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IONOSPHERIC DATA AT SYOWA STATION
(ANTARCTICA)

July 1985—December 1985

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INTRODUCTION

Vertical soundings of ionosphere at Syowa Station, Antarctica, have been carried out by the Radio Research Laboratories, through the sponsorship of the National Institute of Polar Research of Japan.

LOCATION OF SYOWA STATION

Geographic		Geomagnetic	
Latitude	Longitude	Latitude	Longitude
69°00.4'S	39°35.4'E	-69.8°	78.2°

SPECIFICATIONS OF THE IONOSONDE USED AT SYOWA STATION

Items	Specifications
Frequency Range	400 kHz-15 MHz
Transmitting power	10 kW (peak value)
Duration of Sweep	20 sec
Transmitted Pulse Width	80 μ sec
Recurrence Frequency of Transmitted Pulse	50 Hz (by power source frequency)
Frequency Scale	every 1 MHz
Height Range	900 km
Height Scale	every 50 km
Total Receiver Gain	120 dB
Recording Method	35 mm film and video fax for ionograms
Power Supply	100 volt AC, 2.0 kVA
Transmitting Antenna and Receiving Antenna	30 m height vertical delta terminated by 600 Ω respectively

DESCRIPTION

- a. All symbols and terminology in the tables or figures of ionospheric data are used in accordance with the "URSI Handbook of Ionogram Interpretation and Reduction (Second Edition 1972)"
- b. Ionograms data are printed in the quarter hourly of every days.
- c. Characteristics of Ionosphere

fxI	Top frequency of spread F traces or oblique traces.
fof2	Ordinary wave critical frequency for the F2 layer.
fEs(ftEs)	Top frequency of Es layer as reflected overhead.
fmin	Lowest frequency showing vertical ionospheric reflection.
h'F	Minimum virtual height of the ordinary wave F trace as a whole.

Symbols

(i) Descriptive Letters.

The following letters are entered after, or used to replace, a numerical value on the monthly tabulation sheets.

- A Measurement influenced by, or impossible because of, the presence of a lower thin layer, for example, Es.
- B Measurement influenced by, or impossible because of, absorption in the vicinity of f_{min} .
- C Measurement influenced by, or impossible because of, any non-ionospheric reason.
- D Measurement influenced by, or impossible because of, the upper limit of the normal frequency range.
- E Measurement influenced by, or impossible because of, the lower limit of the normal frequency range.
- F Measurement influenced by, or impossible because of, the presence of spread echoes.
- G Measurement influenced or impossible because the ionization density of the layer is too small to enable it to be made accurately.
- H Measurement influenced by, or impossible because of, the presence of stratification.
- K Presence of particle E layer.
- L Measurement influenced by or impossible because the trace has no sufficiently definite cusp between layers.
- M Interpretation of measurement questionable because the ordinary and extraordinary components are not distinguishable.
- N Conditions are such that the measurement cannot be interpreted.
- O Measurement refers to the ordinary component.
- P Man-made perturbation of parameters-Presence of polar spur traces.
- Q Range spread present.
- R Measurement influenced by, or impossible because of, attenuation in the vicinity of a critical frequency.
- S Measurement influenced by, or impossible because of, interference or atmospheric.
- T Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.
- V Forked trace which may influence the measurement.
- W Measurement influenced or impossible because the echo lies outside the height range recorded.
- X Measurement refers to the extraordinary component.
- Y Lacuna phenomena, severe layer tilt.
- Z Third magneto-electronic component present.

(ii) Qualifying Letters

The following letters are entered in the first column before a numerical value on the monthly tabulation sheets.

- D Greater than.

E	Less than.
J	Ordinary component characteristic deduced from the extraordinary component.
M	Mode interpretation uncertain.
O	Extraordinary component characterisitic deduced from the ordinary component.
T	Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.
U	Uncertain or doubtful numerical value.
Z	Measurement deduced from the third magneto-electronic component.

Definitions of the CNT, MED, UQ and LQ

Median count (CNT) is the number of values from which a median has been computed. In addition to numerical values, the count may include certain descriptive letters.

Median (MED) of a set of numbers is the middle value when the numbers are arranged in order of magnitude, or the average of the two middle values if there is an even number of values.

Upper quartile (UQ) is the median value the upper half of the values when they are ranked accrding to magnitude; the lower quartile (LQ) is the median value of the lower half.

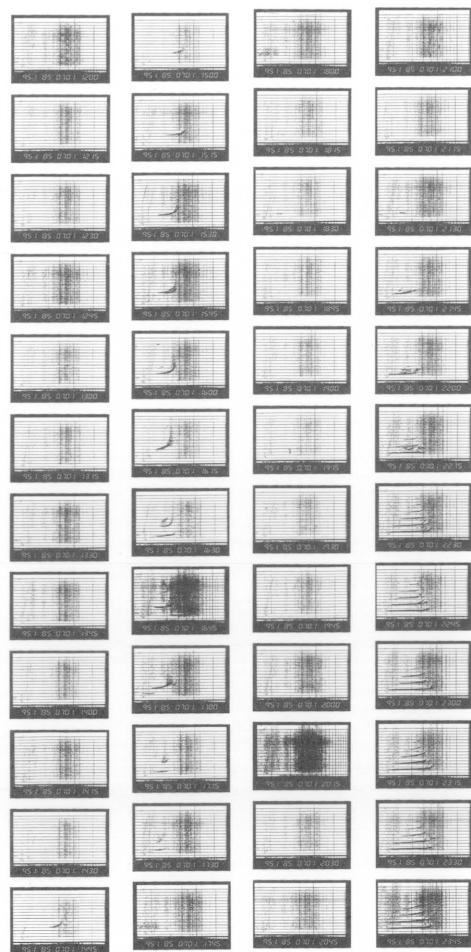
SYOWA STATION

IONOGRAM

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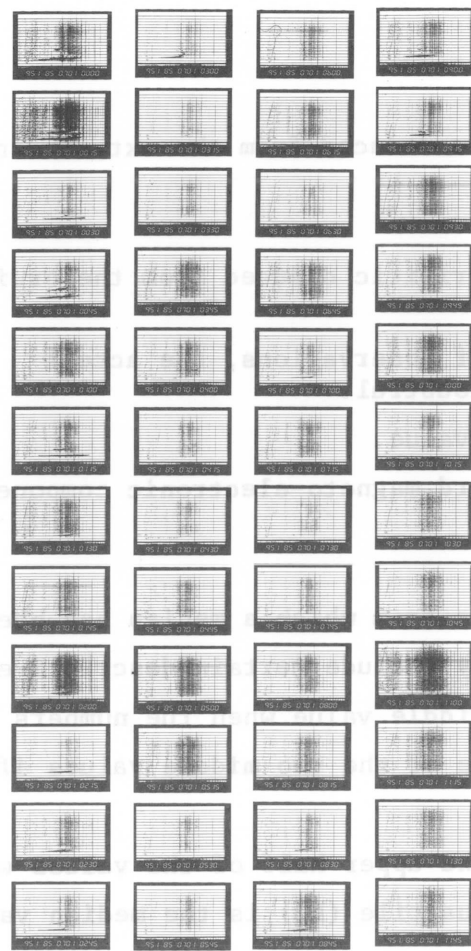
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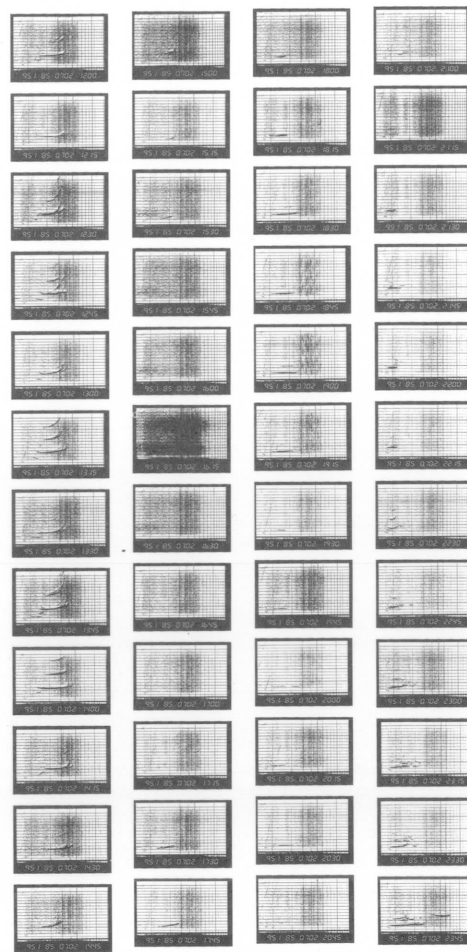
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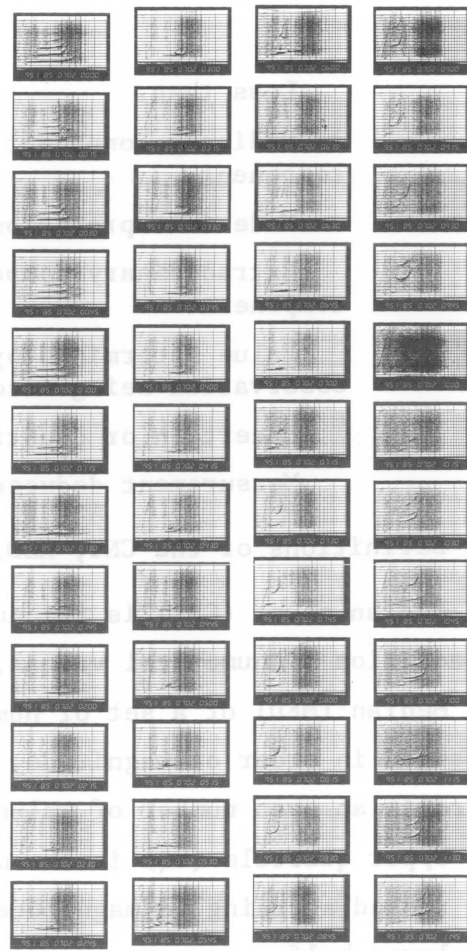
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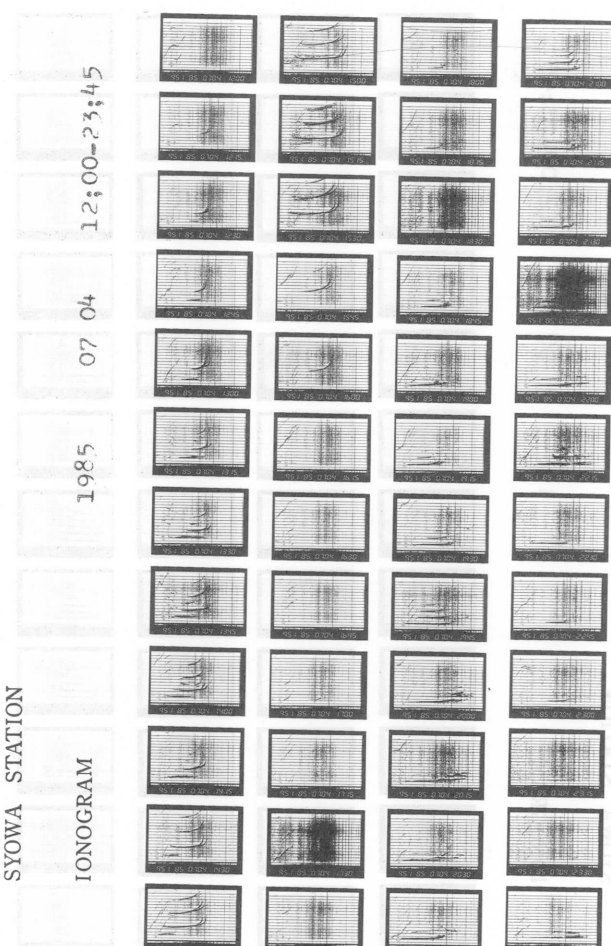
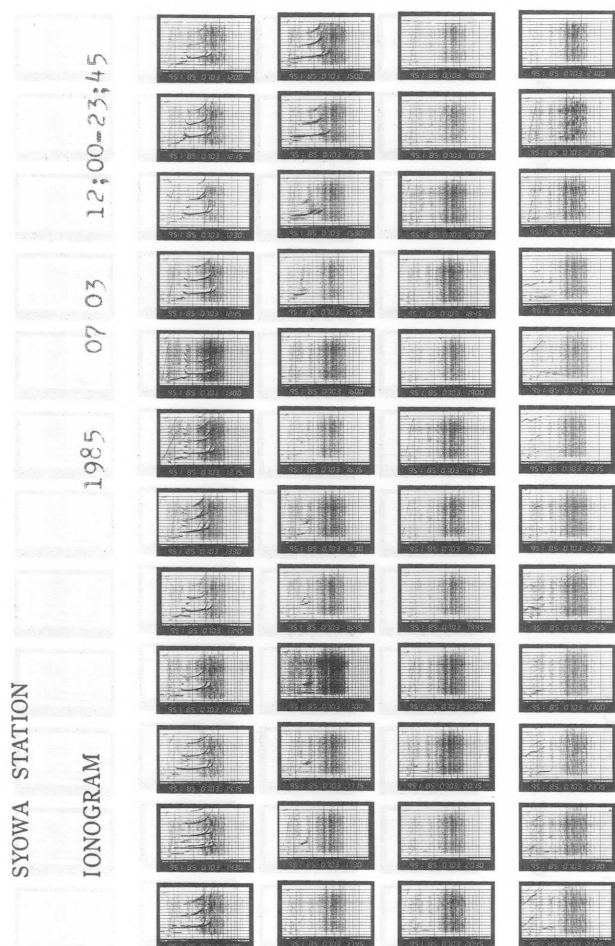
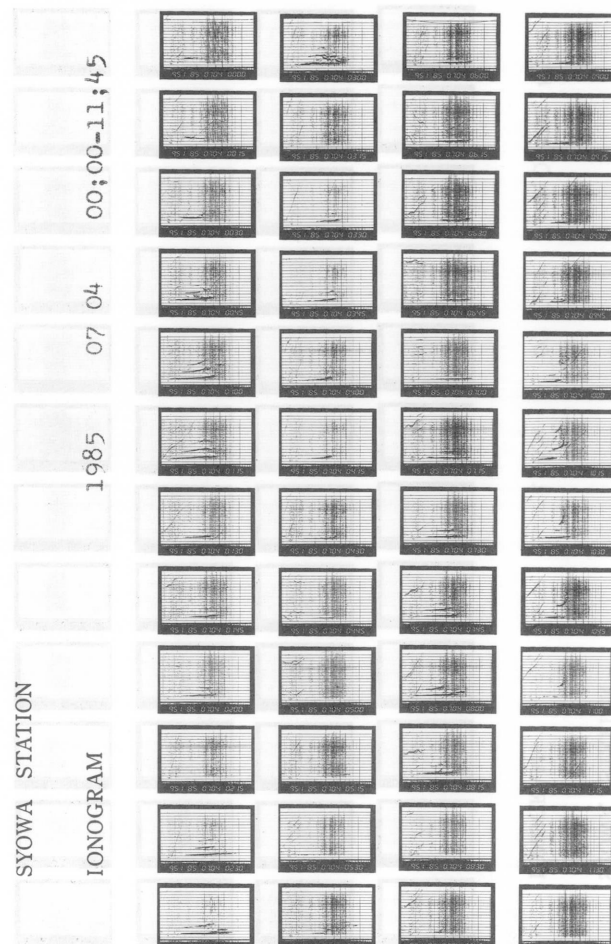
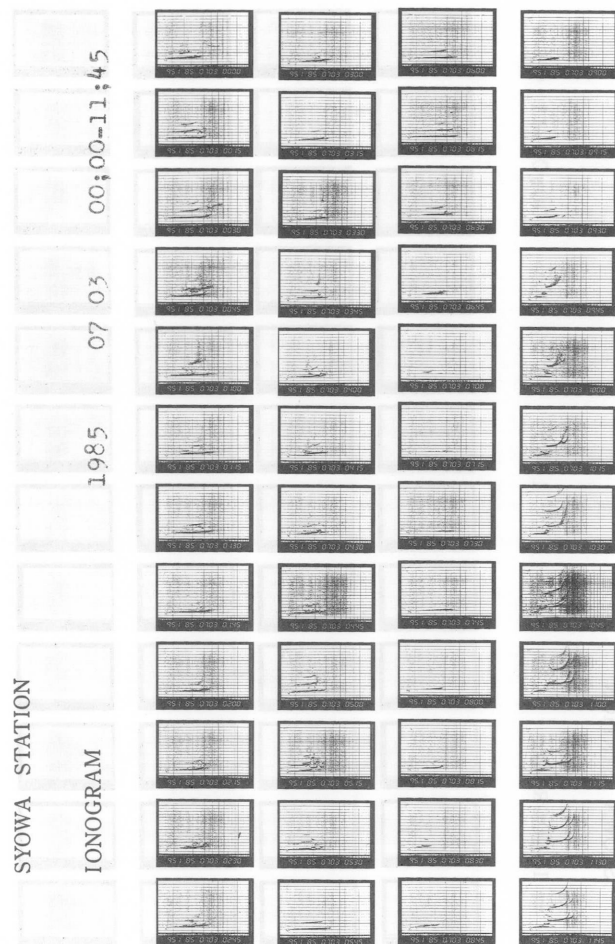
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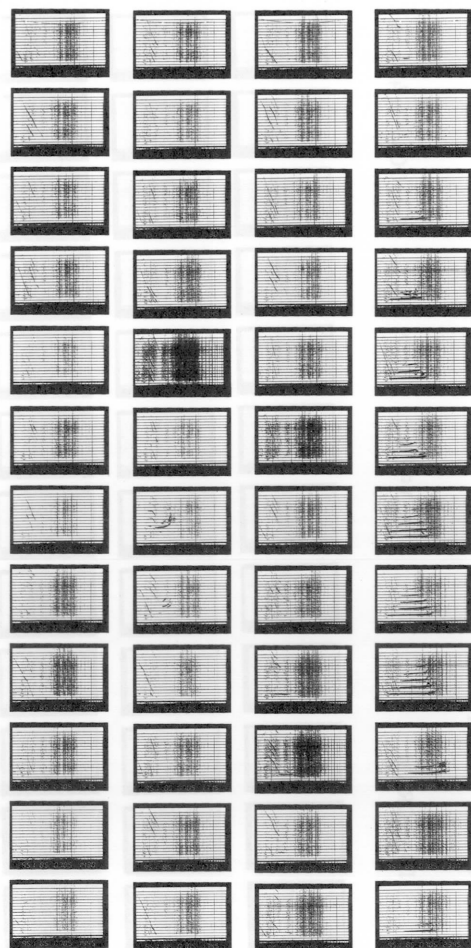
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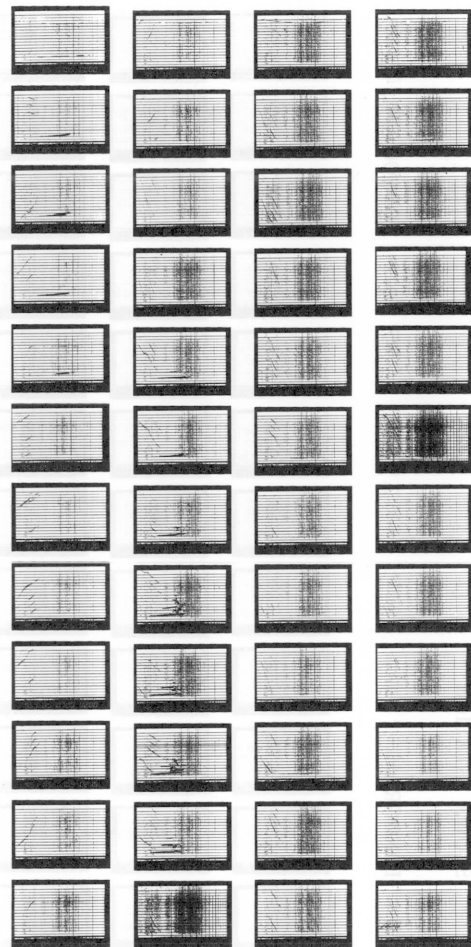
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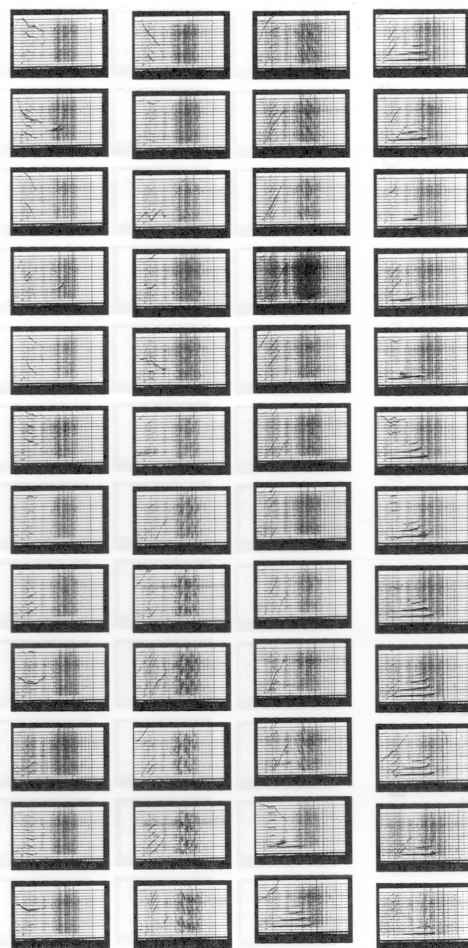
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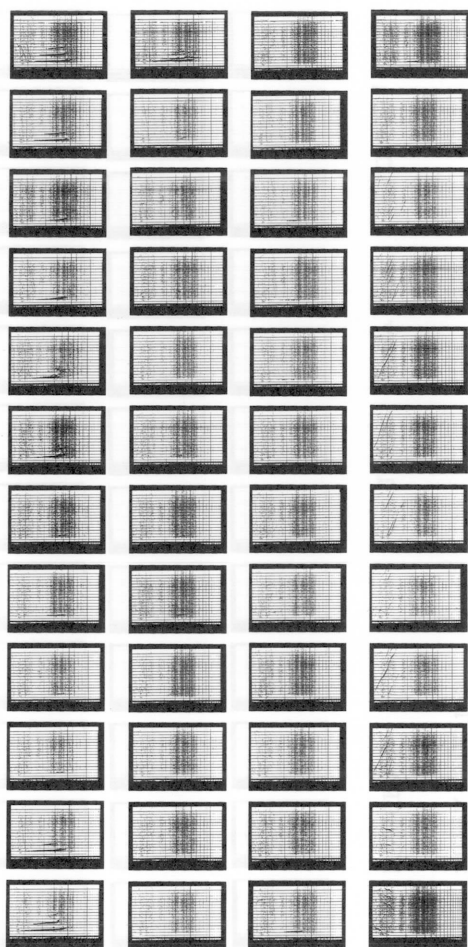
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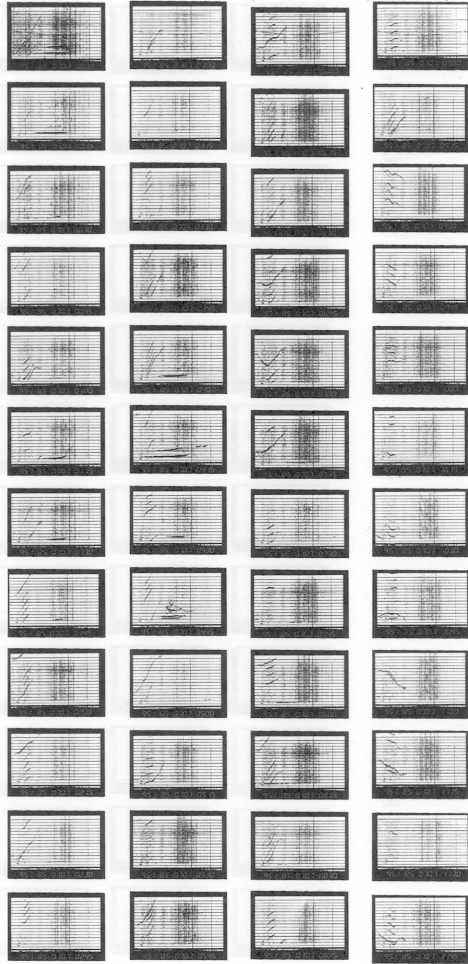
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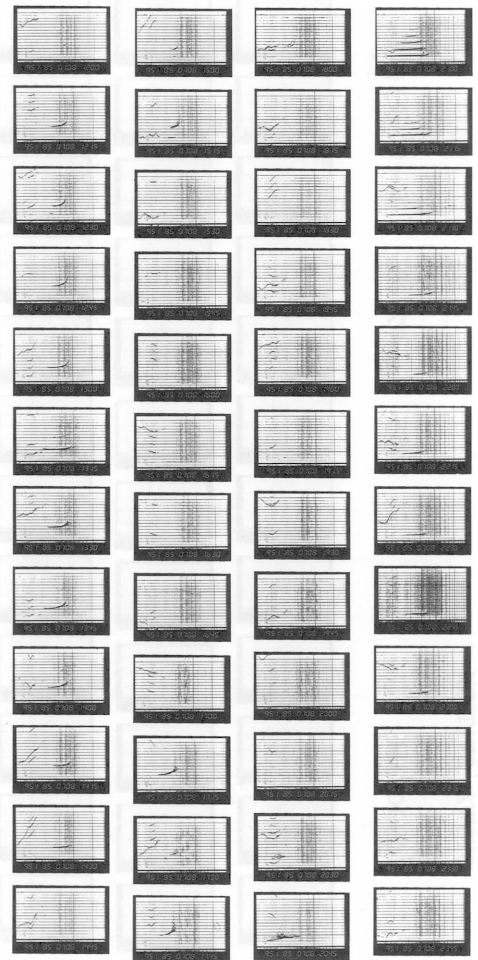
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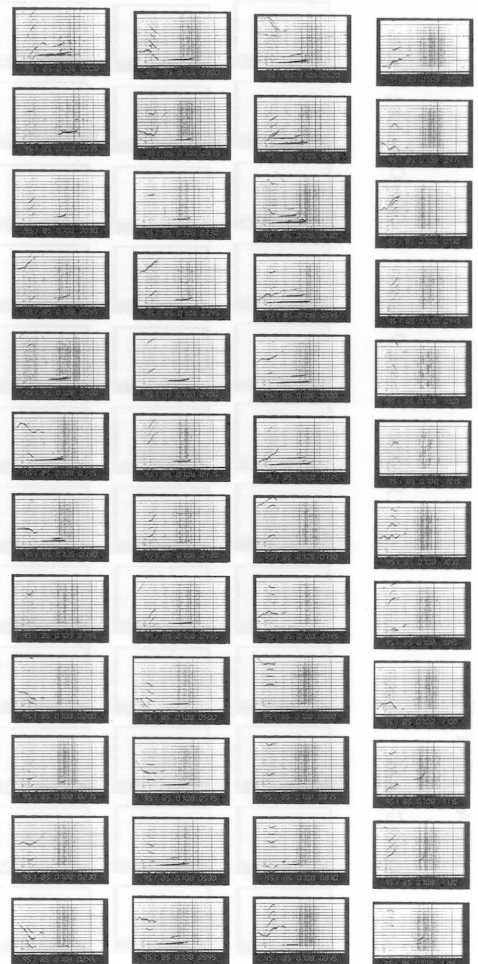
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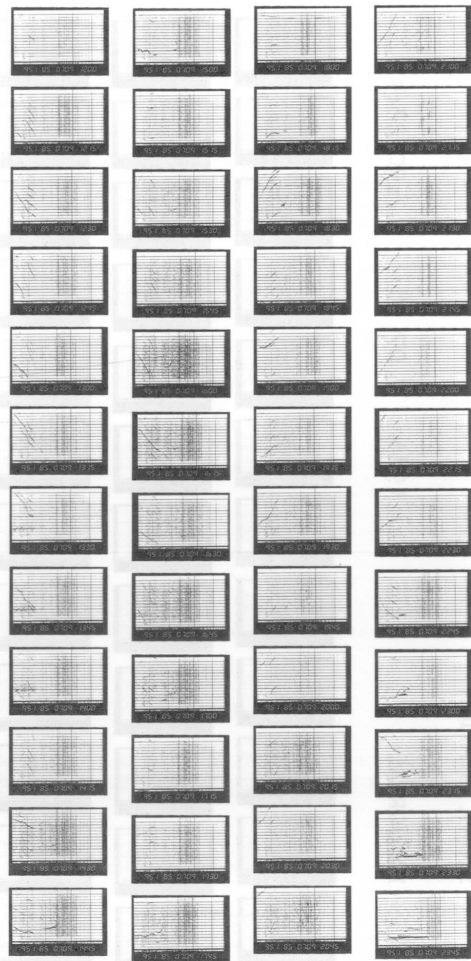
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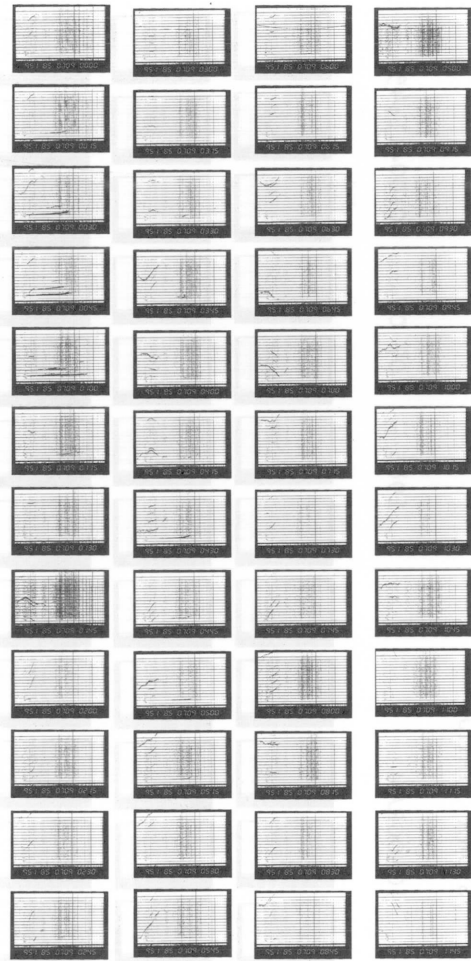
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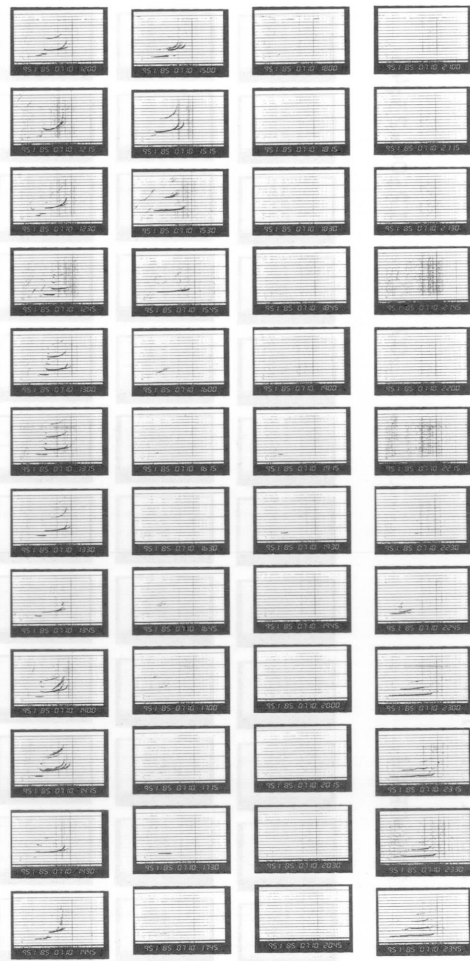
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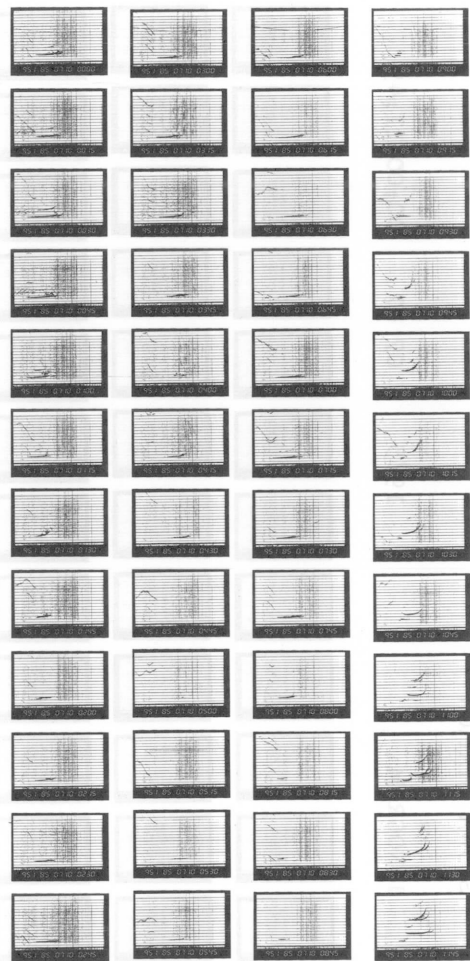
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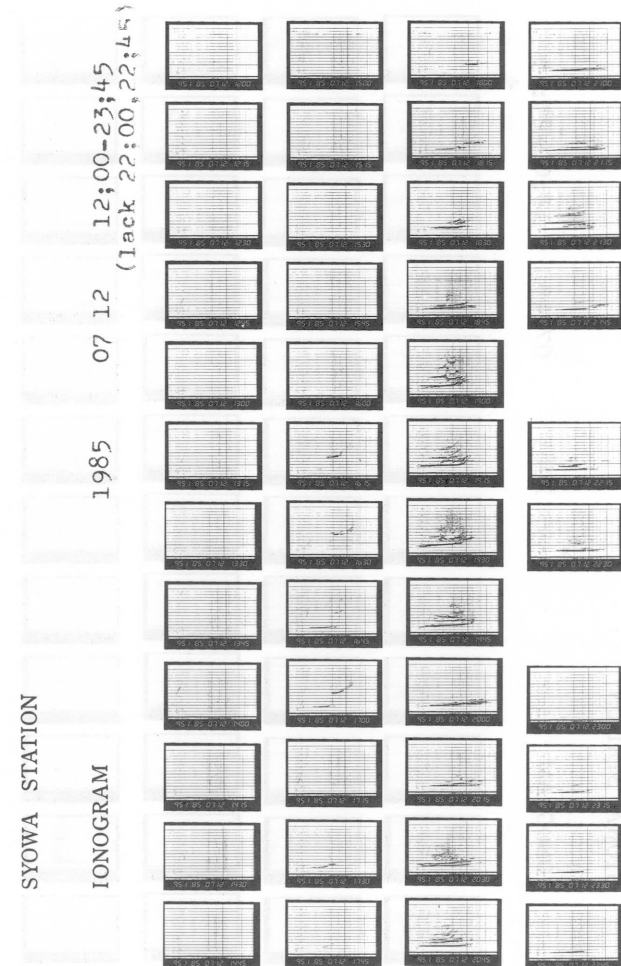
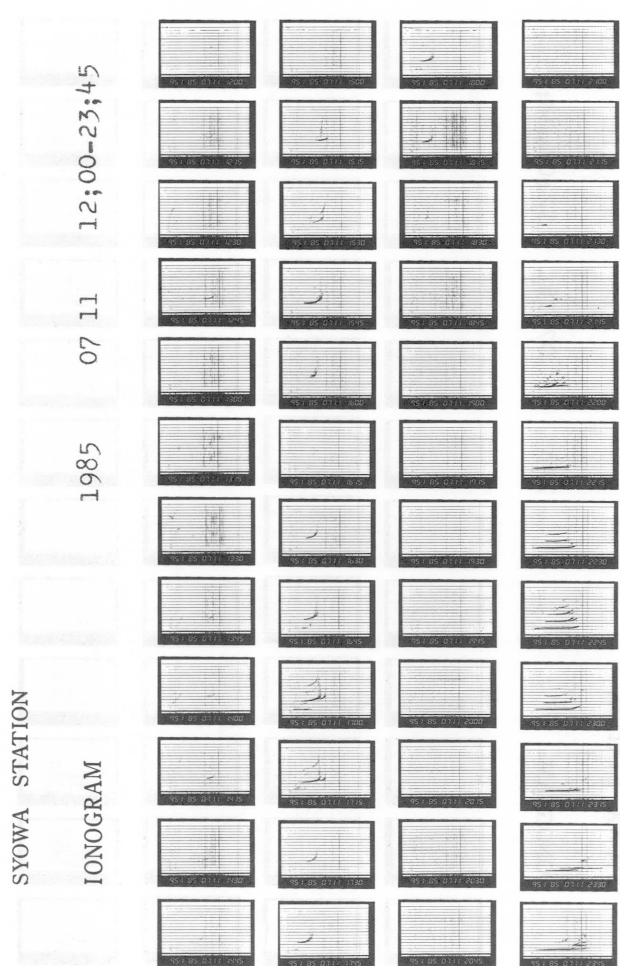
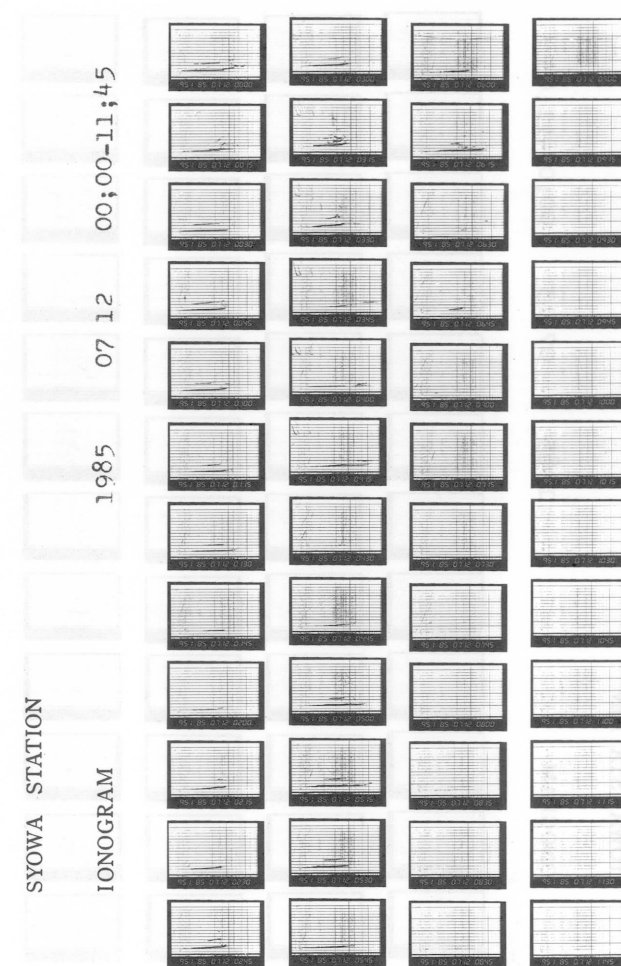
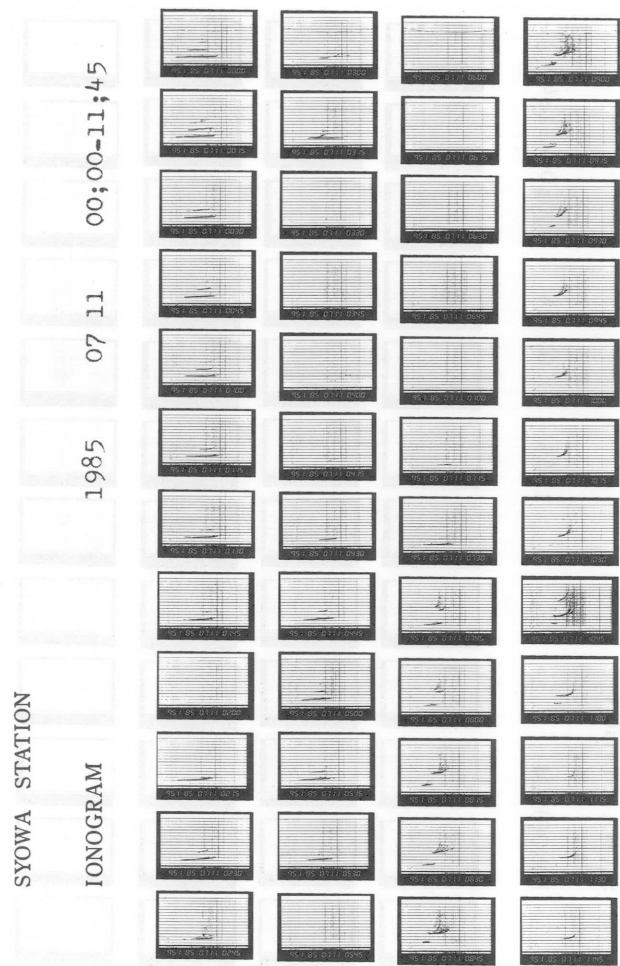
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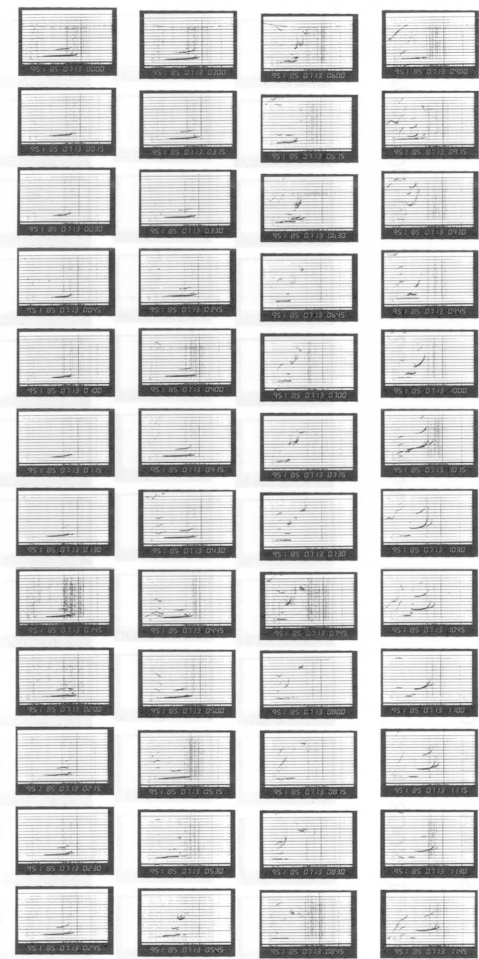
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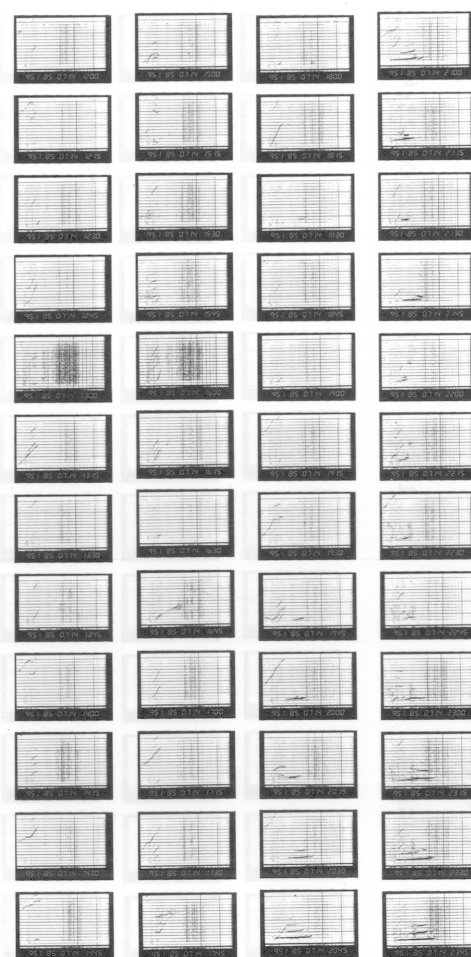
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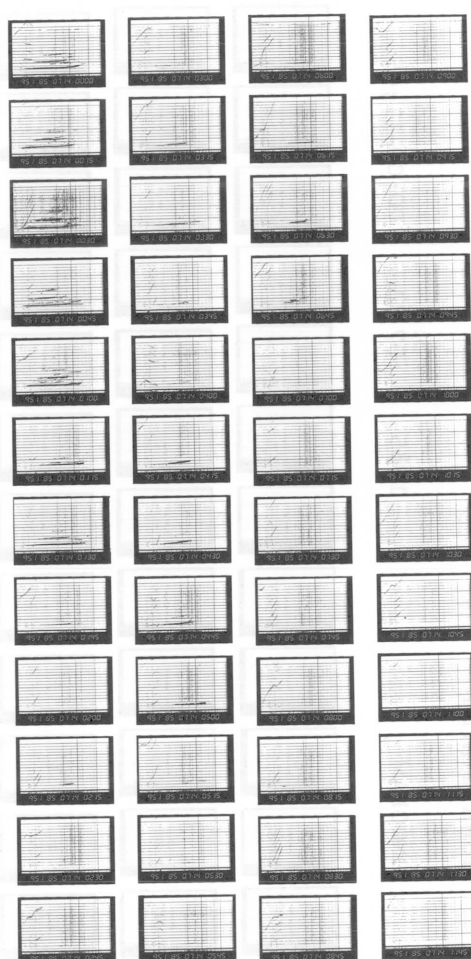
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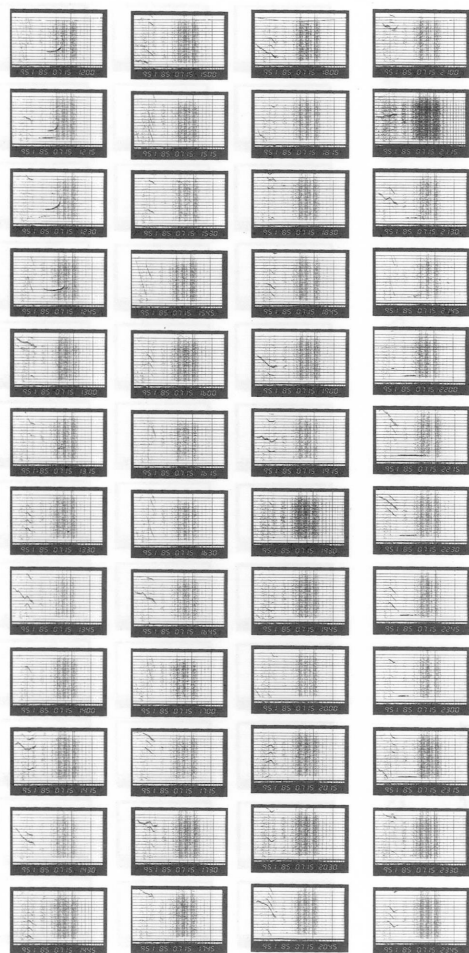
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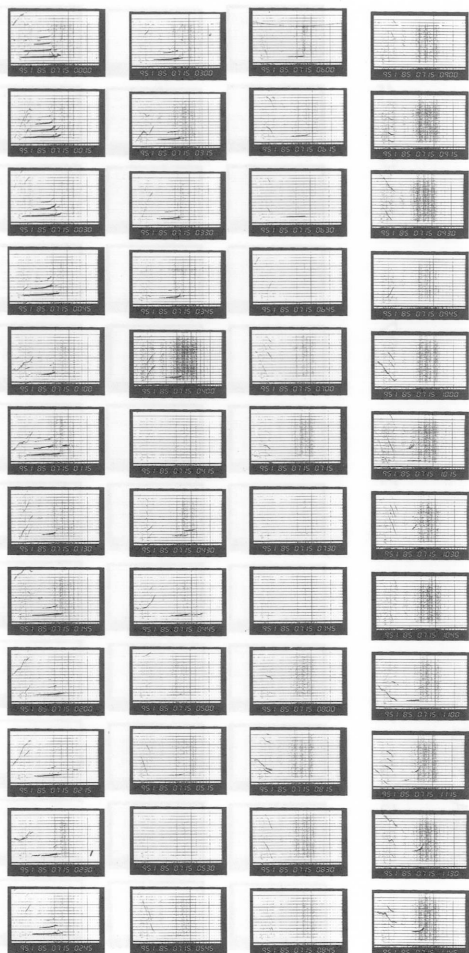
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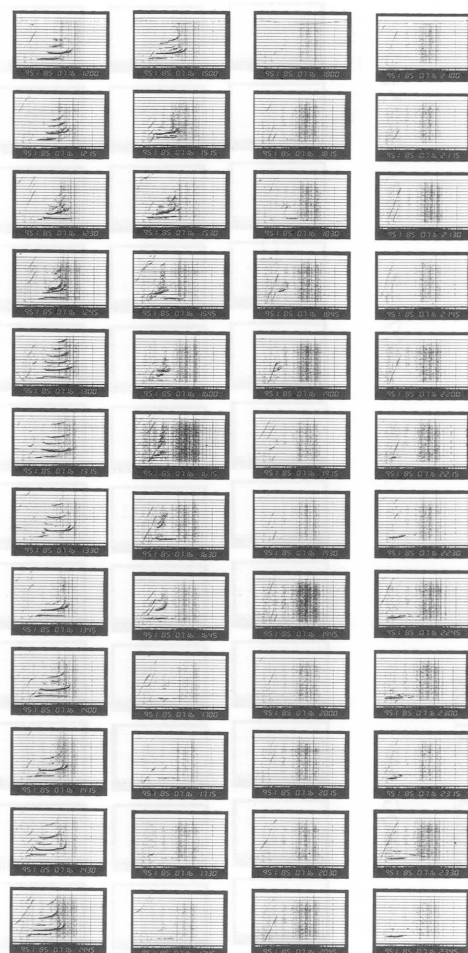
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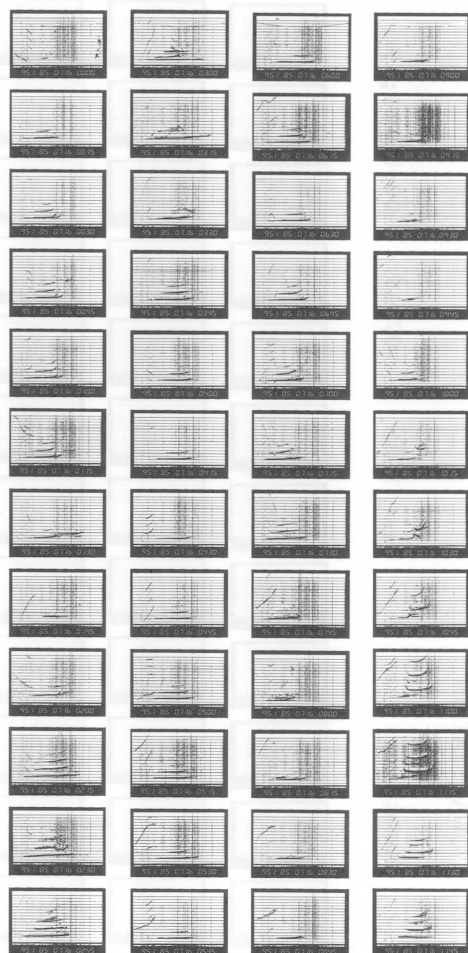
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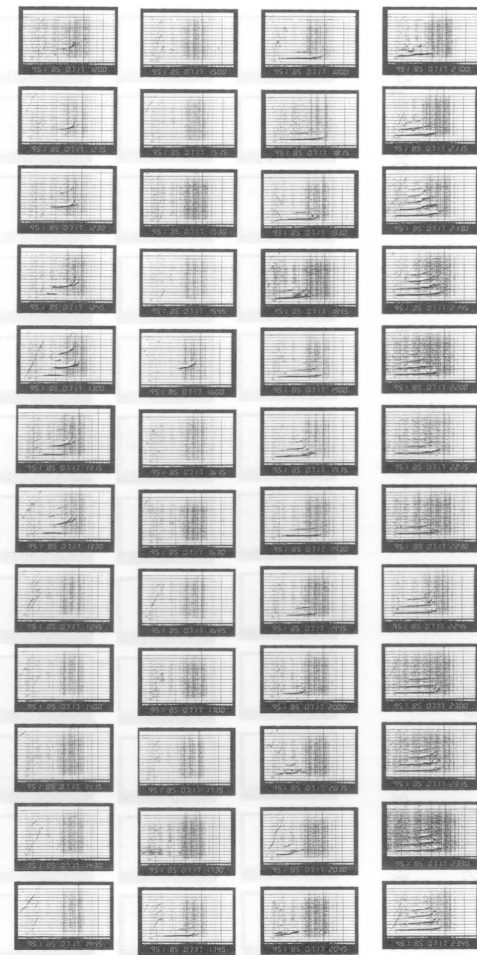
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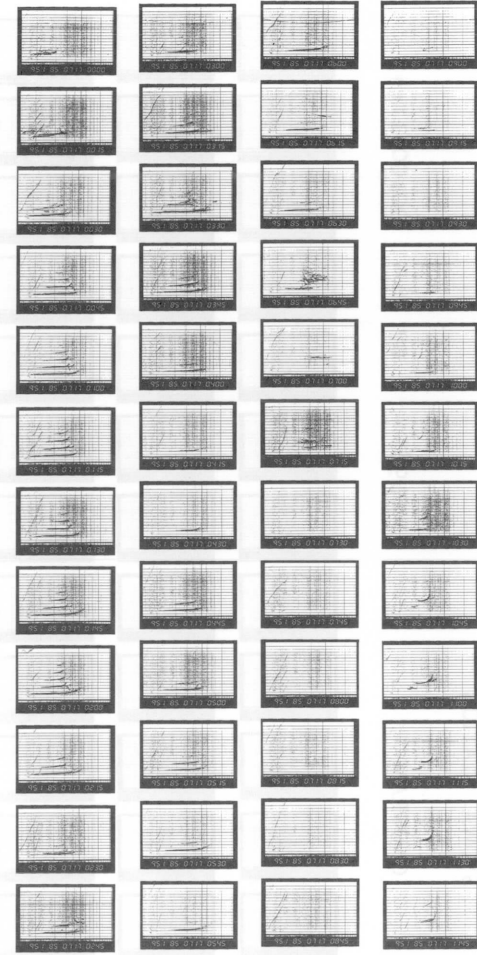
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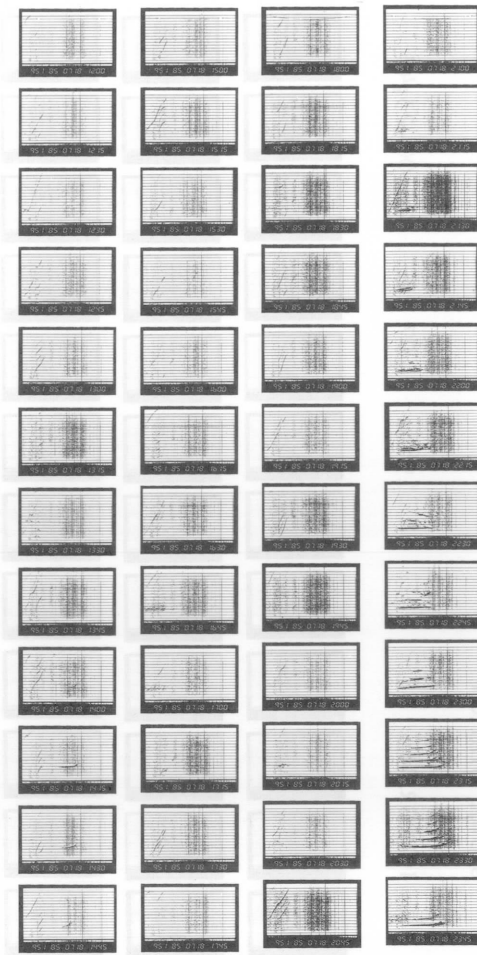
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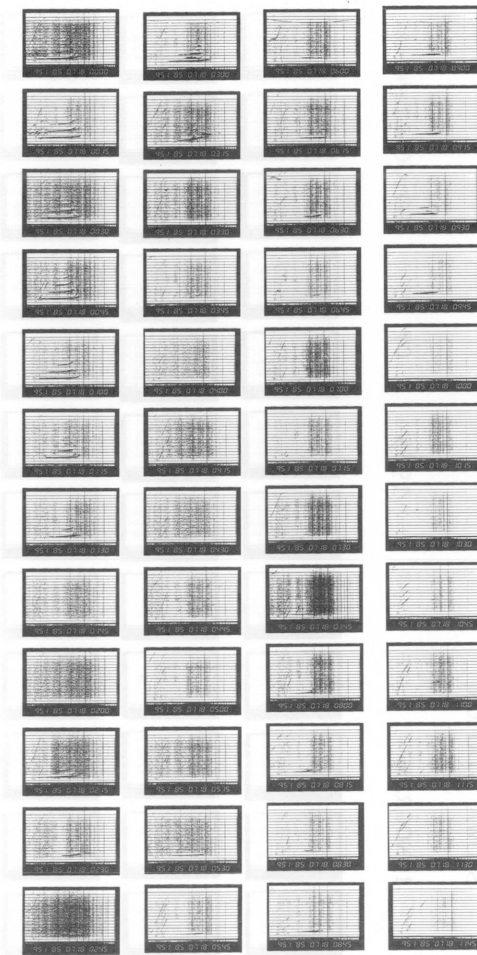
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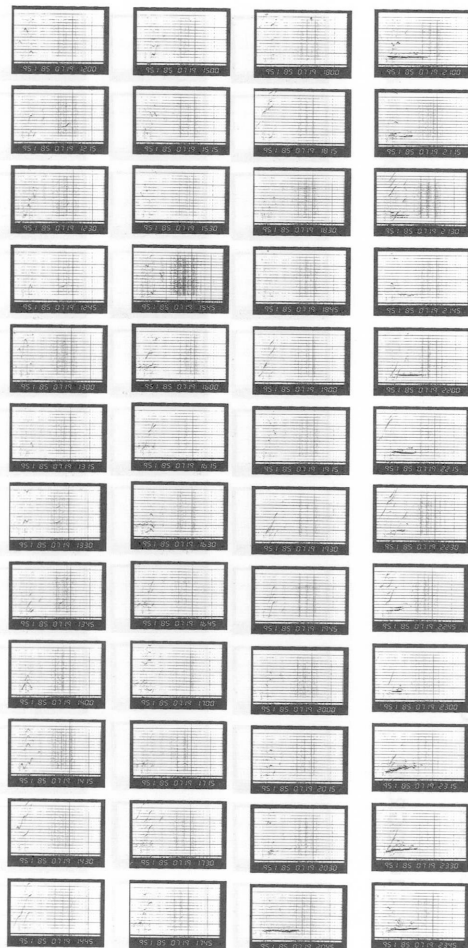
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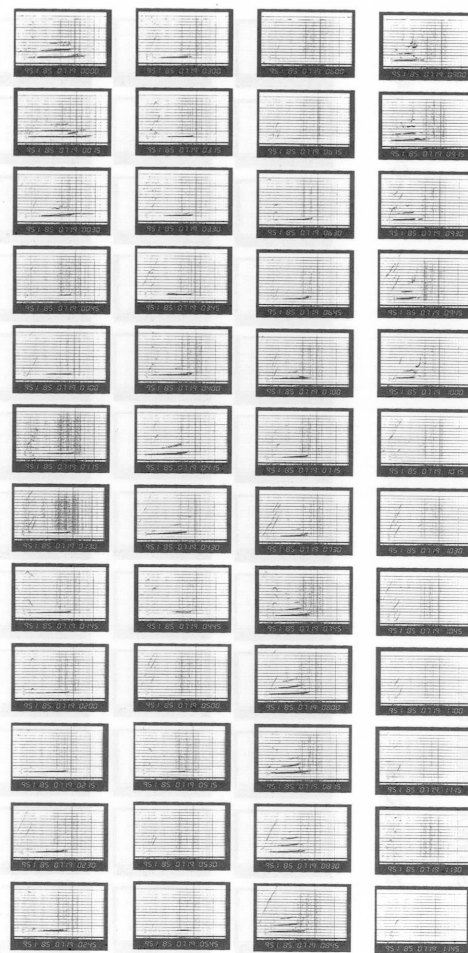
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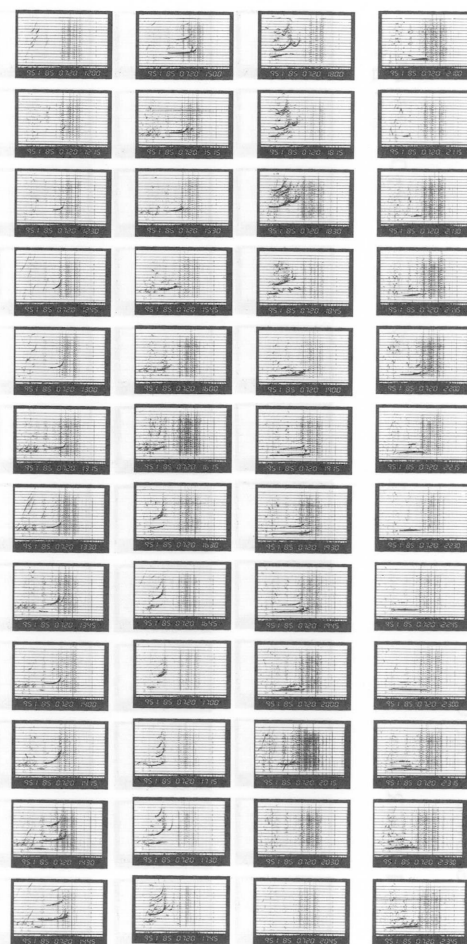
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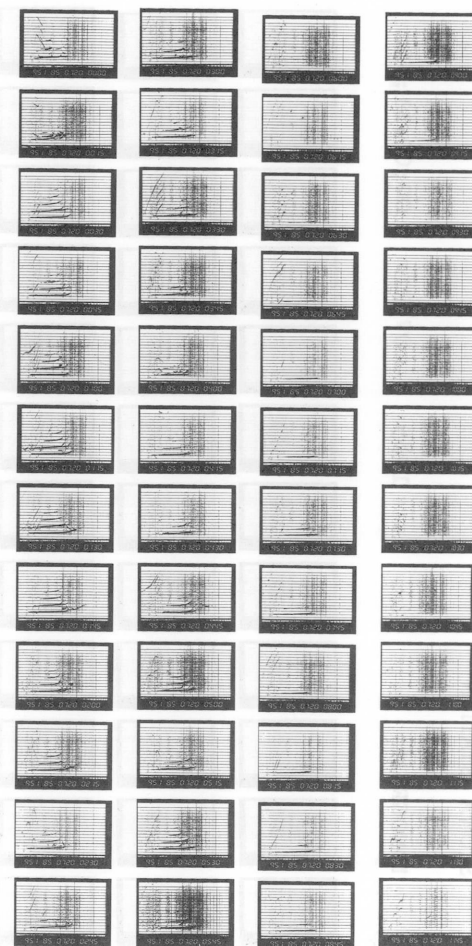
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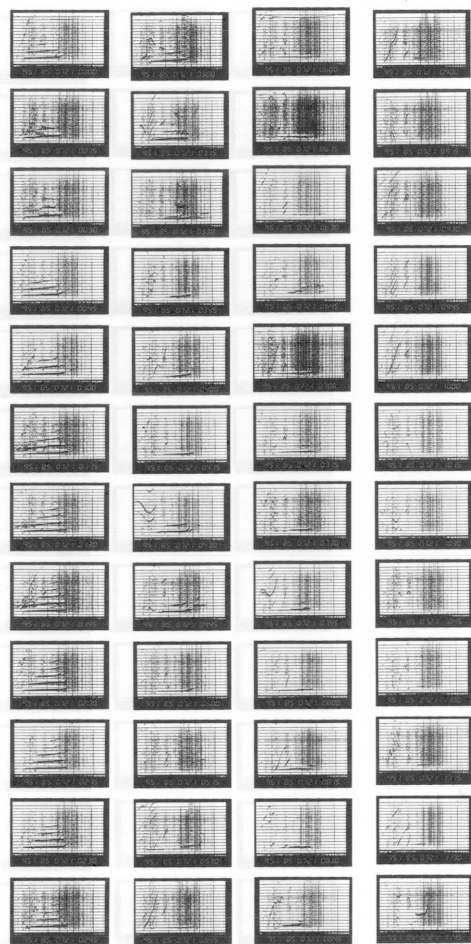
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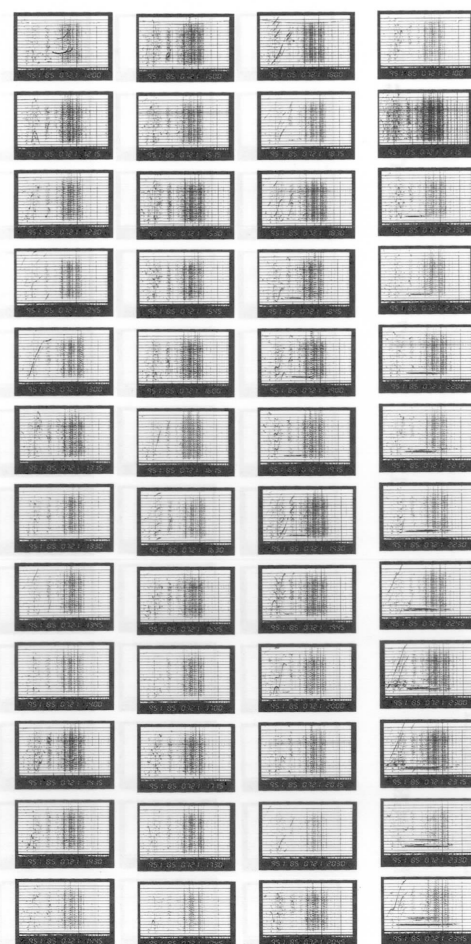
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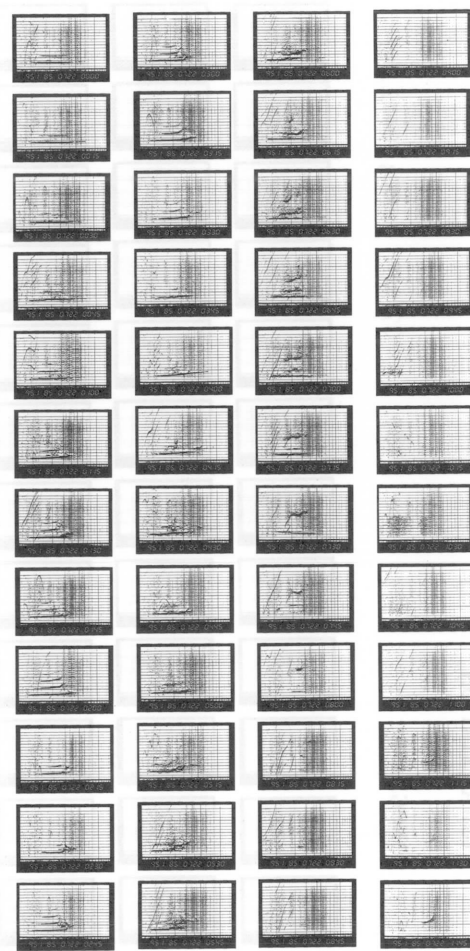
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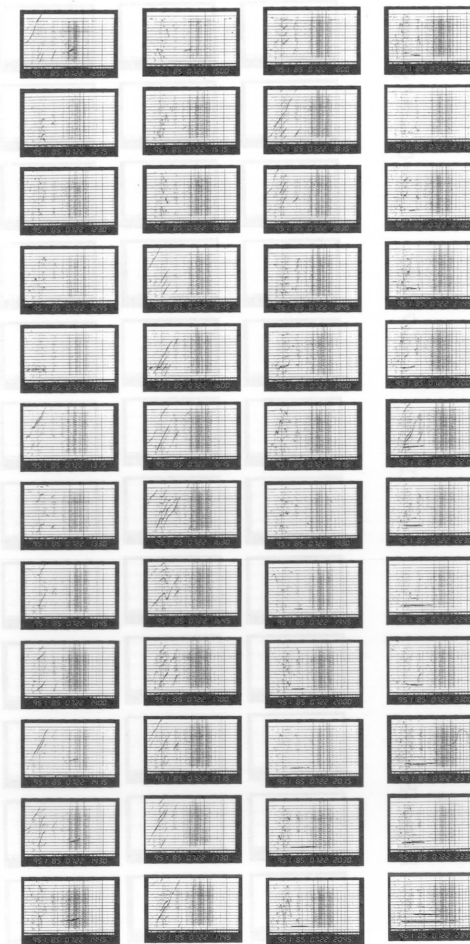
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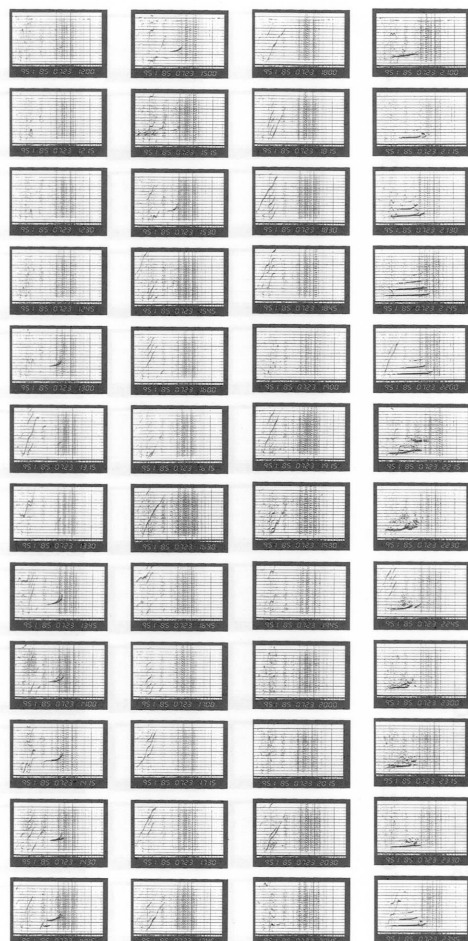


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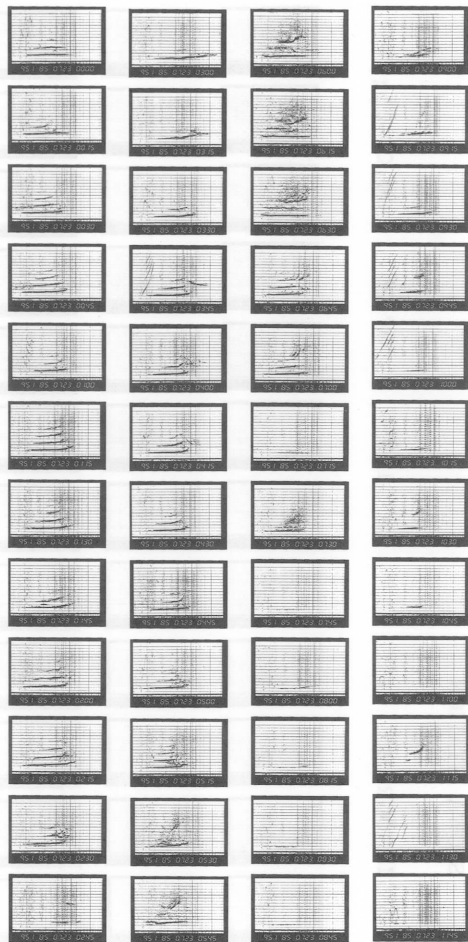
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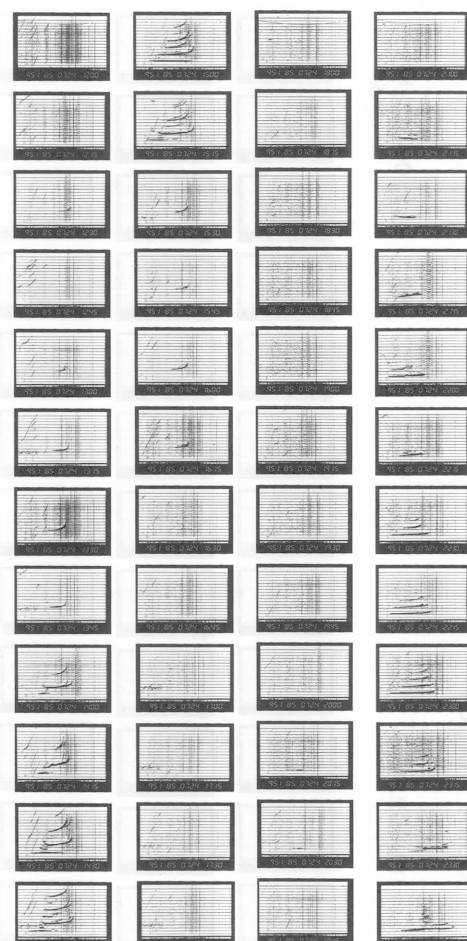


