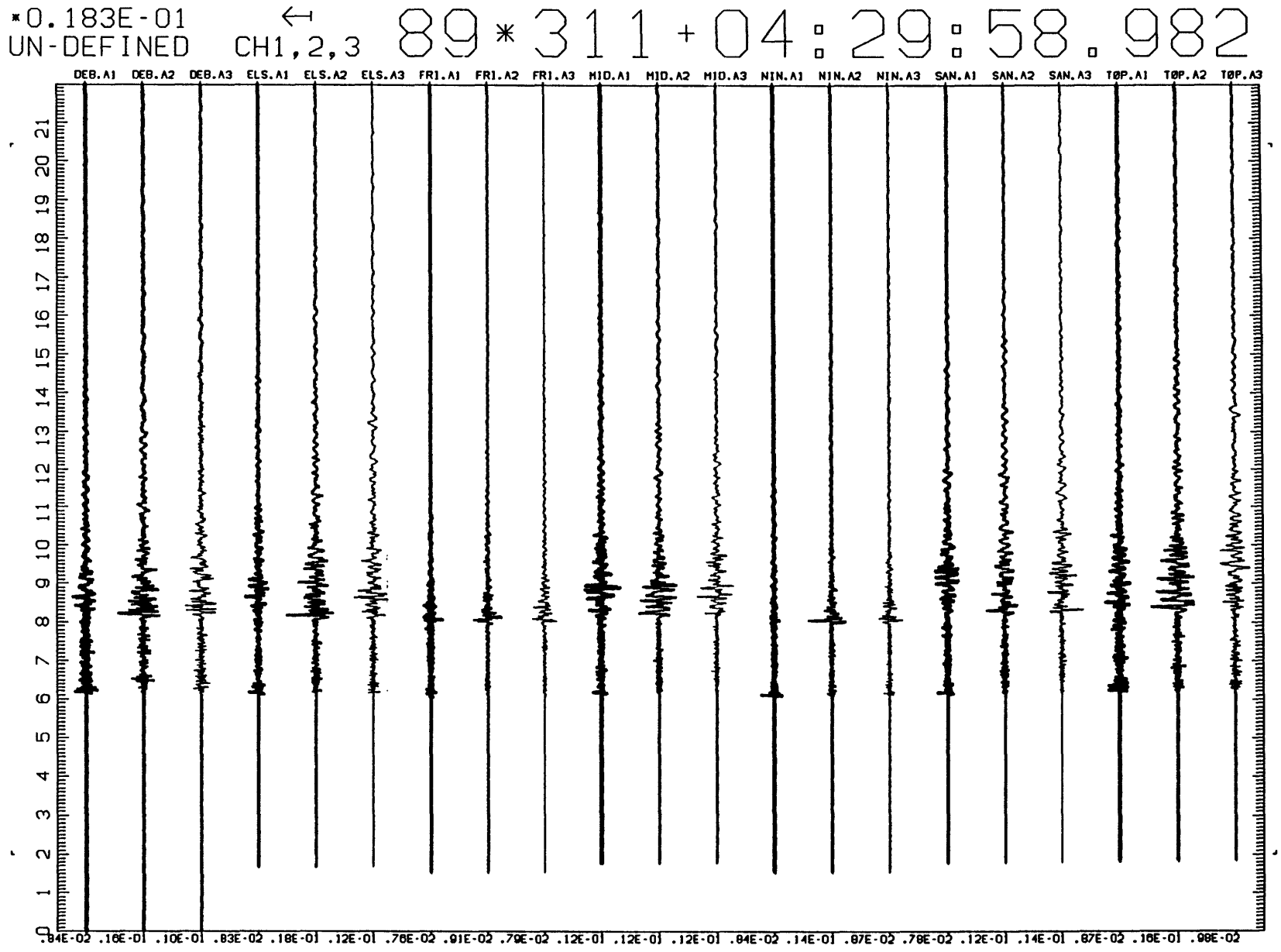
UN-DEFINED
CH1,2,3
89*310+23:37:39.624
MID.A1
MID.A2
MID.A3
SAN.A1
SAN.A2
SAN.A3
ELS.A1
ELS.A2
ELS.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.46E-02
.45E-02
.58E-02
.36E-02
.53E-02
.51E-02
.23E-02
.58E-02
.44E-02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UN-DEFINED
CH1,2,3
89*311+04:29:58.982
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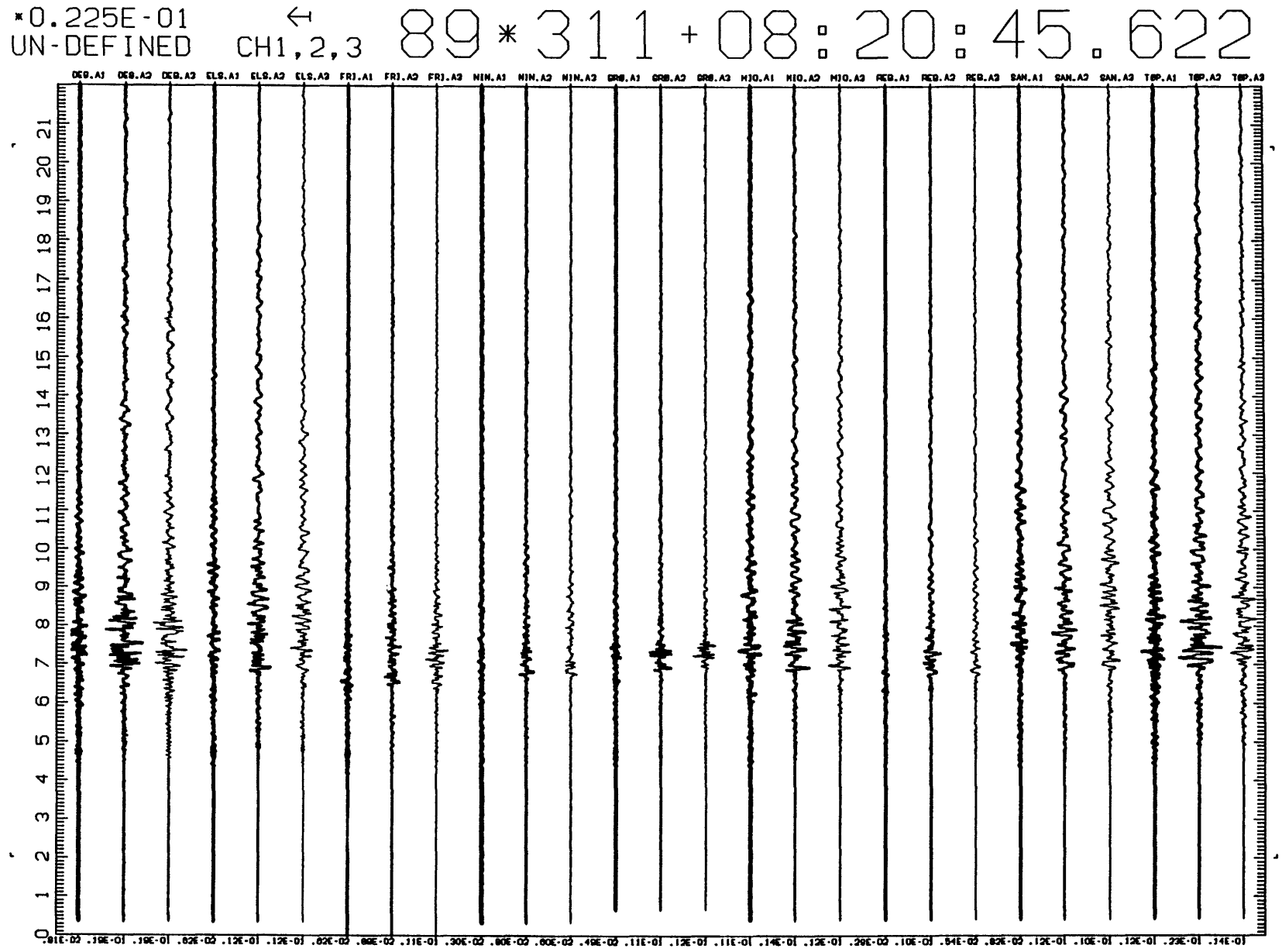
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.84E-02 .16E-01 .10E-01 .83E-02 .18E-01 .12E-01 .76E-02 .91E-02 .79E-02 .12E-01 .12E-01 .12E-01 .84E-02 .14E-01 .87E-02 .78E-02 .12E-01 .14E-01 .87E-02 .16E-01 .98E-02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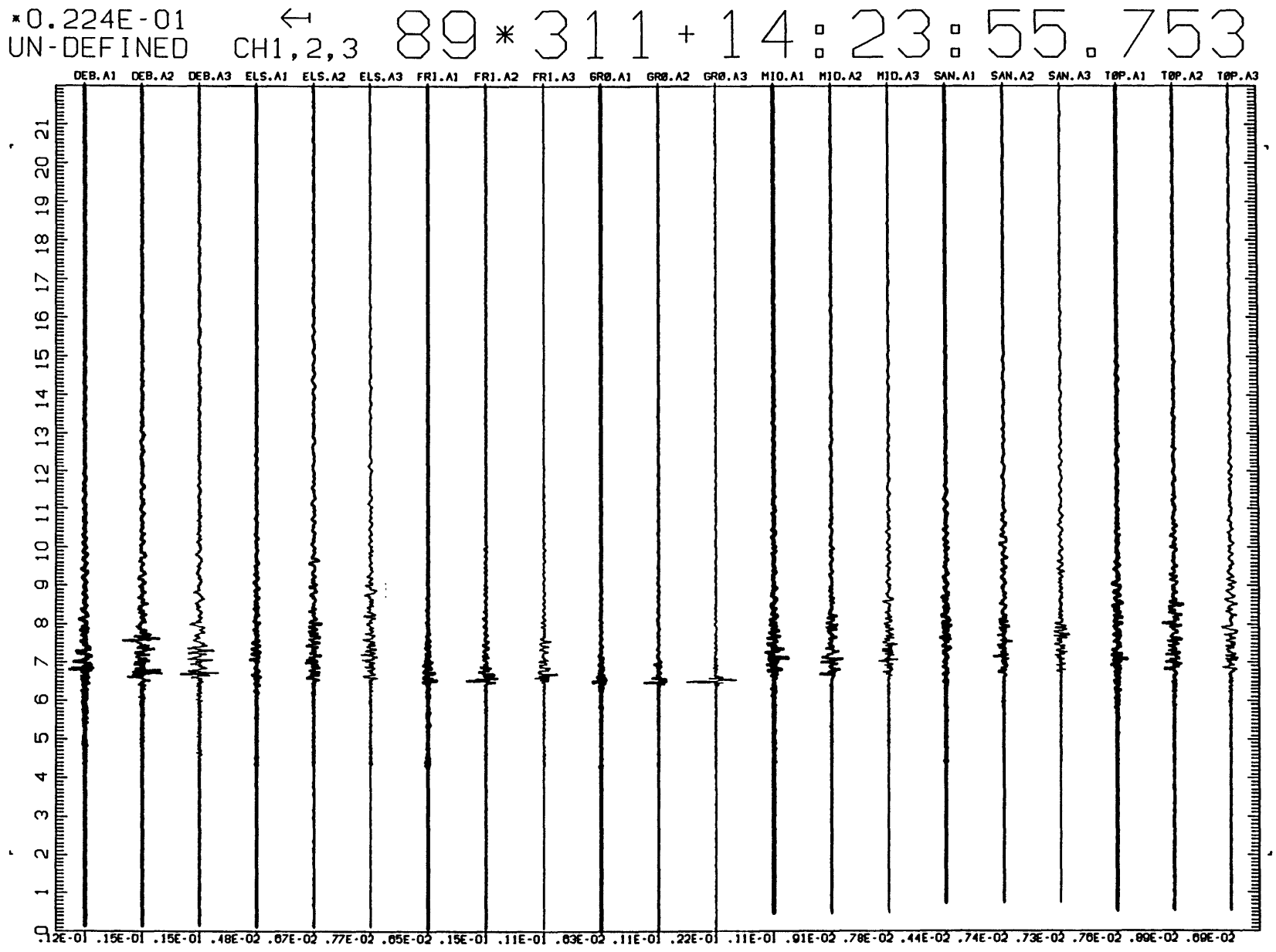
UN-DEFINED
CH1,2,3
89*311+08:20:45.622
DEB.A1 DEB.A2 DEB.A3 ELS.A1 ELS.A2 ELS.A3 FRI.A1 FRI.A2 FRI.A3 NIN.A1 NIN.A2 NIN.A3 ORB.A1 ORB.A2 ORB.A3 HIO.A1 HIO.A2 HIO.A3 REB.A1 REB.A2 REB.A3 SAN.A1 SAN.A2 SAN.A3 TBP.A1 TBP.A2 TBP.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21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UN-DEFINED
CH1,2,3
89*311+14:23:55.753
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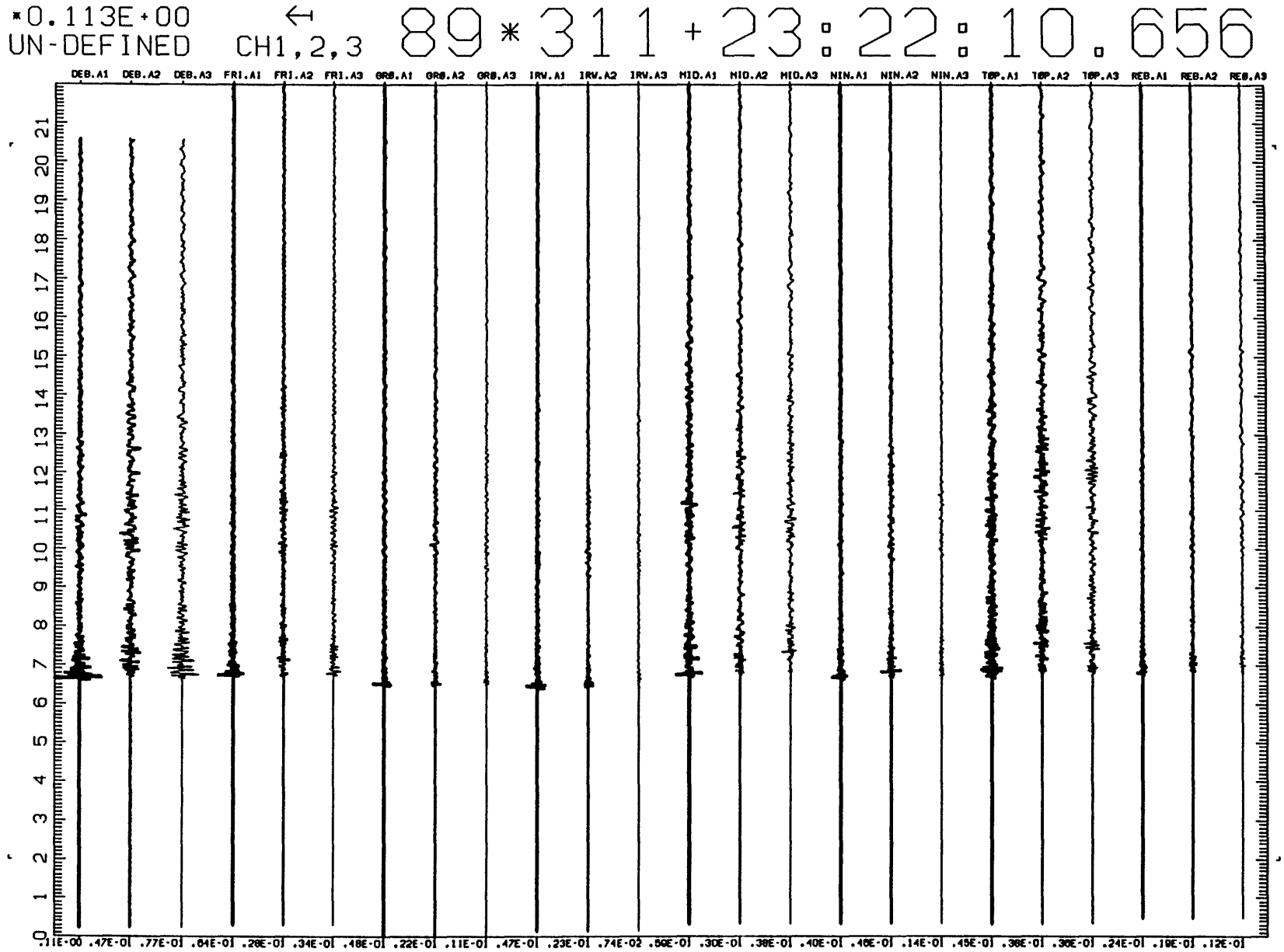
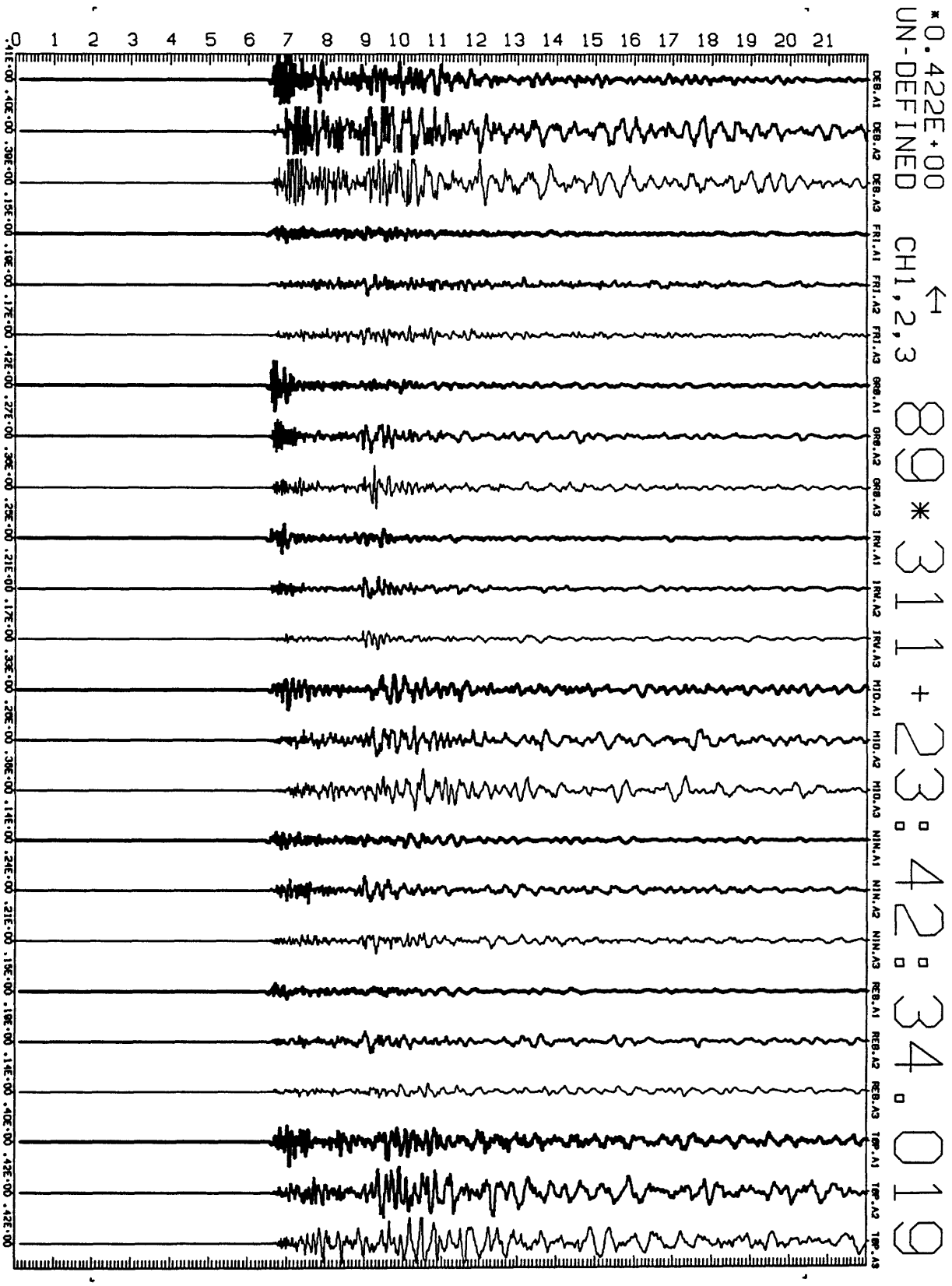
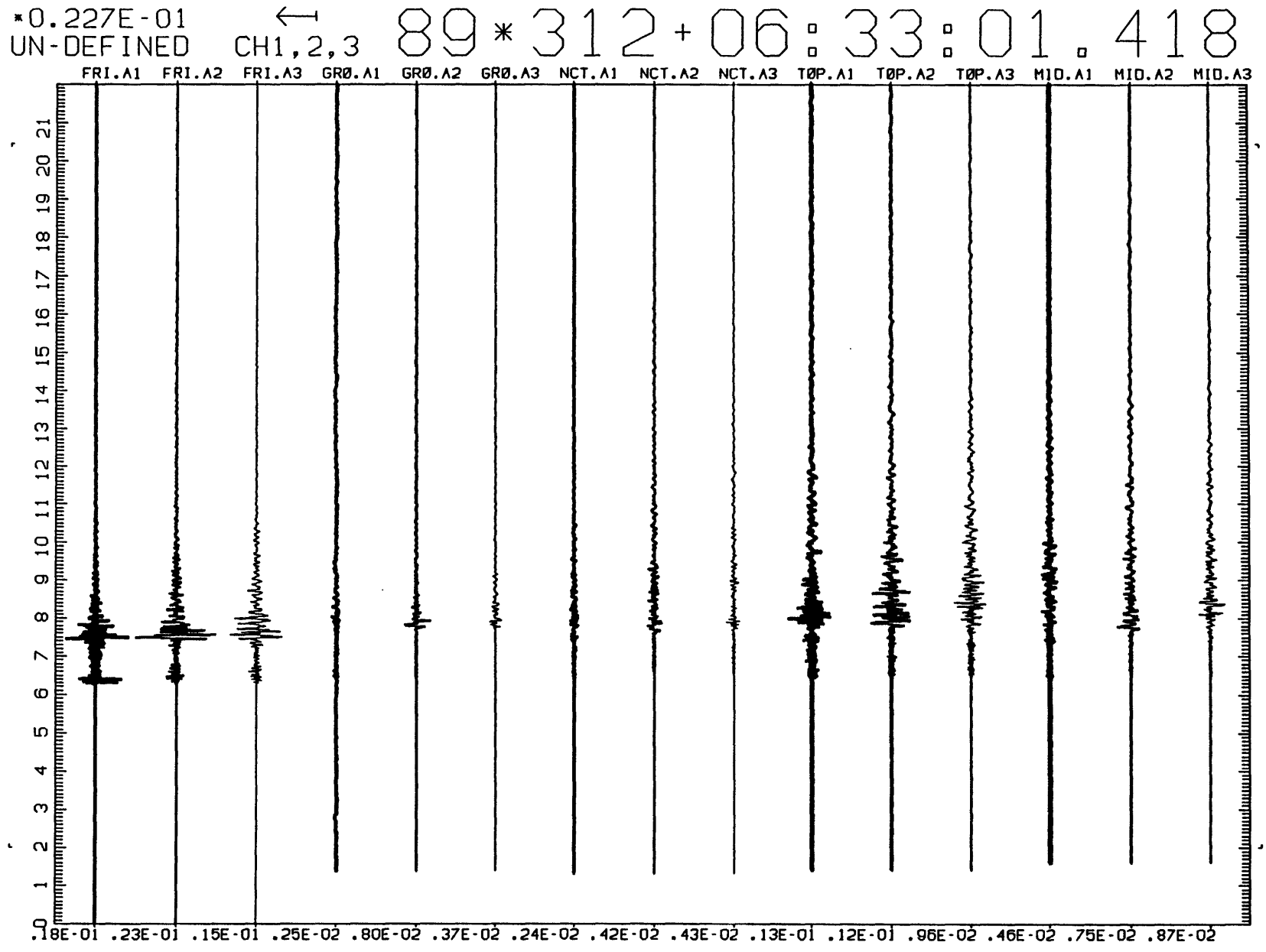
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.12E-01 .15E-01 .15E-01 .48E-02 .67E-02 .77E-02 .65E-02 .15E-01 .11E-01 .63E-02 .11E-01 .22E-01 .11E-01 .91E-02 .78E-02 .44E-02 .74E-02 .73E-02 .76E-02 .89E-02 .69E-02


*0.113E+00
UN-DEFINED
CH1,2,3
89*311+23:22:10.656
DEB.A1 DEB.A2 DEB.A3 FRI.A1 FRI.A2 FRI.A3 GRØ.A1 GRØ.A2 GRØ.A3 IRV.A1 IRV.A2 IRV.A3 MID.A1 MID.A2 MID.A3 NIN.A1 NIN.A2 NIN.A3 TØP.A1 TØP.A2 TØP.A3 REB.A1 REB.A2 REB.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.11E-00 .47E-01 .77E-01 .84E-01 .20E-01 .34E-01 .48E-01 .22E-01 .11E-01 .47E-01 .23E-01 .74E-02 .50E-01 .30E-01 .38E-01 .40E-01 .46E-01 .14E-01 .45E-01 .38E-01 .30E-01 .24E-01 .19E-01 .12E-01


*0.422E+00
UN-DEFINED
CH1,2,3
80*311+23.42.34.019
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
DEB.A1
DEB.A2
DEB.A3
FRI.A1
FRI.A2
FRI.A3
GRB.A1
GRB.A2
GRB.A3
IRN.A1
IRN.A2
IRN.A3
MID.A1
MID.A2
MID.A3
NIN.A1
NIN.A2
NIN.A3
REB.A1
REB.A2
REB.A3
TBP.A1
TBP.A2
TBP.A3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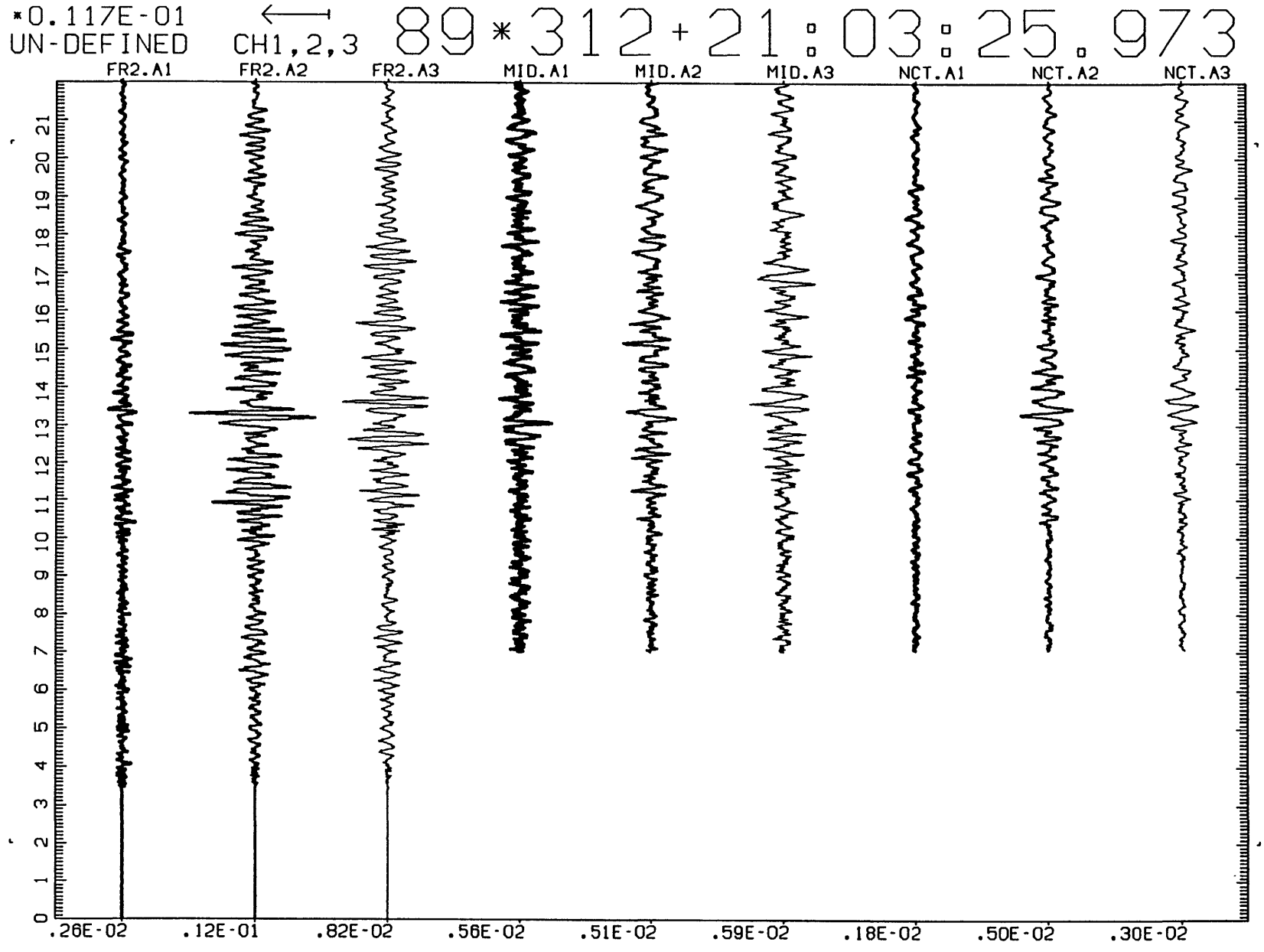
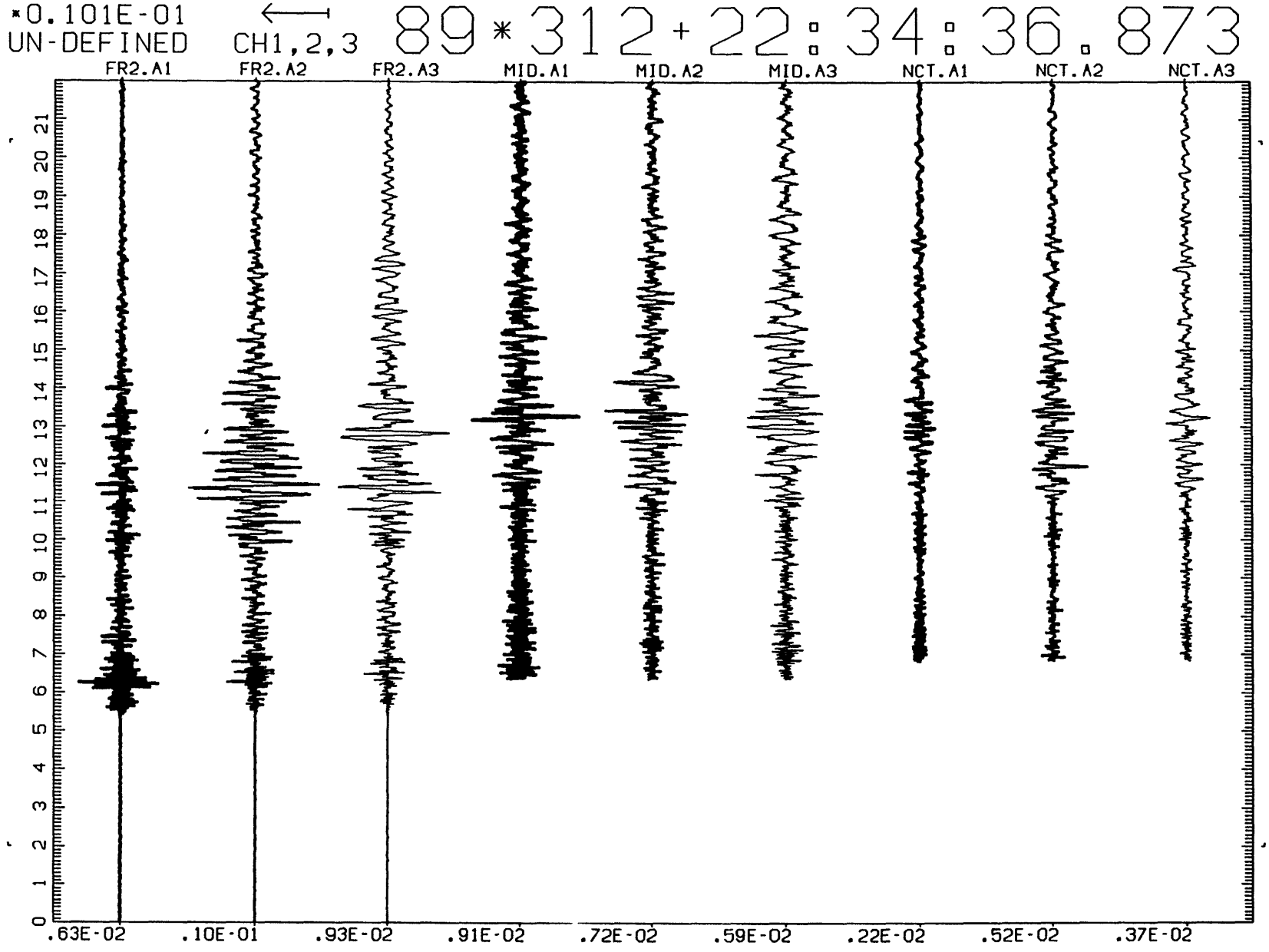
UN-DEFINED
CH1,2,3
89*312+06:33:01.418
FRI.A1
FRI.A2
FRI.A3
GRØ.A1
GRØ.A2
GRØ.A3
NCT.A1
NCT.A2
NCT.A3
TØP.A1
TØP.A2
TØP.A3
MID.A1
MID.A2
MID.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.18E-01 .23E-01 .15E-01 .25E-02 .80E-02 .37E-02 .24E-02 .42E-02 .43E-02 .13E-01 .12E-01 .96E-02 .46E-02 .75E-02 .87E-02