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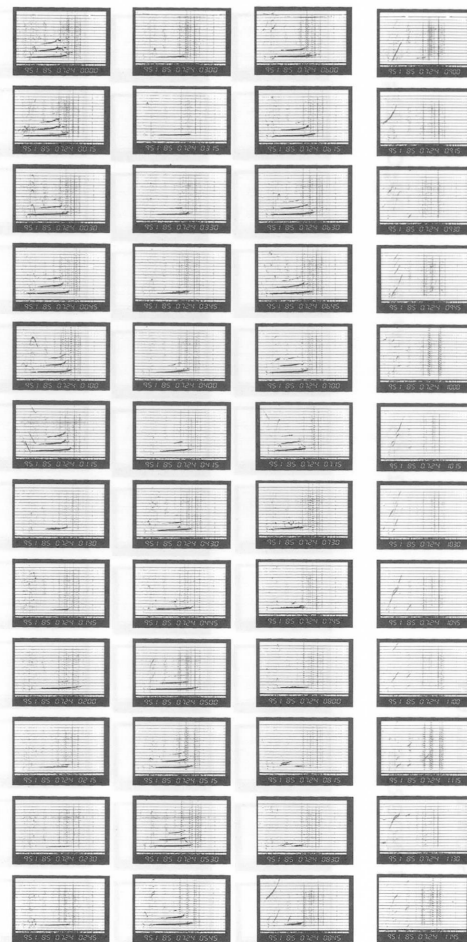
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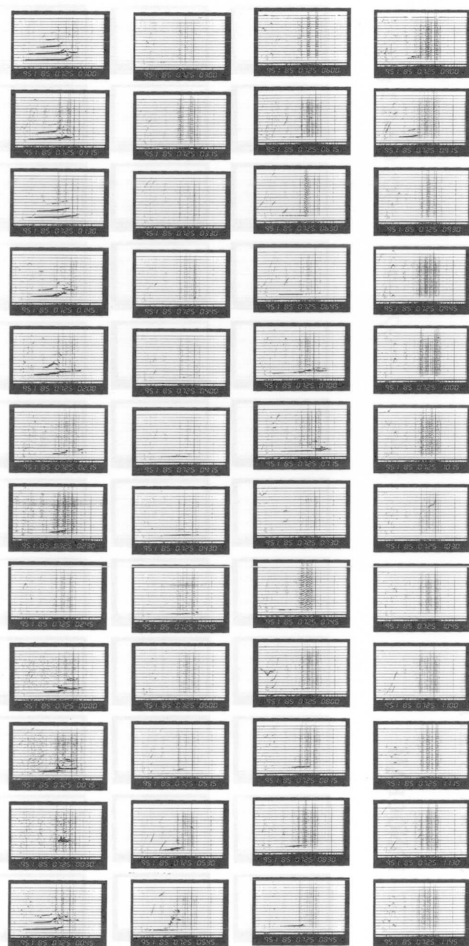
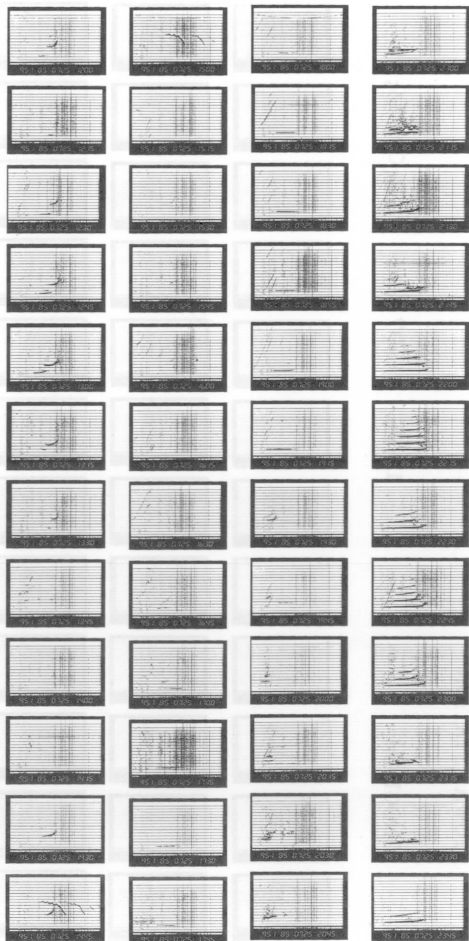
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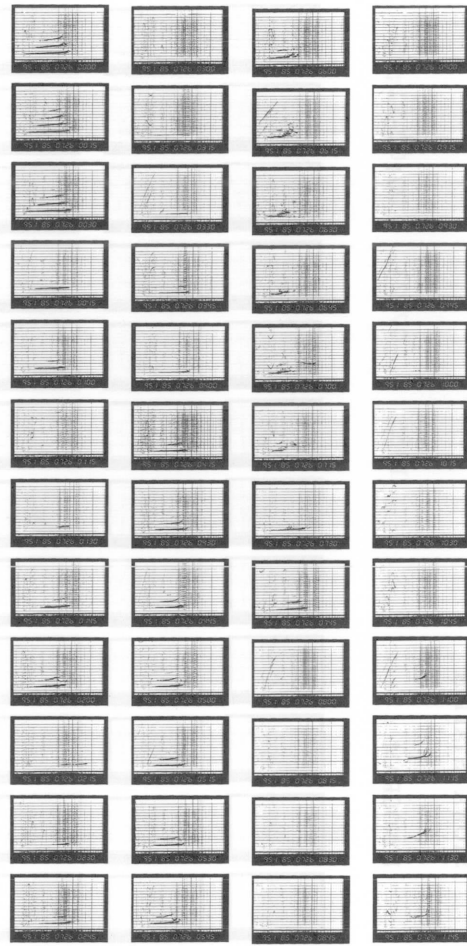
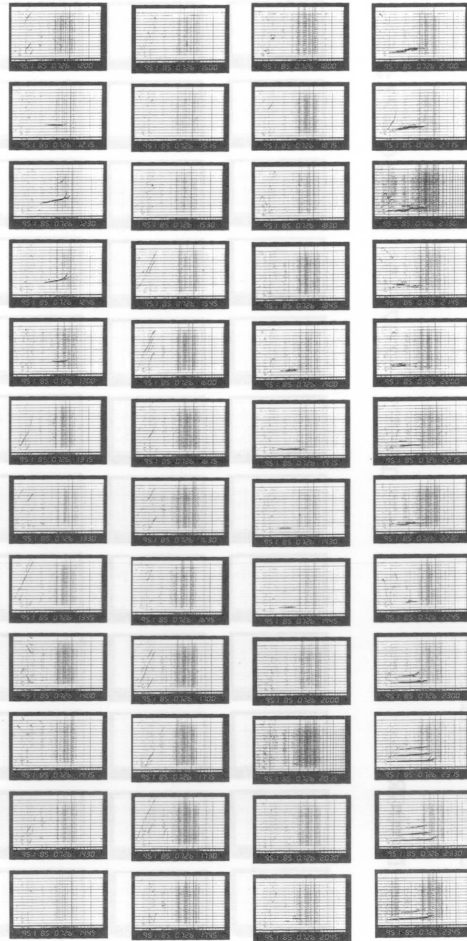
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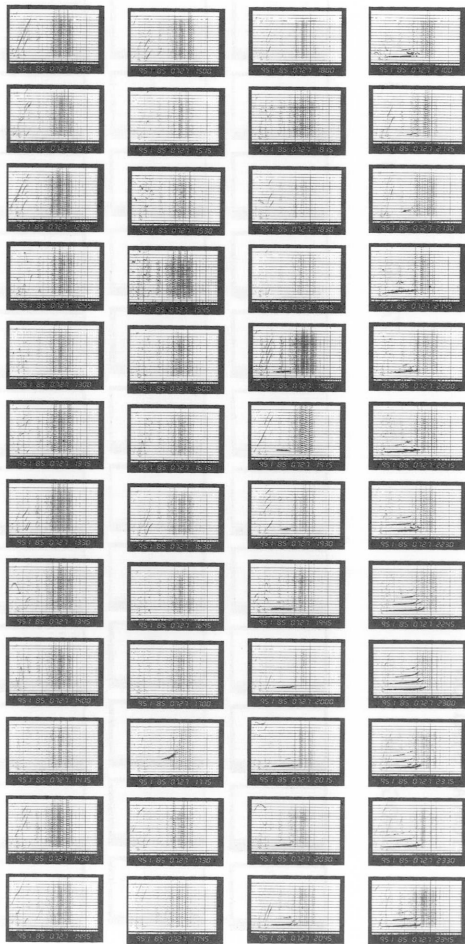
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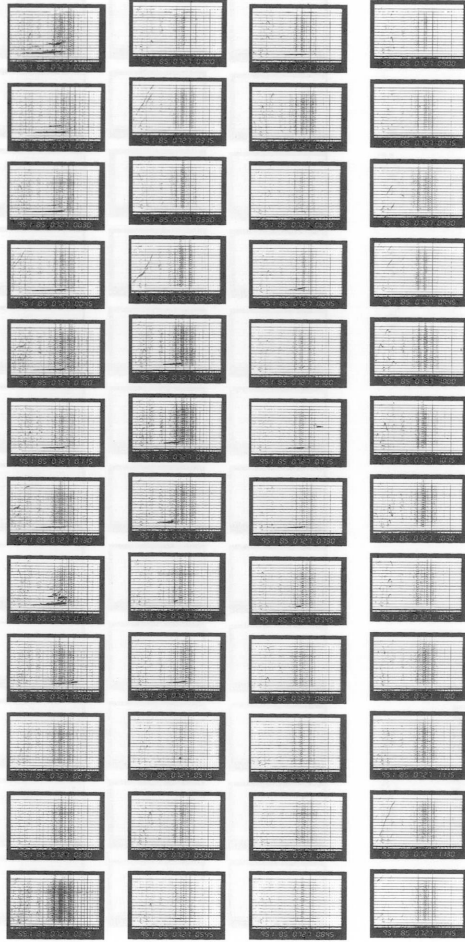
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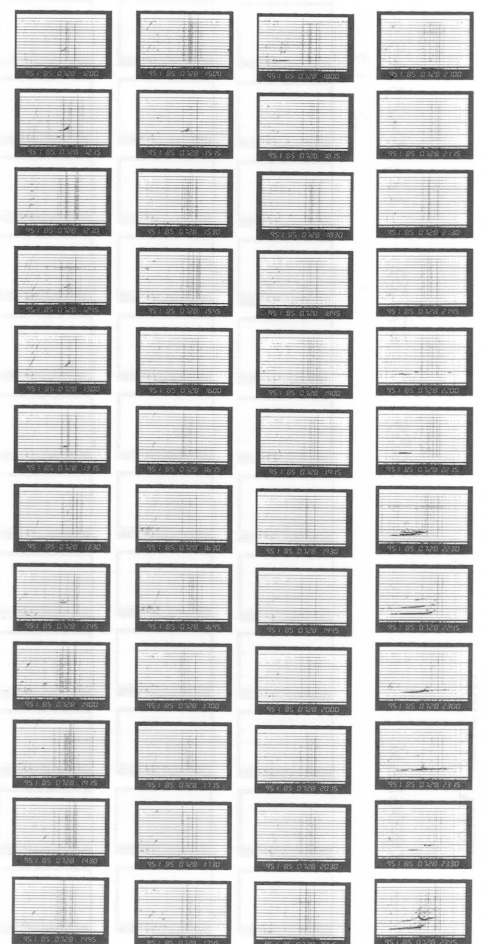
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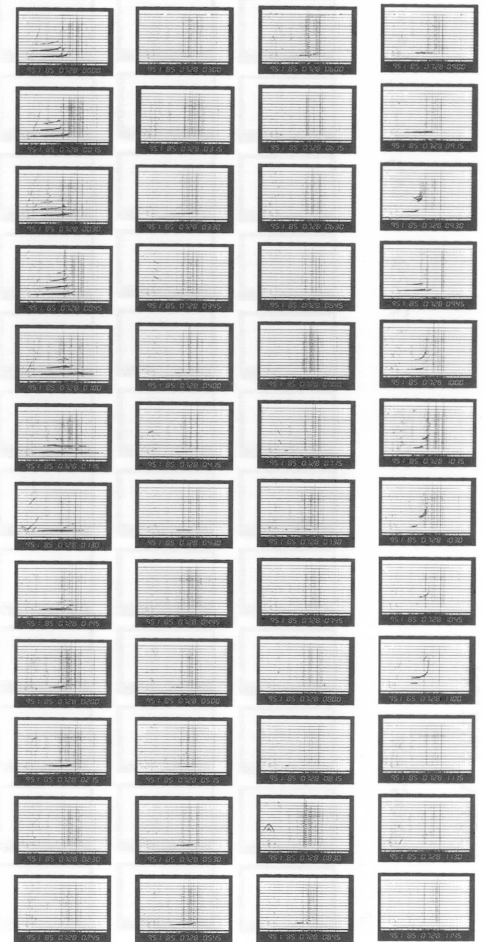
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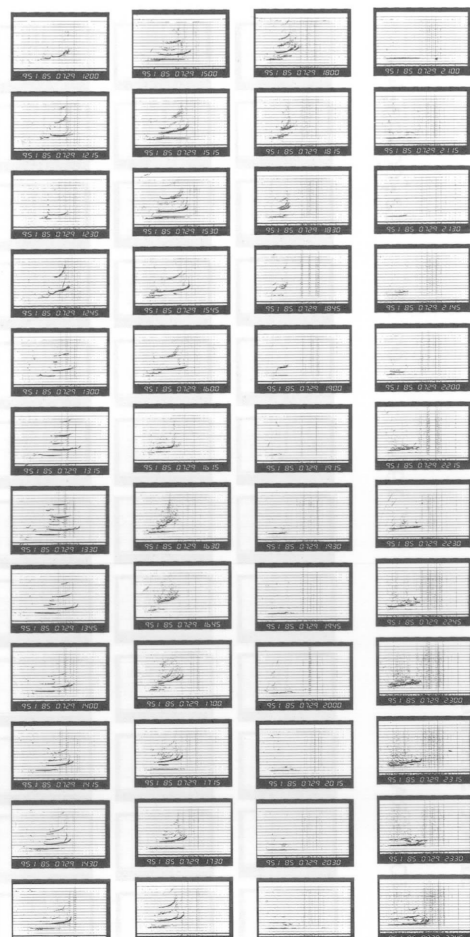
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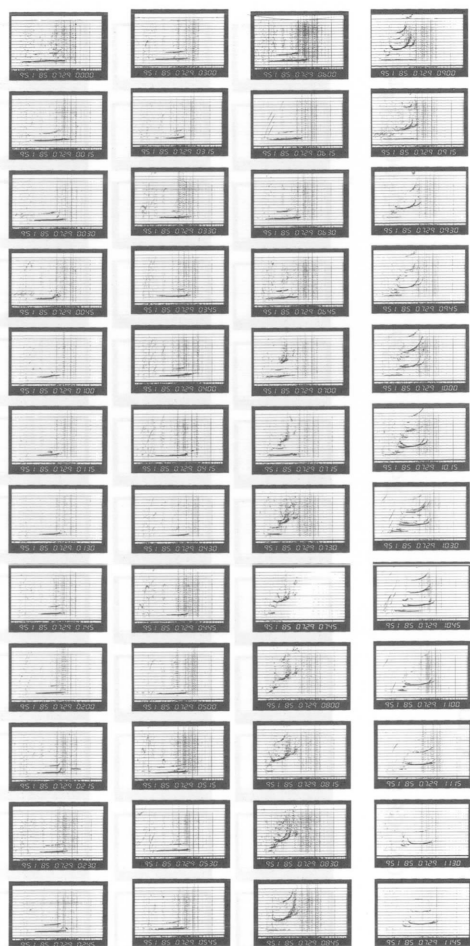
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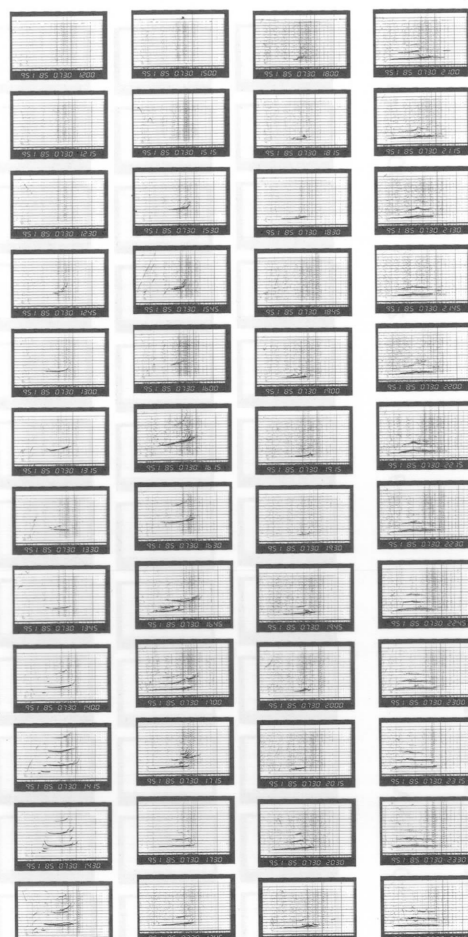
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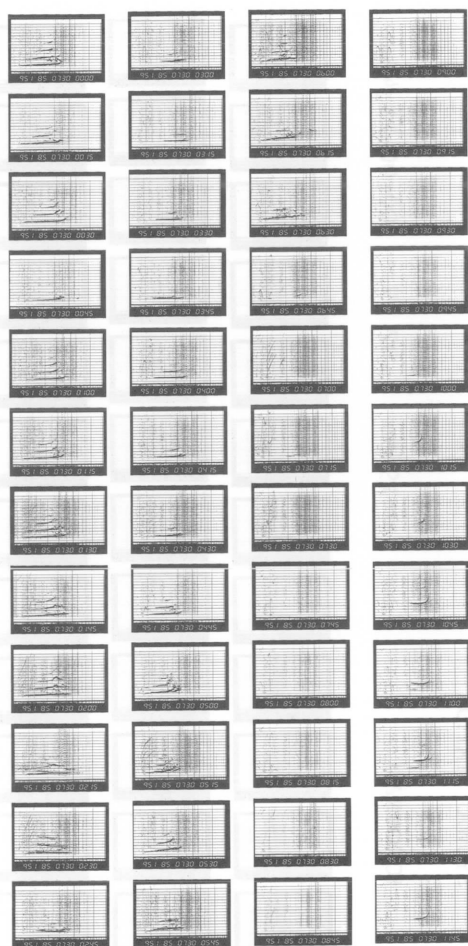
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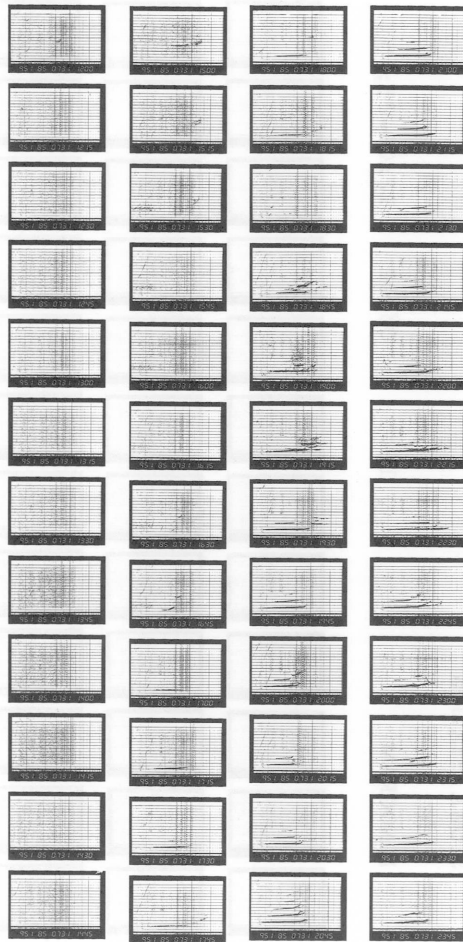
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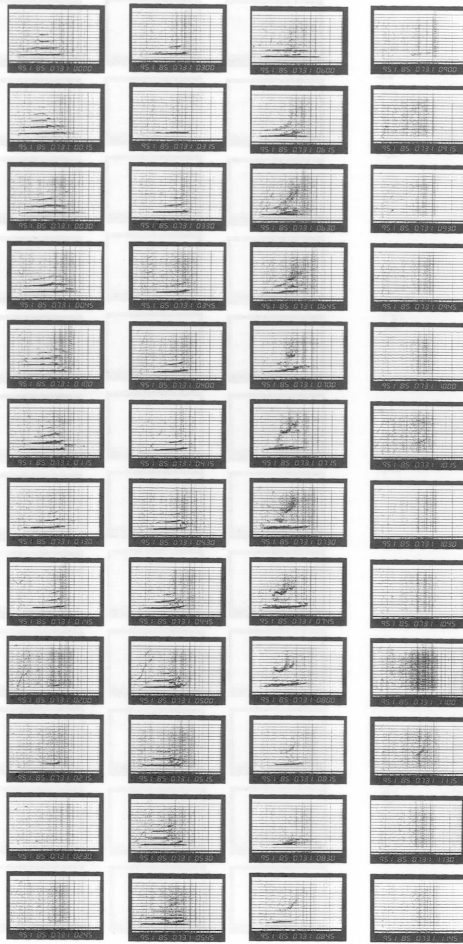
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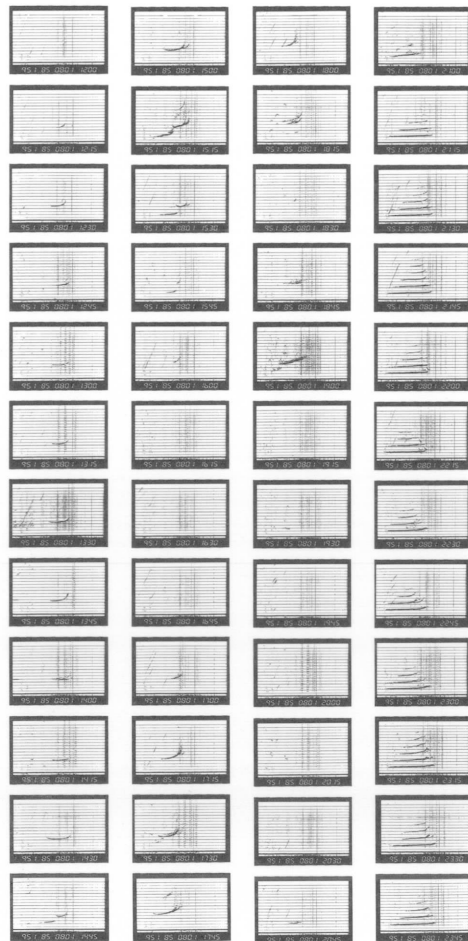
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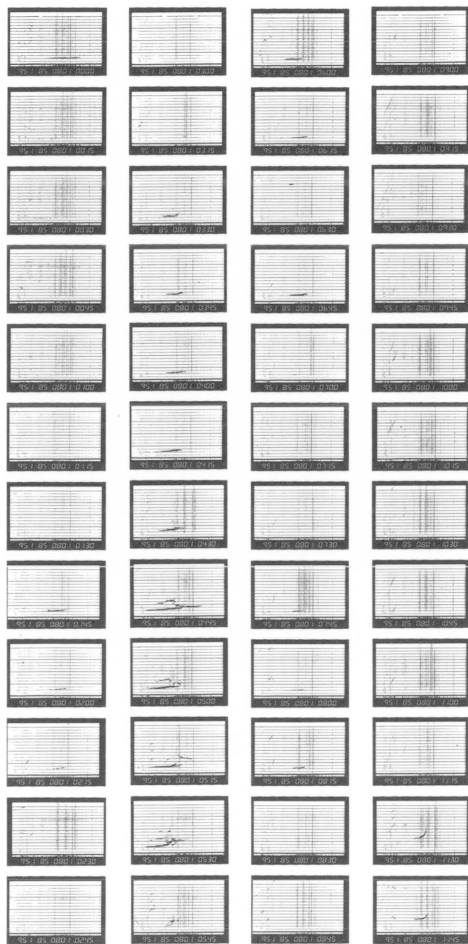
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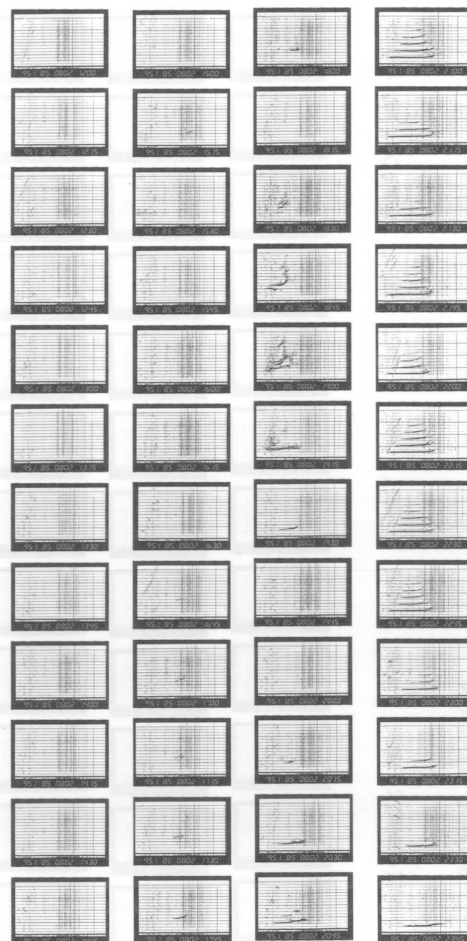
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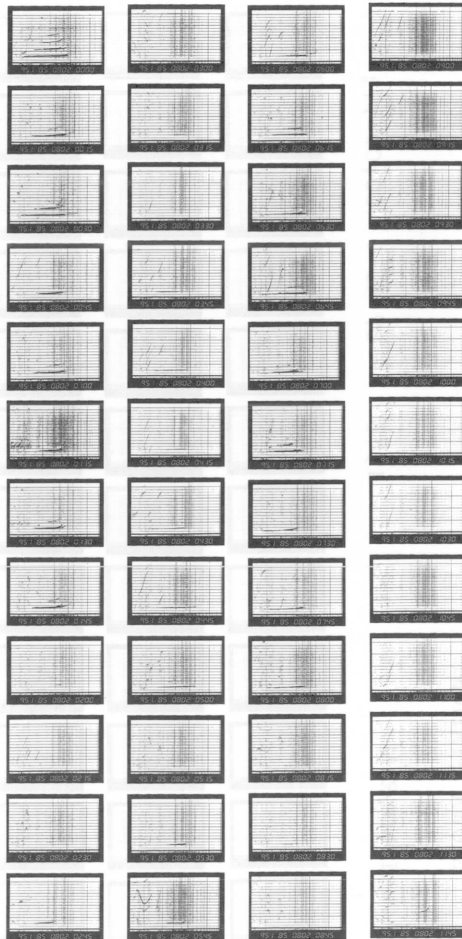
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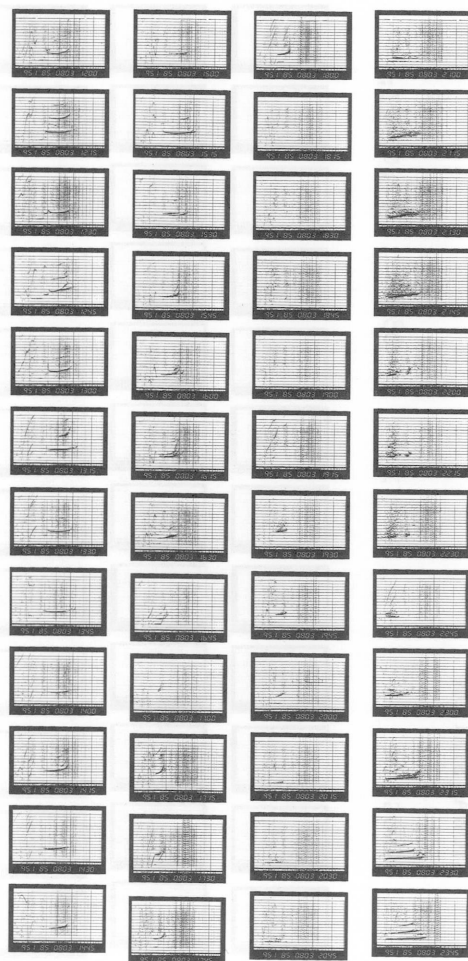
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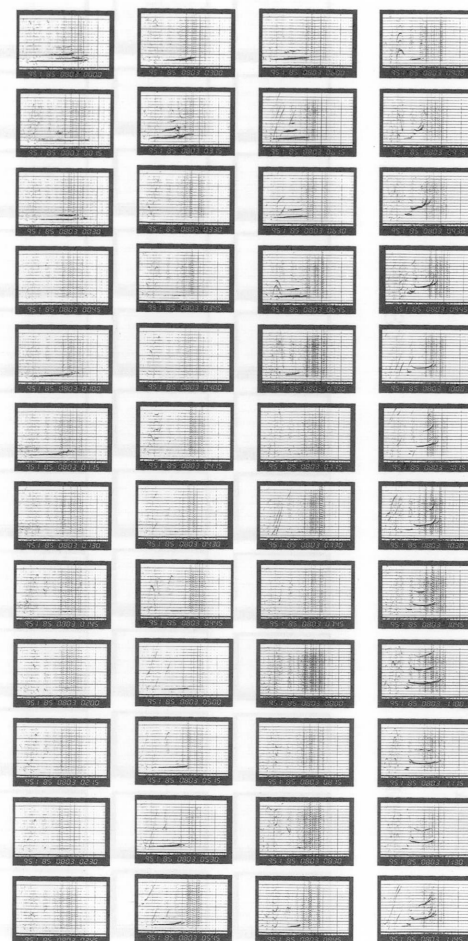
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08 03

00:00-11:45



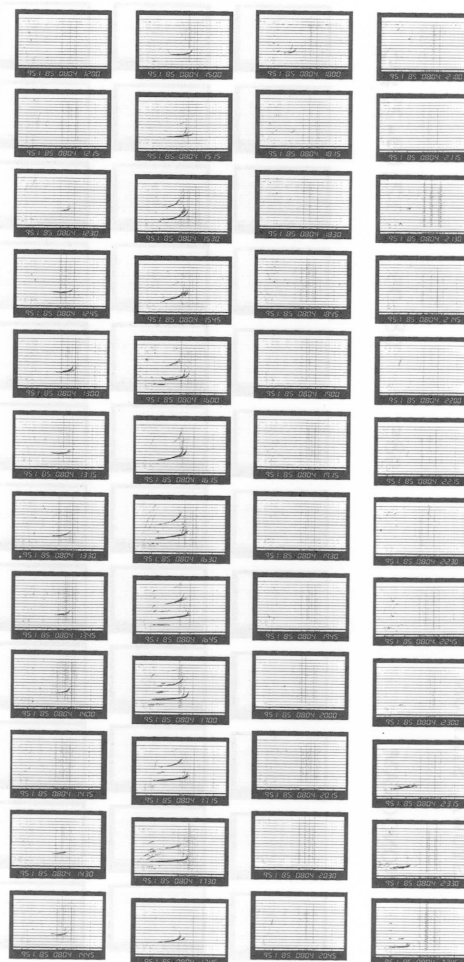
SYOWA STATION

IONOGRAM

1985

08 04

12:00-23:45



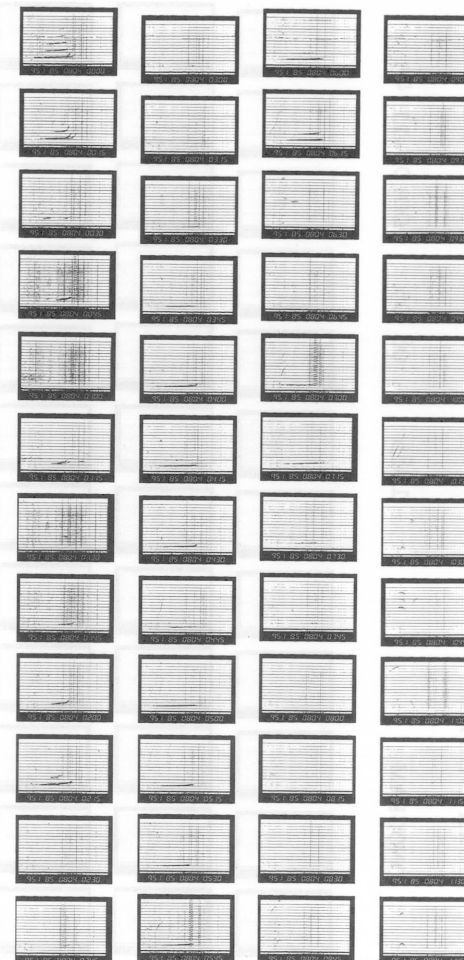
SYOWA STATION

IONOGRAM

1985

08 04

00:00-11:45



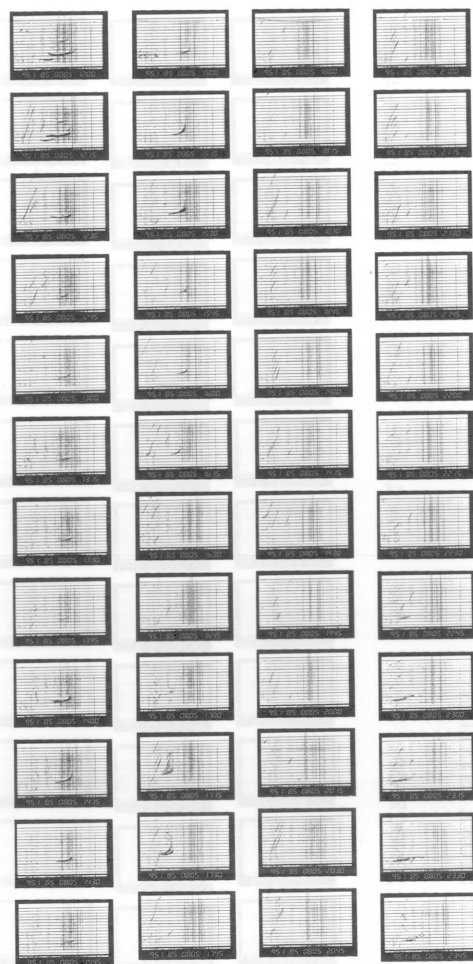
SYOWA STATION

IONOGRAM

12:00-23:45

08 05

1985



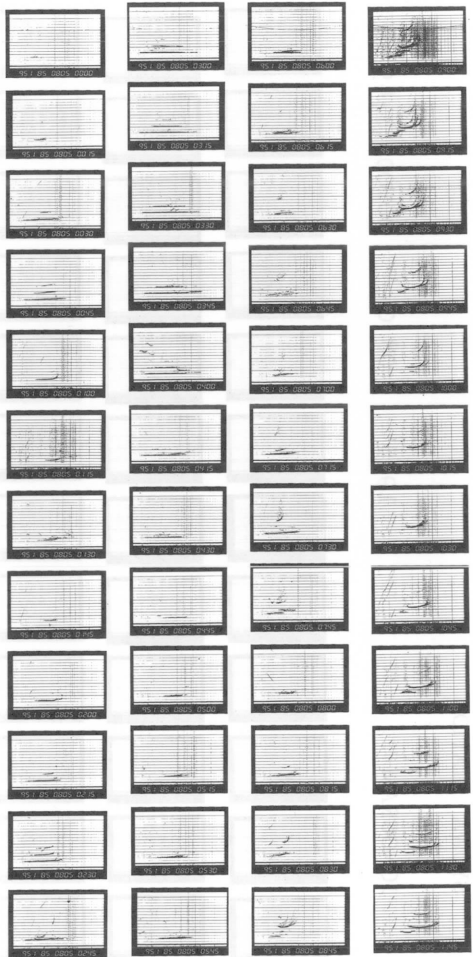
SYOWA STATION

IONOGRAM

00:00-11:45

08 05

1985



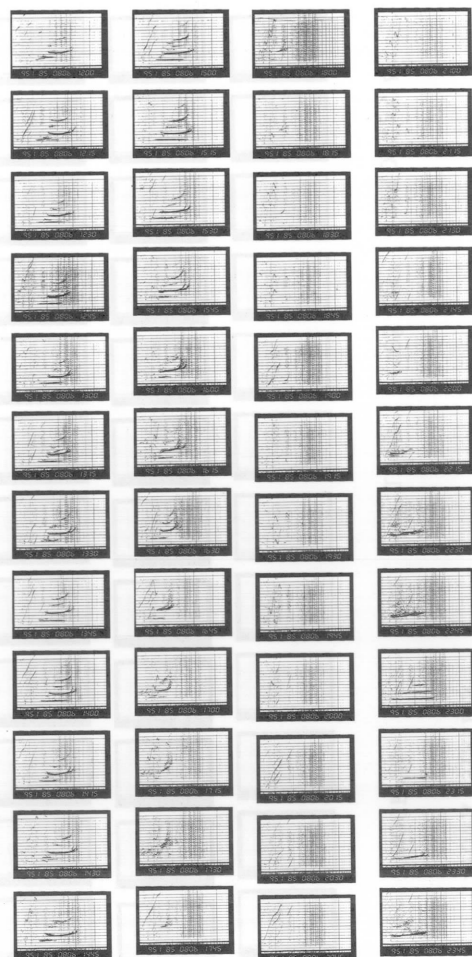
SYOWA STATION

IONOGRAM

12:00-23:45

08 06

1985



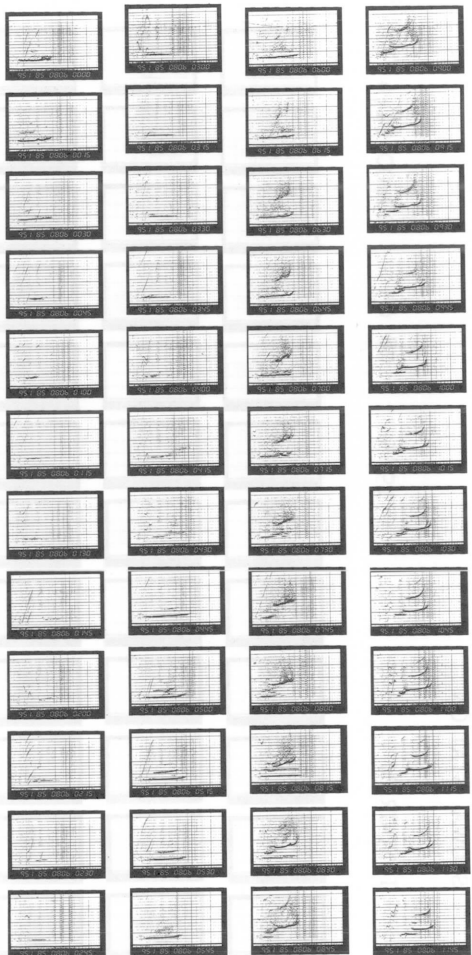
SYOWA STATION

IONOGRAM

00:00-11:45

08 06

1985



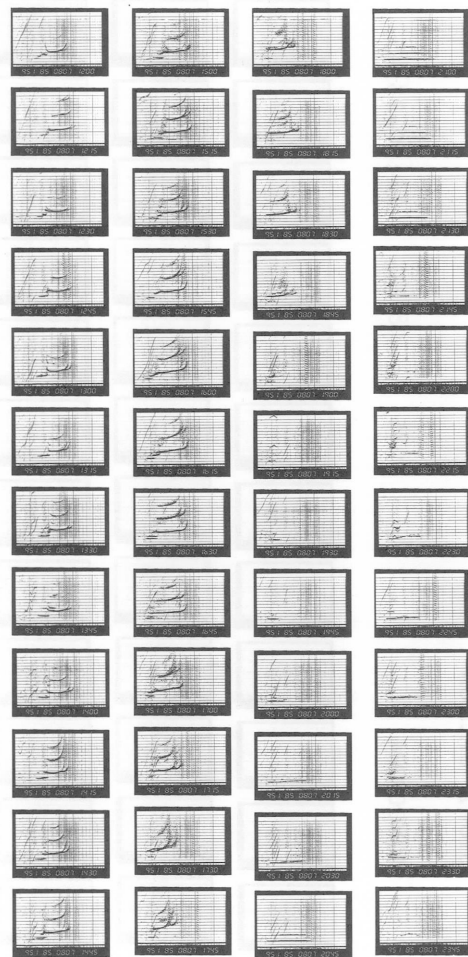
SYOWA STATION

IONOGRAM

1985

08 07

12:00-23:45



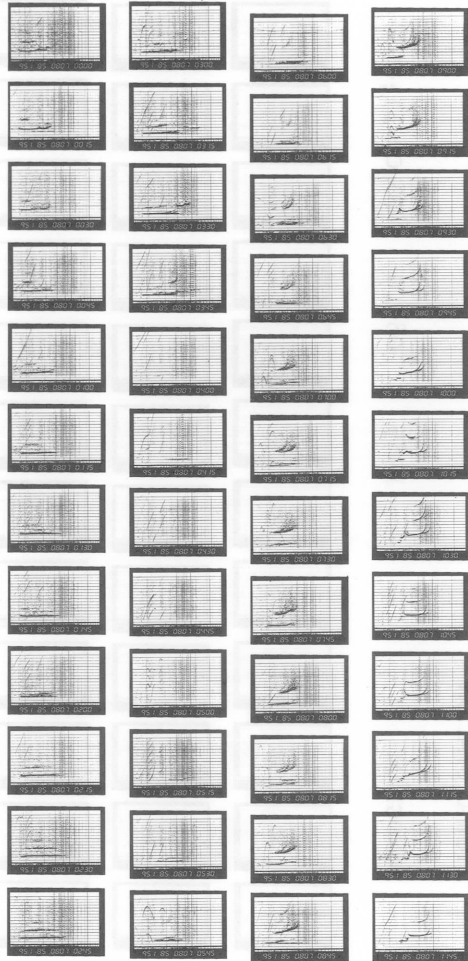
SYOWA STATION

IONOGRAM

1985

08 07

00:00-11:45



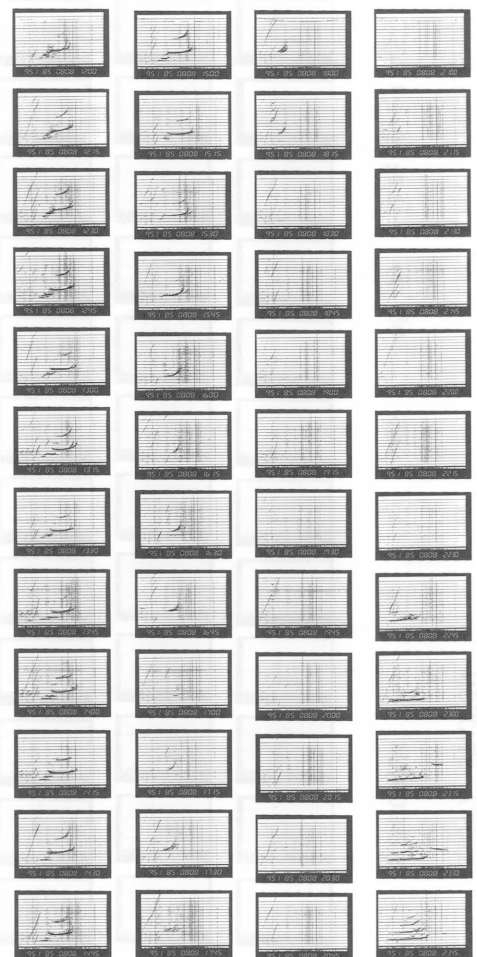
SYOWA STATION

IONOGRAM

1985

08 08

12:00-23:45



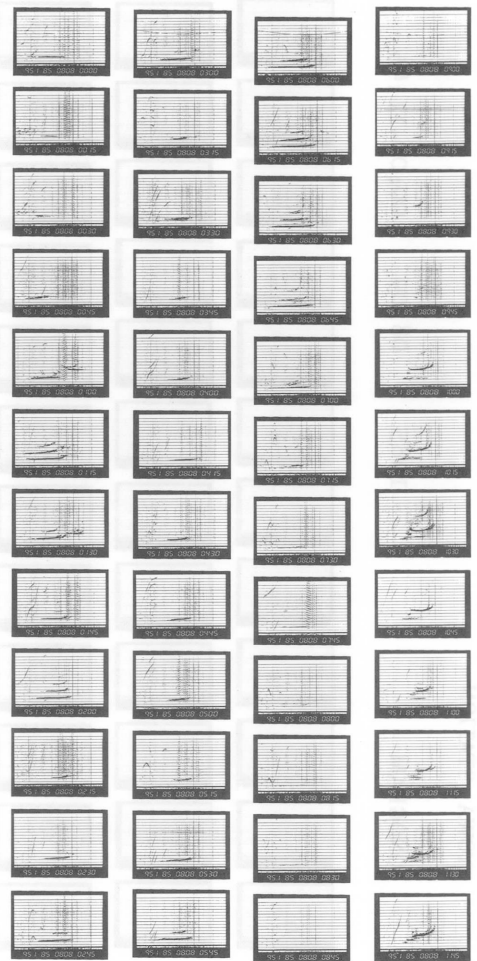
SYOWA STATION

IONOGRAM

1985

08 08

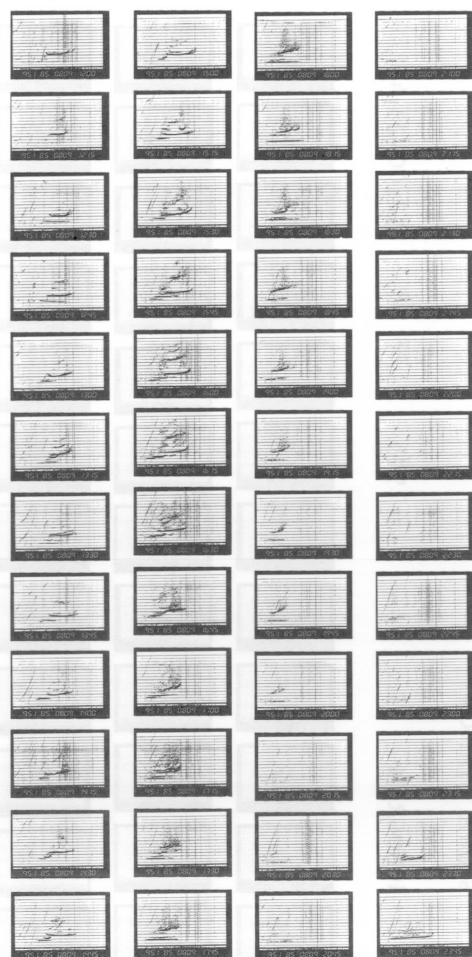
00:00-11:45



SYOWA STATION

IONOGRAM

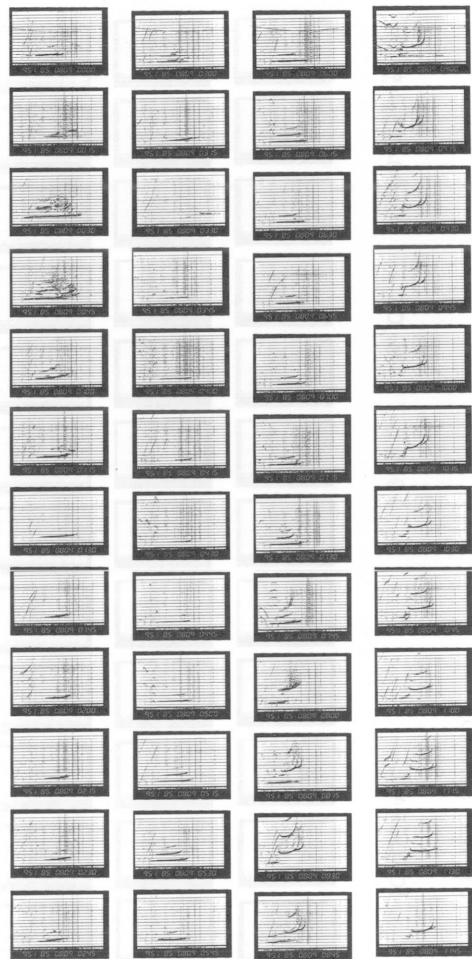
1985 08 09 12:00-23:45



SYOWA STATION

IONOGRAM

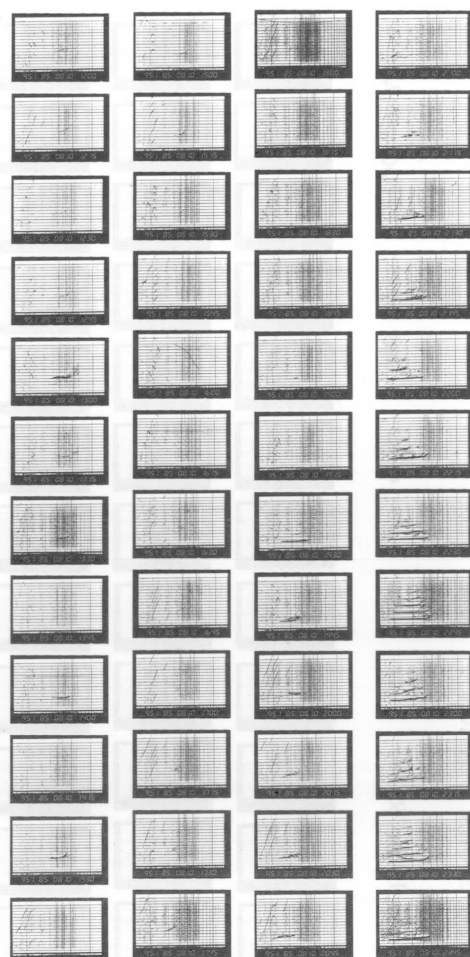
1985 08 09 00:00-11:45



SYOWA STATION

IONOGRAM

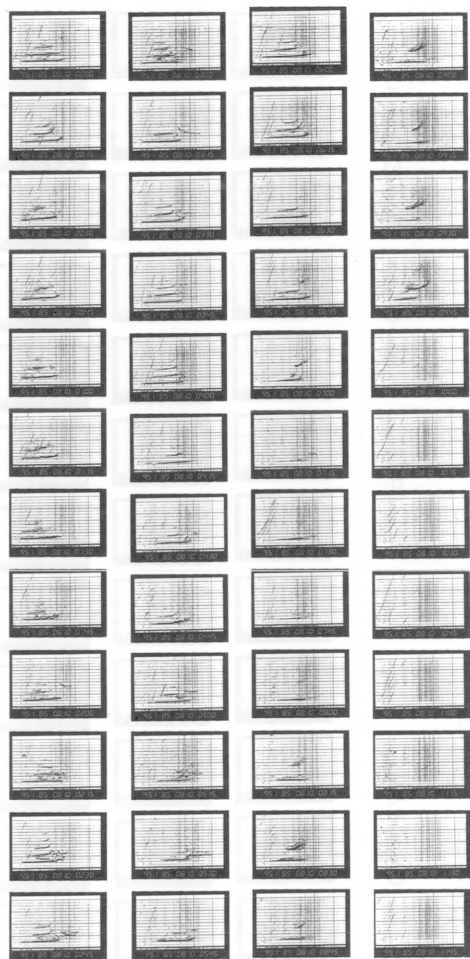
1985 08 10 12:00-23:45



SYOWA STATION

IONOGRAM

1985 08 10 00:00-11:45



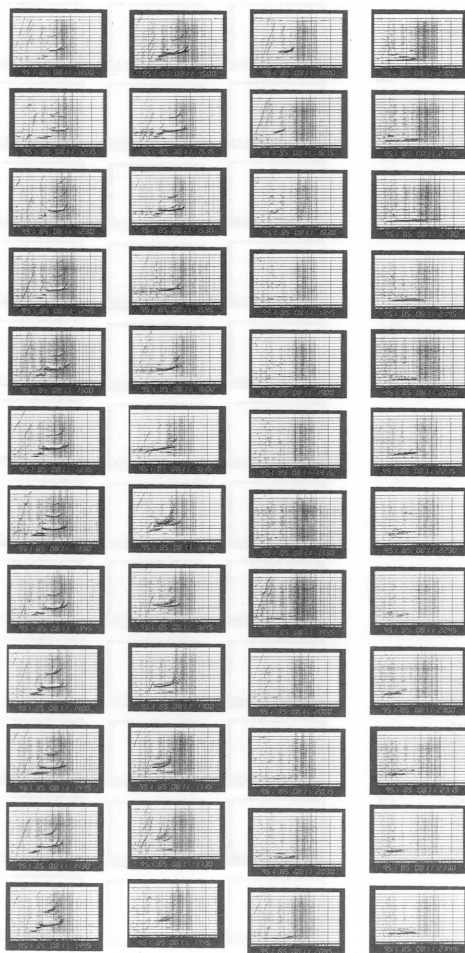
SYOWA STATION

IONOGRAM

1985

08 11

12;00-23;45



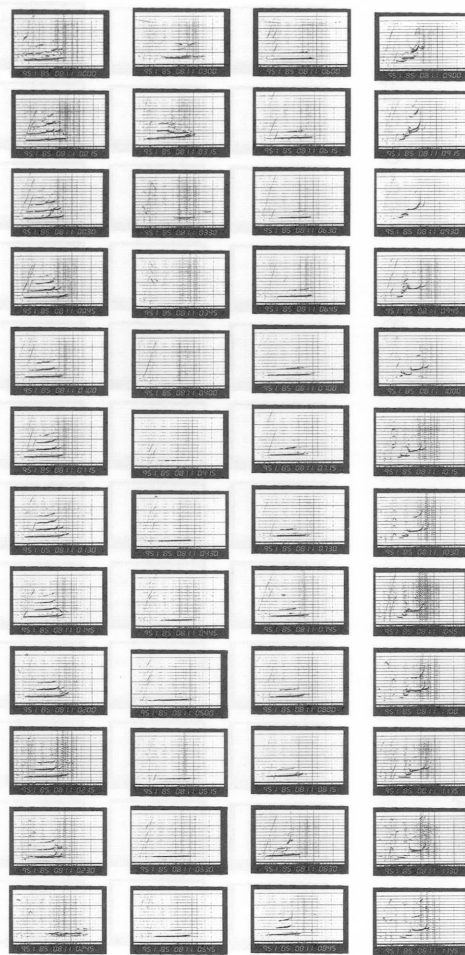
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IONOGRAM

1985

08 11

00;00-11;45



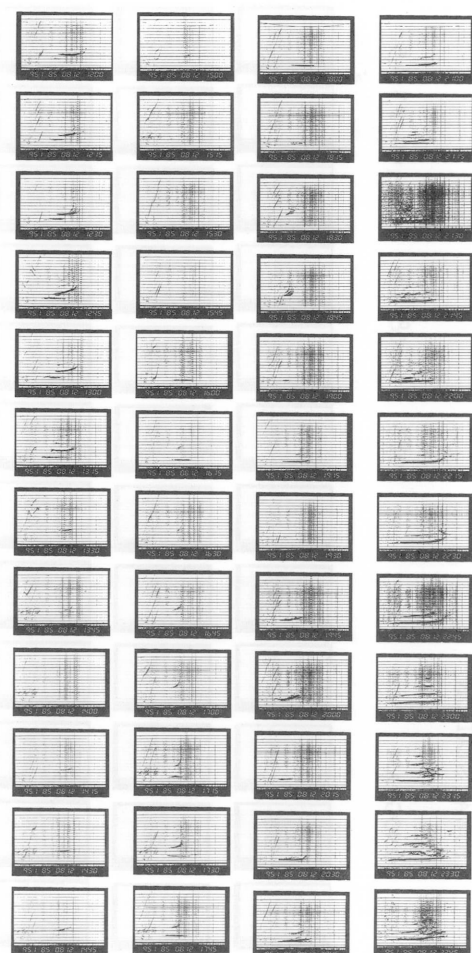
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1985

08 12

12;00-23;45



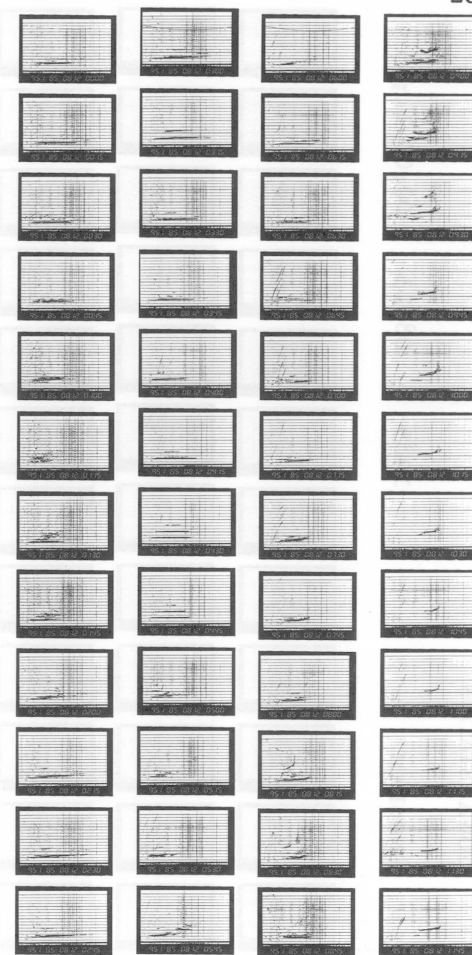
SYOWA STATION

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1985

08 12

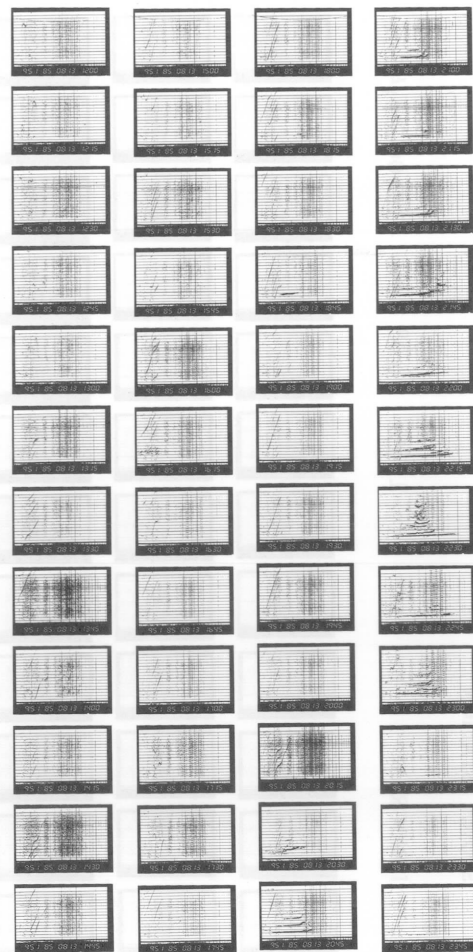
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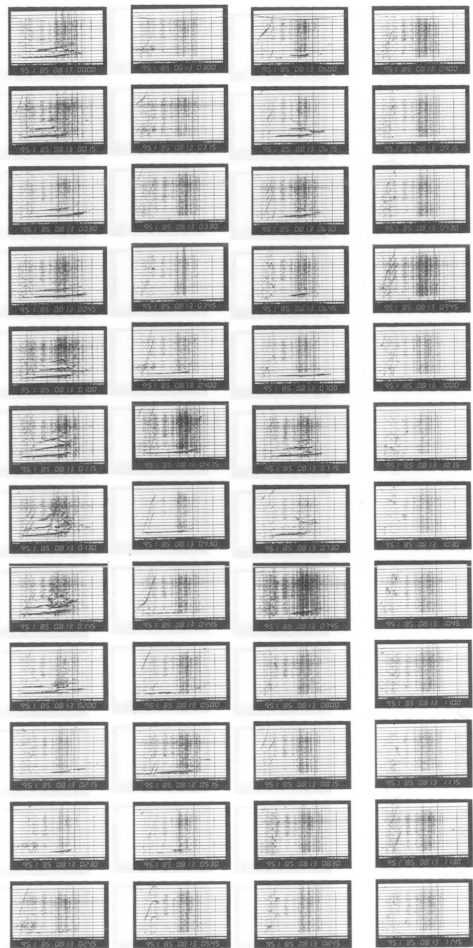
SYOWA STATION

IONOGRAM

1985 08 13 12:00-23:45



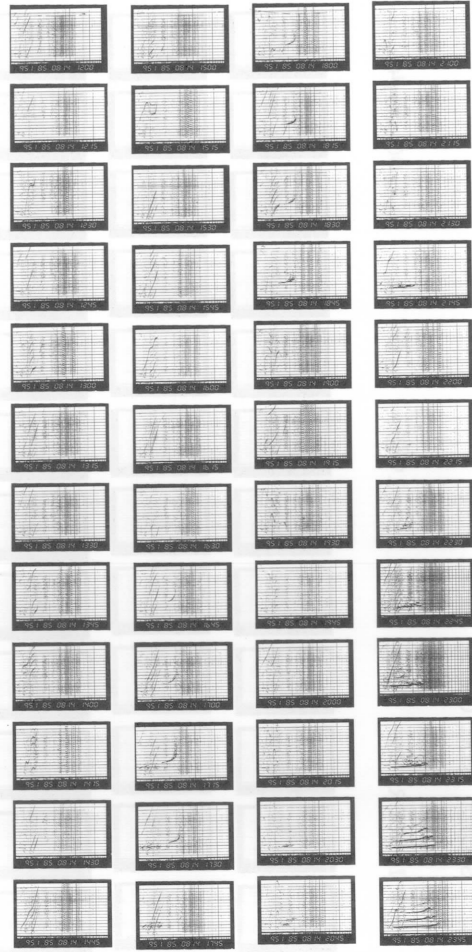
1985 08 13 00:00-11:45



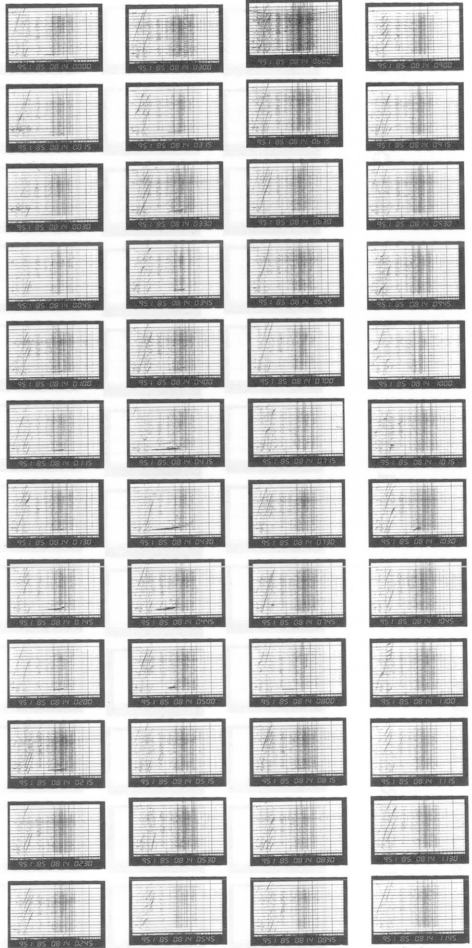
SYOWA STATION

IONOGRAM

1985 08 14 12:00-23:45



1985 08 14 00:00-11:45



SYOWA STATION

IONOGRAM

SYOWA STATION

IONOGRAM

1985

08 15

12:00-23:45

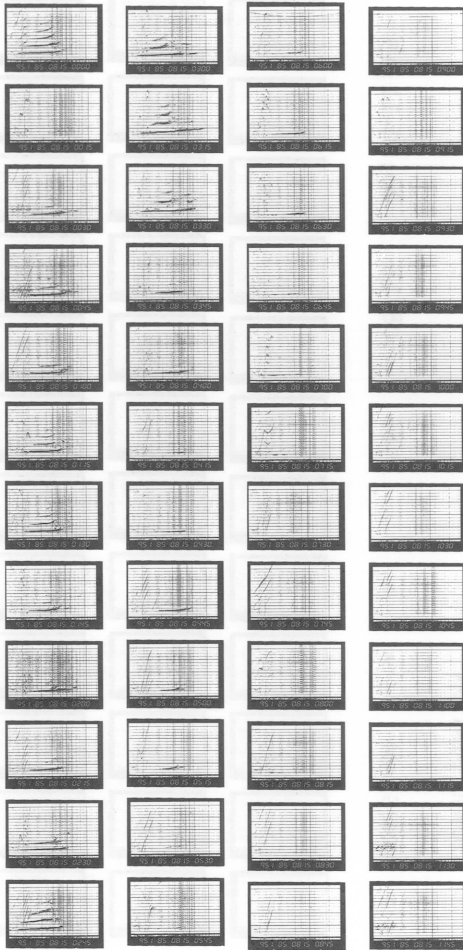
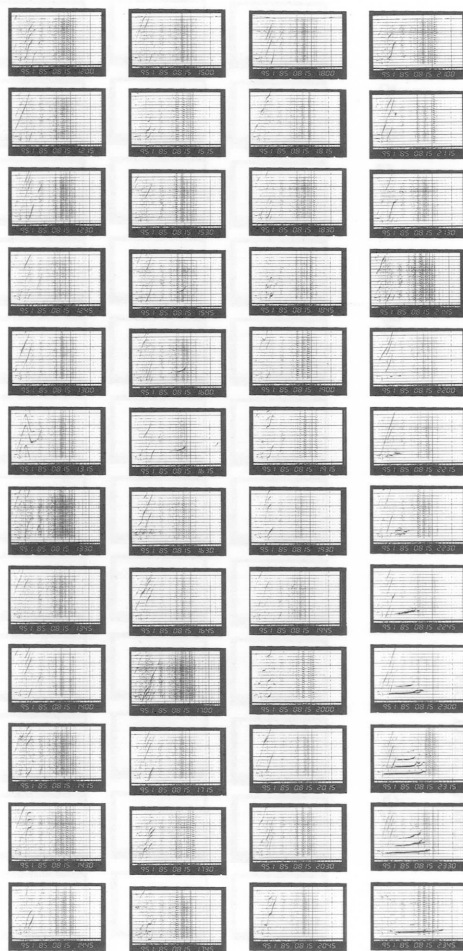
SYOWA STATION

IONOGRAM

1985

08 15

00:00-11:45



SYOWA STATION

IONOGRAM

1985

08 16

12:00-23:45

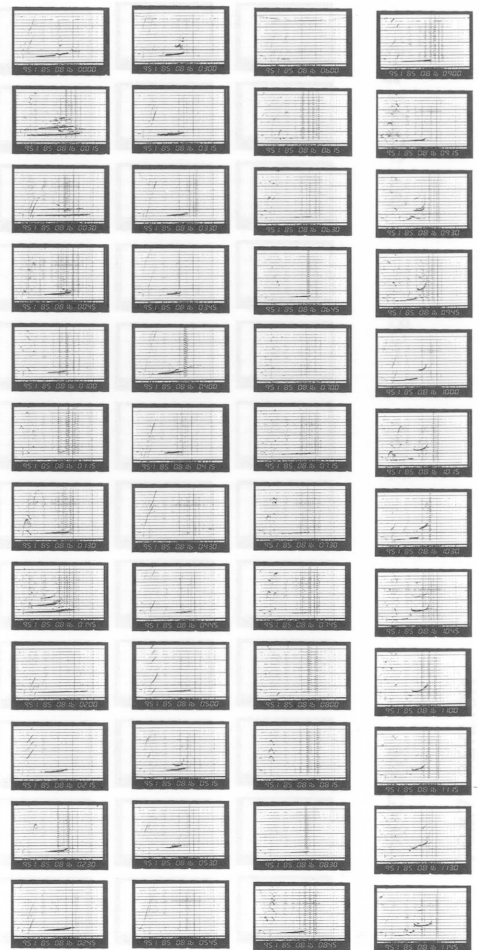
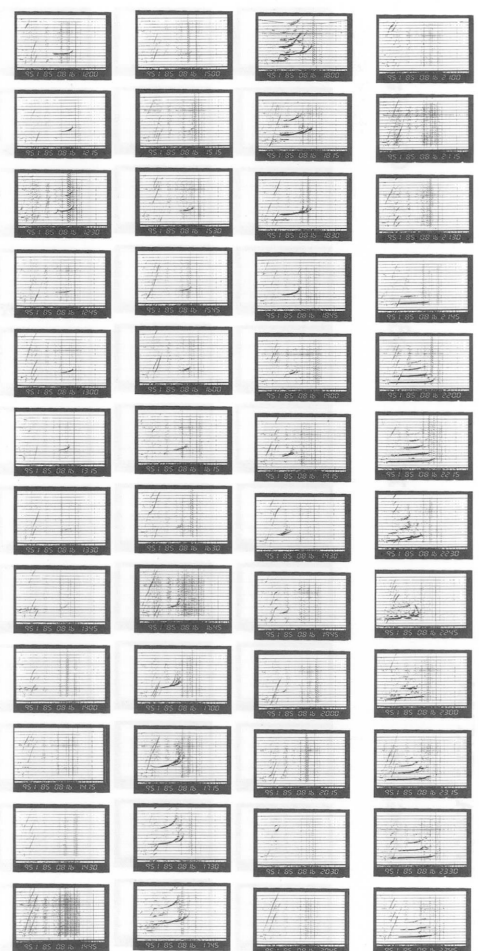
SYOWA STATION

IONOGRAM

1985

08 16

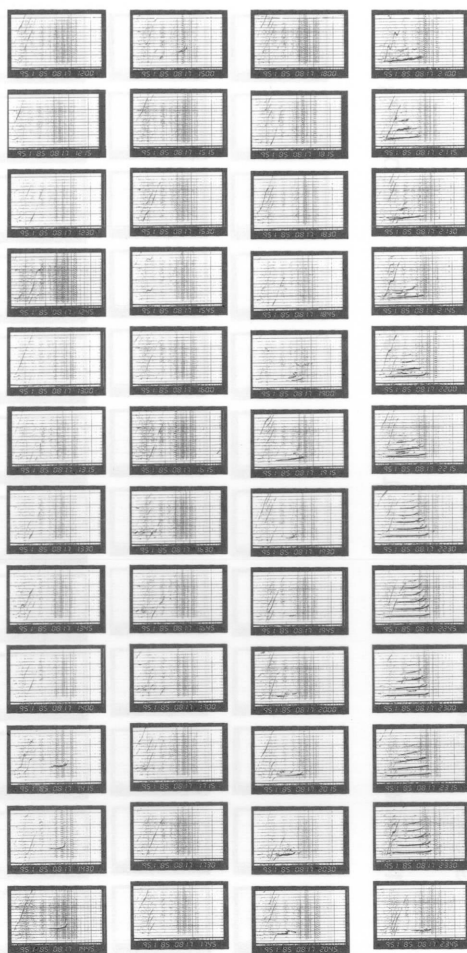
00:00-11:45



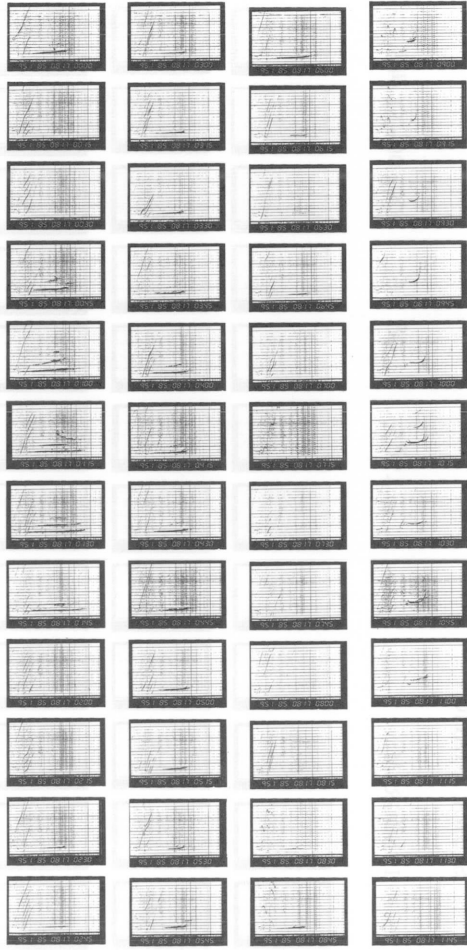
SYOWA STATION

IONOGRAM

1985 08 17 12:00-23:45



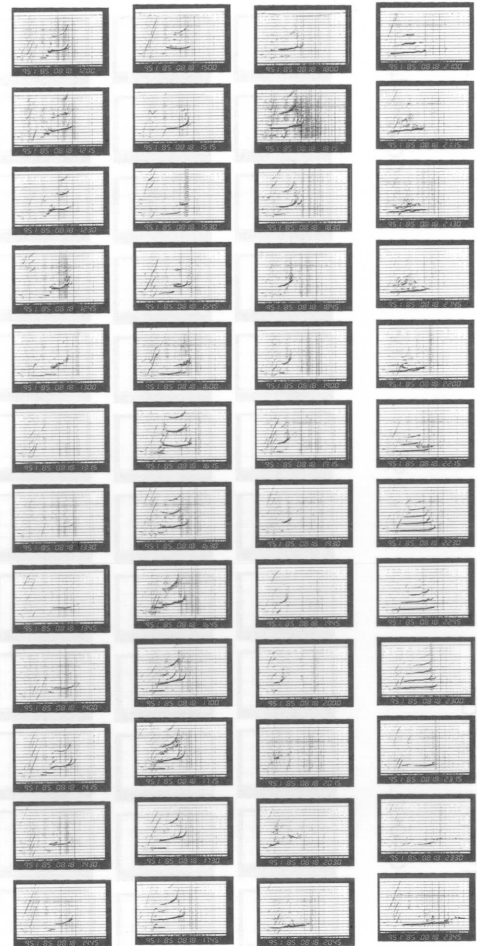
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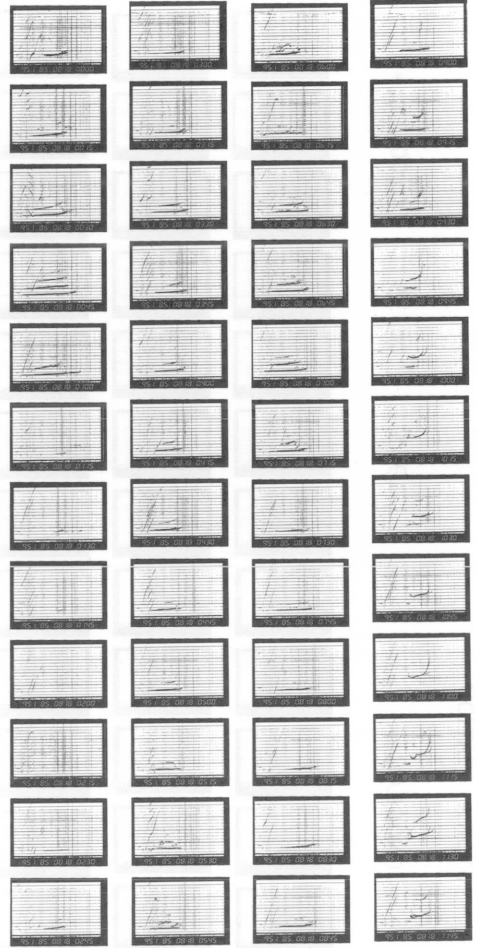
SYOWA STATION

IONOGRAM

1985 08 18 12:00-23:45



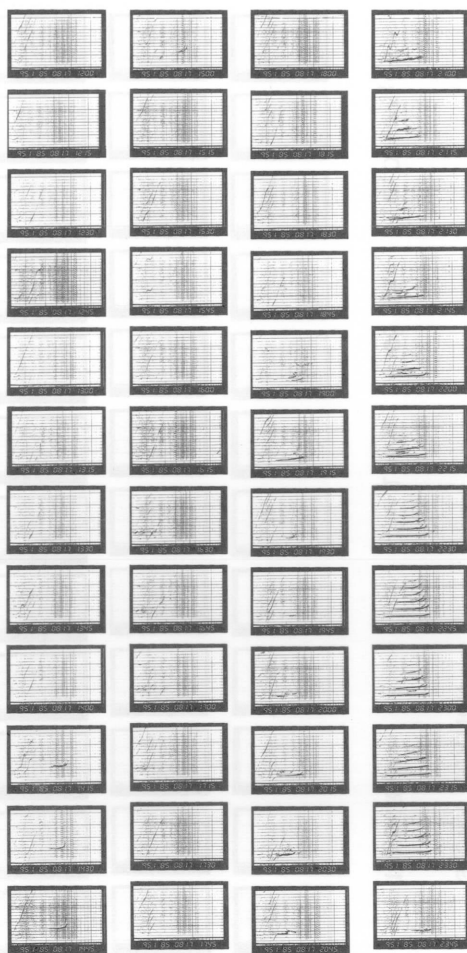
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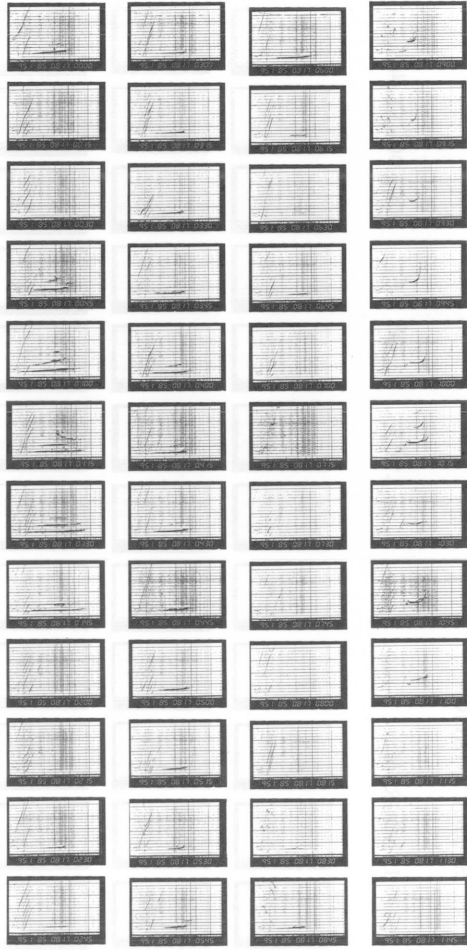
SYOWA STATION

IONOGRAM

1985 08 17 12:00-23:45



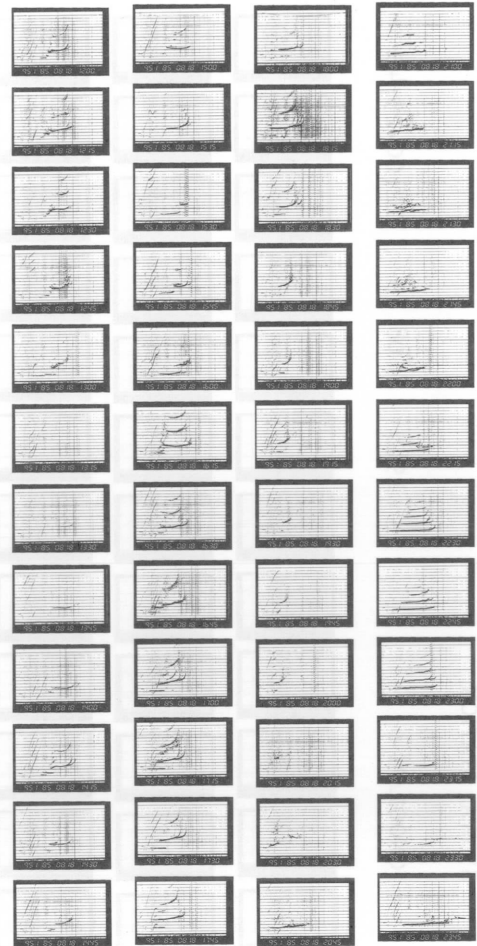
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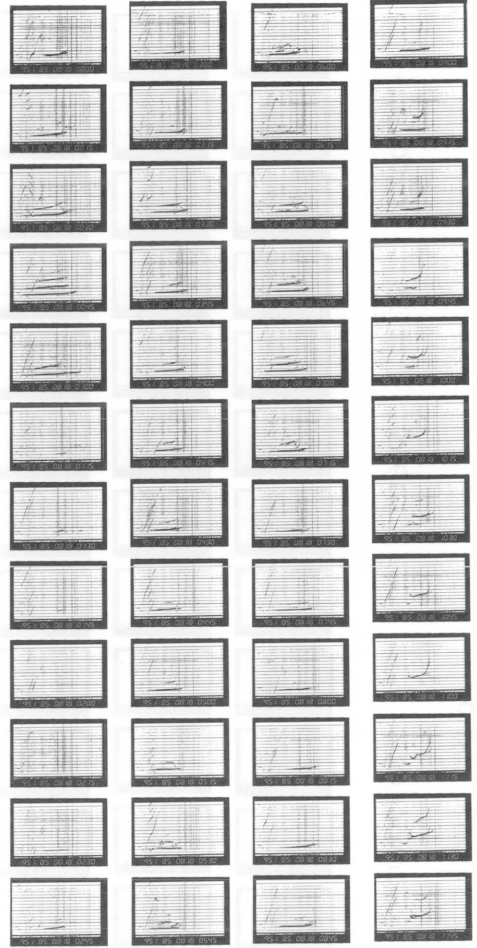
SYOWA STATION

IONOGRAM

1985 08 18 12:00-23:45



1985 08 18 00:00-11:45



SYOWA STATION

IONOGRAM

1985

08 19

12:00-23:45



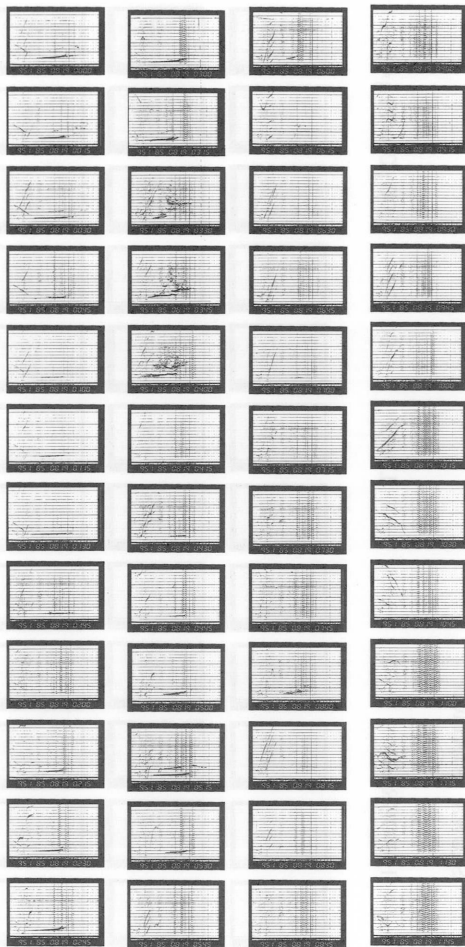
SYOWA STATION

IONOGRAM

1985

08 19

00:00-11:45



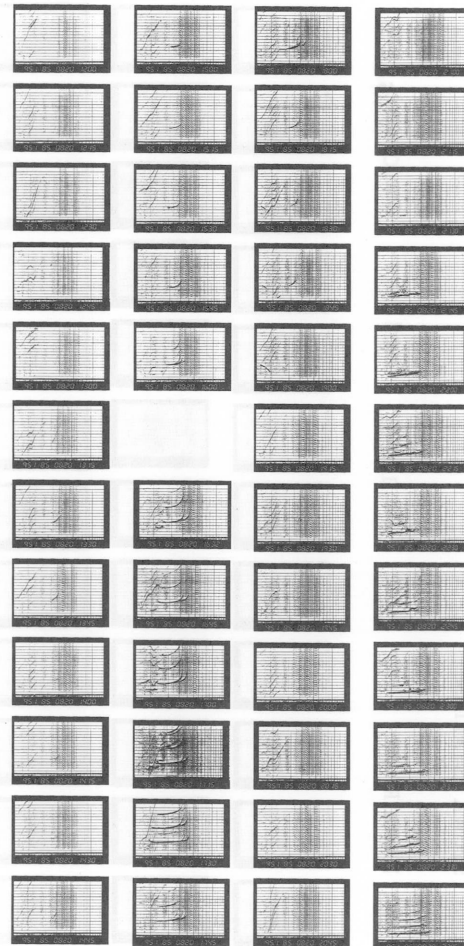
SYOWA STATION

IONOGRAM

1985

08 20

12:00-23:45
(lack 16:15)



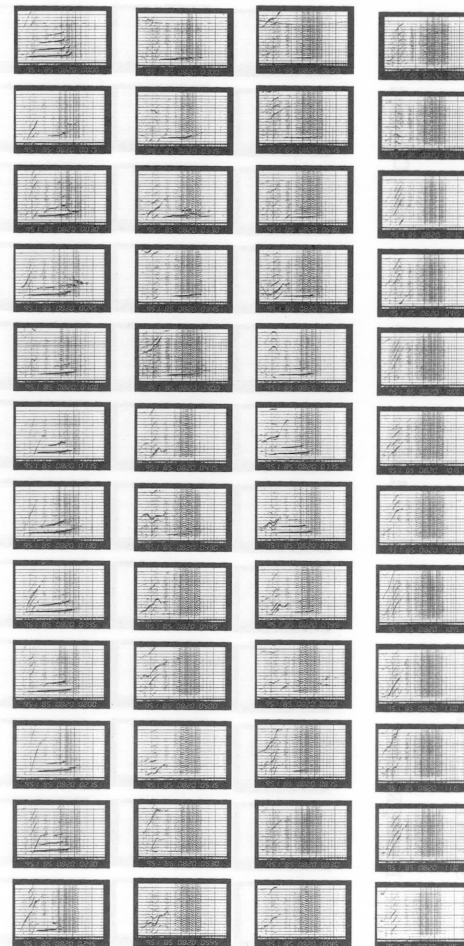
SYOWA STATION

IONOGRAM

1985

08 20

00:00-11:45



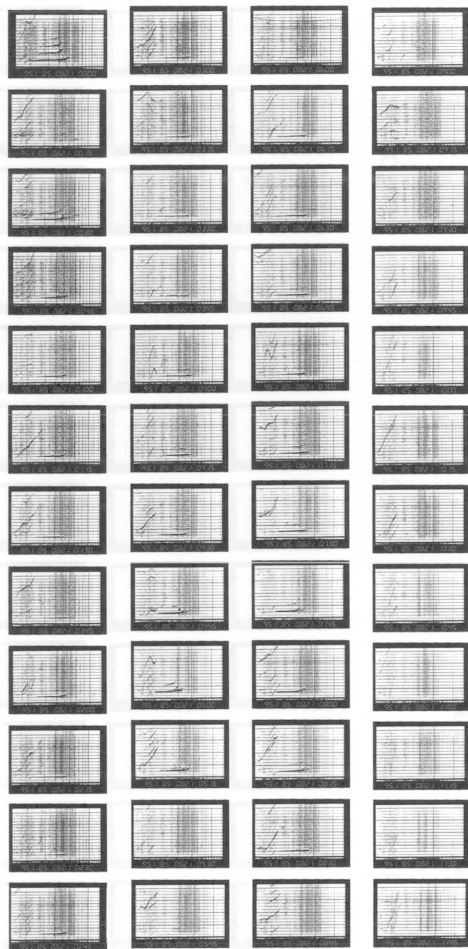
SYOWA STATION

IONOGRAM

1985

08 21

00;00-11;45



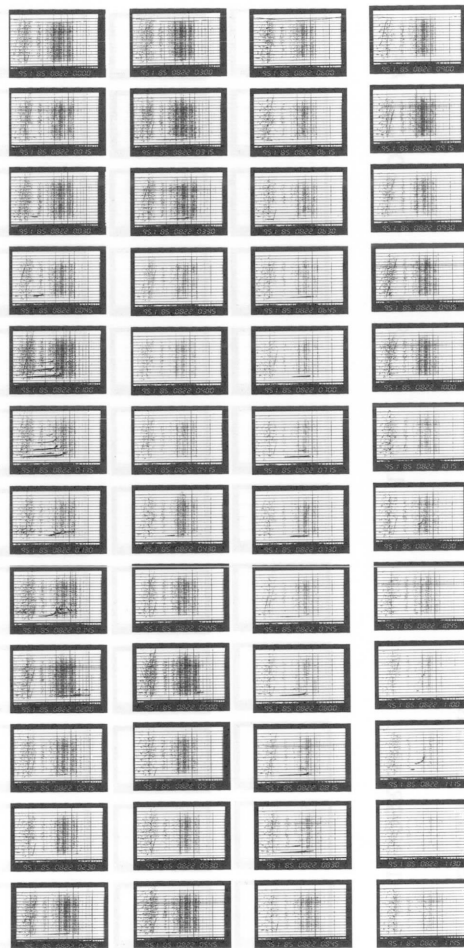
SYOWA STATION

IONOGRAM

1985

08 22

00;00-11;45



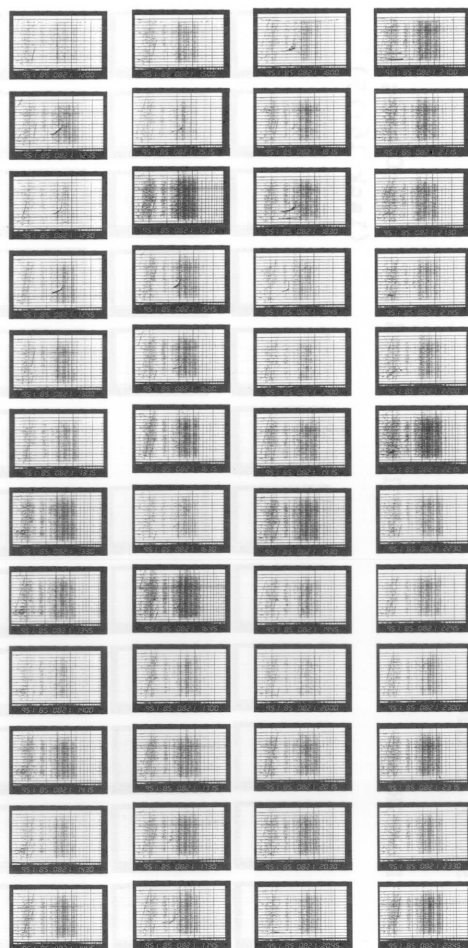
SYOWA STATION

IONOGRAM

1985

08 21

12;00-23;45



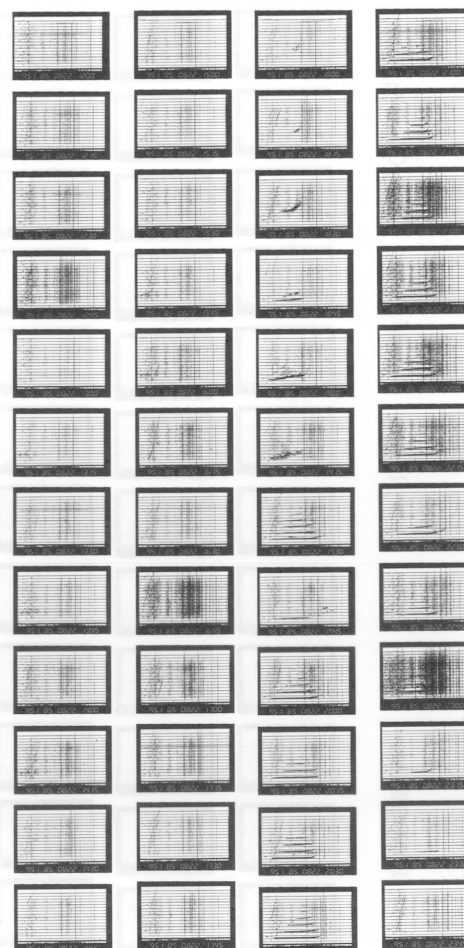
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IONOGRAM

1985

08 22

12;00-23;45



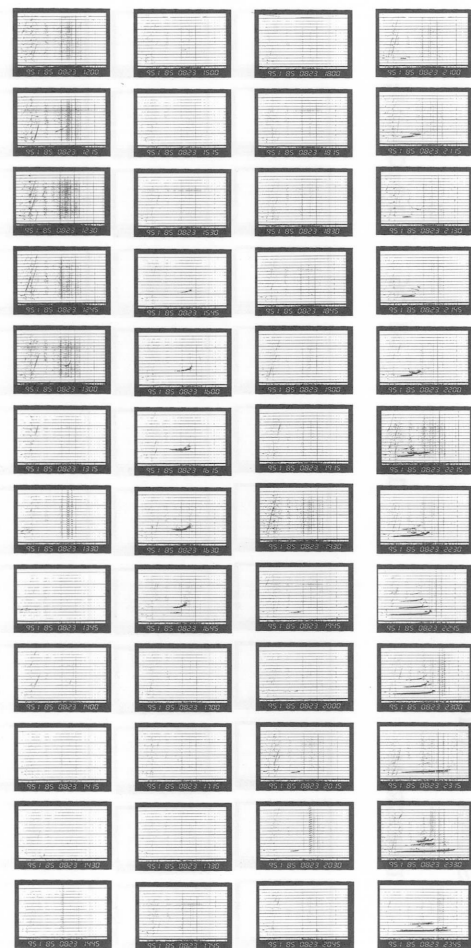
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IONOGRAM