*0.117E-01
UN-DEFINED
CH1,2,3
89*312+21:03:25.973
FR2.A1
FR2.A2
FR2.A3
MID.A1
MID.A2
MID.A3
NCT.A1
NCT.A2
NCT.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.26E-02
.12E-01
.82E-02
.56E-02
.51E-02
.59E-02
.18E-02
.50E-02
.30E-02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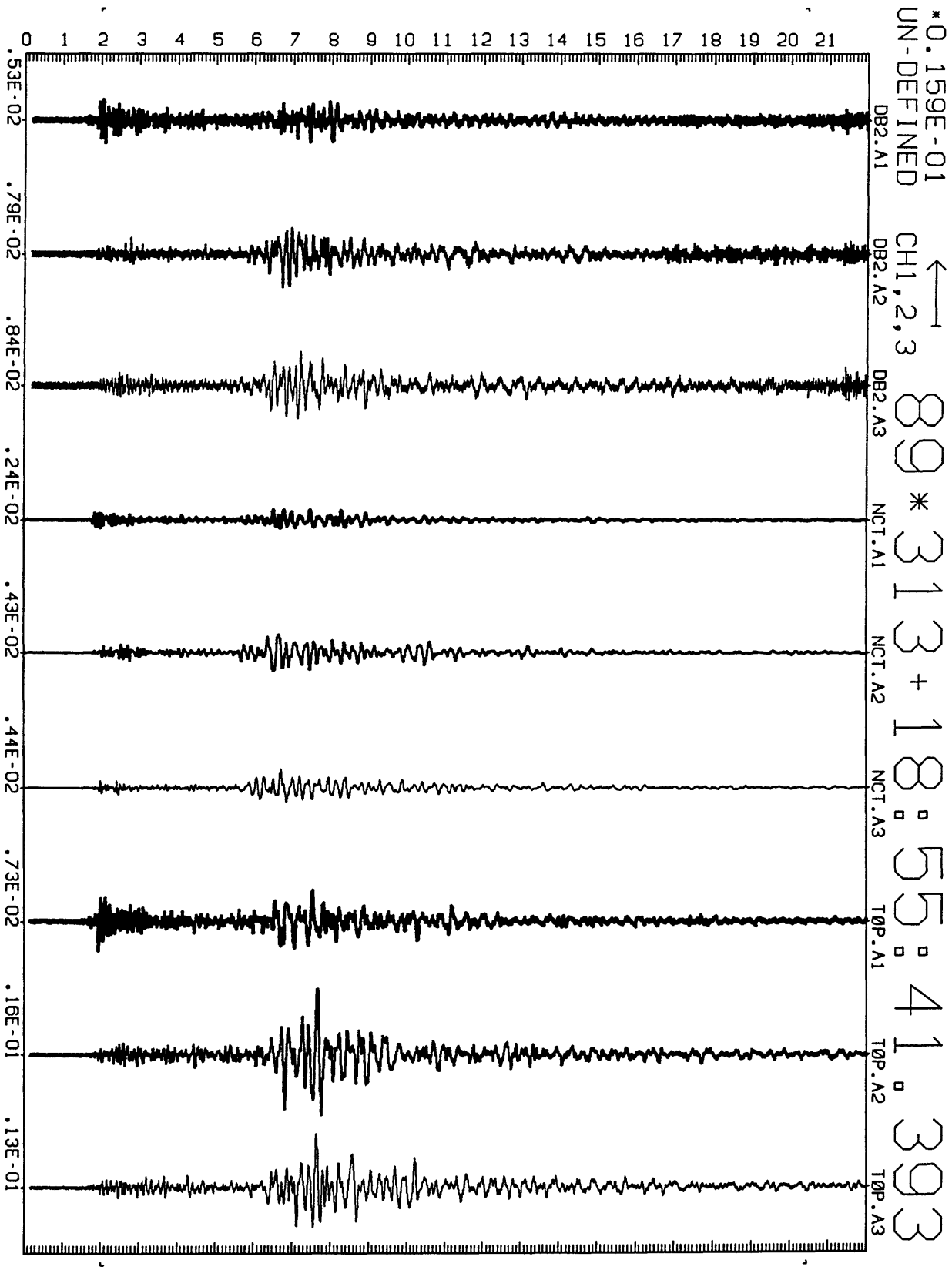
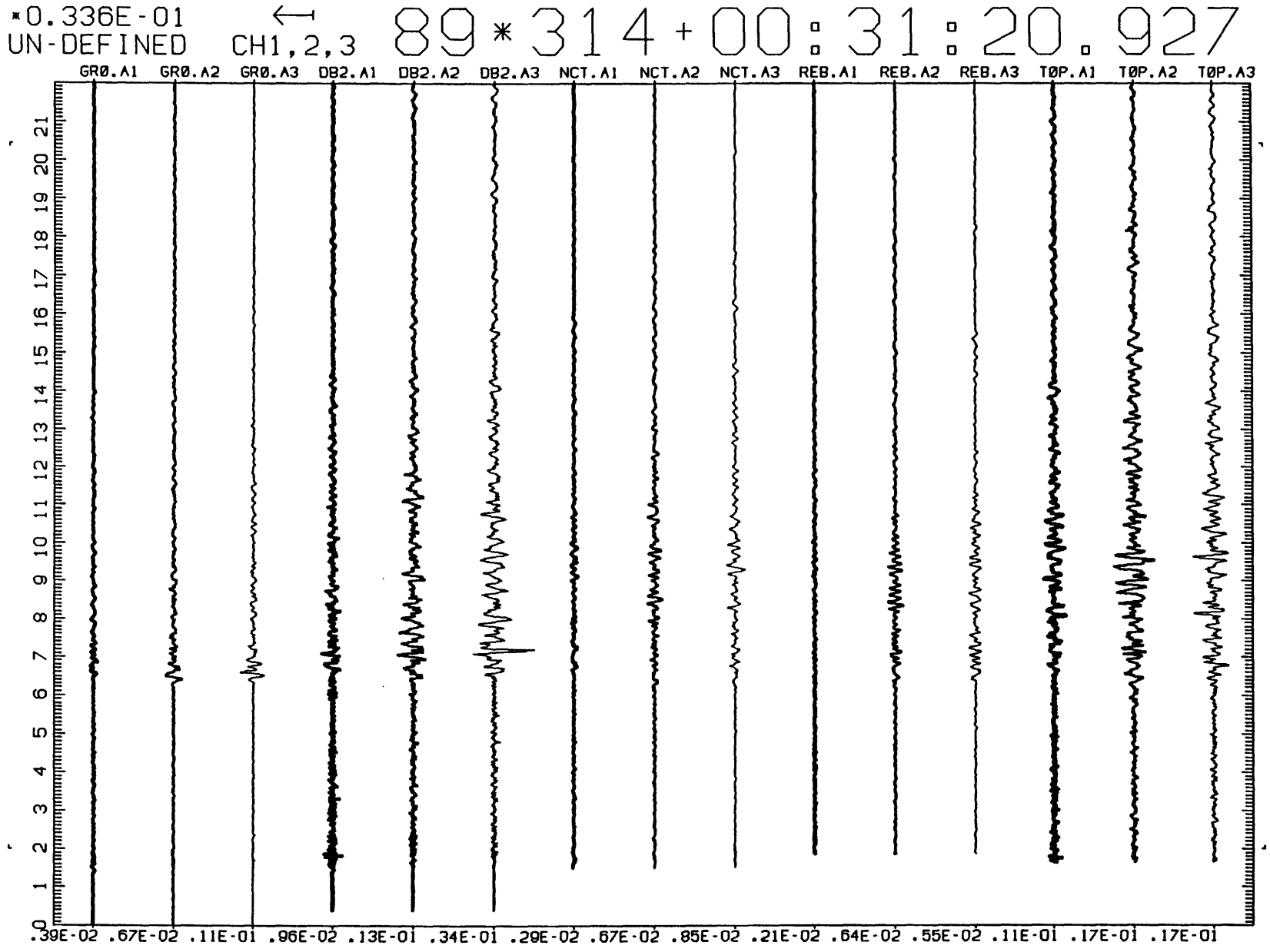
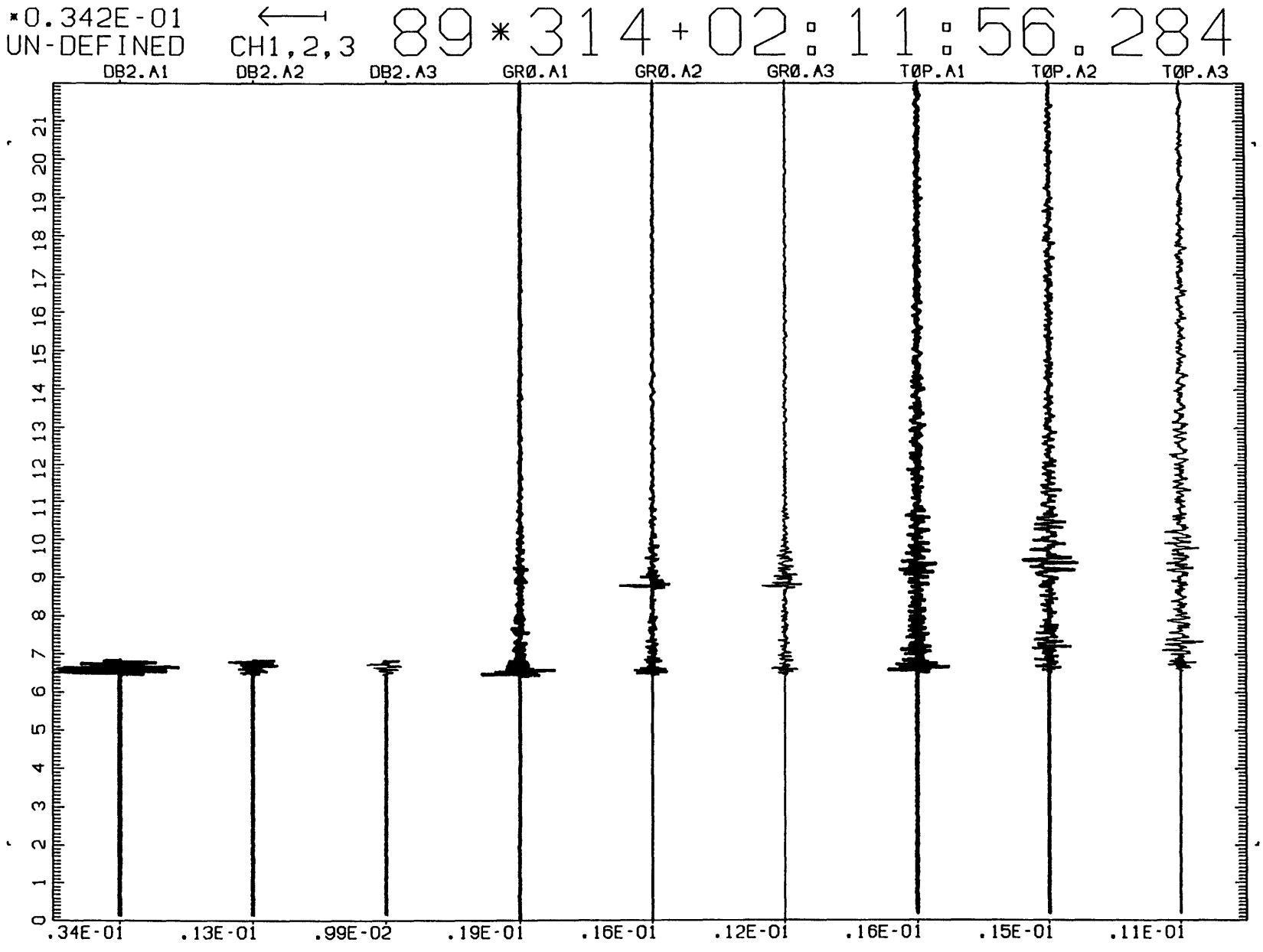
UN-DEFINED
CH1,2,3
89*312+22:34:36.873
FR2.A1
FR2.A2
FR2.A3
MID.A1
MID.A2
MID.A3
NCT.A1
NCT.A2
NCT.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.63E-02
.10E-01
.93E-02
.91E-02
.72E-02
.59E-02
.22E-02
.52E-02
.37E-02


*0.159E-01
UN-DEFINED
CH1,2,3
89*313+18:55:41.393
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.53E-02
.79E-02
.84E-02
.24E-02
.43E-02
.44E-02
.73E-02
.16E-01
.13E-01
DB2.A1
DB2.A2
DB2.A3
NCT.A1
NCT.A2
NCT.A3
TØP.A1
TØP.A2
TØP.A3


*0.336E-01
UN-DEFINED
CH1,2,3
89*314+00:31:20.927
GR0.A1
GR0.A2
GR0.A3
DB2.A1
DB2.A2
DB2.A3
NCT.A1
NCT.A2
NCT.A3
REB.A1
REB.A2
REB.A3
T0P.A1
T0P.A2
T0P.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.39E-02 .67E-02 .11E-01 .96E-02 .13E-01 .34E-01 .29E-02 .67E-02 .85E-02 .21E-02 .64E-02 .55E-02 .11E-01 .17E-01 .17E-01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UN-DEFINED
CH1,2,3
89*314+02:11:56.284
DB2.A1
DB2.A2
DB2.A3
GRØ.A1
GRØ.A2
GRØ.A3
TØP.A1
TØP.A2
TØP.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.34E-01
.13E-01
.99E-02
.19E-01
.16E-01
.12E-01
.16E-01
.15E-01
.11E-01

APPENDIX C. Los Gatos and Watsonville - Salinas study areas station data.

Los Gatos and Watsonville - Salinas study areas seismograph station locations.

The sensor column is used to indicate whether the seismometer was buried or glued as described in the text. Coordinates are referenced to the 1927 North American Datum.

STA	LATITUDE (N)	LONGITUDE (W)	ELEV (M)	SENSOR	ADDRESS
AIR	+36:52.55	−121:47.71	0002	Buried	Model airplane airfield
ART	+36:44.10	−121:47.07	0002	Buried	Artichoke Rd.
BEL	+36:54.53	−121:45.34	0015	Glued	Pacific Bell Bldg., Watsonville
G12	+37:13.23	−121:59.26	0195	Glued	Toll House Apts. rock
GN1	+37:13.47	−121:59.01	0122	Glued	35 m N of GW1
GN2	+37:13.58	−121:58.97	0122	Buried	150 N Wilder Ave.
GN3	+37:13.74	−121:58.84	0128	Glued	Title Ins. Co.
GW1	+37:13.44	−121:59.02	0122	Buried	Church School Yard, SW corner
GW2	+37:13.45	−121:59.05	0122	Buried	35 m W of GW1
GW3	+37:13.47	−121:59.10	0128	Buried	32 N Bayview Ave.
GW4	+37:13.55	−121:59.25	0146	Buried	18 N Peralta Ave.
LG1	+37:13.41	−121:58.24	0121	Buried	Bella Vista & Simmons, Los Gatos
LG2	+37:13.40	−121:58.34	0112	Buried	129 New York Ave., Los Gatos
LG3	+37:13.40	−121:58.98	0122	Buried	15 N. Santa Cruz Ave., Los Gatos
LG4	+37:13.72	−121:59.33	0146	Buried	51 Ellenwood Ave., Los Gatos
LG5	+37:13.25	−121:59.26	0195	Buried	Wood Rd., Los Gatos
LG6	+37:13.57	−121:58.74	0119	Buried	246 Edelen St., Los Gatos
LG7	+37:13.62	−121:59.04	0125	Buried	156 Massol Ave., Los Gatos
LG8	+37:14.05	−121:58.74	0119	Buried	118 Olive, Los Gatos
LG9	+37:13.88	−121:58.11	0112	Buried	108 Albert Ct., Los Gatos
L10	+37:13.73	−122:00.26	0304	Glued	
L11	+37:13.69	−122:00.58	0340	Buried	16460 Lucky Rd., Los Gatos
L12	+37:13.23	−121:59.26	0195	Glued	Wood Rd., Los Gatos
L13	+37:13.32	−121:58.35	0112	Buried	40 Pleasant St., Los Gatos
L14	+37:13.39	−121:58.94	0121	Buried	Santa Cruz Ave., Los Gatos
L15	+37:13.24	−121:58.68	0119	Buried	Police Dept., Los Gatos Civic Center
L16	+37:13.74	−121:57.55	0112	Buried	16611 Topping Way, Los Gatos
L17	+37:13.17	−121:58.23	0121	Buried	208 Johnson Ave., Los Gatos
L18	+37:13.62	−121:59.41	0164	Buried	30 Walnut St., Los Gatos
LEX	+37:12.05	−121:59.43	0201	Glued	Spillway, Lexington Dam
MIL	+36:54.40	−121:44.40	0009	Buried	Miller Raspberry Farm
MOL	+36:45.97	−121:47.64	0003	Buried	Molera Rd.
MOS	+36:47.95	−121:47.32	0002	Buried	Moss Landing Public Access
ORD	+36:38.88	−121:42.08	0012	Buried	East of Fort Ord
SC3	+37:13.42	−121:58.94	0122	Glued	19 N.Santa Cruz Ave.(19 m N of LG3)

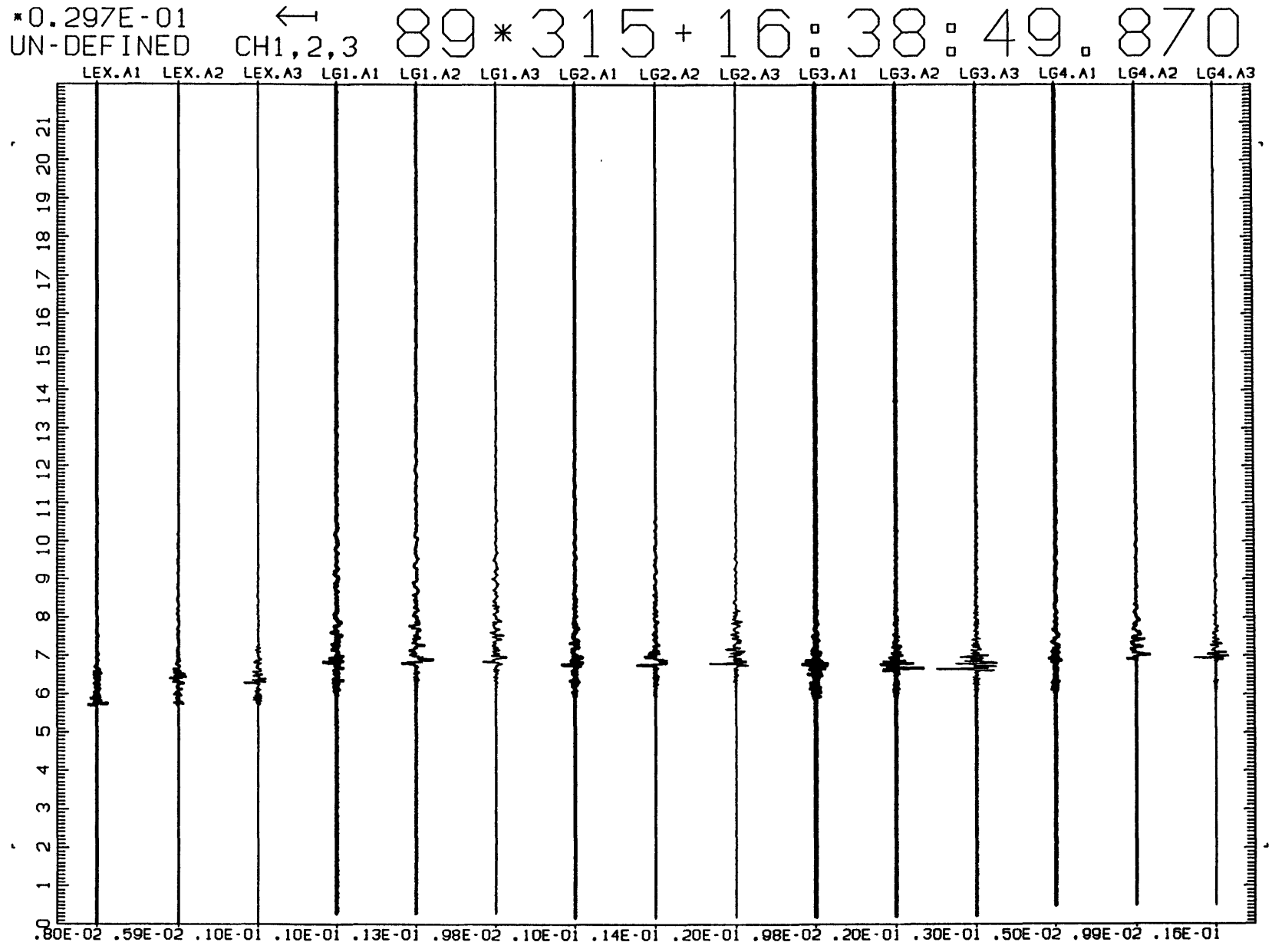
List of aftershocks recorded at three or more seismograph stations at Los Gatos and Watsonville-Salinas study areas. Seismic records were identified by a computer algorithm that found multiple triggers in a 13 s sliding-time window. Earthquakes are listed by the start time of the earliest associated record (day, hour, minute are characters one through seven in the filename). Records (for a given three-letter station code) are indicated by the corresponding second-bin character, i.e., character eight in the filename - A = 0.000 - 2.999, B = 3.000 - 5.999, ...T = 57.000 - 59.999.

The computer algorithm also extracted hypocenter information for associated earthquakes from U.S. Geological Survey summary files. The hypocenter data were provided by D. Oppenheimer and are listed in HYPO71 format. We used versions of the summary files that were current at the time of writing this report in September 1990. These hypocenters will be refined during the lifetime of this report and are provided here only to help readers make preliminary correlations between earthquakes and seismograph recordings.

EVENT	MAG	AIRT	ABEL	GN21	GN23	GW12	GW23	GW34	L01	L12	L23	L34	L45	L56	L67	L78	LEX	LG12	LG23	LG34	LG45	LG56	LG67	LG78	LG89	MIOL	MOOS	MORD	OSC3
3151638	1.4																Q	Q	Q	Q	Q								
3180450	2.3									P									P	P		P	P	P	Q				
3180841	2.0																		K		K	K							
3180906	1.8									J									K	K	K	K		K					
3181734	3.1									B									B		B	C			B				
3182041	2.7								S										R	S	S	S			S				
3182116	3.4								N		N								N	N	N	N	N		N				
3191005	2.5								A		B	B						B	B		B	B		B	B				
3191008	2.4								O		O	O							O		O	O		O	O				
3191806	1.4								L		L	L									L								
3200459	2.9								I		I		I					I	I			I		I	I	I			
3200937	2.0								T		A		A					T	A			A		A	T	A			
3201407	2.4								M		M		M					M	M			M		M	M	M			
3201710	2.7								G		G							G	G			G		G		G			
3202217	2.3								G		H			H	H	H		H	H					G	H	H			
3211233	1.4								H		H	H																	
3211932	2.6								H		G	G			G	G			G						I	H			
3211935	2.2								H		H	H			H	G													
3220630	2.1										E	F		F	F	F	F		F					F					
3221119	1.9										K	K		K	K	K	K		K										
3272158	2.7																									H	I	I	
3340950	3.6		P																								P	O	N
3351237	4.3	Q	P																							P	P	P	
3460351	3.2				T	T	T	T	T	T	T	T									T								T
3481804	2.1				C	C	C		C	C	C	C																	
3482140	1.7				H	H			H	H																			

AIRT	ABEL	GN21	GN23	GW12	GW23	GW34	L01	L12	L23	L34	L45	L56	L67	L78	LEX	LG12	LG23	LG34	LG45	LG56	LG67	LG78	LG89	MIOL	MOOS	MORD	OSC3
8911111638547937	1222121-5817	333	0	13127	1	633377	45196	9	3514	BLM	22	0
8911140450516337	1057121-5753	520	0	66	51	3	1226680	29	62	9	1823	LOM	13	2
8911140841321037	1384122- 836	942	0	50	40	3	1124571	47	5518	2320	BLM	17	1
8911140906347437	1447122- 242	672	0	25	50	5	1024276	56	5	7	2518	BLM	24	0
8911141733500536	4952121-3175	58328	82	33	3	1525589	37	53	0	2131	SJB	13	3
8911142041549237	544121-5031	560	0	78	37	2	827776	19	6311	1327	LOM	9	0
8911142116425437	547121-5044	572	0	85	37	2	926183	22	58	5	1434	LOM	9	1
8911151005038037	411121-5320	1437	0	83	59	5	823379	28	4410	1725	LOM	11	0
8911151008416437	403121-5317	1382	0	79	59	4	1125070	32	4818	2124	LOM	13	0
8911151806379438	4921122-4786	358	0	5239	1	132732	16320242	72	6	GEY	44	0
8911151806391737	1050121-5838	483	0	10101	3	335751	5116137	3414	LOM	23	0
8911160459289537	1133122- 259	123425	82	57	4	1124476	38	4913	1929	BLM	13	1
8911160938024937	887121-5876	1084	0	61	62	4	923177	36	5812	1920	LOM	14	0
8911161407401537	1223122- 234	1173	0	79	51	5	1123873	35	4216	1524	BLM	13	1
8911161710142536	5803121-4276	1494	0	84	42	2	1125486	33	50	2	2227	SJB	12	0
8911162217242937	926121-5764	878	0	66	56	3	1223585	35	50	4	1823	LOM	15	1
8911171233242837	914121-5788	831	0	19	76	4	6 2474	6220115	2714	LOM	24	0
8911171932186737	357121-4757	888	0	80	30	2	1426479	36	6410	1926	LOM	14	0
8911171935189537	383121-4767	888	0	70	25	2	1323986	37	57	3	2022	LOM	14	1
8911180630173437	905121-5863	904	0	54	61	4	1023478	40	5811	1921	LOM	14	0
8911181119330137	656122- 27	1206	0	48	80	6	823575	46	5414	2319	LOM	17	0
8911232158248036	5326121-3580	453	0	82	57	1	18 9386	40231	2	2227	SJB	15	1
8911300950405536	4315121-2235	50930	97	32	3	3621281	90	52	8	3536	STN	23	7
8912011237431736	4154121-1917	68638	83	28	3	1113686	36	50	0	1743	STN	11	0
8912120352010037	849121-5907	129830	92	65	4	922679	28	4810	1632	LOM	10	6
8912141804103037	1417122- 121-	758	0	59	42	5	1123481	42	41	8	1921	BLM	14	1
8912142140261137	1196121-5690	350	0	30	65	3	719872	36	1617	2017	SCV	15	0

Seismograms recorded by three or more stations at the Los Gatos and Watsonville-Salinas study areas. Each seismogram plotted has been limited to 22 s, although the actual records may be longer. Three components are plotted for each station that recorded the aftershock. The traces are identified on the right by station name and component. A1 is the vertically oriented component, A2 is horizontally oriented North; A3 is horizontally oriented East. The peak velocity (expressed in cm/s) of the trace is shown in the left margin. All traces for each event are plotted at the same scale. Time proceeds from left to right and the numbers indicated are seconds from the time of the first sample of the record.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89*315+16:38:49.870
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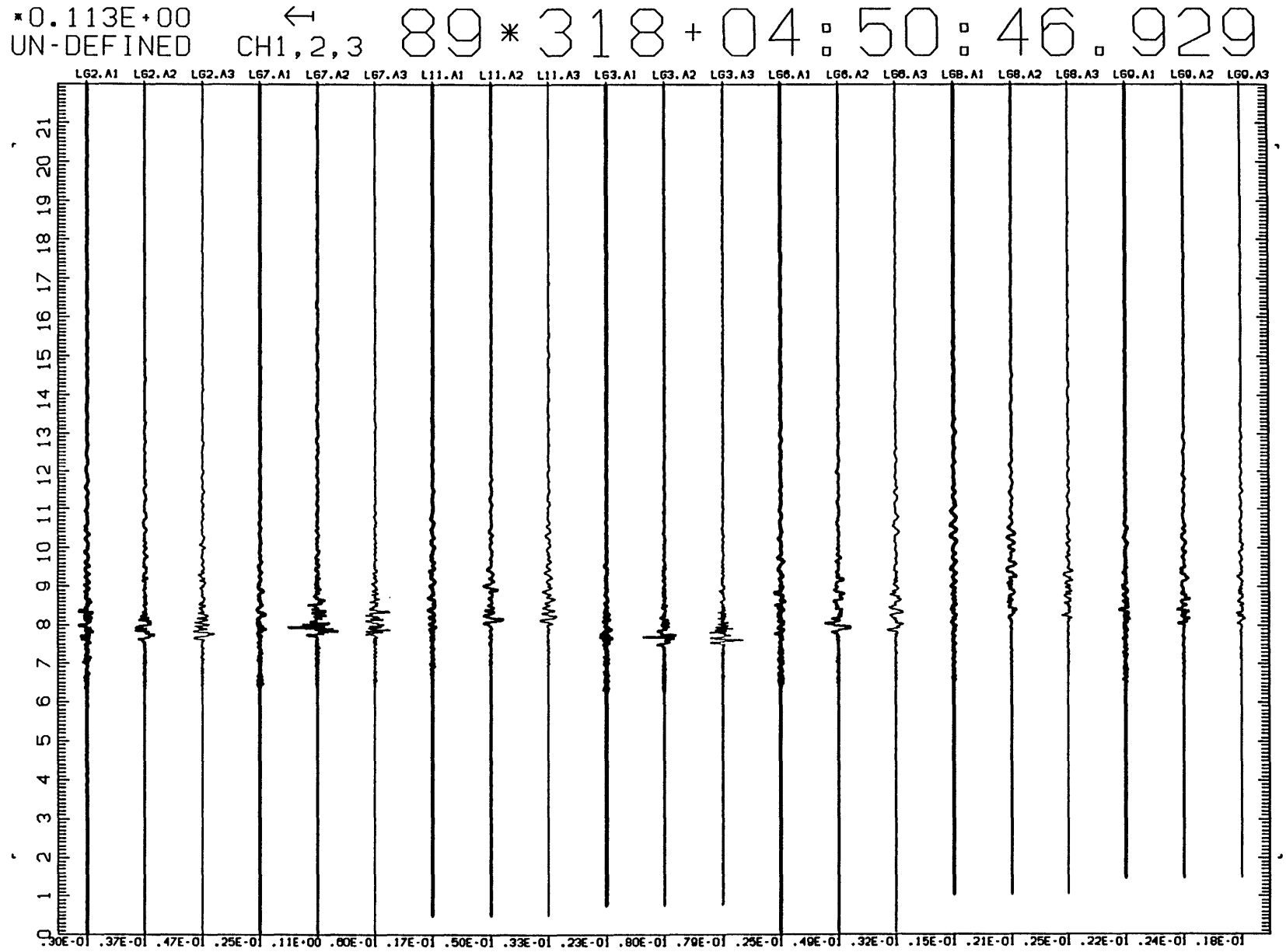
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.80E-02 .59E-02 .10E-01 .10E-01 .13E-01 .98E-02 .10E-01 .14E-01 .20E-01 .98E-02 .20E-01 .30E-01 .50E-02 .99E-02 .16E-01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UN-DEFINED
CH1,2,3
89*318+04:50:46.929
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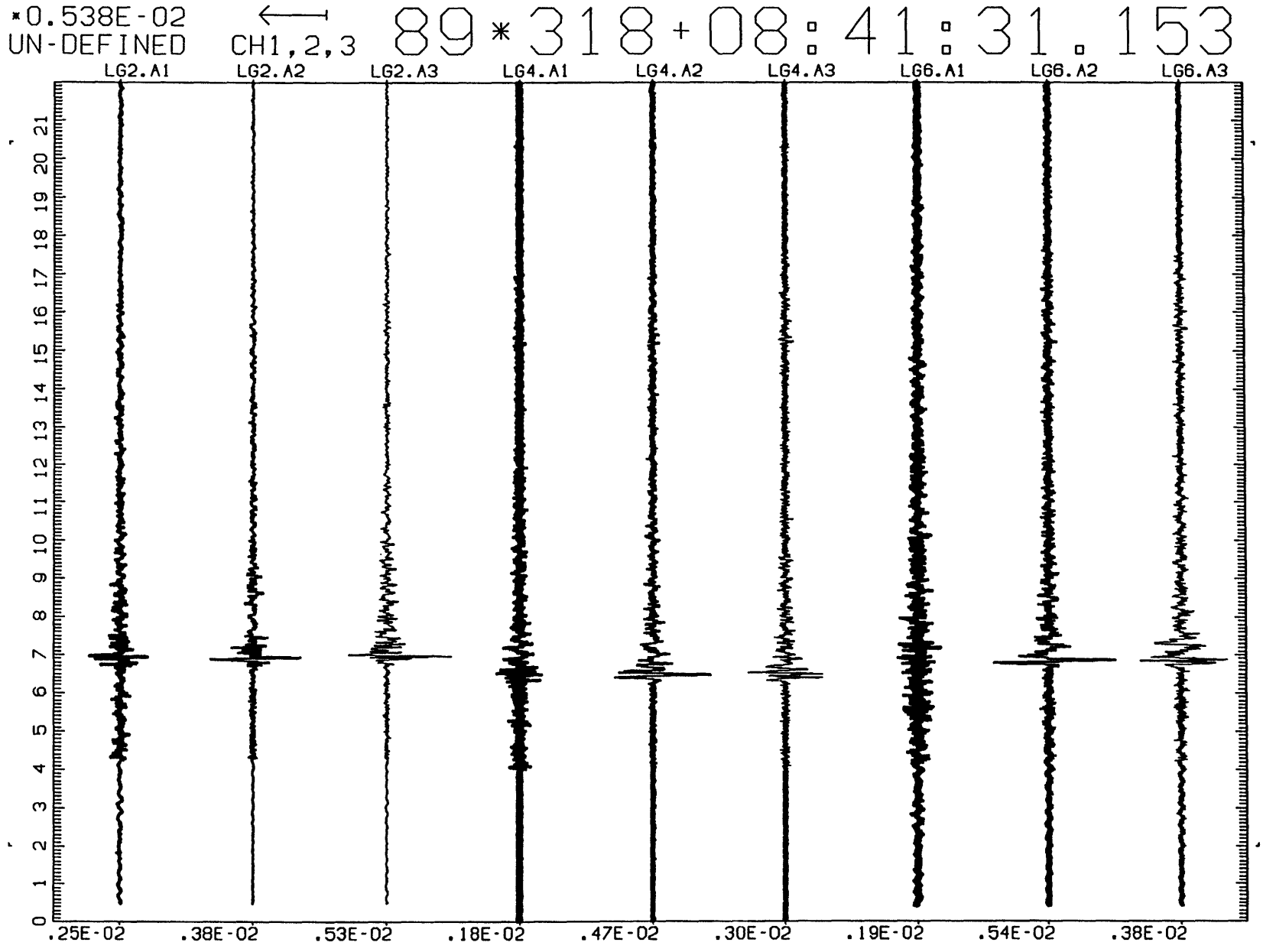
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.30E-01 .37E-01 .47E-01 .25E-01 .11E+00 .60E-01 .17E-01 .50E-01 .33E-01 .23E-01 .80E-01 .79E-01 .25E-01 .49E-01 .32E-01 .15E-01 .21E-01 .25E-01 .22E-01 .24E-01 .18E-01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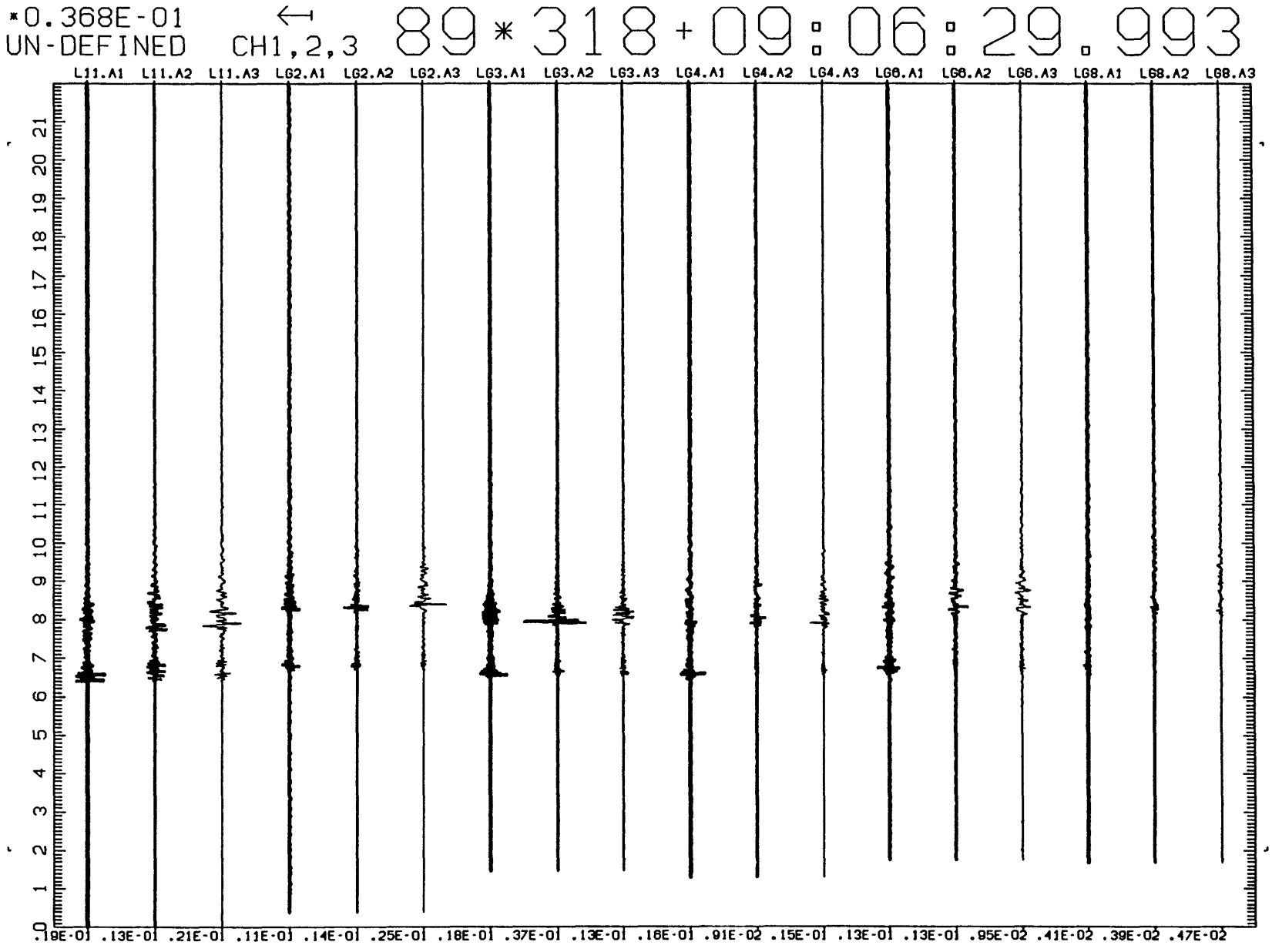
CH1,2,3
89*318+08:41:31.153
LG2.A1
LG2.A2
LG2.A3
LG4.A1
LG4.A2
LG4.A3
LG6.A1
LG6.A2
LG6.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.25E-02
.38E-02
.53E-02
.18E-02
.47E-02
.30E-02
.19E-02
.54E-02
.38E-02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UN-DEFINED
CH1,2,3
89*318+09:06:29.993
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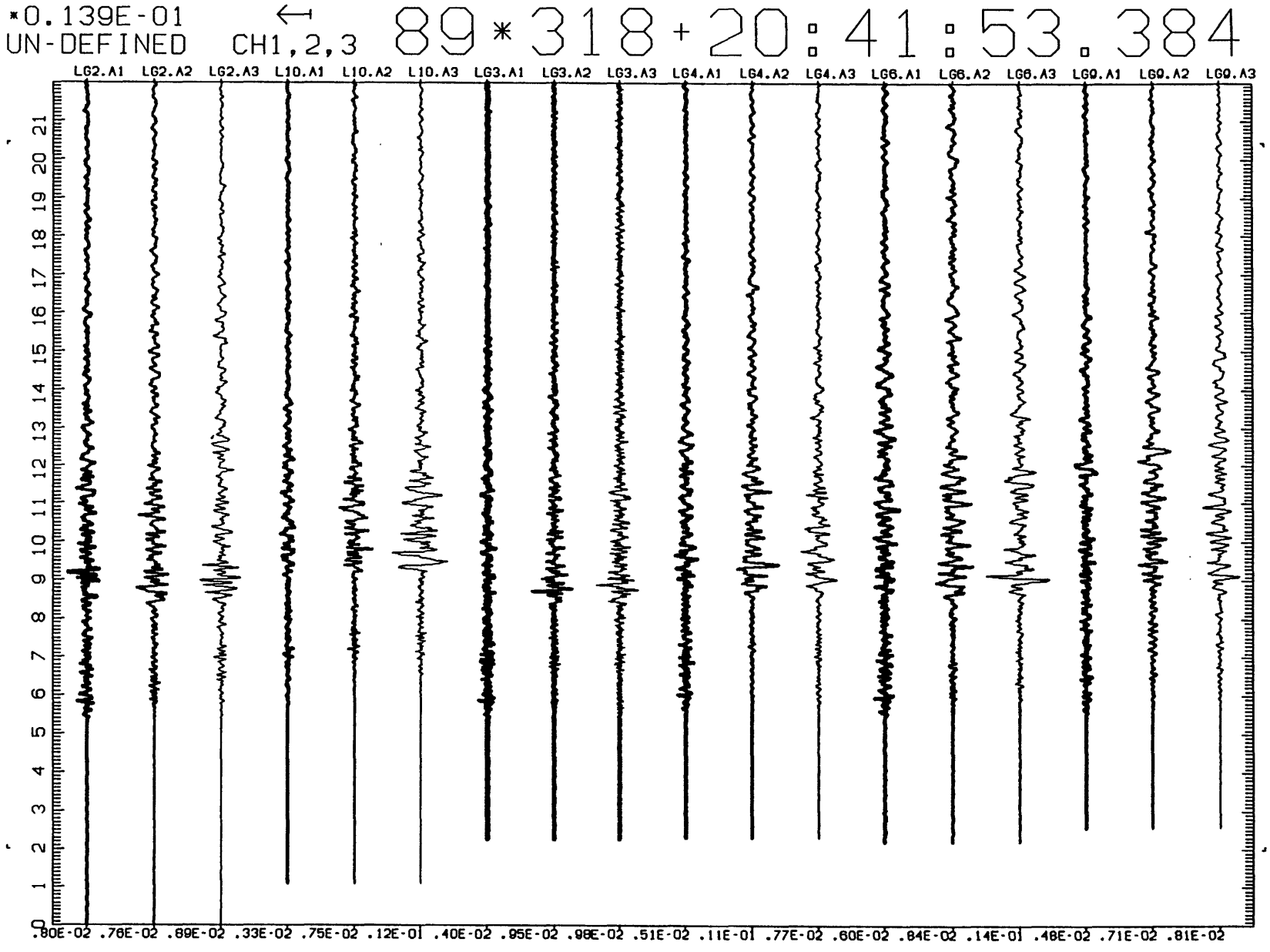
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.19E-01 .13E-01 .21E-01 .11E-01 .14E-01 .25E-01 .18E-01 .37E-01 .13E-01 .16E-01 .91E-02 .15E-01 .13E-01 .13E-01 .95E-02 .41E-02 .39E-02 .47E-02