1985

08 23

12;00-23;45



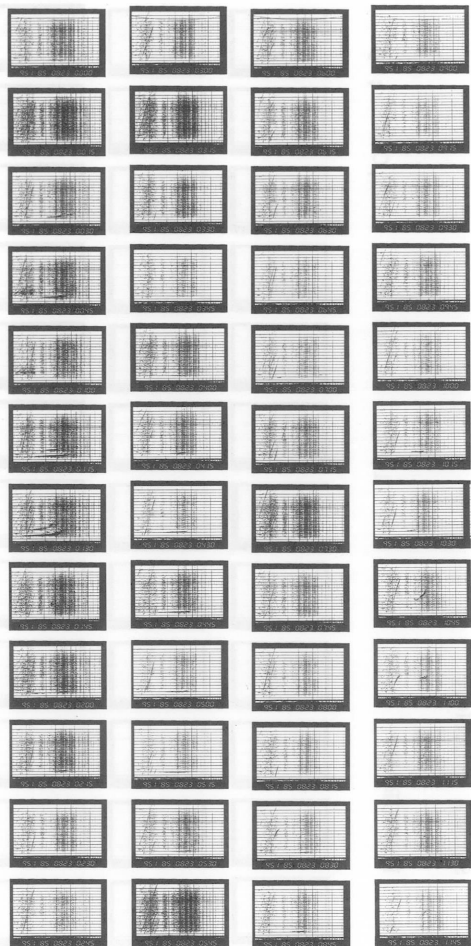
SYOWA STATION

IONOGRAM

1985

08 23

00;00-11;45



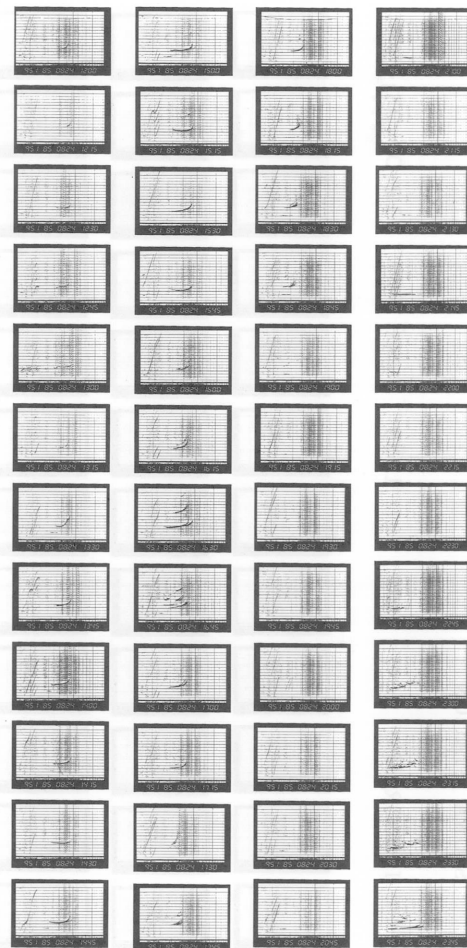
SYOWA STATION

IONOGRAM

1985

08 24

12;00-23;45



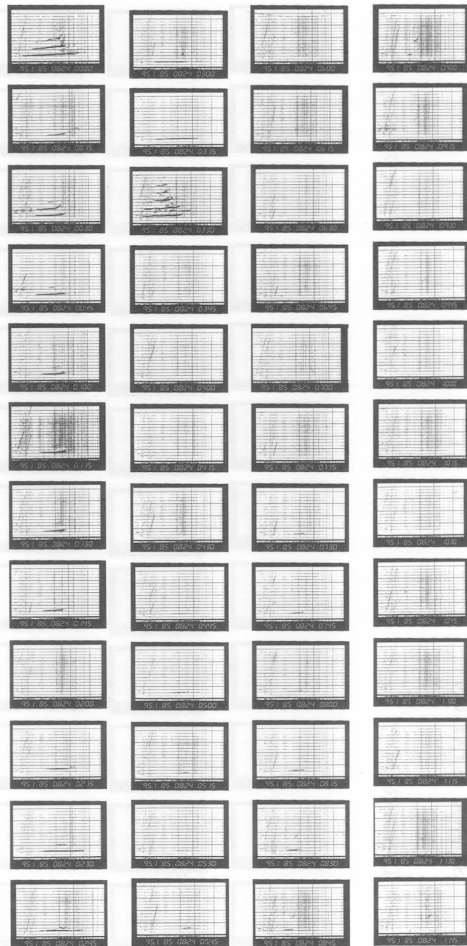
SYOWA STATION

IONOGRAM

1985

08 24

00;00-11;45



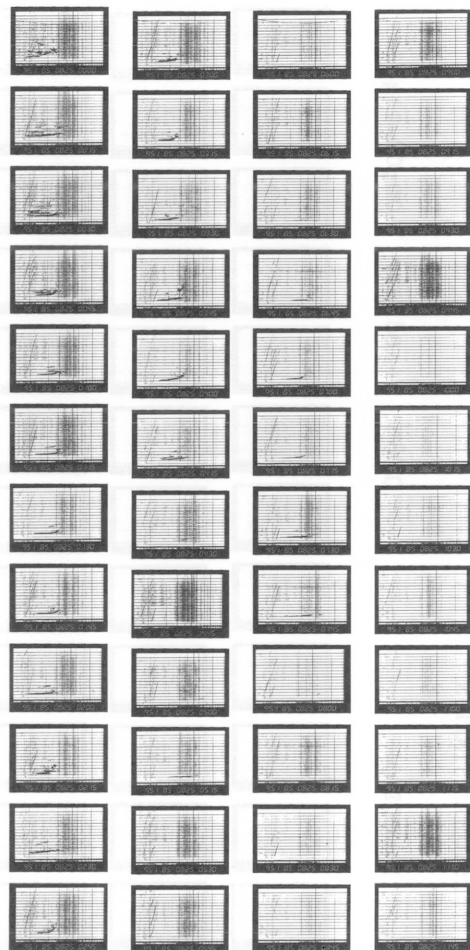
SYOWA STATION

IONOGRAM

1985 08 25 12:00-23:45



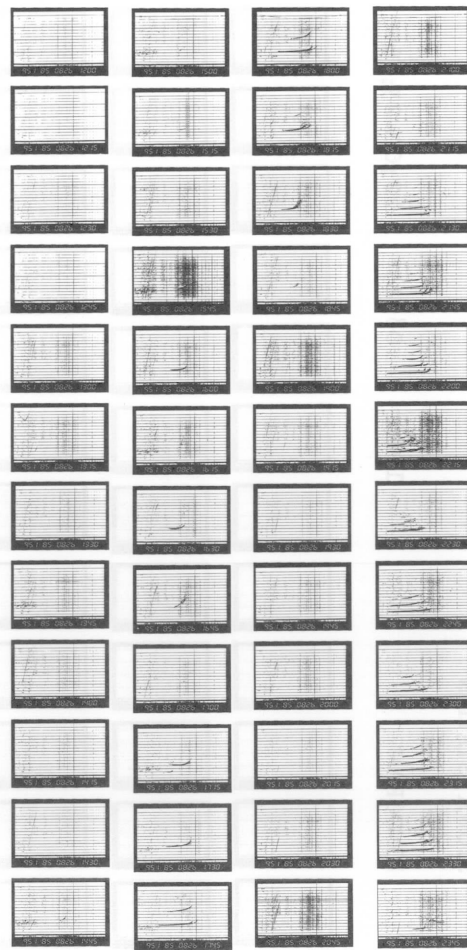
1985 08 25 00:00-11:45



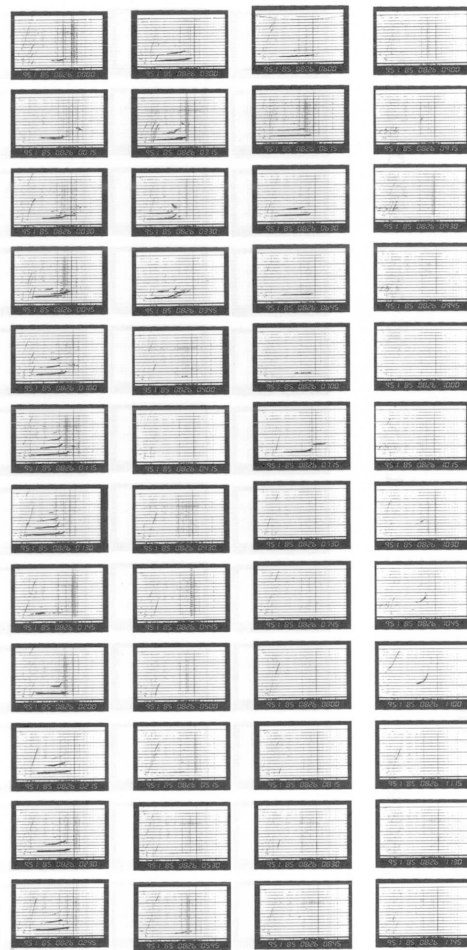
SYOWA STATION

IONOGRAM

1985 08 26 12:00-23:45



1985 08 26 00:00-11:45



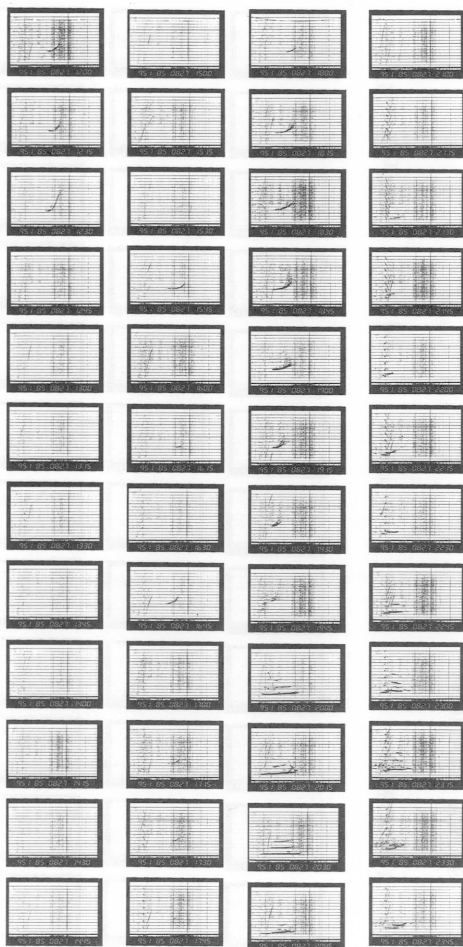
SYOWA STATION

IONOGRAM

1985

08 27

12:00-23:45



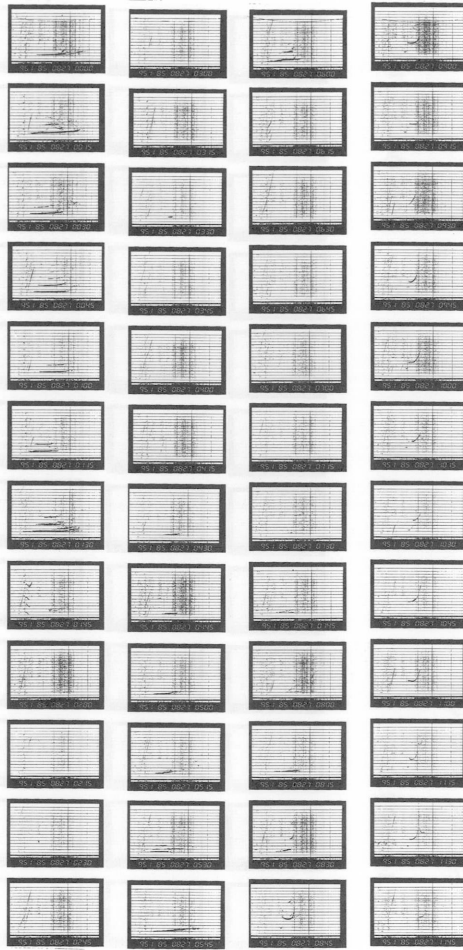
SYOWA STATION

IONOGRAM

1985

08 27

00:00-11:45



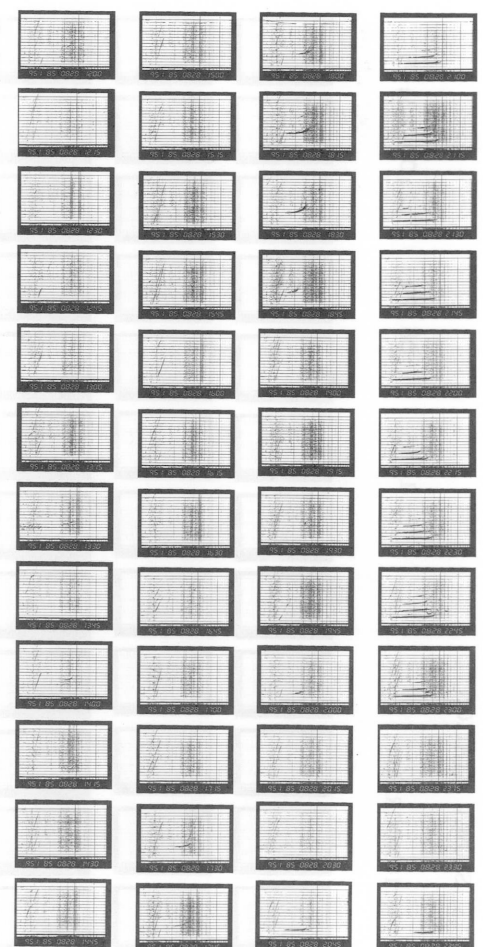
SYOWA STATION

IONOGRAM

1985

08 28

12:00-23:45



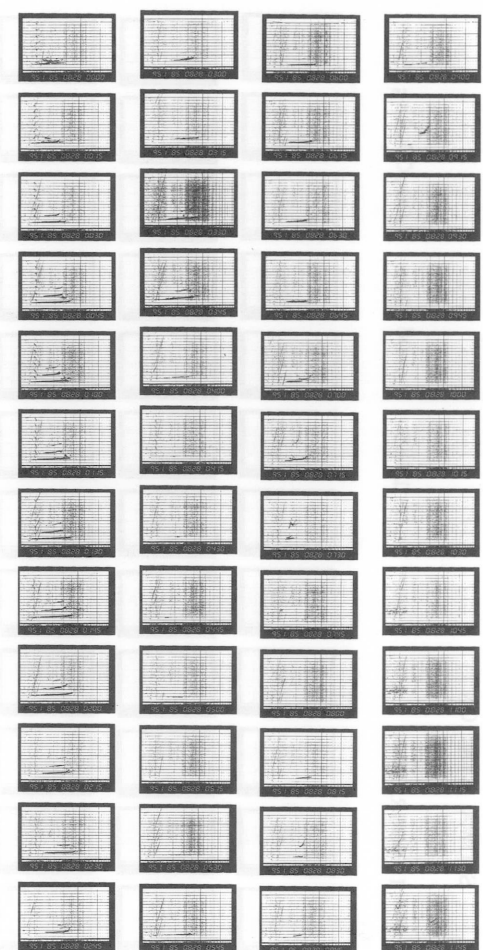
SYOWA STATION

IONOGRAM

1985

08 28

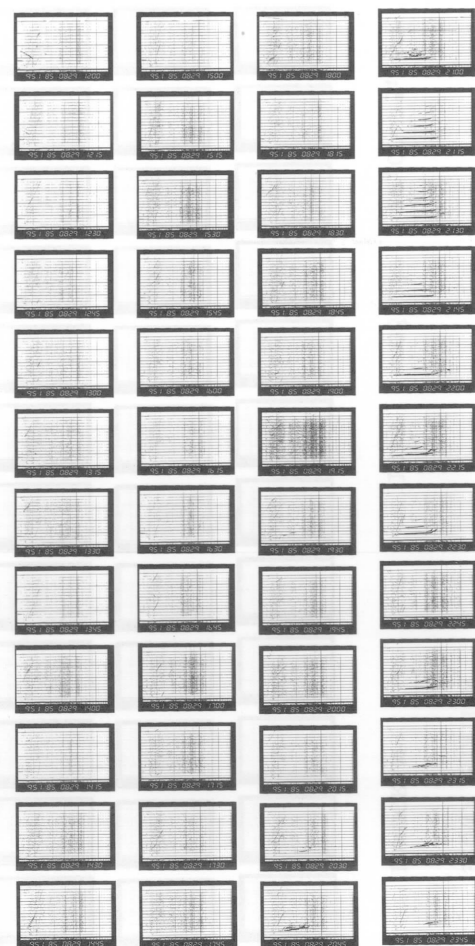
00:00-11:45



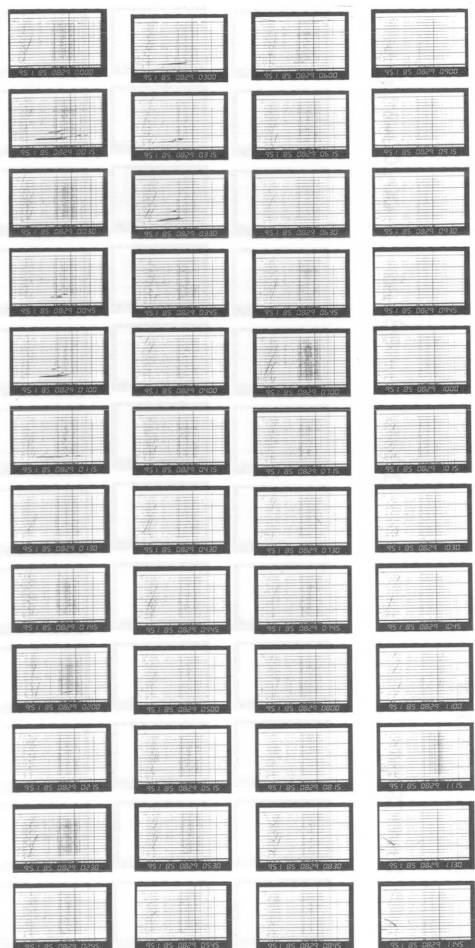
SYOWA STATION

IONOGRAM

1985 08 29 12:00-23:45



1985 08 29 00:00-11:45



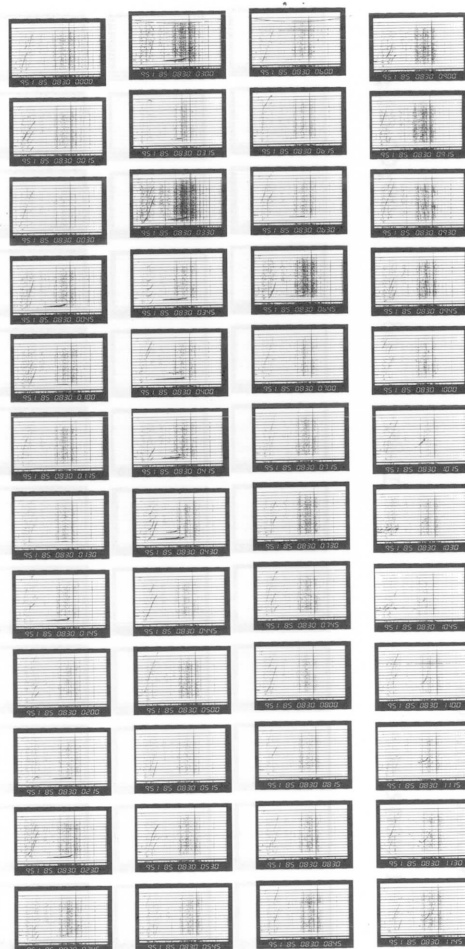
SYOWA STATION

IONOGRAM

1985 08 30 12:00-23:45



1985 08 30 00:00-11:45



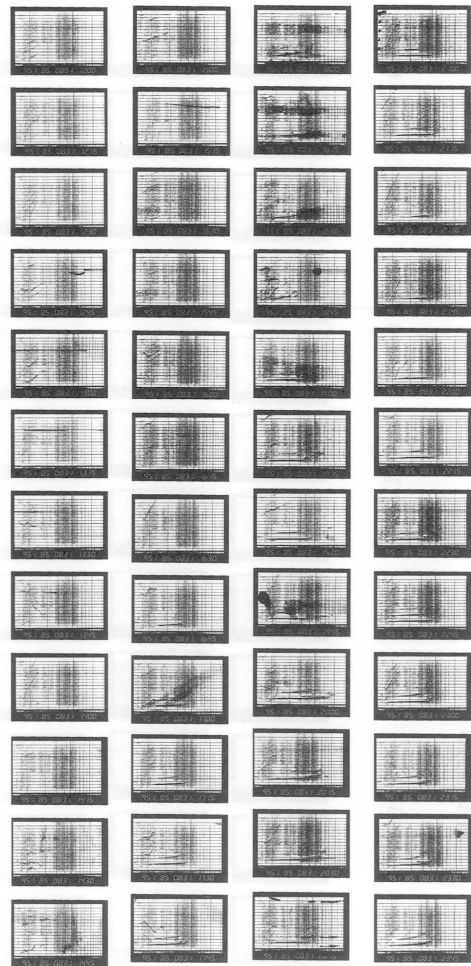
SYOWA STATION

IONOGRAM

1985

08 31

12:00-23:45



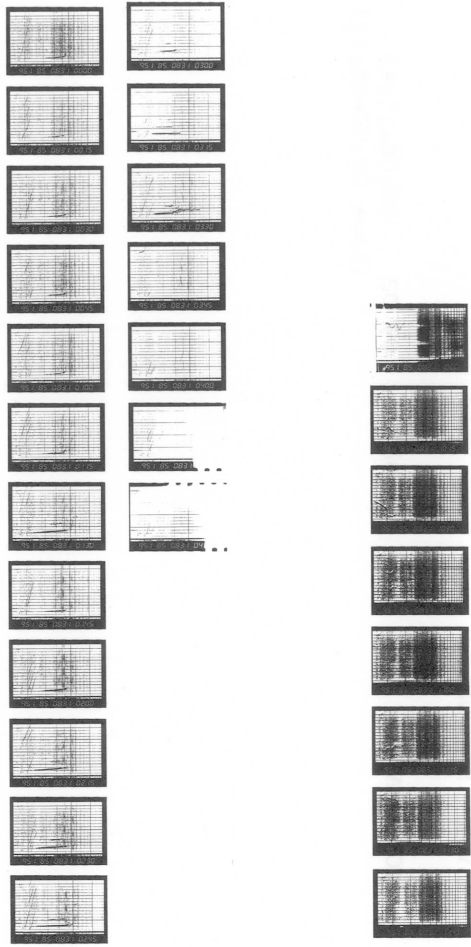
SYOWA STATION

IONOGRAM

1985

08 31

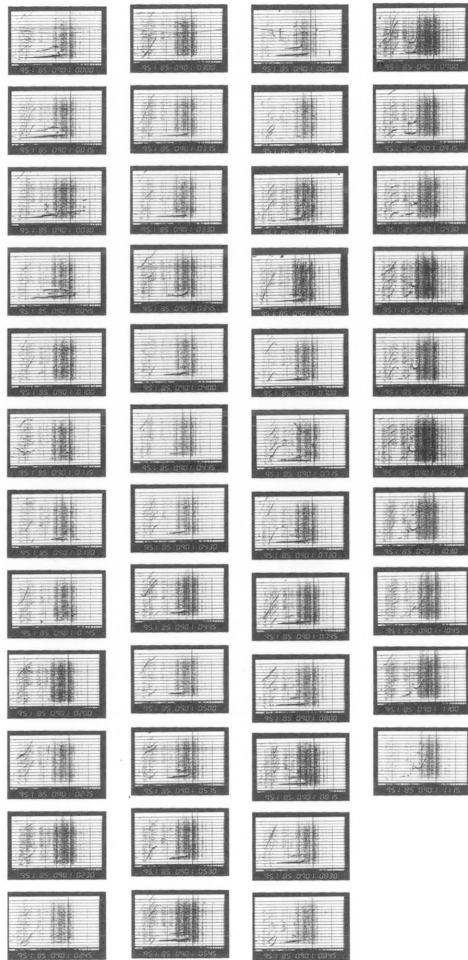
00:00-11:45
(lack 04:45-09:45)



SYOWA STATION

IONOGRAM

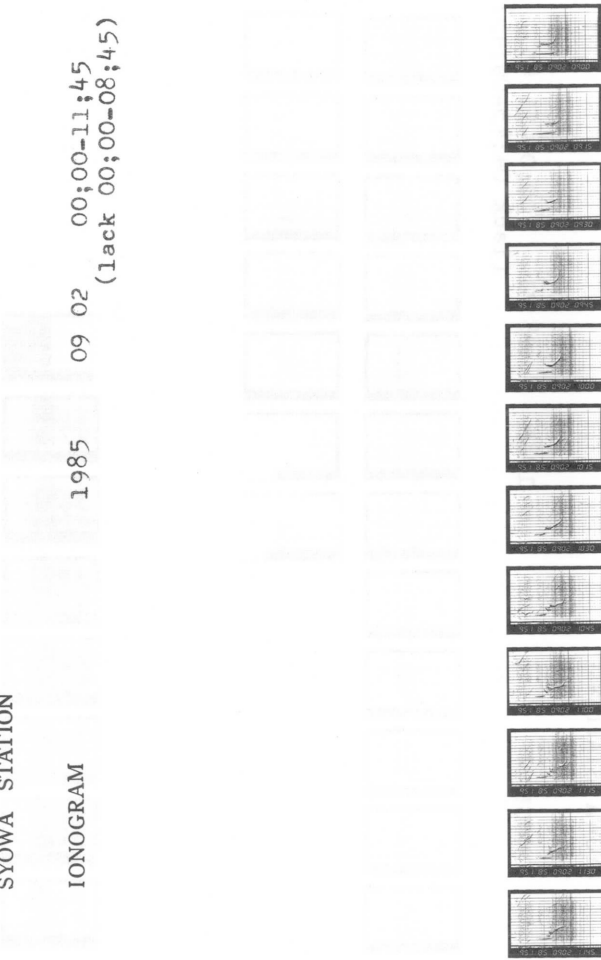
1985 09 01 00:00-11:45
(lack 11:30-11:45)



SYOWA STATION

IONOGRAM

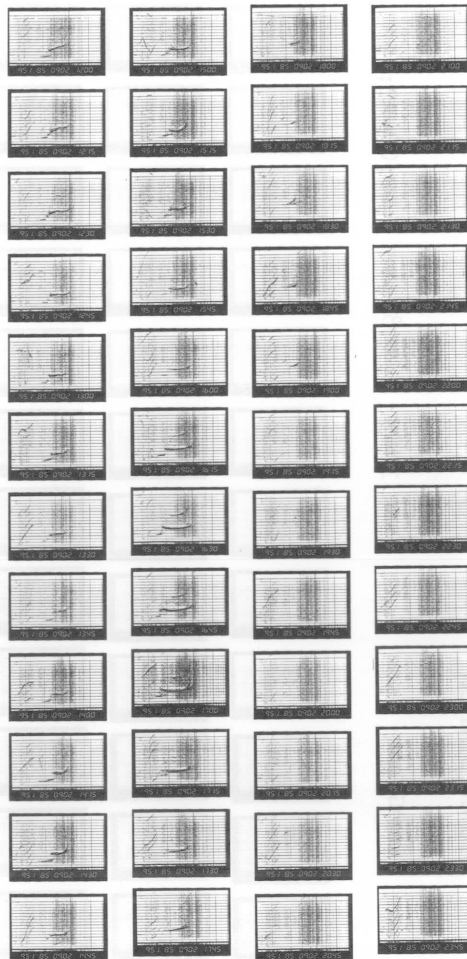
1985 09 02 00:00-11:45
(lack 00:00-08:45)



SYOWA STATION

IONOGRAM

1985 09 02 12:00-23:45



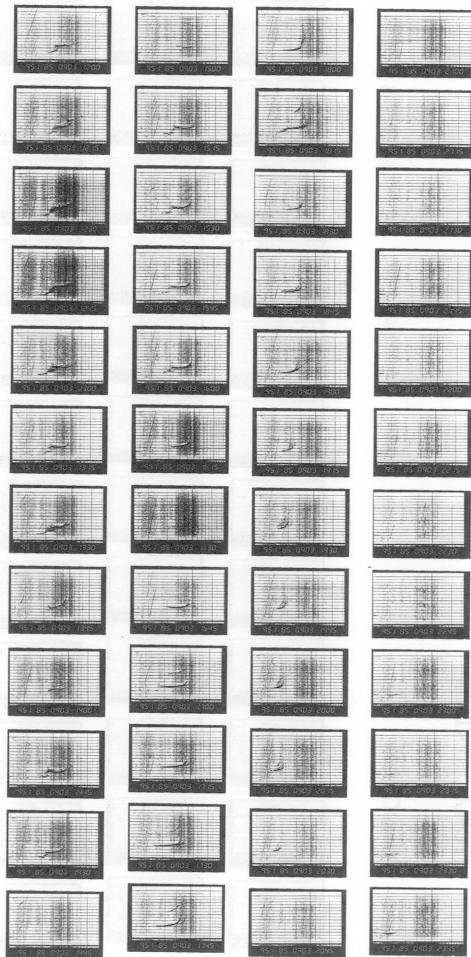
SYOWA STATION

IONOGRAM

1985

09 03

12:00-23:45



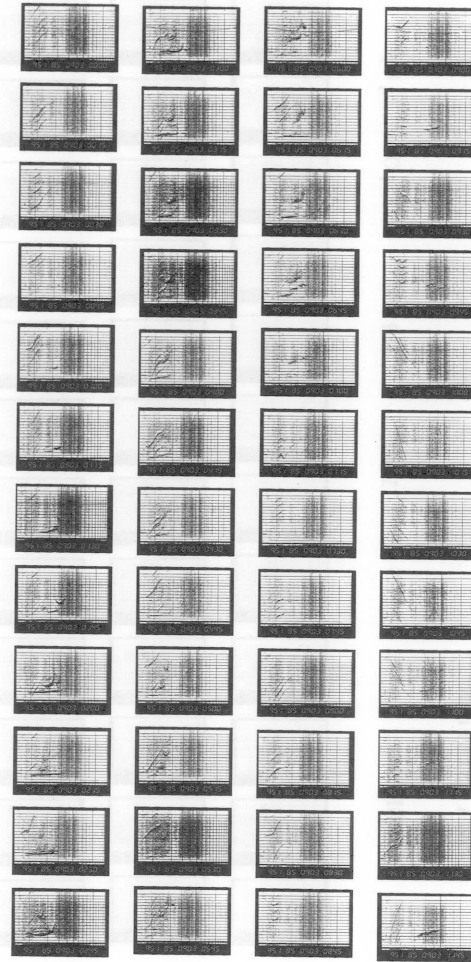
SYOWA STATION

IONOGRAM

1985

09 03

00:00-11:45



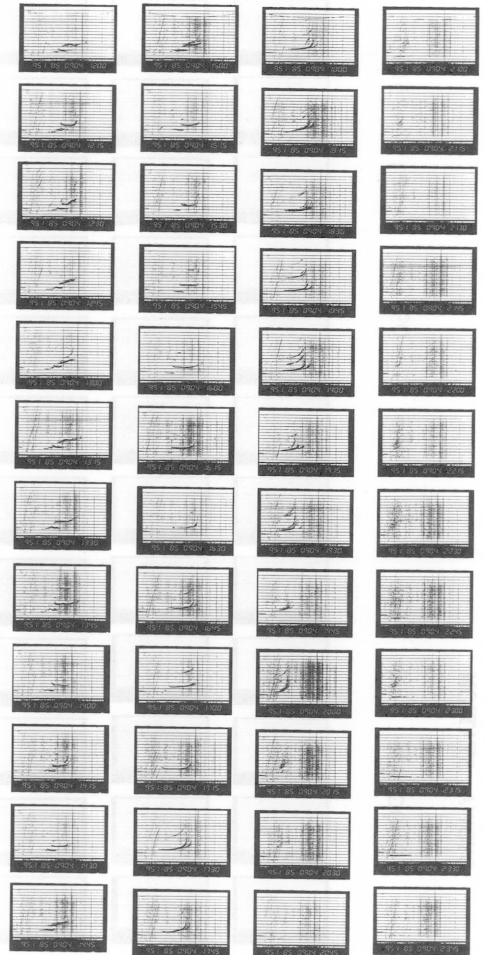
SYOWA STATION

IONOGRAM

1985

09 04

12:00-23:45



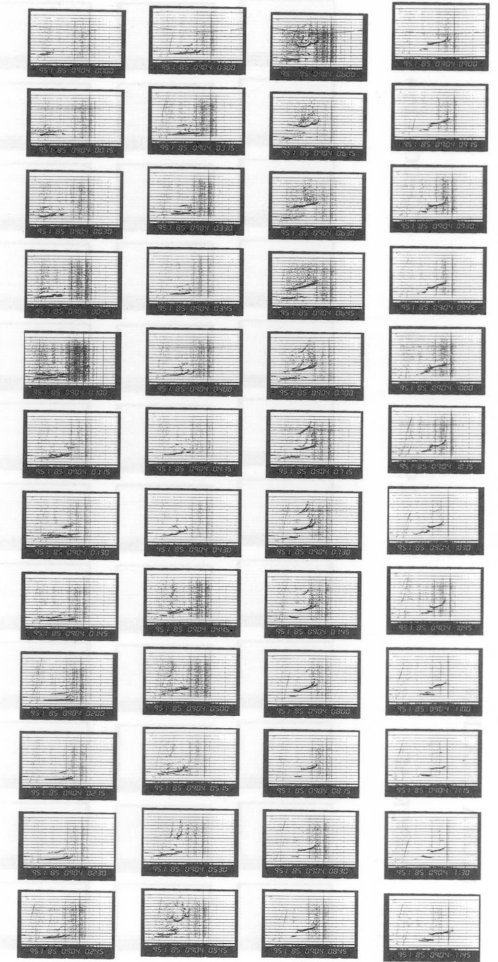
SYOWA STATION

IONOGRAM

1985

09 04

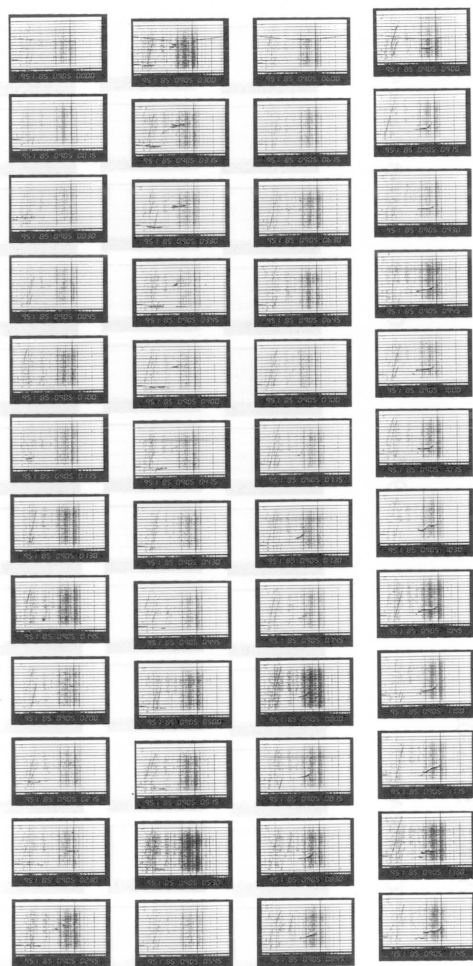
00:00-11:45



SYOWA STATION

1985 09 05 00:00-11:45

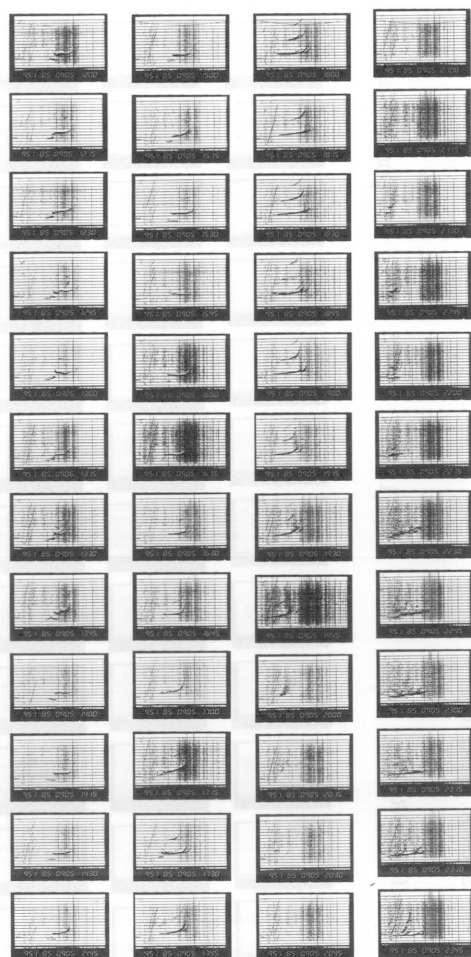
IONOGRAM



SYOWA STATION

1985 09 05 12:00-23:45

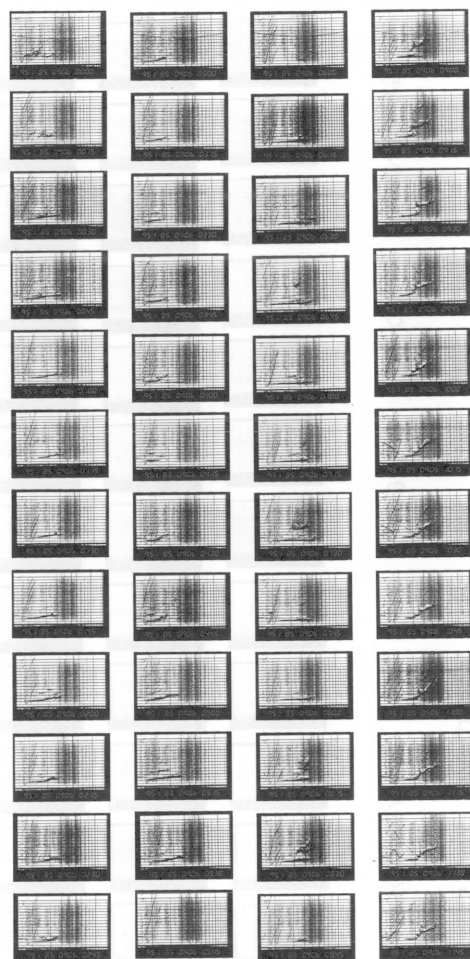
IONOGRAM



SYOWA STATION

1985 09 06 00:00-11:45

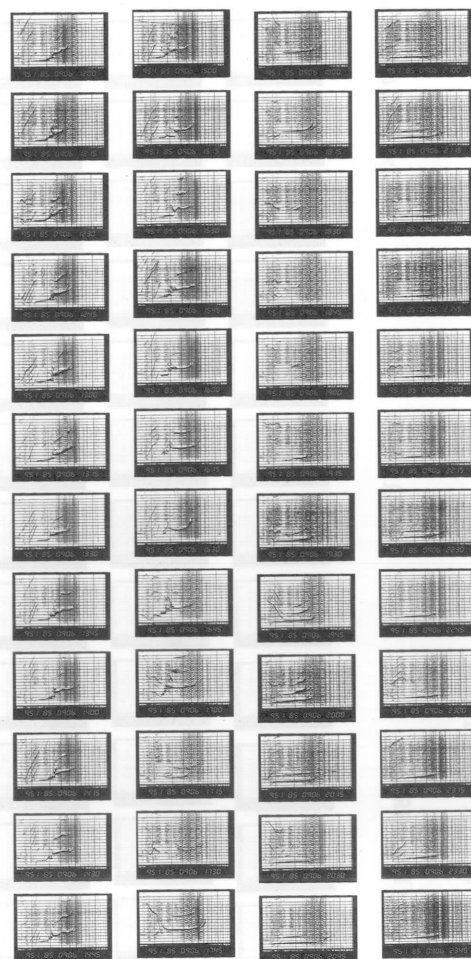
IONOGRAM



SYOWA STATION

1985 09 06 12:00-23:45

IONOGRAM



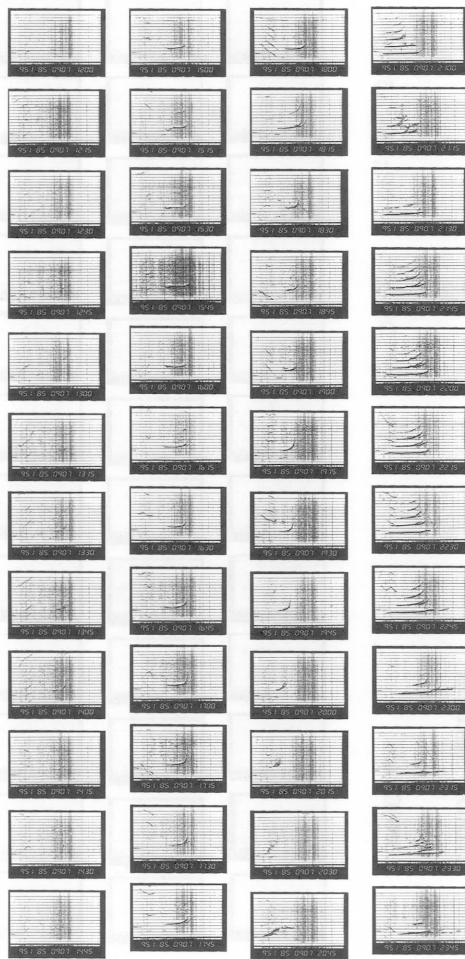
SYOWA STATION

IONOGRAM

1985

09 07

12:00-23:45



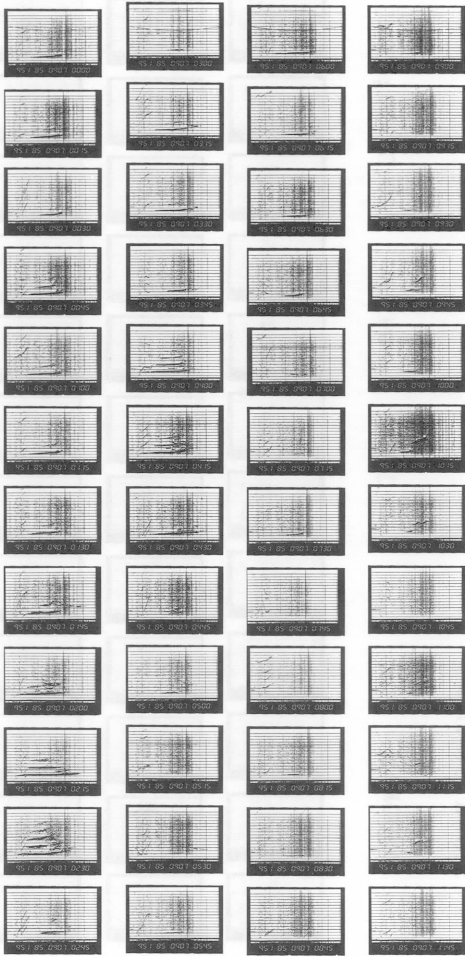
SYOWA STATION

IONOGRAM

1985

09 07

00:00-11:45



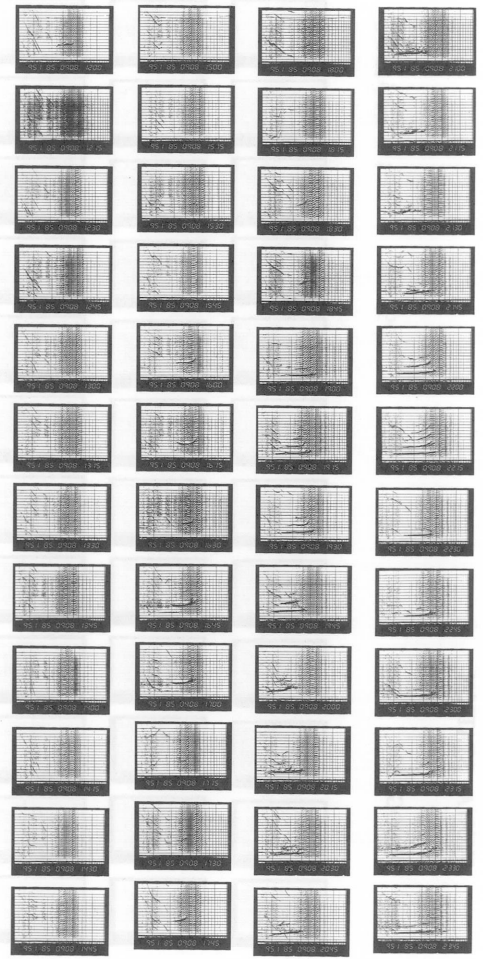
SYOWA STATION

IONOGRAM

1985

09 08

12:00-23:45



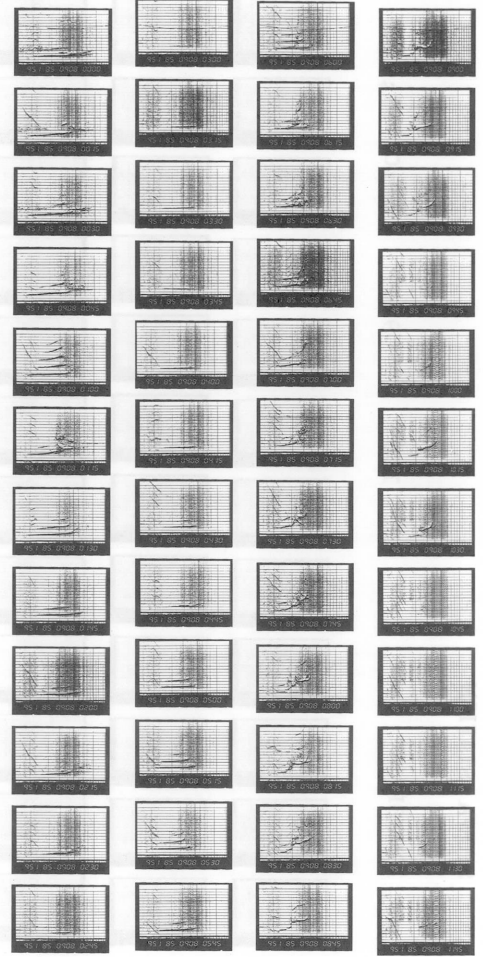
SYOWA STATION

IONOGRAM

1985

09 08

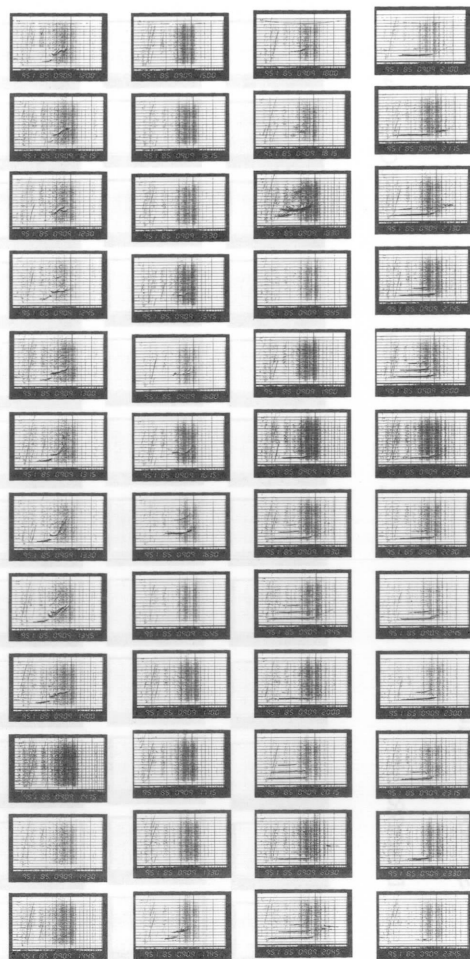
00:00-11:45



SYOWA STATION

IONOGRAM

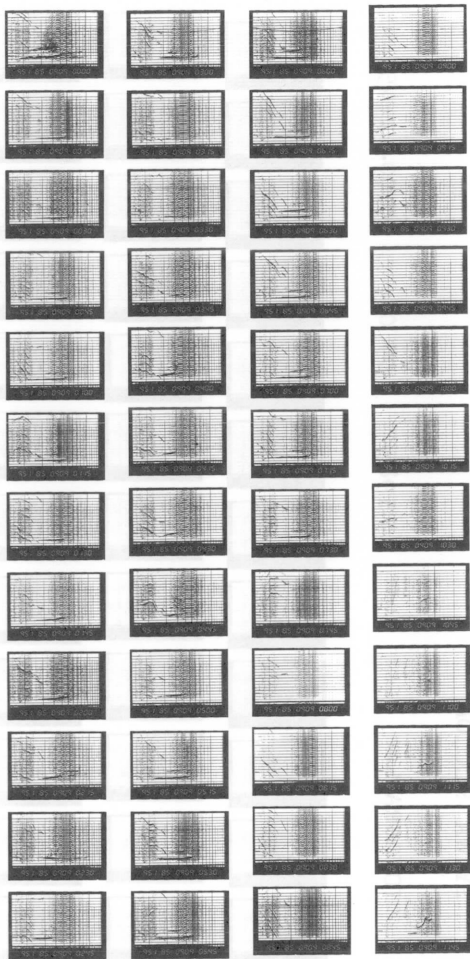
1985 09 09 12:00-23:45



SYOWA STATION

IONOGRAM

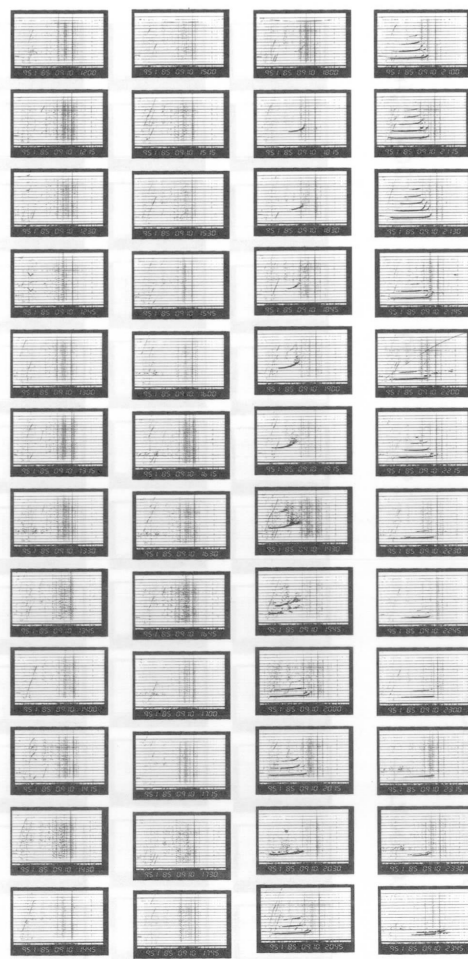
1985 09 09 00:00-11:45



SYOWA STATION

IONOGRAM

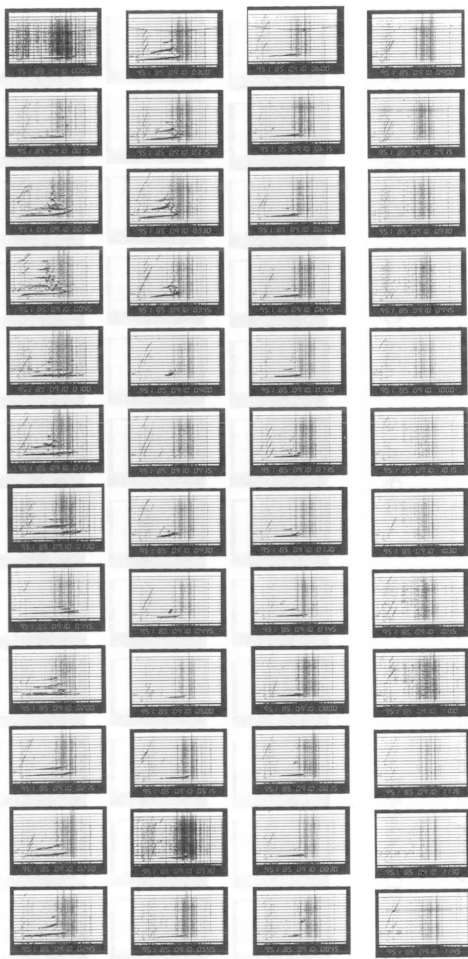
1985 09 10 12:00-23:45



SYOWA STATION

IONOGRAM

1985 09 10 00:00-11:45



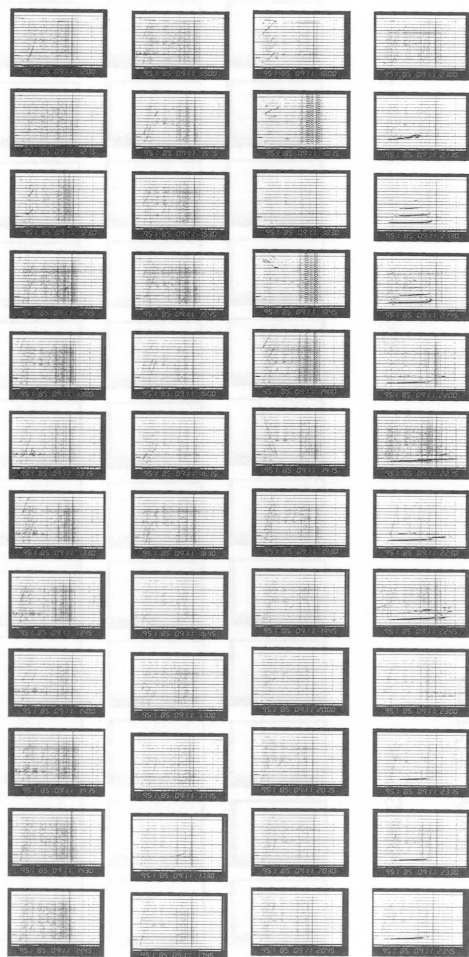
SYOWA STATION

IONOGRAM

1985

09 11

12:00-23:45



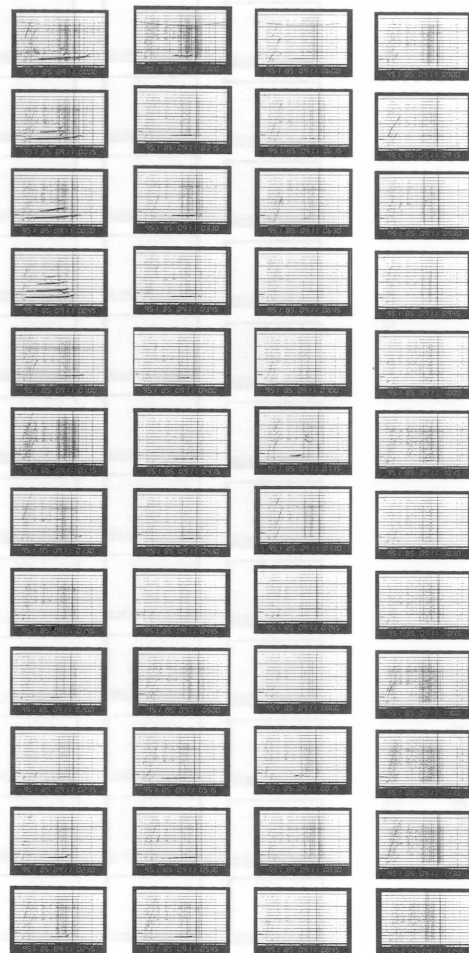
SYOWA STATION

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1985

09 11

00:00-11:45



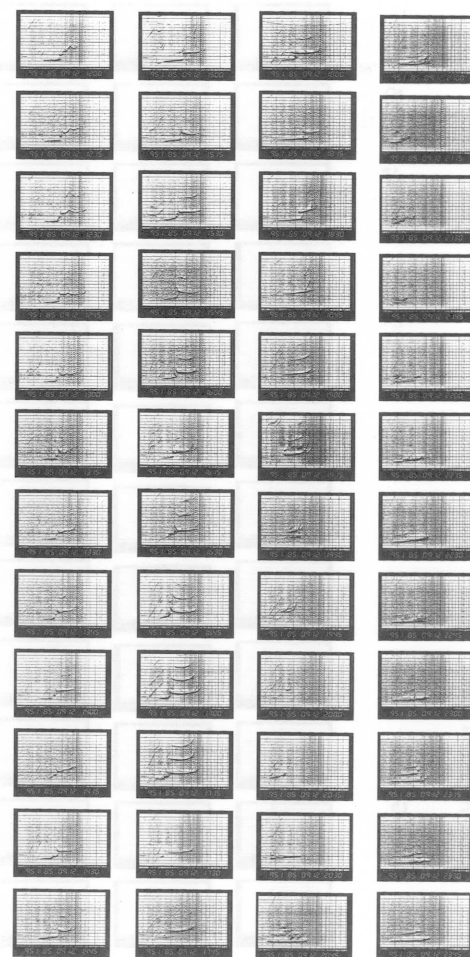
SYOWA STATION

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1985

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12:00-23:45



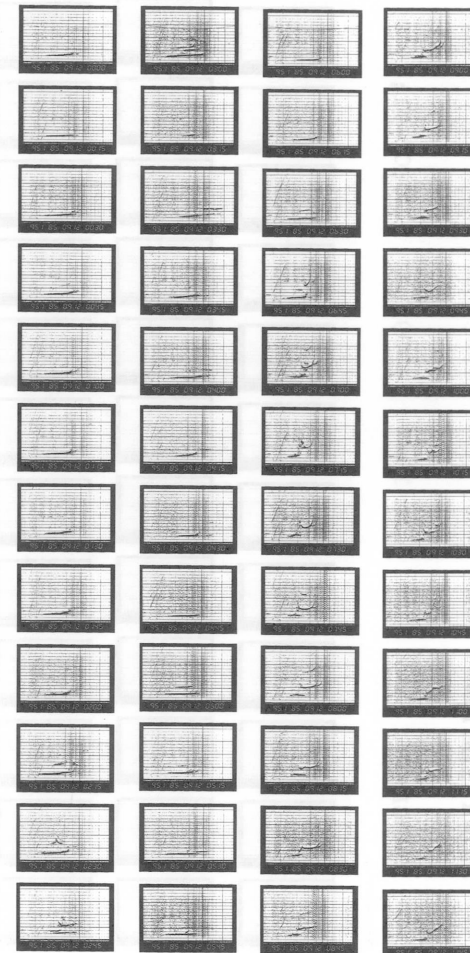
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1985

09 12

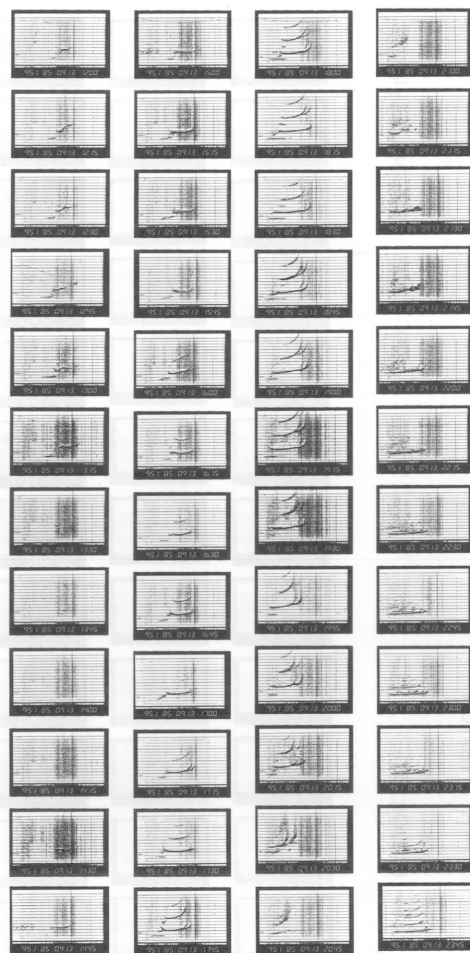
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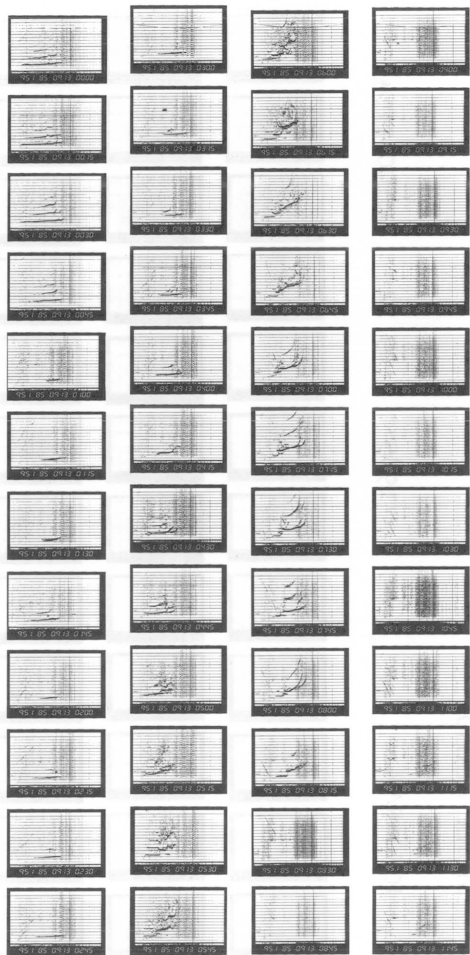
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1985 09 13 12:00-23:45



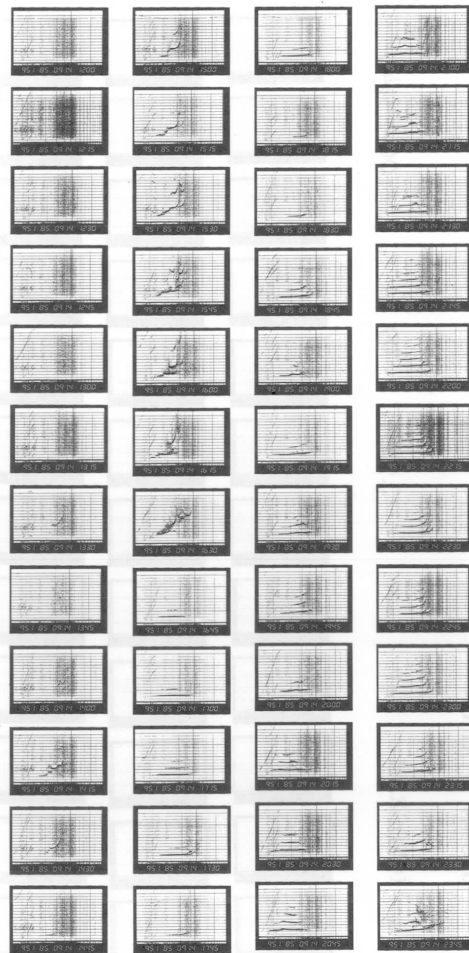
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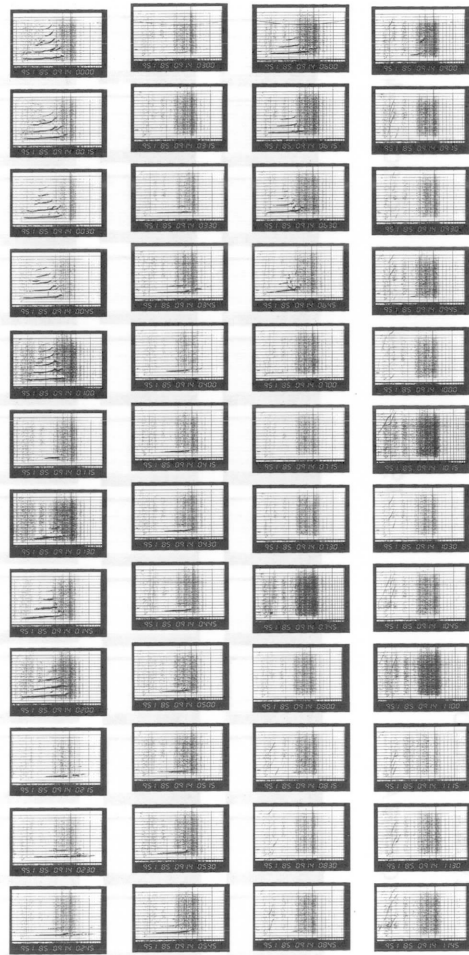
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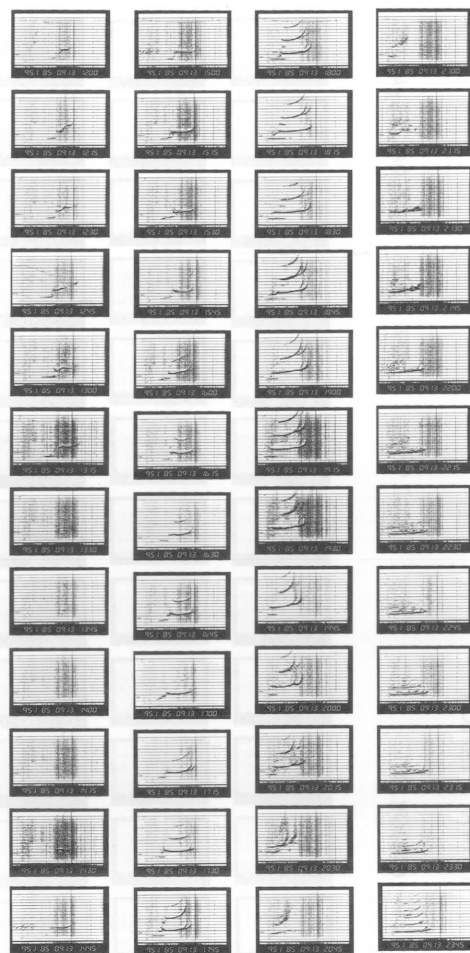
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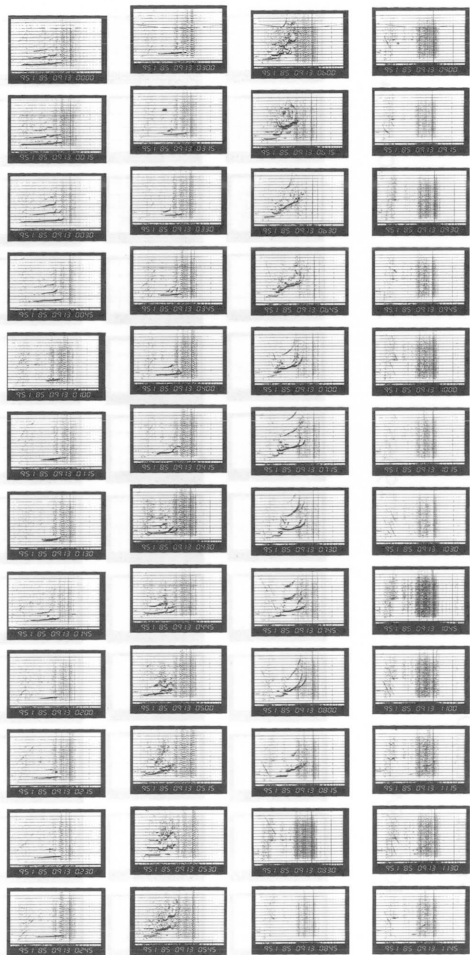
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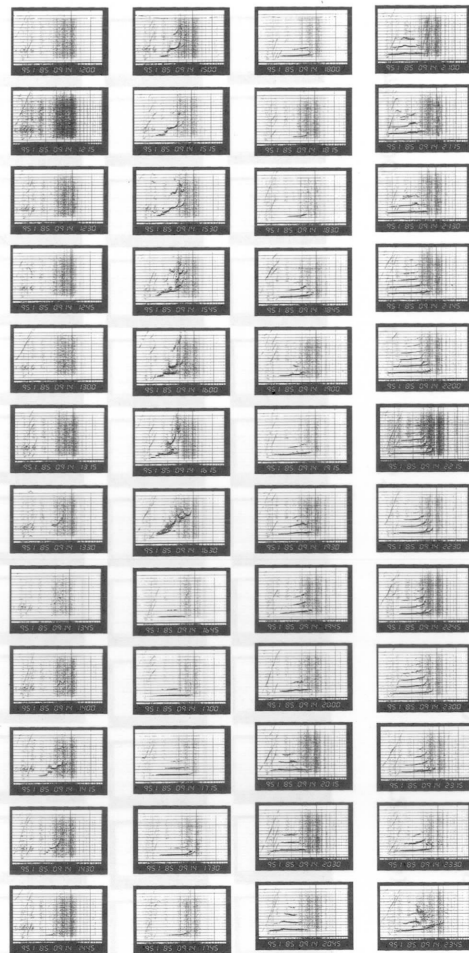
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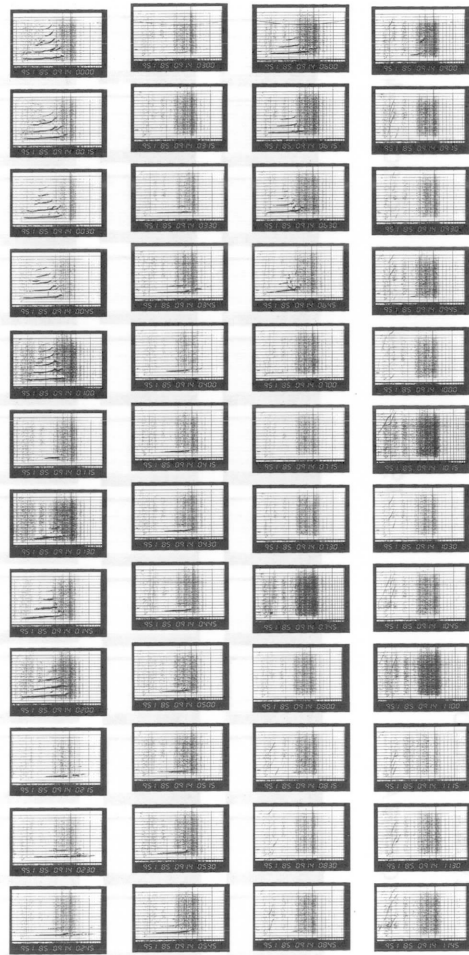
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1985 09 14 12:00-23:45



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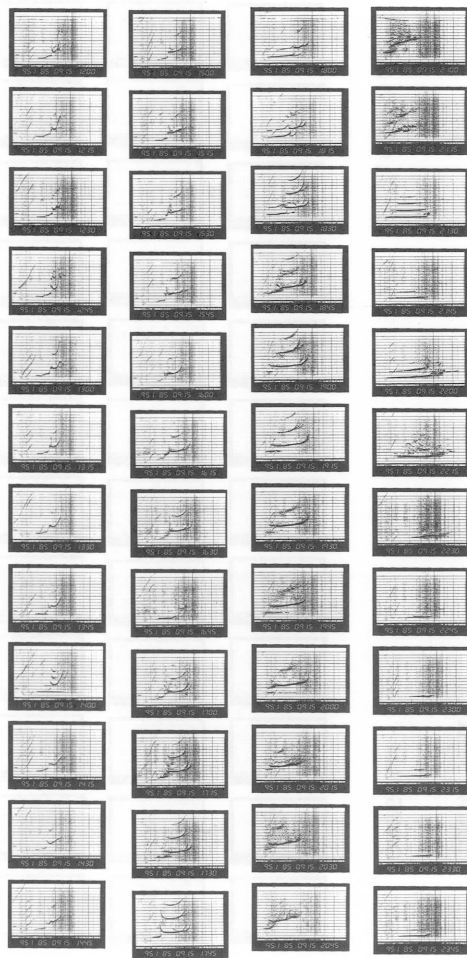
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12:00-23:45



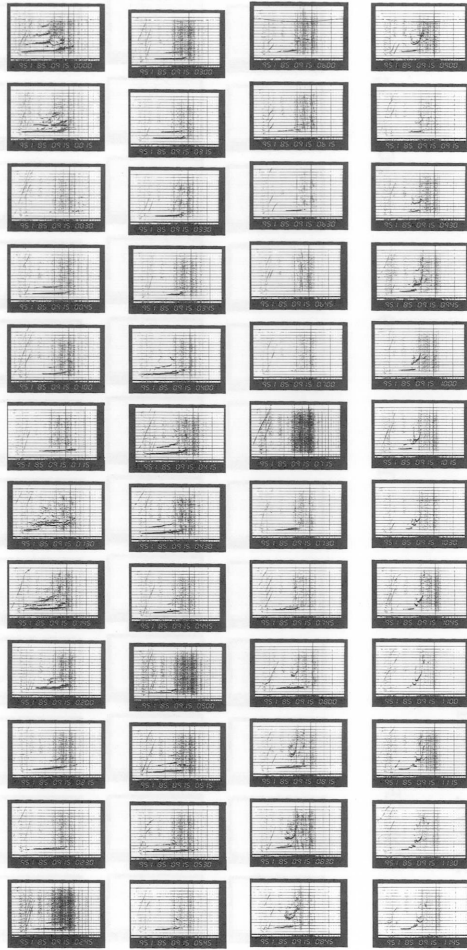
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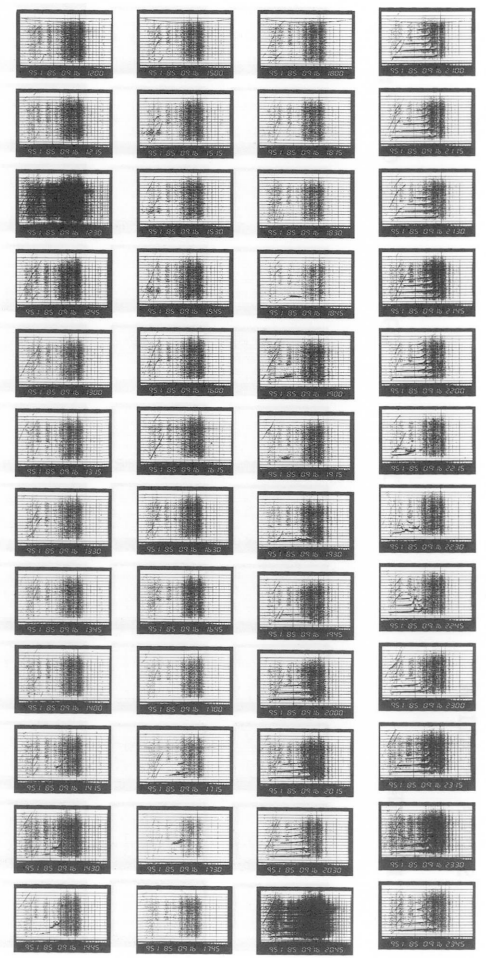
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12:00-23:45



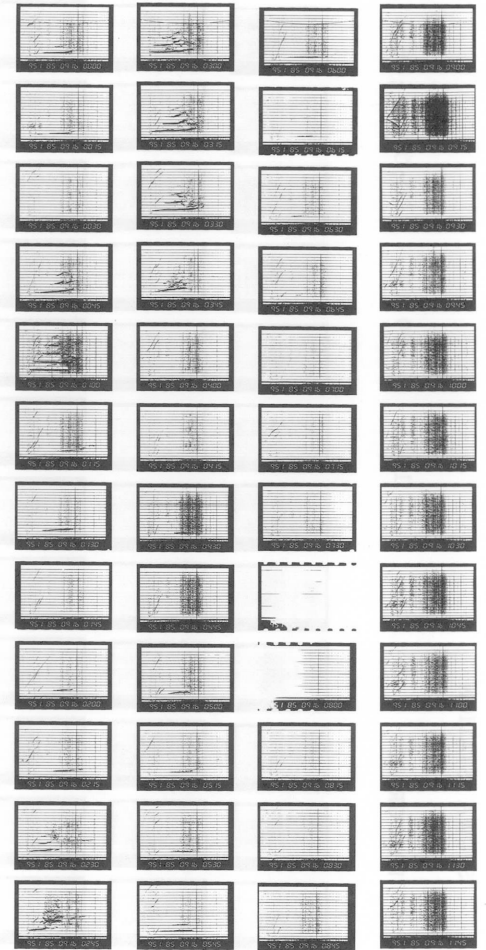
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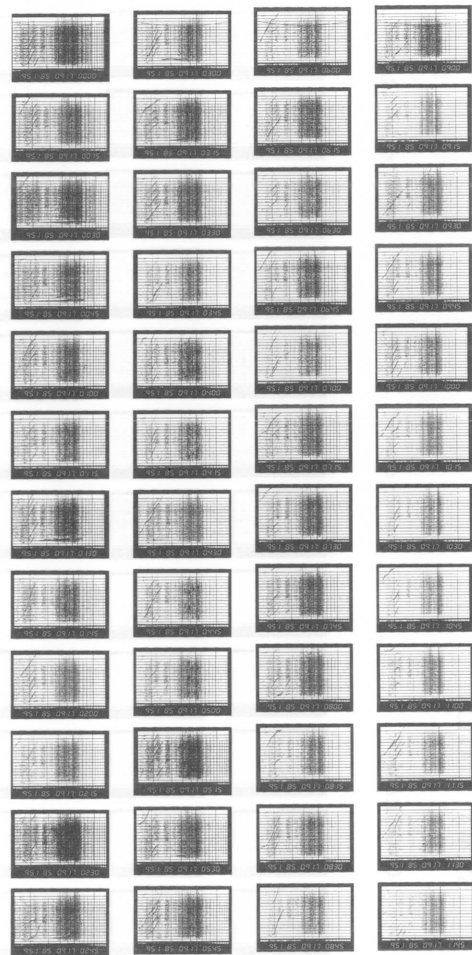
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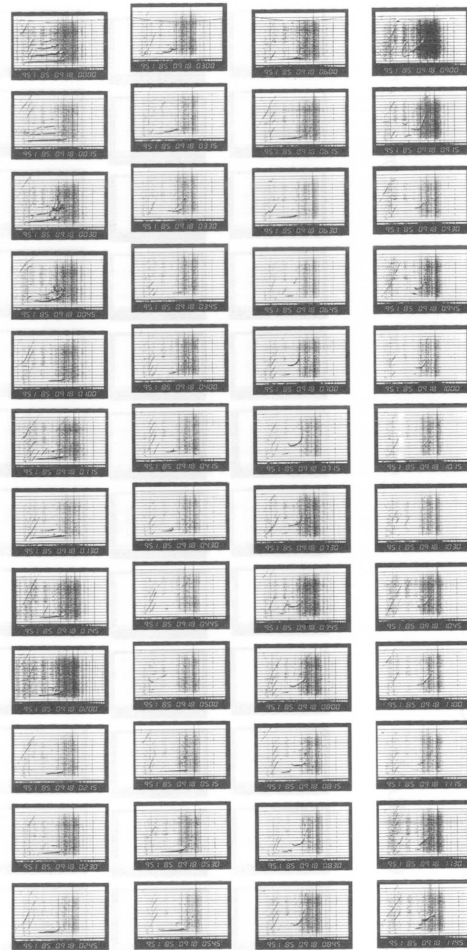
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SYOWA STATION

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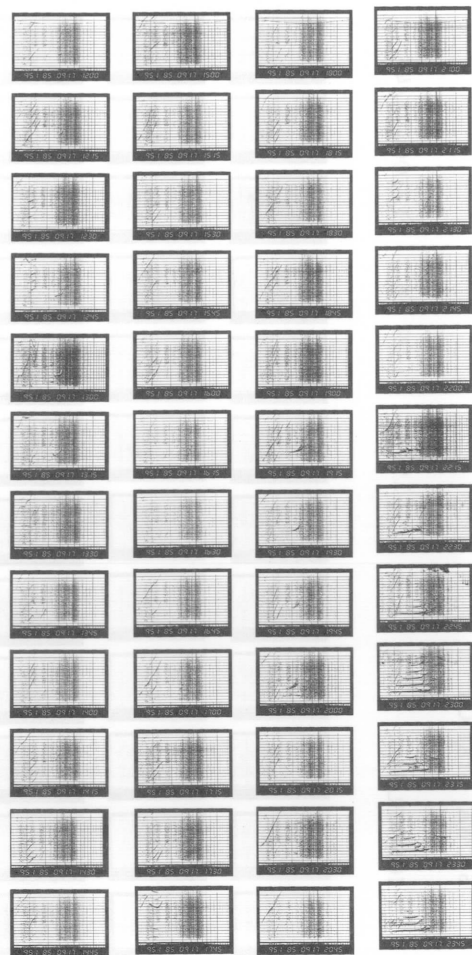
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SYOWA STATION

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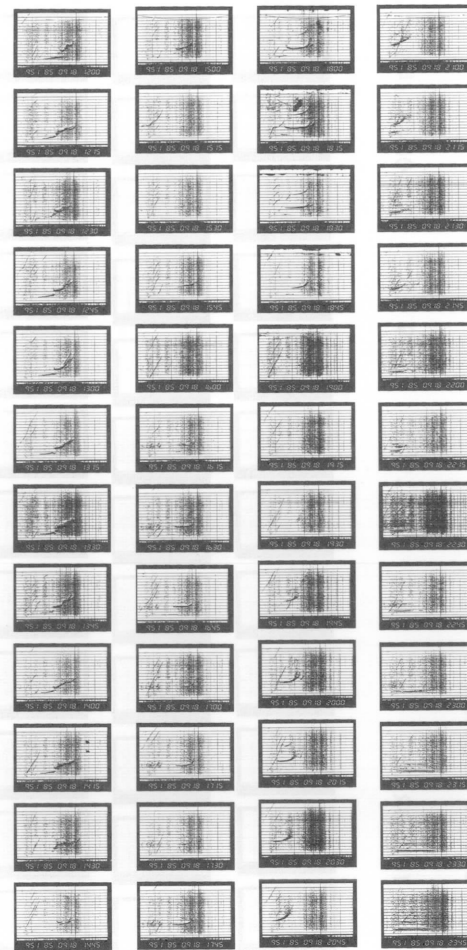
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SYOWA STATION

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1985 09 18 12:00-23:45



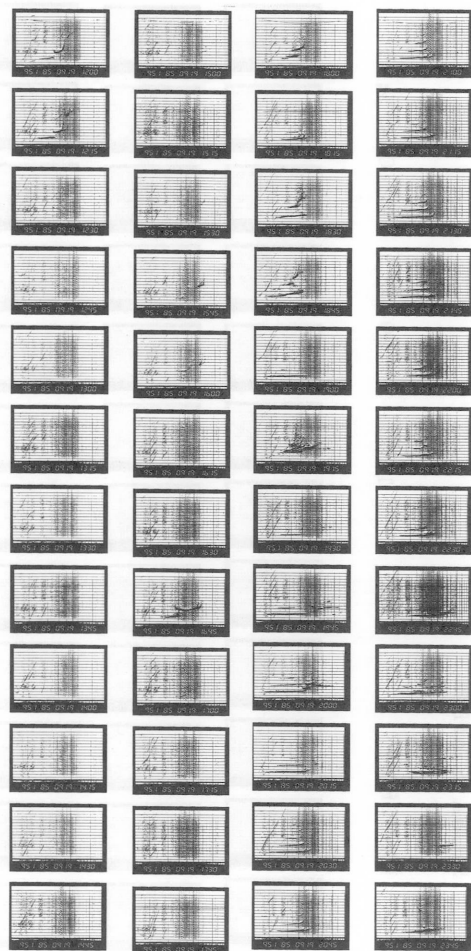
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12:00-23:45



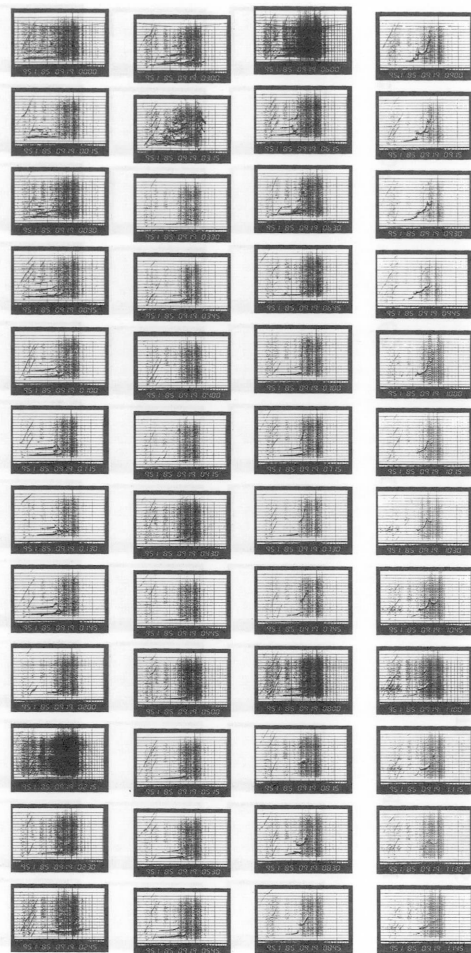
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1985