*0.788E-02
UN-DEFINED
CH1,2,3
89*318+17.34.03.733
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.36E-02 .31E-02 .42E-02 .31E-02 .79E-02 .54E-02 .36E-02 .45E-02 .48E-02 .28E-02 .47E-02 .68E-02 .40E-02 .76E-02 .66E-02
LG2.A1 LG2.A2 LG2.A3 L11.A1 L11.A2 L11.A3 LG4.A1 LG4.A2 LG4.A3 LG9.A1 LG9.A2 LG9.A3 LG6.A1 LG6.A2 LG6.A3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UN-DEFINED
CH1,2,3
89*318+20:41:53.384
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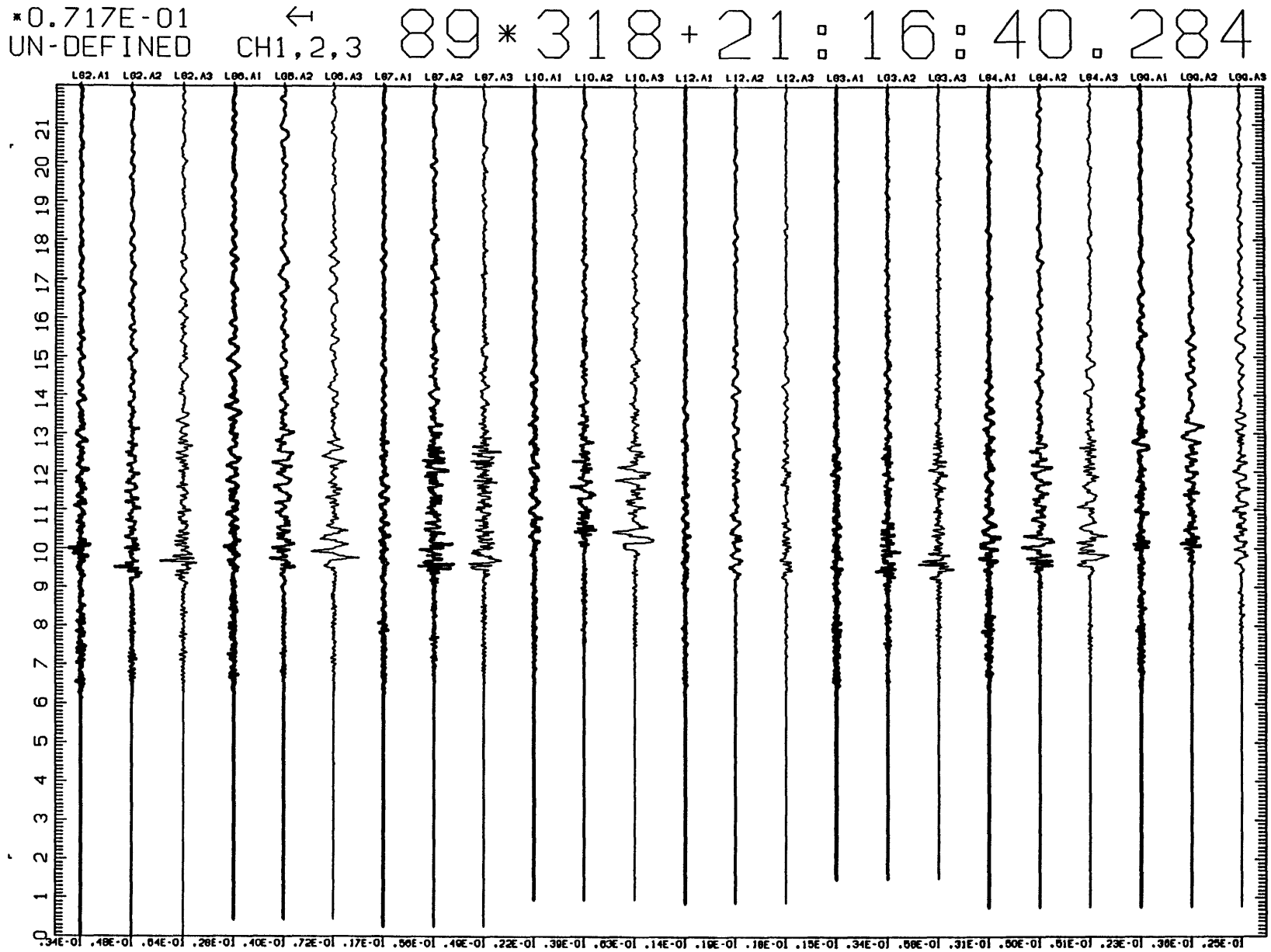
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.80E-02 .76E-02 .89E-02 .33E-02 .75E-02 .12E-01 .40E-02 .95E-02 .98E-02 .51E-02 .11E-01 .77E-02 .60E-02 .84E-02 .14E-01 .48E-02 .71E-02 .81E-02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CH1,2,3
89*318+21:16:40.284
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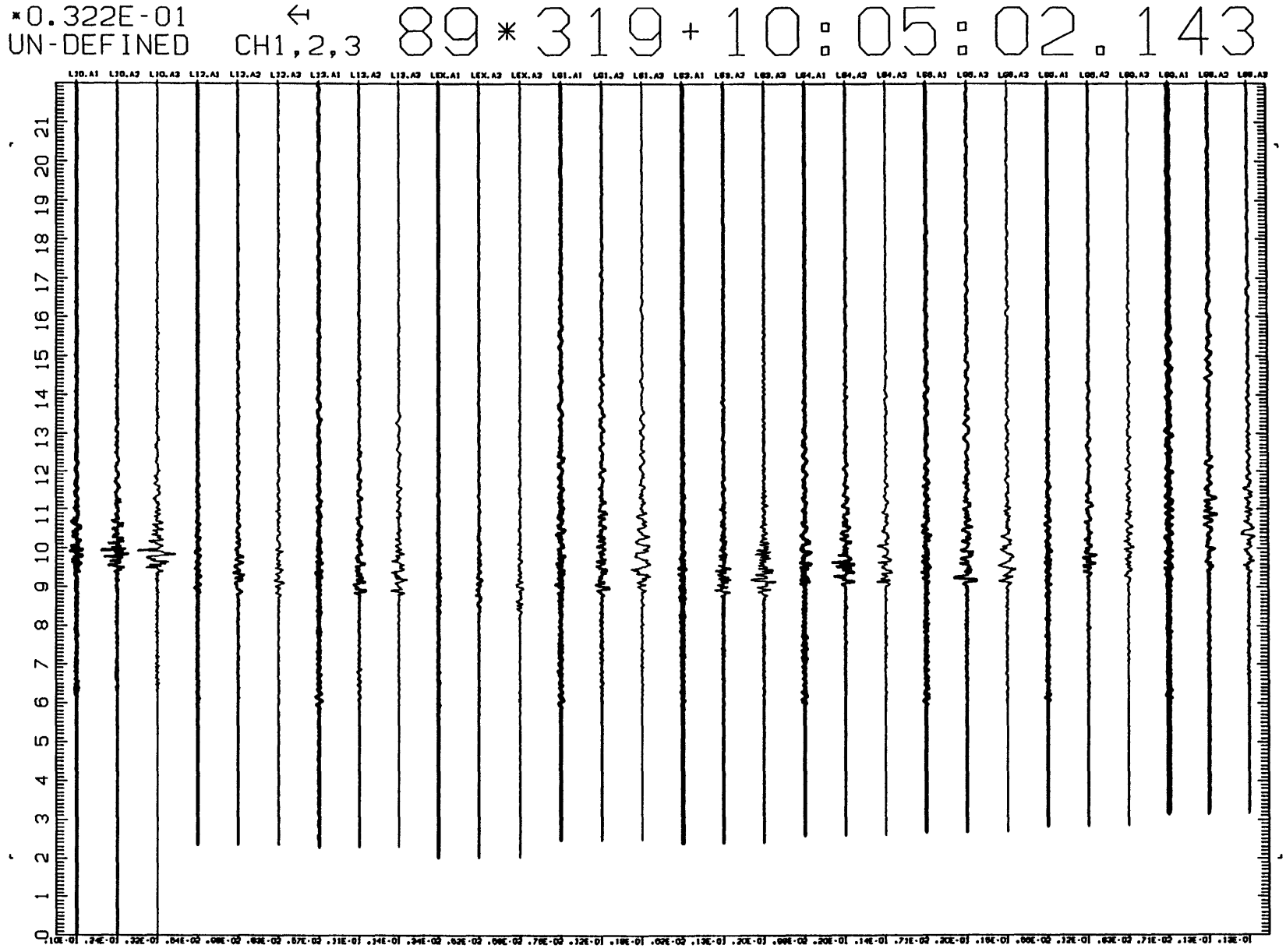
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.34E-01 .48E-01 .64E-01 .28E-01 .40E-01 .72E-01 .17E-01 .56E-01 .49E-01 .22E-01 .30E-01 .63E-01 .14E-01 .19E-01 .18E-01 .15E-01 .34E-01 .66E-01 .31E-01 .50E-01 .61E-01 .23E-01 .30E-01 .25E-01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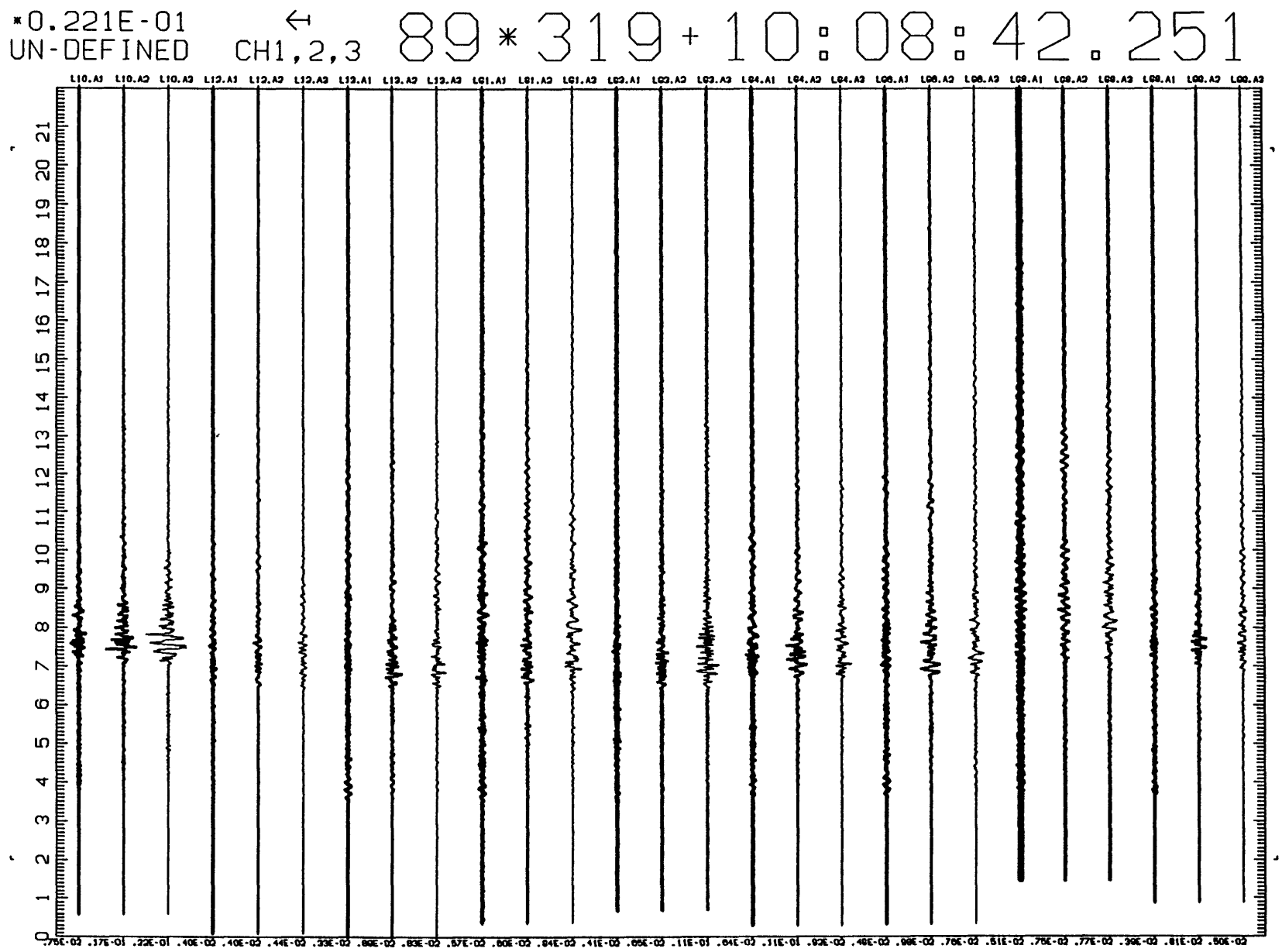
UN-DEFINED
CH1,2,3
89*319+10:05:02.143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UN-DEFINED
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89*319+10:08:42.251
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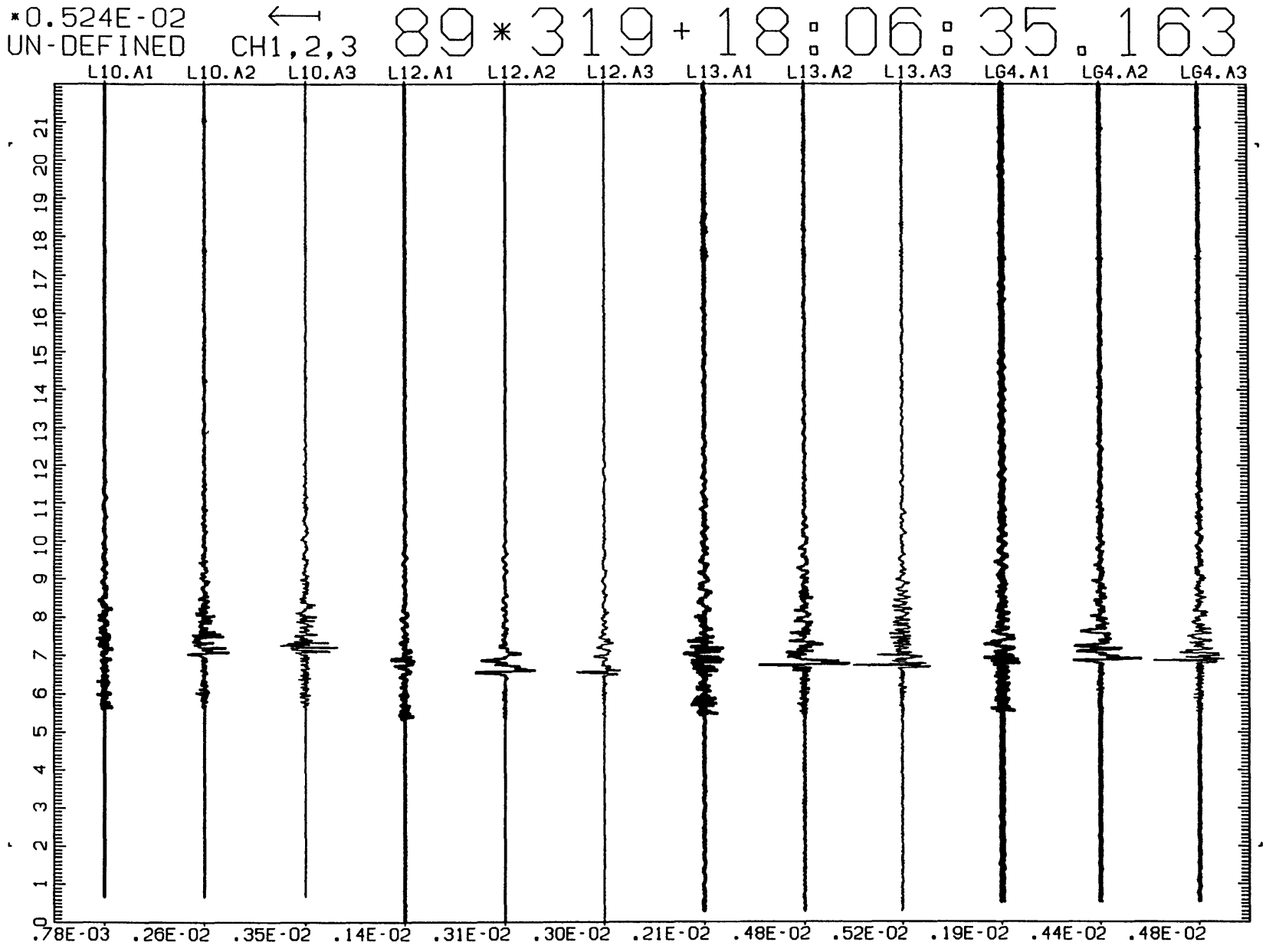
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.75E-02 .17E-01 .22E-01 .40E-02 .40E-02 .44E-02 .33E-02 .80E-02 .83E-02 .57E-02 .60E-02 .84E-02 .41E-02 .65E-02 .11E-01 .64E-02 .31E-01 .93E-02 .48E-02 .98E-02 .76E-02 .51E-02 .75E-02 .77E-02 .39E-02 .81E-02 .50E-02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UN-DEFINED
CH1,2,3
89*319+18:06:35.163
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L10.A2
L10.A3
L12.A1
L12.A2
L12.A3
L13.A1
L13.A2
L13.A3
LG4.A1
LG4.A2
LG4.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.78E-03
.26E-02
.35E-02
.14E-02
.31E-02
.30E-02
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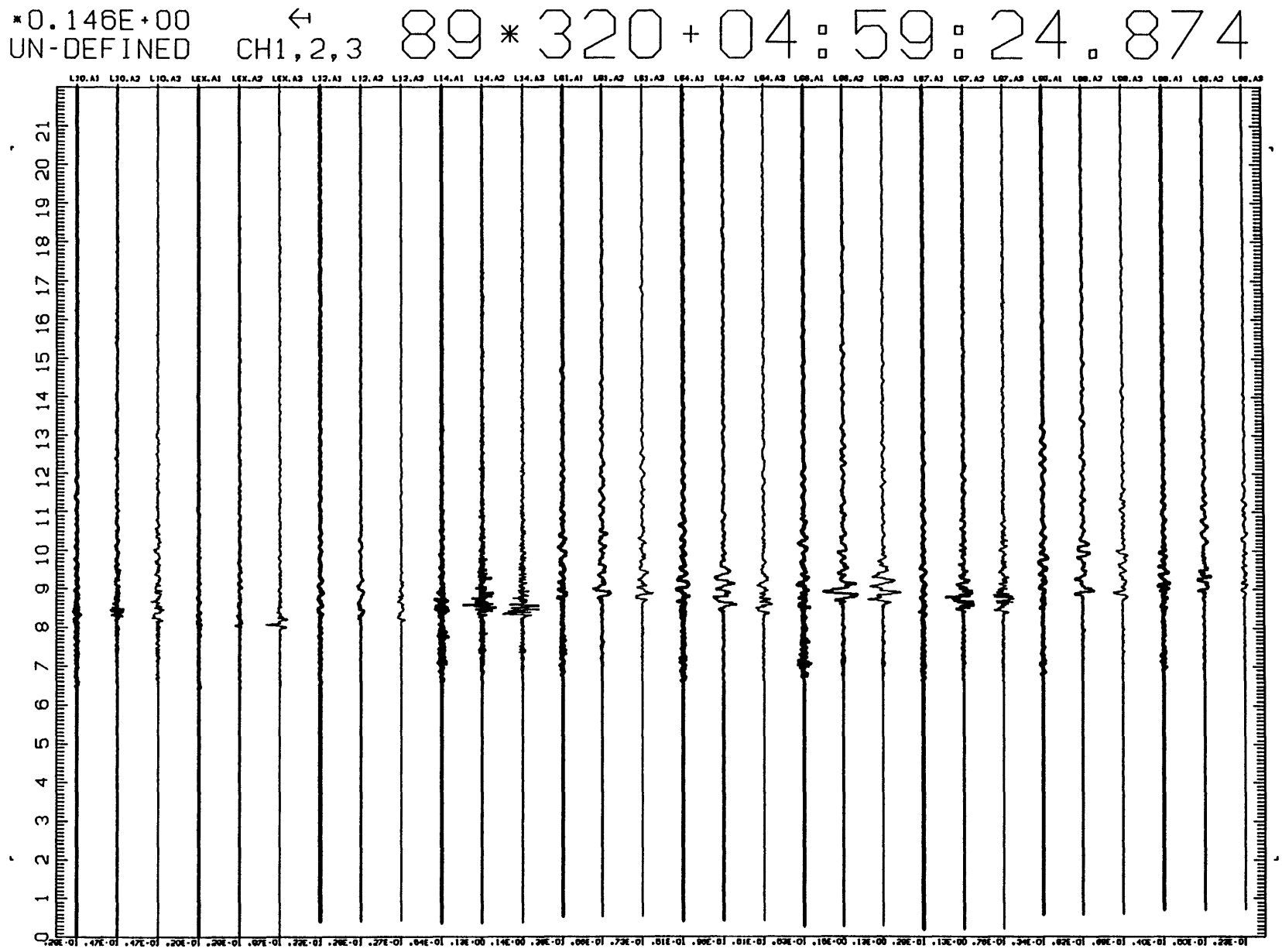
.48E-02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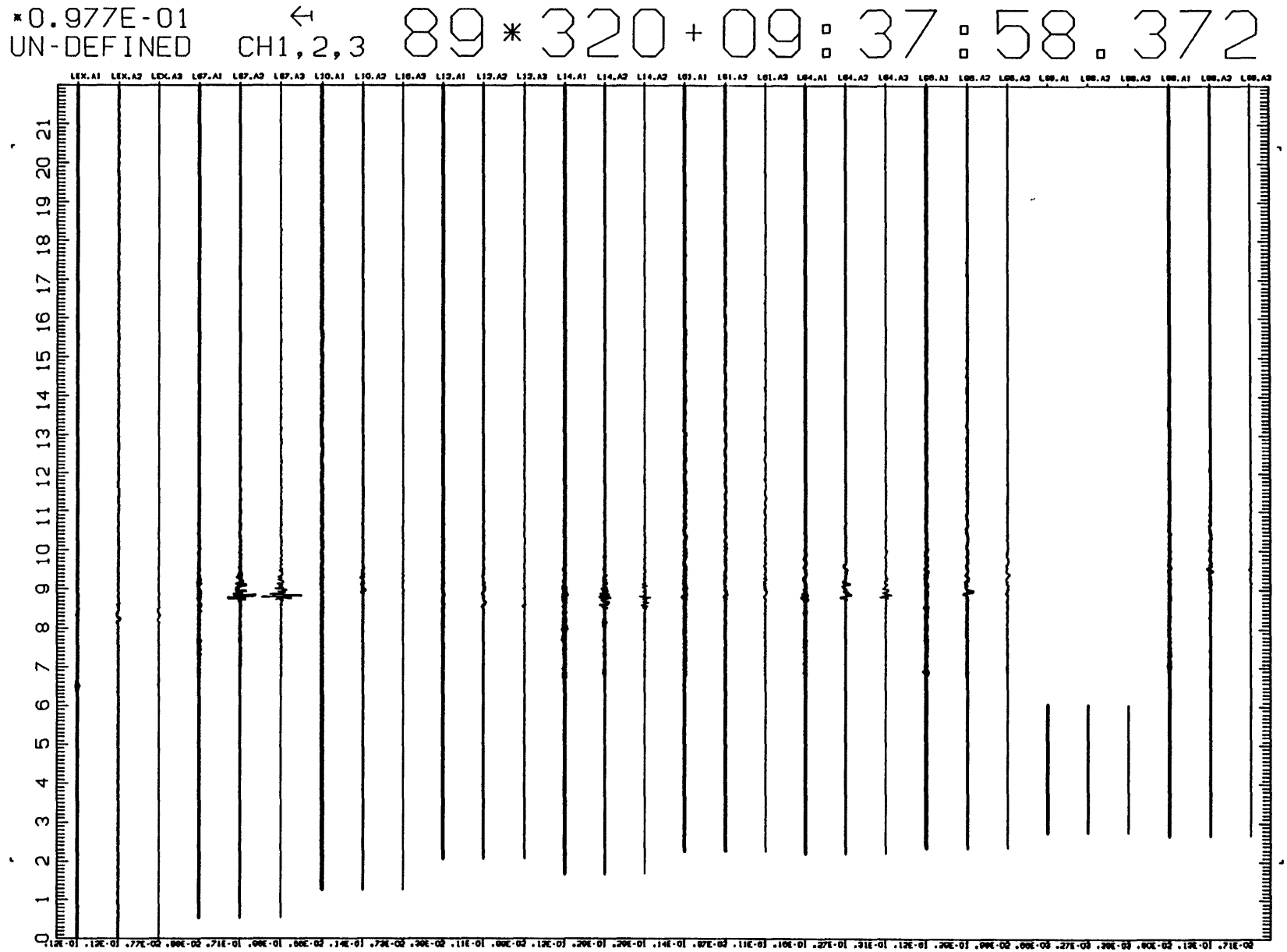
UN-DEFINED
CH1,2,3
89*320+04:59:24.874
L10.A1 L10.A2 L10.A3 LEX.A1 LEX.A2 LEX.A3 L12.A1 L12.A2 L12.A3 L14.A1 L14.A2 L14.A3 L61.A1 L61.A2 L61.A3 L64.A1 L64.A2 L64.A3 L66.A1 L66.A2 L66.A3 L67.A1 L67.A2 L67.A3 L68.A1 L68.A2 L68.A3 L68.A1 L68.A2 L68.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21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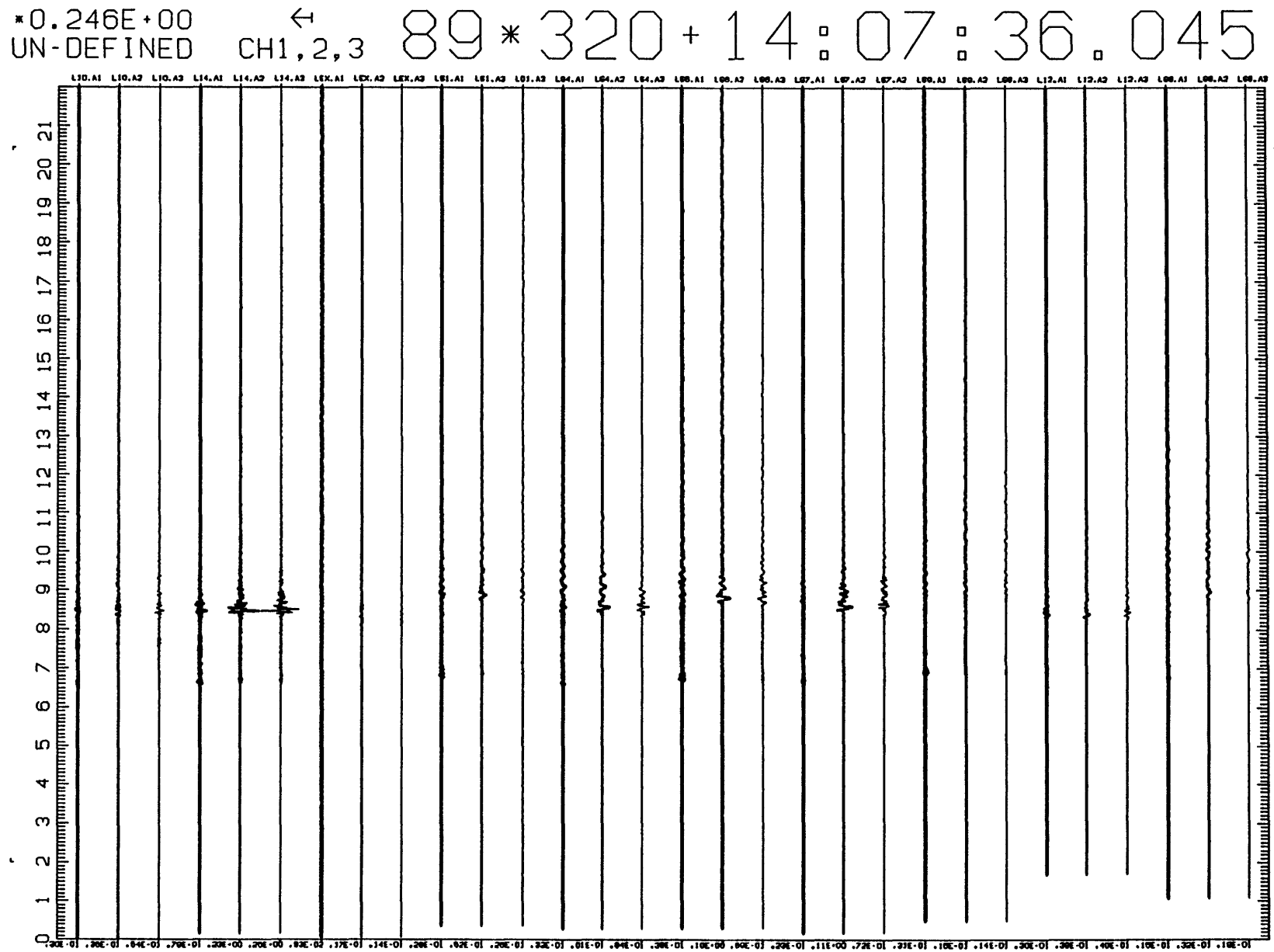
CH1,2,3
89*320+09:37:58.372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UN-DEFINED
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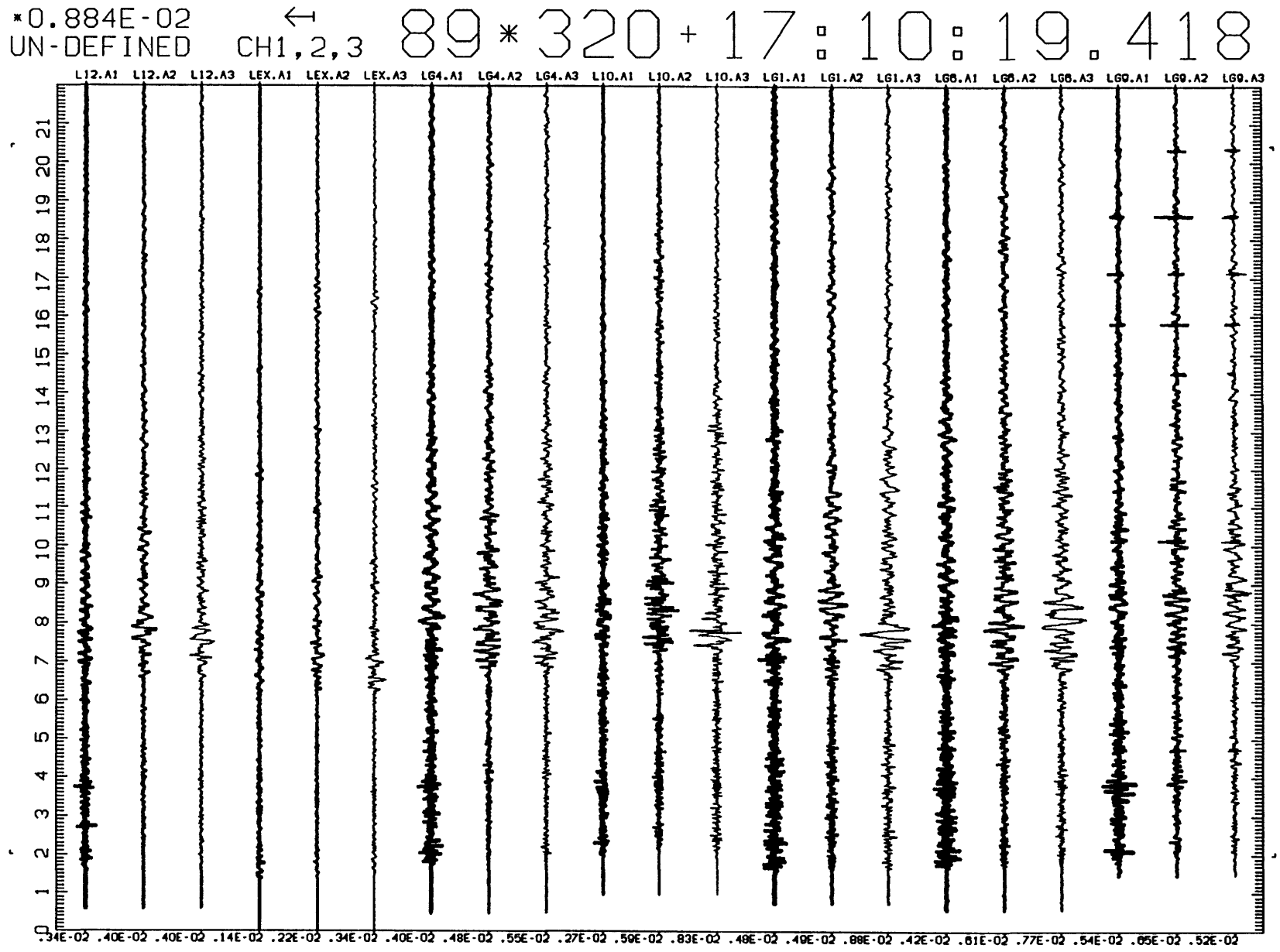
89*320+14:07:36.045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89*320+17:10:19.418
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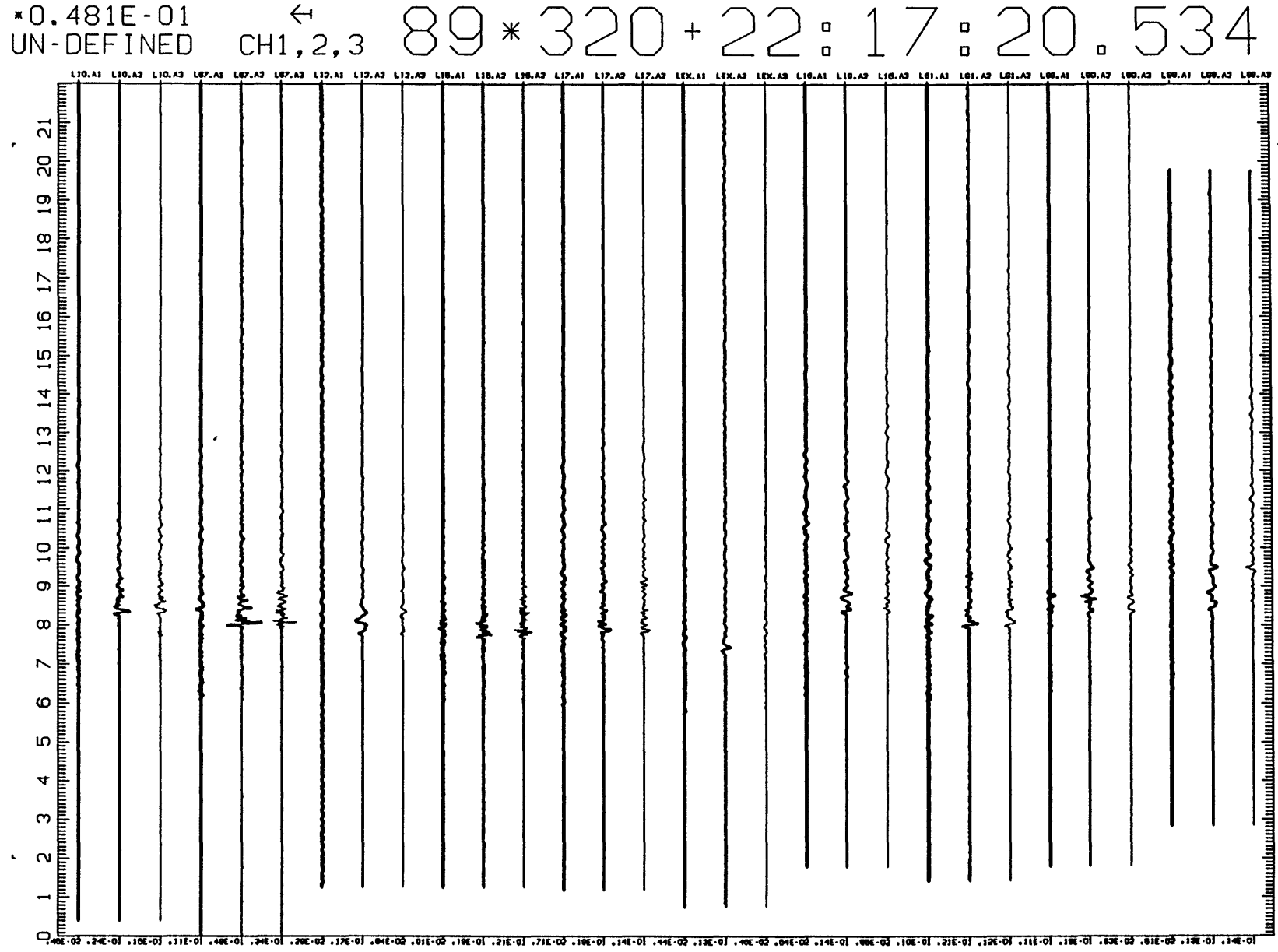
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.34E-02 .40E-02 .40E-02 .14E-02 .22E-02 .34E-02 .40E-02 .48E-02 .55E-02 .27E-02 .59E-02 .83E-02 .48E-02 .40E-02 .88E-02 .42E-02 .61E-02 .77E-02 .54E-02 .65E-02 .52E-02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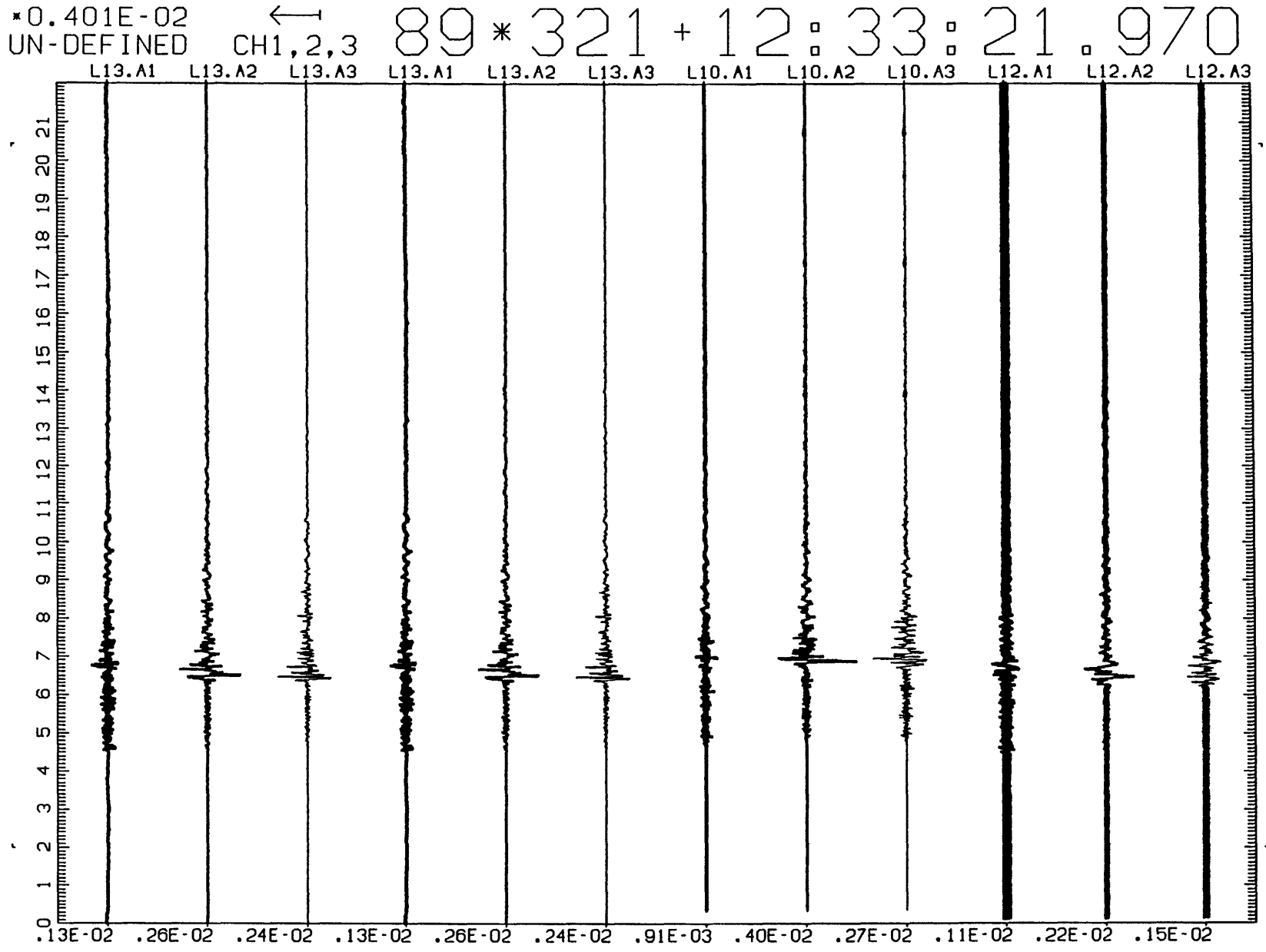
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UN-DEFINED
CH1,2,3
89*321+12:33:21.970
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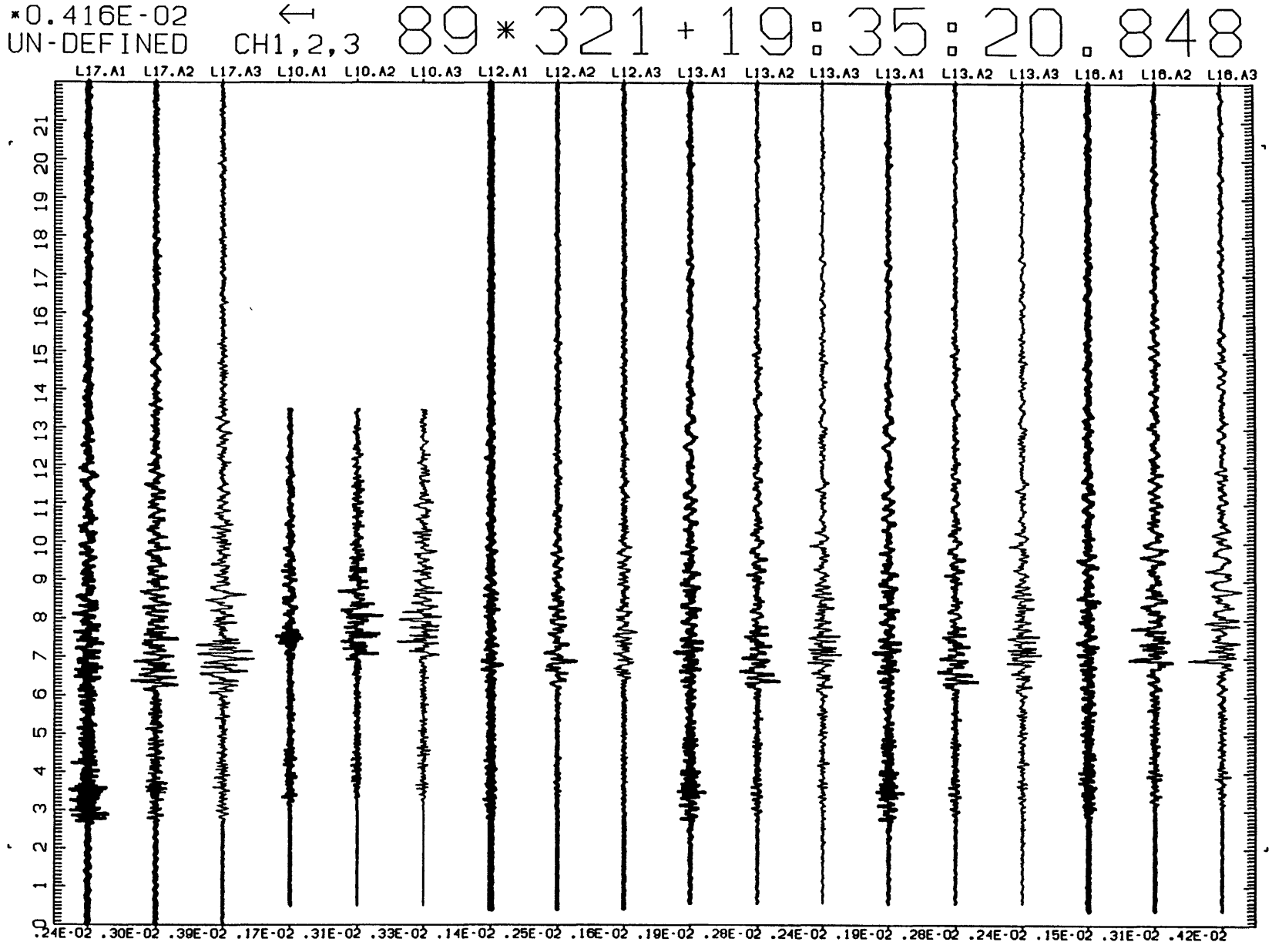
L13.A2
L13.A3
L13.A1
L13.A2
L13.A3
L10.A1
L10.A2
L10.A3
L12.A1
L12.A2
L12.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.13E-02
.26E-02
.24E-02
.13E-02
.26E-02
.24E-02
.91E-03
.40E-02
.27E-02
.11E-02
.22E-02
.15E-02

*0.644E-02
UN-DEFINED
CH1, 2, 3
89 * 321 + 19.32.20.448
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21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89*321+19:35:20.848
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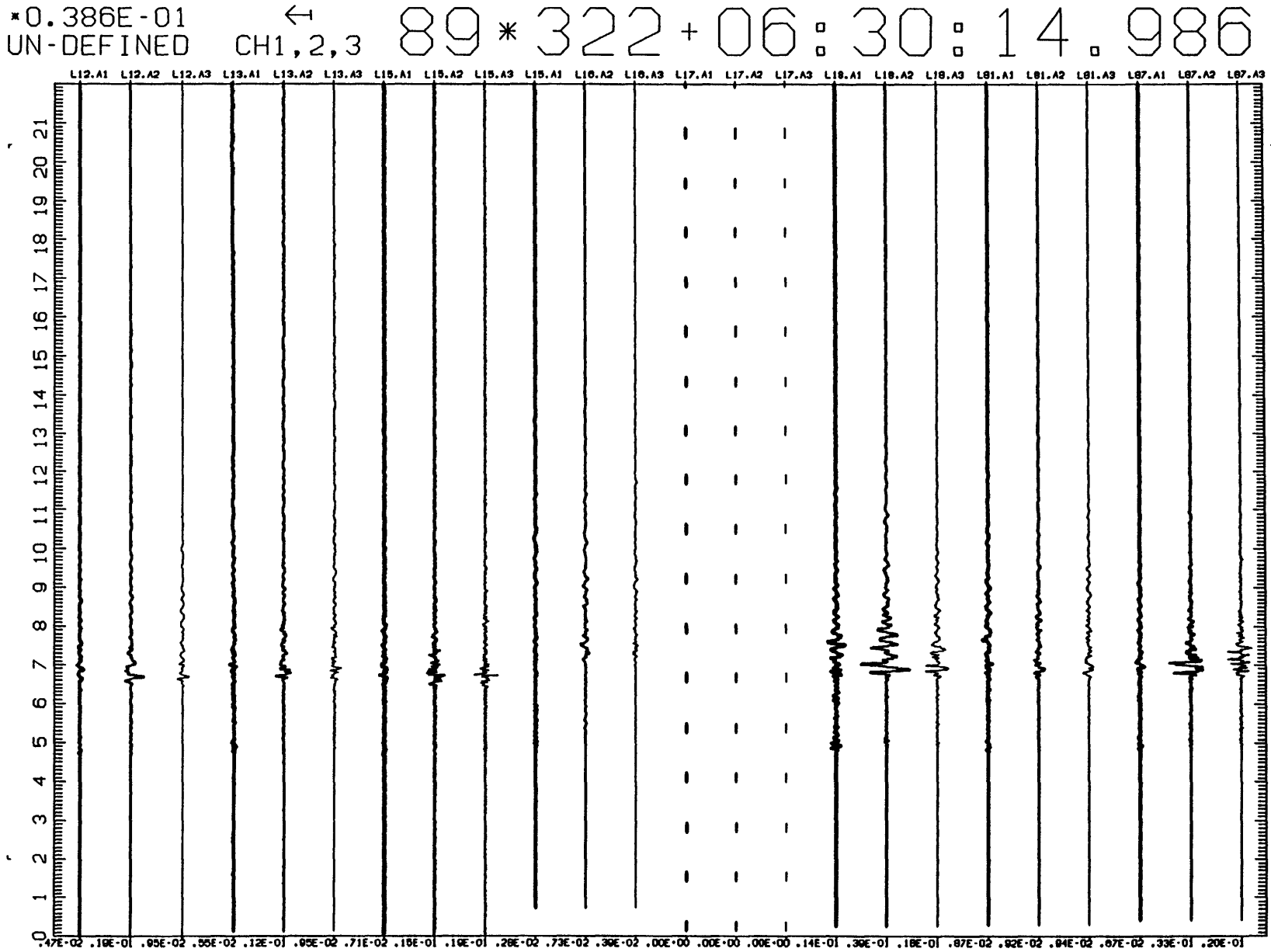
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.24E-02 .30E-02 .39E-02 .17E-02 .31E-02 .33E-02 .14E-02 .25E-02 .16E-02 .19E-02 .28E-02 .24E-02 .19E-02 .28E-02 .24E-02 .15E-02 .31E-02 .42E-02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UN-DEFINED
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89*322+06:30:14.986
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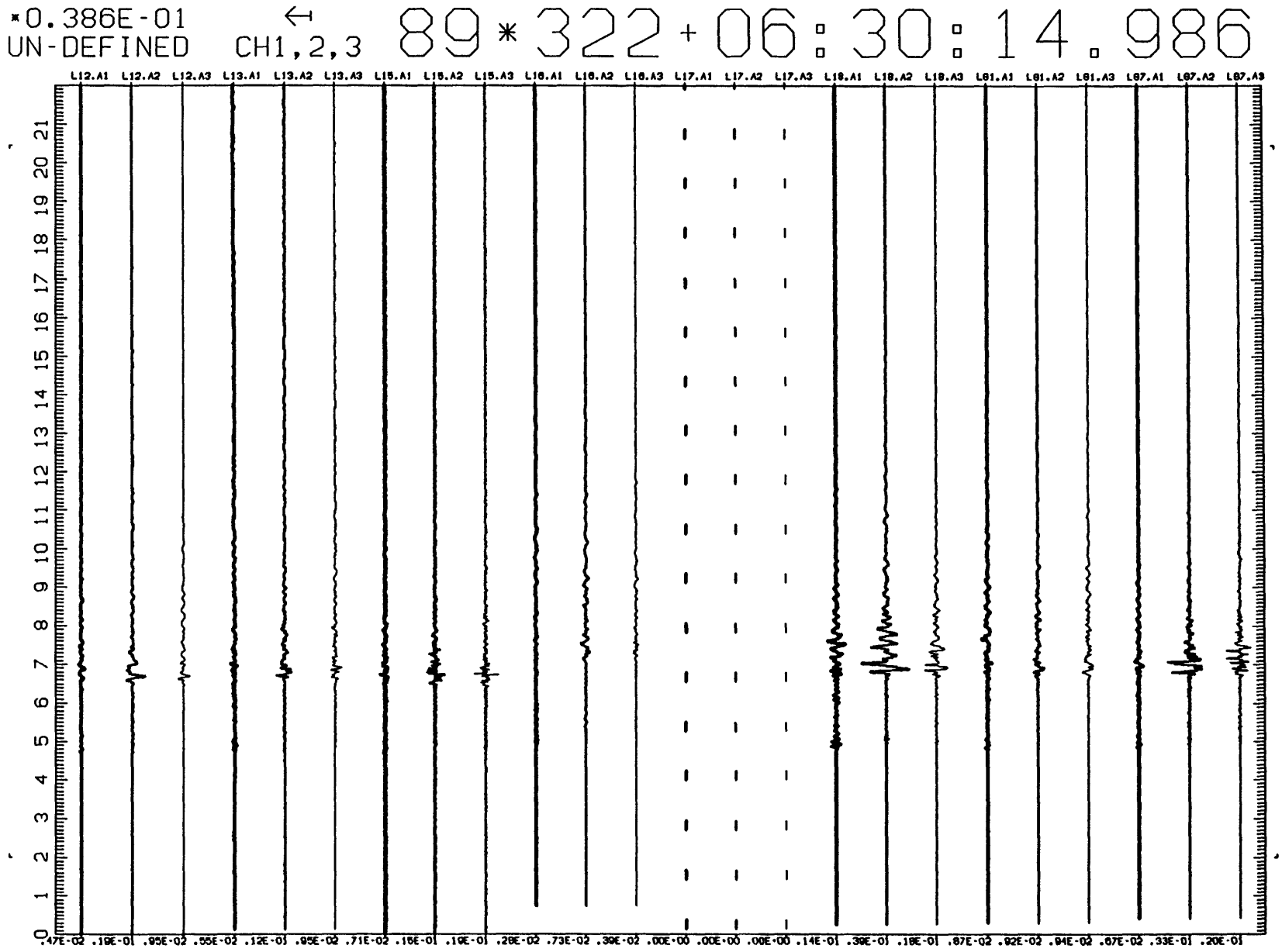
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.47E-02 .19E-01 .95E-02 .55E-02 .12E-01 .95E-02 .71E-02 .15E-01 .19E-01 .28E-02 .73E-02 .30E-02 .00E+00 .00E+00 .00E+00 .14E-01 .30E-01 .18E-01 .87E-02 .92E-02 .94E-02 .67E-02 .33E-01 .20E-01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UN-DEFINED
CH1,2,3
89*322+06:30:14.986
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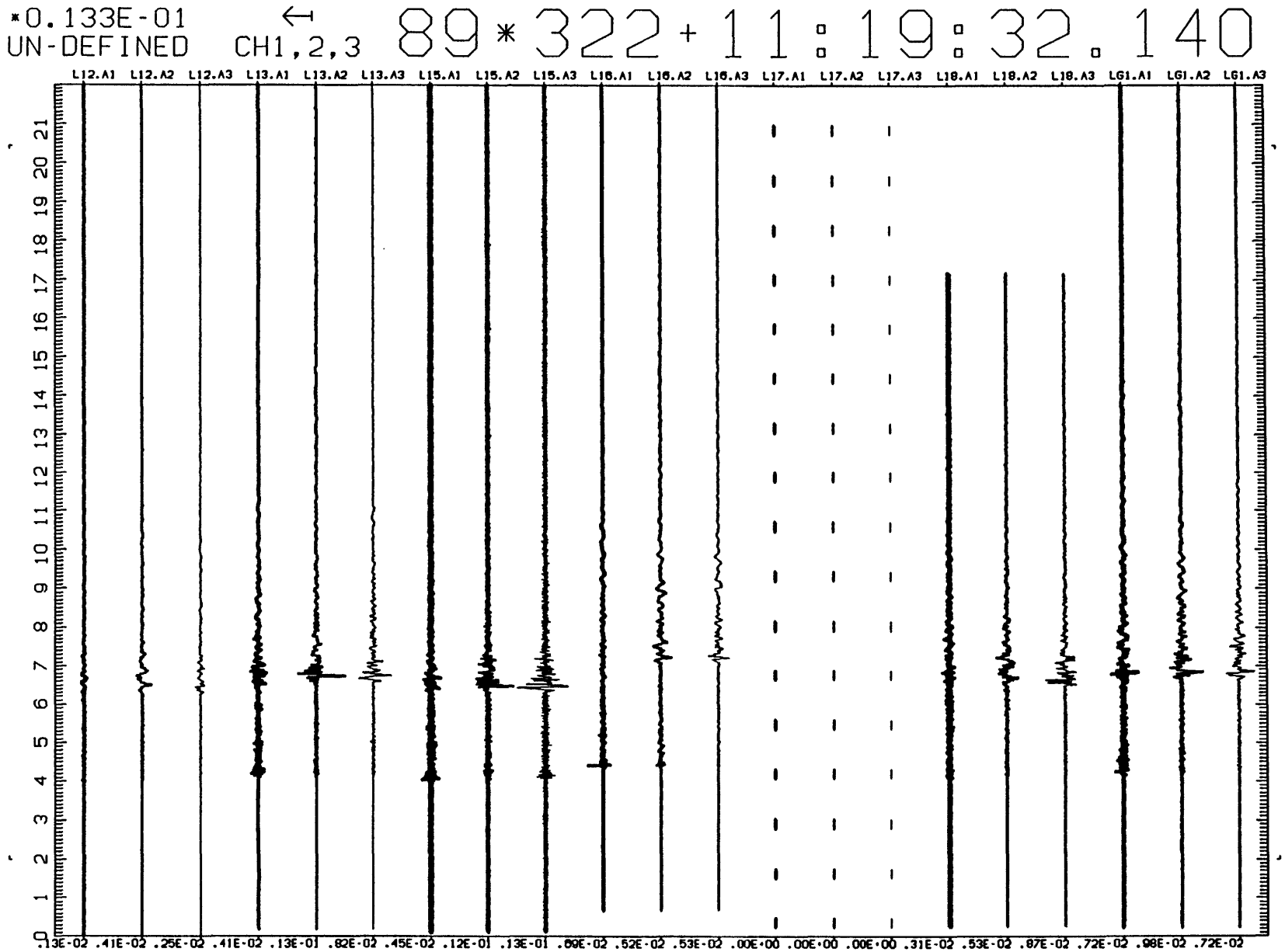
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.47E-02 .19E-01 .95E-02 .55E-02 .12E-01 .95E-02 .71E-02 .16E-01 .19E-01 .28E-02 .73E-02 .39E-02 .00E+00 .00E+00 .00E+00 .14E-01 .39E-01 .18E-01 .67E-02 .92E-02 .94E-02 .67E-02 .33E-01 .20E-01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CH1,2,3
89*322+11:19:32.140
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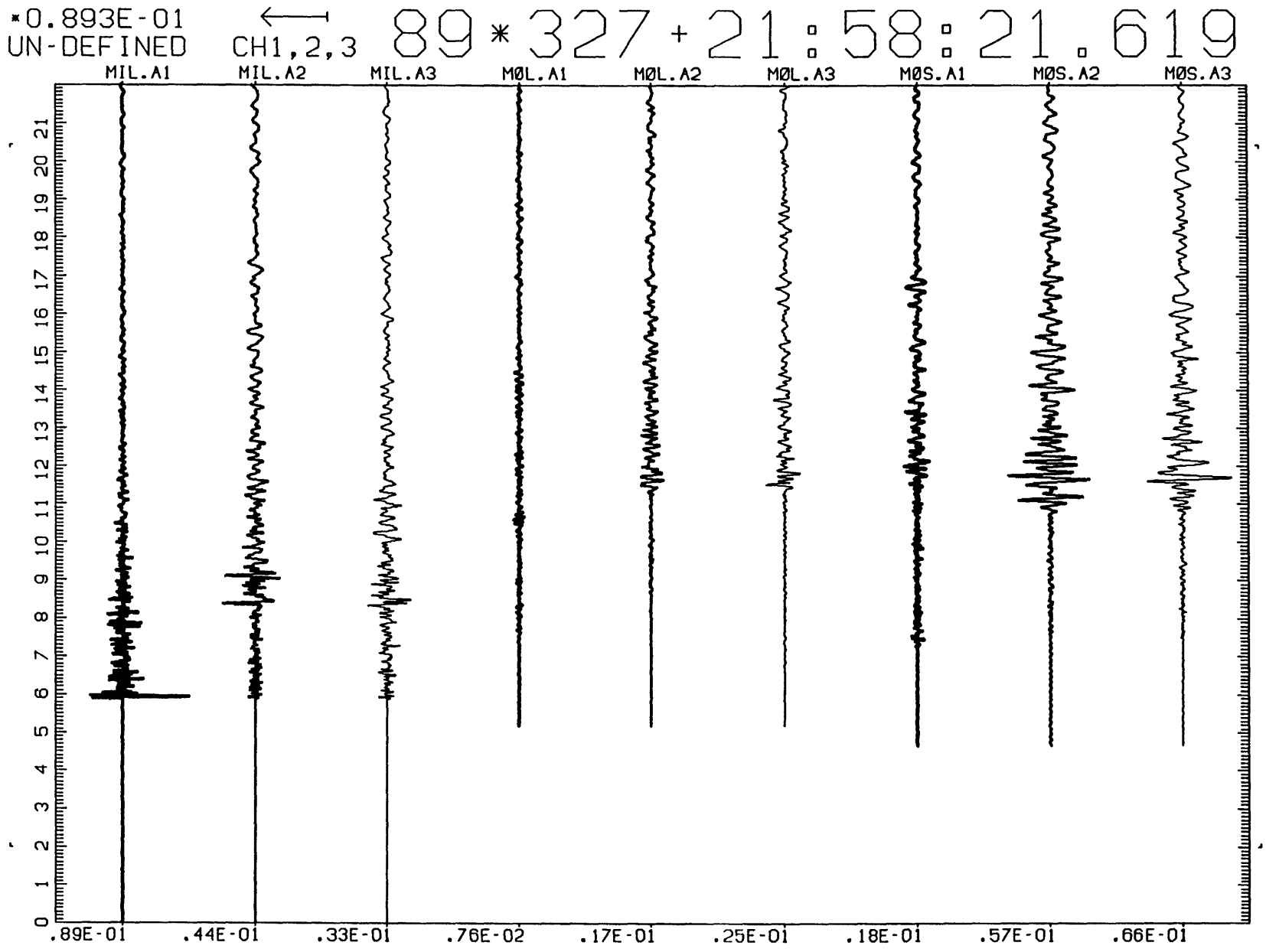
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.13E-02 .41E-02 .25E-02 .41E-02 .13E-01 .82E-02 .45E-02 .12E-01 .13E-01 .69E-02 .52E-02 .53E-02 .00E+00 .00E+00 .00E+00 .31E-02 .53E-02 .87E-02 .72E-02 .98E-02 .72E-02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UN-DEFINED
CH1,2,3
89*327+21:58:21.619
MIL.A1
MIL.A2
MIL.A3
MØL.A1
MØL.A2
MØL.A3
MØS.A1
MØS.A2
MØS.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.89E-01
.44E-01
.33E-01
.76E-02
.17E-01
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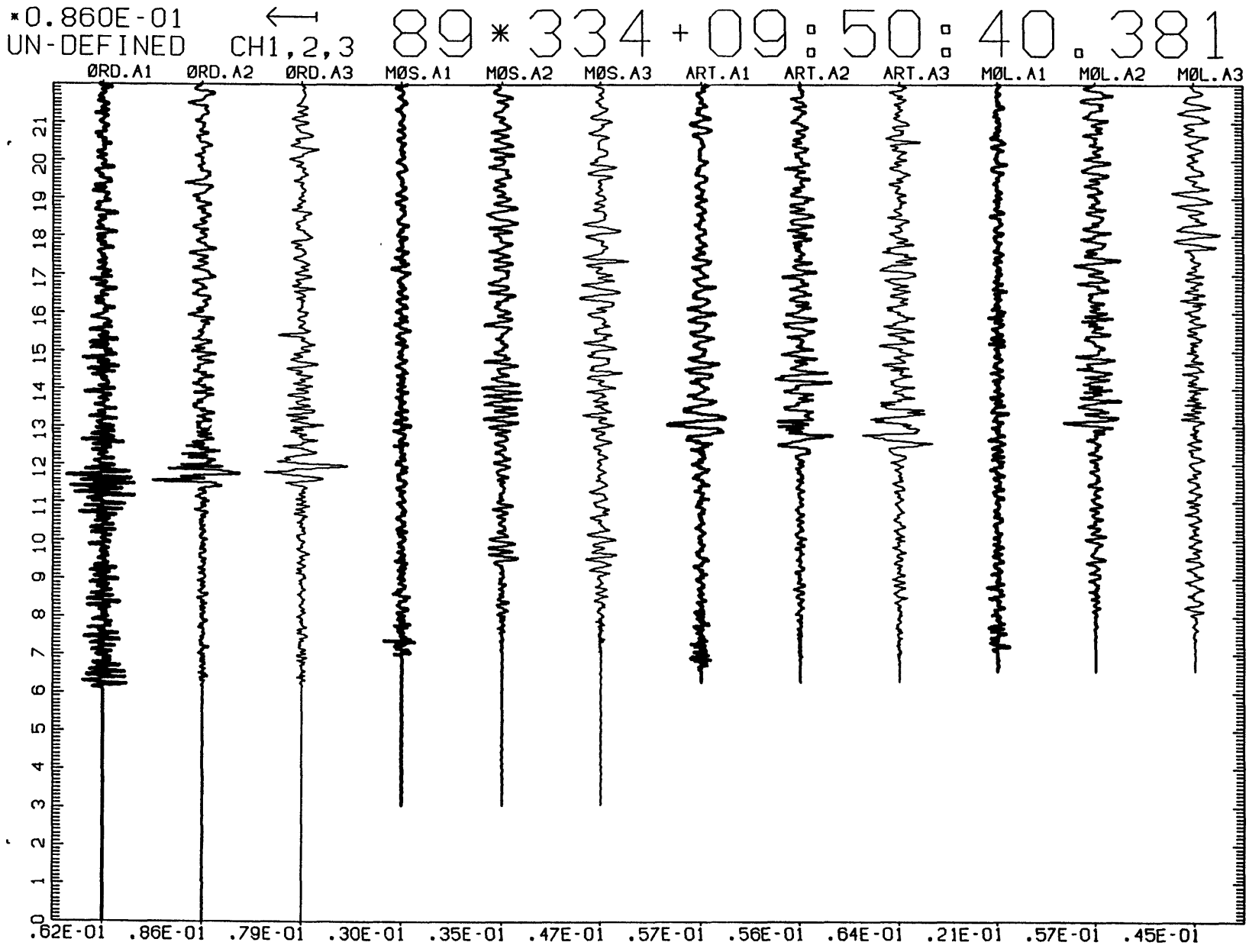
.66E-01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CH1,2,3
89*334+09:50:40.381
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ØRD.A3
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MØS.A2
MØS.A3
ART.A1
ART.A2
ART.A3
MØL.A1
MØL.A2
MØL.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
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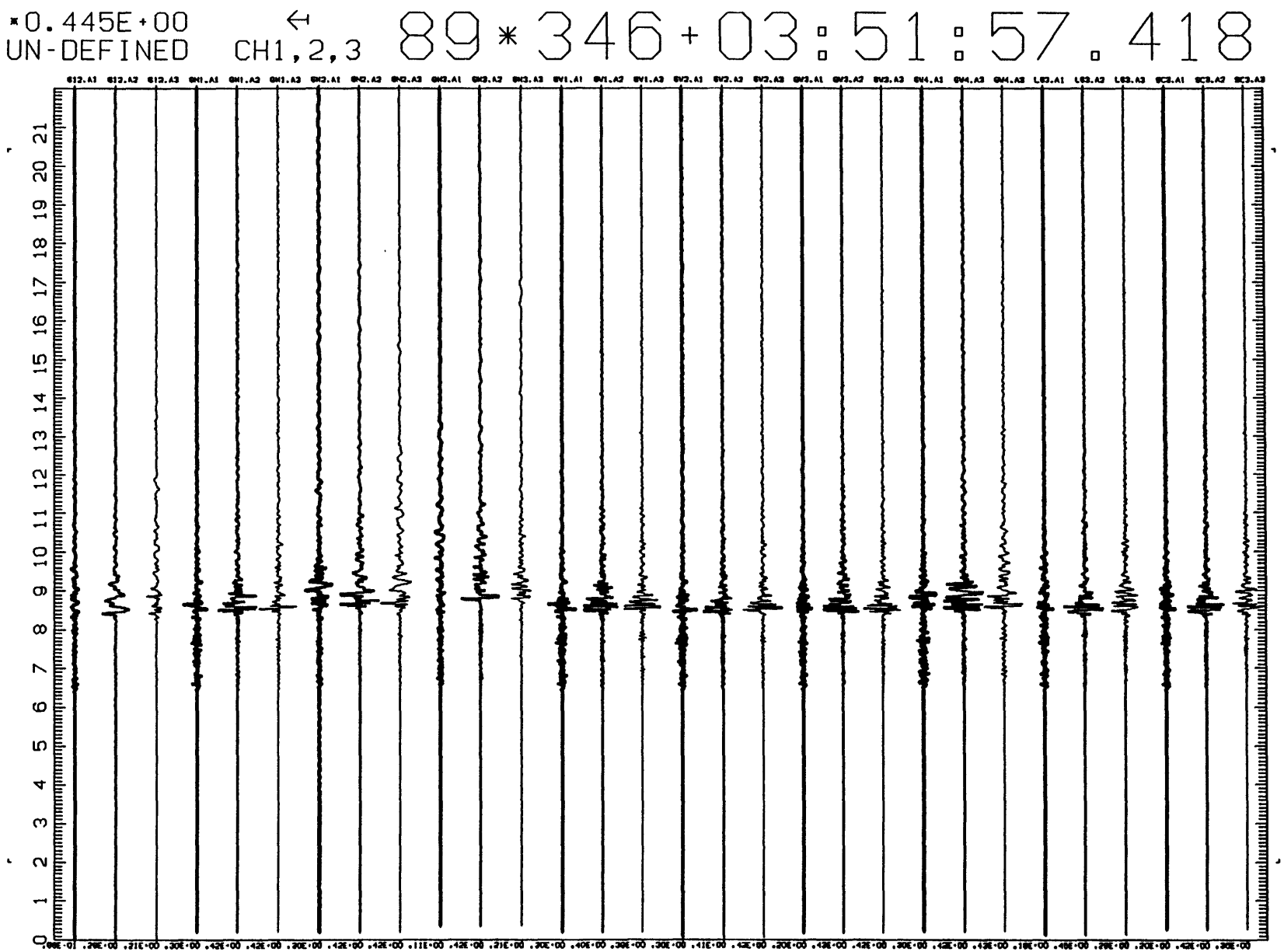
.86E-01
.79E-01
.30E-01
.35E-01
.47E-01
.57E-01
.56E-01
.64E-01
.21E-01
.57E-01
.45E-01

*0.211E+00
UN-DEFINED
CH1,2,3
89 * 335+12:37:45.520
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.10E+00 .21E+00 .19E+00 .10E-02 .82E-03 .72E-03 .68E-01 .14E+00 .15E+00 .61E-01 .15E+00 .15E+00 .00E+00 .00E+00 .00E+00
ART.A1
ART.A2
ART.A3
MIL.A1
MIL.A2
MIL.A3
MØS.A1
MØS.A2
MØS.A3
MØL.A1
MØL.A2
MØL.A3
AIR.A1
AIR.A2
AIR.A3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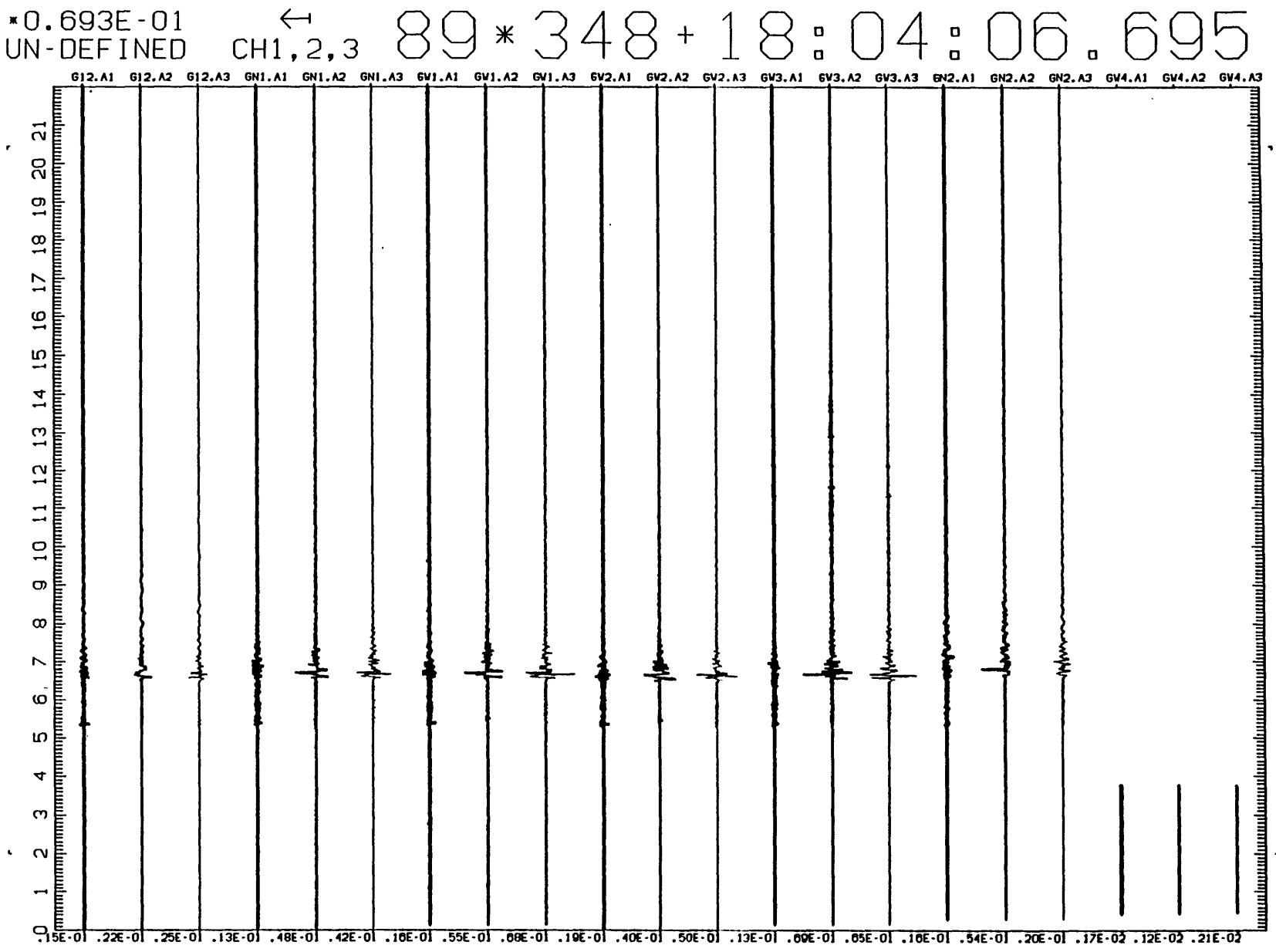
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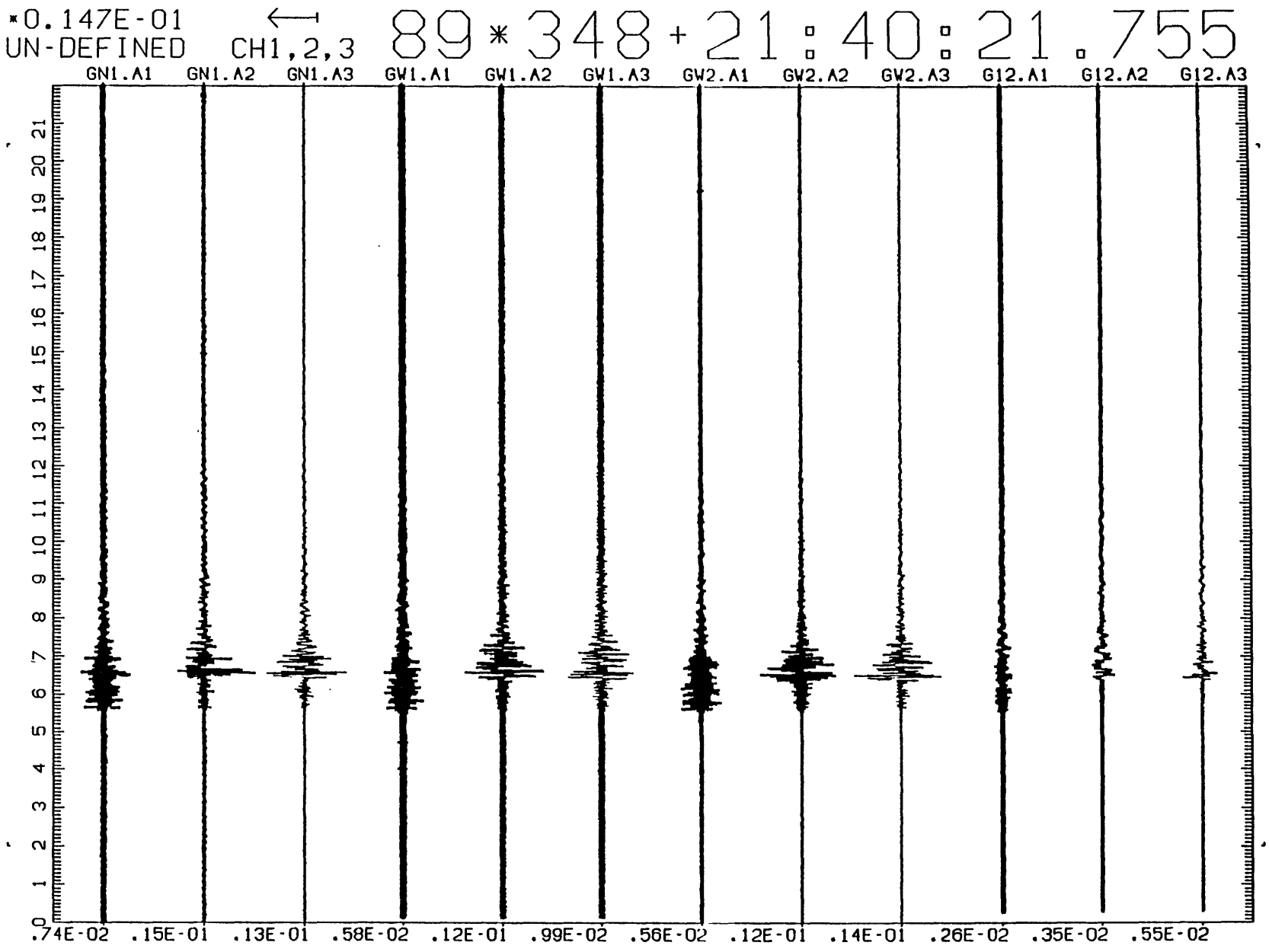
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.15E-01 .22E-01 .25E-01 .13E-01 .48E-01 .42E-01 .16E-01 .55E-01 .68E-01 .19E-01 .40E-01 .50E-01 .13E-01 .69E-01 .65E-01 .16E-01 .54E-01 .20E-01 .17E-02 .12E-02 .21E-02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GN1.A3
GW1.A1
GW1.A2
GW1.A3
GW2.A1
GW2.A2
GW2.A3
G12.A1
G12.A2
G12.A3
0
1
2
3
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19
20
21
.74E-02
.15E-01
.13E-01
.58E-02
.12E-01
.99E-02
.56E-02
.12E-01
.14E-01
.26E-02
.35E-02
.55E-02

APPENDIX D. Robinwood Lane study area station data.

Robinwood Lane study area seismograph station locations. The sensor column is used to indicate whether the seismometer was buried or glued as described in the text. Coordinates are referenced to the 1927 North American Datum.

STA	LATITUDE (N)	LONGITUDE (W)	ELEV. (M)	SENSOR
LP0	+37 05.07	-121 56.23	0292	Buried
LP1	+37 05.10	-121 56.20	0316	Buried
LP2	+37 05.12	-121 56.18	0340	Buried
LP3	+37 05.15	-121 56.16	0352	Buried
LP4	+37 05.15	-121 56.15	0371	Buried
LP5	+37 05.16	-121 56.15	0380	Buried
LP6	+37 05.28	-121 56.25	0401	Buried
LP7	+37 05.85	-121 56.24	0462	Buried

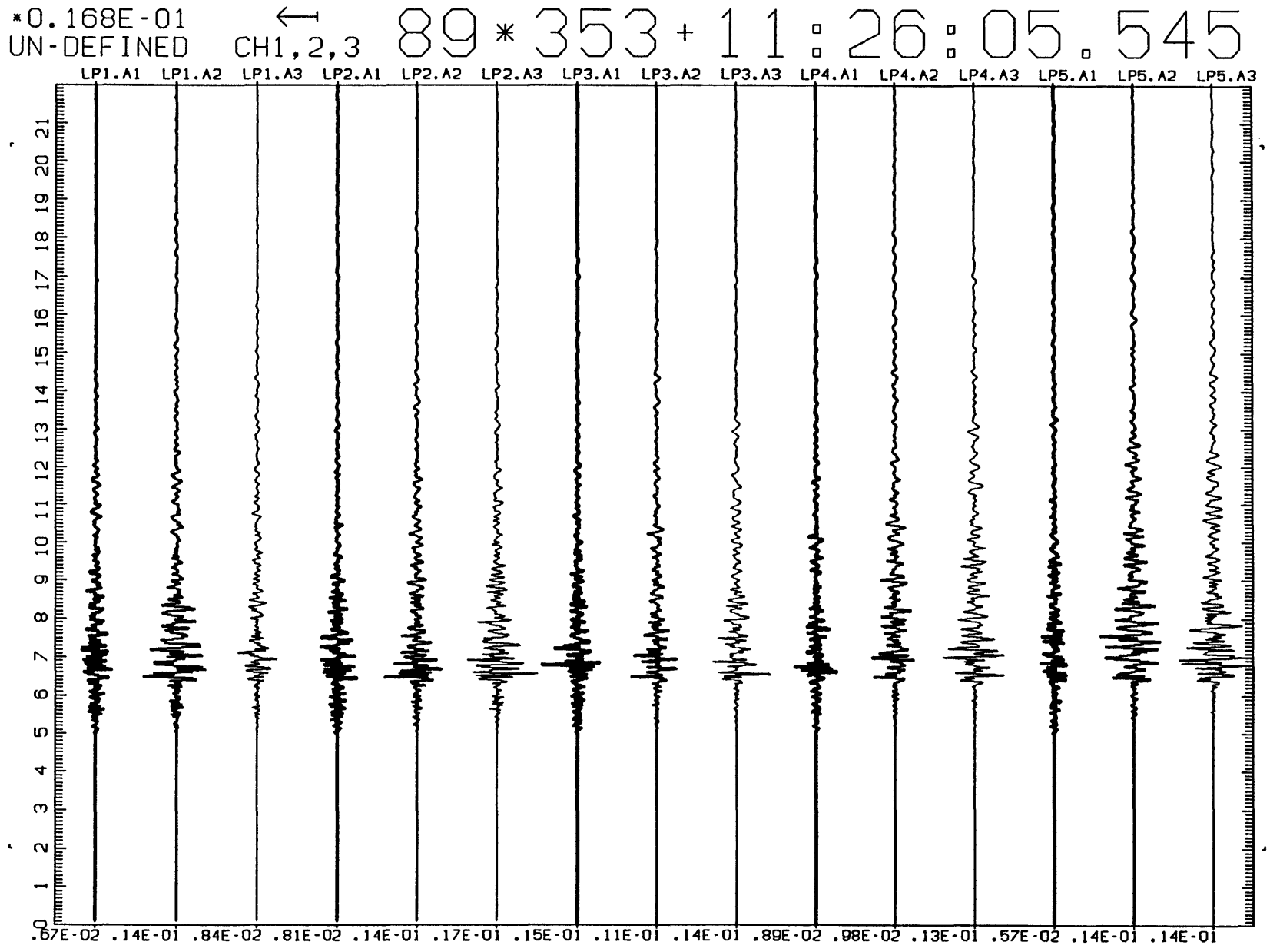
List of aftershocks recorded at three or more seismograph stations at the Robinwood Lane study area. Seismic records were identified by a computer algorithm that found multiple triggers in a 13 s sliding-time window. Earthquakes are listed by the start time of the earliest associated record (day, hour, minute are characters one through seven in the filename). Records (for a given three-letter station code) are indicated by the corresponding second-bin character, i.e., character eight in the filename - A = 0.000 - 2.999, B = 3.000 - 5.999, ...T = 57.000 - 59.999.

The computer algorithm also extracted hypocenter information for associated earthquakes from U.S. Geological Survey summary files. The hypocenter data were provided by D. Oppenheimer and are listed in HYPO71 format. We used versions of the summary files that were current at the time of writing this report in September 1990. These hypocenters will be refined during the lifetime of this report and are provided here only to help readers make preliminary correlations between earthquakes and seismograph recordings.