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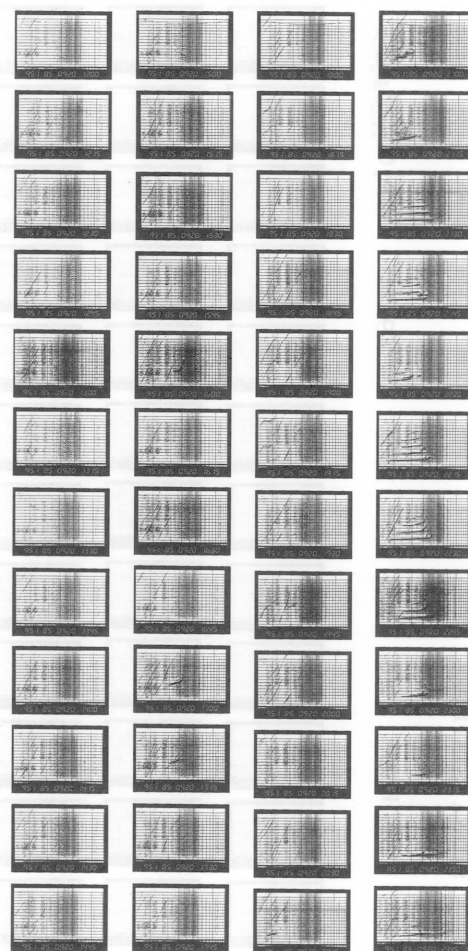
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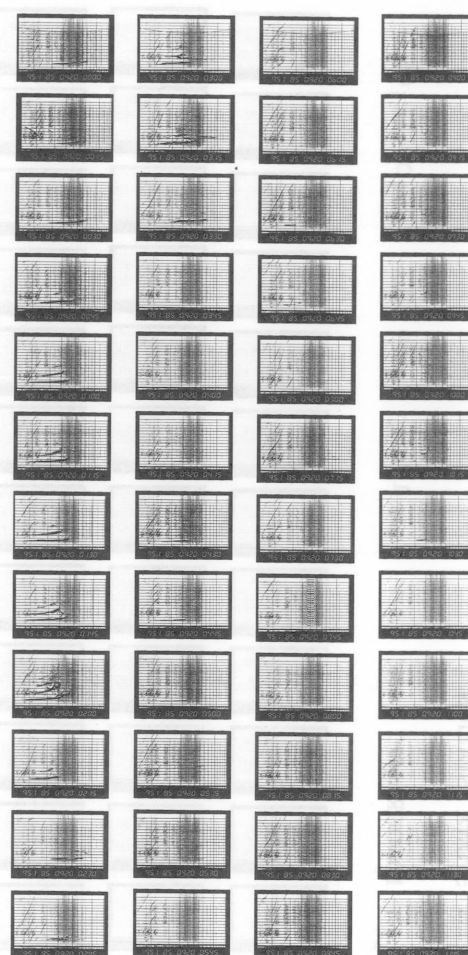
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09 20

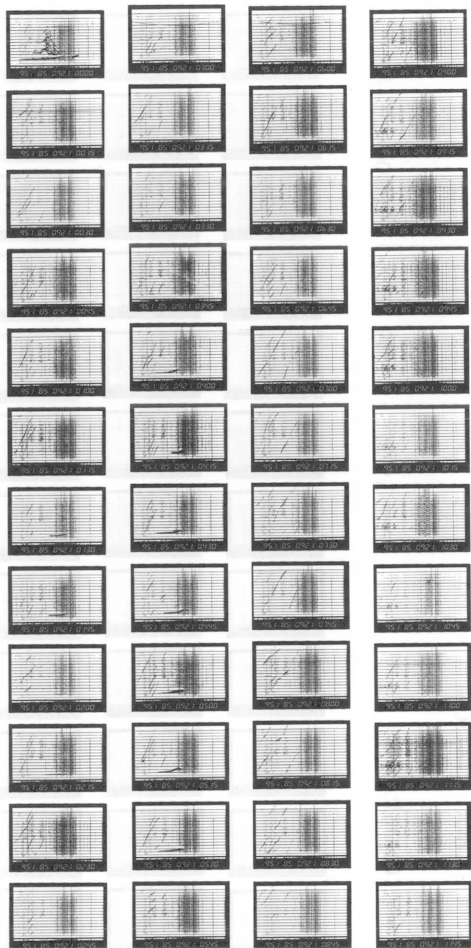
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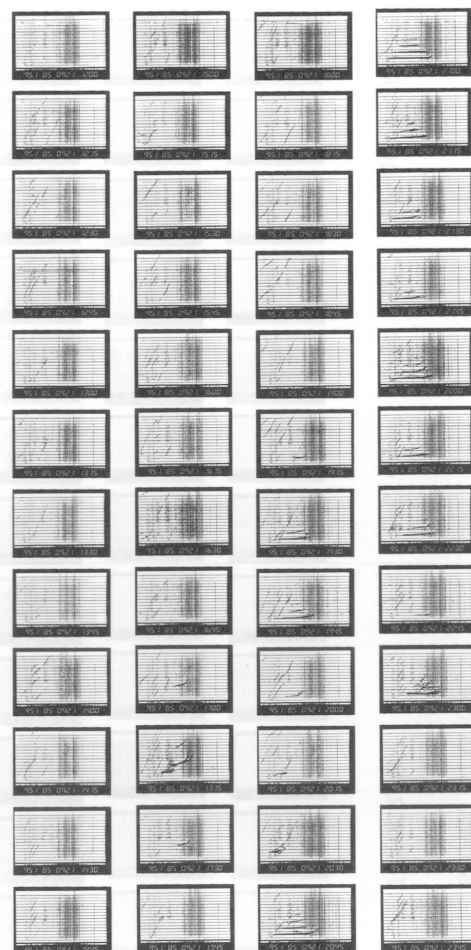
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1985 09 21 12:00-23:45



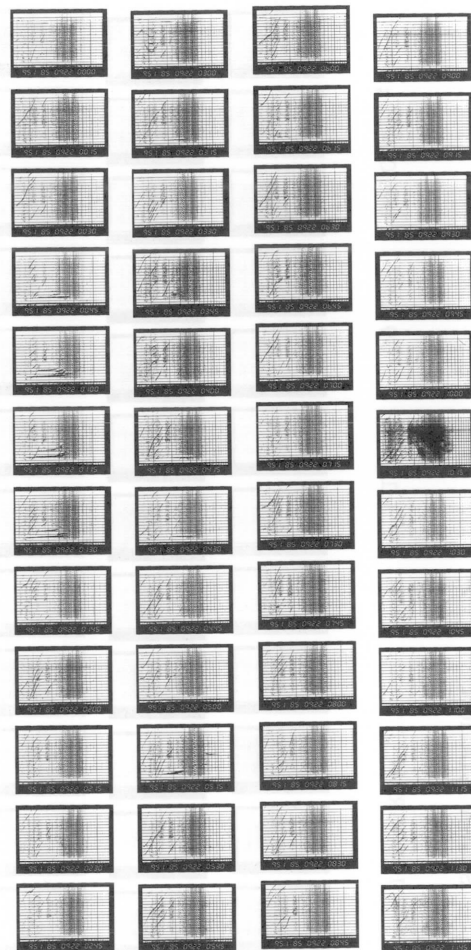
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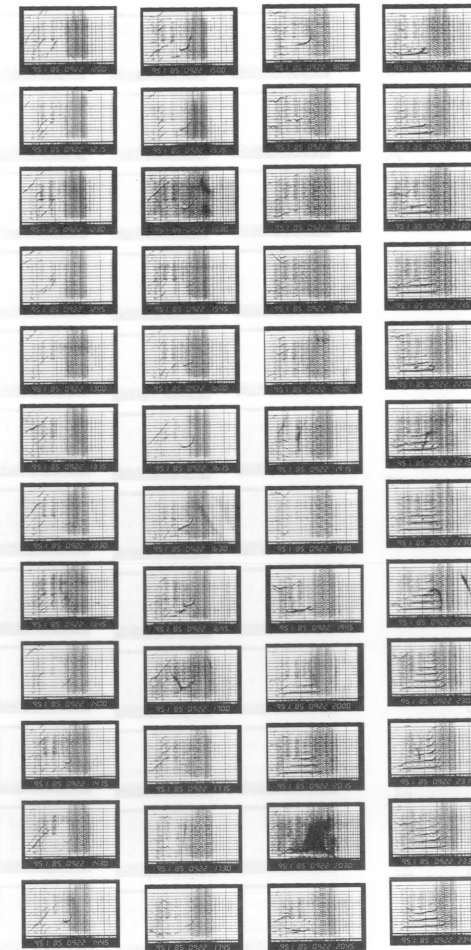
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1985 09 22 12:00-23:45



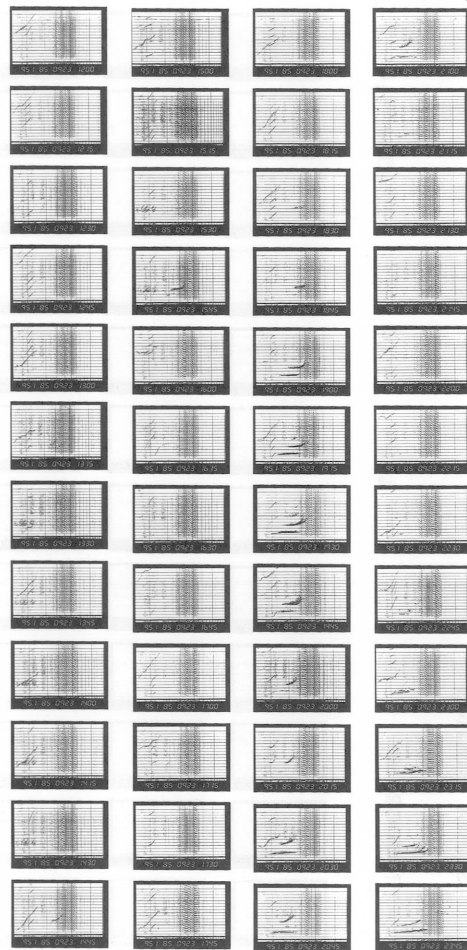
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1985

09 23

12:00-23:45



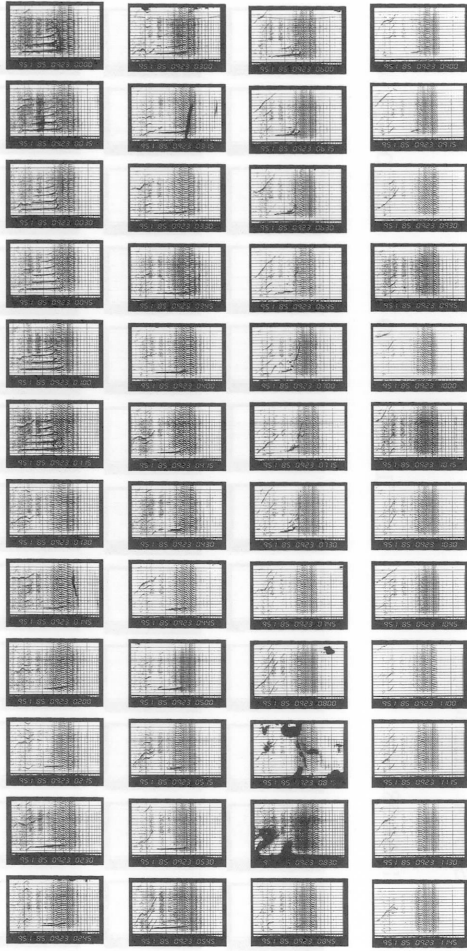
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00:00-11:45



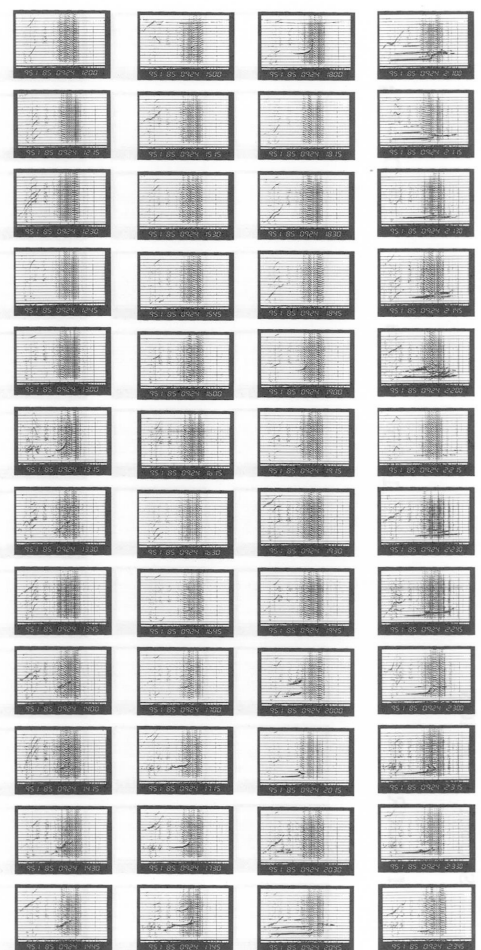
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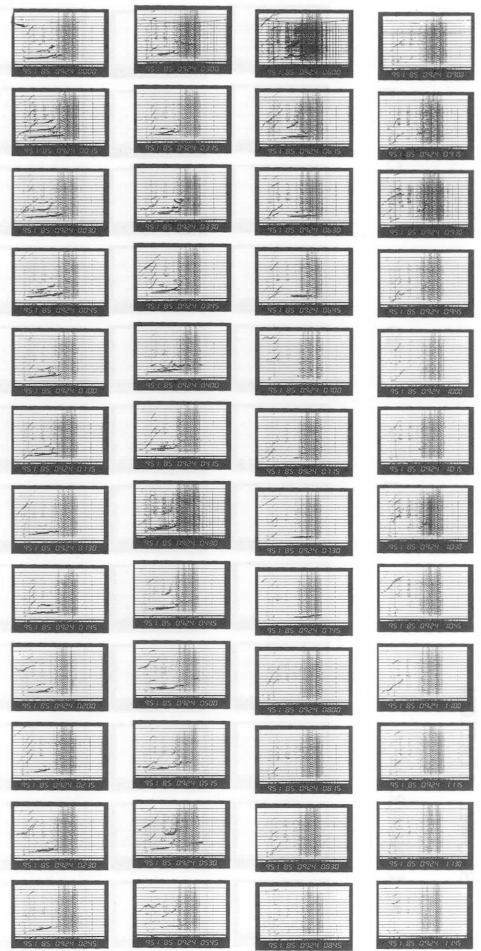
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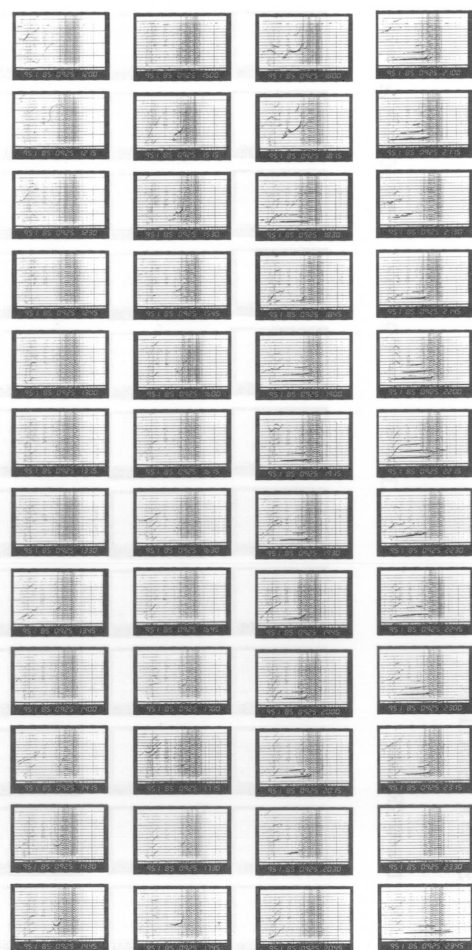
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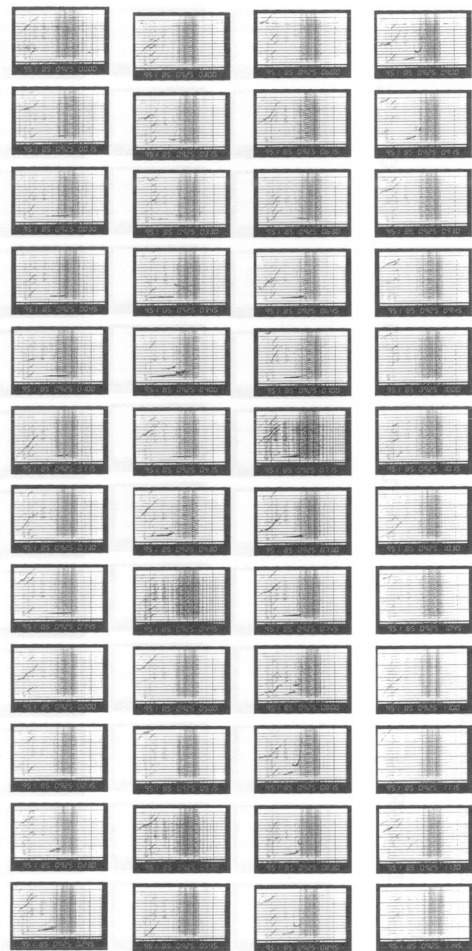
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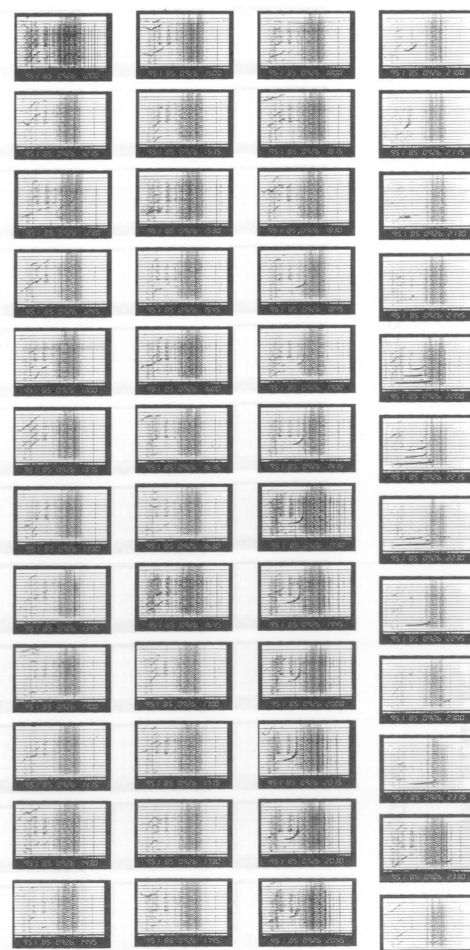
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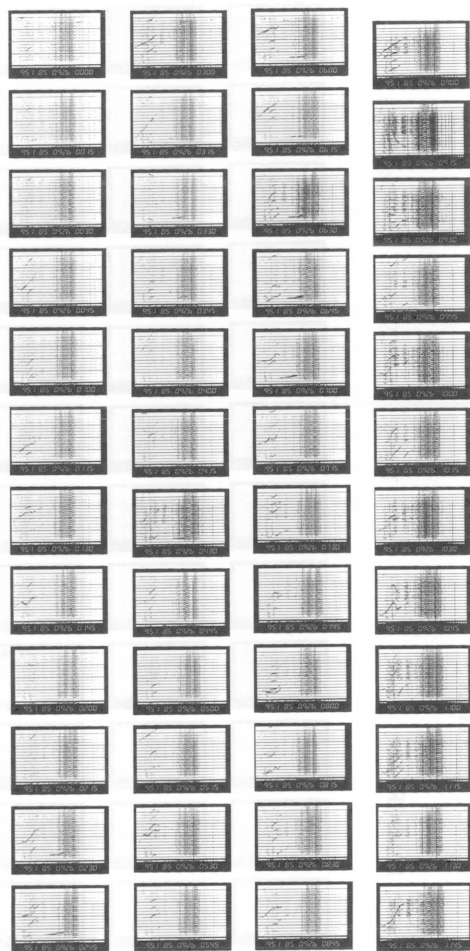
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1985 09 26 00:00-11:45



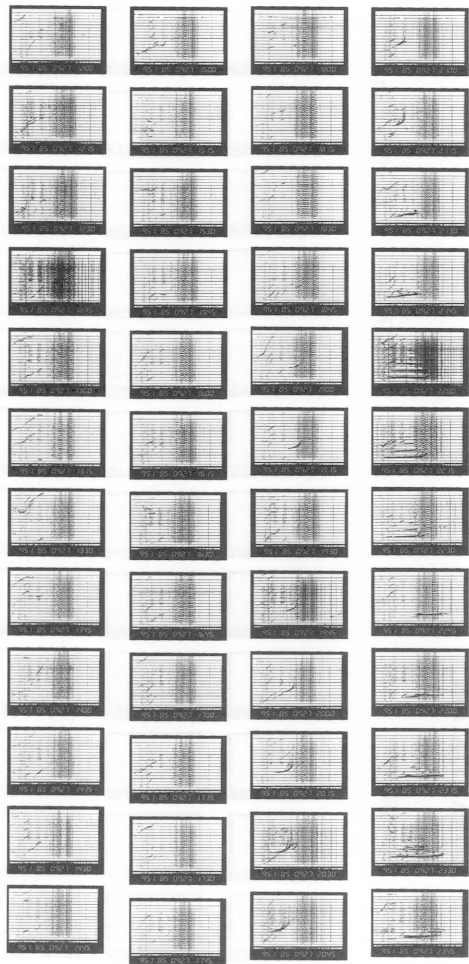
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12:00-23:45



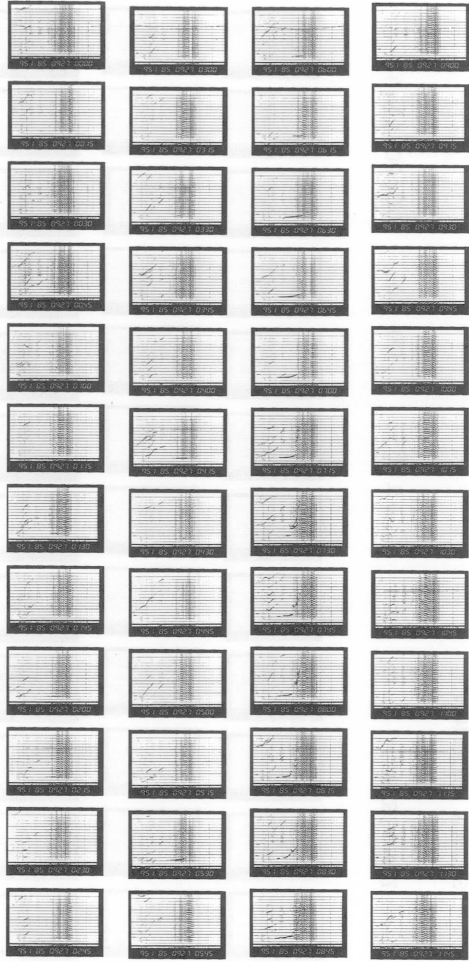
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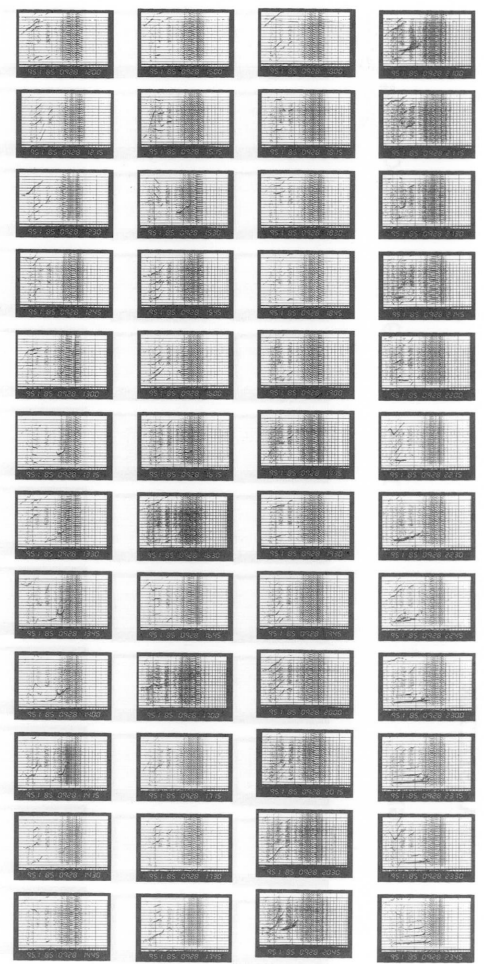
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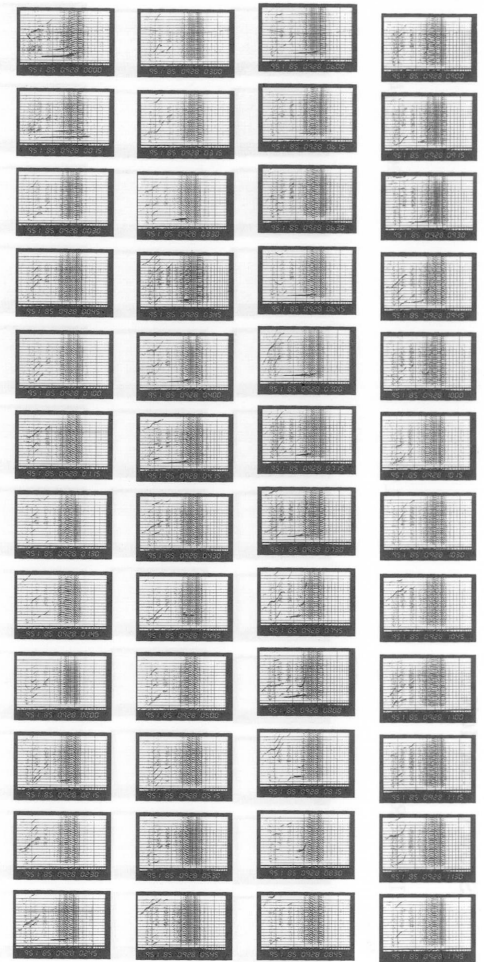
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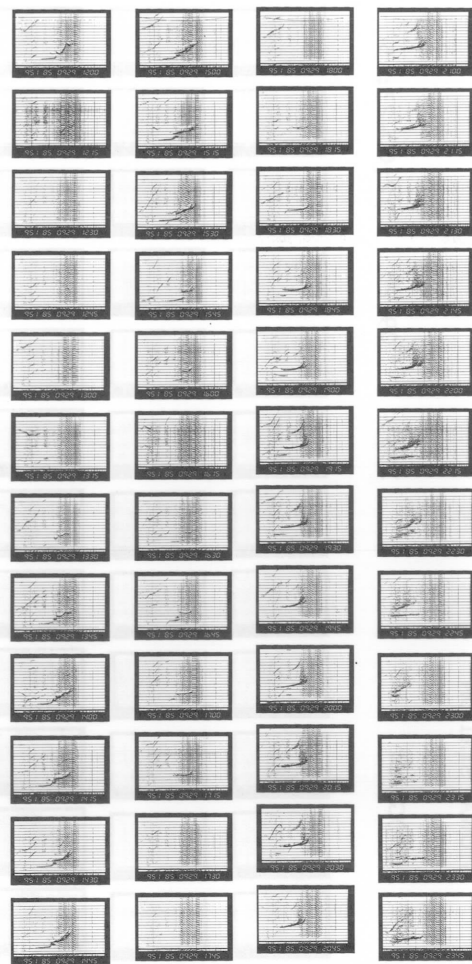
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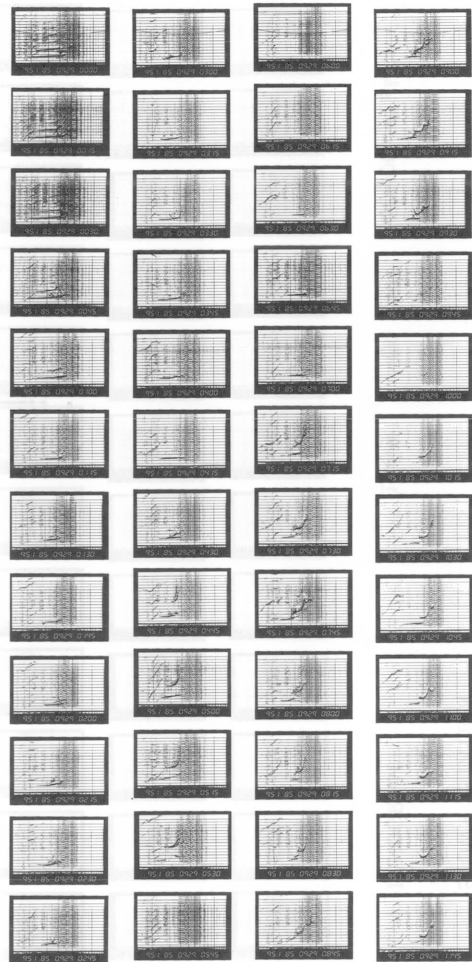
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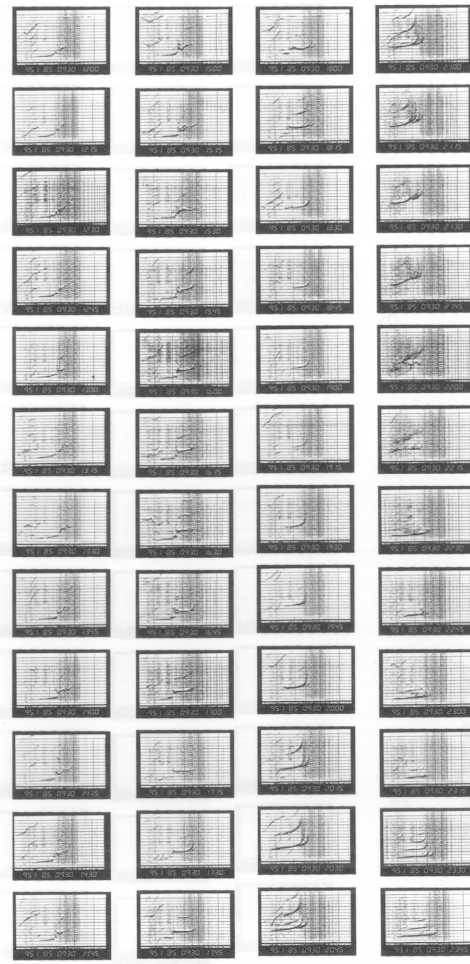
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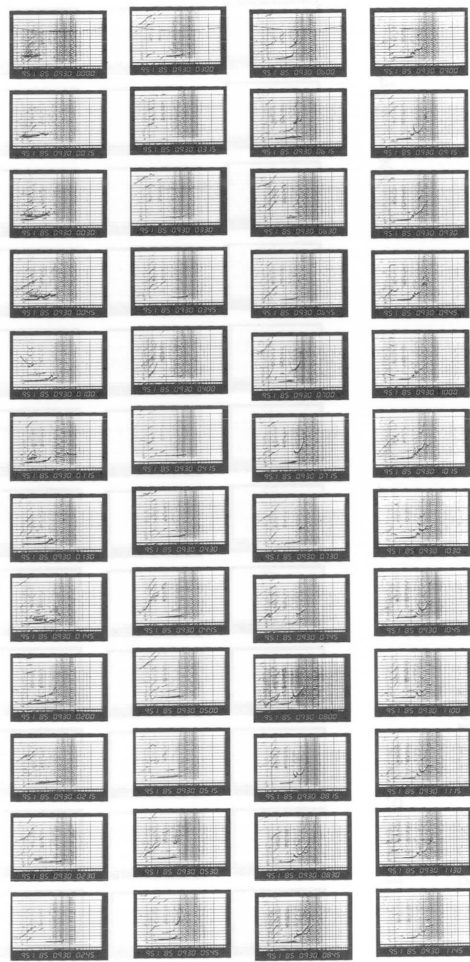
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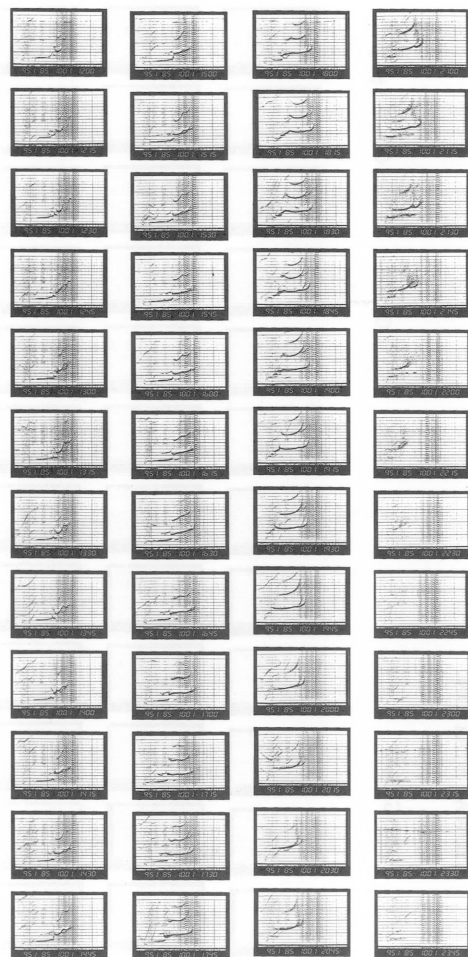
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SYOWA STATION

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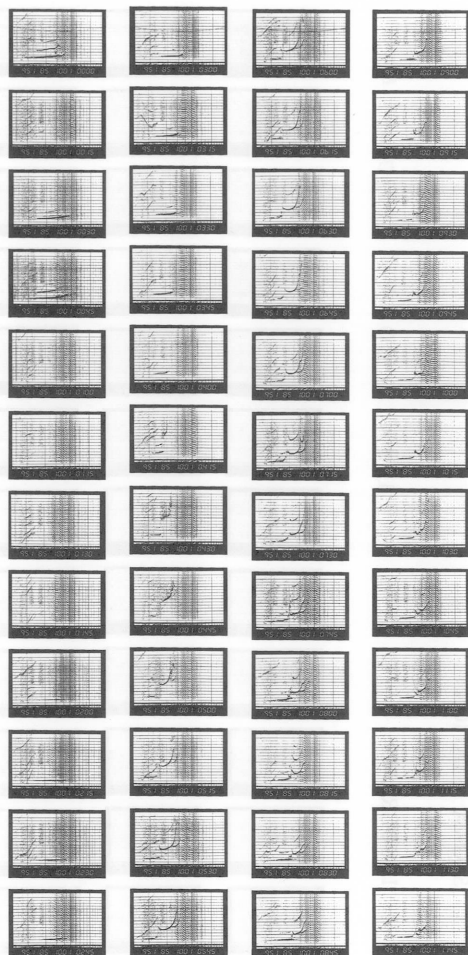
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SYOWA STATION

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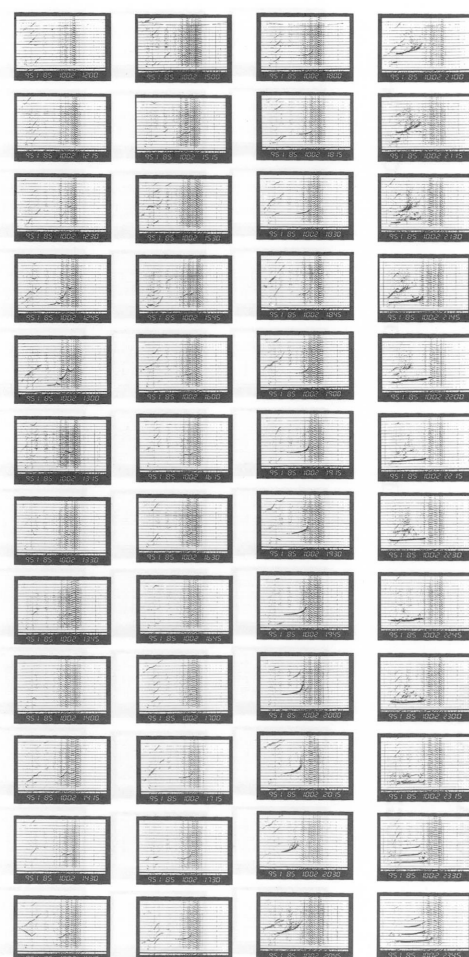
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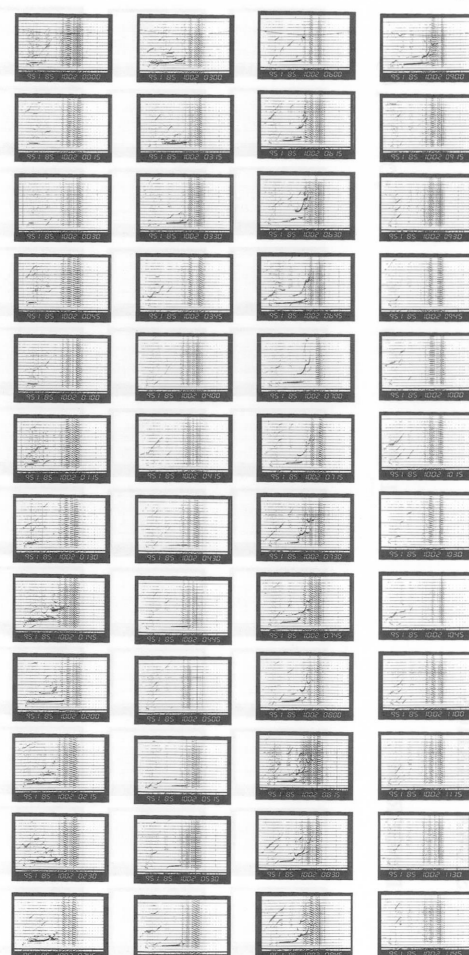
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SYOWA STATION

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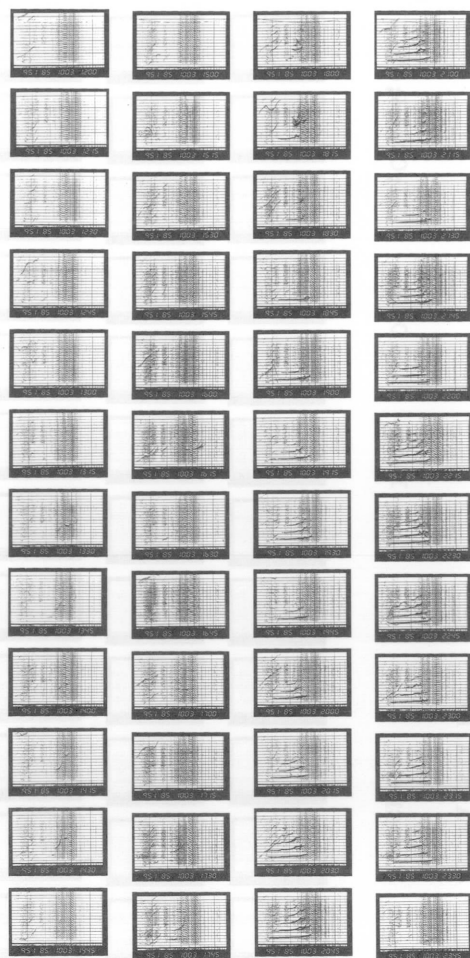
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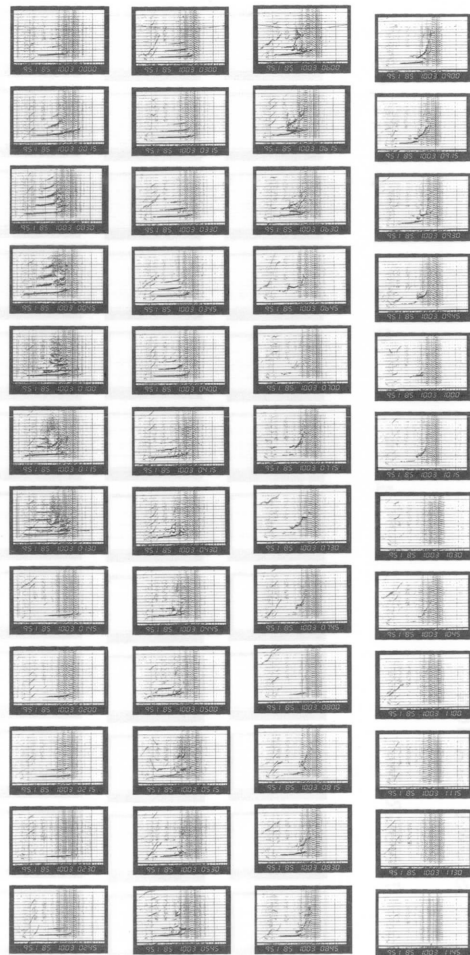
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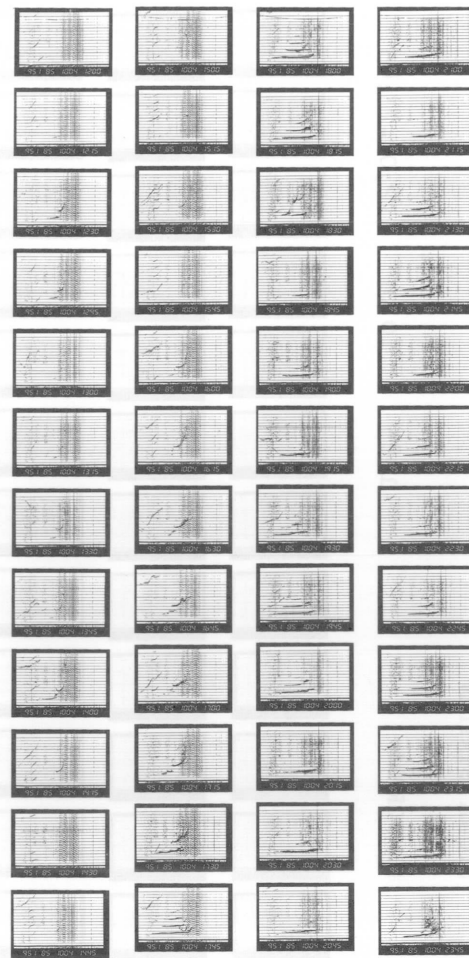
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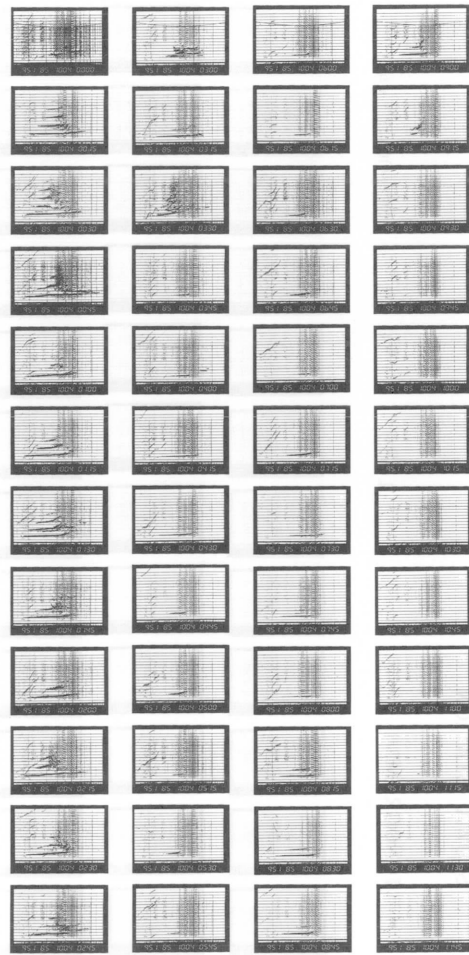
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1985 10 04 00:00-11:45



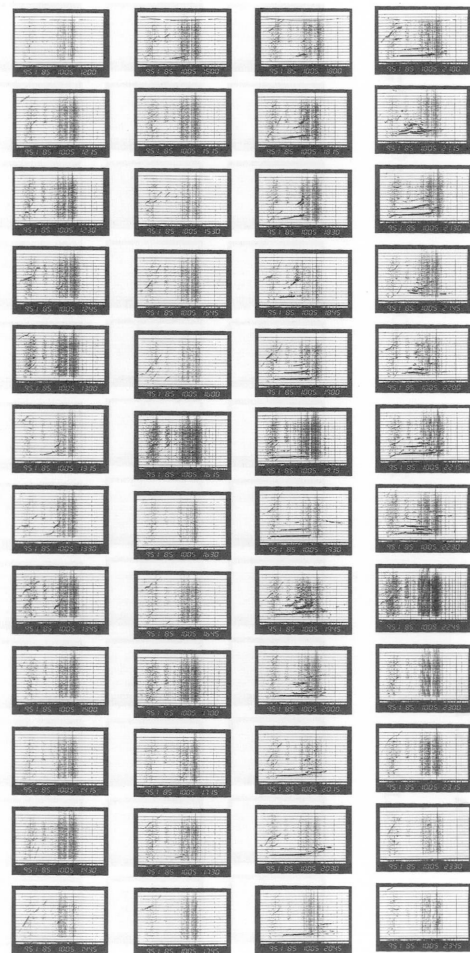
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1985

10 05

12:00-23:45



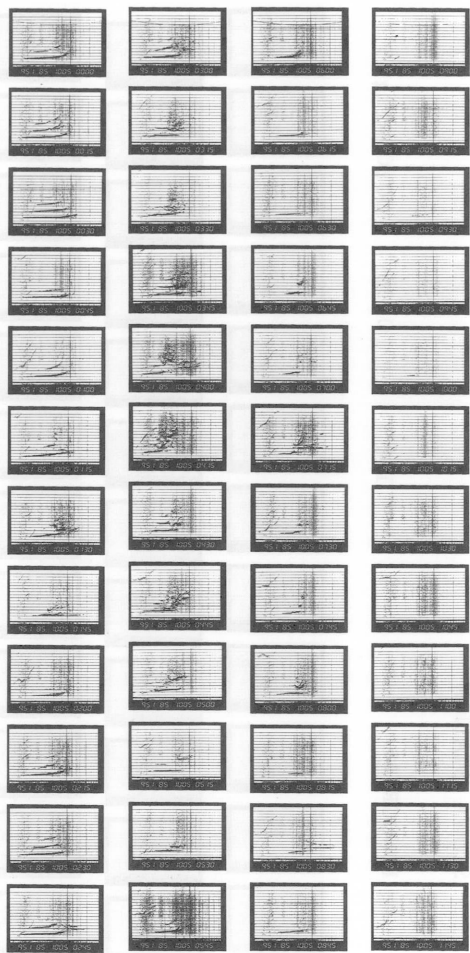
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10 05

00:00-11:45



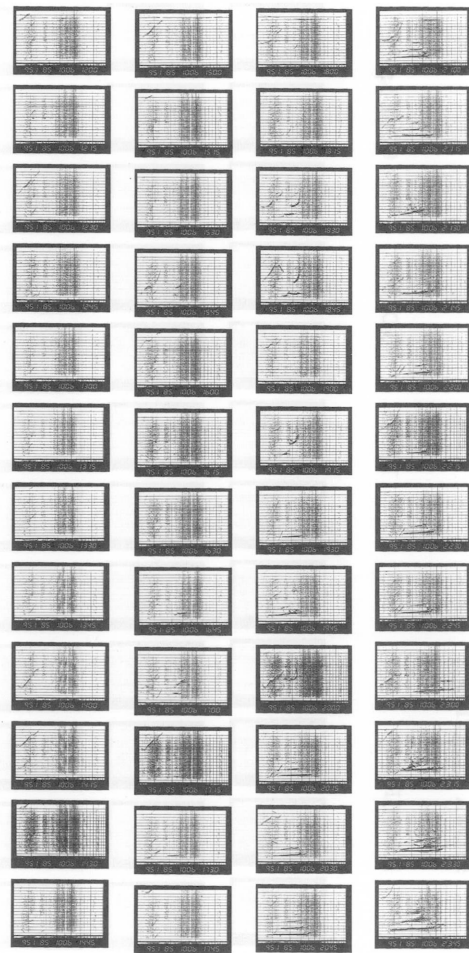
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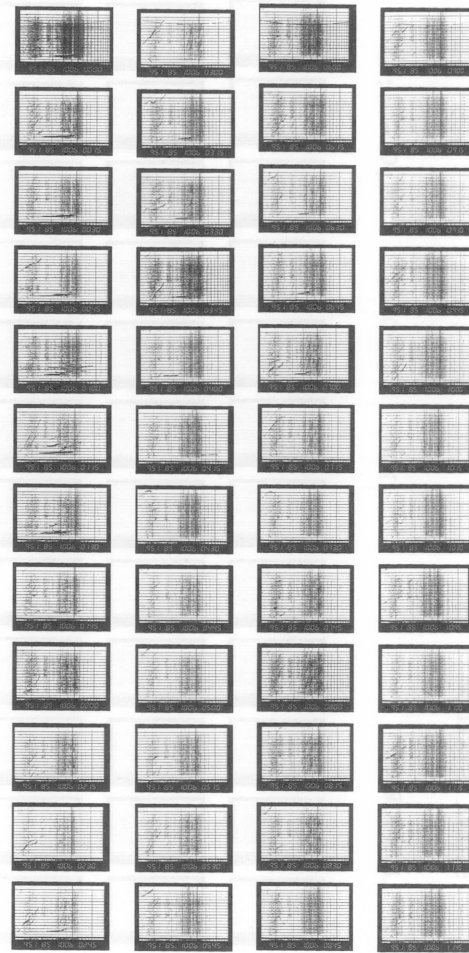
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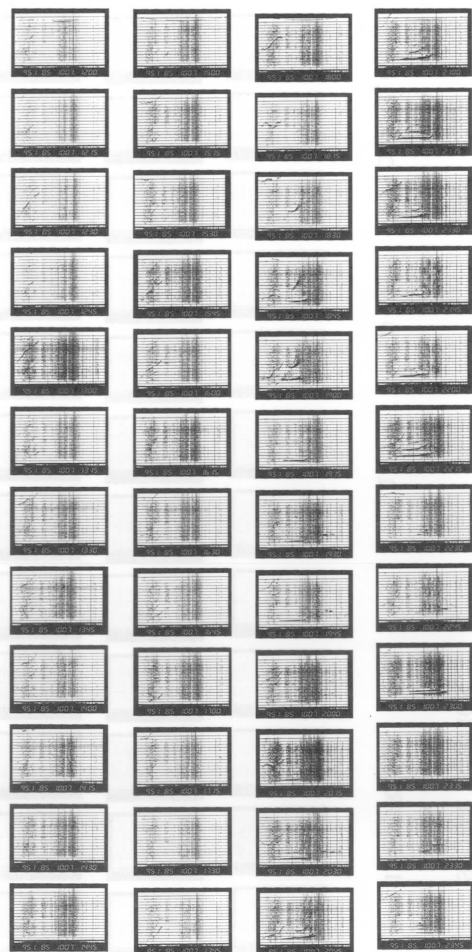
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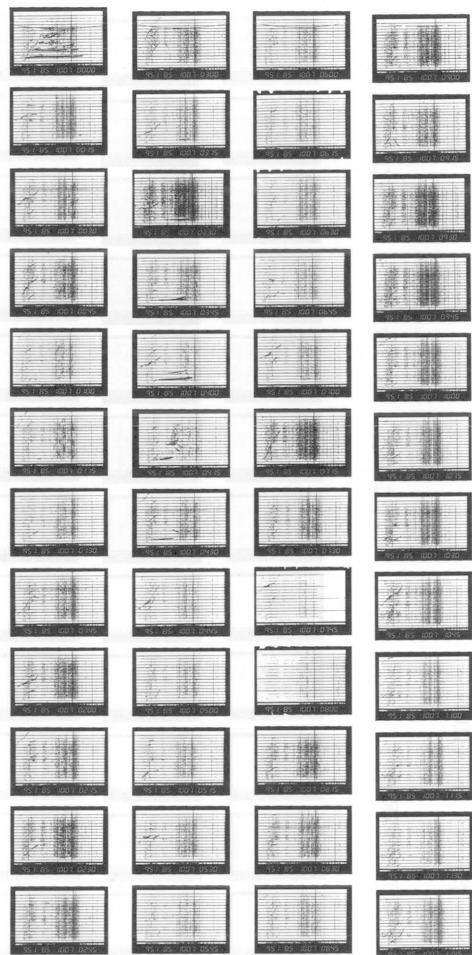
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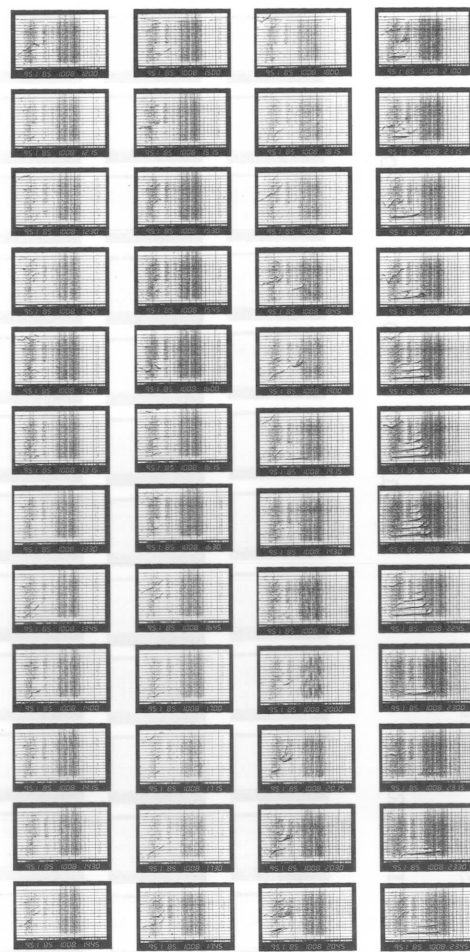
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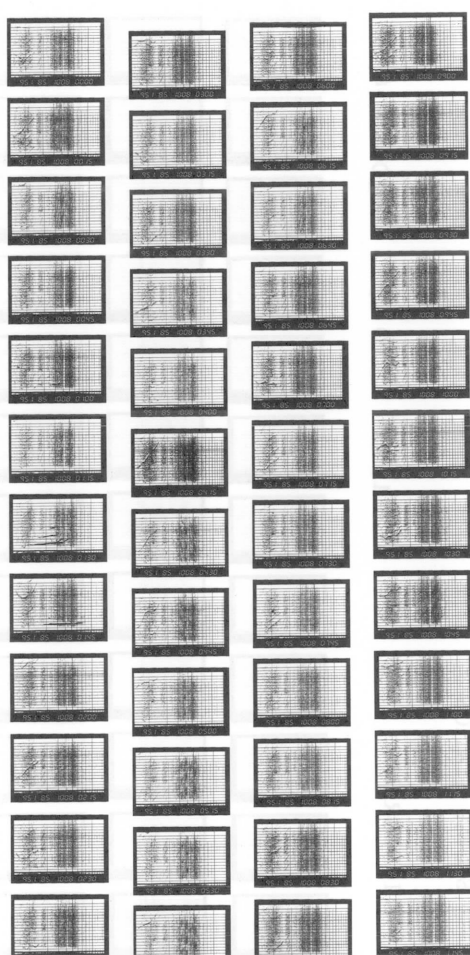
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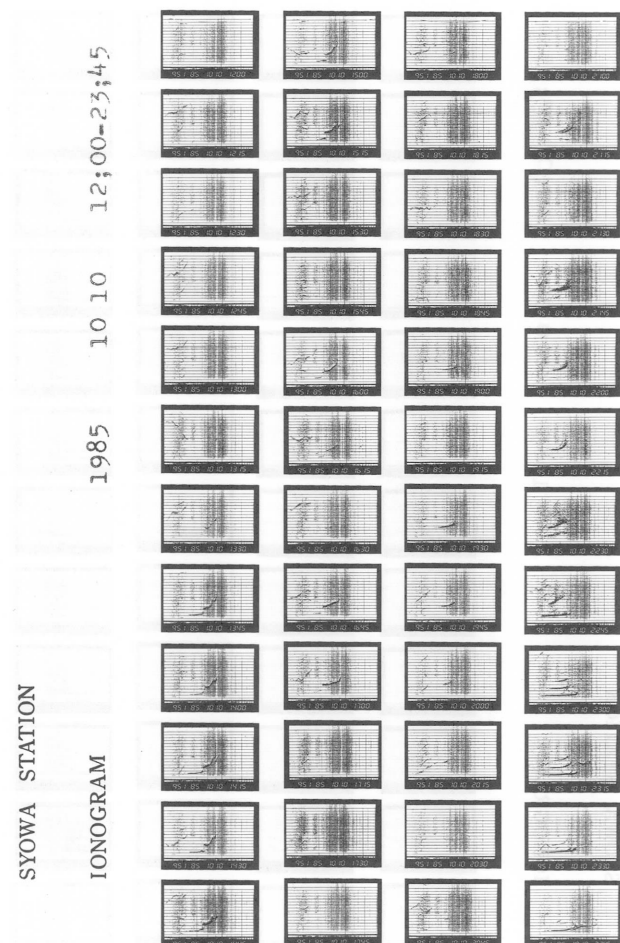
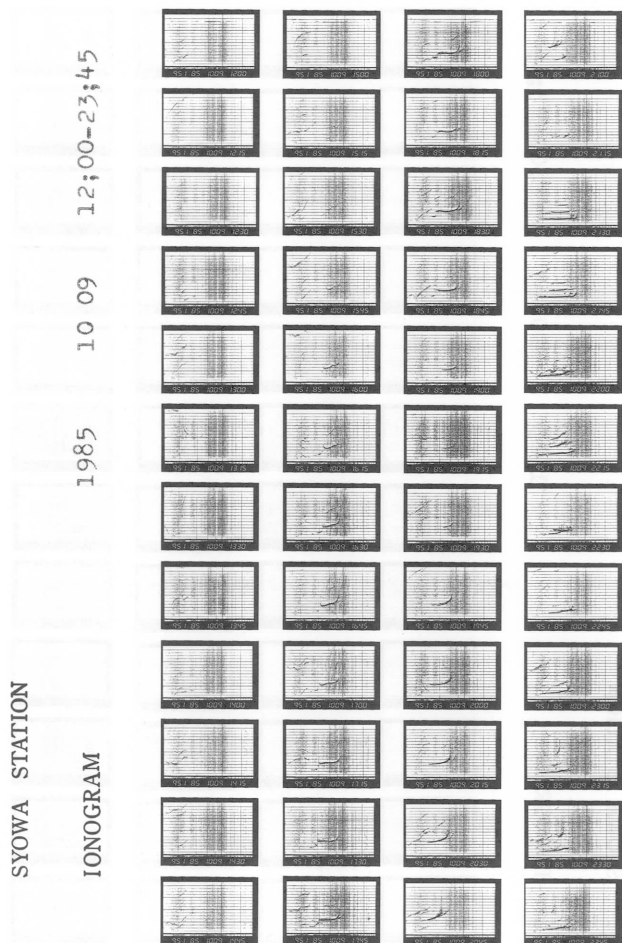
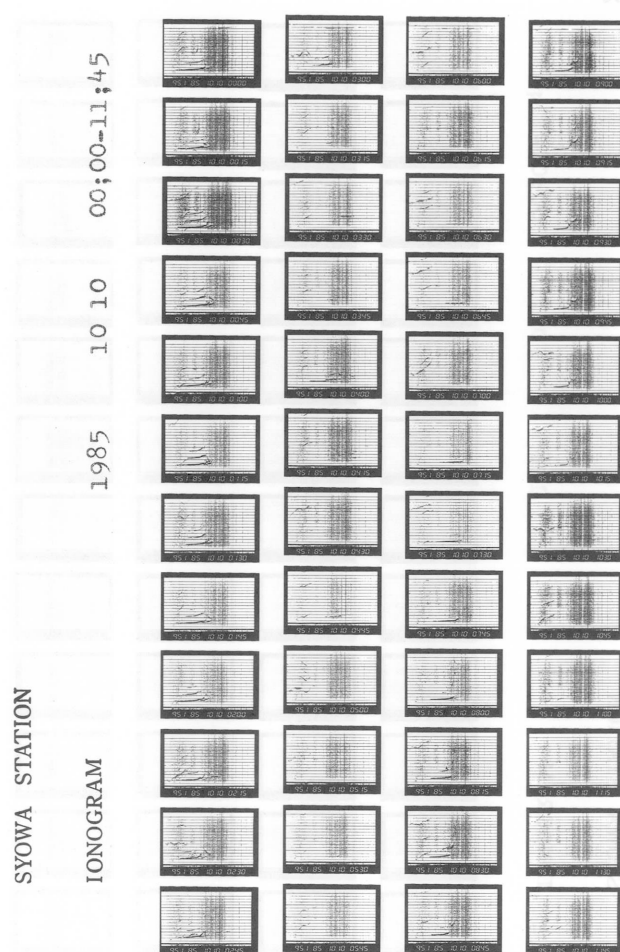
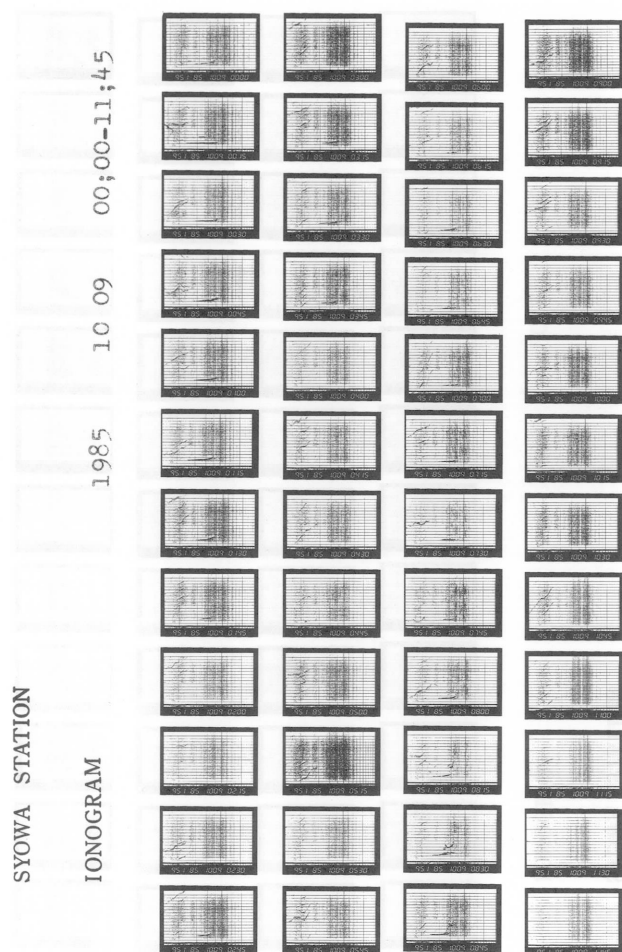
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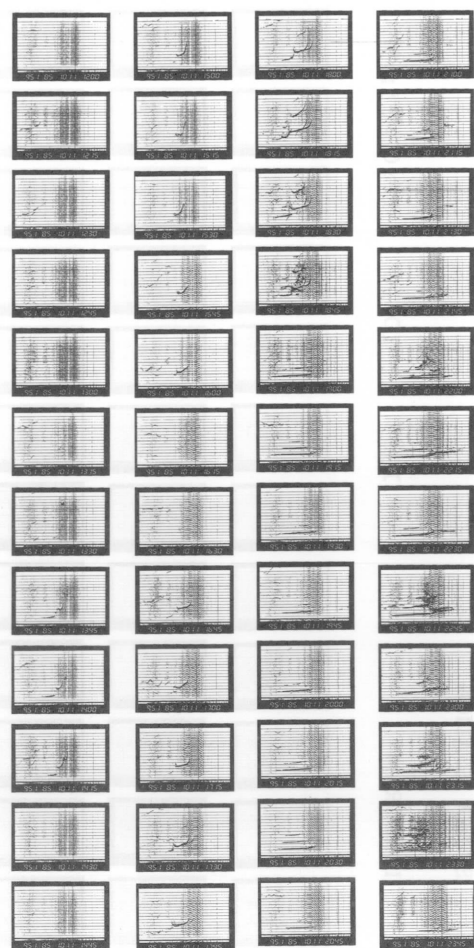




SYOWA STATION

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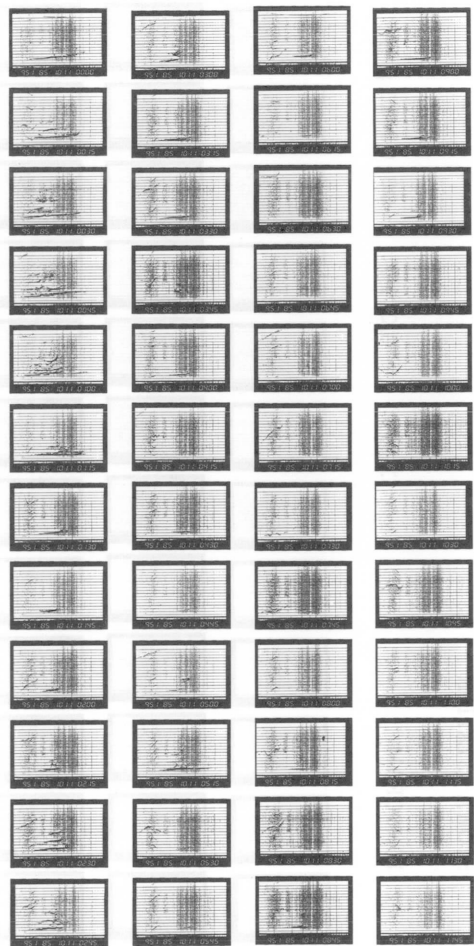
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SYOWA STATION

IONOGRAM

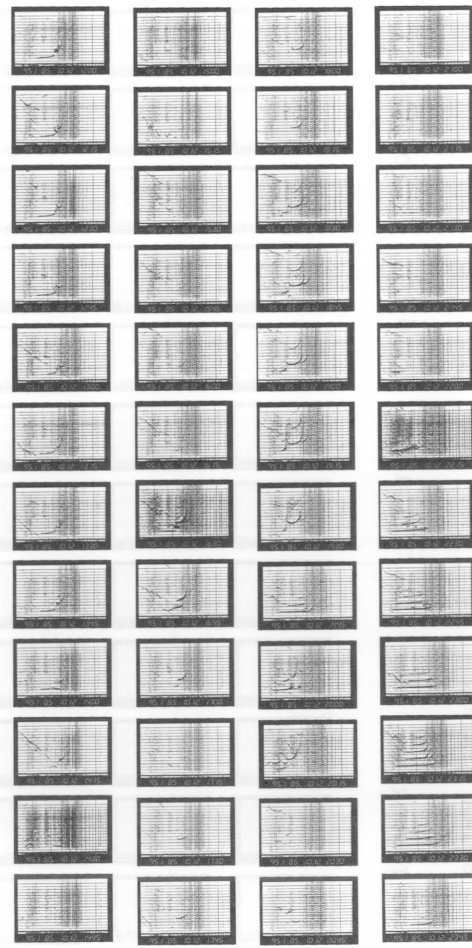
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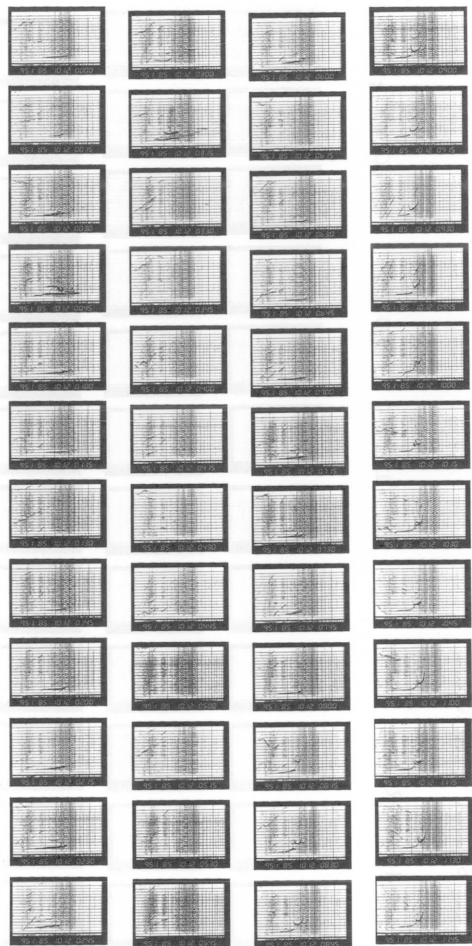
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SYOWA STATION

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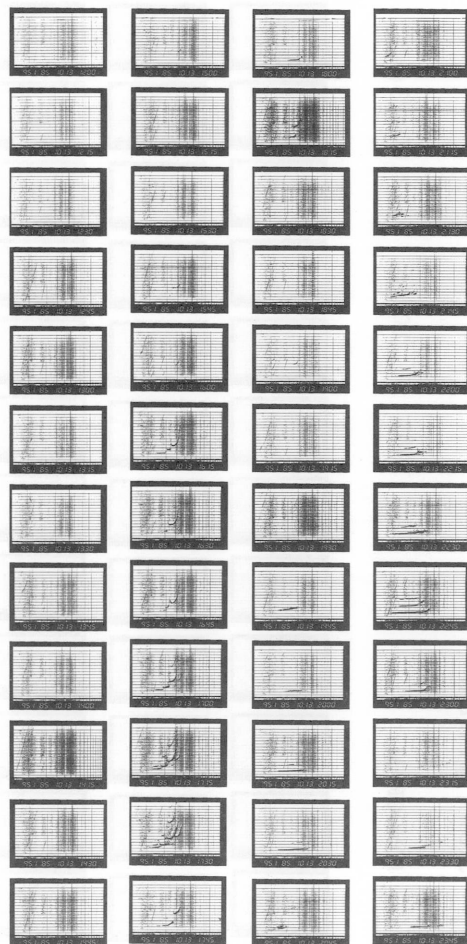
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12:00-23:45



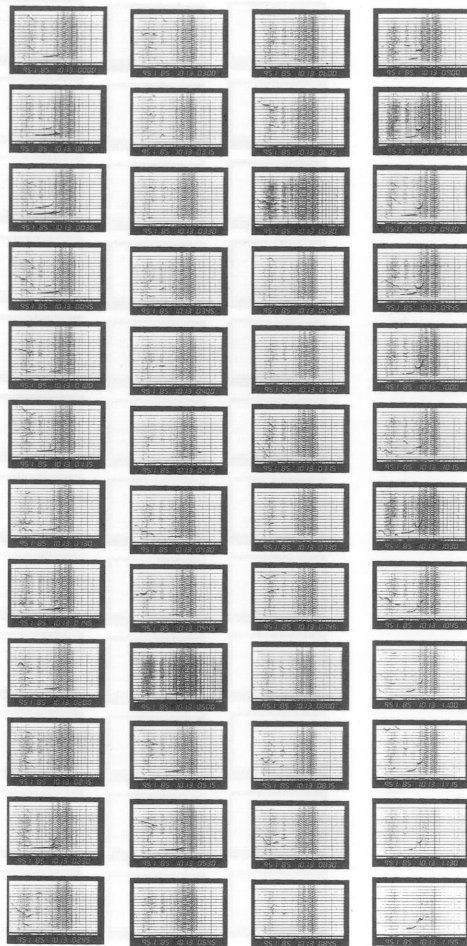
SYOWA STATION

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00:00-11:45



SYOWA STATION

IONOGRAM

1985

10 14

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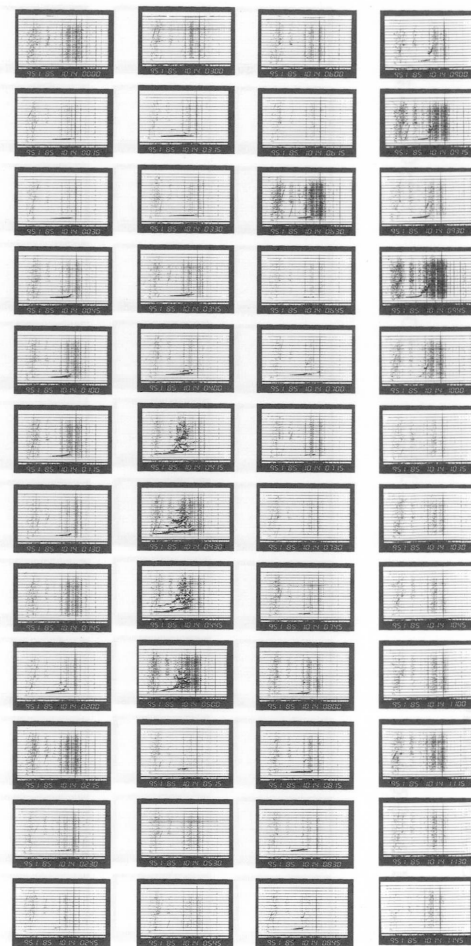
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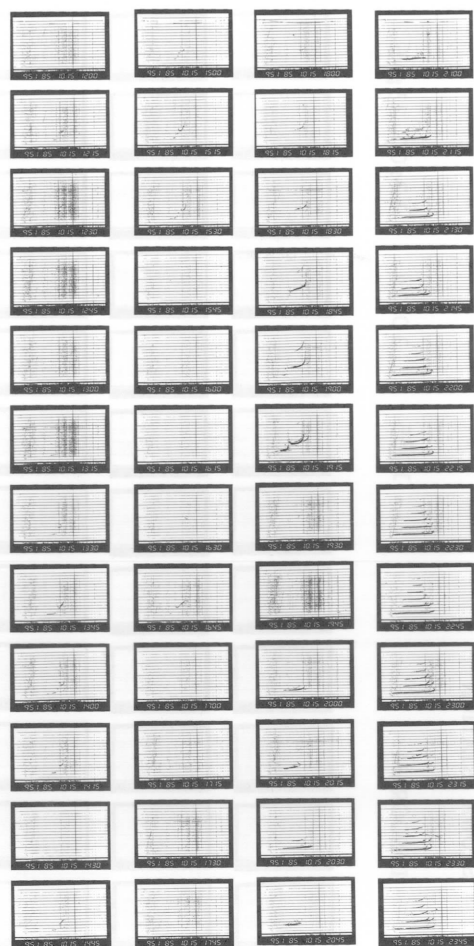
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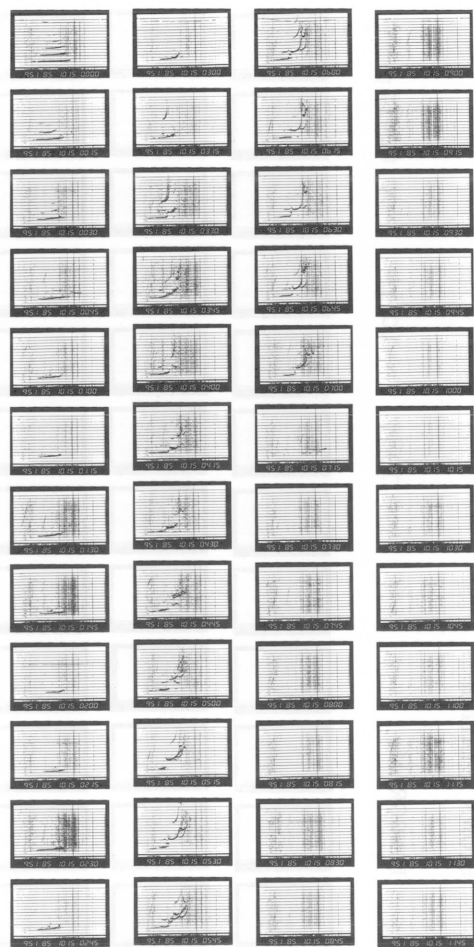
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SYOWA STATION

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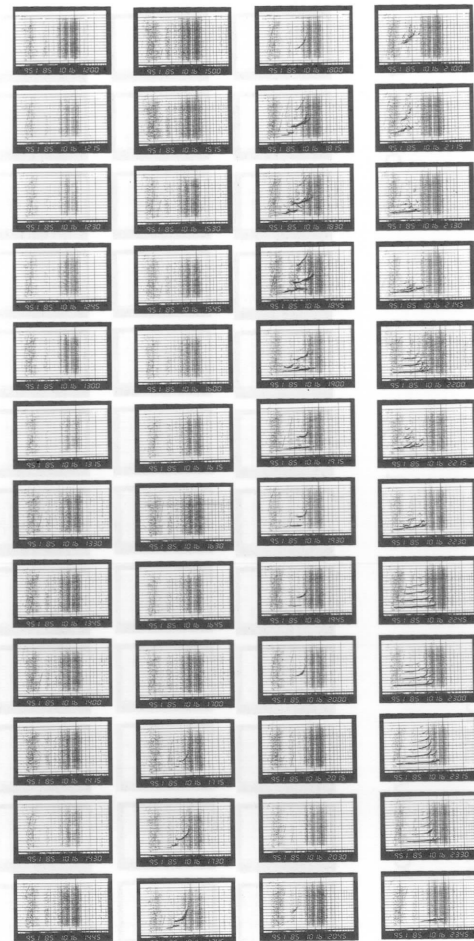
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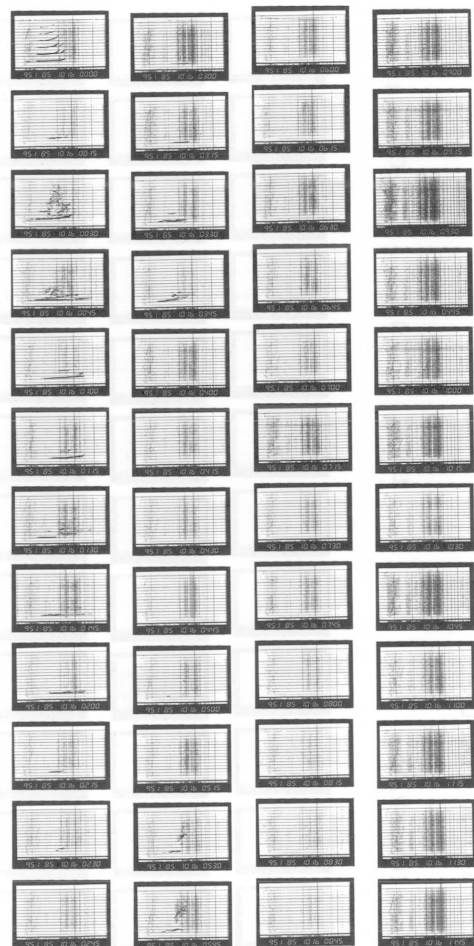
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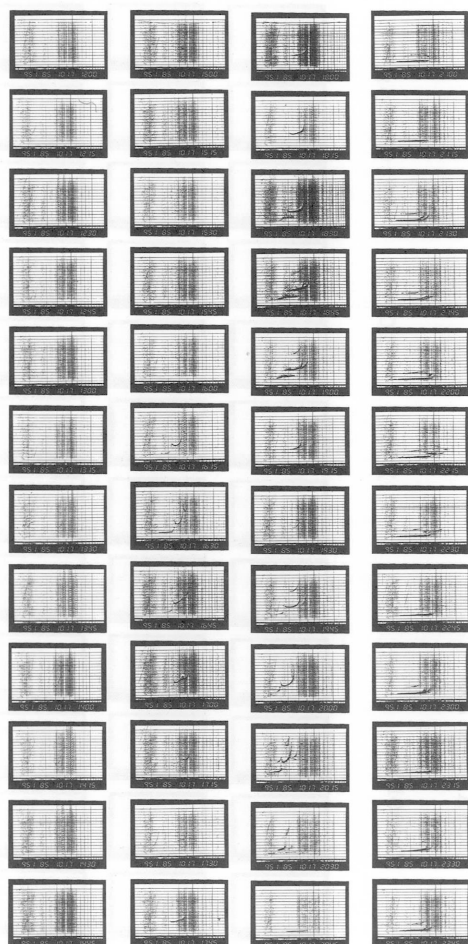
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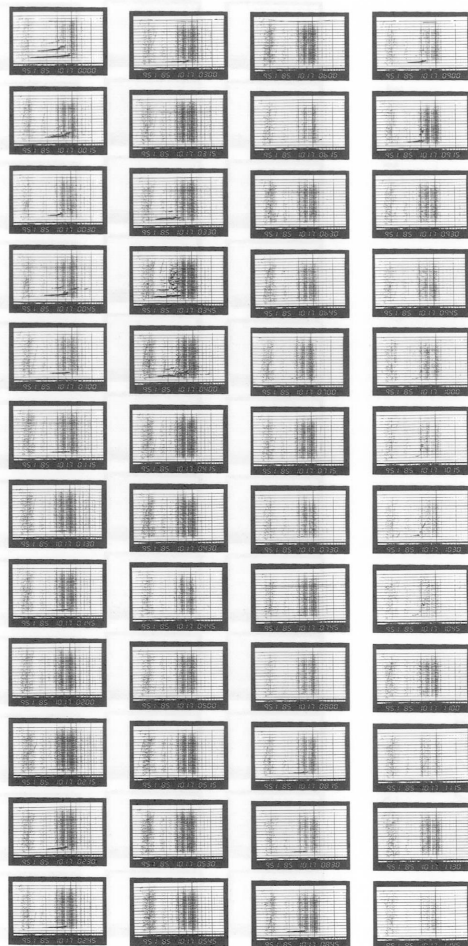
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10 17

00;00-11;45



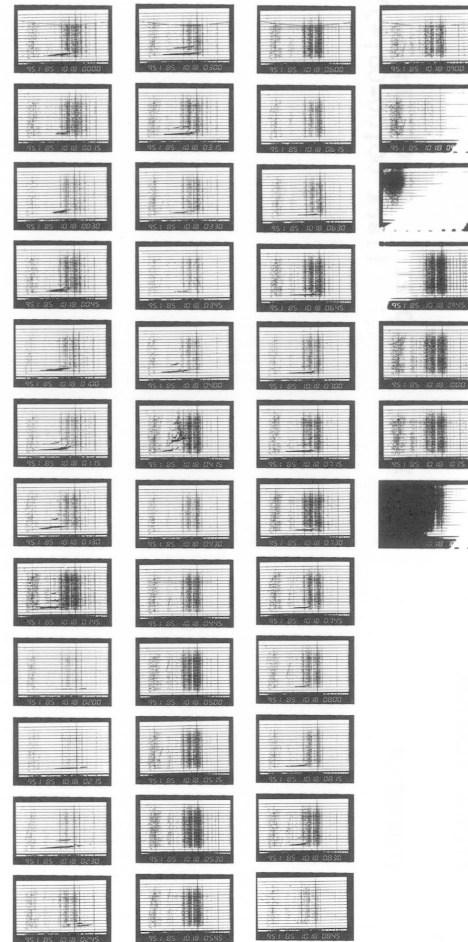
SYOWA STATION

IONOGRAM

1985

10 18

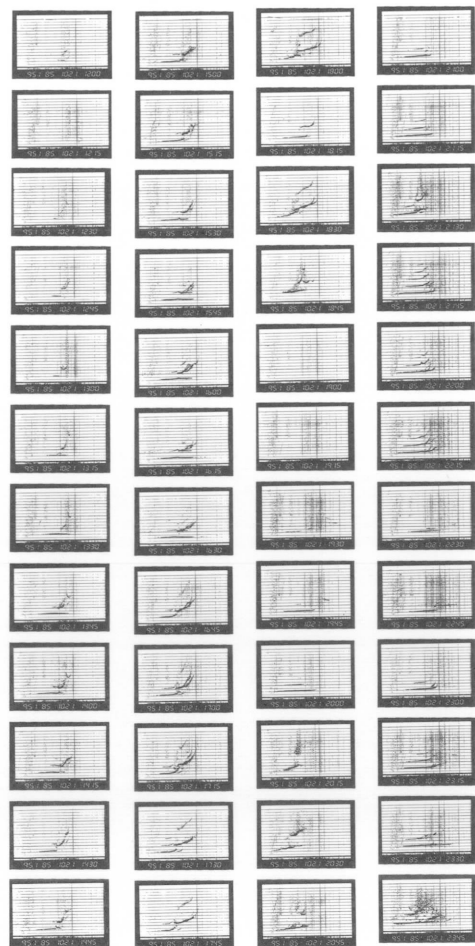
00;00-11;45
(lack 10;45-11;45)