EVENT	MAG	LP0	LP1	LP2	LP3	LP4	LP5	LP6	LP7
3531126	1.3		B	B	B	B	B		
3532255	2.3		P	P	P	Q	P		Q
3541054	1.7		H	H	H	H	H		
3541949	2.4		L	L	M	M	L		
3551127	2.8		L		L	L	K		
3560406	2.1			N	O	O	O		
3560713	1.8			M	M	M	M		M
3571120	2.4			P	P		P		Q
3571742	1.6			J	J	J	J		
3572041	1.8				J	J	J		
3572352	2.3			R		S	S		
3581646	1.8			M	M	M	M		
3602246	3.1			N	N		N		N
3611609	3.1				T		T		A
3611622	2.8				D		D		D
3630839	3.0				M		M		N
3630900	2.0				O		O		O
0011322	2.5			P	P				Q
0101607	2.3	B	B	A	B	B	B	B	
0102152	2.2	P	P	P	P	Q	Q	Q	
0112351	1.7	N			N	O	O		
0120910		M	M	M	N		N	N	O
0122105	1.7	O	O		O	O	P	P	
0131907	1.9	H	H		H		H		
		LP0	LP1	LP2	LP3	LP4	LP5	LP6	LP7

8912191126091537	748121-5432	423	0	23	68	4	6 275	48269	0	2213LOM	18	0
8912192255503837	863121-5886	1137	0	63	63	4	820879	29	3010	1623LOM	11	0
8912201054244137	557121-5055	471	0	37	54	2	829875	33	7611	2017LOM	16	0
8912201949371437	1185121-5691	360	0	73	36	3	919380	26	34 8	1424SCV	11	1
8912211127284237	669121-3117-	773	0	88	65	1	6 7788	33230	1	1328CYN	9	0
8912220406448137	829121-5912	1305	0	67	65	4	1024175	38	5314	2121LOM	15	0
8912220713410637	767121-5447	427	0	39	49	4	7 3779	29244	8	1718LOM	14	0
8912231120489037	372121-5582	1831	0	85	52	4	923876	29	5013	2024LOM	13	1
8912231742328937	665121-5512	605	0	26	51	6	734381	45114	5	2016LOM	18	0
8912232041300837	386121-5564	1833	0	42	52	4	928178	48	49 7	2818LOM	21	0
8912232352503137	1906121-5500	924	0	85	20	12	1024887	54	54 2	1323SCV	11	0
8912232352545438	2808122-4007	930	0	7	91	8	616486	110	6 3	5413ROG	38	0
8912241646409437	620121-5115	430	0	39	39	2	730179	31	86 8	1818LOM	14	0
8912262246416237	1186122- 311	1428	0	86	54	5	1024073	33	4916	1831BLM	12	1
8912271610012637	1173122- 328	147428	92	55	5	1124571	35	5318	1931BLM	11	5
8912271622135037	1075121-5797	451	0	85	48	3	1430788	26	47 0	1728LOM	13	1
8912290839390336	5878121-4457	1553	0	92	35	5	1225481	35	53 7	2130SJB	13	0
8912290900444037	970121-5813	881	0	48	56	3	817585	38	47 2	1820LOM	15	2
9001011322474936	5980121 4804	1629	0	79	40	3	1024481	32	55 8	2225LOM	13	0
9001101607060337	217121 4745	852	0	71	30	2	927178	31	57 9	1623LOM	12	0
9001102152494937	850121 5895	1230	0	52	64	4	722476	36	3113	1822LOM	13	0
9001112351448637	114121 5612	501	0	26	81	3	1027875	48	31 5	2617MON	23	0
9001122105477737	633121 5107	396	0	30	55	1	627257	30	7631	2217LOM	15	0
9001131907237537	858121 5753	894	0	42	58	4	1031584	44	53 0	2119LOM	18	0

Seismograms recorded by three or more stations at the Robinwood Lane study area. Each seismogram plotted has been limited to 22 s, although the actual records may be longer. Three components are plotted for each station that recorded the aftershock. The traces are identified on the right by station name and component. A1 is the vertically oriented component; A2 is horizontally oriented North; A3 is horizontally oriented East. The peak velocity (expressed in cm/s) of the trace is shown in the left margin. All traces for each event are plotted at the same scale. Time proceeds from left to right and the numbers indicated are seconds from the time of the first sample of the record.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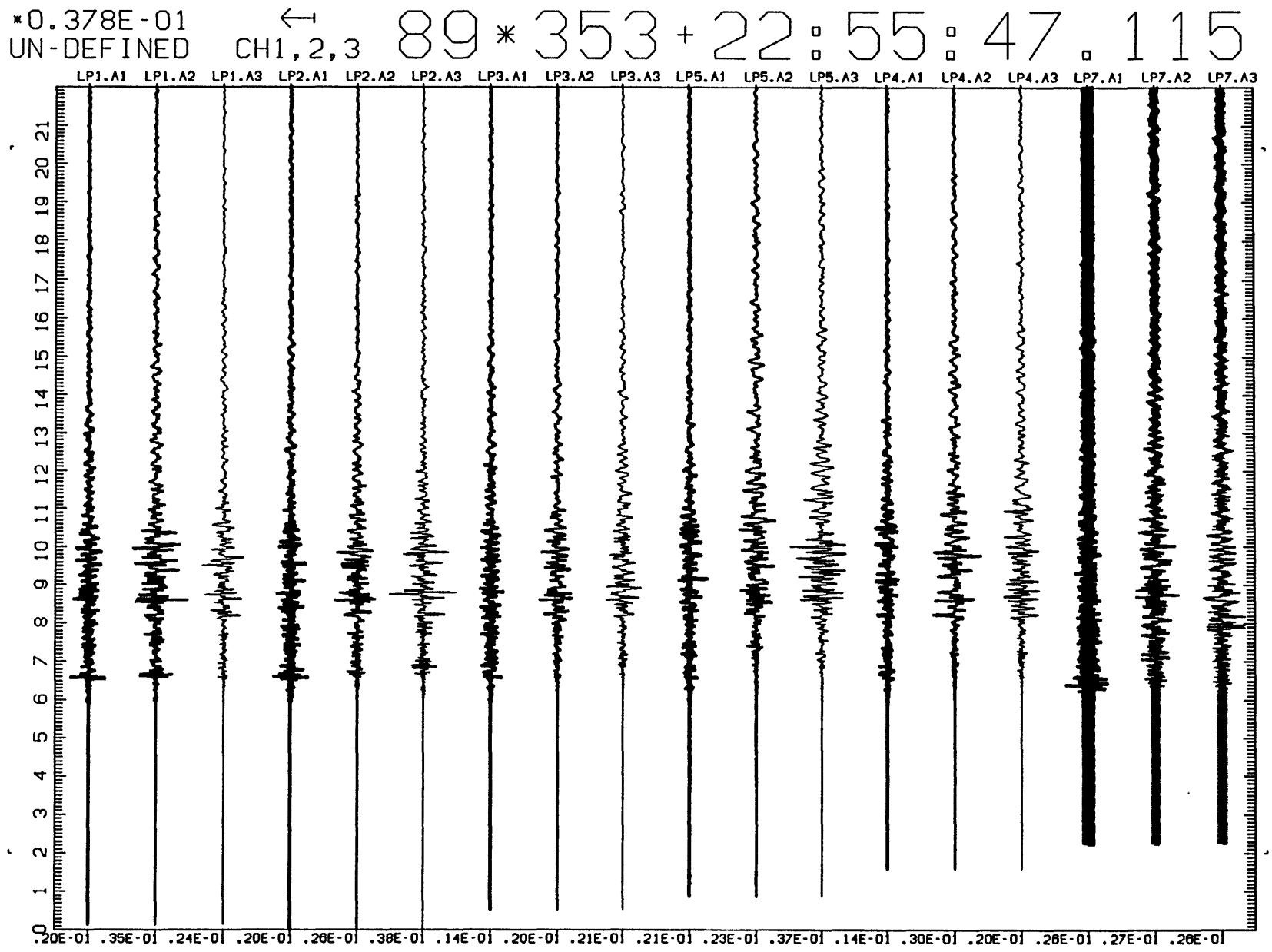
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.67E-02 .14E-01 .84E-02 .81E-02 .14E-01 .17E-01 .15E-01 .11E-01 .14E-01 .89E-02 .98E-02 .13E-01 .57E-02 .14E-01 .14E-01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CH1,2,3
89*353+22:55:47.115
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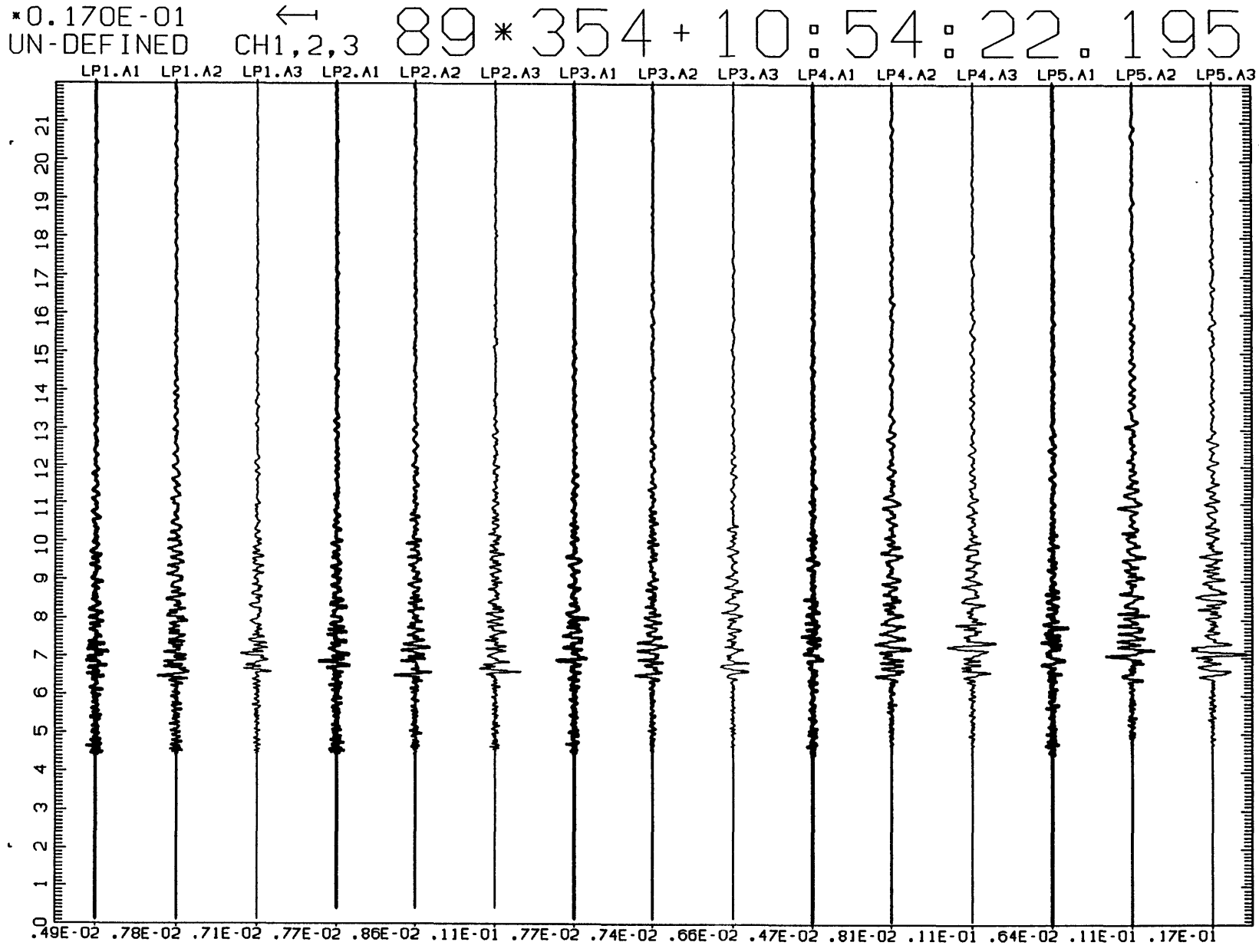
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.20E-01 .35E-01 .24E-01 .20E-01 .26E-01 .38E-01 .14E-01 .20E-01 .21E-01 .21E-01 .23E-01 .37E-01 .14E-01 .30E-01 .20E-01 .26E-01 .27E-01 .26E-01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UN-DEFINED
CH1,2,3
89*354+10:54:22.195
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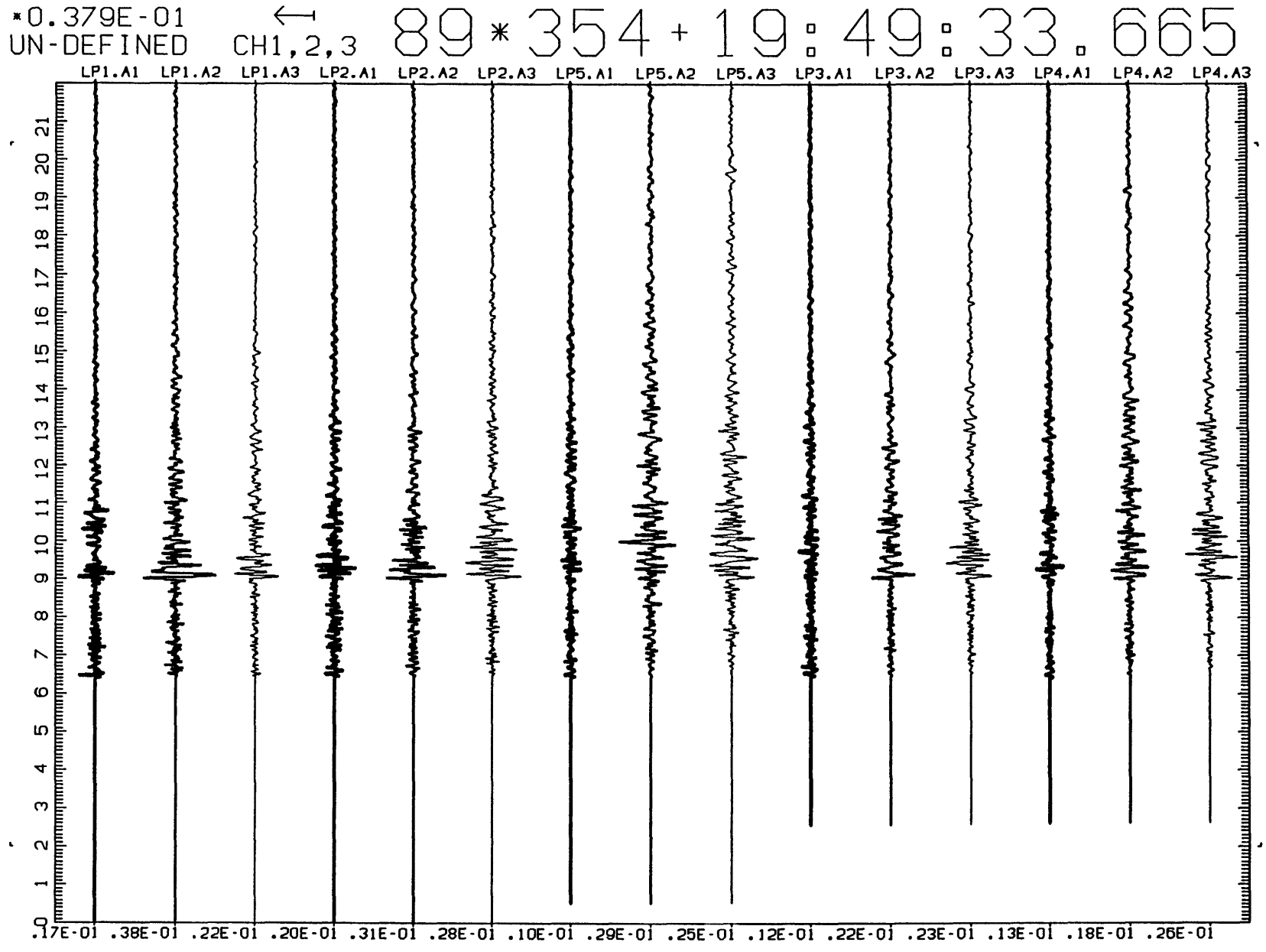
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.49E-02 .78E-02 .71E-02 .77E-02 .86E-02 .11E-01 .77E-02 .74E-02 .66E-02 .47E-02 .81E-02 .11E-01 .64E-02 .11E-01 .17E-01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UN-DEFINED
CH1,2,3
89*354+19:49:33.665
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LP1.A2
LP1.A3
LP2.A1
LP2.A2
LP2.A3
LP5.A1
LP5.A2
LP5.A3
LP3.A1
LP3.A2
LP3.A3
LP4.A1
LP4.A2
LP4.A3
0
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.17E-01
.38E-01
.22E-01
.20E-01
.31E-01
.28E-01
.10E-01
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.13E-01
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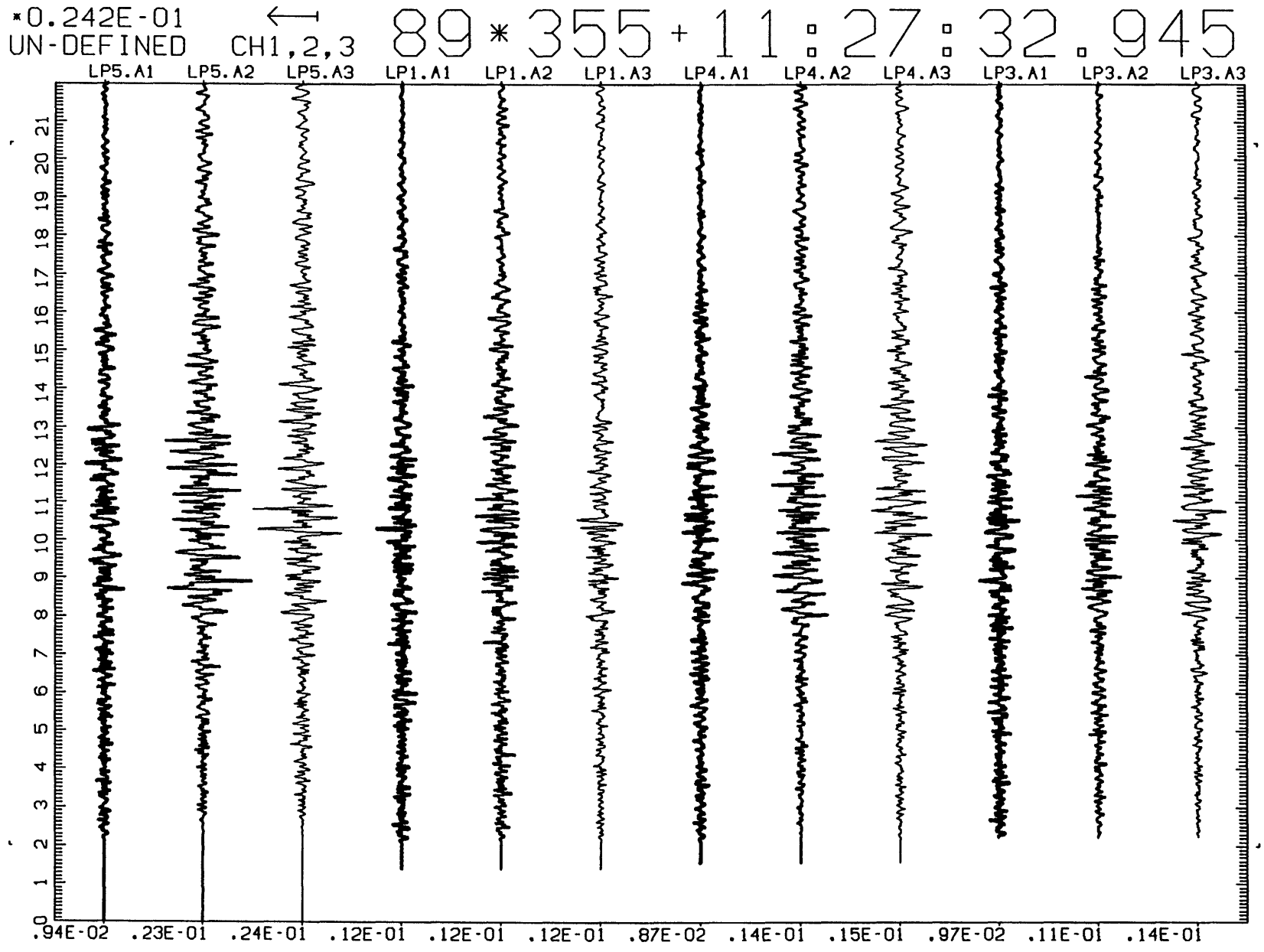
.26E-01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UN-DEFINED
CH1,2,3
89*355+11:27:32.945
LP5.A1
LP5.A2
LP5.A3
LP1.A1
LP1.A2
LP1.A3
LP4.A1
LP4.A2
LP4.A3
LP3.A1
LP3.A2
LP3.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.94E-02
.23E-01
.24E-01
.12E-01
.12E-01
.12E-01
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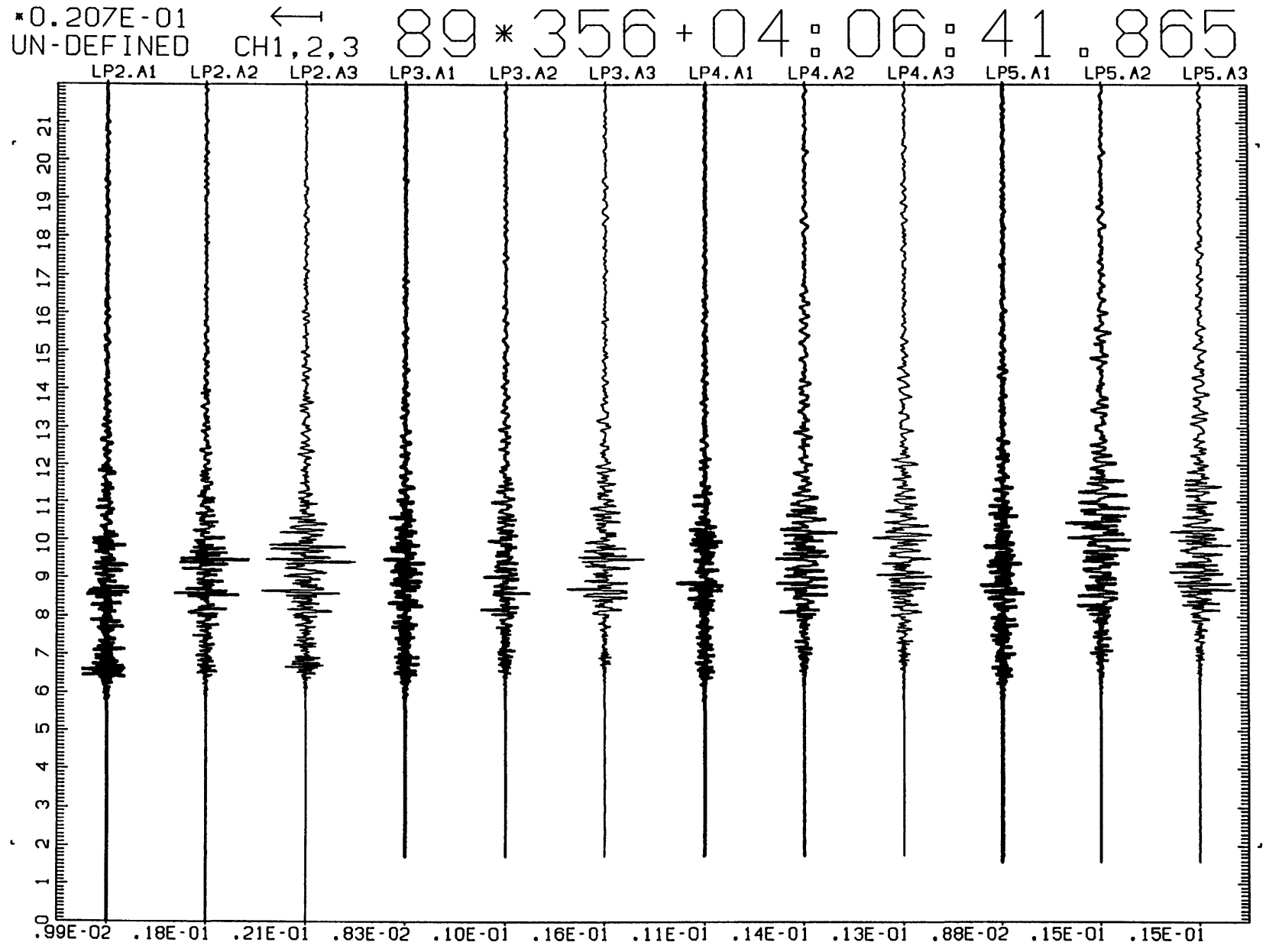
.14E-01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LP2.A3
LP3.A1
LP3.A2
LP3.A3
LP4.A1
LP4.A2
LP4.A3
LP5.A1
LP5.A2
LP5.A3
0
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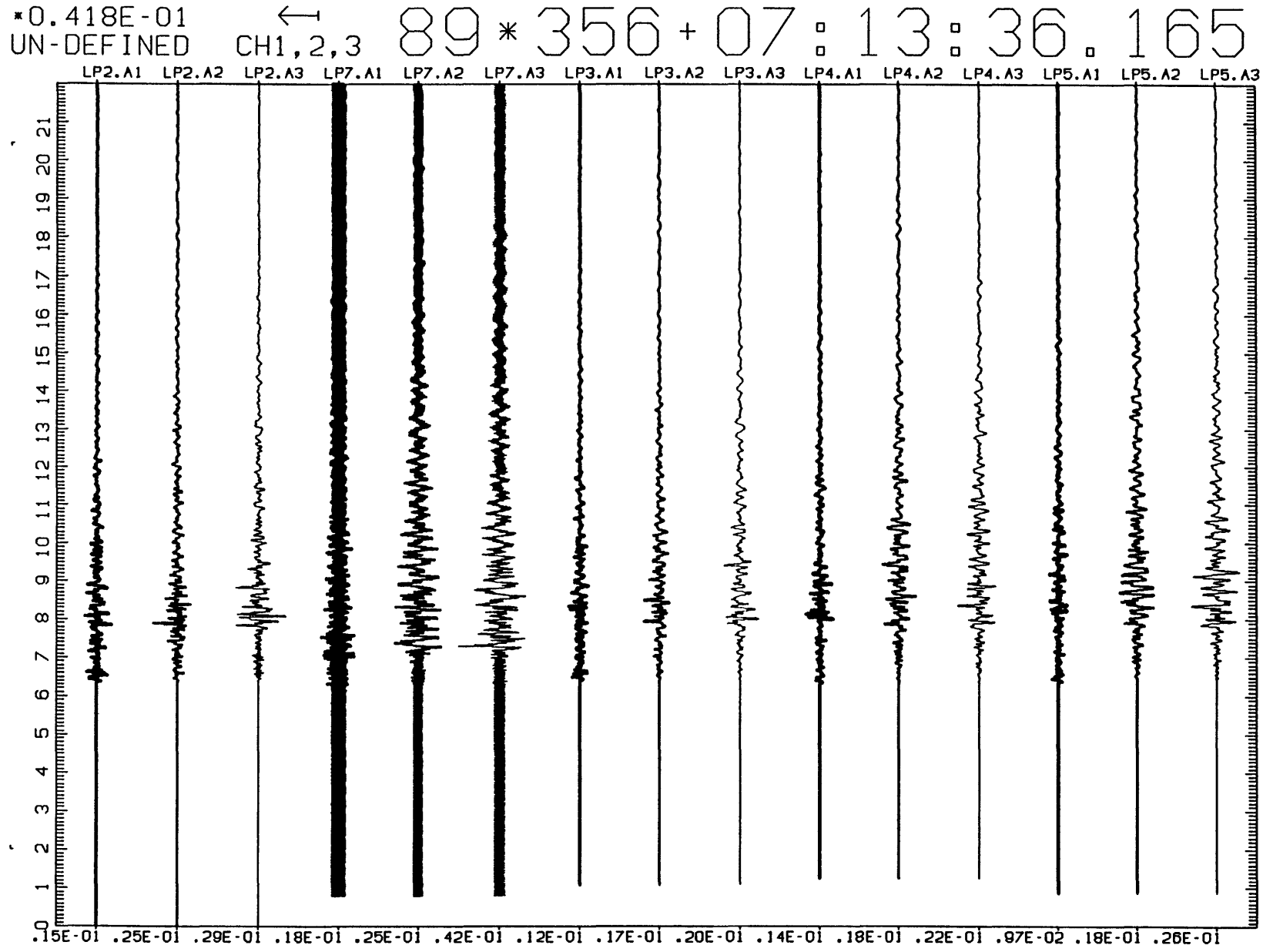
15
16
17
18
19
20
21
.99E-02
.18E-01
.21E-01
.83E-02
.10E-01
.16E-01
.11E-01
.14E-01
.13E-01
.88E-02
.15E-01
.15E-01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UN-DEFINED
CH1,2,3
89*356+07:13:36.165
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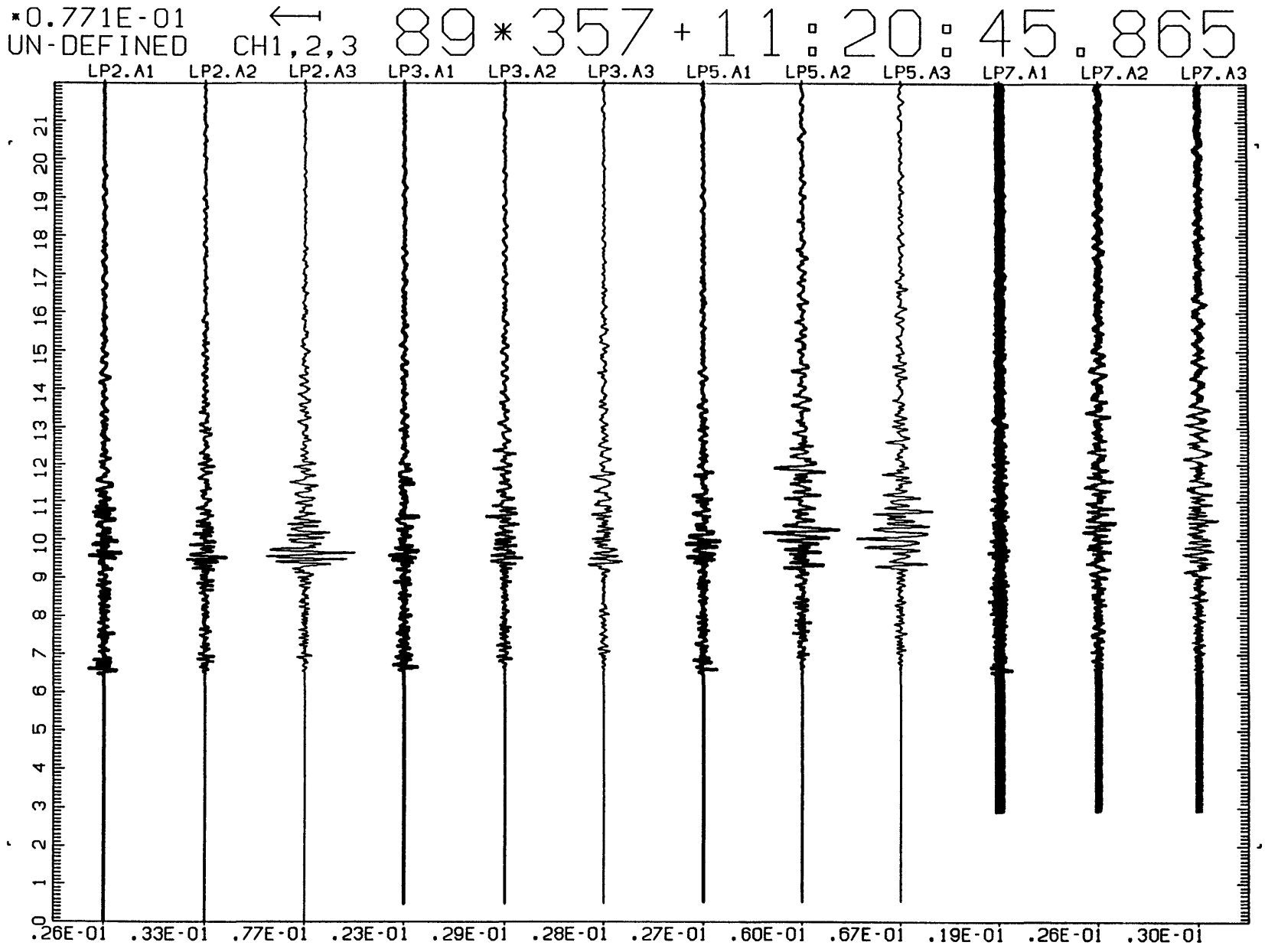
LP2.A2
LP2.A3
LP7.A1
LP7.A2
LP7.A3
LP3.A1
LP3.A2
LP3.A3
LP4.A1
LP4.A2
LP4.A3
LP5.A1
LP5.A2
LP5.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.15E-01 .25E-01 .29E-01 .18E-01 .25E-01 .42E-01 .12E-01 .17E-01 .20E-01 .14E-01 .18E-01 .22E-01 .97E-02 .18E-01 .26E-01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UN-DEFINED
CH1,2,3
89*357+11:20:45.865
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LP2.A2
LP2.A3
LP3.A1
LP3.A2
LP3.A3
LP5.A1
LP5.A2
LP5.A3
LP7.A1
LP7.A2
LP7.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.26E-01
.33E-01
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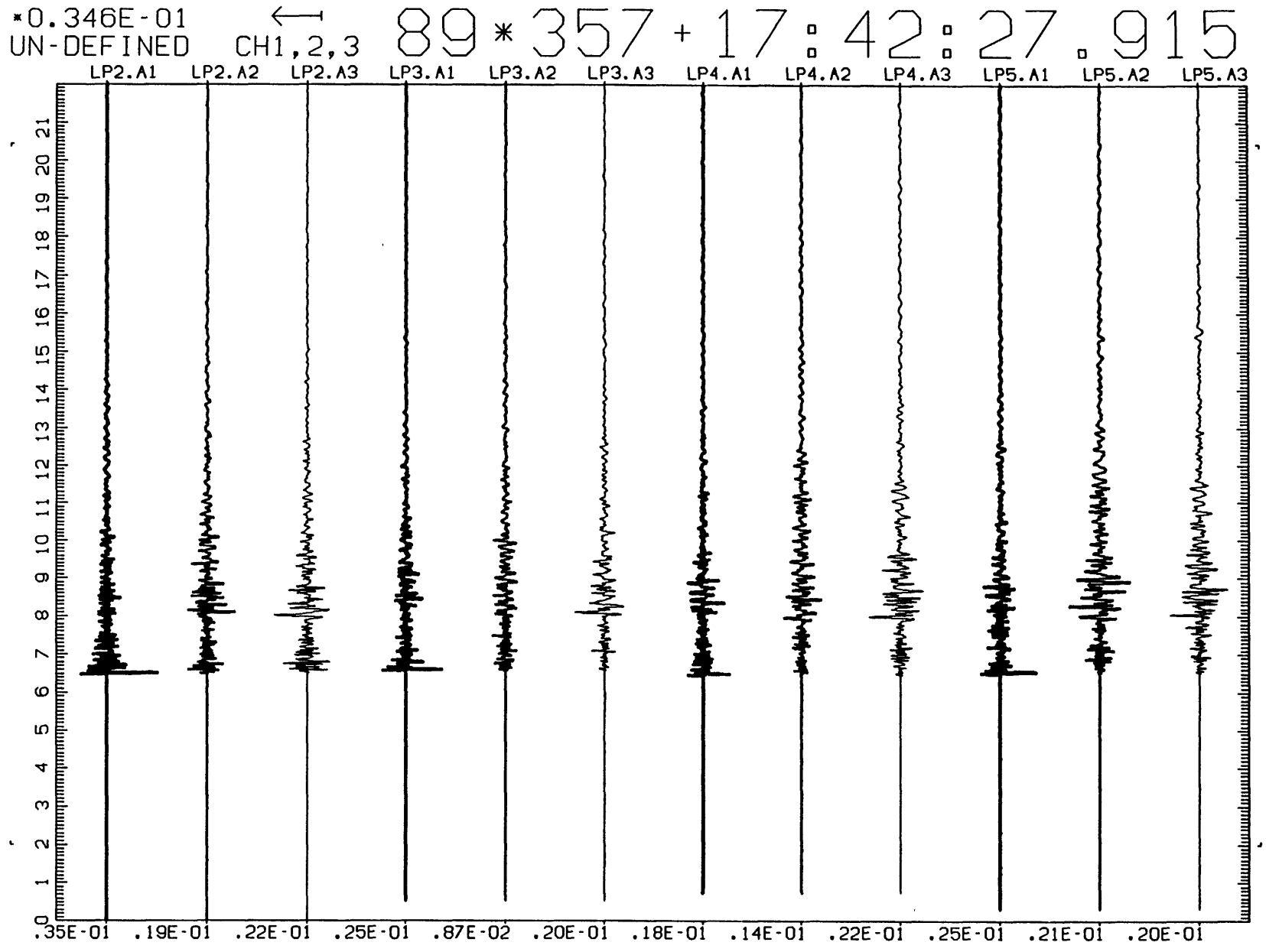
.30E-01


*0.346E-01
UN-DEFINED
CH1,2,3
89*357+17:42:27.915
LP2.A1
LP2.A2
LP2.A3
LP3.A1
LP3.A2
LP3.A3
LP4.A1
LP4.A2
LP4.A3
LP5.A1
LP5.A2
LP5.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.35E-01
.19E-01
.22E-01
.25E-01
.87E-02
.20E-01
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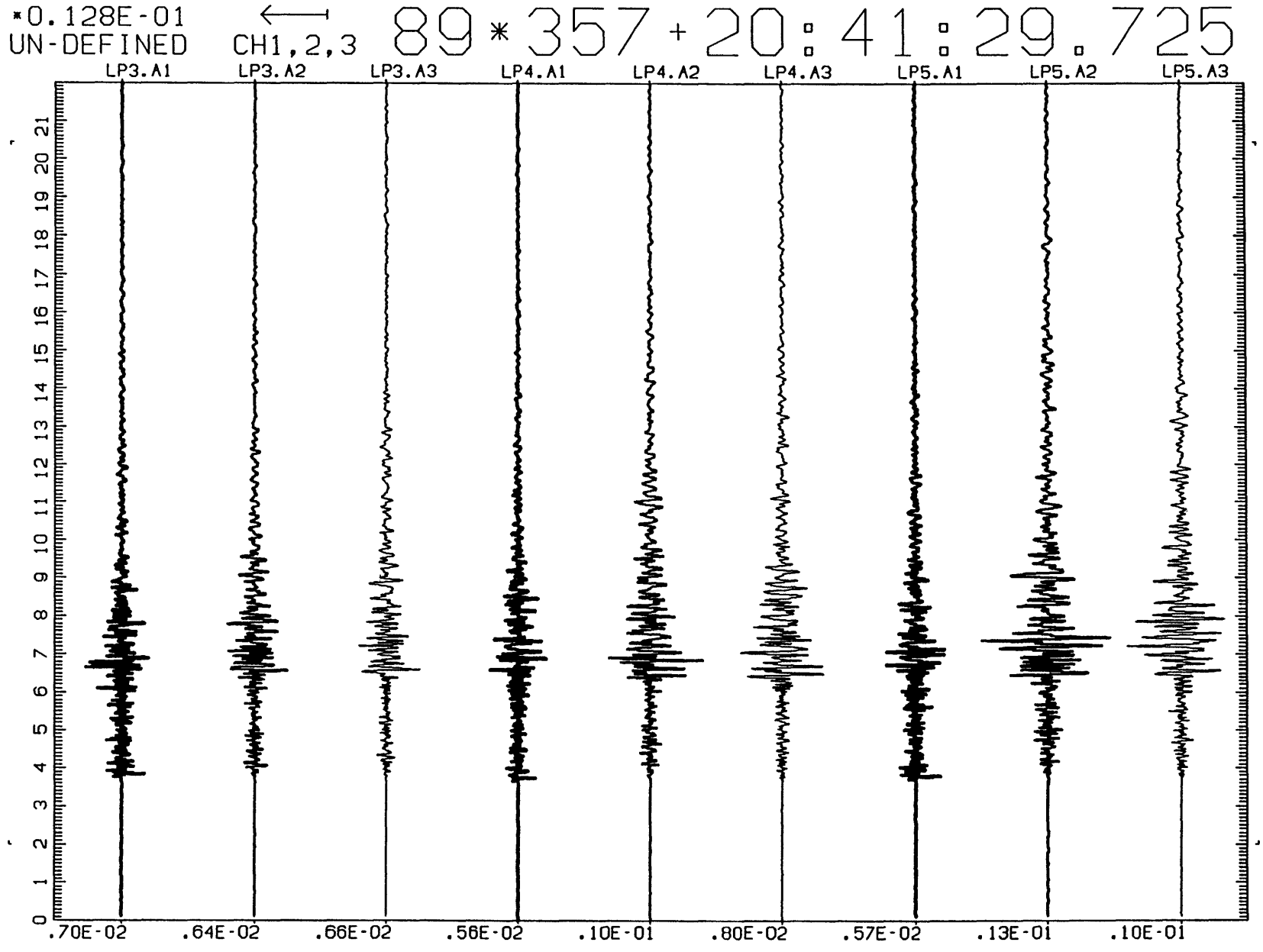
.14E-01
.22E-01
.25E-01
.21E-01
.20E-01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UN-DEFINED
CH1,2,3
89*357+20:41:29.725
LP3.A1
LP3.A2
LP3.A3
LP4.A1
LP4.A2
LP4.A3
LP5.A1
LP5.A2
LP5.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.70E-02
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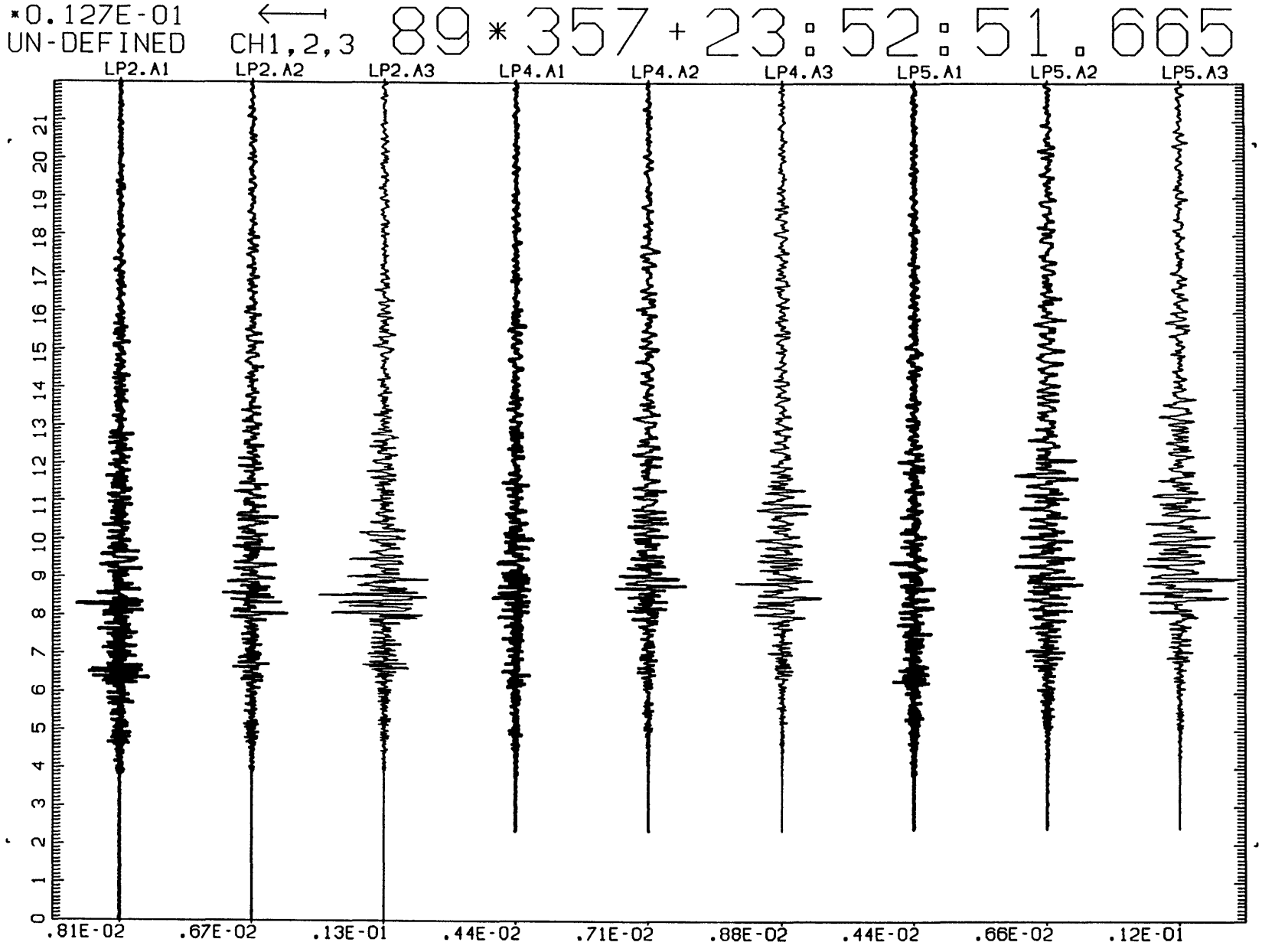
.10E-01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CH1,2,3
89*357+23:52:51.665
LP2.A1
LP2.A2
LP2.A3
LP4.A1
LP4.A2
LP4.A3
LP5.A1
LP5.A2
LP5.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.81E-02
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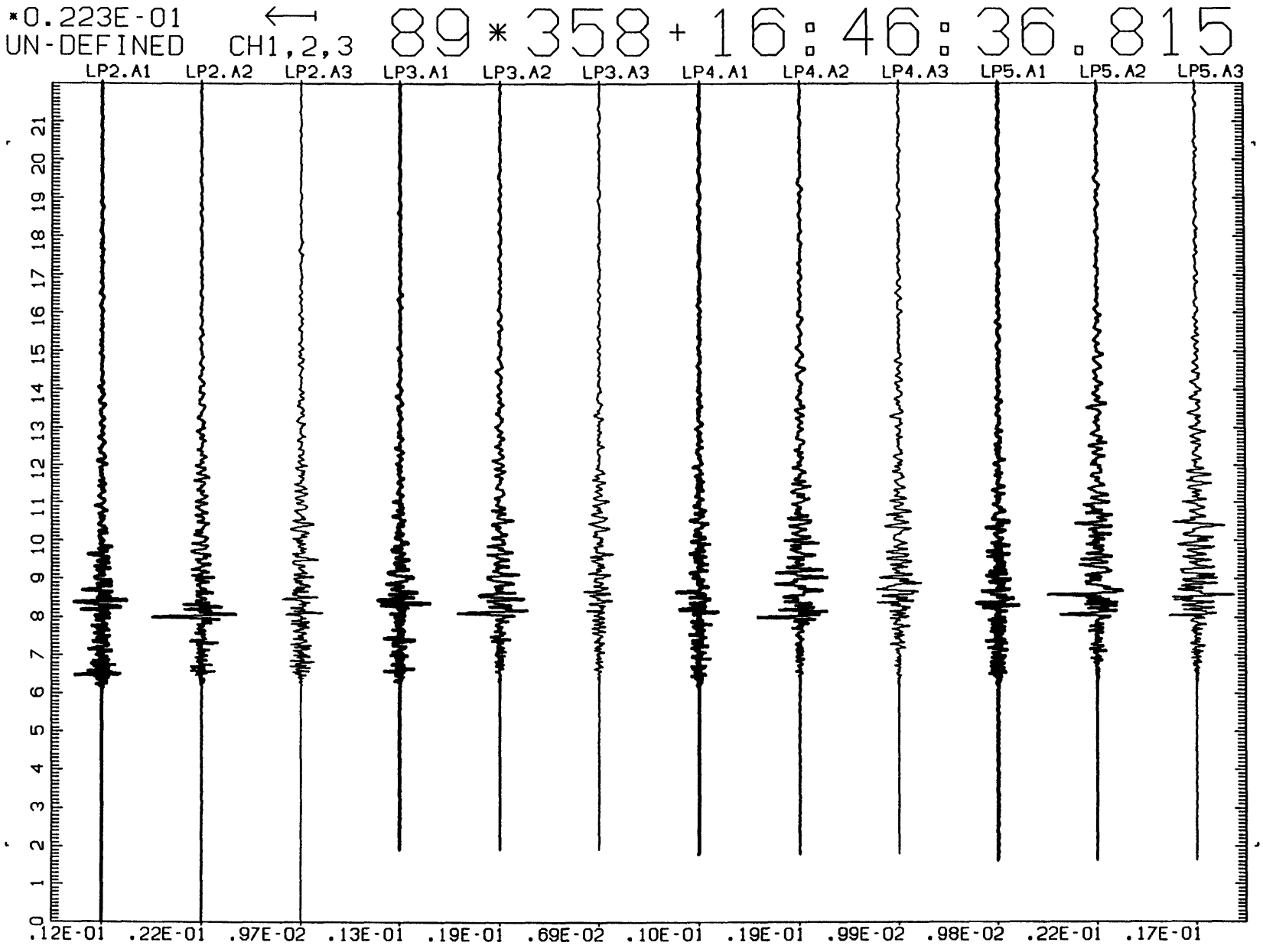
.12E-01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UN-DEFINED
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89*358+16:46:36.815
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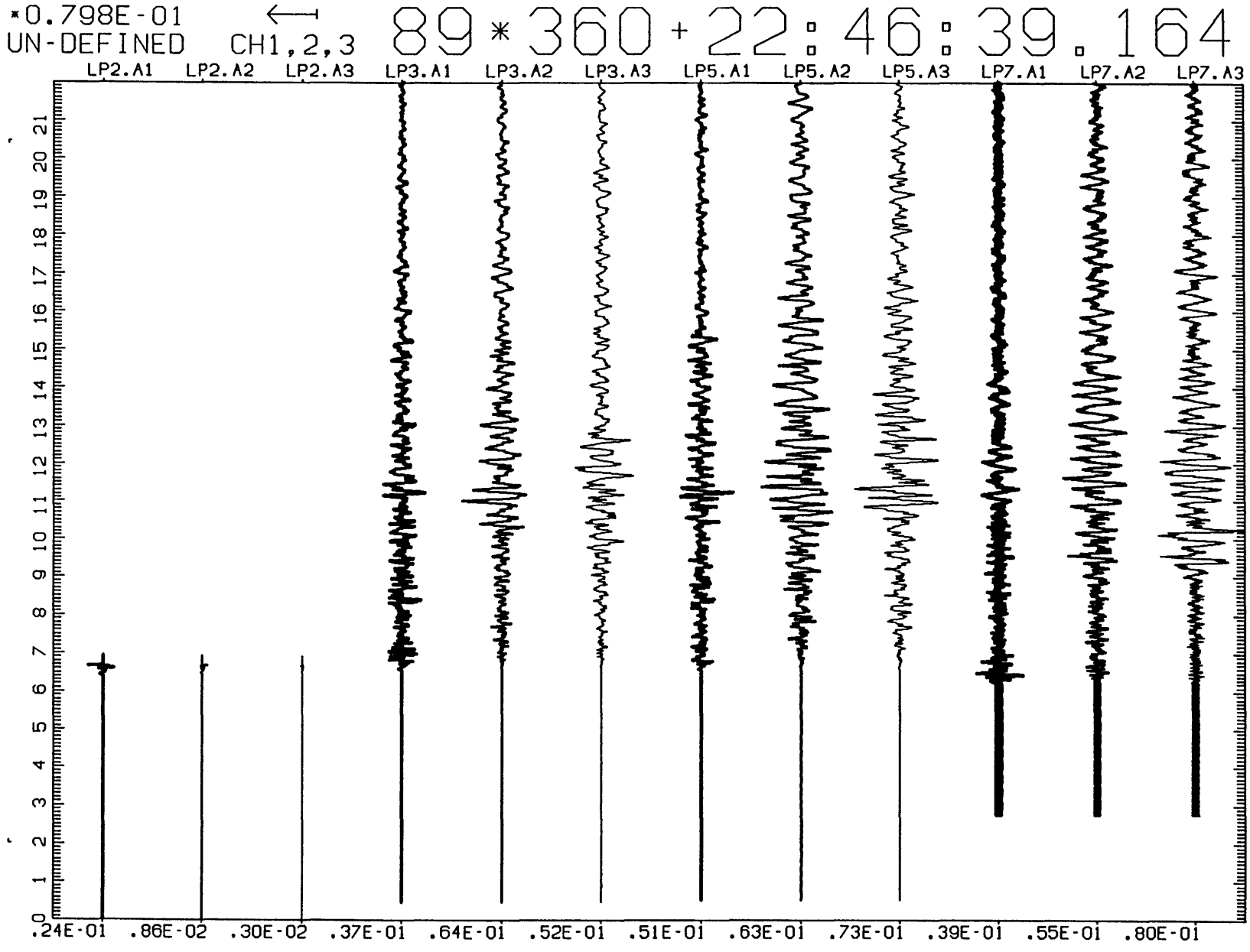
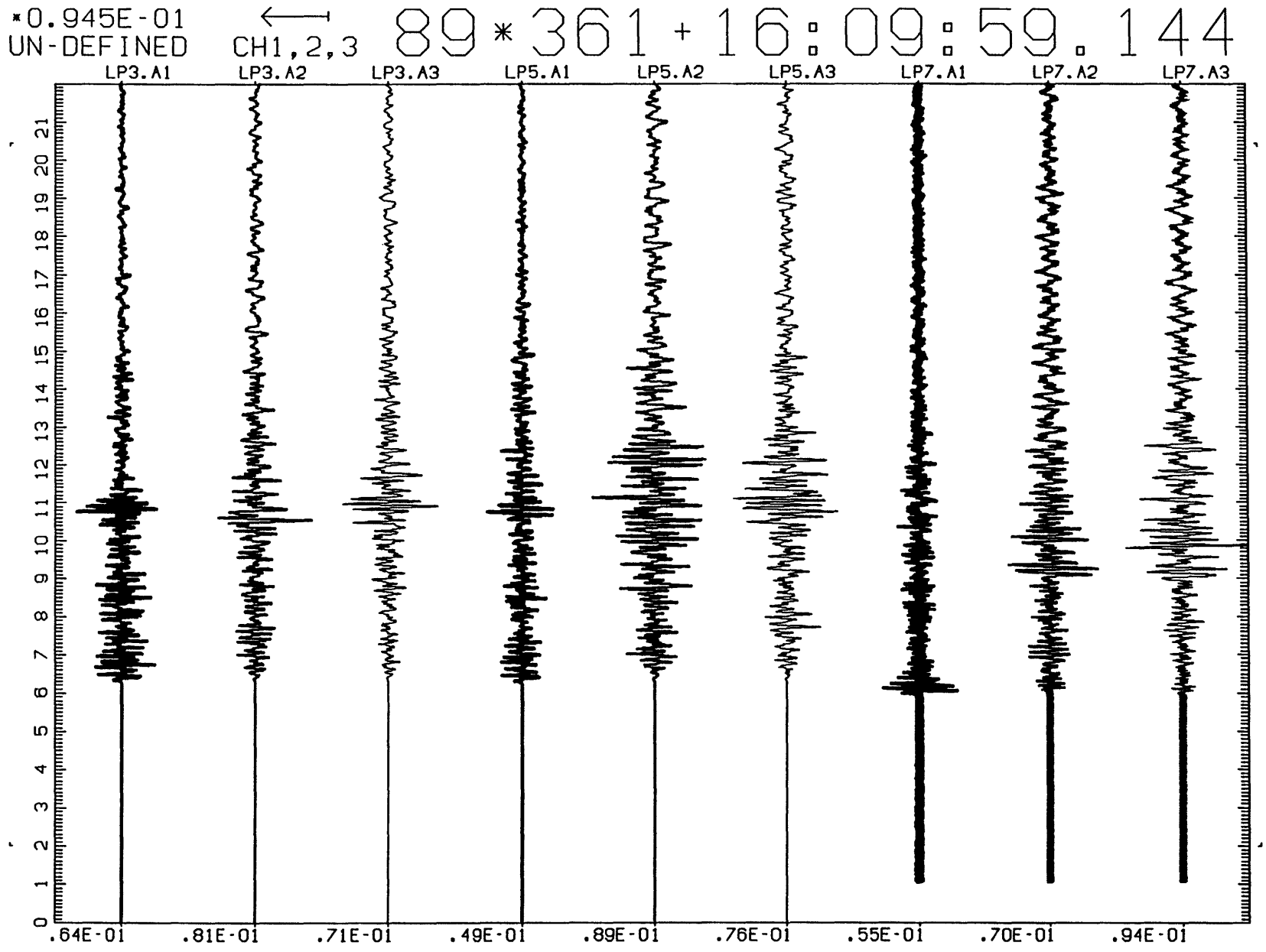
LP2.A2
LP2.A3
LP3.A1
LP3.A2
LP3.A3
LP4.A1
LP4.A2
LP4.A3
LP5.A1
LP5.A2
LP5.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.12E-01
.22E-01
.97E-02
.13E-01
.19E-01
.69E-02
.10E-01
.19E-01
.99E-02
.98E-02
.22E-01
.17E-01


*0.798E-01
UN-DEFINED CH1,2,3
89*360+22:46:39.164
LP2.A1 LP2.A2 LP2.A3 LP3.A1 LP3.A2 LP3.A3 LP5.A1 LP5.A2 LP5.A3 LP7.A1 LP7.A2 LP7.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.24E-01 .86E-02 .30E-02 .37E-01 .64E-01 .52E-01 .51E-01 .63E-01 .73E-01 .39E-01 .55E-01 .80E-01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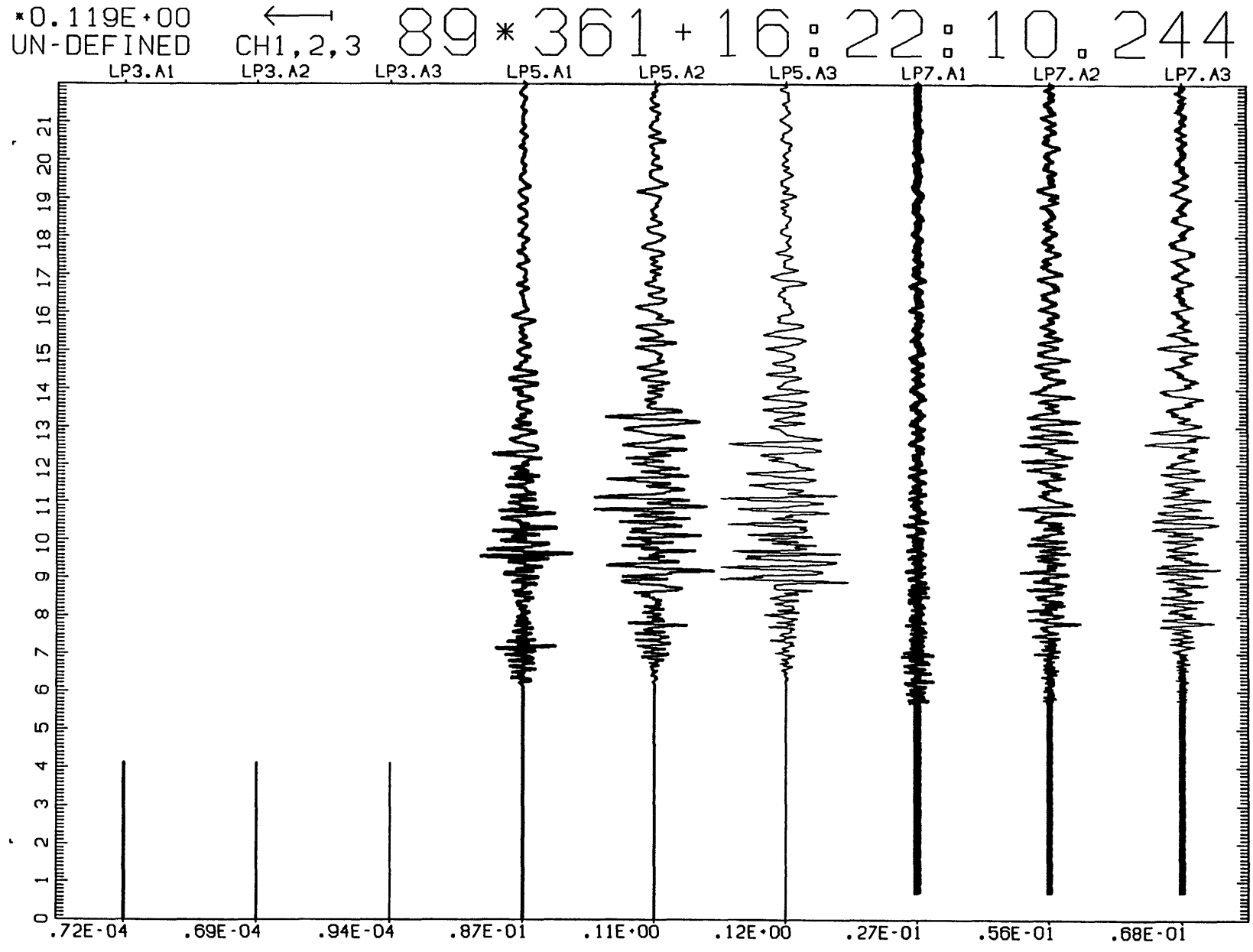
UN-DEFINED
CH1,2,3
89*361+16:09:59.144
LP3.A1
LP3.A2
LP3.A3
LP5.A1
LP5.A2
LP5.A3
LP7.A1
LP7.A2
LP7.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.64E-01
.81E-01
.71E-01
.49E-01
.89E-01
.76E-01
.55E-01
.70E-01
.94E-01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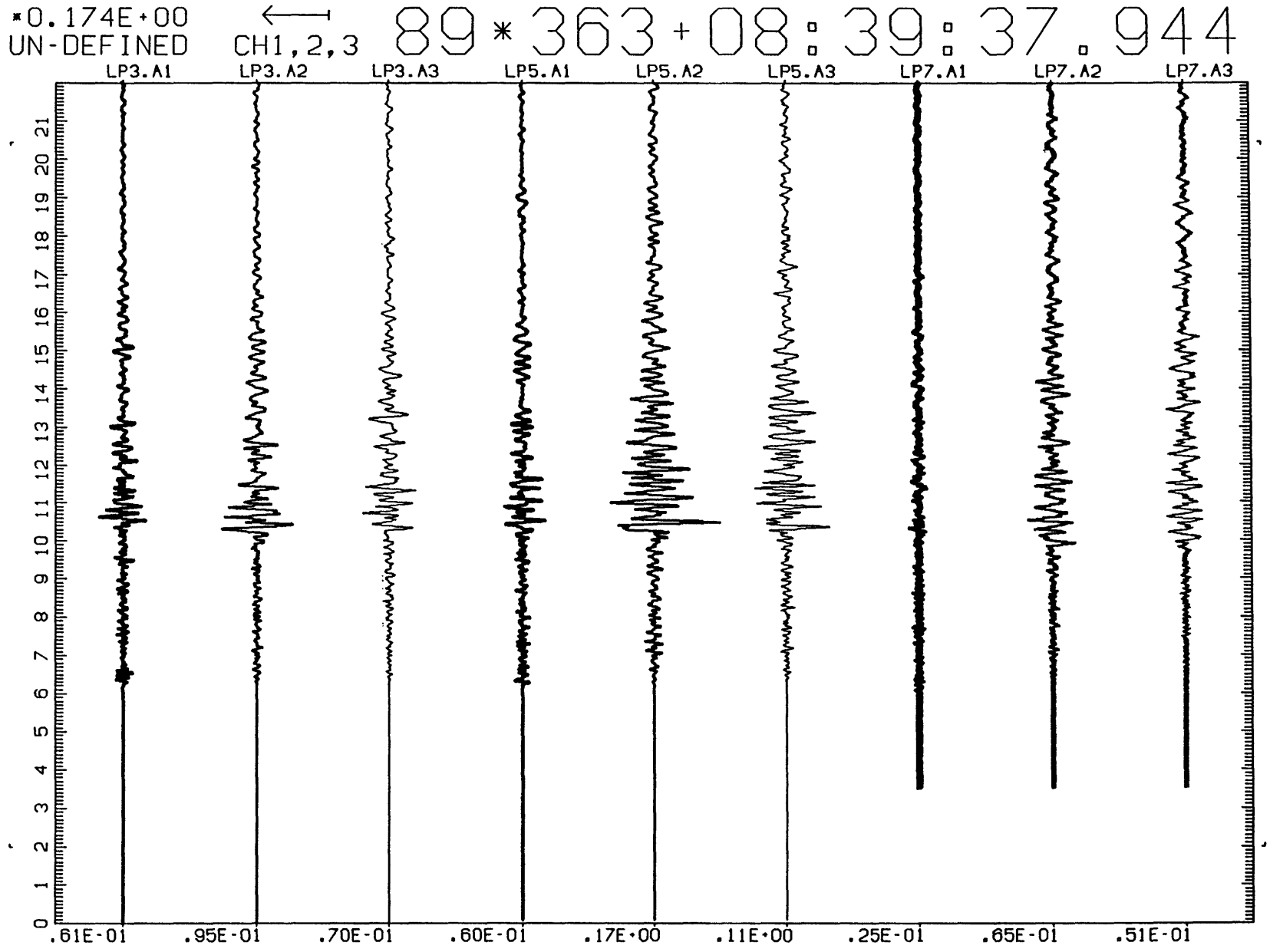
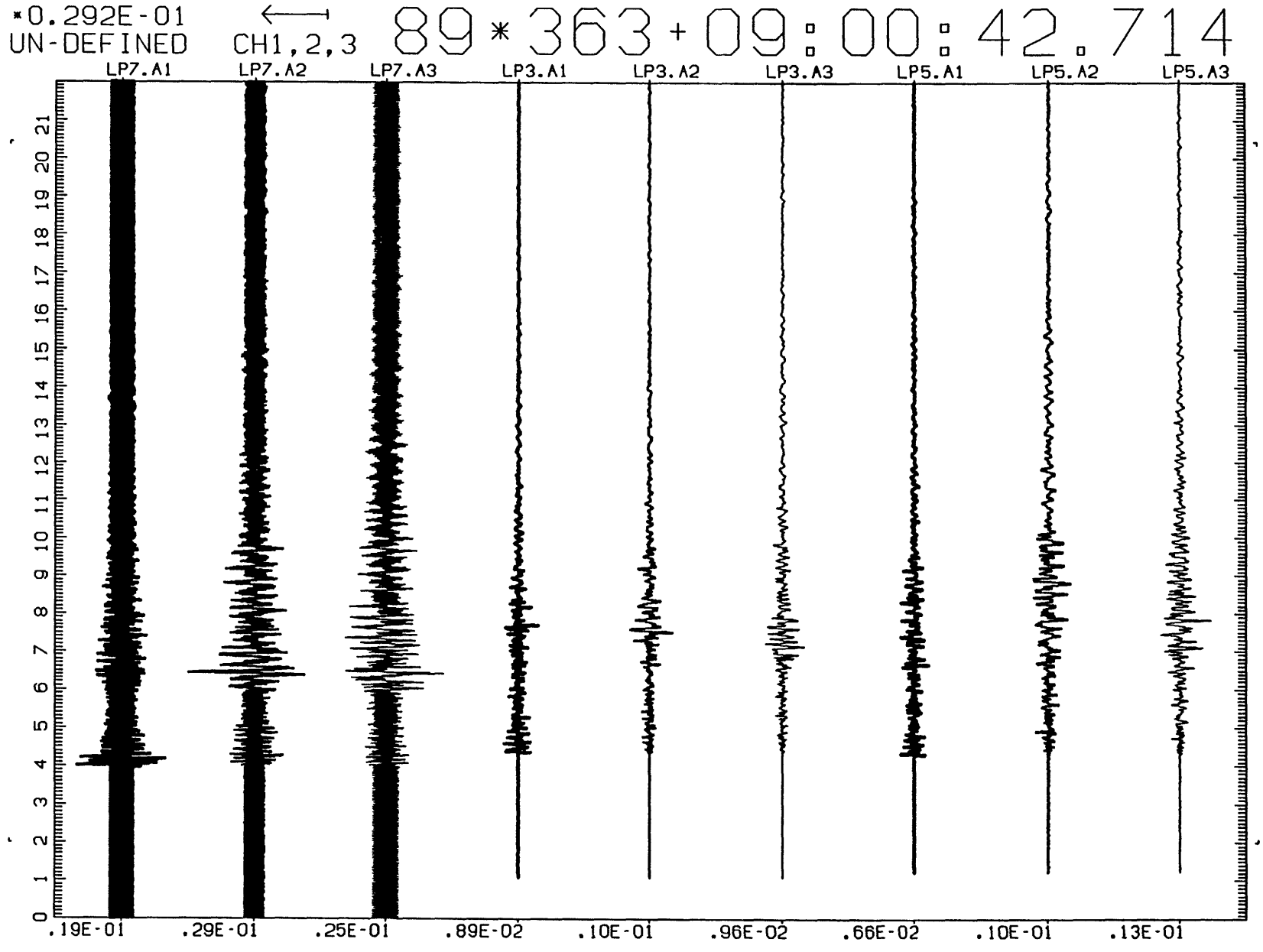
UN-DEFINED
CH1,2,3
89*361+16:22:10.244
LP3.A1
LP3.A2
LP3.A3
LP5.A1
LP5.A2
LP5.A3
LP7.A1
LP7.A2
LP7.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.72E-04
.69E-04
.94E-04
.87E-01
.11E+00
.12E+00
.27E-01
.56E-01
.68E-01