SYOWA STATION

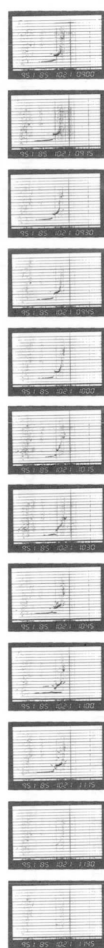
IONOGRAM

1985 10 21 12:00-23:45



SYOWA STATION

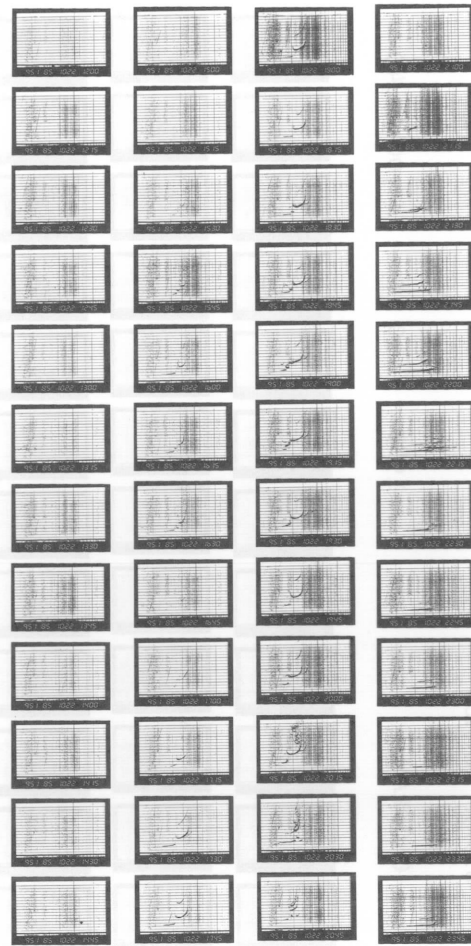
1985 10 21 00:00-11:45
(lack 00:00-08:45)



SYOWA STATION

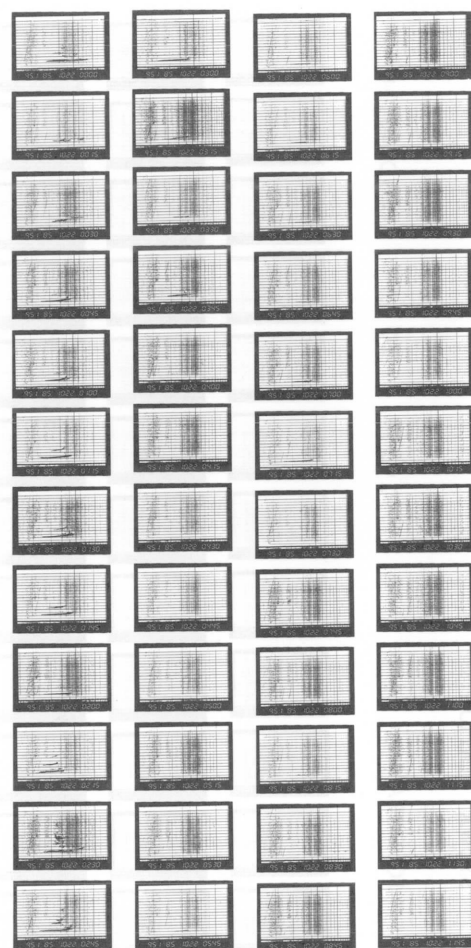
IONOGRAM

1985 10 22 12:00-23:45



SYOWA STATION

1985 10 22 00:00-11:45



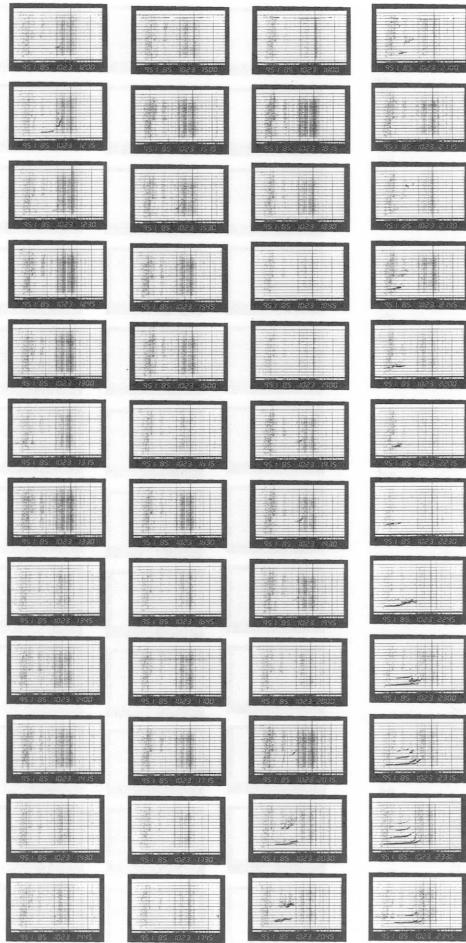
SYOWA STATION

IONOGRAM

1985

10 23

12;00-23;45



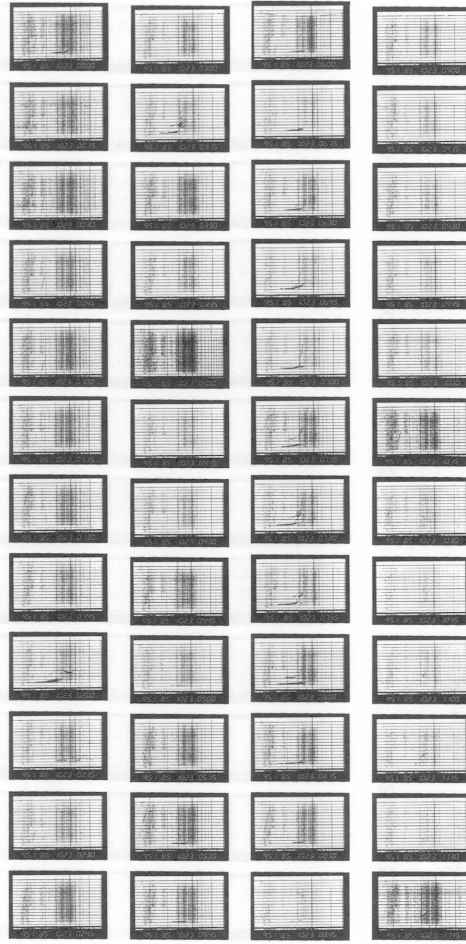
SYOWA STATION

IONOGRAM

1985

10 23

00;00-11;45



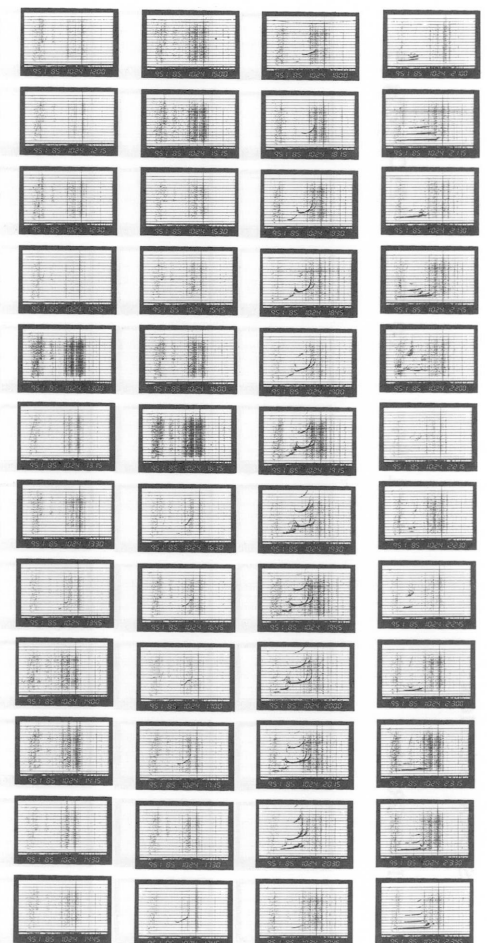
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IONOGRAM

1985

10 24

12;00-23;45



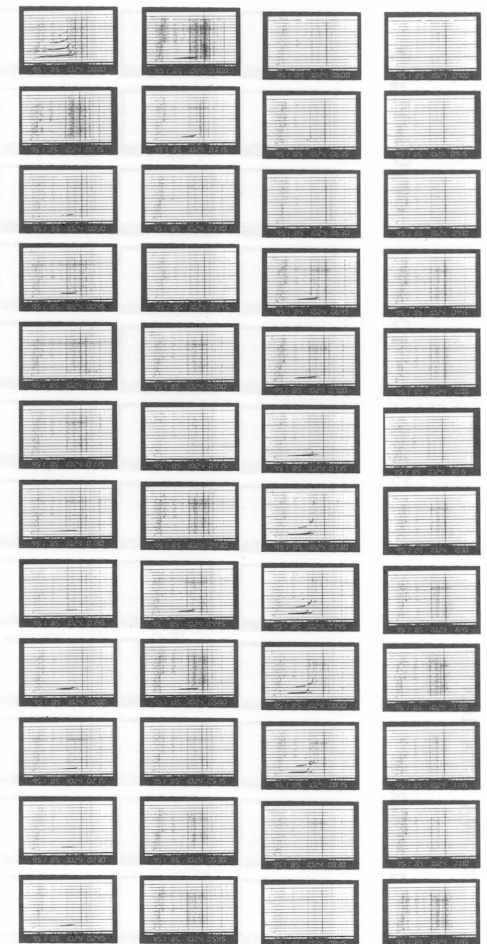
SYOWA STATION

IONOGRAM

1985

10 24

00;00-11;45



SYOWA STATION

IONOGRAM

1985

10 25

12:00-23:45

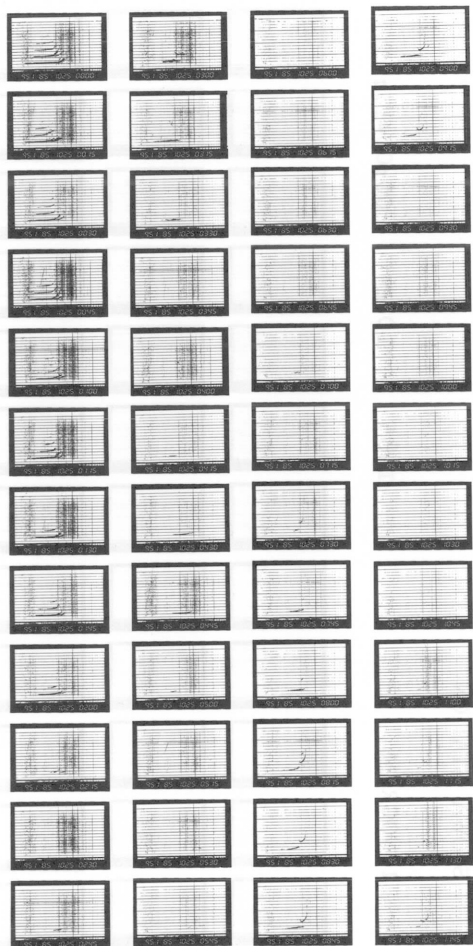
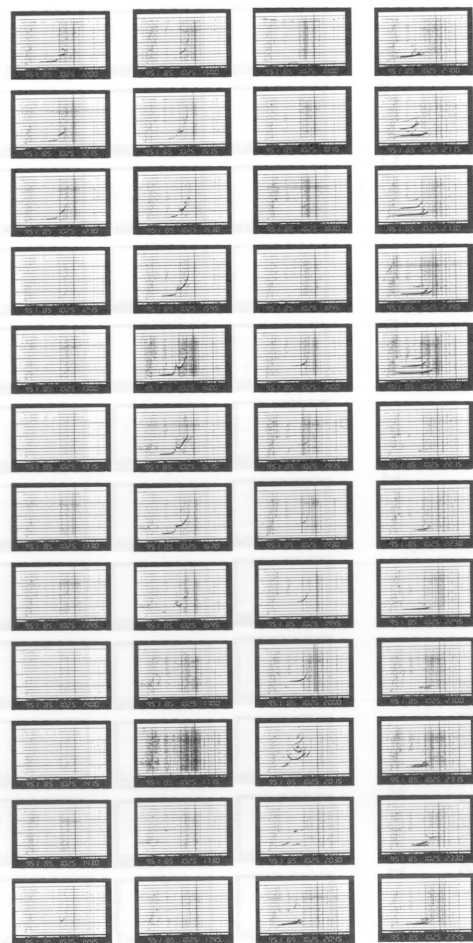
SYOWA STATION

IONOGRAM

1985

10 25

00:00-11:45



SYOWA STATION

IONOGRAM

1985

10 26

12:00-23:45

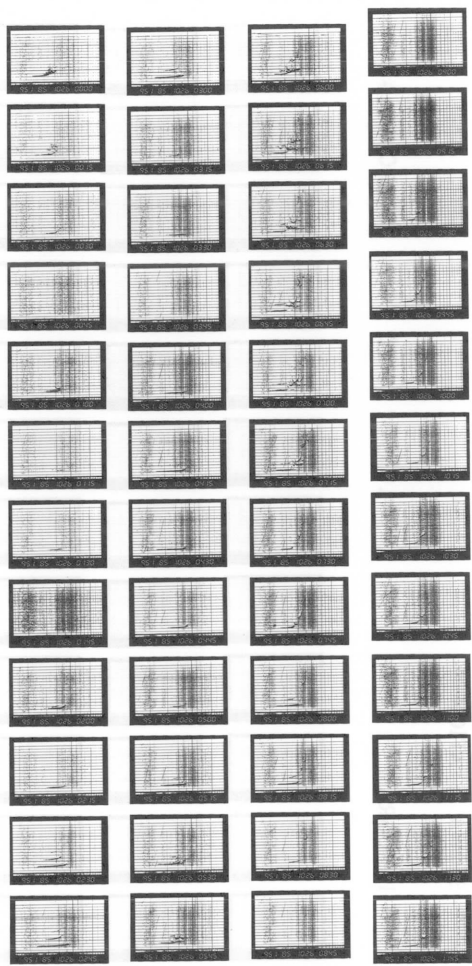
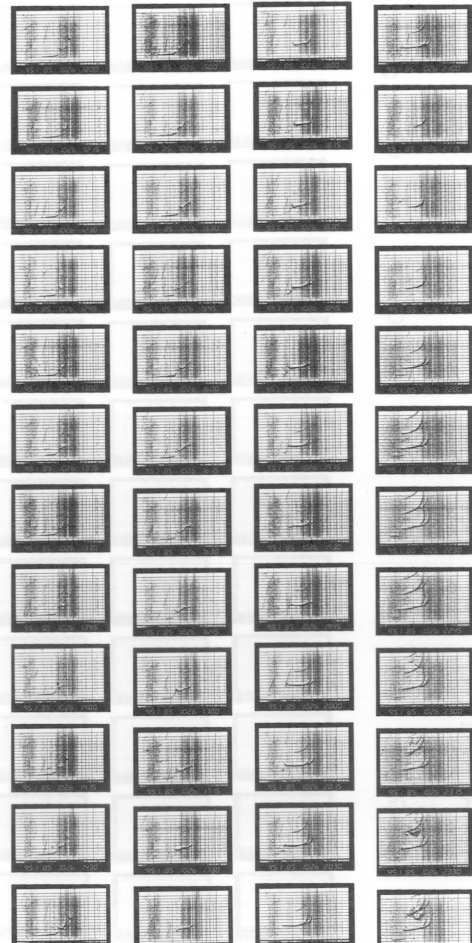
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1985

10 26

00:00-11:45



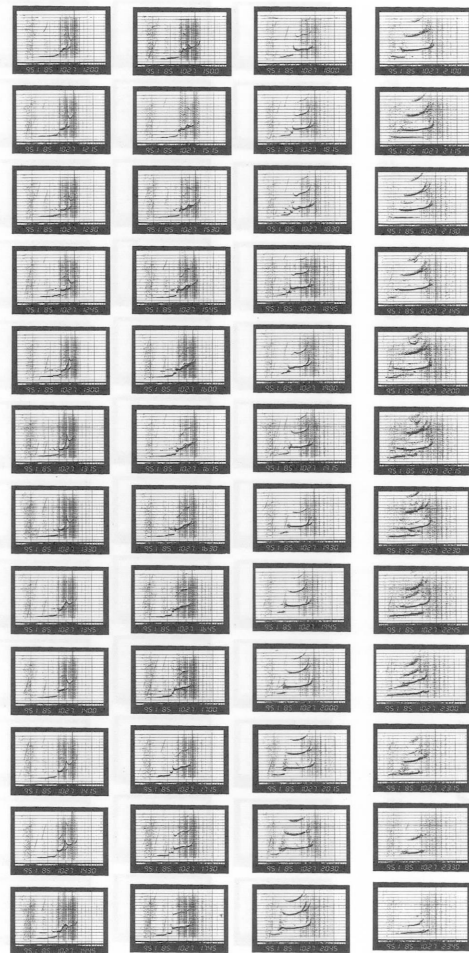
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1985

10 27

12;00-23;45



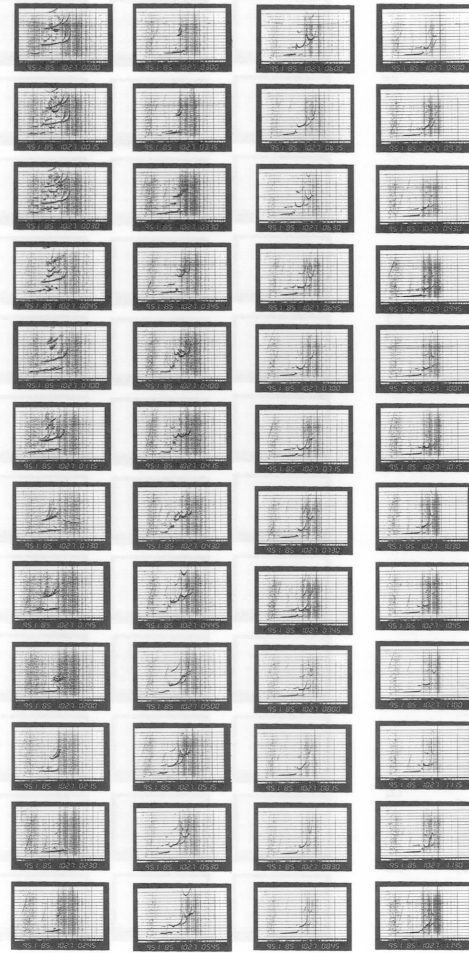
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IONOGRAM

1985

10 27

00;00-11;45



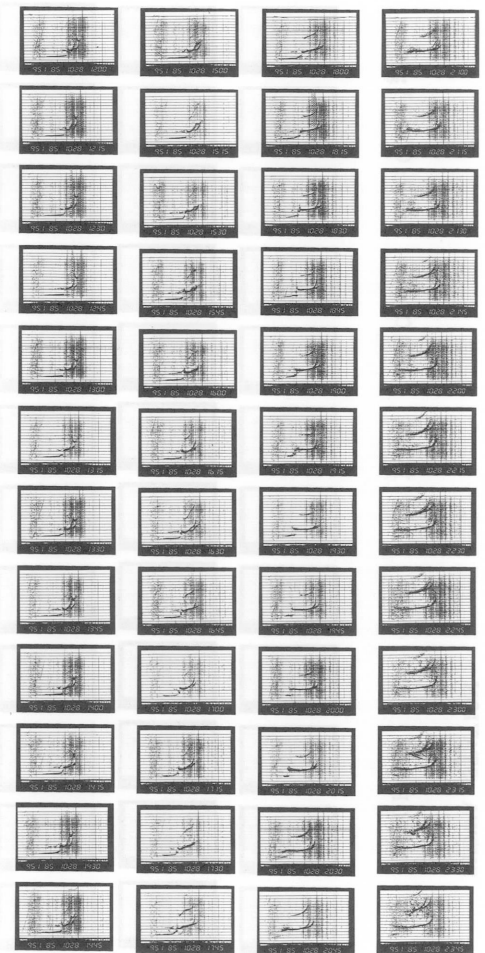
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1985

10 28

12;00-23;45



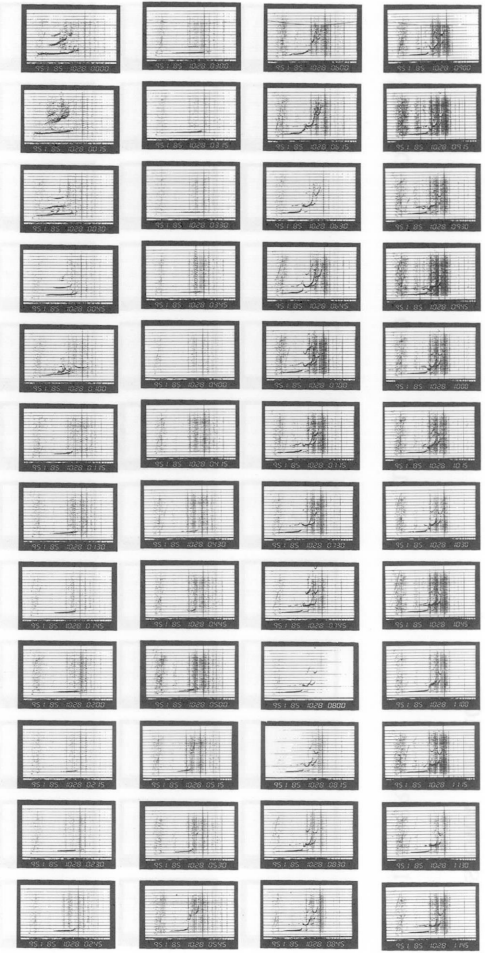
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1985

10 28

00;00-11;45



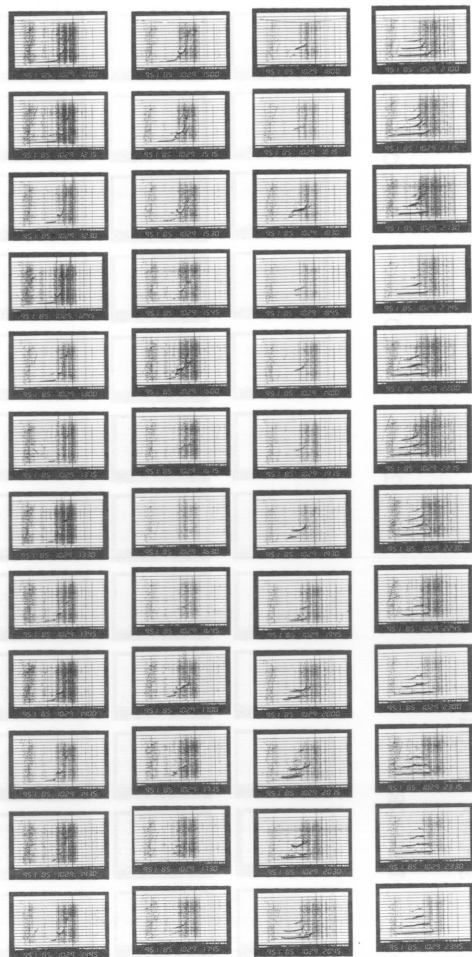
SYOWA STATION

IONOGRAM

1985

10 29

12;00-23;45



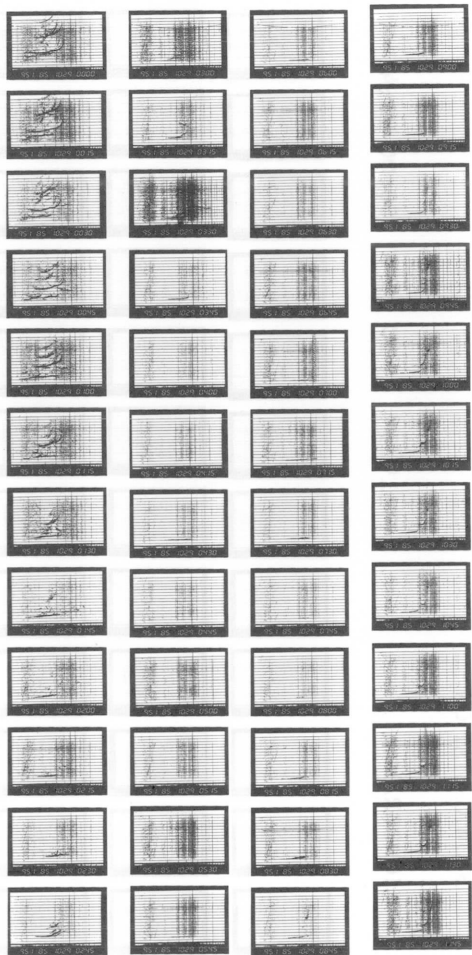
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1985

10 29

00;00-11;45



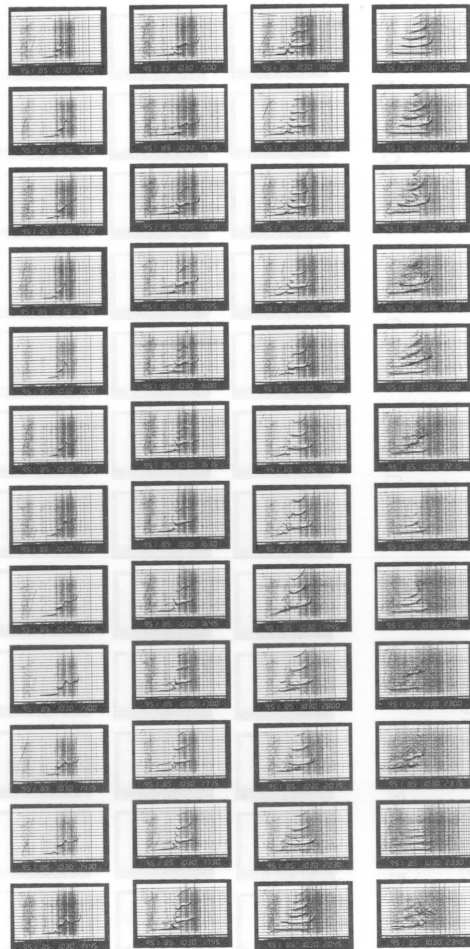
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IONOGRAM

1985

10 30

12;00-23;45



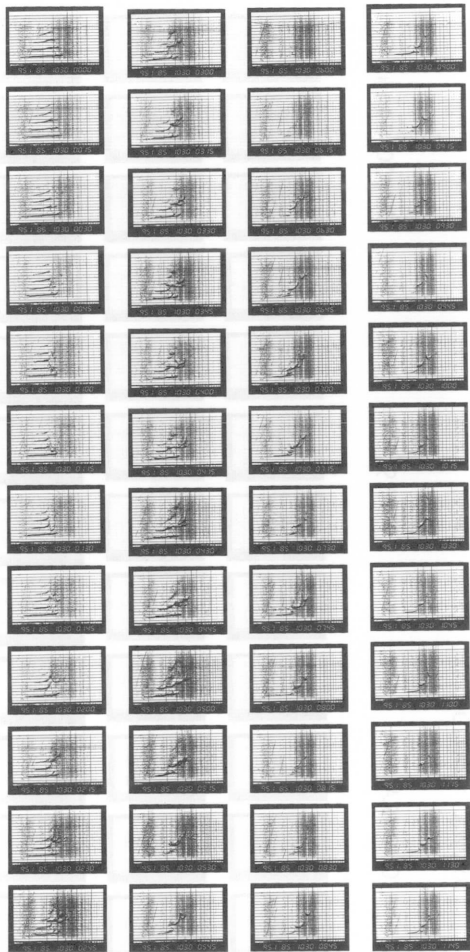
SYOWA STATION

IONOGRAM

1985

10 30

00;00-11;45



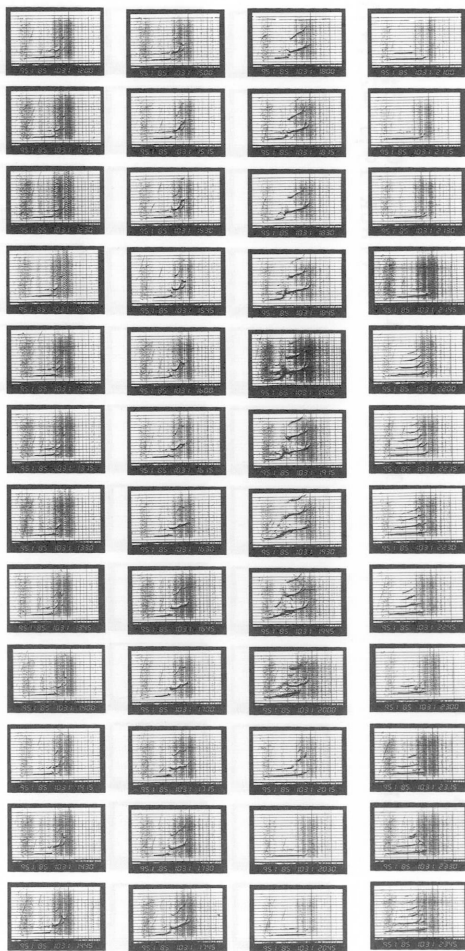
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IONOGRAM

1985

10 31

12:00-23:45



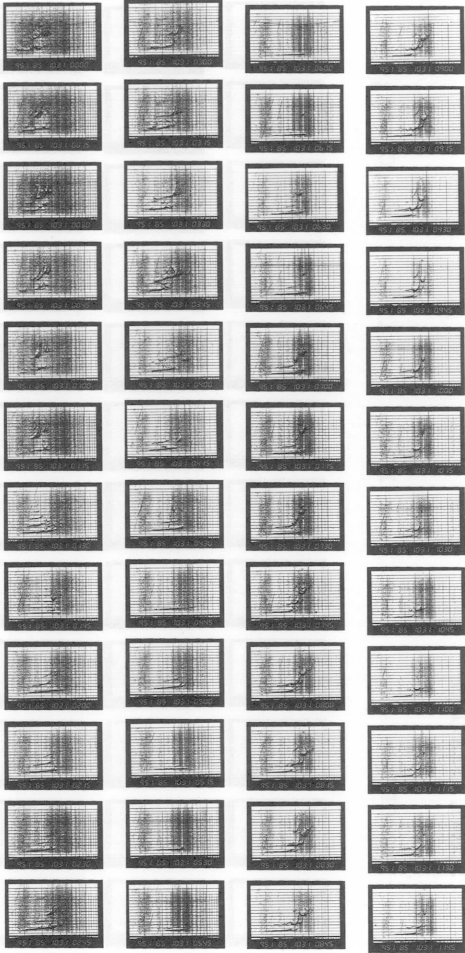
SYOWA STATION

IONOGRAM

1985

10 31

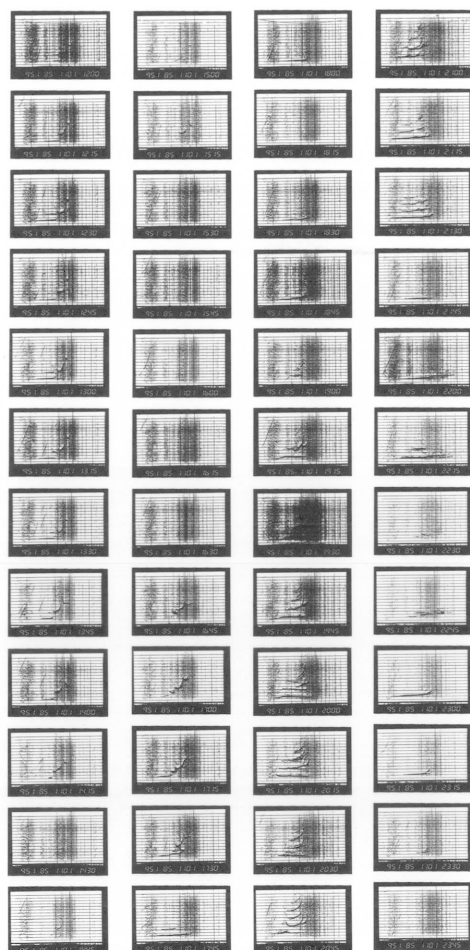
00:00-11:45



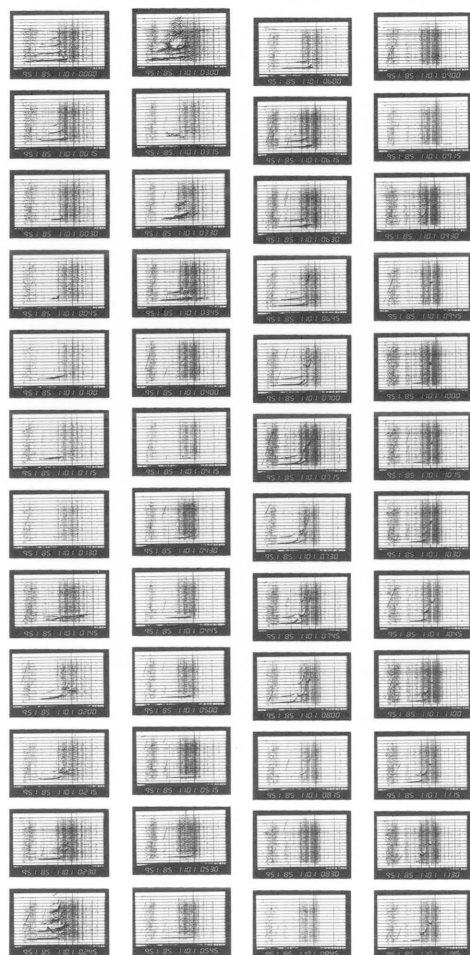
SYOWA STATION

IONOGRAM

1985 11 01 12:00-23:45

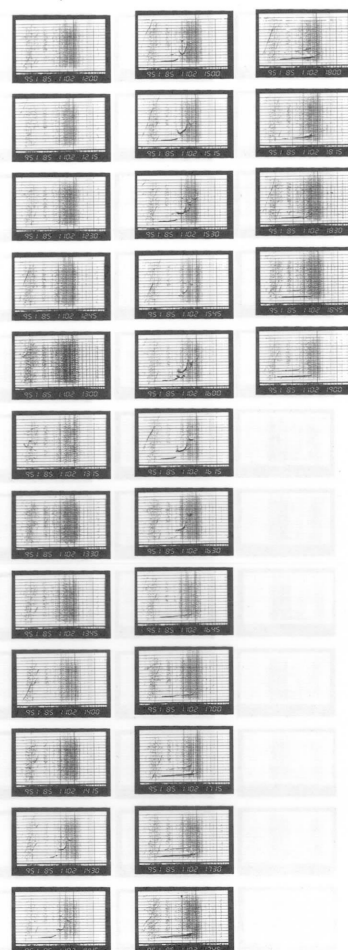


1985 11 01 00:00-11:45

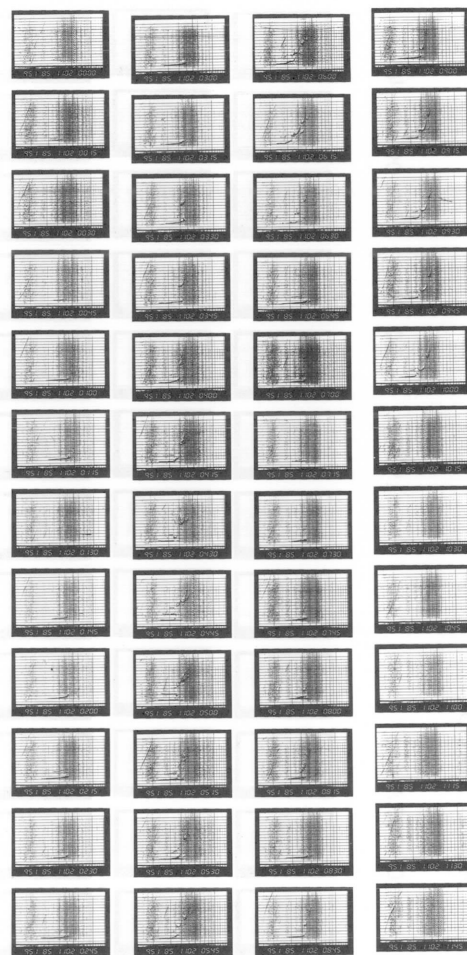


SYOWA STATION

IONOGRAM

1985 11 02 12:00-23:45
(lack 19:15-21:45)

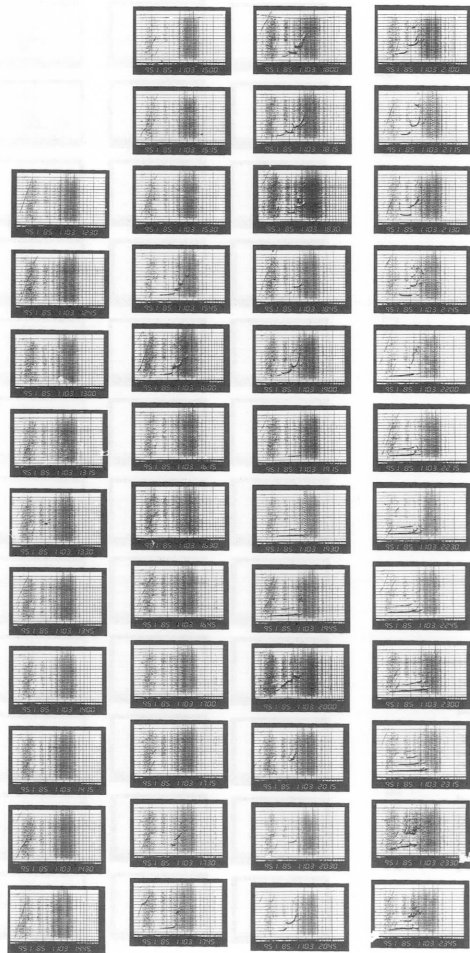
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SYOWA STATION

IONOGRAM

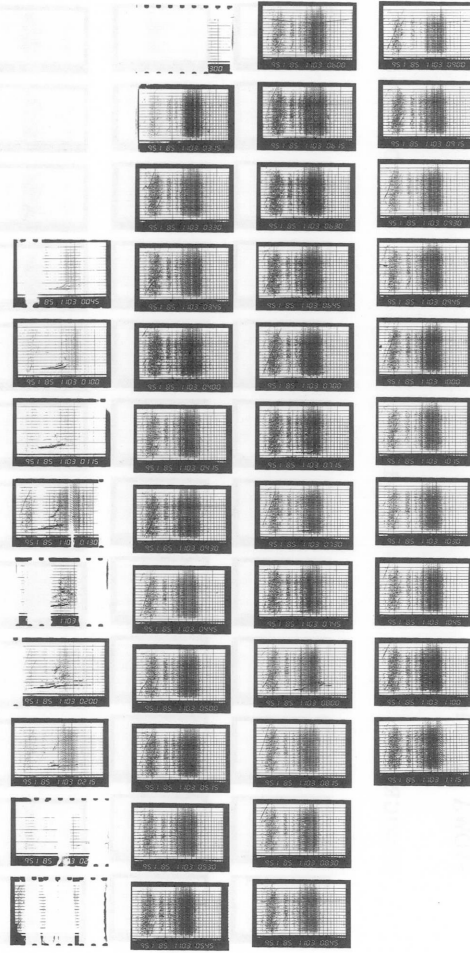
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(lack 12:00-12:15)



SYOWA STATION

IONOGRAM

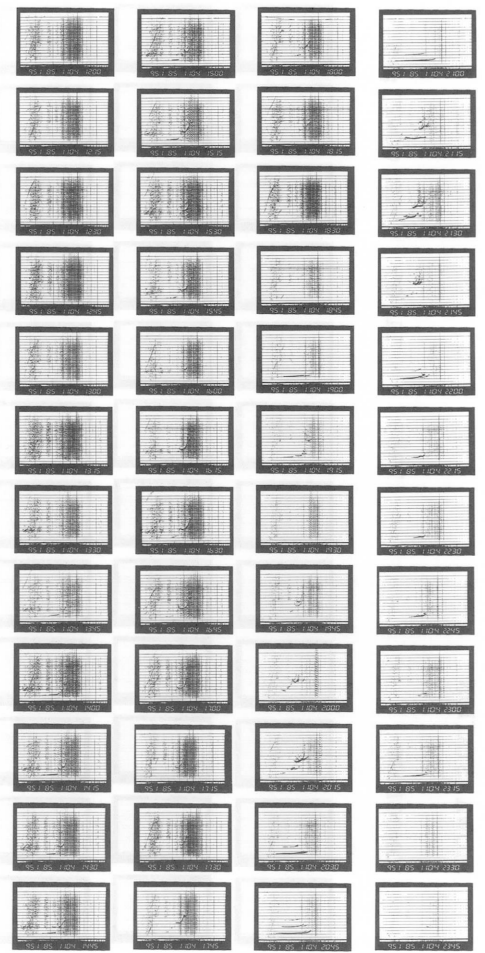
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(lack 00:00-00:30)
11:30-11:45)



SYOWA STATION

IONOGRAM

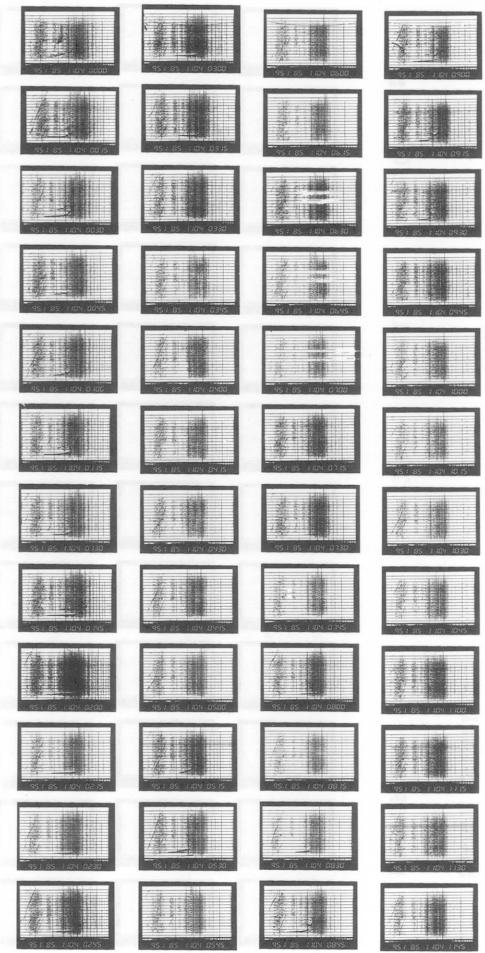
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SYOWA STATION

IONOGRAM

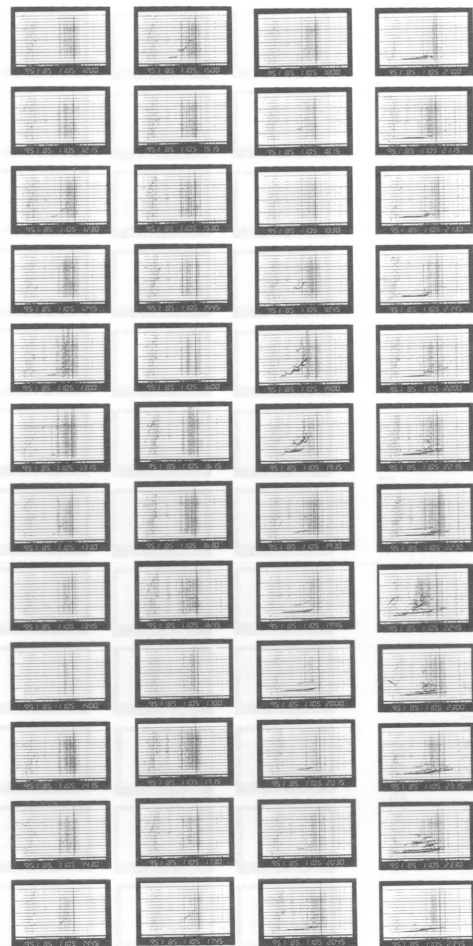
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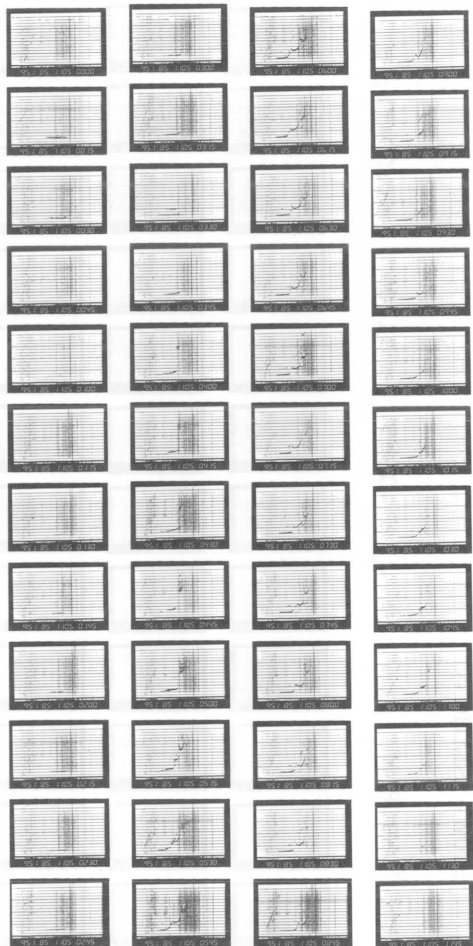
SYOWA STATION

IONOGRAM

1985 11 05 12:00-23:45



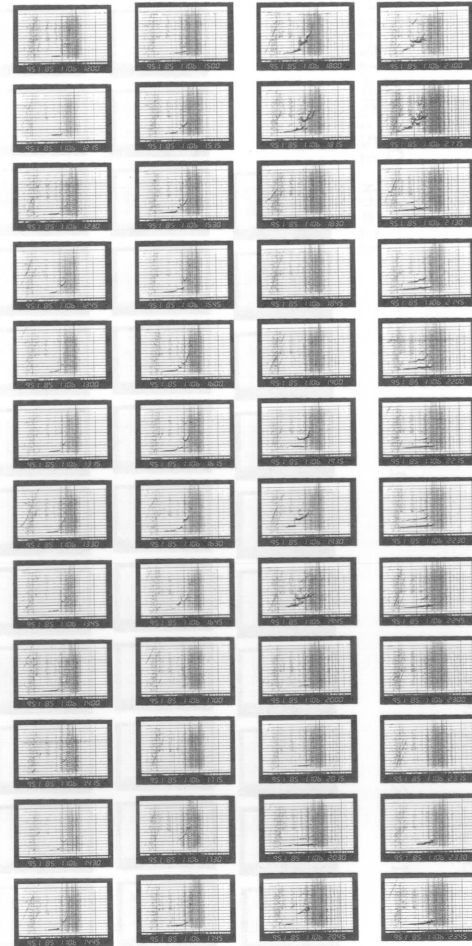
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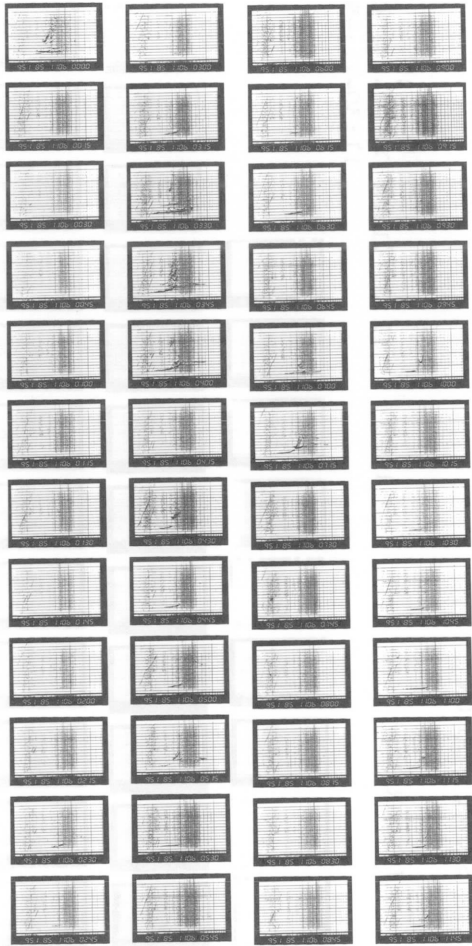
SYOWA STATION

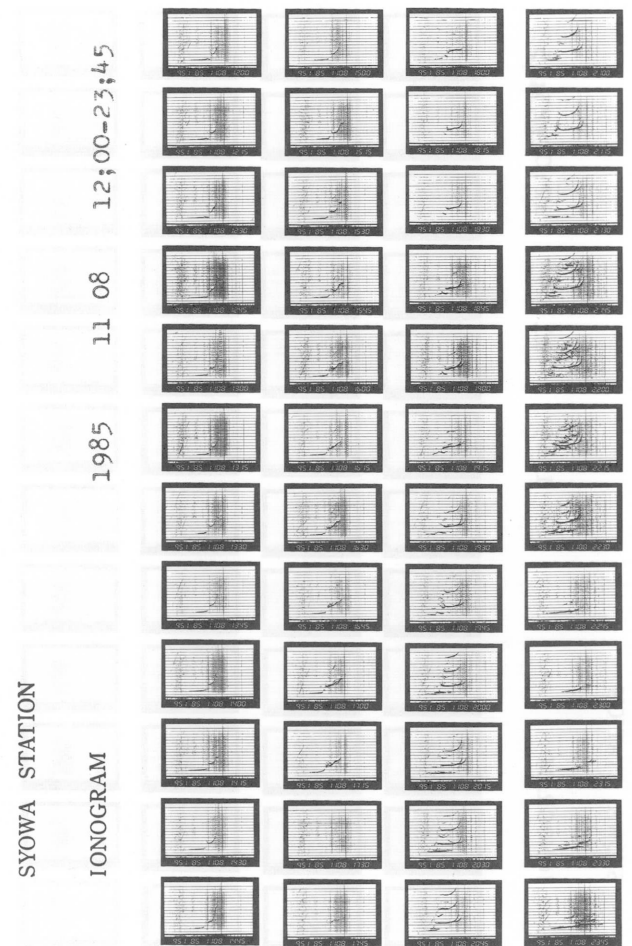
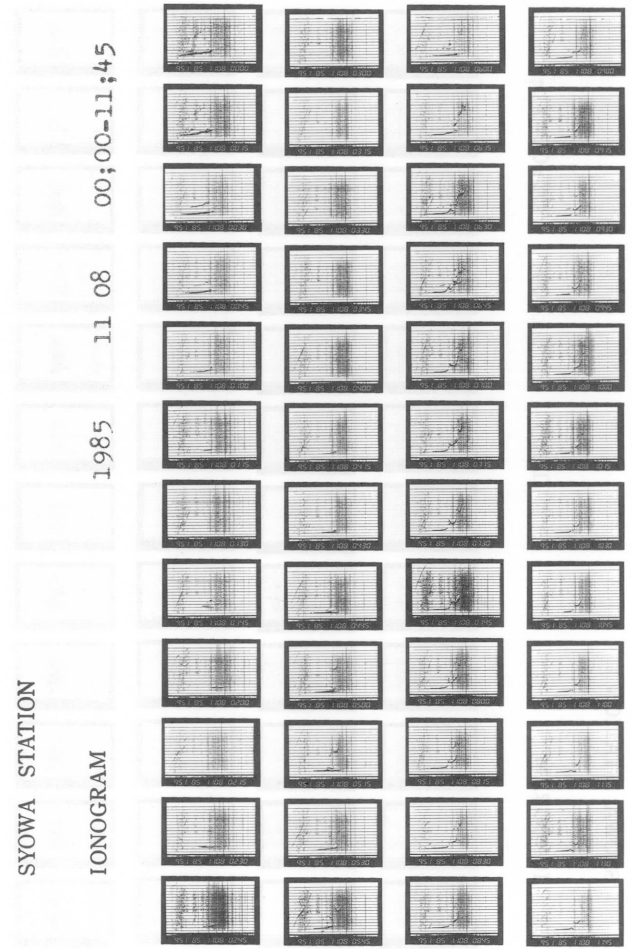
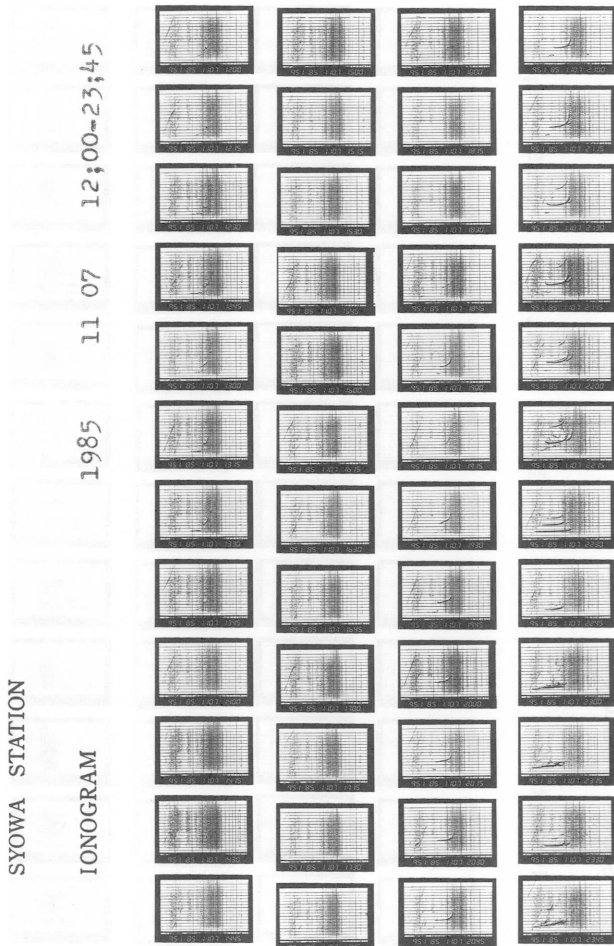
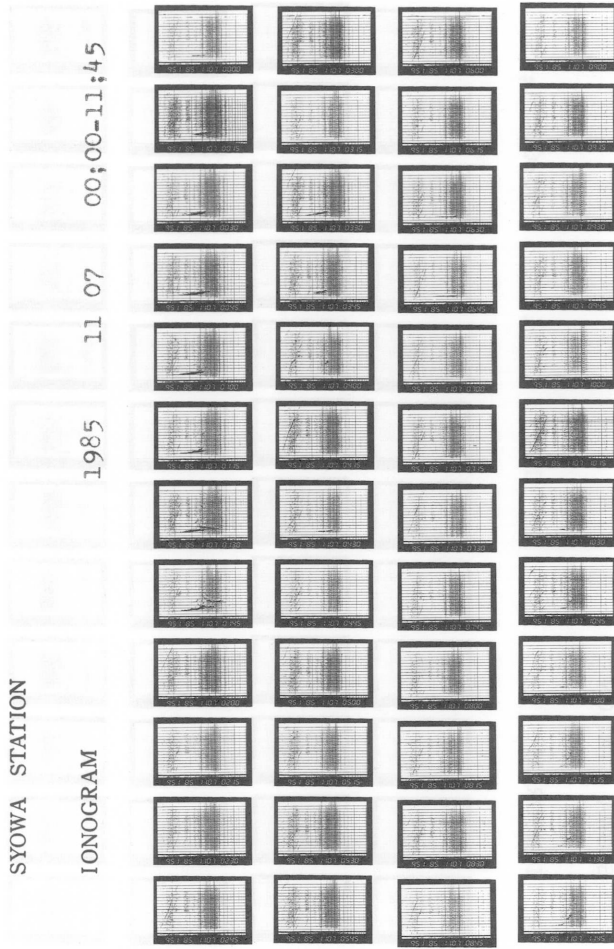
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1985 11 06 12:00-23:45



1985 11 06 00:00-11:45





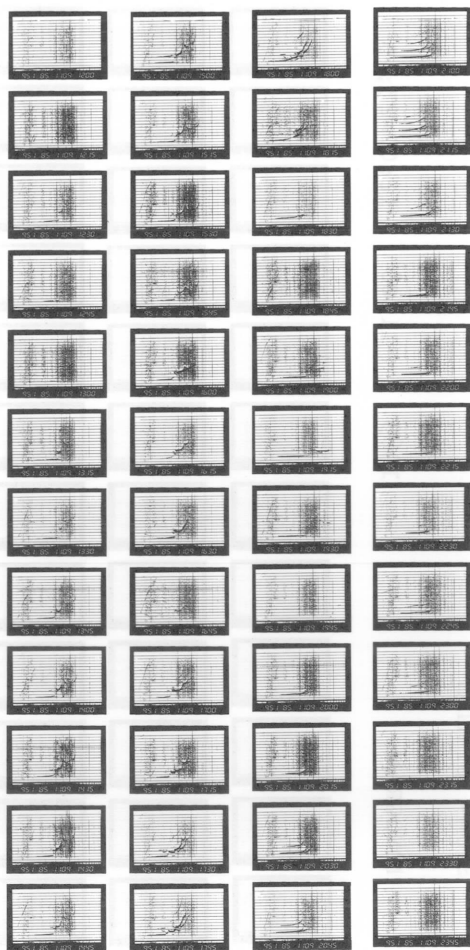
SYOWA STATION

IONOGRAM

1985

11 09

12:00-23:45



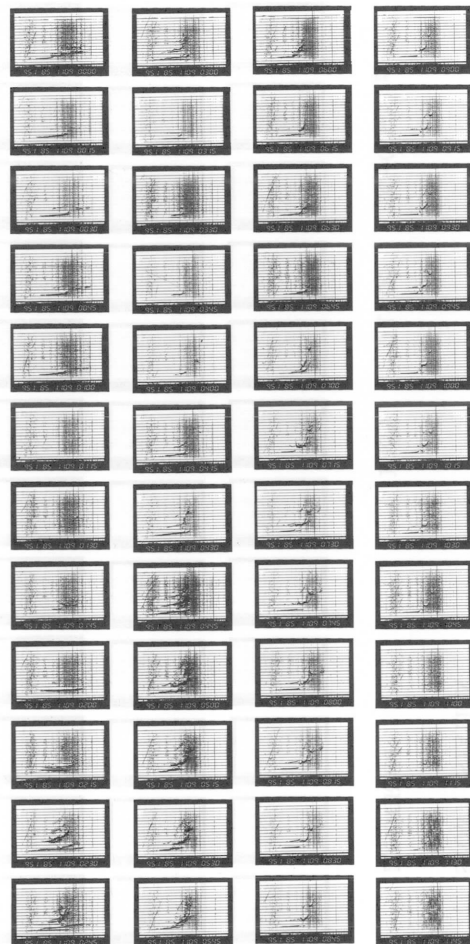
SYOWA STATION

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1985

11 09

00:00-11:45



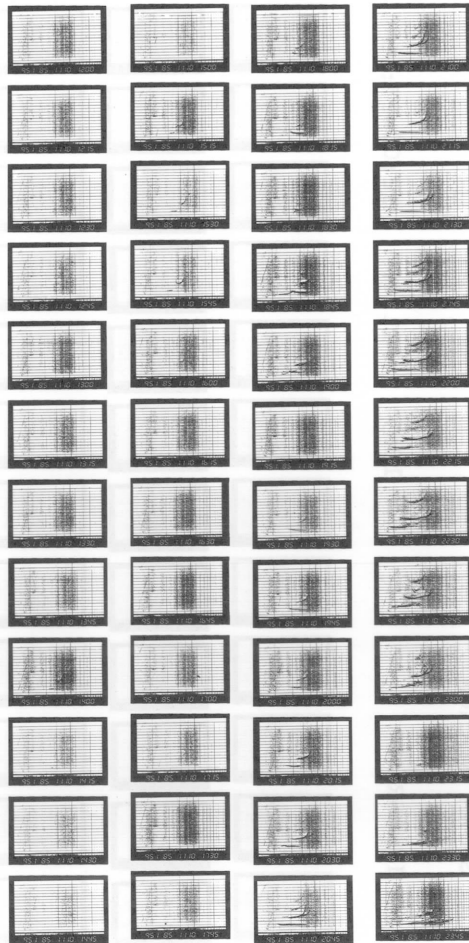
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1985

11 10

12:00-23:45



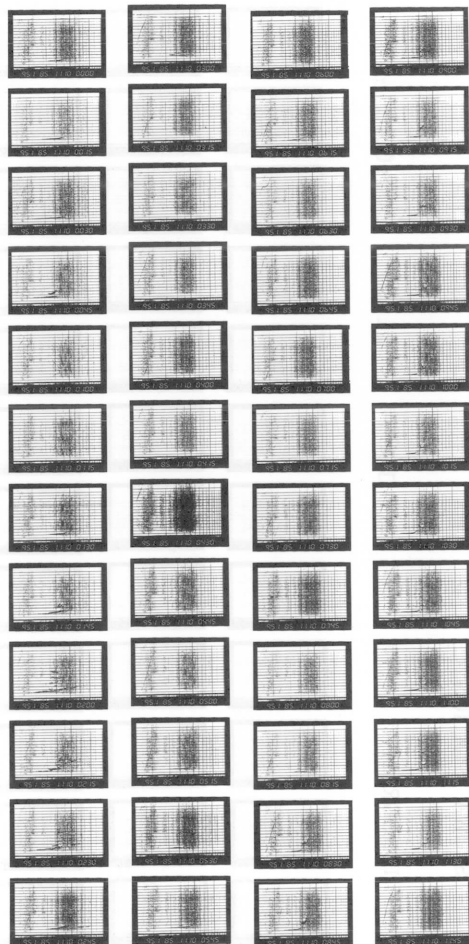
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1985

11 10

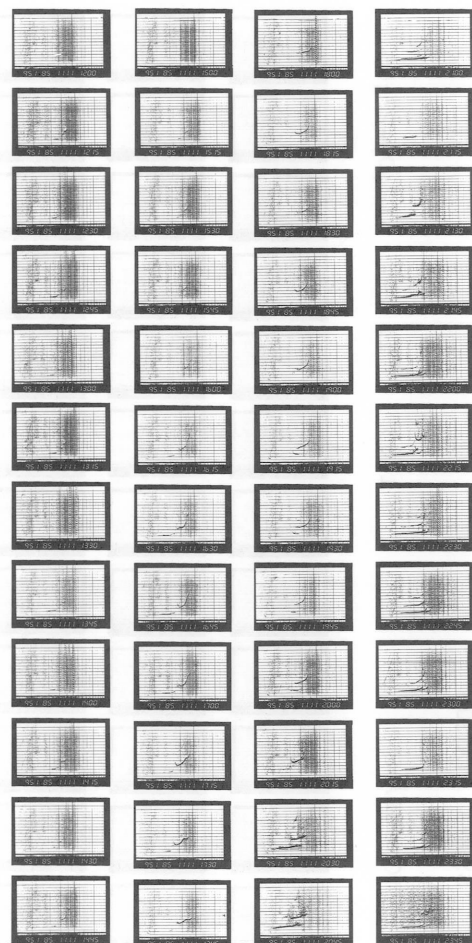
00:00-11:45



SYOWA STATION

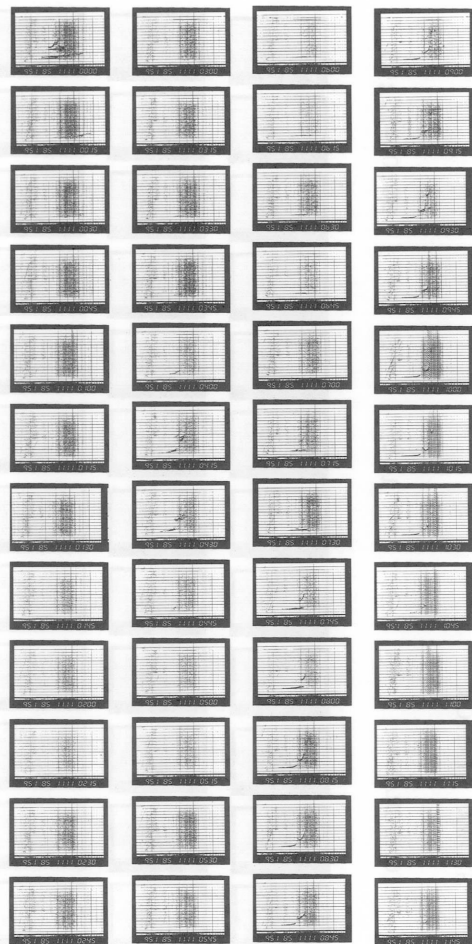
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1985 11 11 12:00-23:45



SYOWA STATION

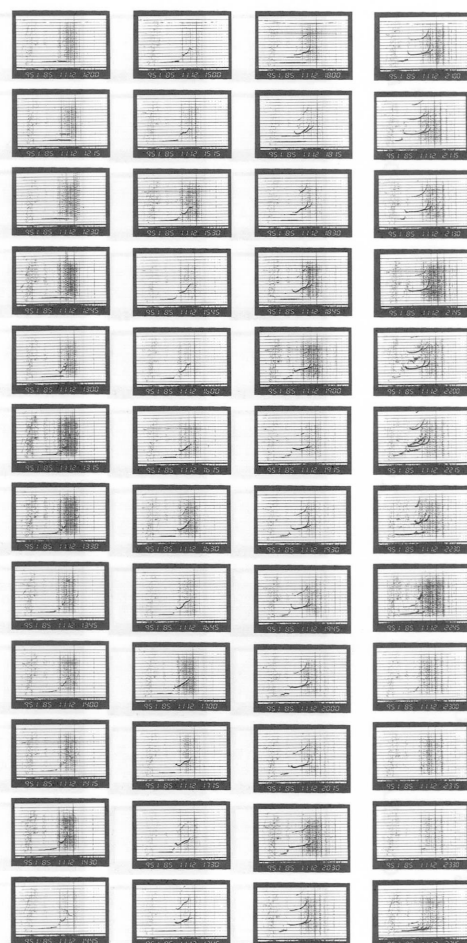
1985 11 11 00:00-11:45



SYOWA STATION

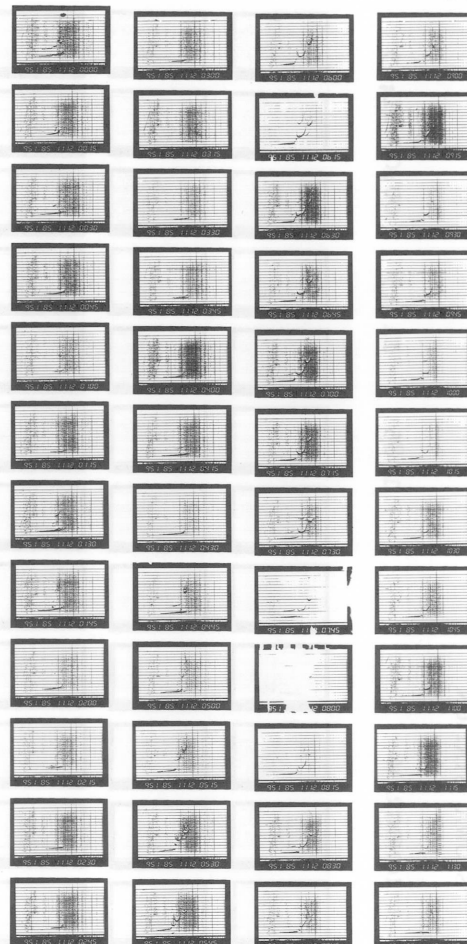
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1985 11 12 12:00-23:45



SYOWA STATION

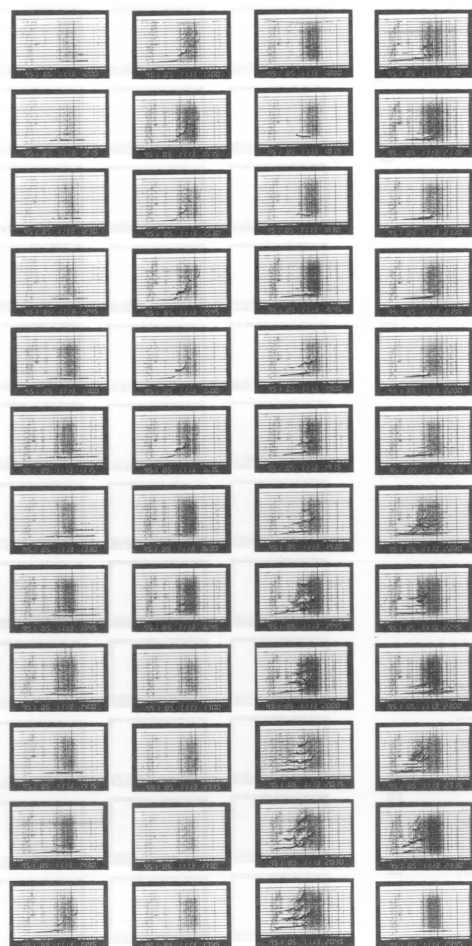
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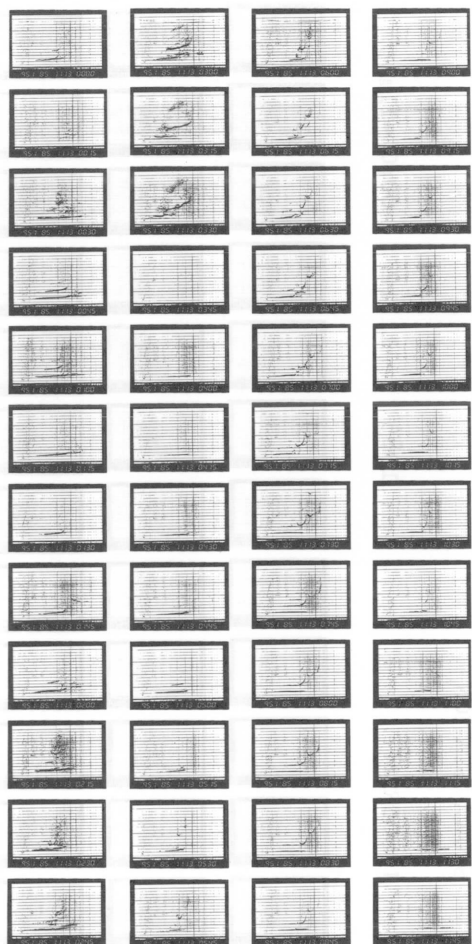
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IONOGRAM

1985 11 13 12:00-23:45



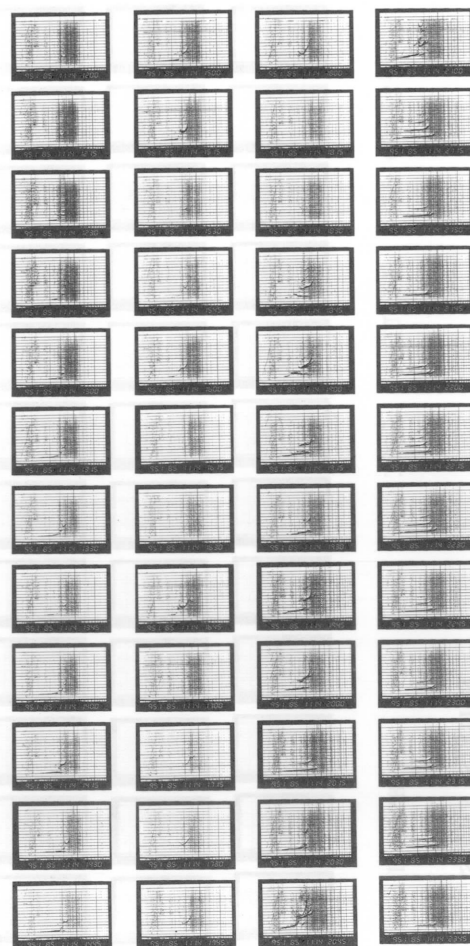
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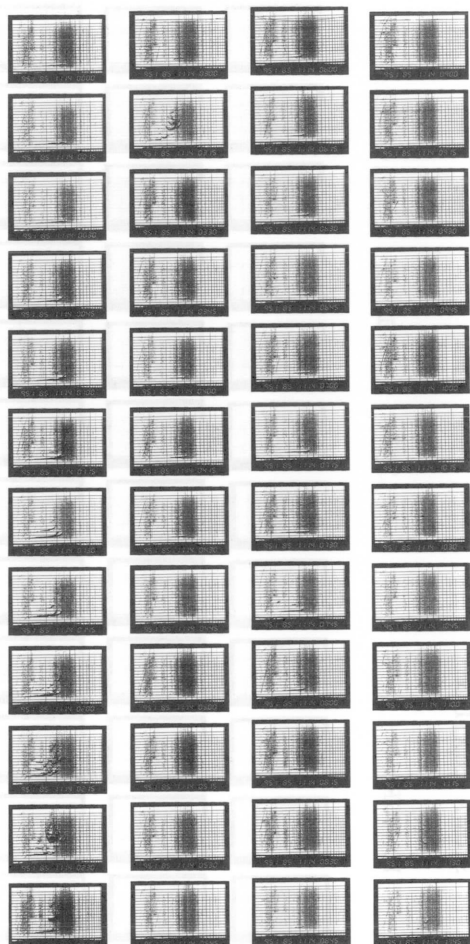
SYOWA STATION

IONOGRAM

1985 11 14 12:00-23:45



1985 11 14 00:00-11:45



SYOWA STATION

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SYOWA STATION

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SYOWA STATION

IONOGRAM

1985

11 15

12:00-23:45

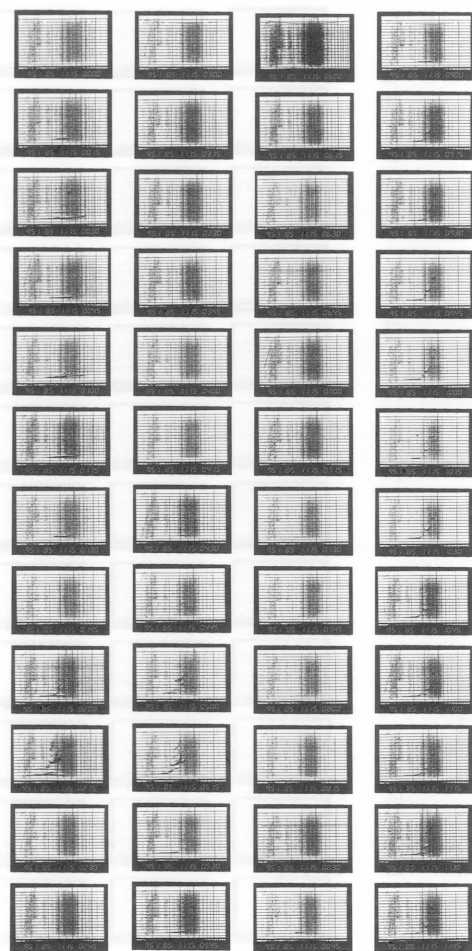
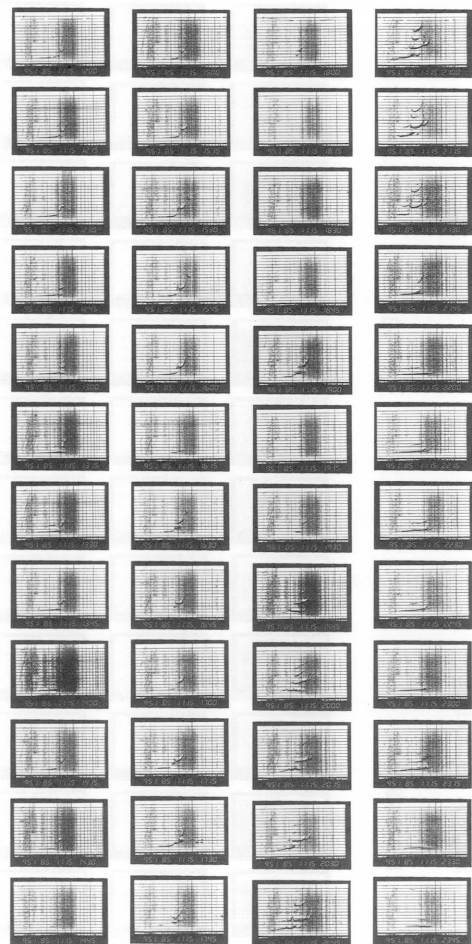
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IONOGRAM

1985

11 15

00:00-11:45



SYOWA STATION

IONOGRAM

1985

11 16

12:00-23:45

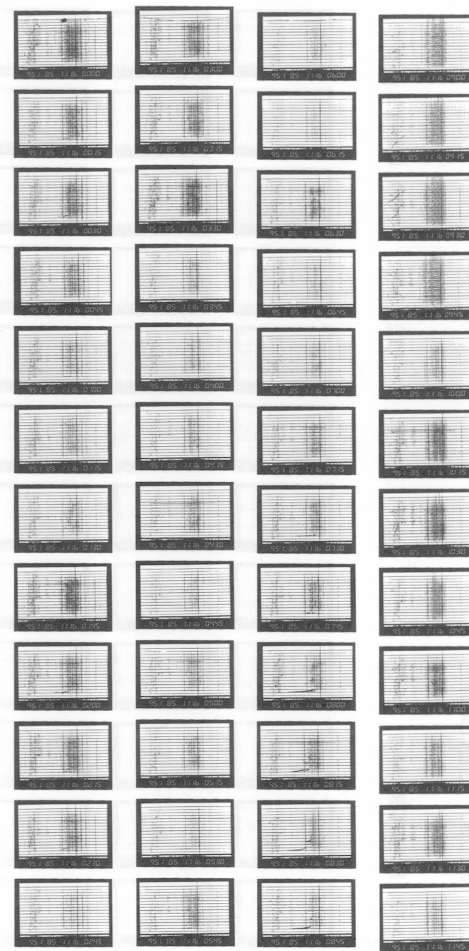
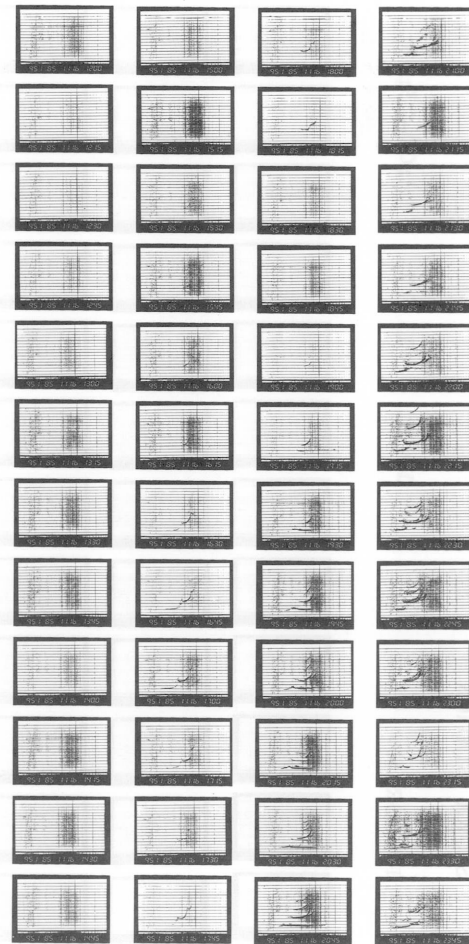
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IONOGRAM

1985

11 16

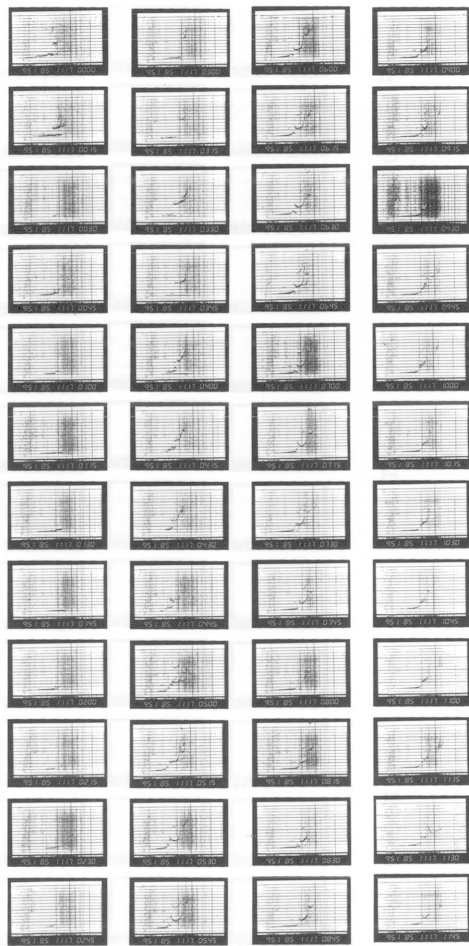
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SYOWA STATION

IONOGRAM

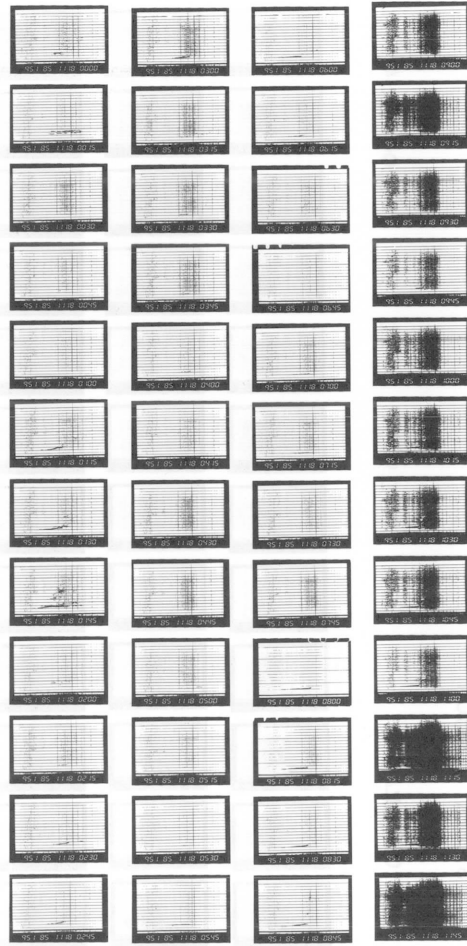
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SYOWA STATION

IONOGRAM

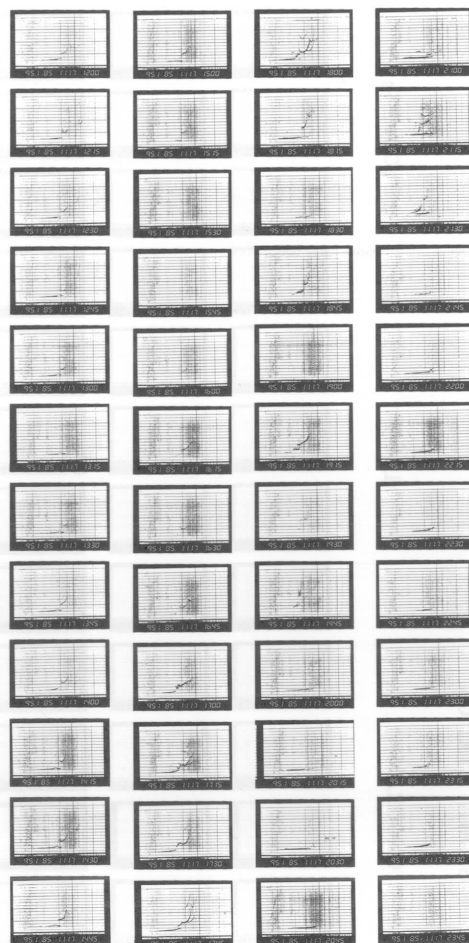
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SYOWA STATION

IONOGRAM

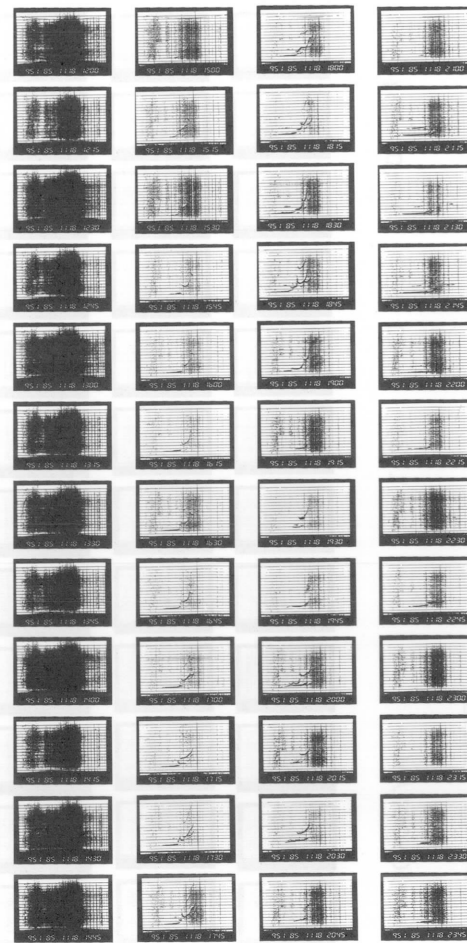
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SYOWA STATION

IONOGRAM

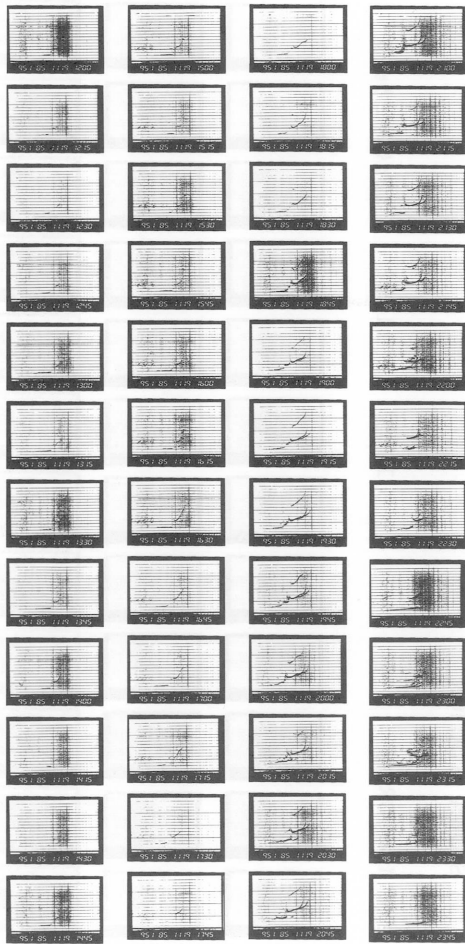
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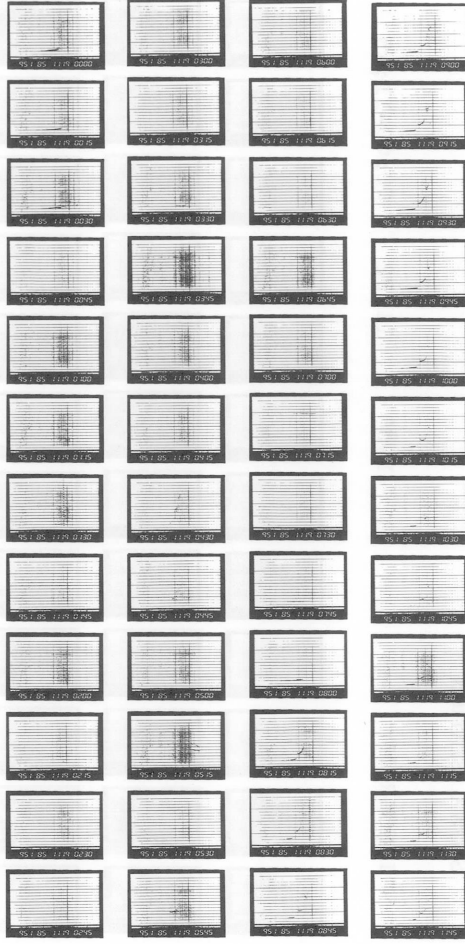
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IONOGRAM

1985 11 19 12:00-23:45



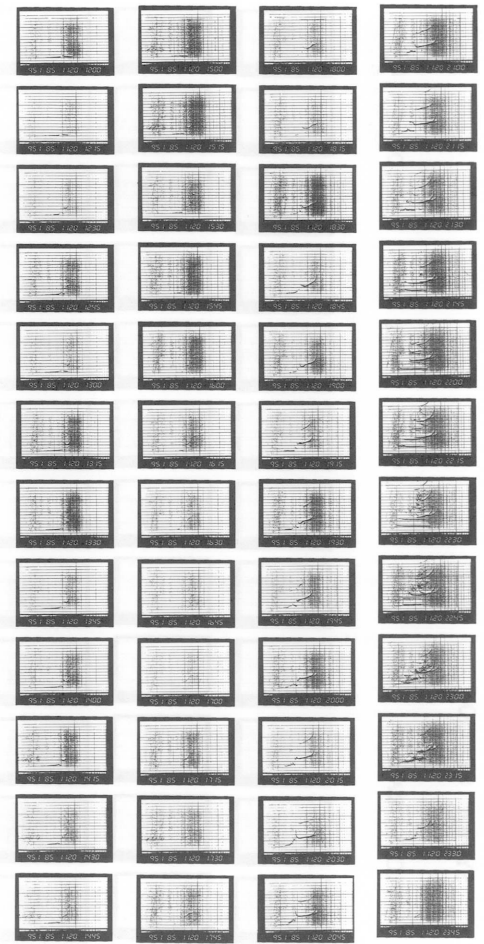
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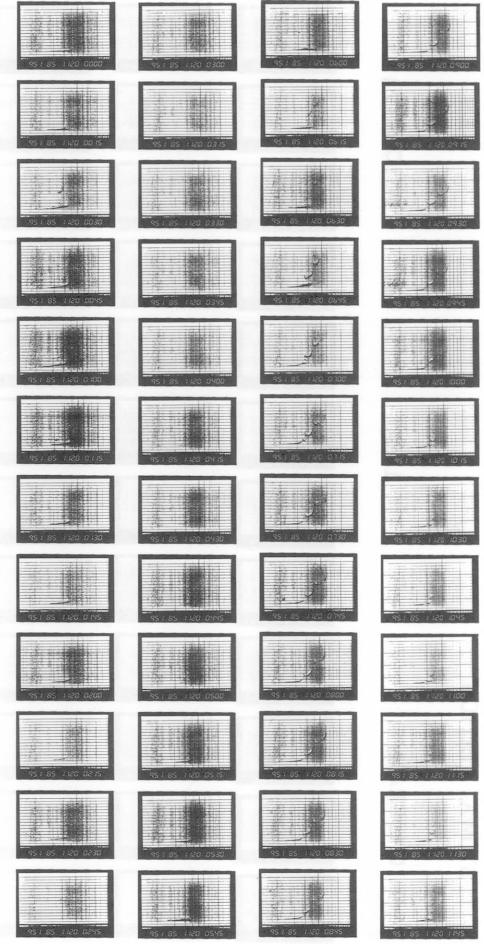
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1985 11 20 12:00-23:45



1985 11 20 00:00-11:45



SYOWA STATION

IONOGRAM

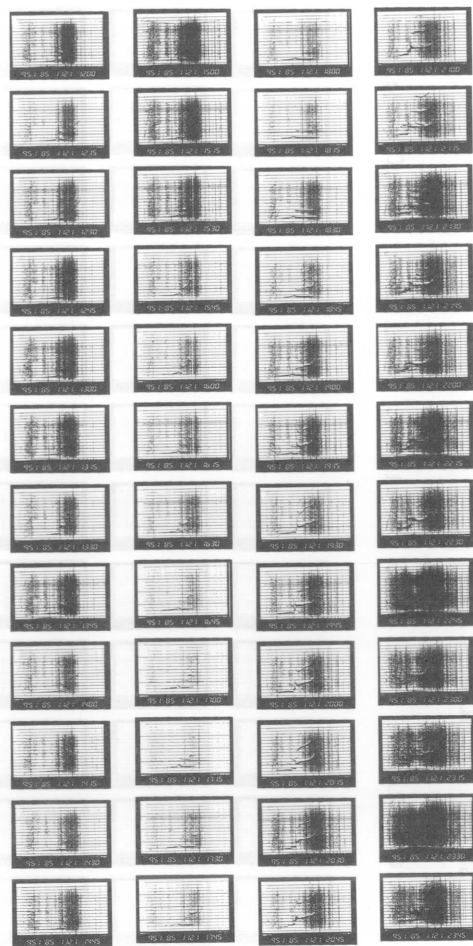
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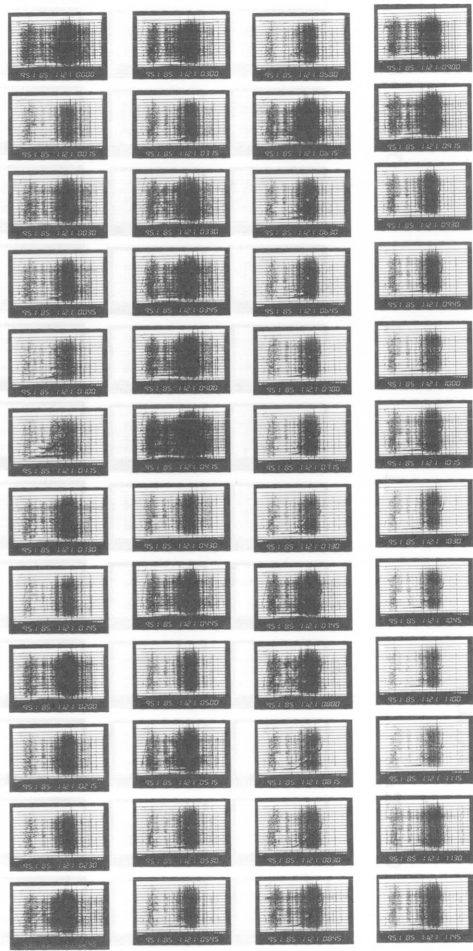
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IONOGRAM

1985 11 21 12:00-23:45



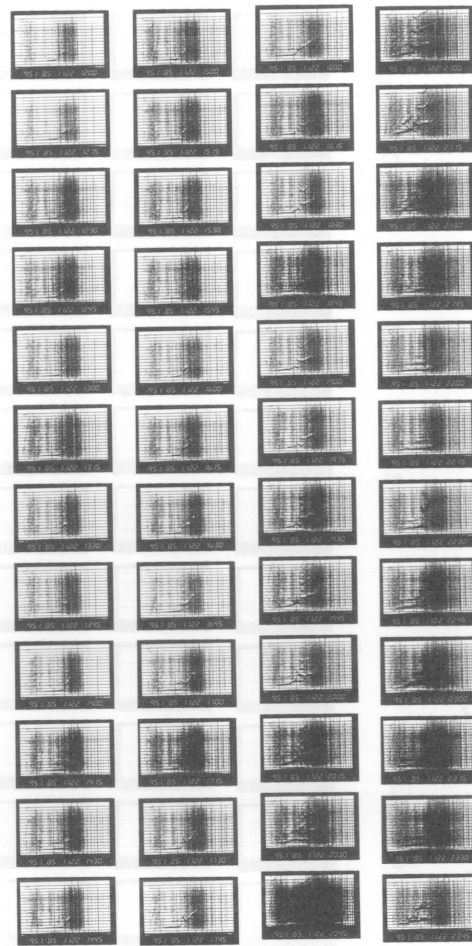
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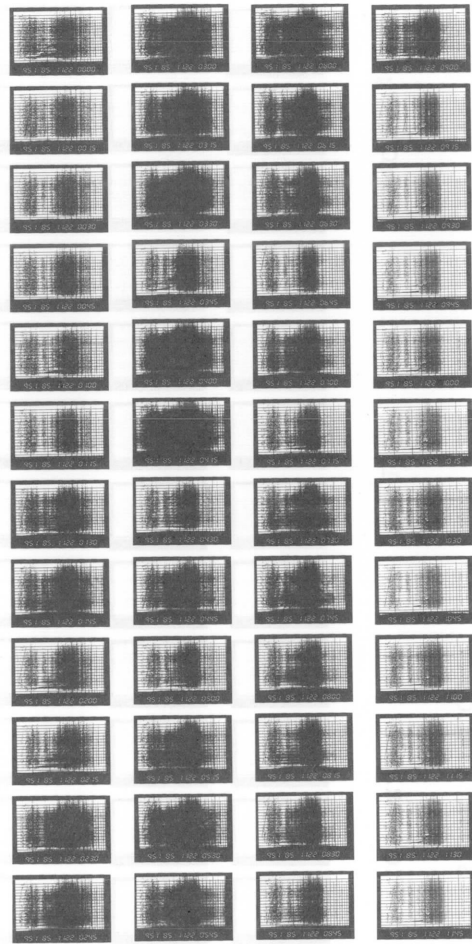
SYOWA STATION

IONOGRAM

1985 11 22 12:00-23:45



1985 11 22 00:00-11:45



SYOWA STATION

IONOGRAM

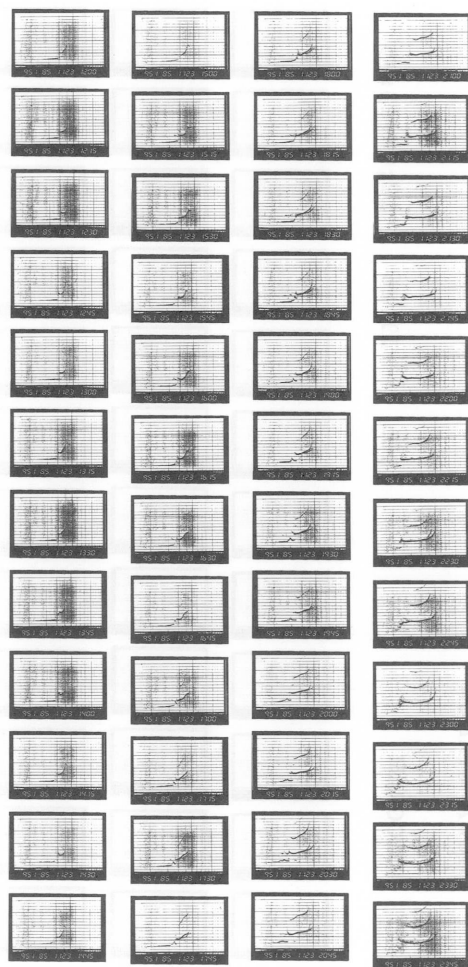
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IONOGRAM

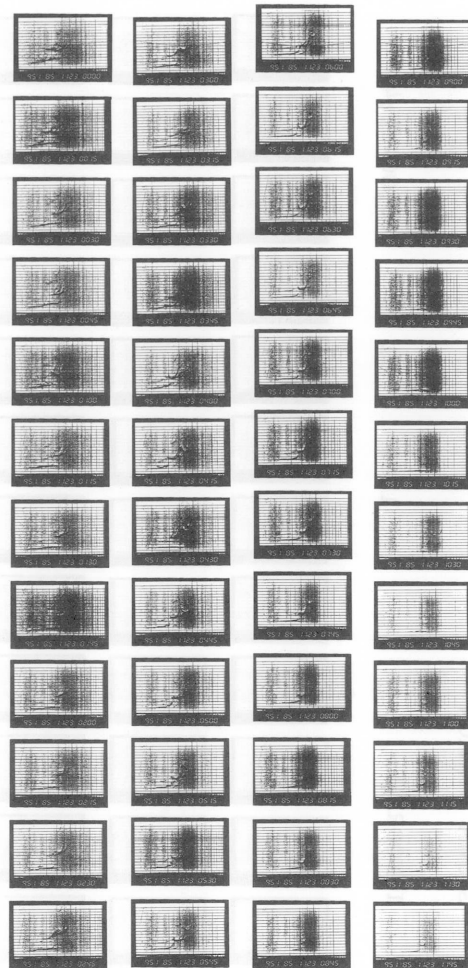
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IONOGRAM

1985 11 23 12:00-23:45



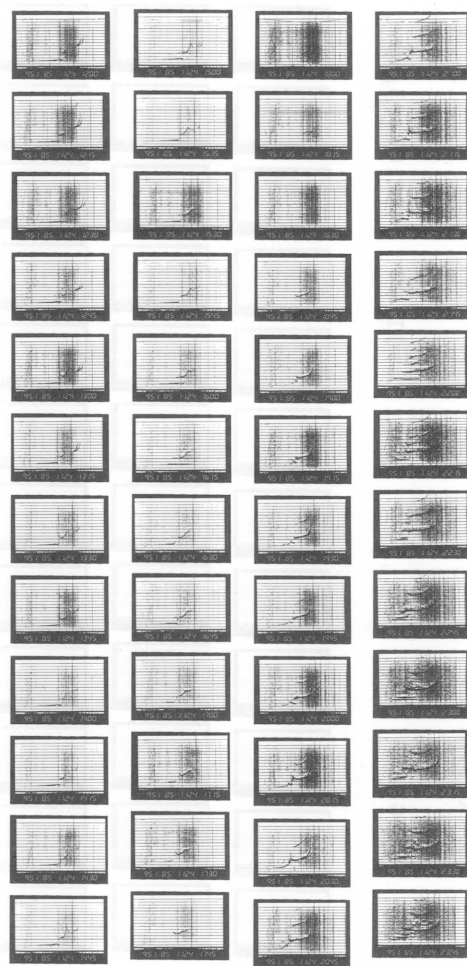
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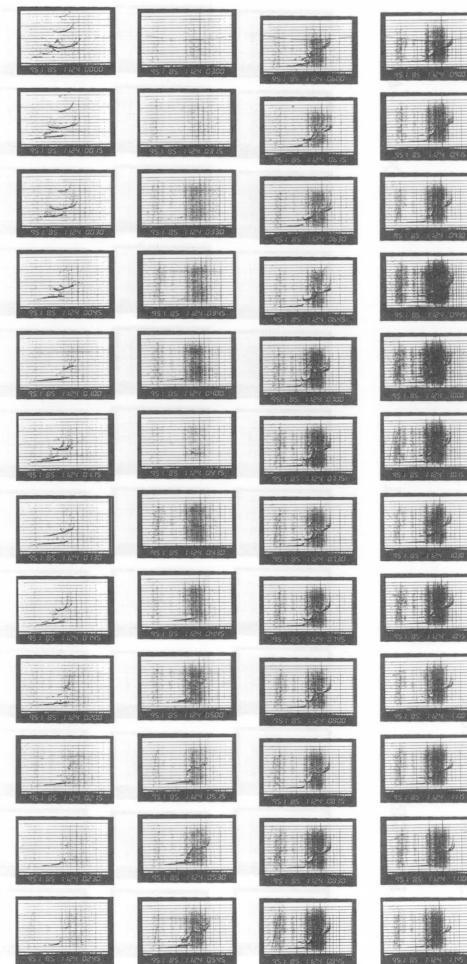
SYOWA STATION

IONOGRAM

1985 11 24 12:00-23:45



1985 11 24 00:00-11:45



SYOWA STATION

IONOGRAM

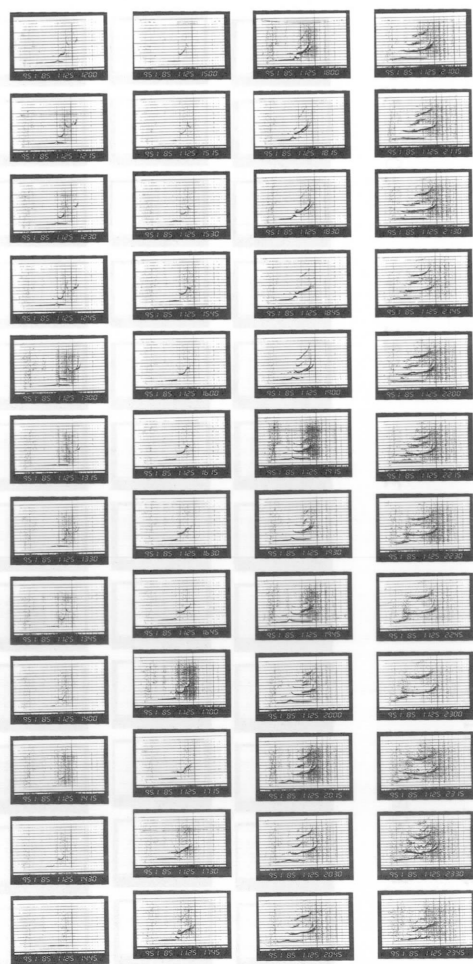
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IONOGRAM

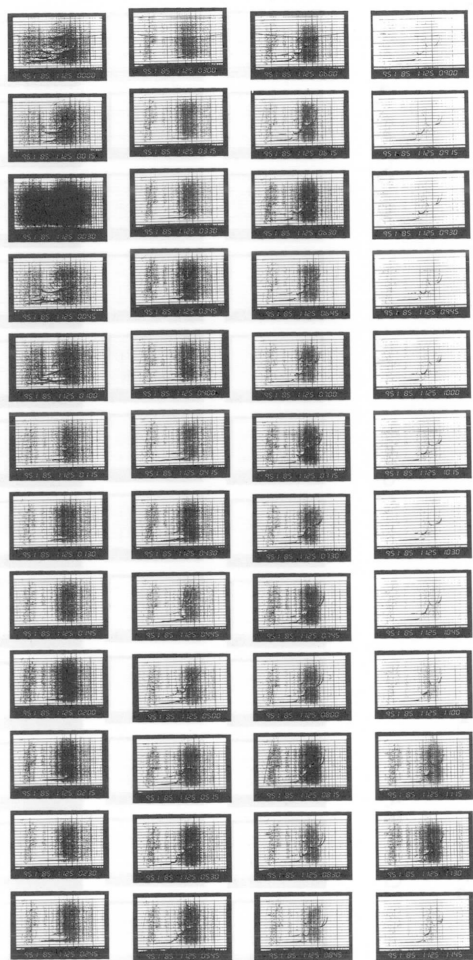
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IONOGRAM

1985 11 25 12:00-23:45



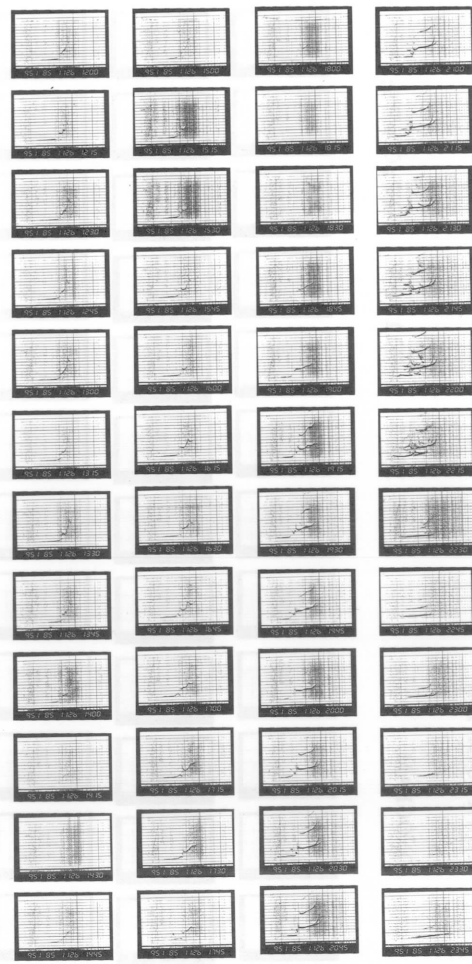
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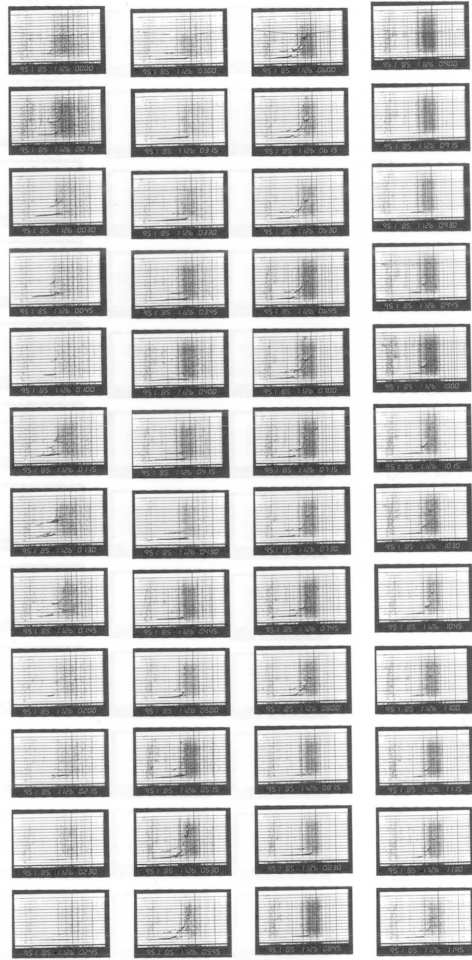
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IONOGRAM

1986 11 26 12:00-23:45



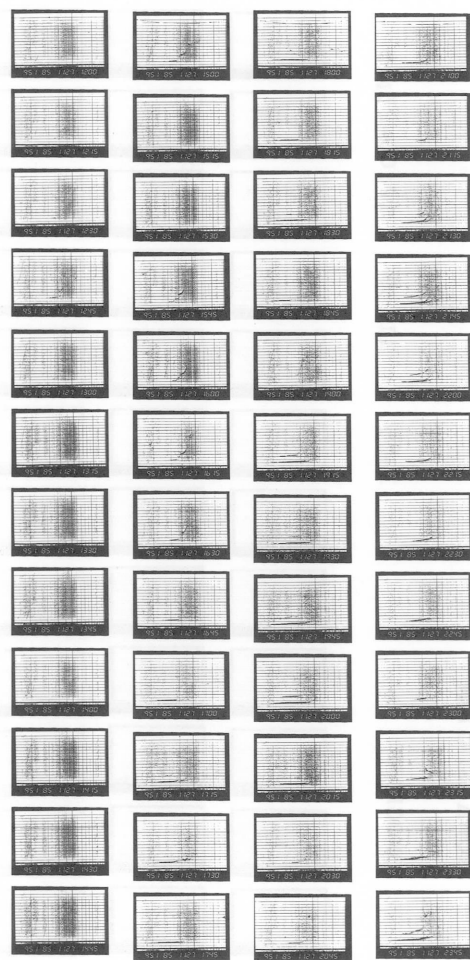
1986 11 26 00:00-11:45



SYOWA STATION

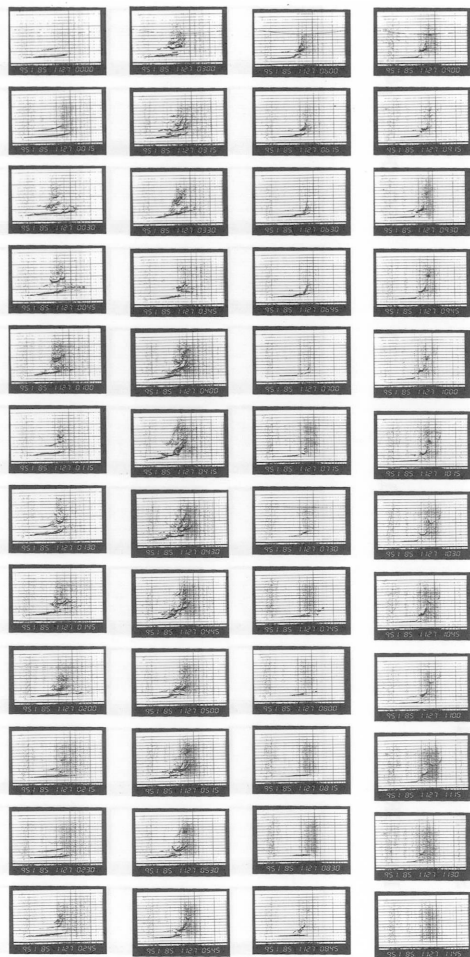
IONOGRAM

1985 11 27 12:00-23:45



SYOWA STATION

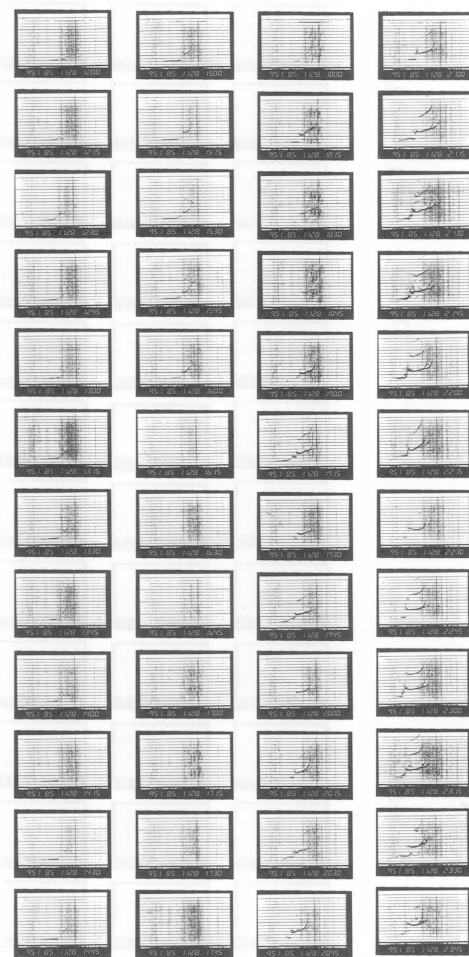
1985 11 27 00:00-11:45



SYOWA STATION

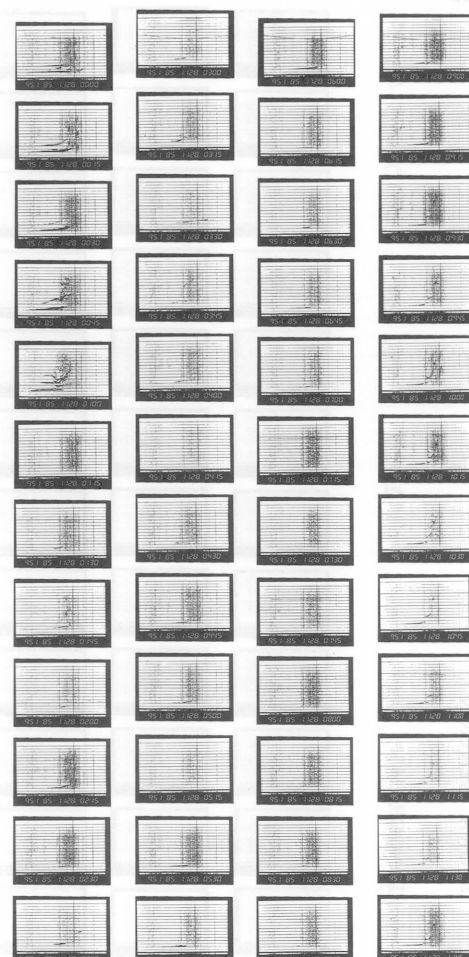
IONOGRAM

1985 11 28 12:00-23:45



SYOWA STATION

1985 11 28 00:00-11:45



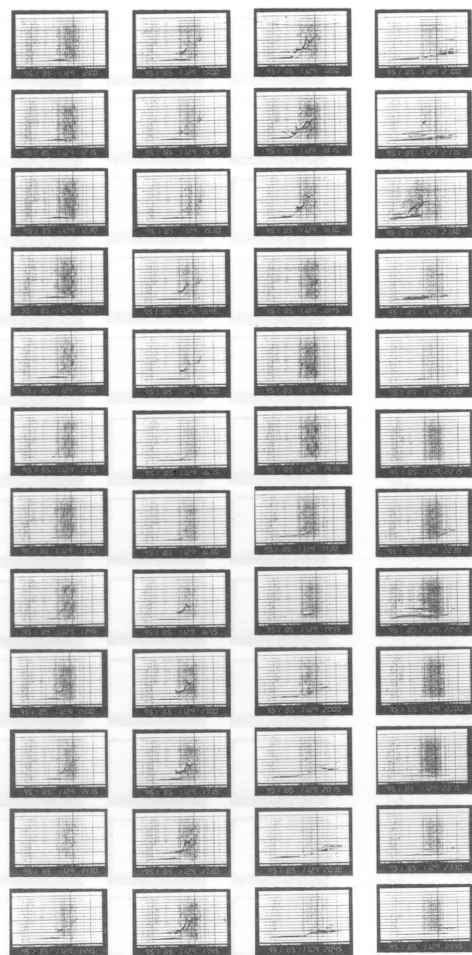
SYOWA STATION

IONOGRAM

1985

11 29

12:00-23:45



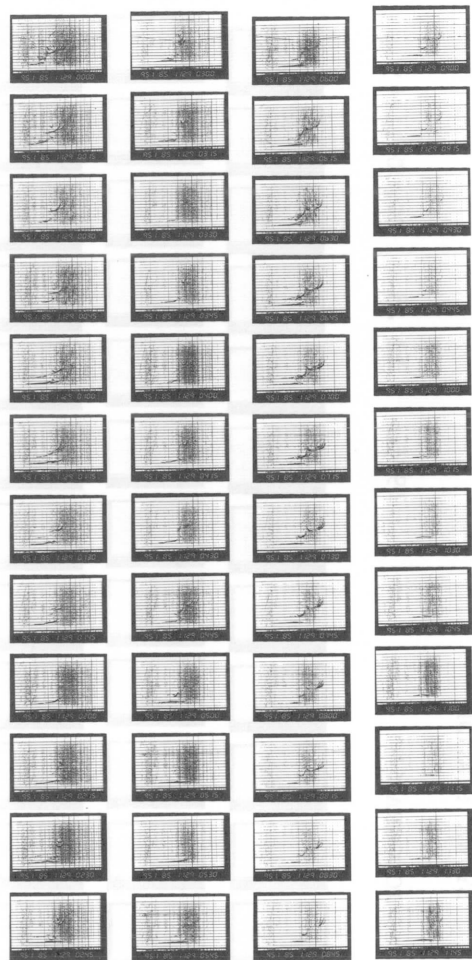
SYOWA STATION

IONOGRAM

1985

11 29

00:00-11:45



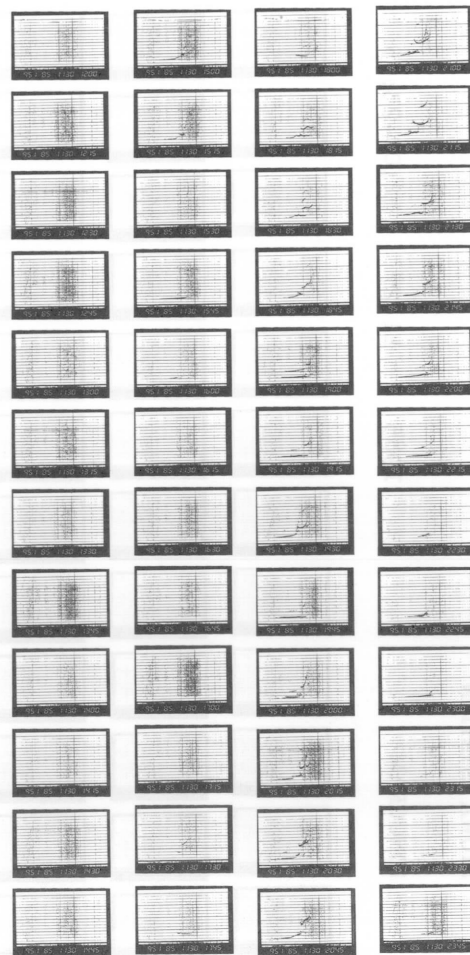
SYOWA STATION

IONOGRAM

1985

11 30

12:00-23:45



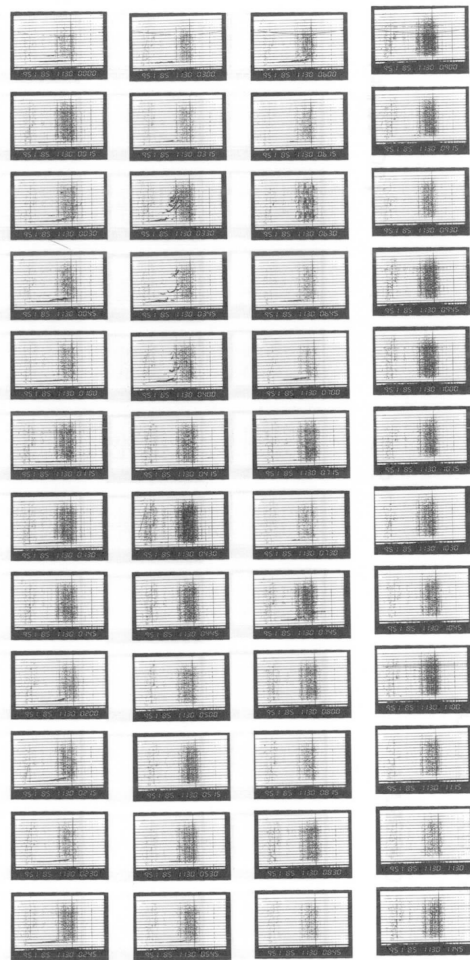
SYOWA STATION

IONOGRAM

1985

11 30

00:00-11:45



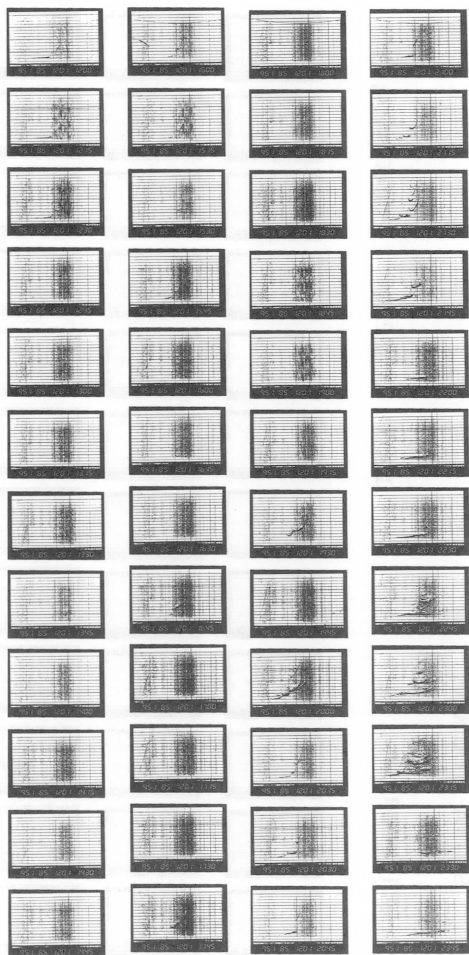
SYOWA STATION

IONOGRAM

1985

12 01

12:00-23:45



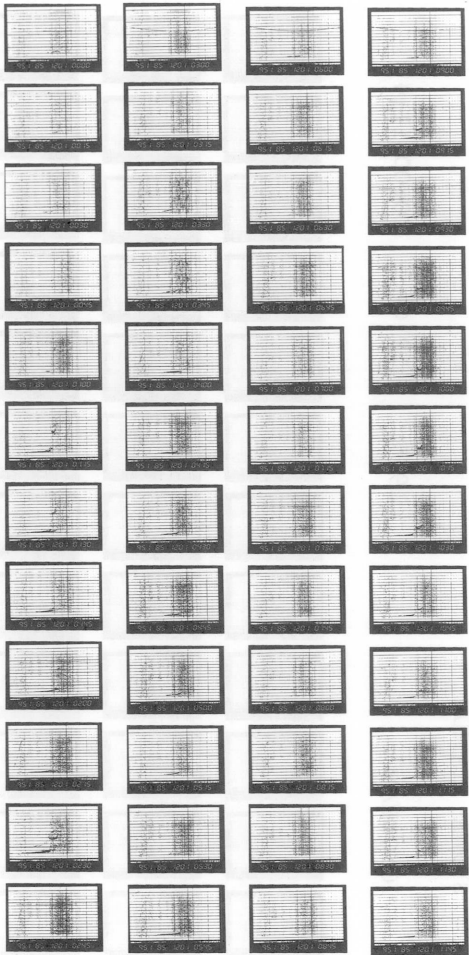
SYOWA STATION

IONOGRAM

1985

12 01

00:00-11:45



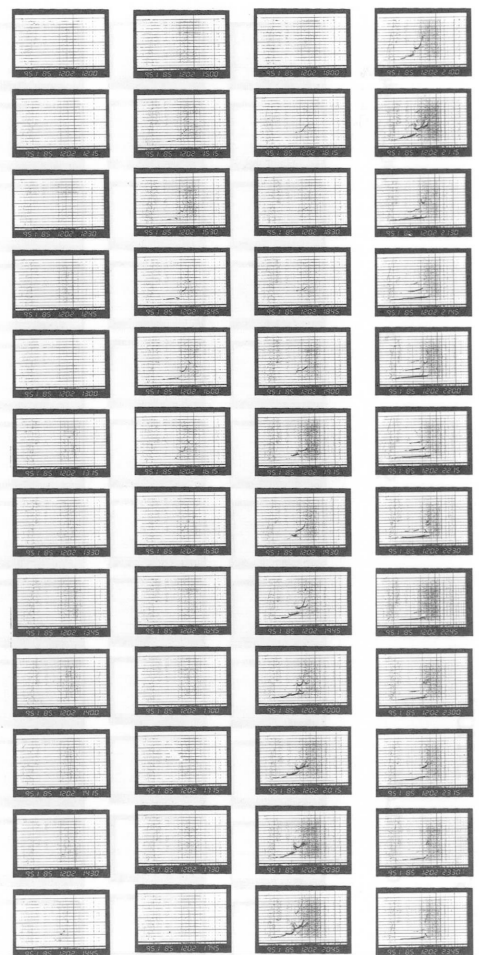
SYOWA STATION

IONOGRAM

1985

12 02

12:00-23:45



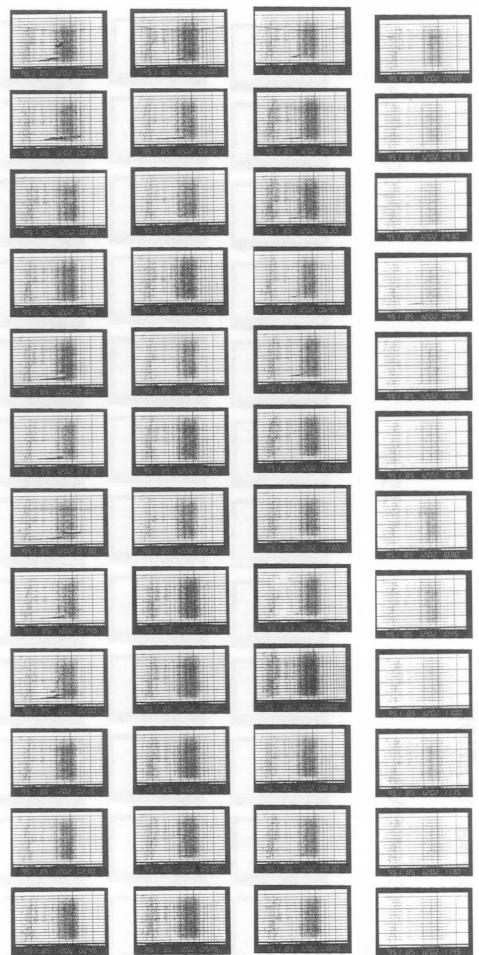
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1985

12 02

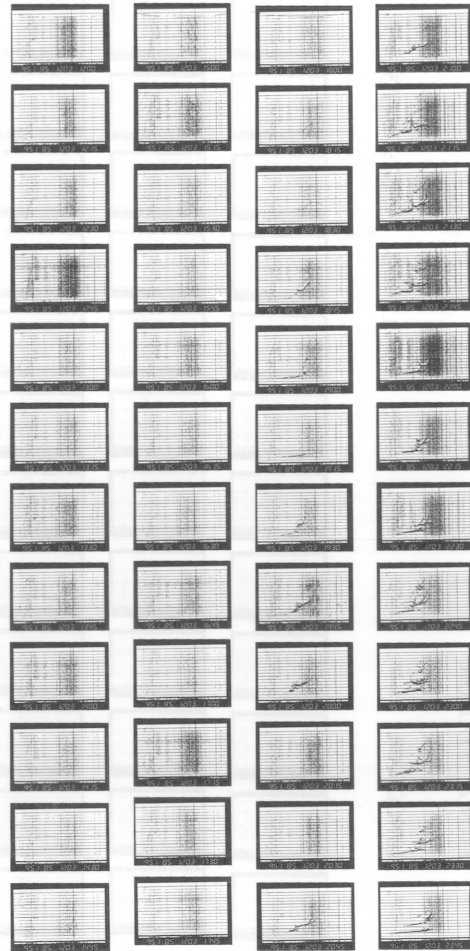
00:00-11:45



SYOWA STATION

IONOGRAM

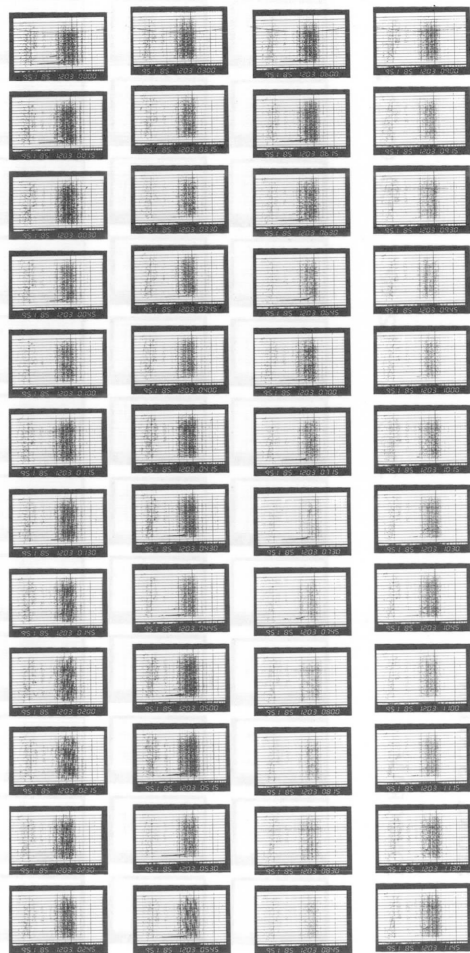
1985 12 03 12:00-23:45



SYOWA STATION

IONOGRAM

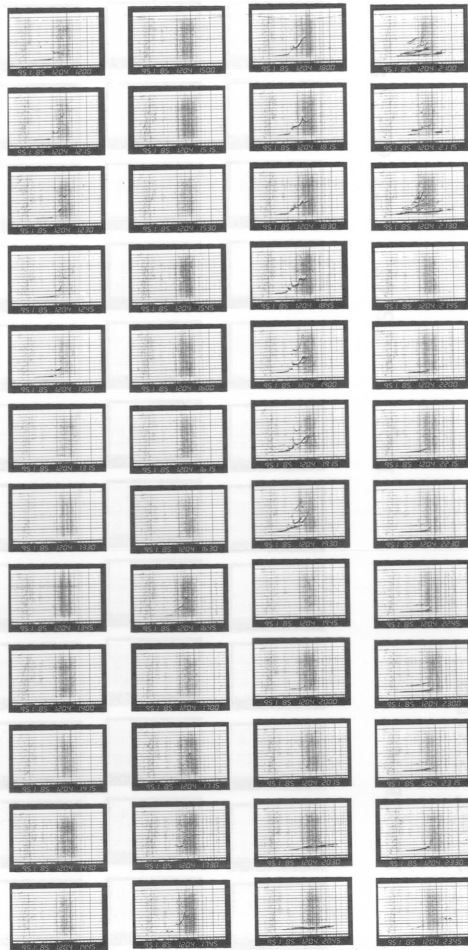
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SYOWA STATION

IONOGRAM

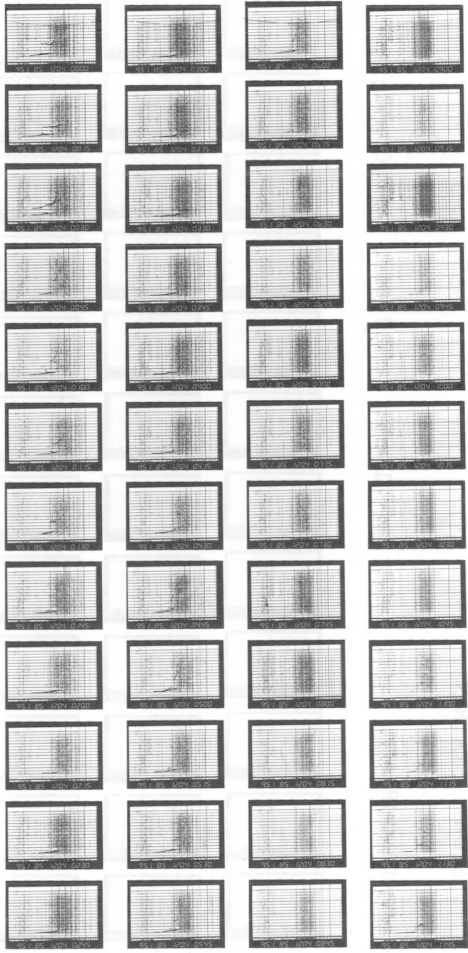
1985 12 04 12:00-23:45



SYOWA STATION

IONOGRAM

1985 12 04 00:00-11:45



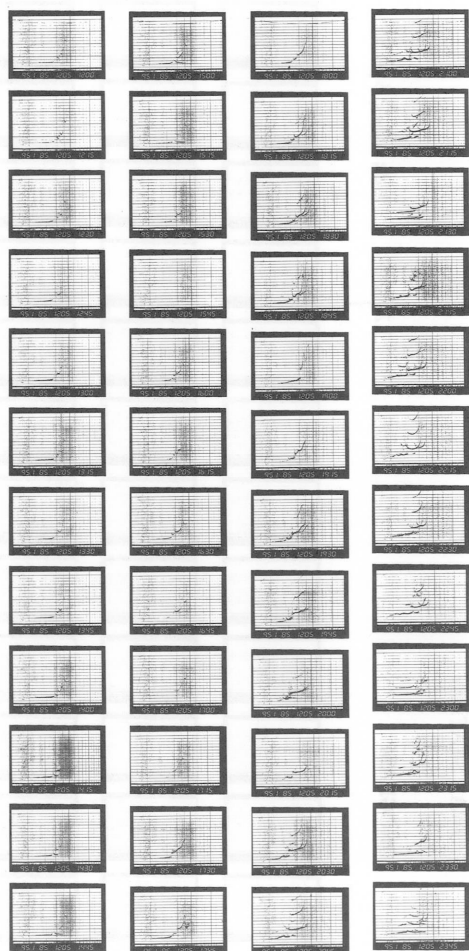
SYOWA STATION

IONOGRAM

1985

12 05

12:00-23:45



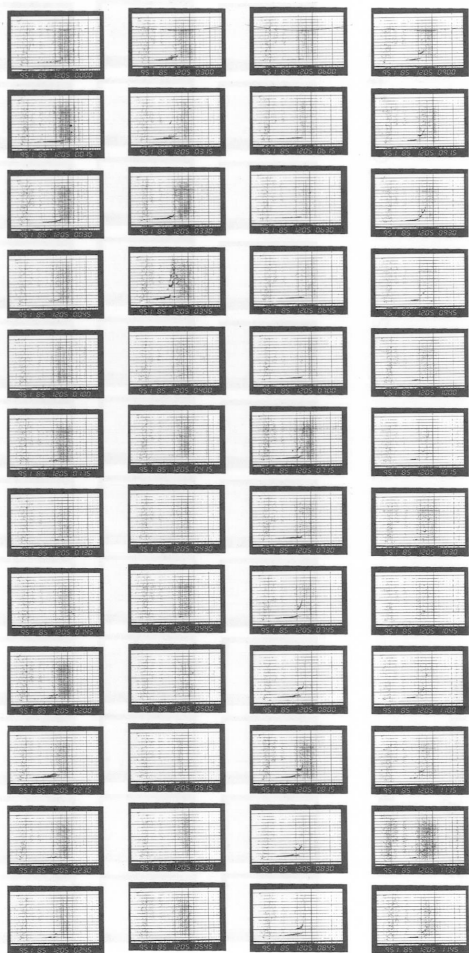
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1985

12 05

00:00-11:45



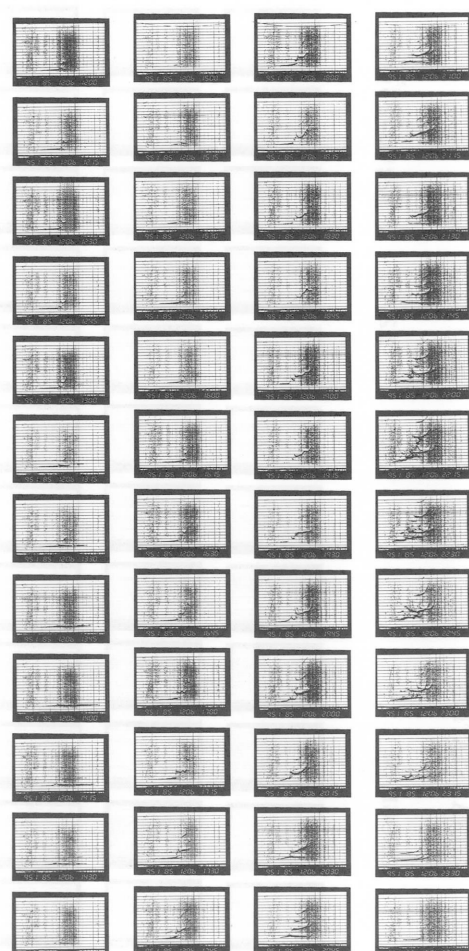
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1985

12 06

12:00-23:45



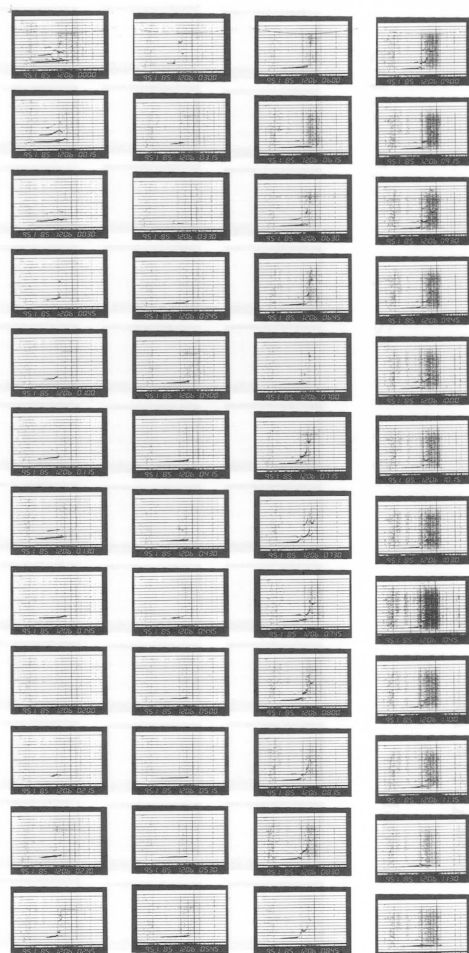
SYOWA STATION

IONOGRAM

1985

12 06

00:00-11:45



SYOWA STATION

IONOGRAM

1985

12 07

12:00-23:45



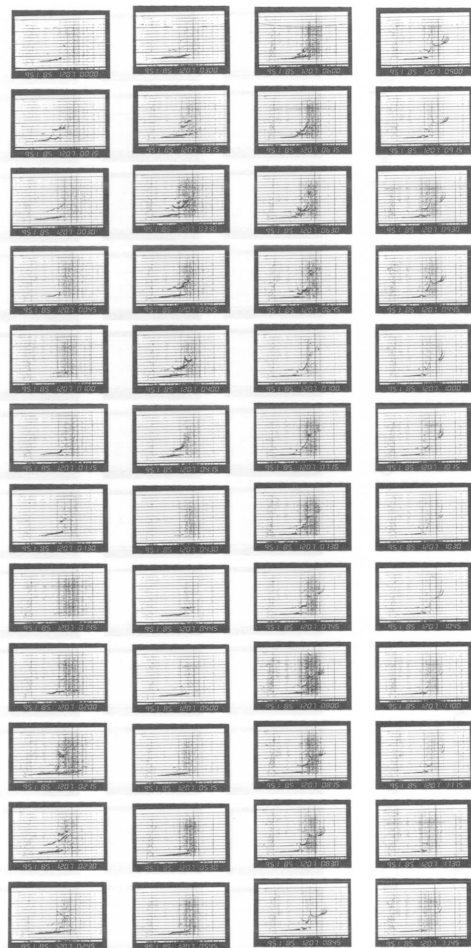
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1985

12 07

00:00-11:45



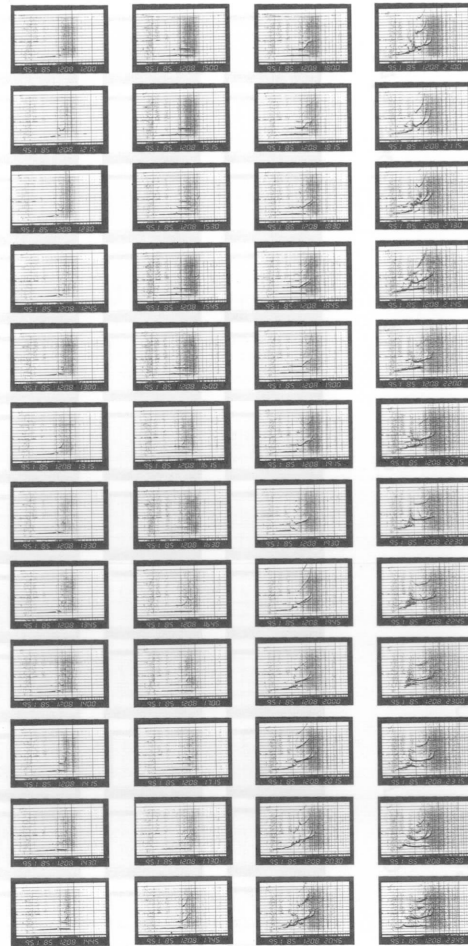
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1985

12 08

12:00-23:45



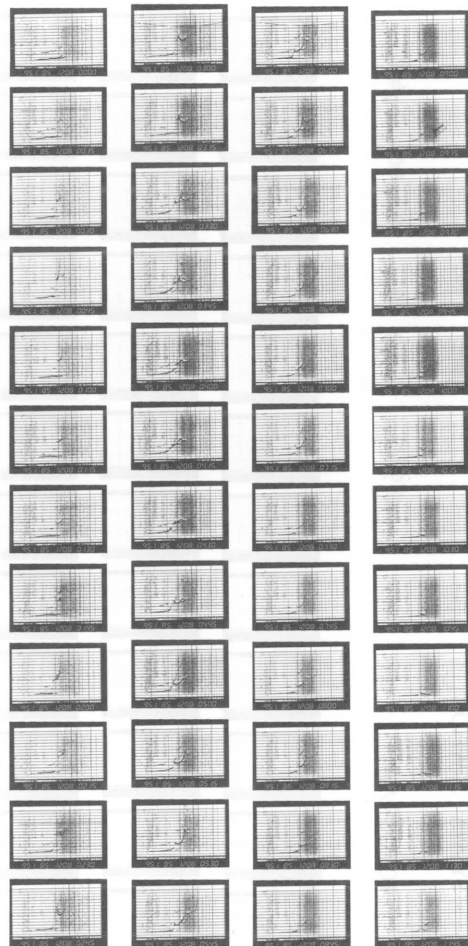
SYOWA STATION

IONOGRAM

1985

12 08

00:00-11:45



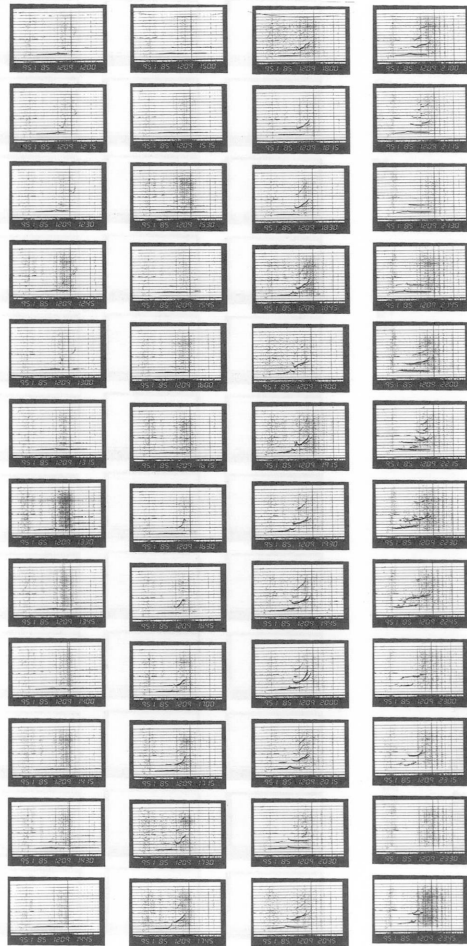
SYOWA STATION

IONOGRAM

1985

12 09

12:00-23:45



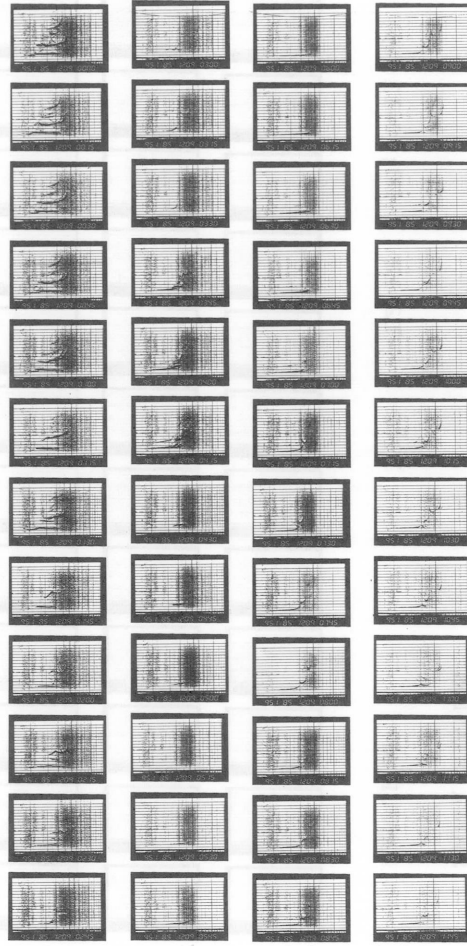
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IONOGRAM

1985

12 09

00:00-11:45



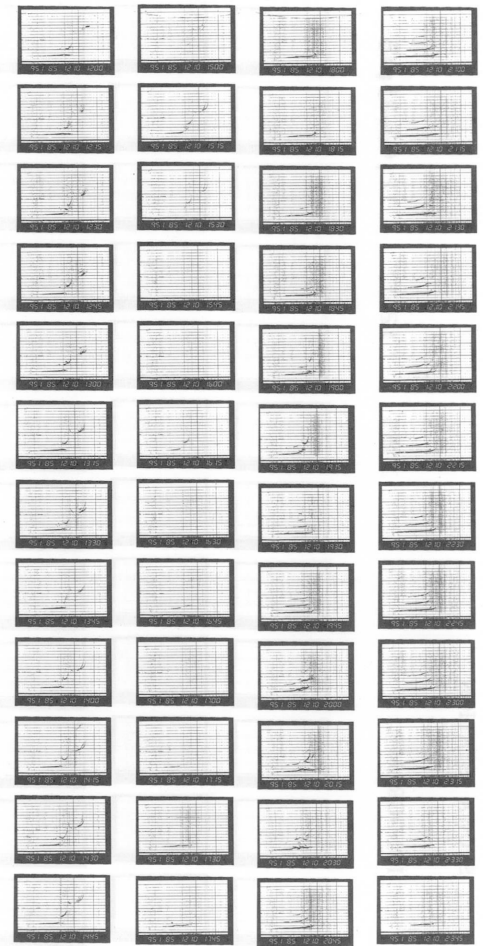
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1985

12 10

12:00-23:45



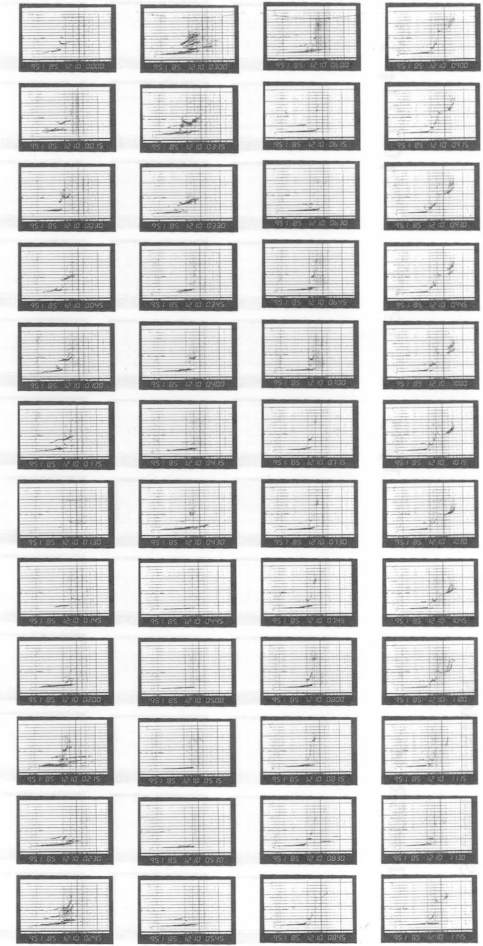
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IONOGRAM

1985

12 10

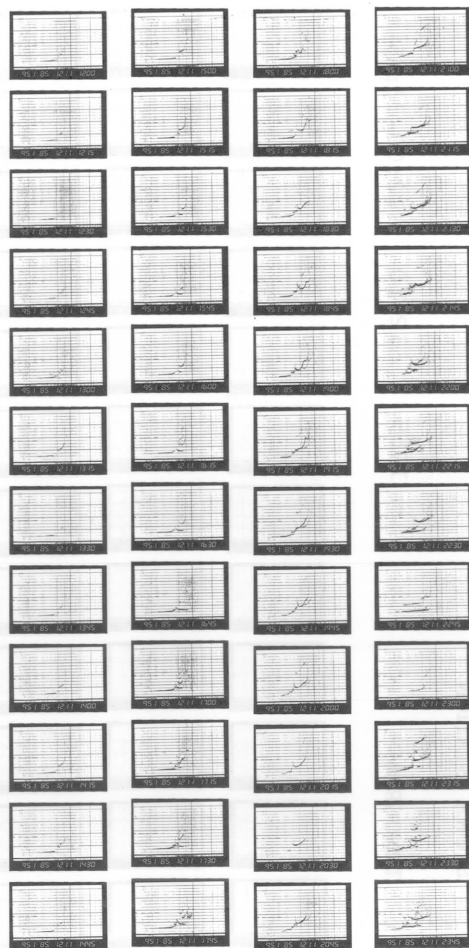
00:00-11:45



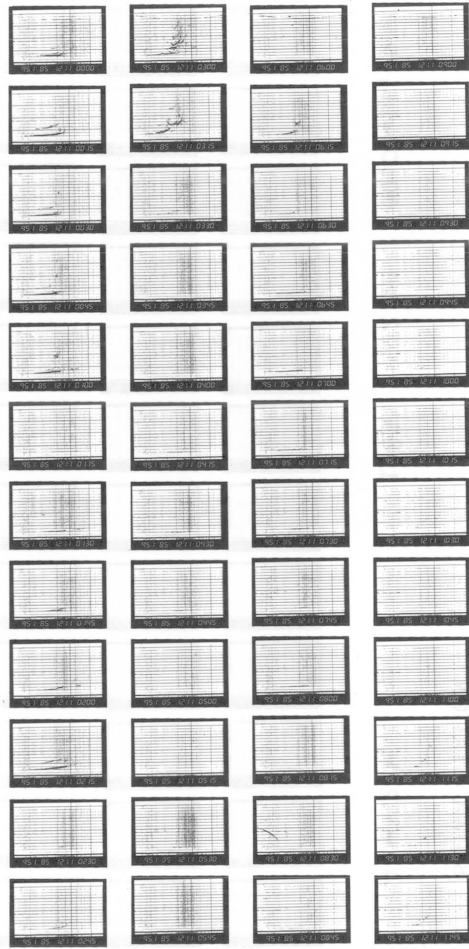
SYOWA STATION

IONOGRAM

1985 12 11 12:00-23:45



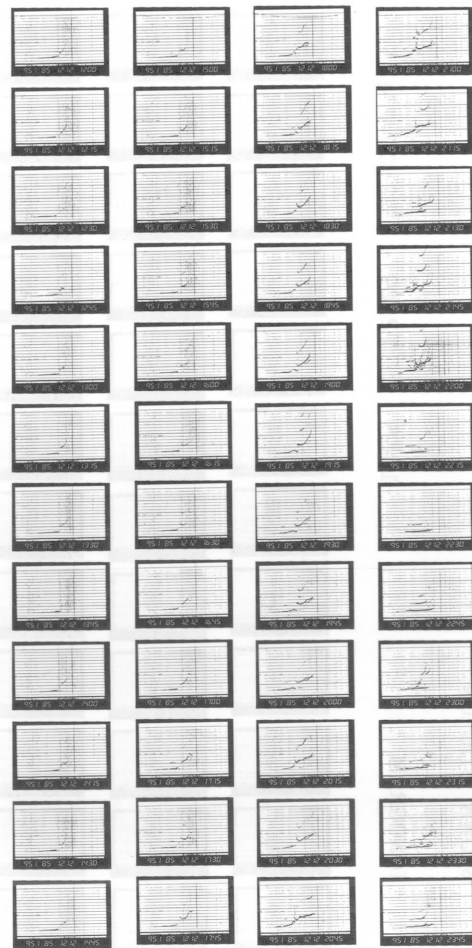
1985 12 11 00:00-11:45



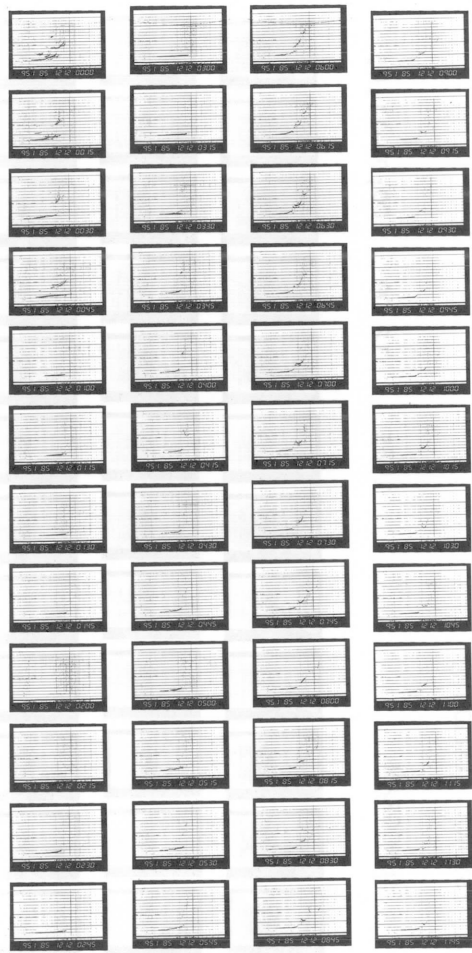
SYOWA STATION

IONOGRAM

1985 12 12 12:00-23:45



1985 12 12 00:00-11:45



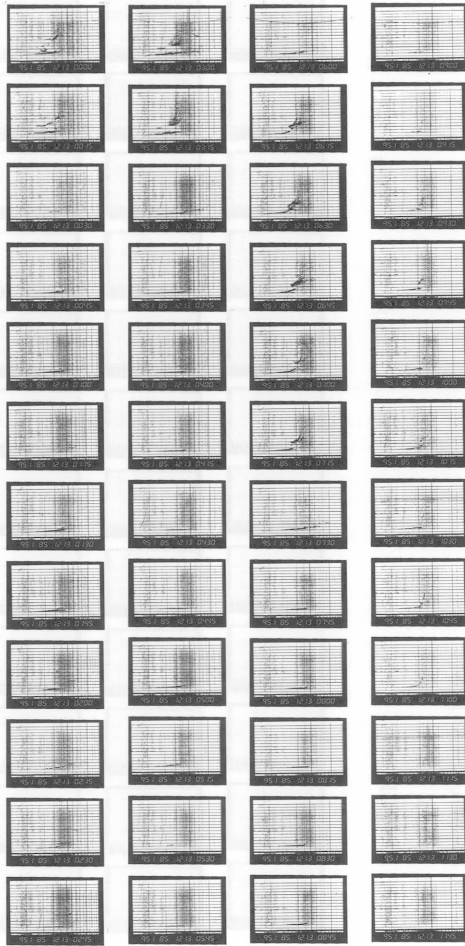
SYOWA STATION

IONOGRAM

00:00-11:45

12 13

1985



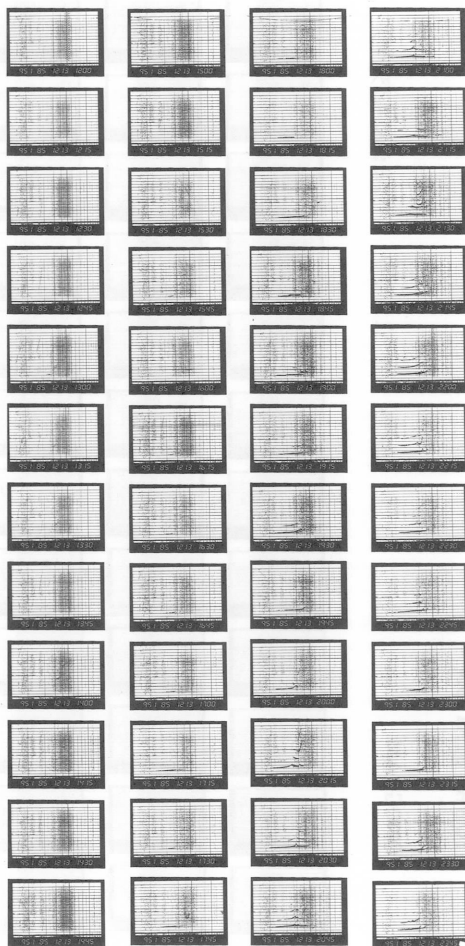
SYOWA STATION

IONOGRAM

12:00-23:45

12 13

1985



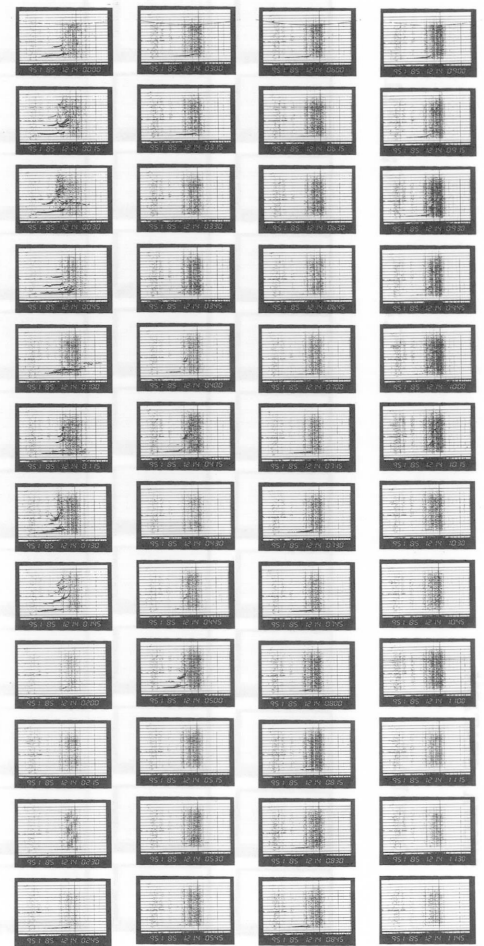
SYOWA STATION

IONOGRAM

00:00-11:45

12 14

1985



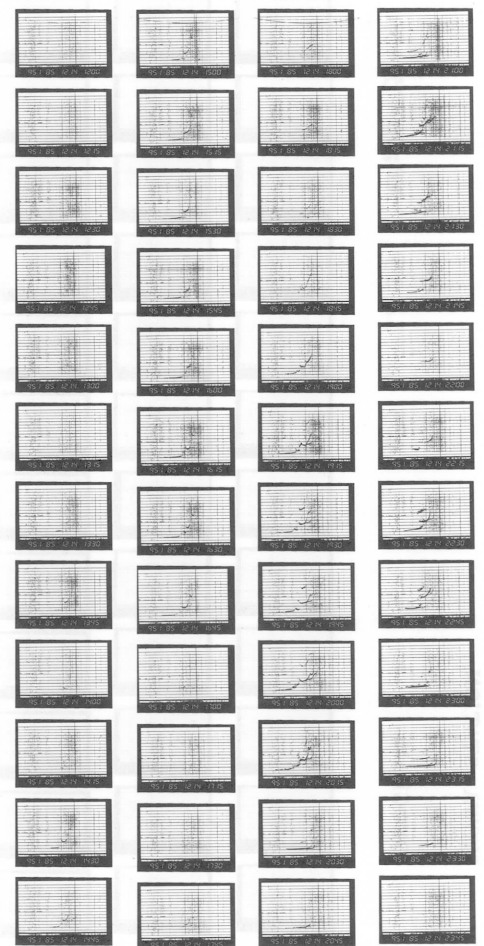
SYOWA STATION

IONOGRAM

12:00-23:45

12 14

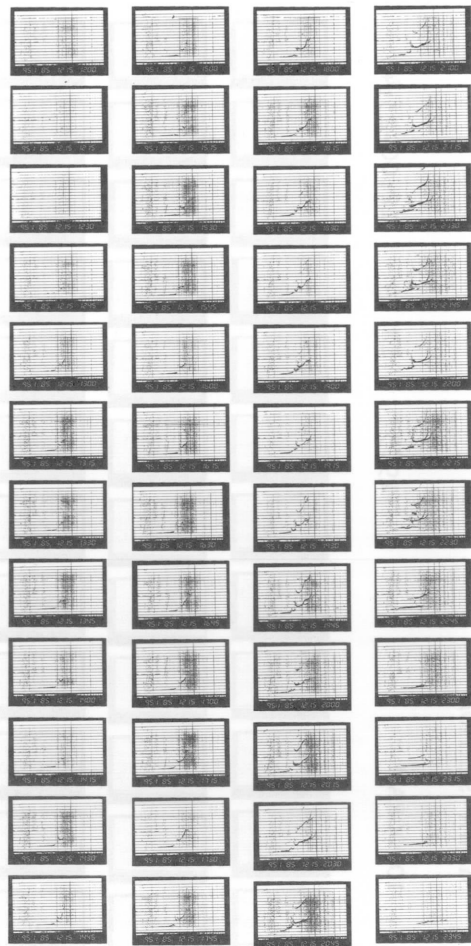
1985



SYOWA STATION

IONOGRAM

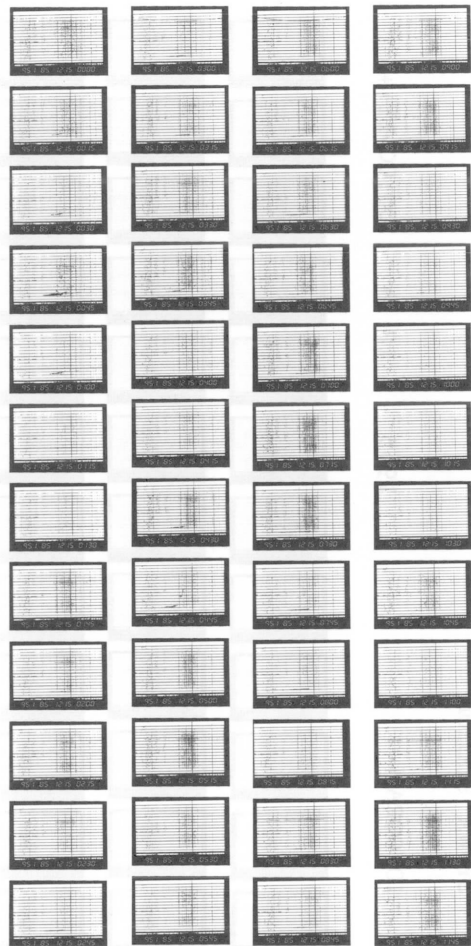
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SYOWA STATION