*0.174E+00
UN-DEFINED
CH1,2,3
89*363+08:39:37.944
LP3.A1
LP3.A2
LP3.A3
LP5.A1
LP5.A2
LP5.A3
LP7.A1
LP7.A2
LP7.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.61E-01
.95E-01
.70E-01
.60E-01
.17E+00
.11E+00
.25E-01
.65E-01
.51E-01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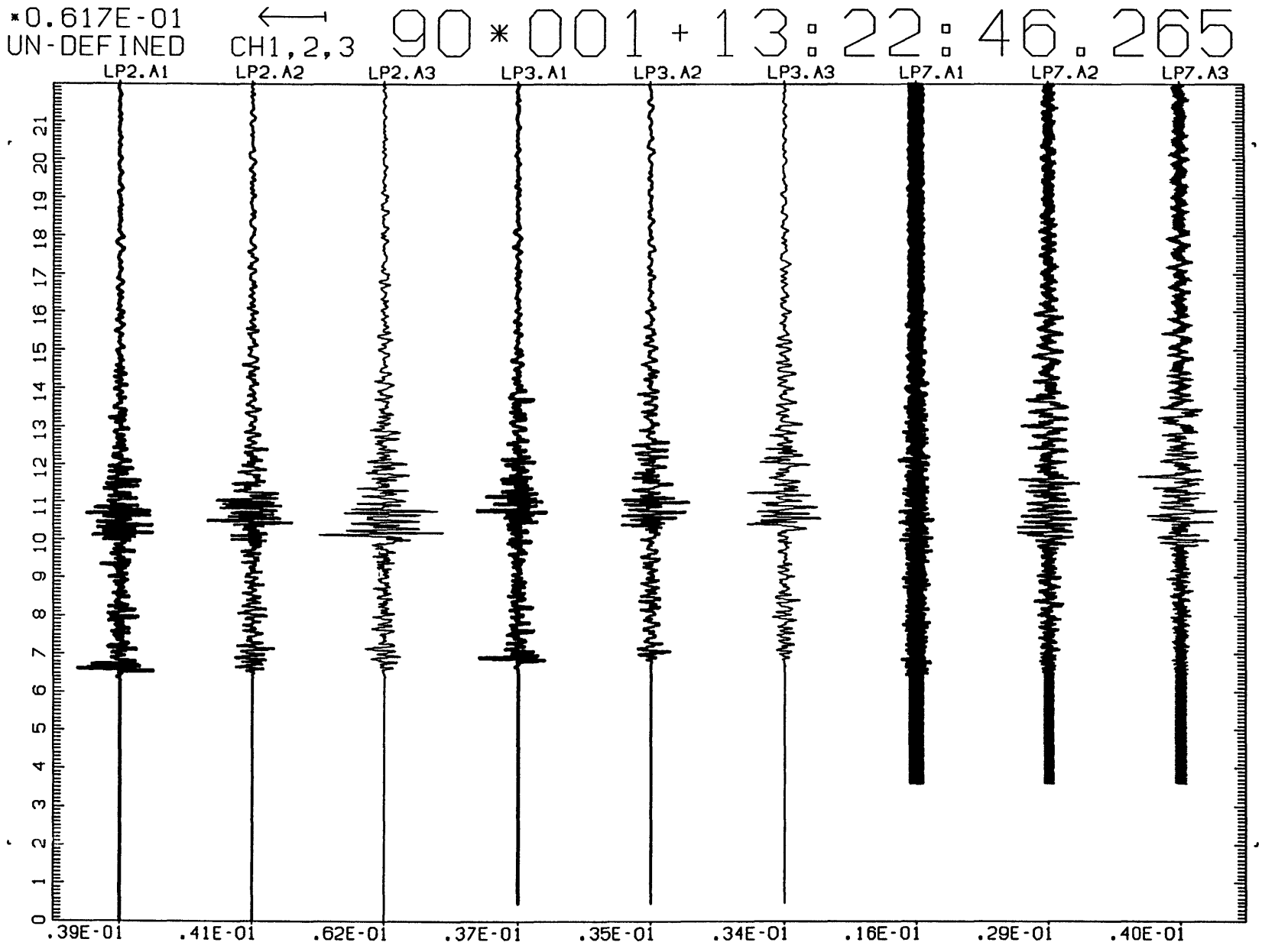
UN-DEFINED
CH1,2,3
89*363+09:00:42.714
LP7.A1
LP7.A2
LP7.A3
LP3.A1
LP3.A2
LP3.A3
LP5.A1
LP5.A2
LP5.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.19E-01
.29E-01
.25E-01
.89E-02
.10E-01
.96E-02
.66E-02
.10E-01
.13E-01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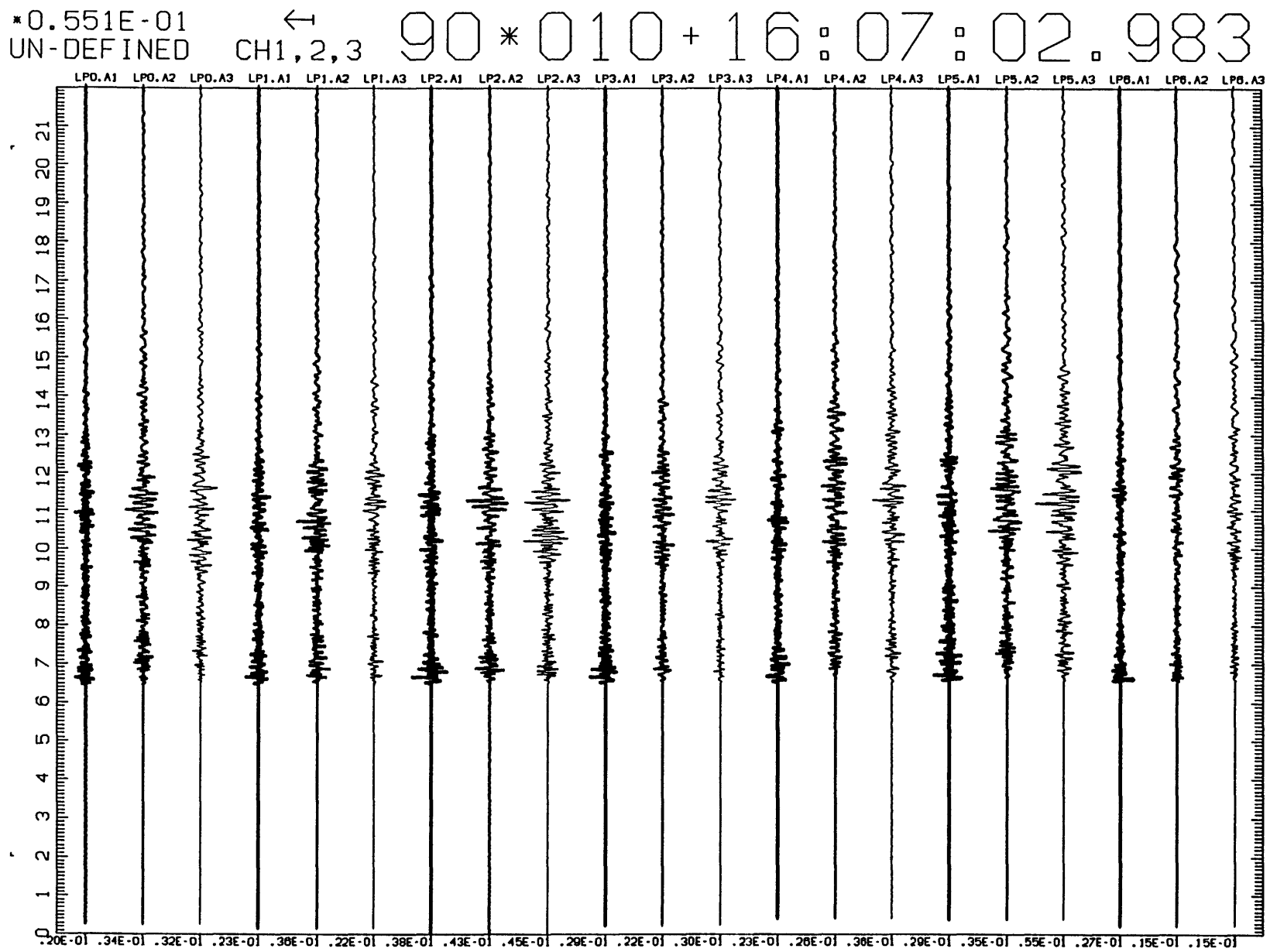
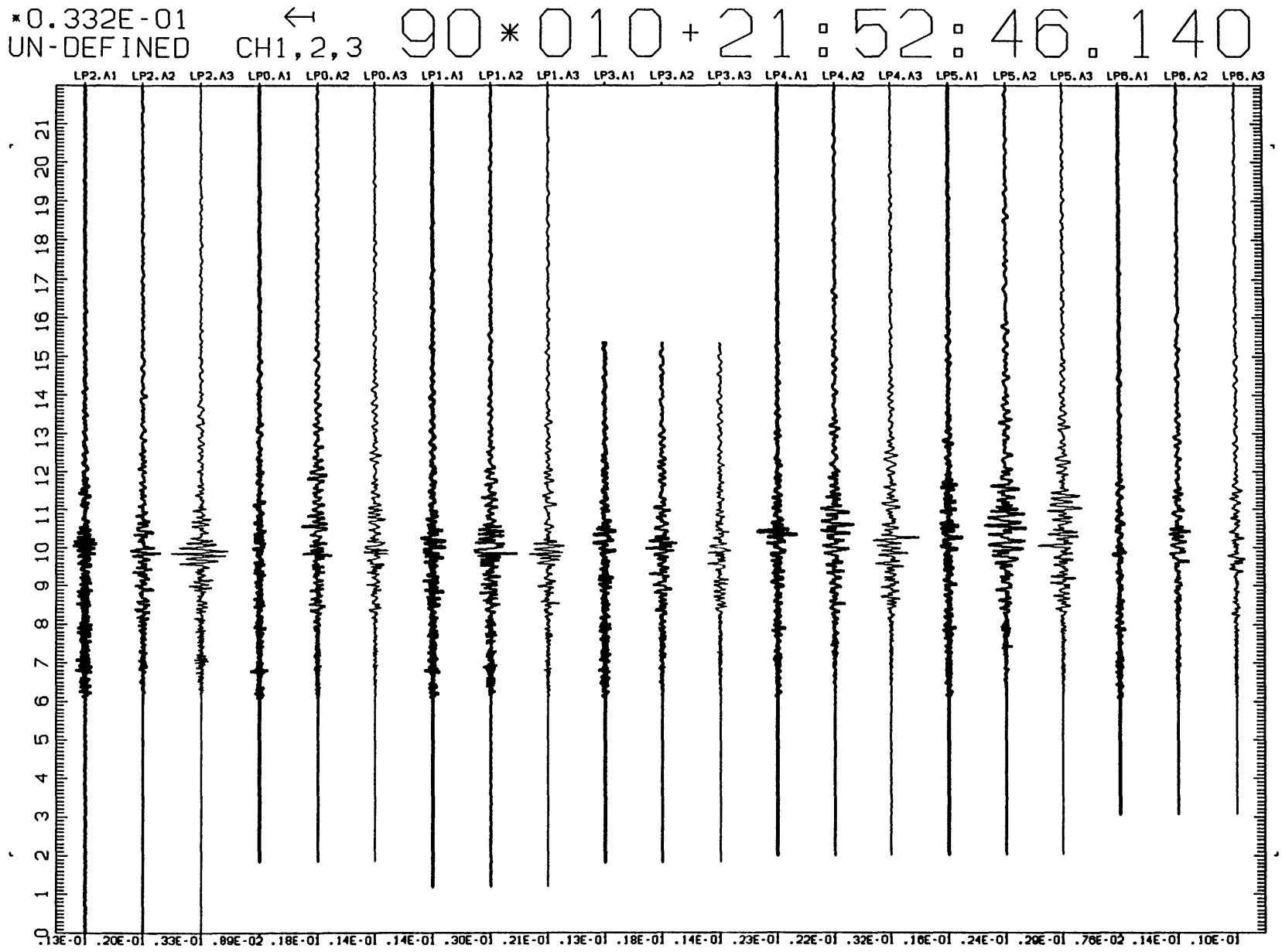
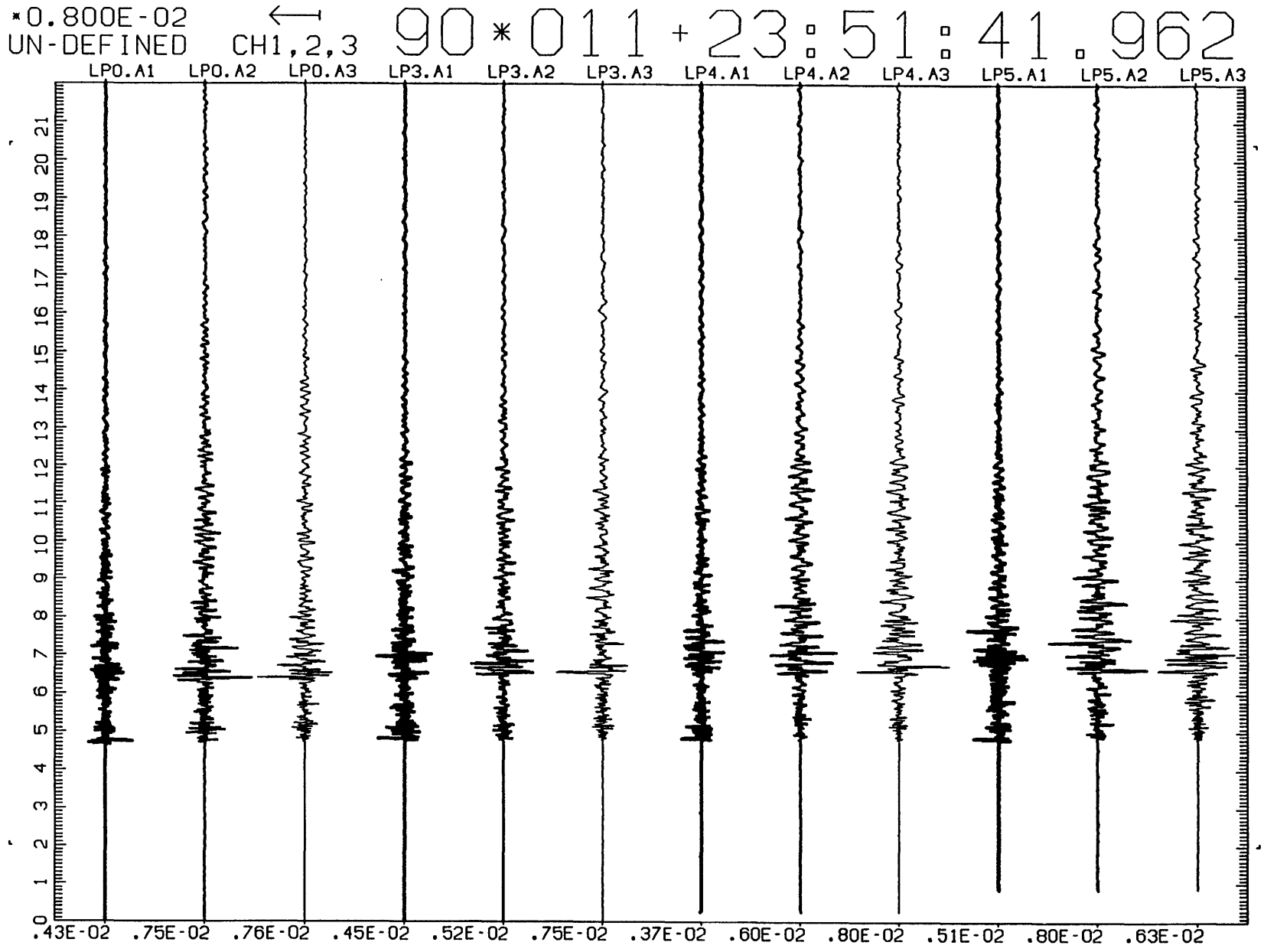
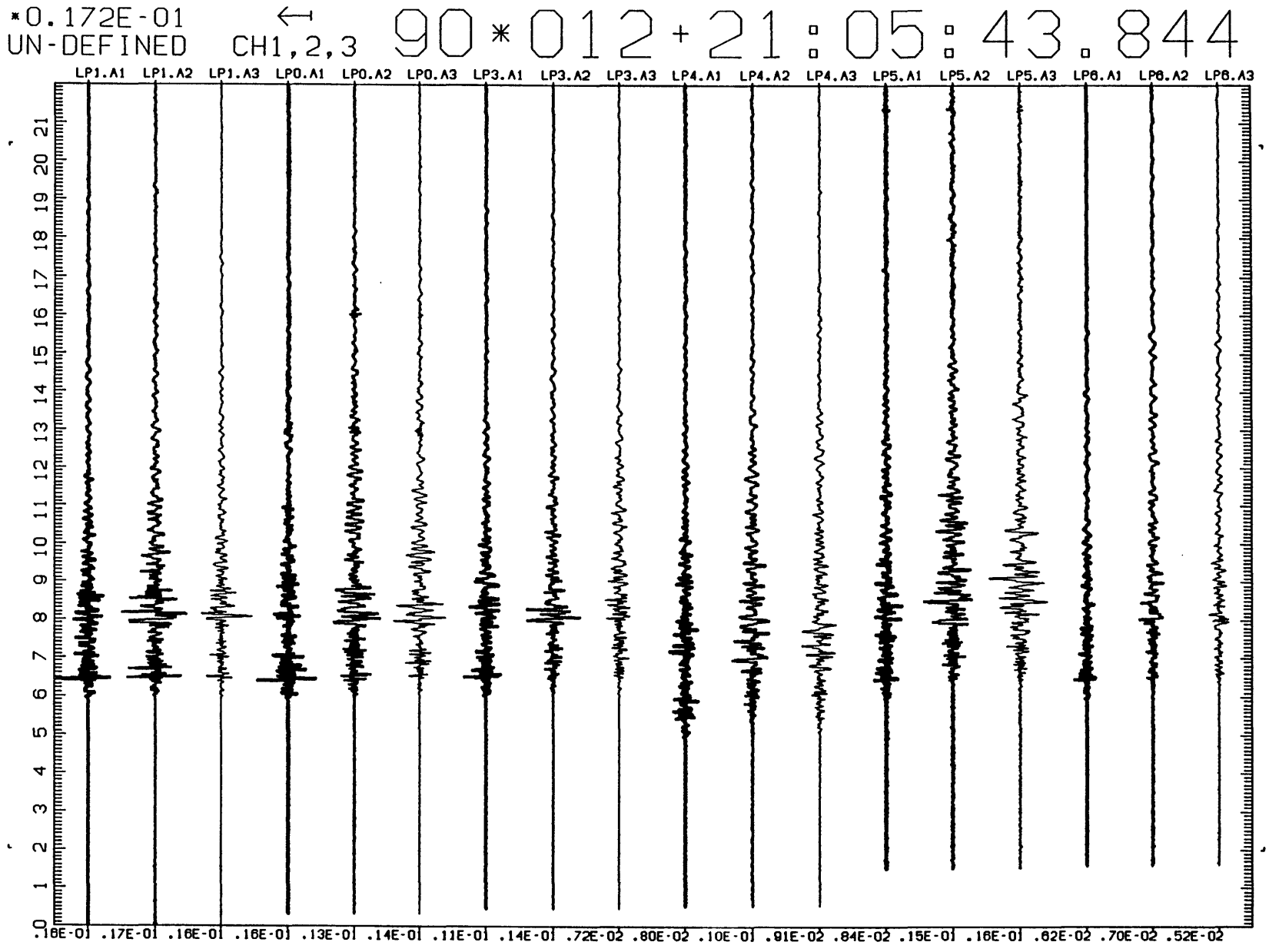
UN-DEFINED
CH1,2,3
90*001+13:22:46.265
LP2.A1
LP2.A2
LP2.A3
LP3.A1
LP3.A2
LP3.A3
LP7.A1
LP7.A2
LP7.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.39E-01
.41E-01
.62E-01
.37E-01
.35E-01
.34E-01
.16E-01
.29E-01
.40E-01


*0.551E-01
UN-DEFINED
CH1,2,3
90*010+16:07:02.983
LP0.A1 LP0.A2 LP0.A3 LP1.A1 LP1.A2 LP1.A3 LP2.A1 LP2.A2 LP2.A3 LP3.A1 LP3.A2 LP3.A3 LP4.A1 LP4.A2 LP4.A3 LP5.A1 LP5.A2 LP5.A3 LP6.A1 LP6.A2 LP6.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.20E-01 .34E-01 .32E-01 .23E-01 .38E-01 .22E-01 .38E-01 .43E-01 .45E-01 .29E-01 .22E-01 .30E-01 .23E-01 .26E-01 .36E-01 .29E-01 .35E-01 .55E-01 .27E-01 .15E-01 .15E-01


*0.332E-01
UN-DEFINED
CH1,2,3
90*010+21:52:46.140
LP2.A1 LP2.A2 LP2.A3 LP0.A1 LP0.A2 LP0.A3 LP1.A1 LP1.A2 LP1.A3 LP3.A1 LP3.A2 LP3.A3 LP4.A1 LP4.A2 LP4.A3 LP5.A1 LP5.A2 LP5.A3 LP6.A1 LP6.A2 LP6.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.13E-01 .20E-01 .33E-01 .89E-02 .18E-01 .14E-01 .14E-01 .30E-01 .21E-01 .13E-01 .18E-01 .14E-01 .23E-01 .22E-01 .32E-01 .16E-01 .24E-01 .29E-01 .76E-02 .14E-01 .10E-01


*0.800E-02
UN-DEFINED
CH1,2,3
90*011+23:51:41.962
LP0.A1
LP0.A2
LP0.A3
LP3.A1
LP3.A2
LP3.A3
LP4.A1
LP4.A2
LP4.A3
LP5.A1
LP5.A2
LP5.A3
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.43E-02
.75E-02
.76E-02
.45E-02
.52E-02
.75E-02
.37E-02
.60E-02
.80E-02
.51E-02
.80E-02
.63E-02

*0.263E-01
UN-DEFINED
CH1, 2, 3
90 * 012 + 090. 10. 38. 193
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
LP0.A1 LP0.A2 LP0.A3 LP1.A1 LP1.A2 LP1.A3 LP2.A1 LP2.A2 LP2.A3 LP3.A1 LP3.A2 LP3.A3 LP5.A1 LP5.A2 LP5.A3 LP6.A1 LP6.A2 LP6.A3 LP7.A1 LP7.A2 LP7.A3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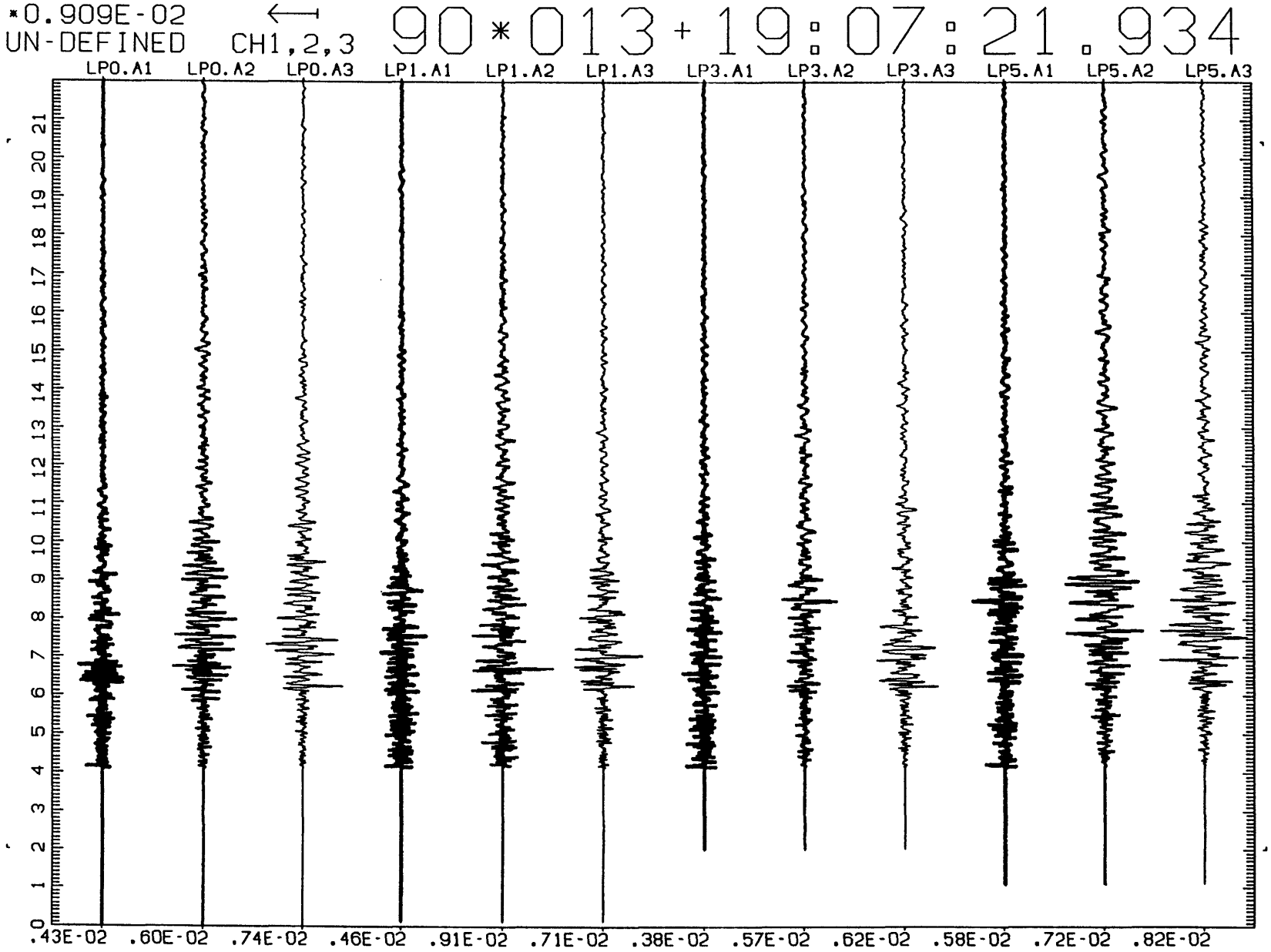
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
.18E-01 .17E-01 .16E-01 .16E-01 .13E-01 .14E-01 .11E-01 .14E-01 .72E-02 .80E-02 .10E-01 .91E-02 .84E-02 .15E-01 .16E-01 .62E-02 .70E-02 .52E-02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UN-DEFINED
CH1,2,3
90*013+19:07:21.934
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LP0.A2
LP0.A3
LP1.A1
LP1.A2
LP1.A3
LP3.A1
LP3.A2
LP3.A3
LP5.A1
LP5.A2
LP5.A3
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
.43E-02
.60E-02
.74E-02
.46E-02
.91E-02
.71E-02
.38E-02
.57E-02
.62E-02
.58E-02
.72E-02
.82E-02

APPENDIX E. Example data file.

Use of hour code (A = 00, B = 01, . . . X = 23) shortens export filenames by one character and makes them PC-compatible. For example: 3472355P4.GAO -> 347X55P4.GAO.

Headers:

I010 = Year
I011 = Day (0-365)
I012 = Hour (0-23)
I013 = Minute (0-59)
I014 = Second (0-59)
I015 = Millisecond (0-999)
I020 = GEOS serial number
I027 = GEOS channel number: first active
I028 = GEOS channel number: this file
I029 = GEOS channel number: total
I031 = Number of data blocks
I032 = Index of last sample in last data block
I040 = Sensor serial number
I041 = Vertical orientation (degree, measured down from 0 = up)
I042 = Horizontal orientation (degree, measured clockwise from 0 = north)
I254 = Recorded motion type (1 = acceleration, 2 = velocity)
R005 = Sample rate (sample/second)
R006 = Component sample lag (second)
R040 = Station latitude (degree)
R042 = Station longitude (degree)
R044 = Station elevation (meter, above sea level)
R046 = Digitizing constant (count/volt)
R047 = Anti-alias filter corner frequency (hertz)
R048 = Anti-alias filter rolloff (poles, 6 dB/octave per pole)
R049 = Sensor natural frequency (hertz)
R050 = Sensor damping (fraction of critical)
R051 = Sensor sensitivity (volt/ground-motion-unit)
R052 = Amplifier gain (dB)

Notes:

I010 through I015 specify the time of the first sample in the file

Total samples in file = (I031 - 1) × 256 + I032

Ground motion = COUNTS / (R046 × R051 × G) where $G = 10^{(R052 / 20)}$

```
<<< program XASCII >>> 23-OCT-90
DISK$WAVEDATA:[LPR.R.LP6.B]0141126I1.LP6;1 -> DISK$CD:[LPR.OTHER]014L26I1.LP6
Headers
I(010) =    1990
I(011) =      14
I(012) =      11
I(013) =      26
I(014) =      25
I(015) =     184
I(020) =     269
I(027) =  -32768
I(028) =  -32768
I(029) =  -32768
I(031) =       3
I(032) =     149
I(040) =  -32768
I(041) =       0
I(042) =       0
I(254) =       2
R(005) =   0.2000000E+03
R(006) =   0.0000000E+00
R(040) =   0.3708800E+02
R(042) =  -0.1219375E+03
R(044) =   0.4010000E+03
R(046) =   0.6553600E+04
R(047) =   0.5000000E+02
R(048) =   0.6000000E+01
R(049) =   0.2080000E+01
R(050) =   0.6000000E+00
R(051) =   0.1200000E+01
R(052) =   0.2000000E+02
Data block #00001
    -2     3    -1    -6     0     1    -1    -4    -3    -1     3    -1    -7
    -2     6     1    -5    -6    -5     4     8   -15   -18     8    15    -4
   -10     0     6    -3    -8     1     2    -6    -6     0     2    -1    -2
     0     1    -1    -3    -2    -1     0    -4    -8    -9     4    15   -11
   -14     6     5    -6    -5     1    -4    -7     0     1    -5    -5     4
     4    -5   -12    -1     3    -4    -6    -2     1     2    -3    -8    -5
     5     2    -4    -8    -3     3     0    -4    -5    -3     0     2    -1
    -9    -6     1     4    -5   -13    -5     6     5    -5   -11    -2     6
     1    -8    -6     0     0     0     2    -5   -10     1     8     0    -9
    -5     1    -2    -2     1    -2    -7    -4     1     2    -2    -9    -4
     1     2     0    -7    -6    -2     0     0    -5    -8    -1     4     0
    -8    -3     2    -3    -9     3     7    -5   -12    -6     5     3    -7
    -8     0     5     0    -8    -8     0     3    -3    -7    -5     1     0
    -5    -5    -1     1    -2    -6    -5     1    -1    -1     3    -5    -4
     0     0    -3    -5    -4    -2     1    -1    -7    -5     0     3    -5
    -7    -1     4    -2    -9    -3     0     0    -1    -7    -9    -3     1
     0    -6    -7     0     3    -2    -6    -6    -5     2     6    -5   -18
    -6    11     5   -13   -13     5     8    -3   -13    -7     5     6    -3
   -15    -7     6     5   -10   -13     1     6    -2   -10    -7     0     2
     1    -7    -7    -1     2    -1   -11    -2     6
Data block #00002
    -2    -6     2     2    -9   -10    -1     5     1    -7    -8    -1     1
    -4    -3    -1    -2    -1    -2    -4    -8   -18     2    23     3   -18
    -2     5    -3    -5     0     1    -1    -2    -4    -7    -2     4     1
    -2    -3    -5     0     0    -3    -2    -2    -2     0     1    -1    -5
    -2     2     4     0    -7    -7     0     5     0    -3     0     1    -6
    -5     9     4   -10   -12     5    10    -3    -7    -7     0    10     4
    -8    -7     1     7     3    -6    -8    -1     3     5     3     1    -6
    -9    -1     0    -6    -1    12     3    -9    -3     6     1    -9    -8
     0     2    -1    -7     0     2    -1    -4    -3    -3    -3    -2    -1
     4     2    -4    -7    -4     1     0    -6    -6    -1     1     2    -2
    -8    -1     1    -3    -2     0    -2    -2     2     1    -9    -8    -1
     4    -2    -8     1     4    -8   -12     1     8    -4   -12    -5     4
    -1    -8    -4     2     0    -9    -5     3     4    -4   -13    -4     6
     5    -7   -12    -2     2     0    -3    -4    -5     1     3    -5    -8
    -1     5    -1    -9   -13     4    12    -7   -10    -2     0     0     0
    -6    -7     2     5    -5    -9    -1     1    -2    -2    -2    -1     0
    -5    -6    -4     0    -4    -8     1     2    -4    -1    -1    -2     4
     0   -13    -7     3     1    -5    -7     0     2    -6   -29   -18    45
    28   -30   -17    13     0    -9     0    -1    -5    -1    -4    -5     4
     1    -7    -7    -1     4     0    -8    -2     0
Data block #00003
    -2    -1     0    -4    -5     0    -1    -3    -8   -13    -7    16    19
   -13   -14     7     6    -8    -6     3    -1    -6    -4    -2    -2     0
     3    -4    -6    -4    -5    -1     2     1    -7    -3     8     2    -5
    -5     0    -1    -2     0    -1    -2    -5    -4     2     4    -4    -5
     0    -1    -2     0     0    -1    -1    -4    -7    -3    -2     6     3
    -8    -7     0     4    -4    -8    -2     2     3    -6   -10    -2     6
```

5	−11	−13	5	11	−4	−13	−4	2	1	−8	−3	6
0	−11	−8	1	2	0	−4	−8	−4	0	1	−5	−7
−1	0	−1	−9	−8	9	9	−7	−12	−3	2	−2	−7
−2	2	−1	−5	−5	−2	−4	−8	2	2	−11	0	1
−12	−12	5	10	−8	−14	3	7	−9	−18	−5	5	2
4	−2	−8	1	4	−8							