IONOGRAM

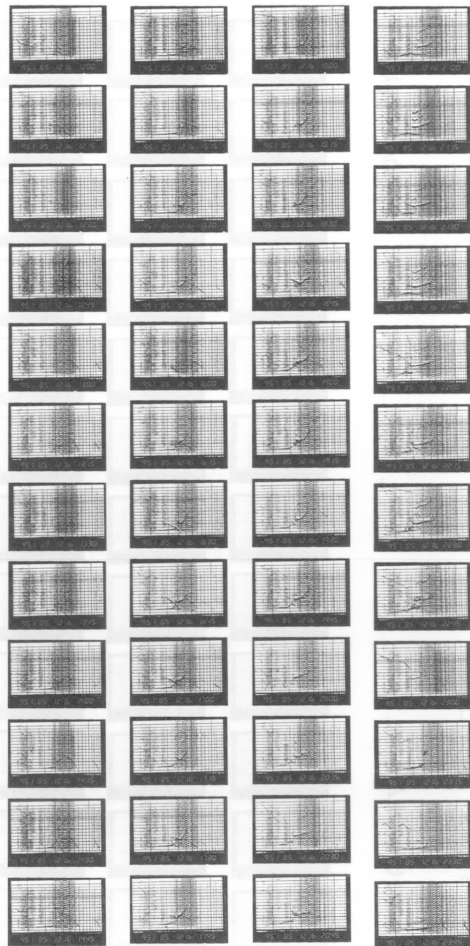
1985 12 15 00:00-11:45



SYOWA STATION

IONOGRAM

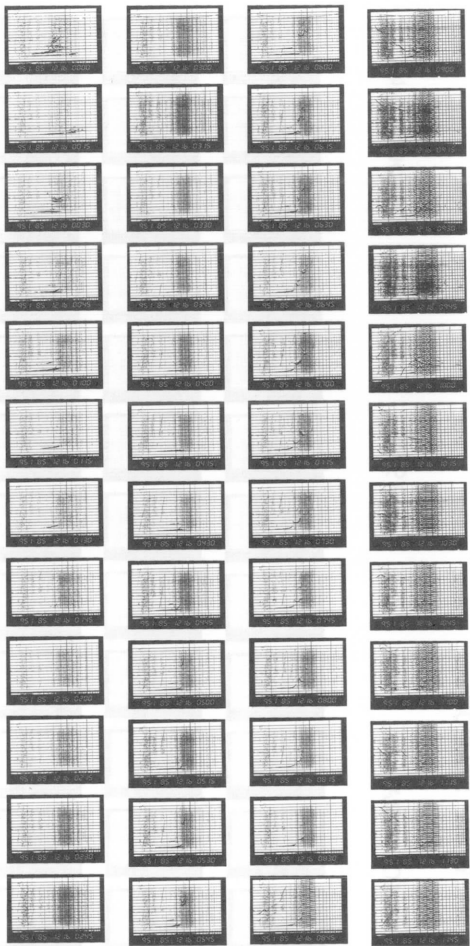
1985 12 16 12:00-23:45



SYOWA STATION

IONOGRAM

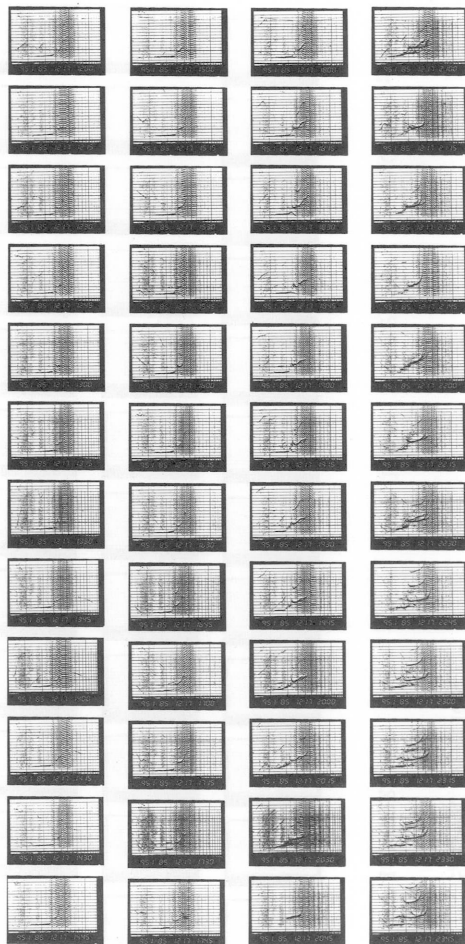
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SYOWA STATION

IONOGRAM

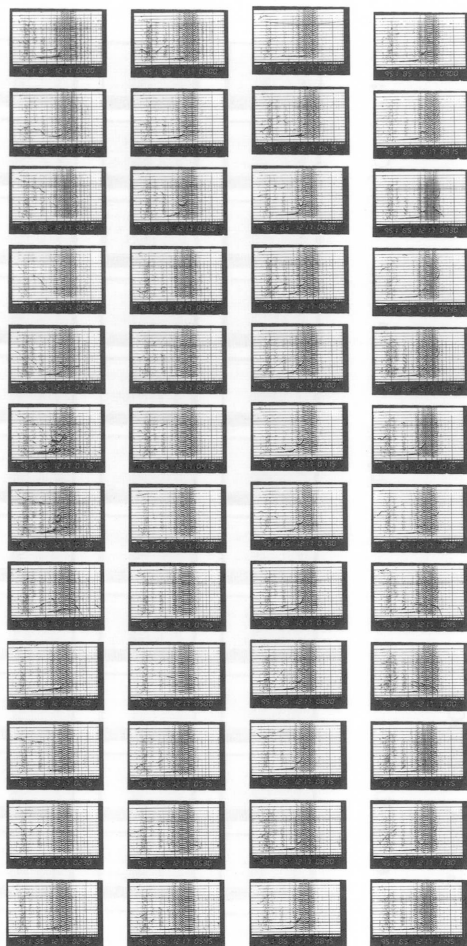
1985 12 17 12:00-23:45



SYOWA STATION

IONOGRAM

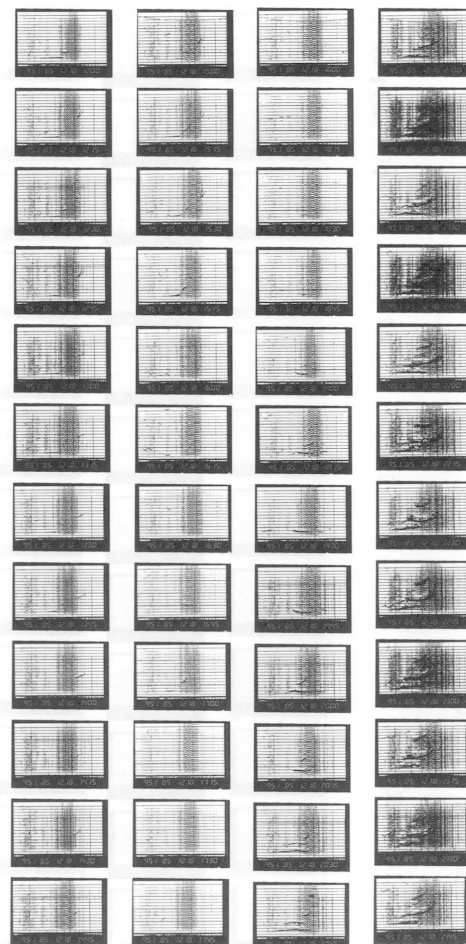
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SYOWA STATION

IONOGRAM

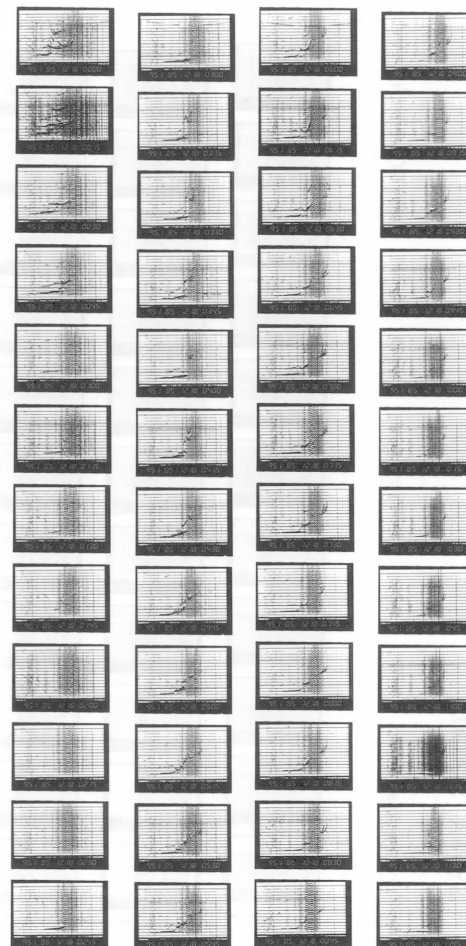
1985 12 18 12:00-23:45



SYOWA STATION

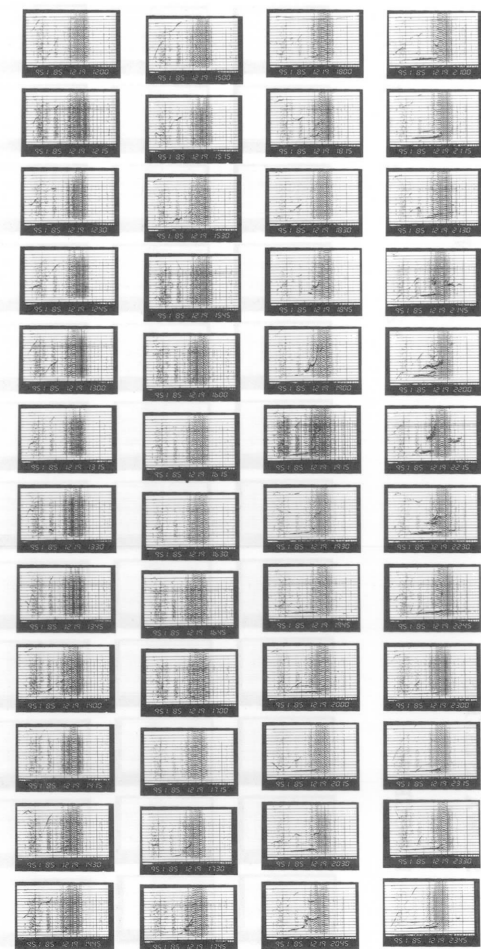
IONOGRAM

1985 12 18 00:00-11:45



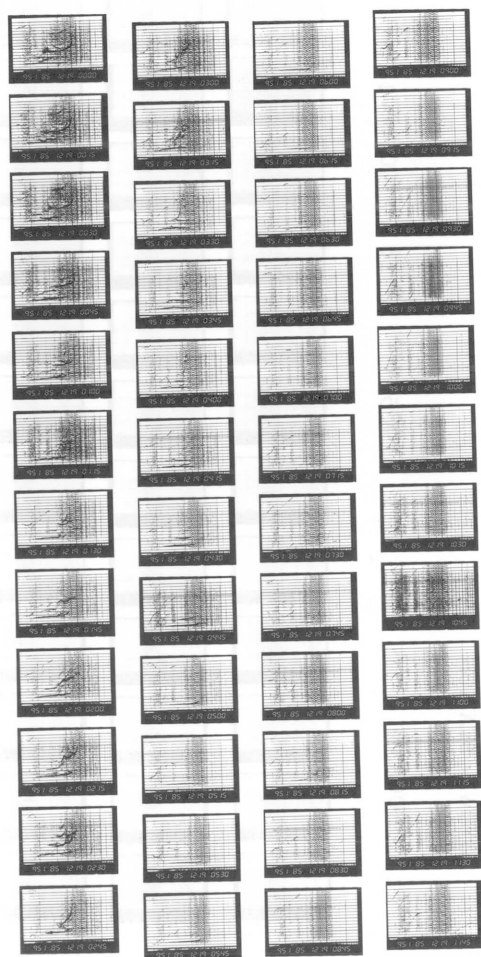
SYOWA STATION

IONOGRAM



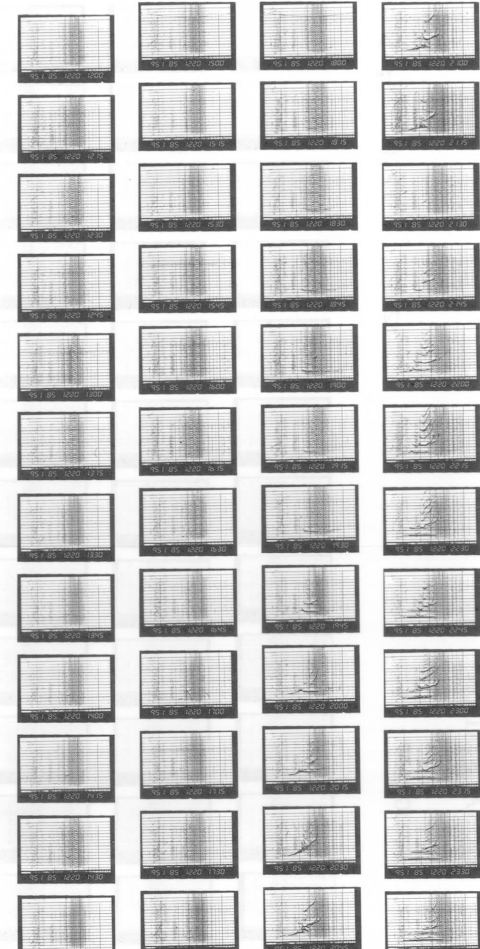
SYOWA STATION

IONOGRAM



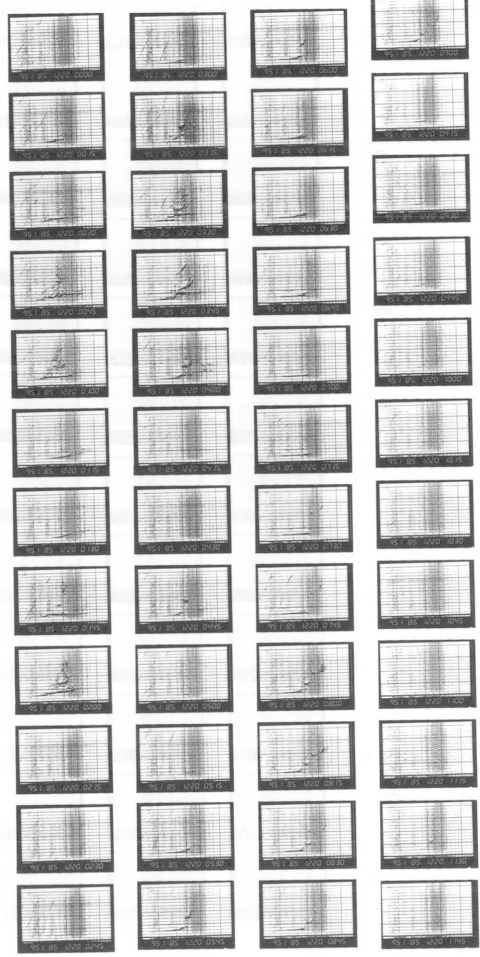
SYOWA STATION

IONOGRAM



SYOWA STATION

IONOGRAM



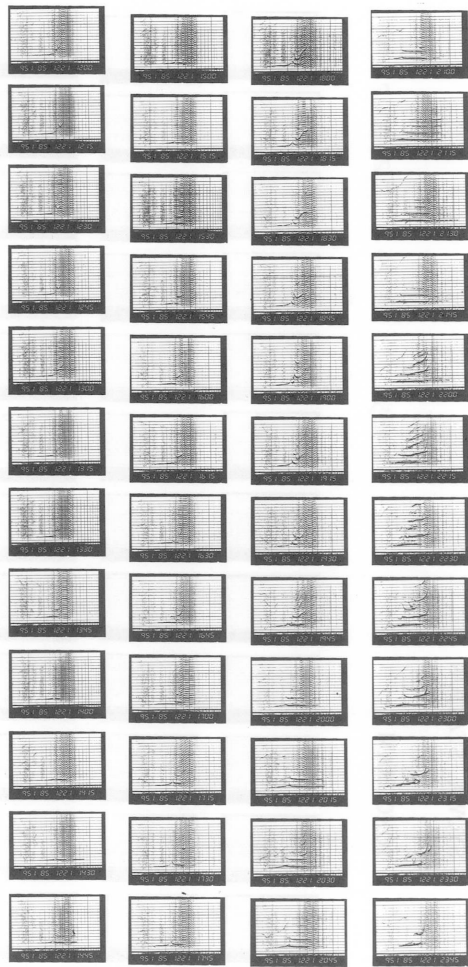
SYOWA STATION

IONOGRAM

1985

12 21

12:00-23:45



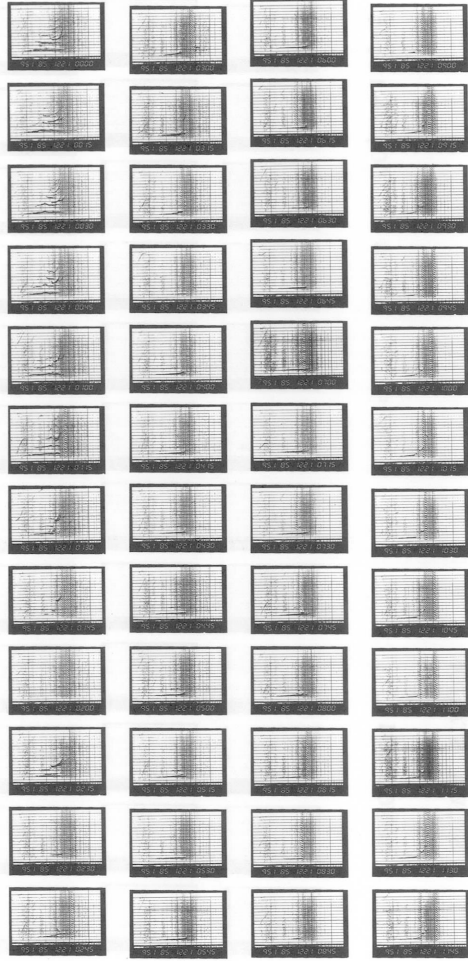
SYOWA STATION

IONOGRAM

1985

12 21

00:00-11:45



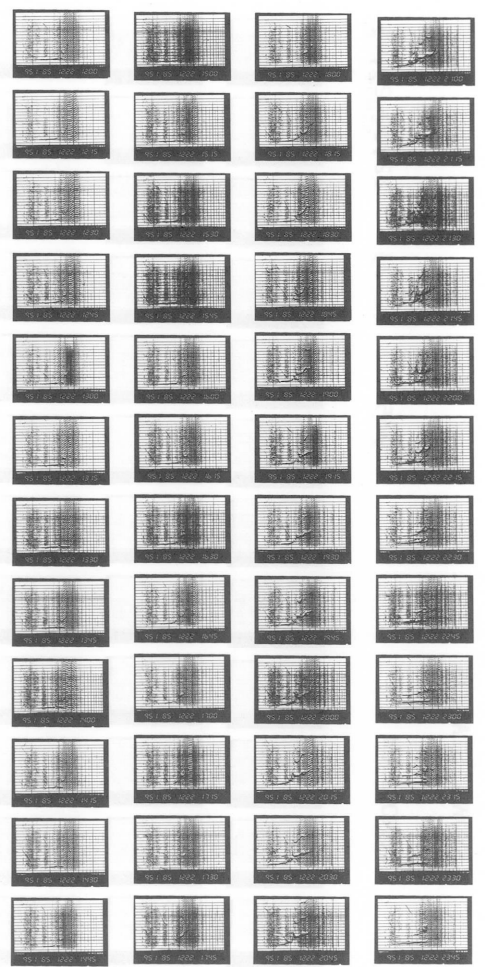
SYOWA STATION

IONOGRAM

1985

12 22

12:00-23:45



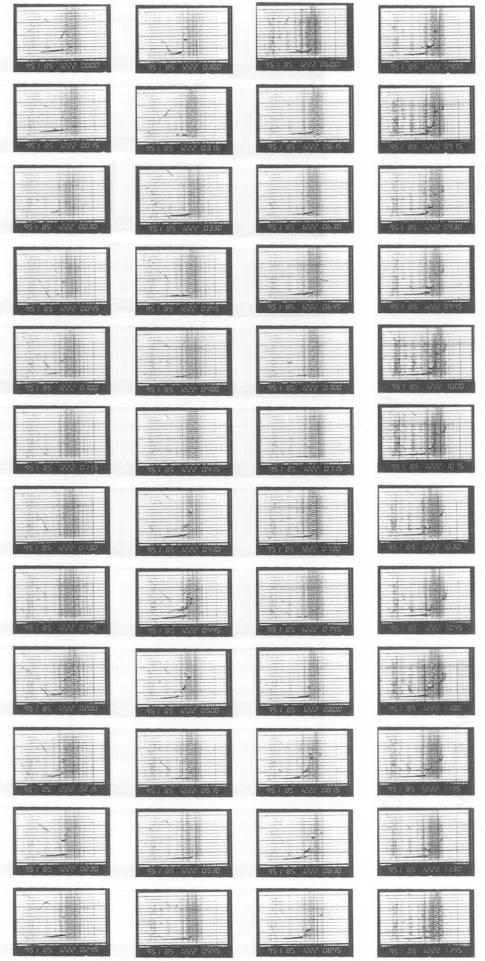
SYOWA STATION

IONOGRAM

1985

12 22

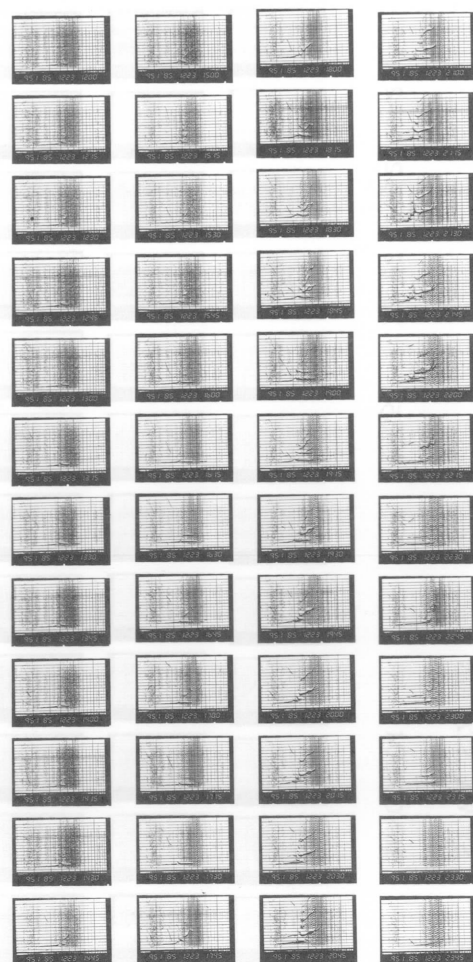
00:00-11:45



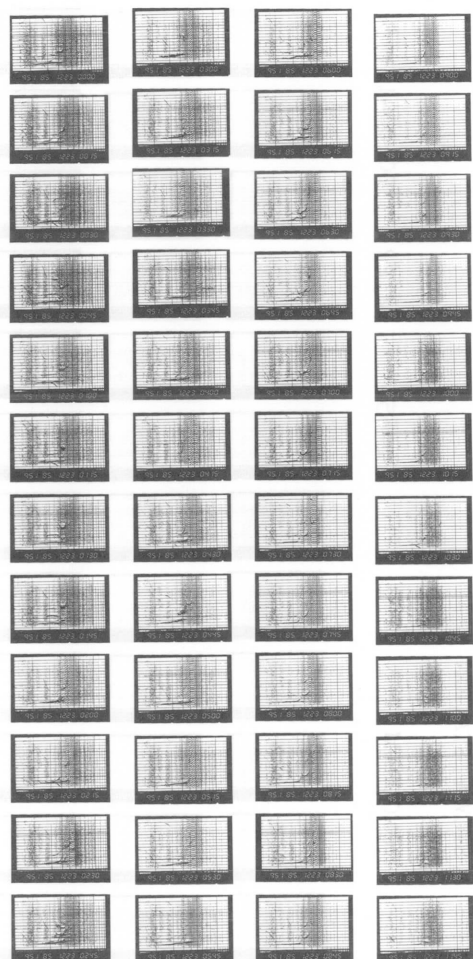
SYOWA STATION

IONOGRAM

1985 12 23 12:00-23:45



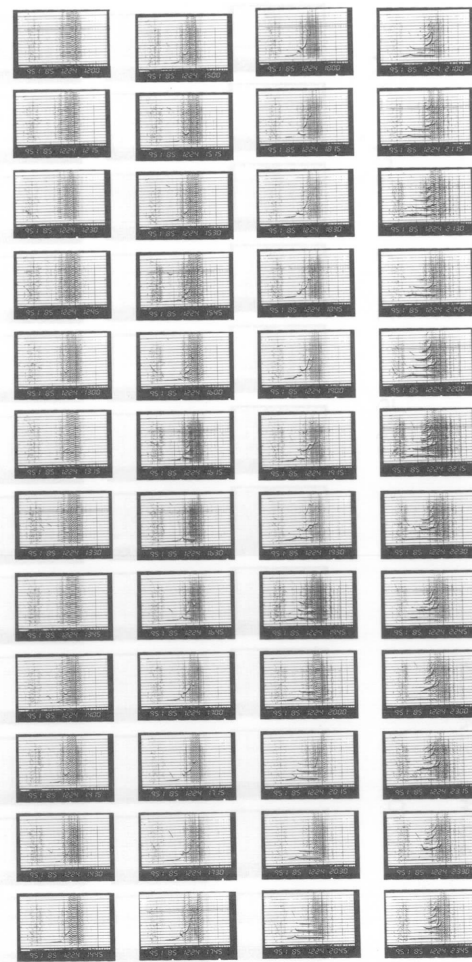
1985 12 23 00:00-11:45



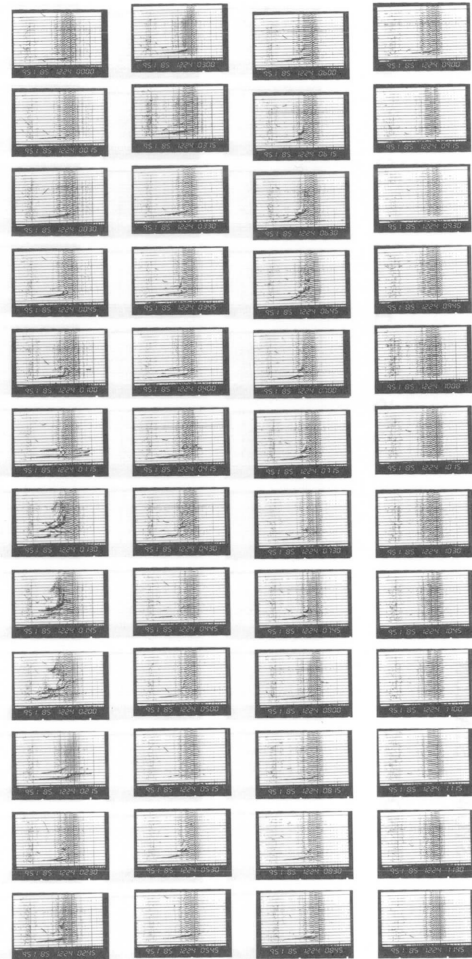
SYOWA STATION

IONOGRAM

1985 12 24 12:00-23:45



1985 12 24 00:00-11:45



SYOWA STATION

IONOGRAM

SYOWA STATION

IONOGRAM

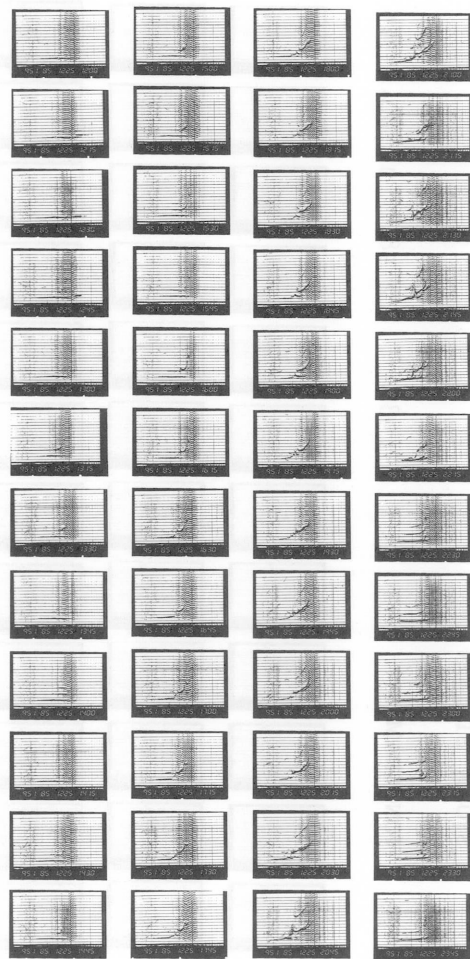
SYOWA STATION

IONOGRAM

1985

12 25

12:00-23:45



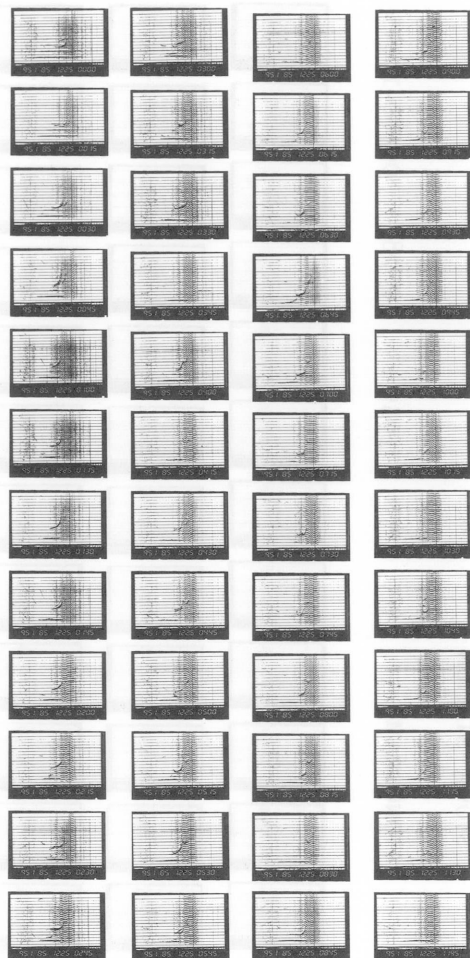
SYOWA STATION

IONOGRAM

1985

12 25

00:00-11:45



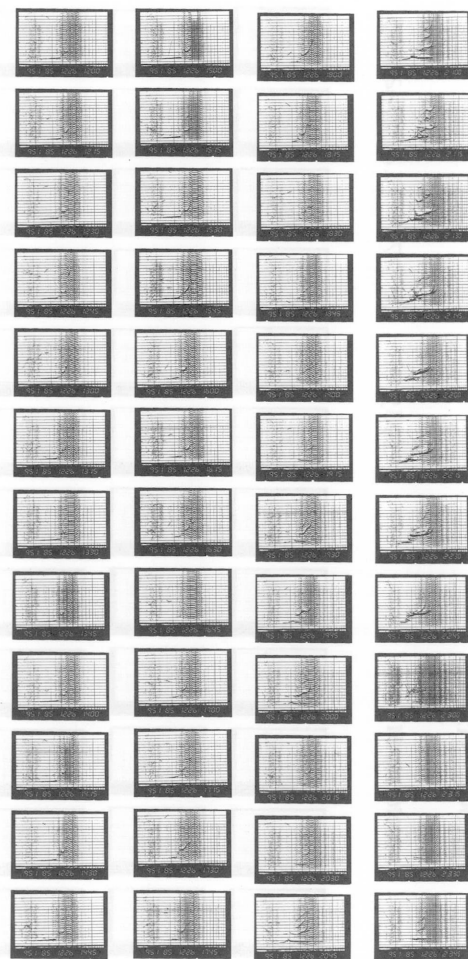
SYOWA STATION

IONOGRAM

1985

12 26

12:00-23:45



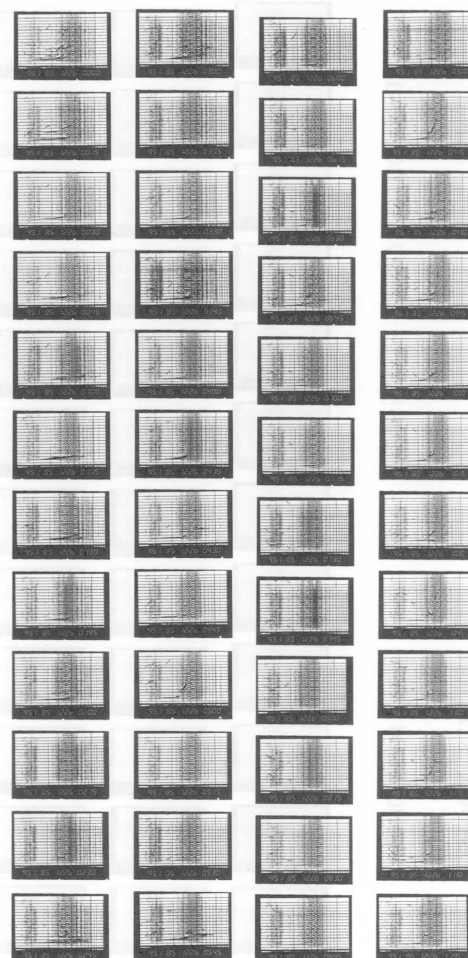
SYOWA STATION

IONOGRAM

1985

12 26

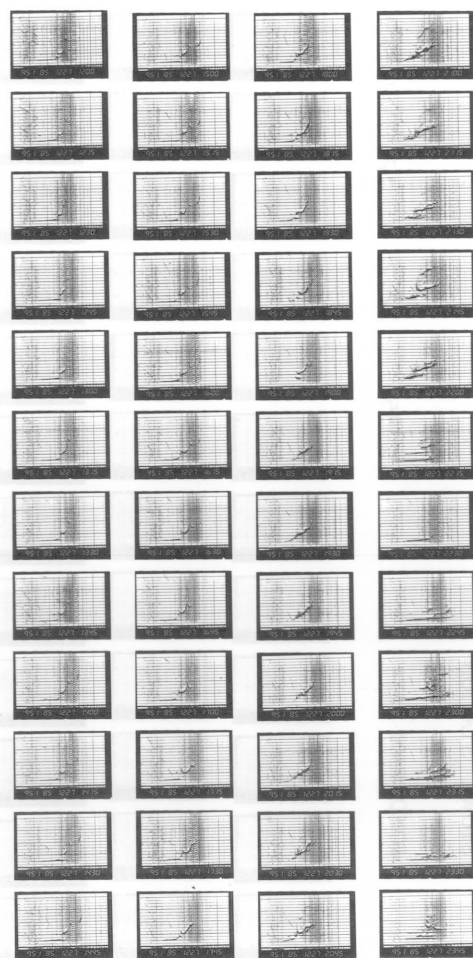
00:00-11:45



SYOWA STATION

IONOGRAM

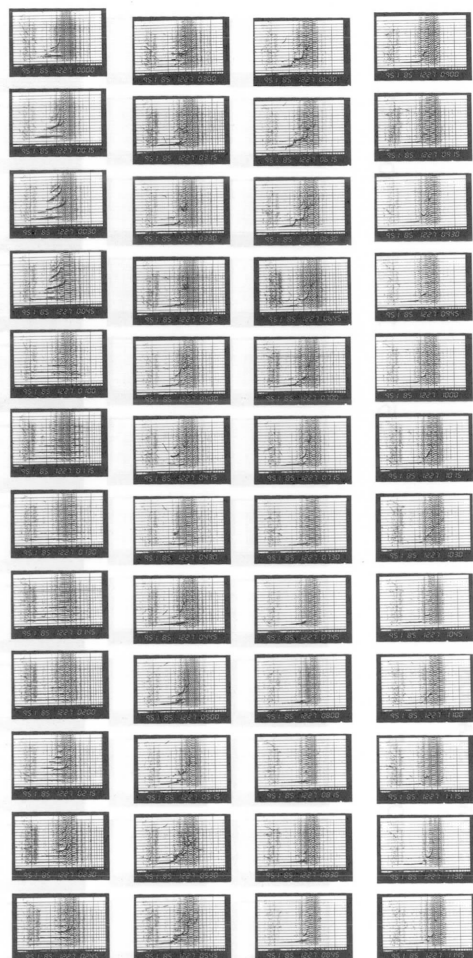
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SYOWA STATION

IONOGRAM

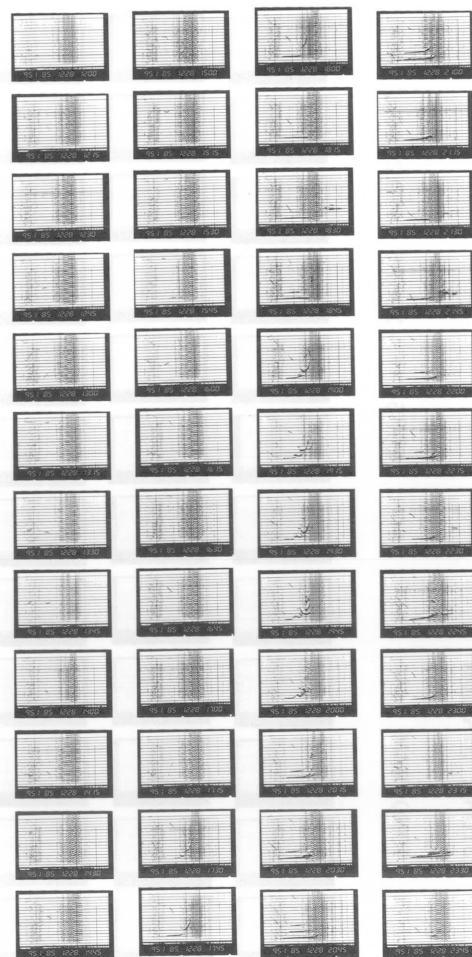
1985 12 27 00:00-11:45



SYOWA STATION

IONOGRAM

1985 12 28 12:00-23:45



SYOWA STATION

IONOGRAM

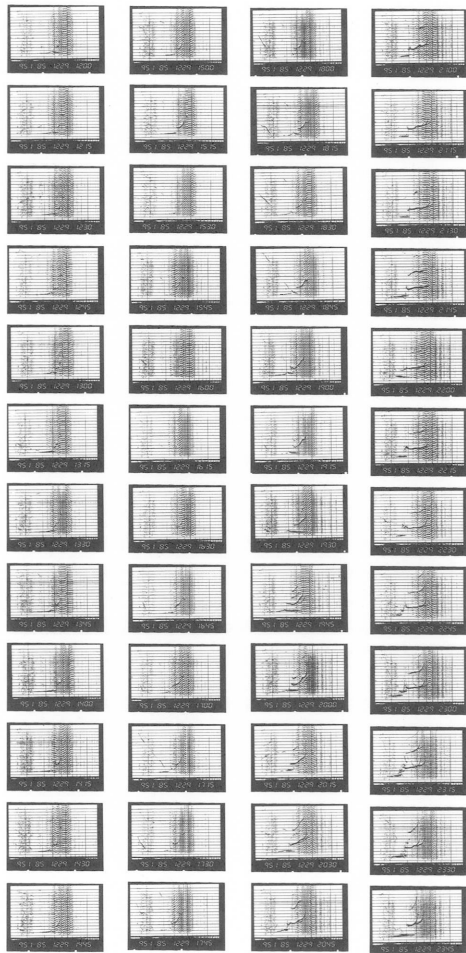
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SYOWA STATION

IONOGRAM

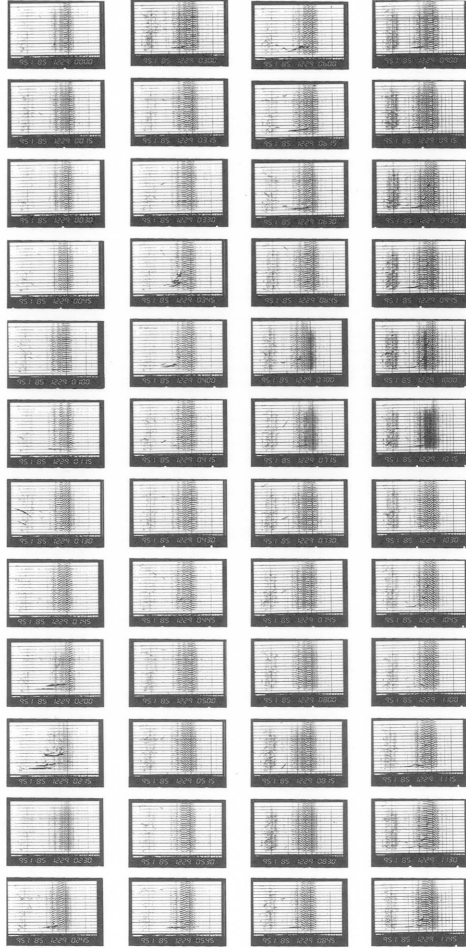
1985 12 29 12:00-23:45



SYOWA STATION

IONOGRAM

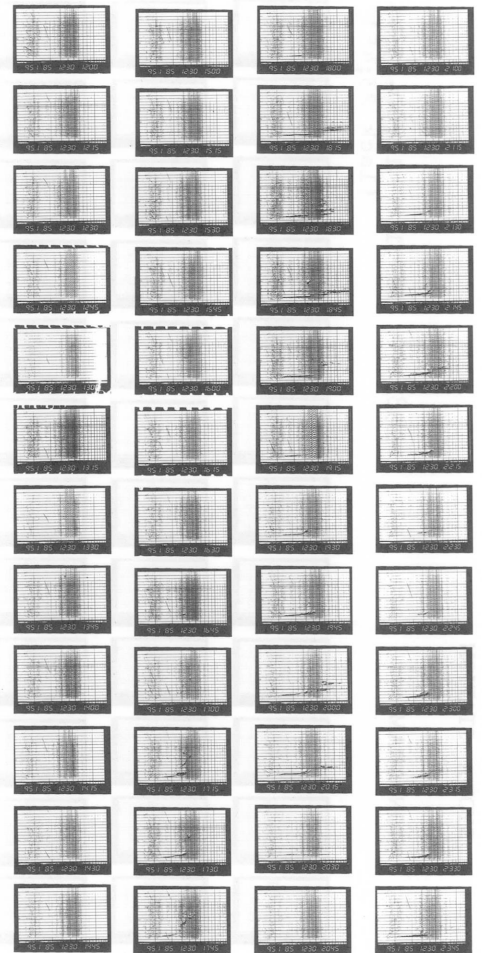
1985 12 29 00:00-11:45



SYOWA STATION

IONOGRAM

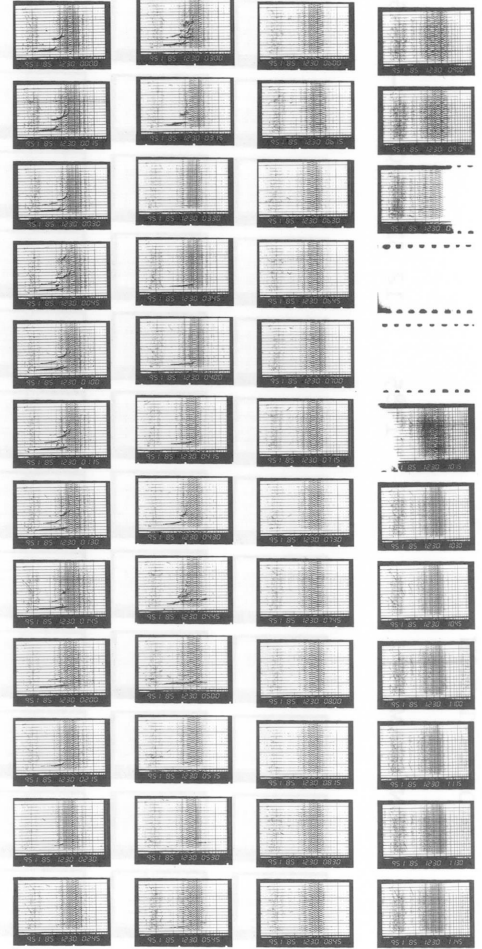
1985 12 30 12:00-23:45



SYOWA STATION

IONOGRAM

1985 12 30 00:00-11:45

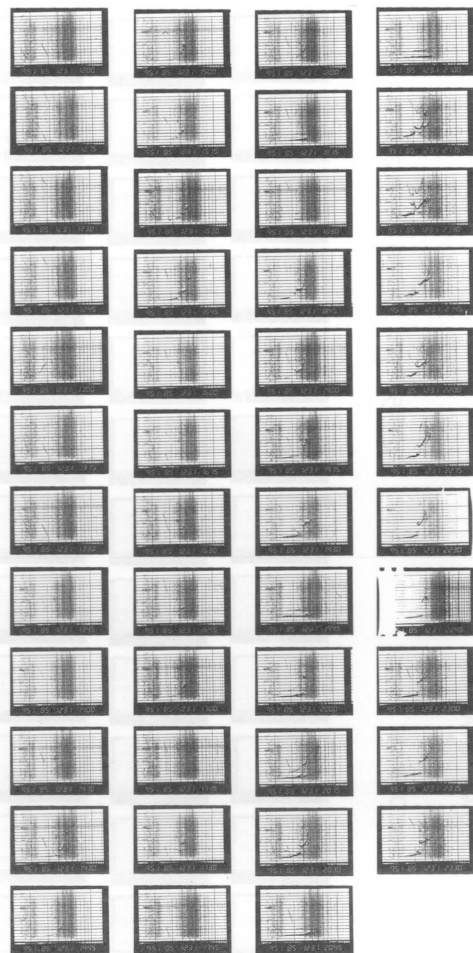


SYOWA STATION

IONOGRAM

1985

12 31

12:00-23:45
(lack 23:45)

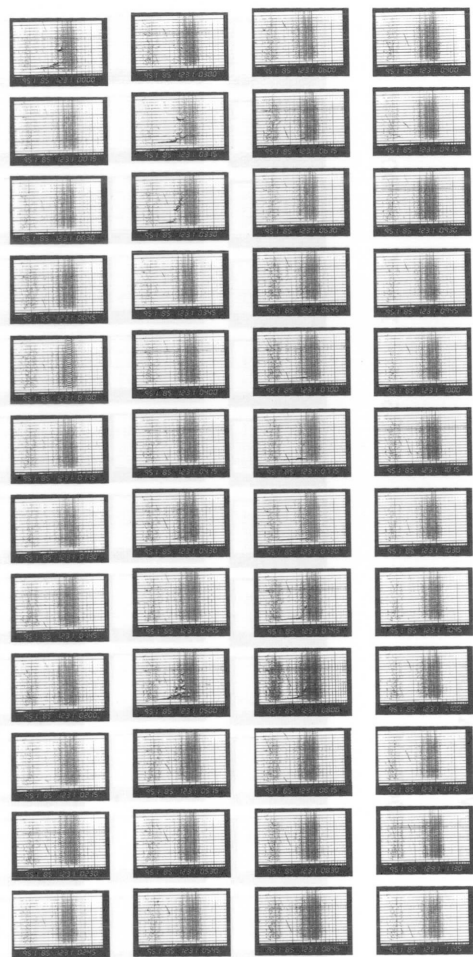
SYOWA STATION

IONOGRAM

1985

12 31

00:00-11:45



IONOSPHERIC DATA

JUL. 1985

FXI (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION Lat. 69° 00.4' S, Long. 39° 35.4' E Sweep 4 MHz to 15 MHz in 20 sec in automatic operation

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	B	A	A	B	B	B	A	B	A	B	B	B	B	B	41	30	29	B	B	B	B	A	A
2	A	A	A	A	A	B	0 X 21	A	0 X 22	0 X 22	0 X 30	0 X 41	X 46	0 X 42	X 45	32	B	B	A	A	A	A	S	A
3	A	32	A	A	A	A	A	A	A	A	28	36	X 40	0 X 47	X 40	36	B	19	B	B	B	B	B	A
4	A	A	A	A	A	B	A	A	A	A	A	0 X 36	B	X 42	X 51	X 59	0 X 48	B	A	A	A	A	A	A
5	A	A	B	B	A	A	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	B	A	A
6	A	A	A	A	B	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	A	A	A
7	A	B	B	B	A	B	B	B	A	B	B	B	B	B	B	B	B	B	A	B	B	B	A	A
8	A	A	B	A	A	A	A	A	B	B	B	B	B	0 X 49	0 X 48	0 X 36	B	B	30	B	B	A	A	A
9	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	0 X 36	B	B	B	B	B	B	B	A
10	A	A	A	A	B	B	A	A	A	A	X 31	X 43	X 48	X 49	X 42	X 40	B	B	B	A	B	B	B	A
11	A	A	B	A	B	A	B	B	33	35	33	0 X 42	B	B	0 X 50	B	26	33	24	B	B	B	A	A
12	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	X 66	B	A	A	A	C	B
13	A	A	A	A	A	A	A	A	A	A	0 X 34	X 41	0 X 42	0 X 46	X 60	B	B	B	A	A	A	A	A	A
14	A	A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A
15	A	A	A	A	A	B	A	B	B	B	B	A	0 X 43	B	B	B	B	B	B	B	B	B	A	A
16	A	A	A	A	A	A	A	A	A	A	A	45	46	A	46	40	B	A	B	B	B	B	B	A
17	A	A	A	A	A	A	A	S	B	B	0 X 30	43	41	X 49	B	B	49	B	A	A	A	A	A	A
18	A	A	B	A	B	B	A	B	A	A	B	B	B	B	0 X 43	B	B	B	B	B	B	B	A	A
19	A	A	A	A	A	B	B	A	A	A	0 X 32	B	B	B	B	B	B	B	B	B	B	A	A	A
20	A	A	A	A	A	A	B	A	A	A	B	B	B	0 X 41	X 40	X 48	23	23	24	A	A	A	A	A
21	A	A	A	A	A	A	A	A	A	B	B	B	X 45	B	B	B	B	B	B	A	A	B	A	A
22	A	A	A	A	A	A	A	A	A	B	B	B	42	B	B	B	B	B	B	B	A	A	A	A
23	A	A	A	A	A	A	A	A	A	A	B	B	B	X 40	39	0 X 40	B	B	B	B	B	A	A	A
24	A	A	A	A	A	A	A	A	A	B	B	B	B	R	X 44	A	0 X 43	B	B	B	B	B	A	A
25	A	A	A	B	B	B	B	A	A	B	B	B	0 X 39	0 X 40	B	B	B	A	A	A	B	A	A	A
26	A	A	A	B	A	A	A	A	B	B	B	0 X 42	B	R	B	B	B	B	B	A	B	A	A	A
27	A	A	A	A	B	A	A	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A	A
28	A	A	A	B	A	A	A	B	B	A	0 X 36	0 X 41	0 X 43	46	B	B	B	B	A	B	B	B	A	A
29	A	A	A	A	A	A	A	A	26	30	X 38	X 50	45	0 X 64	X 52	A	A	32	31	A	A	A	A	A
30	A	A	A	A	A	A	A	B	B	B	A	0 X 47	B	0 X 51	0 X 56	B	36	A	B	A	A	A	A	A
31	A	A	A	A	A	A	A	30	28	B	B	B	B	B	B	30	B	A	A	A	A	A	A	A
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT		1					1	1	4	3	9	12	12	13	14	11	7	6	4					
MED		32					0 X 21	30	27	30	0 X 32	X 42	X 43	0 X 46	X 47	X 40	36	30	27					
UQ									30	32	0 X 34	X 44	X 46	0 X 49	0 X 51	44	46	33	30					
LQ									24	26	0 X 30	0 X 41	X 42	0 X 42	X 42	36	28	23	24					

JUL. 1985

FXI (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

JUL. 1985

F_oF₂ (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION Lat. 69° 00.4' S, Long. 39° 35.4' E Sweep 4 MHz to 15 MHz in 20 sec in automatic operation

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	B	A	A	B	B	B	A	B	A	B	B	B	B	B	F 35	F 24	F 20	B	B	B	B	A	A
2	A	A	A	A	A	B	15	A	16	16	24	35	40	36	40	F 26	B	B	A	A	A	A	S	A
3	A	F 24	A	A	A	A	A	A	A	A	F 21	30	34	41	34	R 30	B	F	B	B	B	B	B	A
4	A	A	A	A	A	B	A	A	A	A	A	30	B	36	45	53	42	B	A	A	A	A	A	A
5	A	A	B	B	A	A	B	B	B	A	B	B	B	B	3	B	B	B	B	B	A	B	A	A
6	A	A	A	A	B	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	A	A	A
7	A	B	B	B	A	B	B	B	A	B	B	B	B	B	B	B	B	B	A	B	B	B	A	A
8	A	A	B	A	A	A	A	A	B	B	B	B	B	43	42	30	B	B	F 23	B	B	A	A	A
9	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	U S 30	B	B	B	B	B	B	B	A
10	A	A	A	A	B	B	A	A	A	A	25	37	42	43	36	34	B	B	B	A	B	B	B	A
11	A	A	B	A	B	A	B	B	F 25	F 24	F 27	36	B	B	U S 44	B	F 20	F 23	F 18	B	B	B	A	A
12	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	60	B	A	A	A	C	B
13	A	A	A	A	A	A	A	A	A	A	28	35	37	40	54	B	B	B	A	A	A	A	A	A
14	A	A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A
15	A	A	A	A	A	B	A	B	B	B	B	A	37	B	B	B	B	B	B	B	B	B	A	A
16	A	A	A	A	A	A	A	A	A	A	A	39	40	A	40	34	B	A	B	B	B	B	B	A
17	A	A	A	A	A	A	A	S	B	B	24	F 34	F 35	43	B	B	F 43	B	A	A	A	A	A	A
18	A	A	B	A	B	B	A	B	A	A	B	B	B	B	42	B	B	B	B	B	B	B	A	A
19	A	A	A	A	A	B	B	A	A	A	26	B	B	B	B	B	B	B	B	B	B	A	A	A
20	A	A	A	A	A	A	B	A	A	A	B	B	B	35	34	42	F 17	F 18	F 18	A	A	A	A	A
21	A	A	A	A	A	A	A	A	A	B	B	B	37	B	B	B	B	B	B	A	A	B	A	A
22	A	A	A	A	A	A	A	A	A	B	B	B	36	B	B	B	B	B	B	B	A	A	A	A
23	A	A	A	A	A	A	A	A	A	A	A	B	B	34	F	34	B	B	B	B	B	A	A	A
24	A	A	A	A	A	A	A	A	A	B	B	B	B	D R 37	33	A	37	B	B	B	B	B	A	A
25	A	A	A	B	B	B	B	A	A	B	B	B	33	34	B	B	B	A	A	A	A	B	A	A
26	A	A	A	B	A	A	A	A	B	B	B	36	B	R	B	B	B	B	B	A	B	A	A	A
27	A	A	A	A	B	A	A	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A	A
28	A	A	A	B	A	A	A	B	B	A	30	35	37	F 40	B	B	B	B	A	B	B	B	A	A
29	A	A	A	A	A	A	A	A	F 18	F 21	32	44	39	D R 58	46	A	A	F 22	F 22	A	A	A	A	A
30	A	A	A	A	A	A	A	B	B	B	A	41	B	45	50	B	F	A	B	A	A	A	A	A
31	A	A	A	A	A	A	A	F 21	B	B	B	B	B	B	B	F	B	A	A	A	A	A	A	A
CNT		1				1			4	3	9	12	12	14	13	10	5	4	4					
MED		F 24				15			F 20	F 21	26	36	37	40	42	34	F 37	F 22	F 20					
UQ									F 23	F 22	28	38	40	43	45	35	42	42	F 22					
LQ									17	18	24	34	36	36	38	30	F 24	F 18	F 18					

JUL. 1985

F_oF₂ (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

JUL. 1985

FES (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION				Lat. 69° 00.4' S				Long. 39° 35.4' E				Sweep 4 MHz to 15 MHz in 20 sec in				automatic operation								
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	60	B	43	35	B	B	B	43	B	43	B	B	B	B	B	E B 22	E B 13	12	B	B	B	B	24	42
2	42	45	42	36	36	B	30	18	14	E B 9	17	17	16	16	E B 13	E B 17	B	B	18	26	27	23	12	22
3	29	46	37	35	32	28	42	19	28	21	18	15	15	17	15	11	B	20	B	B	B	B	B	15
4	23	42	45	58	37	B	65	71	56	30	24	23	B	28	29	E B 8	E B 19	B	27	40	90	45	80	50
5	101	45	B	B	42	31	B	B	B	43	B	B	B	B	B	B	B	B	B	B	19	B	36	46
6	50	41	41	50	B	B	B	B	B	28	B	B	B	B	B	B	B	B	B	B	12	42	35	44
7	45	B	B	B	41	B	B	B	28	B	B	B	B	B	B	B	B	B	20	B	B	B	16	30
8	60	43	B	45	41	43	37	45	B	B	B	B	B	E B 20	E B 20	E B 21	B	B	E B 17	B	B	40	35	41
9	B	80	B	B	B	B	B	B	B	B	B	B	B	B	B	13	B	B	B	B	B	B	B	18
10	36	29	23	32	B	B	35	37	25	17	19	30	20	21	18	21	B	B	B	16	B	B	B	42
11	42	42	B	70	B	36	B	B	25	18	E B 18	24	B	B	E B 30	B	E B 15	19	13	B	B	B	30	49
12	42	45	42	51	15	85	B	B	B	B	B	B	B	B	B	B	B	33	B	43	135	120	C	B
13	43	38	48	43	45	36	21	16	21	28	19	20	23	22	24	B	B	B	45	43	30	105	46	42
14	75	67	B	B	B	89	50	B	B	B	B	B	B	B	B	B	B	B	B	B	28	29	17	28
15	37	30	45	40	35	B	40	B	B	B	B	29	E B 21	B	B	B	B	B	B	B	B	B	27	24
16	21	36	46	89	59	51	47	35	24	36	31	23	30	42	42	20	B	27	B	B	B	B	B	16
17	10	43	47	42	60	48	47	E B 32	B	B	32	20	E B 24	30	B	B	E B 23	B	45	45	27	31	37	42
18	40	41	B	60	B	B	42	B	30	41	B	B	B	B	E B 33	B	B	B	B	B	B	B	11	32
19	75	45	43	42	45	B	B	41	40	27	21	B	B	B	B	B	B	B	B	B	B	35	30	16
20	30	35	41	42	35	45	B	43	35	37	B	B	B	E B 21	18	21	E B 13	13	16	30	34	31	34	37
21	32	38	40	43	45	42	60	50	43	B	B	B	20	B	B	B	B	B	B	37	17	B	43	43
22	70	45	46	42	70	42	70	70	30	B	B	B	E B 24	B	B	B	B	B	B	B	21	19	17	20
23	47	45	45	132	46	46	42	41	42	40	37	B	B	E B 22	E B 20	E B 21	B	B	B	B	B	25	47	19
24	37	45	66	35	40	56	52	36	36	B	B	B	B	E B 27	20	46	E B 20	B	B	B	B	B	35	45
25	70	47	70	B	B	B	B	31	40	B	B	B	21	22	B	B	B	35	27	27	B	26	42	40
26	47	40	42	B	43	37	30	27	B	B	B	E B 25	B	E B 24	B	B	B	B	B	27	B	35	42	36
27	45	42	70	70	B	37	45	B	B	B	B	B	B	B	B	B	B	B	25	30	32	30	33	40
28	35	90	33	B	36	30	43	B	B	35	28	24	E B 30	E B 32	B	B	B	B	19	B	B	20	78	
29	41	34	42	45	53	40	40	27	13	30	17	19	22	26	32	42	16	19	22	18	22	29	17	17
30	36	40	49	43	43	32	30	B	B	B	28	26	B	E B 19	18	B	E B 21	43	B	37	37	70	43	43
31	42	49	36	44	45	36	70	31	42	B	B	B	B	B	B	E B 24	B	38	42	59	32	46	51	55
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	24	24	22	20	21	19	18	16	13	13	12	16	14	13	8	10	13	14	15	18	26	30
MED	42	43	43	43	42	41	42	37	30	30	21	23	19	19	19	16	E B 18	24	22	34	28	33	34	40
UQ	50	45	46	54	45	47	50	44	40	38	28	25	E B 24	26	27	22	E B 20	35	27	43	33	45	42	43
LQ	36	40	41	41	36	36	37	28	25	24	18	20	19	E B 20	16	E B 17	E B 14	19	18	27	22	29	20	22

JUL. 1985

FES (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

JUL. 1985

F-MIN (0.1 MHz)

45° E Mean Time (G.M.T. + 5 h)

Station SYOWA STATION Lat. 69° 00.4' S, Long. 39° 35.4' E Sweep 4 MHz to 15 MHz in 20 sec in automatic operation

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	13	B	21	13	B	B	B	19	B	15	B	B	B	B	B	22	13	7	B	B	B	B	8	7
2	7	8	17	15	20	B	8	8	8	9	14	13	14	14	13	17	B	B	12	11	10	14	7	7
3	7	8	12	12	7	7	9	13	13	9	8	7	8	8	8	8	B	10	B	B	B	B	B	9
4	12	7	14	8	13	B	16	17	9	15	10	13	B	15	9	8	19	3	15	8	9	7	8	21
5	13	28	B	B	11	9	B	B	B	15	B	B	B	B	B	B	B	B	B	B	B	B	B	8
6	13	13	33	11	B	B	B	B	B	18	B	B	B	B	8	B	B	B	B	B	B	8	7	8
7	13	B	B	B	15	B	B	9	13	8	B	B	B	8	3	B	B	B	9	B	B	B	10	7
8	13	19	B	18	16	19	9	10	B	B	B	B	B	20	20	21	B	B	17	B	B	8	21	20
9	B	3	B	B	B	B	B	9	B	B	B	B	B	B	B	11	B	B	B	B	B	B	B	12
10	14	10	13	14	B	B	16	12	13	13	13	14	13	15	13	11	B	B	B	13	B	B	B	8
11	9	13	B	20	B	12	B	8	13	10	18	18	B	B	30	B	15	9	9	B	B	B	8	9
12	8	8	13	9	10	10	B	B	B	B	B	B	B	3	B	B	B	14	B	9	13	13	C	B
13	10	19	13	11	14	10	13	10	9	10	9	13	23	22	10	B	B	B	11	13	12	12	11	15
14	9	8	B	B	B	21	21	B	B	B	B	B	B	B	B	B	B	B	B	B	13	8	11	11
15	8	15	13	13	19	B	20	B	B	8	8	18	21	B	8	B	B	B	B	B	B	B	16	13
16	17	8	11	8	14	11	12	8	9	13	9	13	13	9	12	10	B	14	B	B	B	B	B	7
17	8	8	9	6	3	12	13	32	B	B	18	14	24	9	B	B	23	B	10	9	12	8	7	8
18	8	10	B	13	B	B	22	B	15	15	B	B	B	B	33	B	B	B	B	B	B	B	8	7
19	9	17	8	13	8	B	B	10	9	8	11	B	B	B	B	B	B	B	B	B	B	8	12	11
20	8	8	9	8	13	10	B	13	9	11	B	B	B	21	15	15	13	8	7	8	10	19	13	9
21	8	8	8	10	15	13	13	15	10	B	B	B	17	B	B	B	B	B	B	15	12	B	14	13
22	10	9	7	8	10	8	7	9	18	B	B	B	24	B	B	B	B	B	B	B	15	13	10	10
23	10	13	9	13	11	7	7	7	15	13	17	B	B	22	20	21	B	B	B	B	B	10	9	9
24	8	10	16	13	10	10	10	9	13	B	B	B	B	27	12	10	20	B	B	B	B	B	8	8
25	18	7	12	B	B	B	B	11	14	B	B	B	16	13	B	B	B	15	15	10	B	8	5	8
26	8	13	11	B	14	12	9	9	B	B	B	25	B	24	B	B	B	B	B	14	B	10	10	11
27	9	13	30	30	B	19	22	B	B	3	B	B	B	B	B	B	B	B	13	13	10	11	7	8
28	8	9	19	B	22	20	21	B	B	17	14	19	30	32	B	B	B	B	10	B	B	B	11	13
29	8	14	14	13	14	14	10	9	8	8	8	13	15	13	13	9	9	9	8	11	8	8	8	8
30	7	10	8	18	13	8	8	B	B	B	18	18	B	19	15	B	21	8	B	14	21	10	8	8
31	8	8	24	12	13	9	8	8	9	B	B	B	B	B	B	24	B	15	13	10	9	9	8	8
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31
MED	9	10	14	13	14	14	16	15	15	18	B	B	B	32	B	B	B	B	B	B	B	13	10	9
UQ	13	14	32	25	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	13	12
LQ	8	8	11	11	12	10	10	10	10	13	14	16	22	17	14	16	D 23	14	12	12	11	8	8	8

JUL. 1985

F-MIN (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

JUL. 1985

H⁺F (KM)

45° E Mean Time (G.M.T. + 3 h)

StationSYOWA STATION		Lat. 69° 00.4' S , Long. 39° 35.4' E											Sweep 4 MHz to 15 MHz in 20sec in automatic operation											
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	B	A	A	B	B	B	A	B	A	B	B	B	B	B	E B 250	200	205	B	B	B	B	A	A
2	A	A	A	A	A	B	A	A	A	270	E A 300	245	210	210	220	220	B	B	A	A	A	A	S	A
3	A	E A 290	A	A	A	A	A	A	A	A	E A 270	230	200	200	210	180	B	E A 240	B	B	B	B	B	A
4	A	A	A	A	A	B	A	A	A	A	A	E A 290	B	280	210	230	310	B	A	A	A	A	A	A
5	A	A	B	B	A	A	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	B	A	A
6	A	A	A	A	B	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	A	A	A
7	A	B	B	B	A	B	B	B	A	B	B	B	B	B	B	B	B	B	A	B	B	B	A	A
8	A	A	B	A	A	A	A	A	B	B	B	B	B	245	220	E B 220	B	B	E B 250	B	B	A	A	A
9	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	E A 200	B	B	B	B	B	B	B	A
10	A	A	A	A	B	B	A	A	A	A	260	225	200	210	200	225	B	B	B	A	B	B	B	A
11	A	A	B	A	B	A	B	B	A	E A 275	E B 270	250	B	B	E B 245	B	B	245	240	B	B	B	A	A
12	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	E A 330	B	A	A	A	A	B
13	A	A	A	A	A	A	A	A	A	A	E A 275	230	210	E B 250	275	B	B	B	A	A	A	A	A	A
14	A	A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A
15	A	A	A	A	A	B	A	B	B	B	B	A	225	B	B	B	B	B	B	B	B	B	A	A
16	A	A	A	A	A	A	A	A	A	A	A	230	200	A	210	200	B	A	B	B	B	B	B	A
17	A	A	A	A	A	A	A	275	B	B	A	225	230	220	B	B	E B 270	B	A	A	A	A	A	A
18	A	A	B	A	B	B	A	B	A	A	B	B	B	B	E B 250	B	B	B	B	B	B	A	A	A
19	A	A	A	A	A	B	B	A	A	A	230	B	B	B	B	B	B	B	B	B	B	A	A	A
20	A	A	A	A	A	A	B	A	A	A	B	B	B	E B 240	225	225	190	E A 300	270	A	A	A	A	A
21	A	A	A	A	A	A	A	A	A	B	B	B	240	B	B	B	B	B	B	A	A	B	A	A
22	A	A	A	A	A	A	A	A	A	B	B	B	E B 220	B	B	B	B	B	B	B	A	A	A	A
23	A	A	A	A	A	A	A	A	A	A	A	B	B	E B 250	E B 250	E B 245	B	B	B	B	B	A	A	A
24	A	A	A	A	A	A	A	A	A	B	B	B	B	E B 230	200	A	225	B	B	B	B	B	A	A
25	A	A	A	B	B	B	B	A	A	B	B	B	270	230	B	B	B	A	A	A	B	A	A	A
26	A	A	A	B	A	A	A	B	B	B	B	E B 230	B	E B 210	B	B	B	B	B	A	B	A	A	A
27	A	A	A	A	B	A	A	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A	A
28	A	A	A	B	A	A	A	B	B	A	270	225	E B 250	E B 250	B	B	B	B	A	B	B	B	A	A
29	A	A	A	A	A	A	A	A	E A 300	275	240	210	200	230	200	A	A	250	210	A	A	A	A	A
30	A	A	A	A	A	A	A	B	B	B	A	210	B	230	225	B	F	A	B	A	A	A	A	A
31	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	280	B	A	A	A	A	A	A	A
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT		1						1	1	3	8	12	12	15	14	11	5	6	4					
MED		E A 290						275	E A 300	275	U 250	228	210	220	215	U 212	U 212	U 226	235					
UQ								275	E E 272	234	232	239	U 232	232	270	E A 300	260							
LQ								271	242	222	200	212	210	U 200	200	240	225							

JUL. 1985

H⁺F (KM)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

AUG. 1985

FXI (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION Lat. 69° 00.4' S, Long. 39° 35.4' E Sweep 4 MHz to 15 MHz in 20 sec in automatic operation

Station	Day																							
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	B	A	B	A	A	A	B	A	B	B	B	B	0 X 51	0 X 52	X 44	0 X 37	36	31	37	B	A	A	A
2	A	A	B	B	A	A	A	A	A	B	B	B	B	B	B	B	B	B	33	26	B	A	A	A
3	A	A	B	A	B	A	A	A	B	A	X 46	X 55	0 X 51	0 X 56	0 X 57	0 X 48	35	B	0 X 26	B	0 X 25	A	A	A
4	A	B	A	B	A	A	A	A	B	B	B	B	B	X 52	X 52	0 X 48	X 41	42	X 27	B	B	B	B	B
5	A	A	A	A	A	A	A	A	A	X 33	X 44	X 55	X 56	0 X 49	0 X 50	0 X 50	0 X 43	B	B	B	B	B	B	A
6	A	A	A	A	A	A	A	29	30	35	43	X 49	X 61	46	51	A	37	25	B	B	B	B	A	A
7	A	A	A	A	A	B	A	29	30	33	40	46	48	50	48	A	A	A	30	B	B	A	B	A
8	A	A	A	A	A	A	A	A	B	B	X 44	0 X 46	X 46	X 54	53	0 X 52	0 X 35	B	24	B	B	B	B	A
9	A	A	A	A	A	A	A	A	30	35	X 41	X 48	X 53	50	R	X 52	A	30	F	24	19	B	B	B
10	A	A	A	A	A	A	A	45	A	41	B	B	B	A	0 X 57	0 X 48	B	B	B	A	A	A	A	A
11	A	A	A	A	B	A	A	A	A	X 32	X 38	X 42	X 45	X 49	X 51	0 X 49	40	35	0 X 34	B	B	A	A	A
12	A	A	A	A	A	A	A	A	A	41	43	0 X 48	X 58	X 50	B	B	A	0 X 35	A	A	A	A	A	A
13	A	A	A	B	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A
14	A	A	A	B	B	A	B	B	A	B	B	B	B	B	B	B	0 X 31	0 X 34	B	B	B	B	B	A
15	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	0 X 48	B	B	B	B	B	B	A
16	A	A	A	A	A	A	A	B	B	A	0 X 41	0 X 43	0 X 51	0 X 52	B	B	0 X 46	30	41	29	B	B	A	A
17	A	A	B	A	A	A	B	B	B	0 X 35	0 X 45	0 X 51	B	B	B	0 X 49	B	B	B	A	A	A	A	A
18	A	A	B	A	A	A	A	A	A	A	X 41	X 46	X 50	0 X 47	56	0 X 57	A	34	32	25	20	A	A	A
19	A	A	B	A	A	A	A	B	A	B	B	B	B	0 X 40	0 X 43	0 X 36	0 X 39	B	B	B	B	E	B	A
20	A	A	A	A	A	B	A	A	B	B	B	B	B	B	B	0 X 38	0 X 39	0 X 40	X 37	B	B	B	A	A
21	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	0 X 40	B	28	B	B	A	B	B
22	B	A	A	A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	0 X 35	A	A	A	A	A
23	A	B	A	B	A	A	B	B	B	B	B	B	B	0 X 49	B	B	0 X 49	B	B	B	A	A	A	A
24	A	A	B	A	B	A	B	B	B	0 X 34	B	B	0 X 48	0 X 50	0 X 49	50	0 X 48	0 X 44	0 X 36	A	B	A	A	A
25	A	A	A	A	A	B	B	A	B	B	B	B	B	B	B	B	0 X 46	X 44	33	A	A	A	A	A
26	A	A	A	A	B	B	A	A	B	B	B	0 X 42	B	B	B	B	0 X 44	B	X 52	B	B	B	A	A
27	A	A	B	B	B	A	A	B	A	0 X 36	0 X 38	0 X 39	0 X 42	B	B	B	B	B	0 X 36	43	A	B	A	A
28	A	A	A	A	A	A	A	A	B	B	B	B	B	B	0 X 53	B	B	B	40	B	A	A	A	A
29	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A
30	B	A	B	A	A	B	B	B	B	B	B	0 X 42	0 X 48	0 X 46	0 X 46	0 X 47	X 43	X 43	0 X 34	0 X 24	B	B	A	A
31	A	A	A	A	B	C	C	C	C	C	B	B	B	B	B	B	B	A	A	A	A	A	A	A
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								3	3	10	12	14	13	16	14	14	17	13	19	7	3			
MED								29	30	35	X 42	X 46	50	0 X 50	0 X 52	0 X 48	0 X 41	X 35	X 34	26	20			
UQ								37	30	36	X 44	X 49	53	52	0 X 53	0 X 50	0 X 46	X 42	0 X 36	33	22			
LQ								29	30	33	X 40	0 X 42	X 48	0 X 48	0 X 49	0 X 47	0 X 39	31	30	24	20			

AUG. 1985

FXI (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

AUG. 1985

F0F2 (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION		Lat. 69° 00.4' S, Long. 39° 35.4' E		Sweep .4 MHz to 15 MHz in 20 sec in automatic operation																				
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	B	A	B	A	A	A	B	A	B	B	B	B	45	46	38	31	F	F	F	B	A	A	A
2	A	A	B	B	A	A	A	A	A	B	B	B	B	B	3	B	B	B	F	F	B	A	A	A
3	A	A	B	A	B	A	A	A	B	A	40	49	45	50	U	51	42	29	B	20	U	19	A	A
4	A	B	A	B	A	A	A	A	B	B	B	B	B	46	46	42	35	36	21	B	B	B	B	B
5	A	A	A	A	A	A	A	A	A	F	26	38	49	50	43	44	44	37	B	B	B	B	B	A
6	A	A	A	A	A	A	A	F	F	F	36	43	55	40	45	A	29	19	B	B	B	B	A	A
7	A	A	A	A	A	B	A	F	F	F	20	22	23	34	40	42	44	42	A	A	F	B	A	A
8	A	A	A	A	A	A	A	A	B	B	38	40	40	48	45	46	29	B	18	B	B	B	B	A
9	A	A	A	A	A	A	A	A	F	20	29	35	42	47	F	46	A	F	F	F	F	B	B	B
10	A	A	A	A	A	A	A	F	A	F	35	B	B	B	A	51	42	B	B	B	A	A	A	A
11	A	A	A	A	B	A	A	A	A	26	32	36	39	43	45	43	F	F	U	B	B	A	A	A
12	A	A	A	A	A	A	A	A	A	F	35	37	42	52	44	B	A	29	A	A	A	A	A	A
13	A	A	A	B	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A
14	A	A	A	B	B	A	B	B	A	B	B	B	B	9	B	B	B	25	U	B	B	B	B	A
15	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	42	B	B	B	B	B	B	A
16	A	A	A	A	A	A	A	B	B	A	35	37	45	46	B	B	40	24	35	23	B	B	A	A
17	A	A	B	A	A	A	B	B	B	29	39	45	B	B	3	43	B	B	B	A	A	A	A	A
18	A	A	B	A	A	A	A	A	A	A	35	40	44	41	50	U	A	28	26	19	14	A	A	A
19	A	A	B	A	A	A	A	B	A	B	B	B	B	34	37	30	33	B	B	B	B	B	B	A
20	A	A	A	A	A	B	A	A	B	B	B	B	B	B	B	32	33	34	31	B	B	B	A	A
21	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	34	B	22	B	B	A	B	B
22	B	A	A	A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	29	A	A	A	A	A
23	A	B	A	B	A	A	B	B	B	B	B	B	B	43	B	B	43	B	B	B	A	A	A	A
24	A	A	B	A	B	A	B	B	B	23	B	B	42	U	44	43	44	42	38	30	A	B	A	A
25	A	A	A	A	A	B	B	A	B	B	B	B	B	B	B	B	40	38	27	A	A	A	A	A
26	A	A	A	A	B	B	A	A	B	B	36	B	B	B	B	B	38	B	46	B	B	B	A	A
27	A	A	B	B	B	A	A	B	A	30	32	33	36	B	B	B	B	B	30	31	A	B	A	A
28	A	A	A	A	A	A	A	A	B	B	B	B	B	B	47	B	B	B	34	B	A	A	A	A
29	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	B	B	B	A	A	A
30	B	A	B	A	A	B	B	B	B	B	B	36	42	40	40	41	37	36	28	18	B	B	A	A
31	A	A	A	A	B	C	C	C	C	C	B	B	B	B	B	B	B	A	A	A	A	A	A	A
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								1	2	9	12	14	13	16	14	14	17	13	18	6	3			
MED								20	21	29	36	40	44	44	45	42	35	29	28	18	14			
UQ									30	38	43	47	46	47	44	40	36	30	23	16				
LQ									26	34	36	42	40	43	41	33	25	24	18	14				

AUG. 1985

F0F2 (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

AUG. 1985

FES (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION				Lat. 69° 00.4' S, Long. 39° 35.4' E								Sweep .4 MHz to 15 MHz in 20 sec in automatic operation																			
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
1	80	B	45	B	40	32	35	B	36	B	B	B	B	E B	24	E B	E B	18	E B	E B	24	E B	20	16	E B	13	B	27	38	42	
2	47	47	B	B	42	60	45	42	40	B	B	B	B	B	B	B	B	B	E B	19	15	B	42	38	47						
3	70	38	B	42	B	36	33	22	B	24	18	16	27	17	20	E B	19	E B	15	B	E B	13	B	16	27	12	17				
4	37	B	37	B	42	45	48	34	B	B	B	B	B	E B	25	E B	E B	18	17	18	E B	15	B	B	B	B	B				
5	17	32	35	72	72	42	36	28	29	17	26	26	26	E B	28	E B	E B	26	E B	24	E B	24	B	B	B	B	B	15			
6	29	17	28	28	29	42	35	28	21	15	20	19	30	35	42	35	20	17	B	B	B	B	B	14	40						
7	22	27	32	40	17	B	42	30	27	18	16	17	21	20	20	17	12	12	12	B	17	52	B	27							
8	35	31	47	45	42	43	47	42	B	B	35	34	26	24	26	20	E B	19	B	E B	12	B	B	B	B	33					
9	37	50	46	41	42	45	40	35	26	68	E B	16	20	E B	20	27	23	18	26	27	19	18	20	B	B	B					
10	41	33	37	36	38	47	52	37	35	40	B	B	B	27	E B	E B	25	B	B	E	26	28	17	30	32						
11	40	35	42	77	B	55	45	52	44	22	20	20	22	20	22	18	E B	15	28	E B	15	B	B	28	27	17					
12	36	30	70	70	30	30	29	29	31	35	22	E B	E B	22	27	B	B	45	E B	21	42	13	28	44	40	52					
13	71	46	80	B	42	26	43	91	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	38	70	46					
14	30	41	42	B	B	30	B	B	35	B	B	B	B	B	B	B	B	E B	15	19	B	B	B	B	B	30					
15	43	52	71	75	51	45	41	35	B	B	B	B	B	B	B	B	E B	25	B	B	B	B	B	B	B	35					
16	42	36	80	36	35	46	19	B	B	36	26	21	E B	22	E B	30	B	E B	25	E B	13	16	E B	17	B	B	40	31			
17	46	59	B	41	50	47	B	B	20	E B	E B	22	B	B	B	E B	30	B	B	B	37	28	35	28	42						
18	42	71	B	41	38	32	32	42	51	42	30	E B	19	21	28	23	E B	19	35	22	22	16	12	30	31	44					
19	31	43	B	45	32	42	32	B	41	B	B	B	B	E B	23	E B	E B	21	E B	19	B	B	B	B	B	30					
20	42	52	48	65	52	B	42	48	B	B	B	B	B	B	B	E B	21	E B	19	13	E B	14	B	B	30	35					
21	41	43	42	50	49	35	40	40	35	B	B	B	B	B	B	B	E B	24	B	E B	14	B	B	22	B	B					
22	B	36	15	42	B	B	B	46	42	B	B	B	B	B	B	B	B	B	E B	21	33	48	42	46	34						
23	41	B	42	B	37	43	B	B	B	B	B	B	B	E B	34	B	B	E B	22	B	B	25	17	28	43						
24	80	43	B	72	B	41	B	B	B	22	B	B	E B	34	E B	22	22	26	E B	25	E B	20	18	19	B	27	12	17			
25	15	32	32	30	35	B	B	34	B	B	B	B	B	B	B	B	E B	30	26	30	35	29	29	28	35						
26	37	40	41	45	B	B	51	45	B	B	B	E B	23	B	B	B	B	E B	21	B	13	B	B	B	43	35					
27	90	59	B	B	B	32	33	B	33	E B	20	E B	21	E B	24	B	B	B	B	3	B	B	35	B	14	25					
28	30	34	41	37	33	27	37	29	B	B	B	B	B	B	E B	33	B	B	B	E B	21	B	30	47	36	40					
29	40	41	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	36	46	42						
30	B	42	B	42	42	B	B	B	B	B	B	E B	30	27	24	23	21	E B	20	E B	16	E B	18	13	B	36	27				
31	42	42	45	35	B	C	C	C	C	C	B	B	B	B	B	B	B	B	42	31	35	90	42	42	45						
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
CNT	29	28	22	23	22	23	22	20	15	13	12	14	13	17	15	16	21	15	22	14	13	18	22	28							
MED	41	41	42	42	41	42	40	36	35	22	22	18	22	22	22	E B	E B	22	16	E B	18	18	28	32	34	35					
UQ	43	46	47	58	42	45	45	44	40	36	26	E B	24	26	28	E B	E B	E B	25	24	E B	21	33	30	42	40	42				
LQ	35	34	37	38	35	32	33	30	30	20	18	18	E B	22	20	22	18	E B	19	14	E B	14	E B	15	20	27	28	28			

AUG. 1985

FES (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

AUG. 1985

F-MIN (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION				Lat. 69° 00.4' S				Long. 39° 35.4' E				Sweep 4 MHz to 15 MHz in 20 sec in automatic operation															
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
1	21	B	22	B	20	10	19	B	20	B	B	B	B	24	25	18	24	20	16	13	B	9	8	8			
2	8	13	B	B	13	16	21	9	10	B	B	B	B	B	B	6	B	B	19	E S 7	B	7	8	13			
3	8	9	B	14	B	14	8	14	B	17	15	14	13	14	20	19	15	B	13	B	10	8	6	8			
4	8	B	19	B	9	9	12	11	B	B	B	B	6	25	29	18	11	9	15	B	B	B	B	B			
5	13	13	13	8	8	18	13	13	13	9	21	14	15	28	24	26	24	B	B	B	B	B	B	8			
6	8	11	12	11	11	8	7	6	7	9	12	13	14	14	15	13	13	9	6	B	B	B	8	8			
7	8	8	8	8	13	B	8	9	9	8	22	14	13	13	13	8	8	8	9	B	8	8	B	8			
8	8	11	11	14	19	19	3	8	B	B	14	16	14	14	13	10	19	B	12	B	B	B	B	8			
9	9	13	19	13	14	13	10	11	9	8	16	8	20	13	13	12	9	8	8	8	9	B	B	B			
10	7	8	8	7	8	9	8	8	13	10	B	B	B	20	25	25	B	B	B	22	18	12	8	8			
11	8	8	8	16	B	11	10	9	10	11	13	14	15	15	13	13	15	14	15	B	B	9	11	8			
12	10	9	8	8	8	8	7	9	10	11	15	24	22	14	B	B	21	21	19	14	11	15	8	8			
13	8	8	8	B	11	8	13	13	B	B	B	B	B	B	B	B	B	B	B	B	B	14	13	9			
14	22	24	25	B	B	21	B	B	18	B	B	B	B	B	B	B	B	15	19	B	B	B	B	8			
15	8	9	15	8	13	19	12	7	B	B	B	B	B	B	3	B	25	B	B	B	B	B	B	9			
16	13	19	13	14	9	19	14	B	B	12	9	19	22	30	B	B	25	13	9	17	B	B	8	8			
17	13	8	B	15	13	15	B	B	B	14	22	22	B	B	B	30	B	B	B	20	13	7	8	8			
18	18	8	B	12	13	9	9	9	10	14	17	19	16	11	20	19	13	9	14	13	9	8	8	9			
19	8	14	B	11	8	19	20	B	19	B	B	B	B	23	25	21	19	B	B	B	B	B	B	8			
20	8	13	9	13	18	B	21	13	B	B	B	B	B	B	B	21	19	8	14	B	B	B	8	8			
21	9	15	14	19	15	13	16	13	13	B	B	B	B	B	B	B	24	B	14	B	B	9	B	B			
22	B	9	30	21	B	B	B	23	15	B	B	B	B	B	B	B	B	B	21	8	8	8	8	13			
23	25	B	13	B	22	20	B	B	B	B	B	B	B	34	B	B	22	B	B	9	15	13	11	9			
24	8	19	B	13	B	20	B	B	B	19	B	B	34	22	19	15	25	20	18	15	B	13	8	9			
25	8	13	9	13	14	B	B	15	B	B	B	B	B	B	B	B	30	20	15	8	7	8	8	11			
26	21	10	12	11	B	B	14	22	B	B	B	23	B	B	B	B	21	B	10	B	B	B	8	8			
27	15	18	B	B	B	13	9	B	20	20	21	21	24	B	B	B	B	B	22	14	9	B	9	8			
28	9	8	9	16	13	15	13	18	B	B	B	B	B	B	33	B	B	B	21	B	19	10	8	9			
29	15	14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	8	9	13			
30	B	27	B	20	13	B	B	B	B	B	B	30	21	20	20	18	20	16	18	13	B	B	8	16			
31	22	20	15	15	B	C	C	C	C	C	B	B	B	B	B	B	B	13	10	9	9	11	10	8			
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
CNT	31	31	31	31	31	30	30	30	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31			
MED	9	13	15	14	14	17	14	13	D 20	B	B	B	B	30	9	30	24	B	18	B	B	13	8	8			
UQ	16	18	B	D B 21	B	21	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	10			
LQ	8	9	10	12	12	11	9	9	13	12	19	19	20	18	20	18	19	14	14	14	10	8	8	8			

AUG. 1985

F-MIN (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

AUG. 1985

H^oF (KM)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION Lat. 69° 00.4' S, Long. 39° 35.4' E Sweep 4 MHz to 15 MHz in 20 sec in automatic operation

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	B	A	B	A	A	A	B	A	B	B	B	B	230	240	215	E B 275	E B 250	E B 290	250	B	A	A	A
2	A	A	B	B	A	A	A	A	A	B	B	B	B	B	B	B	B	B	E B 230	250	A	B	A	A
3	A	A	B	A	B	A	A	A	B	A	225	215	210	200	195	210	230	B	225	B	E A 215	A	A	A
4	A	B	A	B	A	A	A	A	B	B	B	B	B	245	E B 240	210	220	210	225	B	B	B	B	B
5	A	A	A	A	A	A	A	A	A	A	260	230	230	205	E B 220	E B 210	E B 210	E B 220	B	B	B	B	B	A
6	A	A	A	A	A	A	A	F	290	250	210	200	210	200	210	A	190	H 210	B	B	B	B	A	A
7	A	A	A	A	A	B	A	E A 350	E A 300	260	200	215	205	210	200	A	A	A	210	B	B	A	B	A
8	A	A	A	A	A	A	A	A	B	B	250	240	200	225	210	200	200	B	E B 225	B	B	B	B	A
9	A	A	A	A	A	A	A	A	E A 310	250	225	240	205	200	190	190	A	H 200	F 240	E A 225	B	B	B	B
10	A	A	A	A	A	A	A	E A 330	E A 270	E	B	B	B	A	215	E B 230	B	B	B	A	A	A	A	A
11	A	A	A	A	B	A	A	A	A	E A 260	230	225	H 240	220	210	205	190	H 205	220	B	B	A	A	A
12	A	A	A	A	A	A	A	A	A	275	220	225	210	225		B	B	A	E B 300	A	A	A	A	A
13	A	A	A	B	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A
14	A	A	A	B	B	A	B	B	A	B	B	B	B	B	B	B	B	E B 260	F 250	B	B	B	B	A
15	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	225	B	B	B	B	B	B	A
16	A	A	A	A	A	A	A	B	B	A	255	200	225	220	B	B	200	225	225	E B 250	B	B	A	A
17	A	A	B	A	A	A	B	B	B	270	250	240	H	B	B	B	B	B	B	A	A	A	A	A
18	A	A	B	A	A	A	A	A	A	A	260	210	200	210	215	210	A	210	205	E A 250	225	A	A	A
19	A	A	B	A	A	A	A	B	A	B	B	B	B	225	220	210	230	B	B	B	B	B	B	A
20	A	A	A	A	A	B	A	A	B	B	B	B	B	B	B	B	205	250	225	245	B	B	A	A
21	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	230	B	245	B	B	A	B	B
22	B	A	A	A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	E B 300	A	A	A	A	A
23	A	B	A	B	A	A	B	B	B	B	B	B	B	280	B	B	225	B	B	B	A	A	A	A
24	A	A	B	A	B	A	B	B	B	E A 325	B	B	E B 250	H 205	H 225	H 205	220	225	220	A	B	A	A	A
25	A	A	A	A	A	B	B	A	B	B	B	B	B	B	B	B	E B 250	240	275	A	A	A	A	A
26	A	A	A	A	B	B	A	A	B	B	B	225	B	B	B	B	210	B	200	B	B	B	A	A
27	A	A	B	B	B	A	B	A	270	E B 270	250	225	B	B	B	B	B	B	230	225	A	B	A	A
28	A	A	A	A	A	A	A	A	B	B	B	B	B	B	280	B	B	B	E B 250	B	A	A	A	A
29	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A
30	B	A	B	A	A	B	B	B	B	B	B	E B 270	H 250	H 200	H 210	230	225	210	220	225	B	B	A	A
31	A	A	A	A	B	C	C	C	C	C	B	B	B	B	B	B	B	A	A	A	A	A	A	A
CNT								2	3	10	12	14	13	16	15	14	17	12	20	7	3			
MED								E A 340	E A 300	260	229	225	208	220	210	209	222	214	222	250	E A 225			
UQ								E A 305	270	251	240	218	225	220	212	228	228	E B 250	250	225				
LQ								292	260	222	215	205	201	210	205	205	210	220	228	E A 220				

AUG. 1985

H^oF (KM)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

SEP. 1985

FXI (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION				Lat. 69° 00.4' S, Long. 39° 35.4' E										Sweep 4 MHz to 15 MHz in 20 sec in automatic operation										
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	B	B	B	A	A	A	A	A	0 X 34	0 X 37	0 X 41	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	0 X 41	0 X 43	0 X 50	0 X 55	0 X 56	0 X 52	0 X 55	0 X 55	X 49	0 X 41	37		B	B	B
3	B	B	30	0 X 25	17	A	B	B	B	B	B	B	0 X 57	0 X 64	0 X 64	0 X 56	51	51	36	30	22	B	B	A
4	A	A	A	A	A	B	31	32	39	0 X 46	0 X 49	0 X 54	0 X 58	A	A	46	0 X 60	0 X 53	X 41	36	33	A	B	A
5	B	B	B	B	A	B	B	B	0 X 45	0 X 55	52	0 X 53	0 X 54	R	0 X 59	0 X 52	X 50	0 X 41	X 43	35	22	B	A	A
6	A	A	A	A	A	A	B	A	A	45	46	49	0 X 50	52	0 X 57	0 X 53	0 X 55	0 X 55	X 55	B	A	A	A	A
7	A	A	A	A	A	A	A	A	B	A	A	A	B	B	0 X 49	0 X 52	0 X 54	0 X 49	0 X 44	0 X 36	24	A	A	A
8	A	A	A	A	A	A	A	36	42	X 43	0 X 46	B	0 X 51	B	B	B	0 X 53	47	B	A	A	A	A	A
9	A	A	A	A	A	A	A	A	B	B	B	B	0 X 51	0 X 49	0 X 53	B	0 X 53	B	0 X 46	B	A	A	A	A
10	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	0 X 43	30	A	A	A	A
11	A	A	B	A	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	B
12	A	A	A	A	A	A	A	X 38	X 46	46	51	53	56	57	59	60	0 X 54	52	56	45	B	A	A	A
13	A	A	A	A	A	30	0 X 35	X 35	X 40	B	B	B	B	63	B	0 X 58	X 53	53	X 41	37	30	20	A	A
14	A	A	A	A	A	A	A	A	B	B	B	B	B	B	0 X 46	X 38	33	A	A	A	A	A	A	A
15	A	A	A	A	A	A	A	B	A	39	0 X 38	41	41	43	42	0 X 43	43	46	43	42	40	30	A	A
16	A	A	A	A	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A
17	B	B	B	A	B	B	B	B	B	B	B	B	B	0 X 41	B	B	B	B	B	5	28	B	B	A
18	A	A	A	A	A	B	A	0 X 36	0 X 41	0 X 43	0 X 42	0 X 44	0 X 51	0 X 54	0 X 56	0 X 51	B	0 X 52	44	0 X 39	27	19	A	A
19	A	A	A	A	A	A	A	A	A	0 X 45	0 X 47	0 X 51	0 X 48	B	B	B	0 X 50	B	0 X 41	A	A	A	A	A
20	A	A	A	A	B	A	B	B	B	B	0 X 37	B	B	B	B	B	0 X 40	39	B	B	B	A	A	A
21	A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	0 X 42	B	B	A	A	A	A	A
22	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	0 X 41	B	0 X 39	37	B	A	A	A	A
23	A	A	A	A	A	A	A	0 X 39	B	A	B	B	B	B	B	B	B	B	B	0 X 42	30	28	B	A
24	A	A	A	A	A	A	39	B	B	B	B	B	B	B	B	B	B	0 X 45	X 46	39	29	A	A	A
25	B	A	B	B	A	B	B	A	0 X 36	0 X 37	B	B	B	B	B	B	B	0 X 42	0 X 36	A	A	A	A	A
26	B	B	B	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	0 X 36	0 X 30	26	A	B
27	B	B	A	B	B	B	A	A	0 X 37	B	B	B	B	B	B	B	B	B	B	0 X 45	0 X 34	24	A	A
28	A	B	B	B	A	B	A	A	0 X 39	B	0 X 38	B	B	B	0 X 46	B	B	B	B	B	24	A	A	A
29	A	A	A	A	A	0 X 33	B	A	0 X 39	0 X 47	B	0 X 52	0 X 53	B	52	58	56	0 X 53	B	33	34	30	B	A
30	A	A	A	A	A	A	X 37	0 X 41	0 X 42	0 X 42	A	0 X 51	A	0 X 51	0 X 52	0 X 51	X 51	X 49	X 46	0 X 41	36	30	34	A
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT			1	1	1	2	4	7	11	13	12	11	12	10	13	14	17	17	17	16	14	9	1	
MED			30	0 X 25	17	32	36	X 36	0 X 40	0 X 43	0 X 44	0 X 51	0 X 52	0 X 53	0 X 52	0 X 52	0 X 53	0 X 49	X 43	38	30	26	34	
UQ							38	X 38	X 42	0 X 46	48	52	56	57	57	56	54	52	46	42	34	30		
LQ							33	36	0 X 39	0 X 41	38	46	50	49	49	46	50	45	41	36	27	24		

SEP. 1985

FXI (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

SEP. 1985

F0F2 (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

StationSYOWA STATION				Lat. 69° 00.4' S , Long. 39° 35.4' E								Sweep 4 MHz to 15 MHz in 20 sec in automatic operation																			
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
1	A	B	B	B	A	A	A	A	A	R 28	31	35	C	C	C	C	C	C	C	C	C	C	C	C							
2	C	C	C	C	C	C	C	C	C	35	37	44	U R 49	U R 50	U R 46	U R 49	U R 49	43	35	31	B	B	B	B							
3	B	B	F 24	19	F	A	B	B	B	B	B	B	U R 51	U R 58	U R 53	U R 50	45	45	30	24	16	F	B	B							
4	A	A	A	A	A	B	F 25	F 26	F 33	40	43	48	U R 52	A	A	F	R 54	47	35	27	F 17	A	B	A							
5	B	B	B	B	A	B	B	B	R 39	R 49	46	46	R 48	R	R 53	46	44	35	37	F 29	F 16	B	A	A							
6	A	A	A	A	A	A	B	A	A	39	40	43	44	46	51	47	49	49	49	B	A	A	A	A							
7	A	A	A	A	A	A	A	A	B	A	A	A	B	B	43	R 46	R 48	43	38	30	F 18	A	A	A							
8	A	A	A	A	A	A	A	F 30	36	37	40	B	R 45	B	B	B	47	41	B	A	A	A	A	A							
9	A	A	A	A	A	A	A	A	B	B	B	B	45	43	47	B	47	B	40	B	A	A	A	A							
10	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	R 37	F 24	A	A	A	A							
11	A	A	B	A	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	B							
12	A	A	A	A	A	A	A	32	40	40	45	R 47	R 50	U R 51	D R 53	54	R 48	46	50	39	B	A	A	A							
13	A	A	A	A	A	F 29	H 29	29	34	B	B	B	B	57	B	R 52	47	47	35	31	24	F 14	A	A							
14	A	A	A	A	A	A	A	A	B	B	B	B	B	B	40	32	F 27	A	A	A	A	A	A	A							
15	A	A	A	A	A	A	A	B	A	F 33	32	35	H 35	H 37	36	37	37	40	37	F 33	F	F	A	A							
16	A	A	A	A	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A							
17	B	B	B	A	B	B	B	B	B	B	B	B	B	35	B	R	B	B	B	B	F 22	B	B	A							
18	A	A	A	A	A	B	A	30	35	37	36	R 38	45	48	50	45	B	R 46	38	33	21	F 13	A	A							
19	A	A	A	A	A	A	A	A	A	H 39	H 41	45	42	B	B	B	U R 45	B	35	A	A	A	A	A							
20	A	A	A	A	B	A	B	B	B	B	31	B	B	B	B	B	34	F 33	B	B	B	A	A	A							
21	A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	36	B	B	A	A	A	A							
22	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	H 35	B	33	F 31	B	A	A	A	A							
23	A	A	A	A	A	A	A	33	B	A	B	B	B	B	B	B	B	B	B	36	24	F 22	B	A							
24	A	A	A	A	A	A	F 33	B	B	B	B	B	B	B	B	B	B	R 39	40	F 33	F 23	A	A	A							
25	B	A	B	B	A	B	B	A	30	31	B	B	B	B	B	B	B	36	30	A	A	A	A	A							
26	B	B	B	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	30	24	F 20	A	B							
27	B	B	A	B	B	B	A	A	E G 31	B	B	B	B	B	B	B	B	B	B	R 39	28	F 18	A	A							
28	A	B	B	B	A	B	A	A	33	B	32	B	B	B	H 40	B	B	B	B	B	B	F 18	A	A							
29	A	A	A	A	A	27	B	A	33	41	B	46	47	B	46	52	R 50	R 47	B	F 32	F 28	F 20	B	A							
30	A	A	A	A	A	A	31	35	R 36	36	A	H 45	A	45	46	R 45	45	43	40	35	30	F 24	F 18	A							
31																															
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
CNT			1	1		1	4	7	11	13	12	11	12	10	13	13	16	18	17	16	13	8	1								
MED			F 24	19		27	30	30	34	37	38	45	46	47	R 46	46	47	43	37	32	F 23	19	F 18								
UQ						32	32	36	40	42	46	R 50	U R 51	R 51	R 50	R 48	46	40	34	F 24	F 21										
LQ						27	30	33	35	32	40	44	43	43	45	44	36	35	F 30	F 18	F 16										

SEP. 1985

F0F2 (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

SEP. 1985

FES (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYCWA STATION				Lat. 69° 00.4' S, Long. 39° 35.4' E											Sweep. 4 MHz to 15 MHz in 20 sec in automatic operation											
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	42	B	B	B	40	36	45	42	43	27	16	21	C	C	C	C	C	C	C	C	C	C	C	C		
2	C	C	C	C	C	C	C	C	C	35	27	21	26	25	26	22	20	19	E B	E B	B	B	B	B		
3	B	B	32	28	17	20	B	B	B	B	B	B	26	21	24	31	24	16	14	16	12	B	B	16		
4	14	27	40	35	30	B	15	23	15	20	24	32	35	29	27	28	21	E B	13	14	12	E B	10	20		
5	B	B	B	B	20	B	B	B	E B	E B	E B	E B	23	30	23	24	29	27	28	25	22	E B	E B	13	31	
6	30	34	32	20	35	27	B	51	47	35	26	26	28	26	26	21	19	E B	15	15	B	37	41	45	49	
7	43	43	51	43	51	43	47	35	B	36	33	27	B	B	E B	27	23	E B	21	21	E B	18	15	32	40	93
8	90	42	65	43	58	46	40	32	32	19	E B	B	E B	B	B	B	E B	22	26	B	47	20	28	46	45	
9	107	45	50	70	20	43	46	46	B	B	B	B	25	23	23	B	E B	25	B	E B	B	43	47	47	49	
10	67	90	71	40	30	43	42	36	35	B	B	B	B	B	B	B	B	B	E B	E B	37	38	36	45		
11	90	72	B	42	42	B	45	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	42	B	
12	42	42	36	48	64	47	40	27	26	26	27	28	27	25	25	28	22	18	22	E B	B	26	19	34		
13	36	37	32	42	35	25	24	16	20	B	B	B	B	27	B	22	22	19	19	12	12	12	30	36		
14	39	40	46	41	42	45	41	20	B	B	B	B	B	B	E B	27	20	26	48	43	33	42	37	40	42	
15	59	43	50	46	42	29	29	B	43	33	17	26	24	24	35	22	19	17	32	12	33	12	70	43		
16	41	37	43	42	B	36	42	B	B	B	B	B	B	B	B	B	B	B	B	20	40	43	37	32		
17	B	B	B	35	B	B	B	B	B	B	B	B	B	E B	B	B	B	B	B	B	26	B	B	39		
18	39	36	37	30	28	B	35	21	19	20	E B	E B	32	26	26	E B	B	E B	31	16	E B	E B	9	14	26	
19	30	35	35	70	36	38	31	30	36	24	E B	23	24	B	B	B	E B	B	B	30	42	47	43	47	70	
20	70	41	43	38	B	35	B	B	B	B	E B	B	B	B	B	B	E B	E B	B	B	B	15	27	36		
21	70	B	B	B	33	35	B	B	B	B	B	B	B	B	B	B	B	E B	22	B	B	27	42	40	47	
22	B	46	B	B	B	B	B	B	B	B	B	B	B	B	B	22	B	E B	E B	B	40	27	32	41		
23	40	41	47	45	42	37	35	26	B	30	B	B	B	B	B	B	B	B	B	30	20	27	B	24		
24	33	32	26	28	30	35	33	B	B	B	B	B	B	B	B	B	B	E B	28	E B	E B	27	41	70	42	
25	B	43	B	B	42	B	B	31	25	24	B	B	B	B	B	B	B	E B	30	E B	45	40	42	41	41	
26	B	B	B	B	B	B	36	28	B	B	B	B	B	B	B	B	B	B	B	E B	14	E B	36	B		
27	B	B	41	B	B	B	35	29	24	B	B	B	B	B	B	B	B	B	B	E B	E B	42	70			
28	47	B	B	B	40	B	45	45	35	B	E B	B	B	B	23	B	B	B	B	B	10	16	35			
29	36	40	36	30	35	30	B	35	24	30	B	25	26	B	27	28	30	E B	B	18	11	13	B	15		
30	30	42	40	35	35	35	17	27	22	25	25	24	29	27	27	24	24	21	18	E B	E B	12	32			
31																										
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
CNT	22	21	20	21	23	19	20	19	16	15	14	12	13	12	14	14	16	19	18	21	24	24	23	26		
MED	42	41	40	41	35	36	38	30	26	26	20	25	26	26	26	23	21	E B	E B	16	23	27	40	40		
UQ	67	43	48	43	42	43	44	36	36	32	26	26	29	27	27	26	24	E B	E B	23	38	41	44	45		
LQ	36	37	36	35	30	32	32	26	22	24	E B	22	25	24	25	22	20	17	E B	E B	12	12	28	32		

SEP. 1985

FES (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

SEP. 1985

F-MIN (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION				Lat. 69° 00.4 ' S				Long. 39° 35.4 ' E				Sweep .4 MHz to 15 MHz in 20 sec in				automatic operation								
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	8	B	B	B	16	21	13	13	13	14	13	14	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	15	15	14	18	19	19	17	16	13	22	20	B	B	B	B
3	B	B	9	10	8	8	B	B	B	B	B	B	19	15	24	31	16	14	14	14	12	B	B	9
4	8	8	13	11	11	B	8	8	13	15	15	19	17	15	19	15	15	13	14	12	10	8	B	8
5	B	B	B	B	9	B	B	B	23	30	23	24	21	18	20	19	16	15	12	11	12	B	8	8
6	9	11	8	9	8	8	B	10	12	13	14	13	12	13	13	12	14	15	15	B	8	9	11	9
7	14	11	8	24	9	20	13	25	B	20	21	22	B	B	27	23	21	21	18	14	12	8	8	10
8	10	3	14	19	14	13	10	11	11	12	25	B	25	B	B	B	22	13	B	13	7	8	10	11
9	8	11	17	18	15	15	10	10	B	B	B	B	18	16	14	B	25	B	21	B	9	13	11	11
10	15	13	8	8	21	21	13	14	14	B	B	B	B	B	B	B	B	B	25	12	8	8	7	12
11	11	31	B	22	32	B	21	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	8	B
12	13	10	13	10	16	13	17	13	14	14	14	13	13	14	14	13	14	11	9	12	B	10	9	8
13	8	21	17	14	13	8	7	9	10	B	B	B	B	16	B	17	14	13	8	7	8	9	7	8
14	8	9	3	21	19	15	9	8	B	B	B	B	B	B	27	14	11	11	13	13	13	8	8	9
15	8	19	14	14	8	10	14	B	13	15	14	19	14	14	13	15	15	10	10	9	8	7	8	19
16	13	8	21	8	B	17	14	B	B	B	B	B	B	B	B	B	B	B	B	10	8	8	8	8
17	B	B	B	14	B	B	B	B	B	B	B	B	B	25	B	B	B	B	B	B	21	B	B	8
18	8	21	14	13	21	B	13	15	14	17	25	25	15	13	14	25	B	31	10	23	11	9	7	8
19	8	8	20	9	15	14	11	8	15	15	22	14	14	B	B	B	27	B	14	7	8	13	15	9
20	20	9	8	10	B	13	B	B	B	B	25	B	B	B	B	B	23	20	B	B	B	7	7	13
21	7	B	B	B	13	13	B	B	B	B	B	B	B	B	B	B	B	22	B	B	15	8	8	14
22	B	8	B	B	B	B	B	B	B	B	B	B	B	B	B	16	B	20	20	B	8	9	8	8
23	9	9	21	14	14	16	11	17	B	22	B	B	B	B	B	B	B	B	B	14	14	13	B	11
24	8	9	10	13	8	10	15	B	B	B	B	B	B	B	B	B	B	28	20	21	13	8	9	14
25	B	18	B	B	9	B	B	15	16	16	B	B	B	B	B	B	B	30	19	8	14	9	8	11
26	B	B	B	B	B	B	21	14	B	B	B	B	B	B	B	8	B	B	B	22	14	13	9	B
27	B	B	25	B	B	B	23	14	14	B	B	B	B	B	B	B	B	B	B	23	19	13	19	16
28	13	B	B	B	17	B	16	14	14	B	29	B	B	B	12	B	B	B	B	B	B	10	11	8
29	11	13	18	15	14	13	B	15	14	17	B	15	14	B	13	14	22	24	B	13	11	8	B	7
30	7	8	15	15	11	12	13	14	14	13	14	10	11	13	13	13	12	10	13	18	13	7	6	8
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	29	29	29	29	29	29	29	29	30	30	30	29	29	29	29	29	29	29	29	29	29	29	29
MED	11	13	17	15	15	16	15	15	16	B	B	B	B	B	B	B	25	22	20	14	12	9	9	9
UQ	20	B	B	B	21	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	15	13	15	13
LQ	8	9	13	11	11	13	13	13	14	15	21	19	17	16	14	16	16	14	14	12	8	8	8	8

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F-MIN (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

SEP. 1985

H⁺F (KM)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION		Lat. 69° 00.4' S , Long. 39° 35.4' E											Sweep .4 MHz to 15 MHz in 20 sec in automatic operation															
Hour	Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
1		A	B	B	B	A	A	A	A	A	E A 275	270	240	C	C	C	C	C	C	C	C	C	C	C	C			
2		C	C	C	C	C	C	C	C	C	255	220	220	H	205	210	240	230	230	210	E B 255	E B 280	B	B	B	B		
3		B	B	A	E A 225	E A 350	E A 350	A	B	B	B	B	B	220	225	205	225	210	210	200	200	E B 250	B	B	B	A		
4		A	A	A	A	A	B	325	250	205	H	200	H	205	H	200	H	220	H	200	225	210	200	200	A	B	A	
5		B	B	B	B	A	B	B	B	E B 250	240	220	215	H	210	H	225	H	200	205	H	220	210	B	B	A	A	
6		A	A	A	A	A	A	A	A	A	H	200	175	H	200	190	H	200	225	220	H	200	250	220	B	A	A	
7		A	A	A	A	A	A	A	A	B	A	A	A	B	B	B	H	230	225	H	220	225	225	240	250	A	A	
8		A	A	A	A	A	A	A	E A 325	280	200	H	215	B	E B 250	B	B	B	E B 250	225	B	A	A	A	A	A	A	
9		A	A	A	A	A	A	A	A	B	B	B	B	215	205	H	200	B	H	230	B	245	B	A	A	A	A	
10		A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	E B 250	230	A	A	A	A	A	
11		A	A	B	A	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	B	
12		A	A	A	A	A	A	A	260	240	210	200	H	200	H	180	205	225	240	205	205	220	225	B	A	A	A	
13		A	A	A	A	A	E A 250	175	225	200	H	B	B	B	B	205	B	205	H	200	205	200	200	240	E A 280	A	A	
14		A	A	A	A	A	A	A	A	H	B	B	B	B	B	E B 250	175	260	A	A	A	A	A	A	A	A	A	
15		A	A	A	A	A	A	A	B	A	240	200	220	205	225	210	225	H	230	210	250	H	220	225	E A 295	A	A	
16		A	A	A	A	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A	A	
17		B	B	B	A	B	B	B	B	B	B	B	B	B	225	B	B	B	B	B	B	B	E A 250	B	B	A	A	
18		A	A	A	A	A	B	A	280	225	200	H	225	210	230	200	180	E B 225	B	230	210	E B 250	225	250	A	A	A	
19		A	A	A	A	A	A	A	A	A	230	180	205	200	B	B	B	250	B	250	A	A	A	A	A	A	A	
20		A	A	A	A	B	A	B	B	B	B	250	B	B	B	B	B	B	E B 250	E B 270	B	B	B	A	A	A	A	
21		A	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	E B 250	B	B	B	A	A	A	A	A	
22		B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	225	B	245	260	B	A	A	A	A	A	A	
23		A	A	A	A	A	A	A	E A 310	B	A	B	B	B	B	B	B	B	B	B	3	B	250	250	275	B	A	
24		A	A	A	A	A	A	E A 280	B	B	B	B	B	B	B	B	B	B	B	E B 255	230	245	E A 310	A	A	A	A	
25		B	A	B	B	A	B	B	A	250	225	B	B	B	B	B	B	B	B	E B 270	275	A	A	A	A	A	A	
26		B	B	B	B	B	B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	E B 260	E B 260	250	A	A	A	
27		B	B	A	B	B	B	A	A	E A 310	B	B	B	B	B	B	B	B	B	B	B	245	250	E B 300	A	A	A	
28		A	B	B	B	A	B	A	A	280	B	E B 245	B	B	B	B	220	B	B	B	B	B	B	260	A	A	A	
29		A	A	A	A	A	305	B	A	250	225	H	B	H	200	190	B	H	200	H	255	230	B	210	225	250	B	A
30		A	A	A	A	A	A	E A 300	E A 330	200	210	A	200	A	200	200	200	H	205	H	200	220	210	225	260	A	A	
31																												
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
CNT				1	1	1	2	4	7	11	13	12	11	12	12	14	14	16	13	17	16	14	9	1				
MED				225	E A 350	E A 350	278	U 232	U 252	U 238	218	214	210	205	H	205	218	217	216	218	222	222	U 232	255	260			
UQ								312	E A 305	258	235	228	220	215	H	218	225	225	250	U 238	248	242	E 250	E 280				
LQ								U 202	255	208	H	200	H	200	H	200	195	H	200	H	200	H	205	210	210	210	225	250

SEP. 1985

H⁺F (KM)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

OCT. 1985

FXI (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station		SYOWA STATION				Lat. 69° 00.4' S ,		Long. 39° 35.4' E		Sweep. 4		MHz to 15		MHz in 20		sec in		automatic operation							
Hour Day		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		A	B	A	A	A	X 29	X 35	H 40	H 43	O 43	O 42	O 48	O 48	H 49	O 52	O 52	X 53	X 52	X 46	X 41	X 34	X 32	24	B
2		B	A	A	A	B	B	A	O 41	O 44	H 46	B	B	B	O 52	B	B	B	B	O 47	O 43	X 36	25	A	A
3		A	A	A	A	A	A	A	A	A	42	O 41	B	B	B	B	B	B	B	O 38	A	A	A	A	A
4		A	A	A	A	A	A	A	A	A	A	B	B	B	B	O 41	B	O 40	O 41	A	A	A	A	A	A
5		A	A	A	A	A	A	A	A	O 42	B	A	B	B	B	B	A	B	B	B	A	A	A	A	B
6		A	A	B	B	A	B	B	A	B	B	B	B	B	B	B	B	B	O 41	O 33	B	B	A	A	A
7		A	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	30	A	A	A	A
8		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	O 36	O 26	21	A	A	A
9		A	A	B	B	B	B	B	A	A	B	B	B	B	B	B	O 48	O 49	X 46	O 46	O 33	X 25	A	A	A
10		A	A	A	A	A	B	B	A	O 39	O 42	B	B	B	B	O 47	O 46	O 46	O 48	B	O 42	B	B	30	A
11		A	A	A	A	A	A	A	B	B	A	B	B	B	B	O 47	O 42	O 45	O 43	X 42	A	A	A	A	A
12		A	A	A	A	B	B	A	A	A	O 39	O 39	O 41	O 41	O 40	O 39	B	O 41	O 41	O 38	X 36	28	B	B	A
13		A	A	A	B	B	A	B	B	B	O 38	O 40	O 39	B	B	B	B	O 39	O 37	A	O 35	A	B	A	A
14		B	A	A	B	A	A	B	A	A	O 40	O 39	B	O 40	42	B	B	B	O 43	B	O 40	B	B	A	A
15		A	A	A	A	30	X 33	X 35	X 37	B	B	B	B	B	B	O 41	B	B	B	B	X 40	A	A	A	A
16		A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	O 39	X 40	O 36	24	A	A
17		A	A	B	A	A	B	B	B	B	A	B	B	B	B	B	B	B	O 43	O 44	X 40	O 32	A	A	A
18		A	A	A	A	A	B	A	A	A	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C
19		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21		C	C	C	C	C	C	C	C	C	O 46	O 47	44	B	O 46	O 51	O 55	X 53	X 48	X 53	B	A	A	A	A
22		A	A	A	A	B	B	A	A	B	B	B	B	B	B	B	B	O 40	O 42	X 40	X 38	34	B	A	A
23		A	B	A	B	B	B	A	O 39	A	B	B	B	B	B	B	B	B	B	B	B	B	27	A	A
24		A	B	A	A	B	A	B	A	O 41	B	B	B	B	B	B	B	B	O 46	O 43	42	X 40	A	20	A
25		A	A	A	A	B	A	B	A	A	X 42	B	B	O 46	B	B	O 46	O 46	B	B	O 43	O 39	A	A	A
26		A	A	A	A	A	A	O 41	X 39	O 47	B	O 48	O 48	O 51	O 52	O 53	O 55	O 53	O 51	O 49	O 48	X 46	X 42	X 38	X 37
27		X 40	X 37	35	36	X 41	X 46	O 51	O 51	O 50	44	O 51	O 52	O 54	O 53	X 57	X 59	X 56	O 54	O 51	X 50	X 48	46	45	A
28		A	A	A	A	B	A	O 48	O 49	O 51	O 51	X 52	O 53	O 55	O 54	51	50	O 51	O 48	X 49	X 48	X 47	X 44	42	43
29		39	37	A	A	B	B	A	A	B	A	O 48	O 47	O 48	O 48	O 48	O 46	O 49	O 48	O 45	O 43	X 43	A	A	A
30		A	A	A	A	A	A	B	H 49	H 51	O 53	O 56	X 58	O 48	61	62	66	63	O 52	O 56	X 49	X 47	A	A	A
31		30	25	A	A	A	A	A	A	O 53	O 52	O 49	O 44	O 48	O 48	O 50	O 51	O 52	X 54	X 50	X 50	45	A	A	A
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT		3	3	1	1	2	3	5	8	9	13	13	10	10	11	13	11	16	19	18	21	16	9	6	2
MED		39	37	35	36	36	X 33	O 41	40	O 47	O 43	O 47	O 48	O 48	O 49	O 50	O 51	O 48	O 48	O 46	X 42	X 38	27	34	40
UQ		40	37				X 40	O 48	49	O 51	O 46	O 49	O 52	O 51	O 52	O 52	O 55	X 53	O 50	X 49	O 46	X 46	42	42	
LQ		34	31				X 31	X 35	39	O 43	O 40	O 41	O 44	O 46	O 47	O 47	O 46	O 43	O 42	O 40	X 40	X 34	25	24	

OCT. 1985

FXI (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

OCT. 1985

FOF2 (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION		Lat. 69° 00.4' S, Long. 39° 35.4' E										Sweep. 4 MHz to 15 MHz in 20 sec in automatic operation												
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	B	A	A	A	23	29	H 34	H 37	H 37	36	H 42	H 42	H 43	46	S 46	47	46	40	35	28	26	F 19	B
2	B	A	A	A	B	B	A	35	38	H 40	B	B	B	46	B	B	B	B	41	37	30	F 19	A	A
3	A	A	A	A	A	A	A	B	A	36	35	B	B	B	B	B	B	B	A	A	A	A	A	A
4	A	A	A	A	A	A	A	A	A	A	B	B	B	B	35	B	34	35	A	A	A	A	A	A
5	A	A	A	A	A	A	A	A	36	B	A	B	B	B	B	A	B	B	B	A	A	A	A	B
6	A	A	B	B	A	B	B	A	B	B	B	B	B	B	B	B	B	35	27	B	B	A	A	A
7	A	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	F 24	A	A	A	A
8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	30	R 20	F 15	A	A
9	A	A	B	B	B	B	B	A	A	B	B	B	B	B	B	B	42	43	40	R 40	32	19	A	A
10	A	A	A	A	A	B	B	B	A	33	36	B	B	B	41	40	40	42	B	R 36	B	B	F 24	A
11	A	A	A	A	A	A	A	B	B	A	B	B	B	B	B	H 41	36	39	R 37	36	A	A	A	A
12	A	A	A	A	B	B	A	A	A	33	33	35	35	34	33	B	35	35	32	30	22	B	B	A
13	A	A	A	B	B	A	B	B	B	32	34	33	B	B	B	B	33	31	A	R 29	A	B	A	A
14	B	A	A	B	A	A	B	A	A	34	33	B	34	36	B	B	B	37	B	34	B	B	A	A
15	A	A	A	A	F 24	27	29	31	B	B	B	B	B	B	35	B	B	B	B	34	A	A	A	A
16	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	33	34	30	F 18	A	A
17	A	A	B	A	A	B	B	B	B	A	B	B	B	B	B	B	B	42	38	34	26	A	A	A
18	A	A	A	A	A	B	B	A	A	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	H 40	H 41	38	B	40	45	49	47	42	47	B	A	A	A	A
22	A	A	A	A	B	B	A	A	B	B	B	B	B	B	B	B	34	36	34	32	28	B	A	A
23	A	B	A	B	B	B	A	33	A	B	B	B	B	B	B	B	B	B	B	B	F 21	A	A	A
24	A	B	A	A	B	A	B	A	35	B	B	B	B	B	B	B	B	40	37	36	34	A	F 14	A
25	A	A	A	A	B	A	B	A	A	36	B	B	R 40	B	B	H 40	H 40	B	B	37	33	A	A	A
26	A	A	A	A	A	A	H 35	33	H 41	B	H 42	H 42	45	R 46	R 47	49	47	45	43	42	40	36	32	31
27	34	31	F 29	F 30	35	40	45	45	44	38	45	46	48	47	51	53	R 50	R 48	R 45	43	42	F 40	F 39	A
28	A	A	A	A	B	A	H 42	H 43	H 45	45	46	47	49	48	H 45	H 44	S 45	42	43	42	41	38	36	F 37
29	F 32	F 31	A	A	B	B	A	A	B	A	H 42	H 41	H 42	H 42	H 42	40	43	42	R 39	R 37	37	A	A	A
30	A	A	A	A	A	A	B	H 43	H 45	H 47	50	52	H 42	55	56	60	57	46	50	43	41	A	A	A
31	F 24	F 19	A	A	A	A	A	A	R 49	47	H 43	R 38	H 42	H 42	44	45	46	43	44	44	F 39	A	A	A
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	3	3	1	1	2	3	5	8	9	13	13	10	10	11	13	11	16	19	18	21	16	9	6	2
MED	F 32	F 31	F 29	F 30	30	27	35	34	41	37	41	42	42	43	44	45	42	42	40	36	32	F 21	F 23	34
UQ	33	31				34	H 42	43	H 45	H 40	H 43	46	45	46	46	49	47	44	43	40	40	36	F 36	
LQ	F 28	F 25				25	29	33	37	34	35	38	40	41	41	40	37	36	34	34	28	F 19	F 18	

OCT. 1985

FOF2 (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

OCT. 1985

FES (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station	SYOWA	STATION	Lat. 69° 00.4 ' S , Long. 39° 35.4 ' E											Sweep	4	MHz to 15		MHz in 20		sec in automatic operation							
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
1	40	B	41	35	21	13	15	17	27	25	23	24	29	28	27	24	30	20	16	20	E B 10	12	12	B			
2	B	12	32	31	B	B	27	35	32	31	B	B	B	29	3	B	B	3	E B 22	E B 21	E B 13	11	31	30			
3	40	70	46	47	40	35	35	B	35	31	E B 20	B	B	B	B	B	B	B	E B 21	41	38	42	37	37			
4	35	60	55	35	60	36	43	42	60	43	B	B	B	B	16	B	E B 24	E B 21	40	42	43	60	46	50			
5	45	45	45	36	27	35	36	32	42	B	27	B	B	B	B	30	B	B	B	42	70	76	36	B			
6	43	72	B	B	24	B	B	36	B	B	B	B	B	B	B	B	B	30	E B 22	B	B	37	40	10			
7	80	B	B	B	45	B	B	B	B	B	B	B	B	B	B	B	B	B	B	27	32	42	32	62			
8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	E B 20	E B 14	16	36	35			
9	35	42	B	B	B	B	B	36	35	B	B	B	B	B	B	B	E B 24	20	19	E B 21	E B 14	26	30	33			
10	31	31	31	30	42	B	B	B	36	27	26	B	B	B	25	23	22	E B 21	B	E B 21	B	B	E B 15	35			
11	65	90	32	29	43	27	42	B	B	42	B	B	B	B	27	E B 24	E B 24	E B 21	21	40	40	45	82	70			
12	50	50	43	25	B	B	45	43	33	23	25	25	26	25	29	B	E B 27	24	E B 20	17	25	B	B	40			
13	33	35	36	B	B	35	B	B	B	26	24	25	B	B	B	B	E B 28	24	34	E B 23	35	B	32	41			
14	B	41	35	B	42	33	B	37	37	30	26	B	27	26	B	B	B	23	B	19	B	20	29				
15	43	33	36	28	20	19	21	21	B	B	B	B	B	B	25	B	B	B	B	16	30	32	40	42			
16	37	72	101	42	B	B	B	B	B	B	B	B	B	B	B	B	B	B	E B 22	42	E B 19	E B 13	34	38			
17	50	45	B	43	35	B	B	B	B	35	B	B	B	B	B	B	B	E B 25	E B 22	26	15	42	45	42			
18	42	43	80	52	35	B	B	42	35	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C			
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C			
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C			
21	C	C	C	C	C	C	C	C	C	29	27	37	B	28	35	33	42	31	26	B	43	36	42	46			
22	85	44	45	43	B	B	41	42	B	B	B	B	B	B	B	B	23	E B 25	21	17	17	B	46	45			
23	44	B	35	B	B	B	40	35	40	B	B	B	B	B	B	B	B	B	B	B	18	19	30				
24	38	B	41	36	B	42	B	42	34	B	B	B	B	B	B	B	B	E B 25	E B 22	19	17	20	28	28			
25	41	36	36	35	B	28	B	30	35	31	B	B	28	B	B	E B 28	25	B	B	E B 22	E B 18	30	43	35			
26	32	36	41	43	45	40	35	28	34	B	27	26	28	27	27	27	25	22	E B 22	E B 19	E B 16	E B 13	E B 13	12			
27	12	30	33	35	20	19	21	24	25	17	28	27	30	30	23	28	27	23	22	21	17	15	22	41			
28	32	33	47	50	B	35	27	23	31	32	33	28	28	33	34	33	26	22	23	20	17	E B 13	E B 10	E B 9			
29	E B 9	32	30	36	B	B	43	43	B	37	30	28	28	27	27	27	25	26	E B 23	E B 21	30	43	37	45			
30	42	32	34	32	33	32	B	29	27	33	27	30	32	31	30	35	41	26	32	26	28	46	32	27			
31	22	30	45	30	32	46	45	43	32	27	34	27	35	35	35	32	28	25	22	19	31	44	43	38			
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
CNT	25	23	23	21	16	15	15	20	18	17	14	10	10	11	13	12	16	19	20	25	24	23	27	26			
MED	40	41	41	35	35	35	36	36	34	31	27	27	28	28	27	28	26	23	20	20	22	32	34	38			
UQ	44	48	45	43	42	36	42	42	36	33	28	28	30	30	30	32	28	25	23	26	34	42	41	42			
LQ	33	32	34	31	26	28	27	28	32	27	25	25	28	27	27	26	24	22	E B 21	18	E B 16	16	25	30			

OCT. 1985

FES (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

OCT. 1985

F-MIN (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION				Lat. 69° 00.4' S, Long. 39° 35.4' E											Sweep. 4 MHz to 15 MHz in 20 sec in automatic operation																		
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23									
1	8	8	15	14	12	8	9	8	8	14	13	14	11	11	12	11	8	11	10	8	10	7	8	8									
2	8	7	7	8	8	8	12	10	13	10	8	8	8	18	8	8	8	8	22	21	13	8	8	8									
3	14	9	19	13	10	10	10	8	18	13	20	8	8	8	8	8	8	8	21	10	10	8	8	8									
4	24	8	9	9	20	19	22	13	14	13	8	8	8	8	15	8	24	21	8	14	10	15	19	13									
5	8	8	13	8	8	7	14	15	13	8	20	8	8	8	8	19	8	8	8	8	13	11	14	8									
6	22	15	8	8	14	8	8	22	8	8	8	8	8	8	8	8	8	21	22	8	8	9	13	22									
7	9	8	8	8	13	8	8	8	8	8	8	8	8	8	8	8	8	8	8	13	18	9	13	17									
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	20	14	8	9	12									
9	17	18	8	8	8	8	8	21	19	8	8	8	8	8	8	8	24	15	15	21	14	16	8	10									
10	9	8	8	14	13	8	8	8	14	14	14	8	8	8	15	19	17	21	8	21	8	15	8										
11	11	8	16	14	20	19	21	8	8	14	8	8	8	8	15	24	24	21	13	8	11	14	9	10									
12	19	14	18	13	8	8	18	15	14	13	14	14	13	14	14	8	27	21	20	13	9	8	8										
13	16	24	21	8	8	20	8	8	8	19	14	18	8	8	8	8	28	14	19	23	17	8	11	15									
14	8	19	16	8	15	13	8	15	18	20	21	8	23	14	8	8	8	16	8	14	8	8	9	8									
15	10	13	18	13	8	8	10	13	8	8	8	8	8	8	17	8	8	8	8	14	14	13	9	8									
16	8	15	19	23	8	8	8	8	8	8	8	8	8	8	8	8	8	8	22	13	19	13	8	8									
17	10	22	8	16	13	8	8	8	8	18	8	8	8	8	8	8	8	25	22	12	13	13	10	12									
18	15	14	22	14	13	8	8	16	22	8	8	C	C	C	C	C	C	C	C	C	C	C	C	C									
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C									
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C									
21	C	C	C	C	C	C	C	C	C	15	15	13	8	22	13	12	12	11	11	8	9	13	11	14									
22	19	18	15	12	8	8	20	15	8	8	8	8	8	8	8	8	14	25	15	13	13	8	14										
23	24	8	13	8	8	8	21	14	13	8	8	8	8	8	8	8	8	8	8	8	13	9	8										
24	8	8	19	16	8	20	8	17	13	8	8	8	8	8	8	8	8	24	22	13	9	8	8	13									
25	8	12	13	18	8	21	8	21	18	14	8	8	14	8	8	28	13	8	8	22	18	11	11	23									
26	13	20	19	14	19	24	13	11	13	8	19	14	15	14	13	13	13	15	22	19	16	13	13	8									
27	8	8	13	16	14	12	13	12	12	12	13	13	13	13	13	13	9	8	13	14	12	8	7	8									
28	8	11	19	15	8	20	13	11	9	12	13	13	13	13	11	13	12	13	10	13	14	13	10	9									
29	9	7	13	18	8	8	22	14	8	18	14	14	13	14	15	14	19	19	23	21	15	12	10	10									
30	8	10	9	8	13	8	8	12	13	13	19	19	19	20	18	13	10	13	9	14	12	8	8	8									
31	8	9	8	13	13	13	15	13	12	12	12	12	13	12	11	12	13	13	13	10	8	10	11	10									
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23									
CNT	28	28	28	28	28	28	28	28	28	29	29	28	28	28	28	28	28	28	28	28	28	28	28	28									
MED	10	14	17	14	20	22	22	15	18	18	8	8	8	8	8	8	26	21	22	14	14	13	10	10									
UQ	19	21	20	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	21	18	14	12	14									
LQ	8	8	13	13	13	13	14	13	13	13	14	14	14	14	14	14	13	14	13	13	10	8	8	8									

OCT. 1985

F-MIN (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

OCT. 1985

H^oF (KM)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION		Lat. 69° 00.4' S		Long. 39° 35.4' E		Sweep 4 MHz to 15 MHz in 20 sec in automatic operation																			
Hour	Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		A	B	A	A	A	E A 300	240	230	225	200	195	H 205	200	H 205	200	H 205	210	200	H 175	H 200	225	250	270	B
2		B	A	A	A	B	B	A	250	275	H 205	B	B	B	210	B	B	B	B	230	240	245	275	A	A
3		A	A	A	A	A	A	A	B	A	H 195	H 195	B	B	B	B	B	B	B	275	A	A	A	A	A
4		A	A	A	A	A	A	A	A	A	A	B	B	B	B	245	B	250	250	A	A	A	A	A	A
5		A	A	A	A	A	A	A	A	240	B	A	B	B	B	B	A	B	B	B	A	A	A	A	B
6		A	A	B	B	A	B	B	A	B	B	B	B	B	B	B	B	B	E A 295	E B 275	B	B	A	A	A
7		A	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	E A 340	A	A	A	A
8		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	190	E B 300	E A 375	A	A
9		A	A	B	B	B	B	B	A	A	B	B	B	B	B	B	B	H 225	H 215	H 220	H 220	230	E A 340	A	A
10		A	A	A	A	A	B	B	B	A	H 200	220	B	B	B	225	220	H 220	H 225	B	240	B	B	255	A
11		A	A	A	A	A	A	B	B	A	B	B	B	B	B	225	215	H 225	H 215	H 250	A	A	A	A	A
12		A	A	A	A	B	B	A	A	A	205	225	H 200	H 200	200	220	B	E B 230	E A 250	250	250	280	B	B	A
13		A	A	A	B	B	A	B	B	B	250	200	E A 250	B	B	B	B	E B 250	245	A	E B 290	A	B	A	A
14		B	A	A	B	A	A	B	A	A	230	250	B	225	205	B	B	B	H 225	B	260	B	B	A	A
15		A	A	A	A	E A 375	290	225	225	B	B	B	B	B	B	250	B	B	B	B	250	A	A	A	A
16		A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	E B 250	E A 300	190	E B 320	A	A
17		A	A	B	A	A	B	B	B	B	A	B	B	B	B	B	B	B	H 250	H 250	H 250	260	A	A	A
18		A	A	A	A	A	B	B	A	A	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C
19		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21		C	C	C	C	C	C	C	C	C	205	200	225	B	210	190	H 200	H 200	H 210	H 225	B	A	A	A	A
22		A	A	A	A	B	B	A	A	B	B	B	B	B	B	B	B	H 225	245	230	H 225	225	B	A	A
23		A	B	A	B	B	B	A	E A 300	A	B	B	B	B	B	B	B	B	B	B	B	B	E B 300	A	A
24		A	B	A	A	B	A	B	A	250	B	B	B	B	B	B	B	B	240	230	H 225	H 250	A	F	A
25		A	A	A	A	B	A	B	A	A	205	B	B	200	B	B	H 215	220	B	B	250	250	A	A	A
26		A	A	A	A	A	A	325	225	A	B	220	H 200	225	H 195	210	200	225	225	220	220	230	240	250	260
27		260	290	F	E A 400	E A 375	H 225	240	210	200	200	215	210	190	190	200	H 200	205	210	215	H 205	225	225	240	A
28		A	A	A	A	B	A	E A 290	H 200	H 200	H 200	H 200	H 200	200	H 200	H 200	205	225	215	200	H 225	230	210	225	240
29		250	E A 300	A	A	B	B	A	A	B	A	225	H 200	H 200	225	220	H 225	H 225	H 240	E B 250	E B 250	265	A	A	A
30		A	A	A	A	A	A	B	205	205	200	200	200	210	H 200	H 210	H 225	220	205	220	205	230	A	A	A
31		E A 325	E A 330	A	A	A	A	A	A	H 220	200	205	200	200	H 200	225	215	225	215	200	H 205	280	A	A	A
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT		3	3		1	2	3	5	8	8	13	13	10	10	11	13	11	16	19	18	21	16	9	5	2
MED		255	E A 300		E A 400	E A 375	U 258	240	222	222	200	205	200	200	200	220	215	224	H 220	H 225	230	234	U 242	250	250
UQ		U 276	E A 315				292	290	234	245	205	220	208	210	208	225	218	225	242	240	245	258	E 320	255	
LQ		255	292				258	240	208	202	200	200	200	200	200	200	202	220	215	H 220	H 220	228	240	240	

OCT. 1985

H^oF (KM)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

NOV. 1985

FXI (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION					Lat. 69° 00.4 S , Long. 39° 35.4 E					Sweep 4 MHz to 15 MHz in 20 sec in automatic operation																		
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
1	A	A	A	A	B	A	A	A	0 X 48	B	A	0 X 52	0 X 53	0 X 51	0 X 55	B	B	0 X 51	A	B	X 40	35	A	A				
2	B	A	A	A	A	A	0 X 46	A	A	0 X 46	0 X 48	B	B	B	B	0 X 52	0 X 51	A	A	A	C	C	C	C				
3	C	A	A	C	B	B	B	B	B	B	B	B	C	B	B	B	0 X 48	B	0 X 43	X 37	0 X 33	X 34	30	A				
4	27	A	A	A	B	B	B	B	A	0 X 41	B	B	B	B	X 33	0 X 47	B	0 X 46	0 X 44	A	33	A	A	B				
5	B	B	A	A	A	X 43	0 X 46	0 X 43	0 X 48	0 X 46	0 X 47	0 X 48	B	0 X 42	B	0 X 42	B	B	B	38	A	A	A	A				
6	A	B	B	B	A	A	B	A	B	B	0 X 42	A	A	0 X 42	0 X 42	A	0 X 31	B	0 X 44	B	A	30	A	B				
7	A	A	B	B	B	B	B	B	B	B	B	B	0 X 43	0 X 47	B	B	B	B	B	0 X 43	0 X 44	X 41	X 40	A				
8	A	A	A	B	B	A	A	0 X 48	0 X 47	0 X 43	0 X 49	0 X 51	0 X 43	0 X 43	0 X 48	0 X 48	0 X 49	0 X 51	0 X 51	X 42	X 48	X 45	X 43	A				
9	A	A	A	40	A	A	A	0 X 51	0 X 54	0 X 49	0 X 51	B	B	B	X 63	X 59	0 X 54	0 X 51	X 46	A	A	A	A	A				
10	A	B	A	B	B	A	B	B	B	A	0 X 43	0 X 43	B	B	0 X 49	B	0 X 48	B	0 X 44	0 X 46	0 X 44	X 41	43	40				
11	A	B	B	B	A	B	A	B	0 X 41	0 X 46	0 X 47	B	B	B	B	B	0 X 49	0 X 48	0 X 49	0 X 44	0 X 43	0 X 34	A	A				
12	A	A	A	A	A	A	0 X 48	0 X 51	0 X 50	0 X 51	S	0 X 54	A	0 X 56	0 X 57	0 X 54	0 X 51	0 X 49	0 X 46	X 46	X 45	X 45	X 40	B				
13	A	A	A	44	A	A	0 X 49	0 X 52	0 X 54	0 X 56	0 X 55	A	A	A	A	60	61	B	B	50	49	A	A	A				
14	A	A	A	A	A	B	A	A	A	B	B	B	B	A	A	0 X 43	0 X 42	B	0 X 41	0 X 46	0 X 41	A	A	A				
15	B	A	A	B	B	A	B	B	B	A	0 X 50	0 X 49	S	S	0 X 51	0 X 52	0 X 53	0 X 49	0 X 47	0 X 47	X 47	40	A	A				
16	B	B	A	B	B	B	B	B	A	B	B	B	B	B	B	B	S	0 X 49	0 X 48	0 X 46	X 44	46	36	33				
17	A	A	A	A	X 43	0 X 46	X 49	0 X 53	0 X 55	0 X 56	X 60	X 65	0 X 66	S	S	S	S	0 X 51	X 48	B	A	A	A	A				
18	A	B	B	A	B	B	A	A	A	A	B	0 X 49	S	0 X 46	0 X 47	0 X 48	0 X 47	0 X 49	0 X 46	X 41	X 41	B	A	B				
19	A	B	B	B	B	B	B	B	A	0 X 48	0 X 46	S	S	S	0 X 45	0 X 48	0 X 47	0 X 48	0 X 49	0 X 49	X 48	X 41	X 41	42				
20	A	A	A	B	B	B	A	0 X 54	X 60	X 61	X 64	S	S	0 X 46	0 X 47	0 X 47	0 X 46	0 X 46	0 X 49	0 X 49	X 48	0 X 48	X 48	X 48				
21	A	A	B	B	A	B	0 X 56	62	62	X 62	64	X 66	62	63	62	0 X 59	X 58	A	X 58	0 X 56	51	0 X 53	0 X 50	48				
22	42	A	A	A	A	A	B	A	A	0 X 51	0 X 49	A	0 X 49	0 X 48	0 X 46	0 X 49	0 X 51	0 X 50	0 X 49	X 49	X 49	X 48	A	A				
23	40	X 43	X 46	X 48	0 X 51	0 X 50	0 X 51	0 X 49	S	0 X 53	60	X 58	0 X 56	57	S	S	0 X 51	0 X 49	0 X 49	X 49	X 50	X 52	50	X 51				
24	X 51	44	0 X 42	B	A	A	F	71	71	70	X 70	X 73	X 71	X 72	61	62	0 X 56	0 X 55	B	0 X 50	X 48	X 51	X 50	54				
25	X 60	48	A	A	A	0 X 51	X 59	67	70	72	X 65	X 61	X 60	X 66	S	S	0 X 51	0 X 49	0 X 47	X 43	X 50	X 50	50	50				
26	B	A	A	A	A	A	0 X 50	0 X 52	0 X 50	A	0 X 47	0 X 49	S	0 X 51	0 X 51	0 X 49	0 X 54	0 X 56	B	0 X 51	0 X 49	X 48	X 47	A				
27	A	A	A	A	F	F	46	A	A	0 X 49	0 X 50	0 X 56	A	A	A	A	0 X 51	A	A	B	A	A	A	A				
28	A	A	B	A	A	A	A	A	B	A	0 X 49	0 X 48	A	A	A	0 X 51	0 X 49	B	0 X 49	0 X 49	0 X 45	X 45	X 42	X 39				
29	44	42	A	A	A	S	S	70	71	66	A	A	X 60	X 61	X 61	X 66	X 64	X 58	65	B	A	A	A	B				
30	A	A	A	A	X 35	B	A	A	B	B	B	B	B	B	B	A	B	B	A	A	X 40	X 41	X 44	A				
31																												
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
CNT	6	4	2	3	3	4	10	13	14	13	20	15	10	15	16	18	23	13	21	21	23	20	15	9				
MED	43	44	X 44	44	X 43	0 X 48	0 X 49	0 X 52	0 X 54	0 X 51	0 X 50	0 X 52	0 X 58	0 X 51	0 X 50	0 X 50	0 X 51	0 X 49	0 X 48	0 X 48	X 46	X 45	X 43	48				
UQ	X 51	46	46	46	X 47	0 X 50	0 X 51	X 62	X 62	X 61	X 60	X 60	X 62	X 59	X 59	X 59	0 X 54	0 X 51	0 X 49	0 X 49	X 48	X 48	X 49	50				
LQ	40	42	42	39	X 44	0 X 46	0 X 51	0 X 48	0 X 43	0 X 47	0 X 49	0 X 49	0 X 46	0 X 46	0 X 43	0 X 43	0 X 48	0 X 49	0 X 46	0 X 46	42	X 40	X 40	40				

NOV. 1985

FXI (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

NOV. 1985

F0F2 (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station	SYOWA	STATION	Lat.	69° 00.4' S	Long.	39° 35.4' E	Sweep	4	MHz to	15	MHz in	20	sec in	automatic operation											
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	A	A	A	A	B	A	A	A	H 42	B	A	46	47	45	49	B	B	45	A	B	34	29	A	A	
2	B	A	A	A	A	A	40	A	A	H 40	H 42	B	B	B	B	H 46	45	A	A	A	C	C	C	C	
3	C	A	A	C	B	B	B	B	B	B	B	B	C	B	B	B	42	B	37	31	27	28	24	A	
4	F 21	A	A	A	B	B	B	B	A	35	B	B	B	B	32	H 41	B	H 40	38	A	F 27	A	A	B	
5	B	B	A	A	A	37	40	42	42	H 40	H 41	H 42	B	R 36	B	36	B	B	B	F 32	A	A	A	A	
6	A	B	B	B	A	A	B	A	B	B	36	A	A	R 36	36	A	25	B	38	B	A	F	A	B	
7	A	A	B	B	B	B	B	B	B	B	B	B	R 37	H 41	B	B	B	B	B	37	38	35	34	A	
8	A	A	A	B	B	A	A	42	H 41	H 42	H 43	H 45	37	42	42	42	43	45	45	42	42	39	37	A	
9	A	A	A	F 34	A	A	A	45	48	43	45	B	B	B	57	53	R 48	45	40	A	A	A	A	A	
10	A	B	A	B	B	A	B	B	B	A	37	37	B	B	43	B	H 42	B	R 38	R 40	R 38	35	F 37	34	
11	A	B	B	B	A	B	A	B	35	H 40	H 41	B	B	B	B	B	H 43	42	43	38	37	28	A	A	
12	A	A	A	A	A	A	42	45	44	45	S	48	A	50	51	48	45	43	40	40	39	39	34	B	
13	A	A	A	F 38	A	A	43	46	48	50	49	A	A	A	A	54	54	B	B	44	43	A	A	A	
14	A	A	A	A	A	B	A	A	A	B	B	B	B	A	A	37	36	B	35	40	35	A	A	A	
15	B	A	A	B	B	A	B	B	B	A	44	43	S	S	45	46	U 47	43	R 41	R 40	40	F 32	A	A	
16	B	B	A	B	B	B	B	B	A	B	B	B	B	B	B	B	S	H 43	H 42	R 40	38	F 40	F 30	F 27	
17	A	A	A	A	37	40	43	47	49	50	J 54	59	U 60	S	S	S	S	45	42	B	A	A	A	A	
18	A	B	B	A	B	B	A	A	A	A	B	43	S	R 40	R 40	42	41	43	H 40	35	35	B	A	B	
19	A	B	B	B	B	B	B	B	A	42	40	S	S	S	40	42	41	42	43	43	42	35	35	F 36	
20	A	A	A	B	B	B	A	48	54	55	58	S	S	40	41	41	H 40	H 41	43	43	42	42	42	42	
21	A	A	B	B	A	B	R 50	F 52	56	56	58	60	J 56	J 57	56	53	R 52	J 52	A	52	50	45	47	44	F 34
22	F 36	A	A	A	A	A	B	A	A	45	43	A	43	42	40	43	45	44	43	43	43	42	A	A	
23	F	37	40	42	45	44	45	43	S	47	54	52	50	51	S	S	45	43	43	43	44	46	44	45	
24	45	F 38	36	B	A	A	F	F 65	F 65	F 64	64	67	65	66	55	56	R 50	R 49	B	44	42	45	44	F 48	
25	54	F 42	A	A	A	45	53	60	V 64	66	59	55	54	60	S	S	R 45	R 43	H 41	42	44	44	F 44	F 44	
26	B	A	A	A	A	A	44	46	H 44	A	H 41	H 43	S	H 45	H 45	H 43	R 48	R 50	B	45	43	42	41	A	
27	A	A	A	A	F	F	F 34	A	A	H 43	H 44	50	A	A	A	S	H 45	A	A	B	A	A	A	A	
28	A	A	B	A	A	A	A	A	B	A	H 43	H 42	A	A	A	H 45	H 43	B	H 43	43	40	39	36	33	
29	F 32	F 36	A	A	A	S	S	F	F 65	F 60	A	A	J 54	55	J 55	60	58	52	R 59	B	A	A	A	B	
30	A	A	A	A	29	B	A	A	B	B	B	B	B	B	B	A	B	B	A	A	34	35	38	A	
31																									
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
CNT	5	4	2	3	3	4	10	12	14	18	20	15	10	15	16	18	23	18	21	21	23	19	15	9	
MED	F 36	38	38	38	37	42	43	46	48	45	44	46	52	45	44	44	45	43	42	42	40	39	37	F 36	
UQ	45	F 40		40	41	44	45	50	56	55	54	54	56	53	53	53	48	45	43	43	42	42	43	F 44	
LQ	F 32	36		F 36	33	38	40	44	42	H 42	H 41	43	43	40	40	42	42	43	40	40	36	35	34	F 34	

NOV. 1985

F0F2 (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

NOV. 1985

FES (0.1 MHz)

45° E Mean Time (G.M.T. + 3h)

Station SYOWA STATION				Lat. 69° 00.4' S , Long. 39° 35.4' E Sweep. 4 MHz to 15 MHz in 20 sec in automatic operation																						
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	41	33	36	43	B	50	43	36	31	B	32	35	30	32	27	B	B	27	34	B	42	29	90	42		
2	B	45	42	40	30	34	26	36	37	36	26	B	B	B	B	25	32	42	50	41	C	C	C	C		
3	C	36	94	C	B	B	B	B	B	B	B	B	C	B	B	B	24	B	26	22	15	18	30	37		
4	26	35	45	41	B	B	B	B	42	33	B	B	B	B	26	23	B	E B	24	26	35	16	40	35	B	
5	B	B	35	36	30	28	28	22	23	26	27	27	B	27	B	25	B	B	B	27	45	43	35	63		
6	45	B	B	B	35	33	B	71	B	B	27	36	28	29	26	35	27	B	27	B	35	17	37	B		
7	33	35	B	B	B	B	B	B	B	B	B	B	27	E B	30	B	B	B	B	24	21	18	E B	14	30	
8	31	32	50	B	B	37	36	23	25	26	26	29	29	27	28	26	25	22	20	23	28	20	26	41		
9	35	42	70	42	37	36	28	36	31	26	26	B	B	B	28	32	25	22	32	40	42	42	42	41		
10	36	B	60	B	B	42	B	B	B	35	27	28	B	B	28	B	E B	30	B	34	31	27	30	28	28	
11	70	B	B	B	30	B	36	B	33	25	26	B	B	B	B	B	E B	31	23	E B	E B	23	26	35	32	37
12	35	33	35	35	31	30	21	24	25	25	31	30	32	17	27	26	23	24	35	20	19	17	13	B		
13	42	80	43	35	42	42	35	27	35	41	30	40	81	140	120	27	25	B	B	40	33	36	37	90		
14	47	43	35	35	41	B	40	42	36	B	B	B	B	26	27	27	24	B	E B	25	36	35	30	43	42	
15	B	75	42	B	B	26	B	B	B	37	26	30	30	36	28	27	26	25	E B	25	35	34	28	42	41	
16	B	B	36	B	B	B	B	B	36	B	B	B	B	B	B	B	E B	30	24	E B	E B	31	36	27	27	17
17	30	32	34	30	42	21	24	28	25	27	28	28	31	31	27	31	E B	30	27	28	B	40	41	42	37	
18	33	B	B	43	B	B	32	41	42	33	B	28	28	27	26	27	27	28	22	27	35	B	42	B		
19	35	B	B	B	B	B	B	B	35	27	27	27	27	26	27	28	25	24	22	23	19	19	28	35		
20	41	35	35	B	B	B	40	30	26	26	27	33	42	35	30	34	E B	31	E B	E B	20	21	19	32	27	
21	32	32	B	B	33	B	43	35	27	28	32	28	33	32	33	40	31	42	43	35	19	20	23	17		
22	35	40	50	70	41	43	B	42	40	27	23	27	28	28	30	28	28	31	22	25	27	19	40	30		
23	27	28	32	30	27	22	27	30	30	28	40	30	29	30	28	27	26	25	25	25	21	18	16	12		
24	20	36	35	B	28	37	33	25	27	27	27	28	33	36	34	30	35	24	B	E B	23	23	19	30	25	
25	33	37	42	37	37	28	30	27	27	28	28	28	35	42	27	33	27	27	28	31	41	38	31	16		
26	B	30	26	42	42	36	30	30	32	27	29	30	28	26	26	27	28	28	B	20	16	19	19	40		
27	51	35	90	45	31	35	32	42	36	31	26	32	A	A	A	26	28	27	36	B	43	40	40	35		
28	42	32	B	34	28	42	42	36	B	32	28	33	34	27	27	26	27	B	23	E B	E B	23	20	17	15	
29	19	32	32	37	32	35	36	33	34	32	28	41	36	41	35	41	41	32	28	B	26	100	36	B		
30	42	36	36	35	30	B	43	41	B	B	B	B	B	B	B	26	B	B	36	39	30	27	36	36		
31																										
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
CNT	24	23	23	18	19	19	21	22	23	23	23	21	19	21	22	24	25	21	25	25	29	28	29	24		
MED	35	35	36	37	32	35	33	34	32	28	27	30	30	30	28	27	26	26	26	26	27	27	32	36		
UQ	42	38	48	42	39	40	40	41	36	32	28	33	34	35	30	32	29	28	34	35	35	37	40	41		
LQ	32	32	35	35	30	29	28	27	27	26	26	28	28	27	27	26	25	24	24	22	21	19	27	26		

NOV. 1985

FES (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

NOV. 1985

F-MIN (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION		Lat. 69° 00.4 ' S , Long. 39° 35.4 ' E											Sweep 4 MHz to 15 MHz in 20 sec in automatic operation											
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	13	13	15	7	B	15	13	9	9	B	21	19	24	13	18	B	B	19	13	B	11	10	13	9
2	B	18	19	15	14	13	13	15	19	13	13	B	B	B	B	13	14	13	12	11	C	C	C	C
3	C	13	11	C	B	B	B	B	B	B	B	B	C	B	B	B	15	B	15	13	12	11	9	9
4	13	16	15	19	B	B	B	B	22	14	B	B	B	B	14	18	B	24	20	12	13	8	11	B
5	B	B	21	22	12	14	12	13	13	13	13	14	B	20	B	18	B	B	B	13	11	13	13	11
6	15	B	B	B	13	20	B	19	B	B	19	15	20	19	14	19	13	B	13	B	23	13	10	B
7	20	10	B	B	B	B	B	B	B	B	B	B	23	30	B	B	B	B	B	21	15	13	14	8
8	8	14	30	B	B	15	13	13	10	13	13	15	13	15	14	15	14	13	15	15	10	11	8	19
9	13	15	14	9	23	8	13	13	12	13	13	B	B	B	13	12	12	14	8	13	14	8	14	13
10	22	B	12	B	B	23	B	B	B	15	18	15	B	B	22	B	30	B	22	14	19	12	9	8
11	15	B	B	B	20	B	21	B	14	13	13	B	B	B	B	B	31	14	25	23	19	9	8	11
12	13	23	16	19	15	13	12	12	9	15	13	14	14	7	13	12	14	12	12	13	13	11	9	B
13	13	13	8	8	16	13	11	8	11	13	14	22	30	18	15	10	13	B	B	12	9	8	15	12
14	13	9	8	25	22	B	15	19	15	B	B	B	B	16	13	11	17	B	25	14	13	11	11	13
15	B	15	14	B	B	15	B	B	B	20	14	12	12	13	11	15	12	18	25	14	15	9	11	11
16	B	B	22	B	B	B	B	B	14	B	B	B	B	B	B	B	30	13	25	31	12	13	9	11
17	8	18	14	15	15	13	11	9	11	11	14	13	14	13	13	18	30	14	9	B	14	11	18	19
18	24	B	B	21	B	B	13	22	13	18	B	13	14	13	13	15	15	13	11	13	11	B	11	B
19	17	B	B	B	B	B	B	B	15	15	15	18	20	13	19	13	14	14	13	10	11	12	13	9
20	15	13	18	B	B	B	17	13	8	13	13	18	13	14	14	18	31	30	26	14	14	8	11	8
21	19	13	B	B	13	B	13	15	13	13	13	15	13	13	13	13	12	12	13	11	9	13	13	10
22	8	17	9	13	19	17	B	22	21	13	12	13	14	13	13	13	13	12	11	11	9	8	8	8
23	7	9	10	12	9	9	9	10	15	18	14	13	16	13	15	15	13	13	8	11	11	11	11	10
24	8	9	8	B	13	14	10	10	9	12	11	13	13	13	13	13	13	15	B	23	13	11	10	9
25	9	9	19	29	13	12	11	11	10	11	11	13	11	13	22	20	13	13	11	10	10	9	9	8
26	B	18	20	11	9	13	9	11	11	15	14	21	15	12	15	18	14	13	B	13	13	9	10	13
27	10	13	10	13	8	9	8	13	21	12	13	12	A	A	A	15	21	12	10	B	9	15	13	20
28	8	8	B	21	20	20	15	23	B	18	13	13	18	13	17	14	14	B	19	24	23	14	9	11
29	11	9	13	13	14	13	13	10	13	14	19	21	13	12	15	13	12	10	9	B	8	10	14	B
30	14	10	13	9	8	B	7	14	B	B	B	B	B	B	B	13	B	B	14	13	9	12	10	13
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	30	30	29	30	30	30	30	30	30	30	30	28	29	29	30	30	30	30	30	29	29	29	29
MED	13	14	16	21	20	16	13	14	14	14	14	16	19	14	15	15	14	14	14	14	12	11	11	11
UQ	20	23	30	B	B	B	B	B	22	20	21	B	B	B	22	19	30	B	25	23	14	13	13	19
LQ	10	10	12	13	13	13	11	11	11	13	13	13	14	13	13	13	13	13	11	12	10	9	9	9

NOV. 1985

F-MIN (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

NOV. 1985

H'F (KM)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION				Lat. 69° 00.4' S , Long. 39° 35.4' E		Sweep 4 MHz to 15 MHz in 20 sec in automatic operation																				
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	A	A	A	A	B	A	A	A	200	B	A	200	220	220	225	B	B	230	A	B	280	275	A	A		
2	B	A	A	A	A	A	245	A	A	250	210	B	B	B	B	210	230	A	A	A	C	C	C	C		
3	C	A	A	C	B	B	B	B	B	B	B	B	C	B	B	B	200	B	255	260	225	280	300	A		
4	E A 340	A	A	A	B	B	B	B	A	200	B	B	B	B	195	240	B	225	270	A	305	A	A	B		
5	B	B	A	A	A	A	230	200	200	190	190	200	H	B	A	B	H	B	B	B	255	A	A	A	A	
6	A	B	B	B	A	A	B	A	B	B	250	A	A	220	245	A	225	B	E A 250	B	A	F	A	B		
7	A	A	B	B	B	B	B	B	B	B	B	B	H	E B 200	B	B	B	B	B	240	250	245	275	A		
8	A	A	A	B	B	A	A	200	195	200	200	205	200	210	210	200	195	205	200	200	230	240	245	A		
9	A	A	A	E A 245	A	A	A	200	190	200	220	B	B	B	210	210	215	200	225	H	A	A	A	A		
10	A	B	A	B	B	A	B	B	B	A	200	200	B	B	225	B	240	B	225	250	250	245	250	275		
11	A	B	B	B	A	B	A	B	210	205	200	H	B	B	B	B	E B 225	220	E B 250	E B 220	250	E A 325	A	A		
12	A	A	A	A	A	A	230	215	200	215	200	200	H	A	160	H	200	205	205	200	225	215	240	240	255	B
13	A	A	A	270	A	A	270	220	205	E A 270	200	A	A	A	A	200	220	B	B	230	200	A	A	A		
14	A	A	A	A	A	B	A	A	A	B	B	B	B	A	A	220	240	B	210	250	250	A	A	A		
15	B	A	A	B	B	A	B	B	B	A	225	205	205	200	220	225	210	225	E B 300	260	250	275	A	A		
16	B	B	A	B	B	B	B	B	A	B	B	B	B	B	B	B	H	H	205	210	225	E B 245	E A 280	255	250	255
17	A	A	A	A	E A 290	245	210	215	200	195	190	200	H	H	H	H	210	205	220	B	A	A	A	A		
18	A	B	B	A	B	B	A	A	A	A	B	200	200	210	200	210	220	220	160	H	280	290	B	A	B	
19	A	B	B	B	B	B	B	B	A	200	205	200	H	H	H	H	210	225	210	225	225	250	270	E A 280		
20	A	A	A	B	B	B	A	245	200	205	215	200	A	210	195	240	215	225	225	200	H	210	225	250	275	
21	A	A	B	B	A	B	H	H	210	200	205	200	H	220	215	225	205	A	A	225	210	245	230	275		
22	E A 250	A	A	A	A	A	B	A	A	200	180	A	200	200	205	200	205	215	205	H	230	230	245	A	A	
23	E A 305	E A 300	E A 315	280	260	250	H	210	220	210	200	E A 240	210	200	200	210	200	200	200	H	200	225	230	H	230	240
24	245	E A 300	A	B	A	A	F	230	200	190	220	195	E A 225	220	210	205	205	205	B	215	205	H	205	H	225	260
25	250	290	A	A	A	E A 275	H	H	H	195	200	200	200	H	A	200	205	200	200	200	215	E A 260	H	225	H	240
26	B	A	A	A	A	A	205	200	180	A	200	220	200	190	200	190	205	215	H	B	200	230	210	225	A	
27	A	A	A	A	F	F	A	A	A	200	190	200	A	A	A	200	215	A	A	B	A	A	A	A	A	
28	A	A	B	A	A	A	A	A	B	A	210	220	A	A	A	210	200	B	A	200	225	235	240	245	245	
29	280	280	A	A	A	H	200	210	205	210	210	A	A	200	205	210	205	H	225	205	185	B	A	A	A	B
30	A	A	A	A	265	B	A	A	B	B	B	B	B	B	B	A	B	B	A	A	275	300	300	A		
31																										
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
CNT	6	4	1	3	3	4	10	13	15	18	21	17	14	17	19	22	25	18	20	21	23	19	15	9		
MED	255	288	E A 315	270	262	U	235	228	235	200	200	200	H	200	200	210	210	212	215	225	235	245	248	258		
UQ	E A 305	E A 300		275	272	256	230	220	208	205	212	205	H	205	210	212	220	220	225	232	250	252	258	257	275	
LQ	250	285		258	262	222	210	200	198	200	200	200	H	200	200	200	205	205	200	215	225	235	H	230	245	

NOV. 1985

H'F (KM)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

DEC. 1985

FXI (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION Lat. 69° 00.4' S, Long. 39° 35.4' E Sweep 4 MHz to 15 MHz in 20 sec in automatic operation

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	A	A	A	B	A	A	A	B	B	A	S	0 X 43	S	B	B	B	B	B	B	B	X 42	0 X 38	A	A	
2	A	A	0 X 37	A	B	B	A	A	B	B	B	B	B	B	B	B	S	B	B	0 X 46	0 X 38	0 X 38	A	A	
3	A	B	B	B	B	A	A	A	B	B	B	B	B	B	B	B	B	B	B	0 X 46	40	42	0 X 42	X 41	
4	X 41	0 X 46	A	A	A	X 40	0 X 41	A	B	B	B	B	A	S	B	B	B	B	0 X 51	0 X 49	A	A	A	A	
5	A	B	A	A	B	B	B	A	0 X 43	0 X 44	A	A	A	0 X 52	0 X 55	0 X 54	0 X 55	0 X 49	0 X 47	0 X 46	X 46	X 44	X 40	A	
6	A	A	B	A	A	A	A	A	0 X 51	0 X 54	0 X 54	0 X 54	0 X 51	0 X 54	A	B	A	0 X 49	0 X 49	0 X 49	0 X 47	0 X 45	X 46	X 43	
7	A	B	A	A	44	A	A	0 X 61	74	75	X 68	X 64	X 66	0 X 68	A	0 X 63	S	0 X 54	0 X 51	0 X 51	X 49	X 46	X 41	40	
8	A	0 X 40	0 X 43	0 X 51	0 X 63	X 56	X 59	60	X 63	X 62	S	A	A	A	S	A	A	A	A	0 X 49	X 48	X 42	X 42	X 42	
9	X 43	X 43	0 X 48	A	45	A	A	A	0 X 51	0 X 53	60	66	A	63	A	A	A	0 X 51	0 X 51	X 49	X 46	0 X 49	0 X 49	0 X 42	
10	0 X 44	0 X 46	A	F	A	A	A	S	0 X 48	0 X 60	72	X 67	S	72	X 76	B	B	B	A	0 X 42	A	A	A	A	
11	A	A	A	X 39	B	B	B	A	A	B	B	B	A	S	0 X 47	S	0 X 48	0 X 49	0 X 49	0 X 49	0 X 46	0 X 46	0 X 46	A	
12	X 42	A	A	A	A	A	0 X 48	S	X 60	X 62	X 60	S	S	S	0 X 47	0 X 47	S	S	0 X 51	0 X 48	0 X 49	X 49	39	X 37	
13	41	A	A	F	A	A	A	0 X 41	A	A	A	A	B	B	B	B	B	A	A	A	A	A	A	A	
14	A	A	B	A	A	36	A	A	A	A	S	B	B	B	B	S	S	B	0 X 51	0 X 46	46	A	0 X 47	A	
15	B	A	A	A	B	B	B	A	A	B	B	B	B	S	S	0 X 46	S	0 X 49	0 X 49	0 X 49	0 X 43	0 X 47	X 43	A	
16	A	A	B	B	A	A	X 51	X 57	S	A	B	B	A	A	A	A	B	0 X 49	0 X 47	0 X 43	0 X 49	0 X 51	0 X 51	B	
17	A	A	A	A	B	B	A	S	0 X 55	X 57	X 63	X 63	A	A	A	S	0 X 49	0 X 53	S	0 X 54	0 X 51	46	42	X 46	
18	0 X 46	A	B	A	0 X 51	0 X 55	56	75	X 71	X 70	A	B	X 68	X 77	X 84	X 71	B	A	B	A	0 X 46	0 X 49	56	55	
19	53	50	45	F	0 X 45	A	A	B	B	B	B	B	B	B	B	B	B	B	B	0 X 49	A	A	43	A	
20	B	F	F	A	0 X 46	B	S	A	66	0 X 65	B	B	B	B	B	B	B	S	B	A	X 49	X 46	0 X 43	X 42	
21	X 46	X 42	B	A	A	A	A	A	A	A	S	S	S	0 X 46	A	A	0 X 46	0 X 46	0 X 49	0 X 49	A	A	0 X 49	X 48	
22	0 X 40	A	A	A	A	0 X 49	A	A	A	S	X 65	X 68	S	S	S	S	0 X 56	S	0 X 53	55	X 54	X 51	X 43	A	
23	43	44	46	A	A	A	A	0 X 49	S	S	S	X 63	S	S	0 X 47	0 X 46	A	0 X 66	0 X 56	A	X 51	0 X 50	X 49	0 X 48	
24	A	A	41	A	A	S	38	40	A	A	B	B	B	B	0 X 49	S	0 X 51	0 X 52	0 X 47	H 48	A	X 48	X 45	X 42	
25	A	X 41	X 44	0 X 47	0 X 48	0 X 48	A	0 X 51	0 X 52	X 59	A	S	A	A	A	S	S	0 X 51	0 X 49	X 46	X 47	X 46	X 48	A	
26	A	A	A	A	A	0 X 41	A	A	B	A	A	0 X 48	S	0 X 49	S	S	X 56	S	0 X 48	B	0 X 49	X 48	46	B	
27	0 X 41	A	A	X 49	X 48	46	0 X 51	X 50	A	A	S	0 X 55	0 X 51	0 X 52	X 60	X 62	X 59	0 X 61	0 X 49	0 X 49	0 X 46	0 X 48	46	A	
28	F	A	A	F	A	B	A	40	B	B	0 X 42	0 X 47	B	B	B	B	B	B	3	0 X 41	X 41	S	A	A	A
29	B	B	A	A	A	B	A	B	B	A	0 X 49	0 X 50	0 X 48	A	S	0 X 49	B	0 X 49	0 X 49	0 X 46	0 X 46	X 48	X 49	X 44	
30	X 40	X 44	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	B	A	A	
31	A	B	A	A	B	F	B	A	0 X 48	B	B	B	B	B	B	0 X 49	B	0 X 43	0 X 42	0 X 39	A	A	X 40	36	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
CNT	12	9	7	4	8	8	7	10	12	11	9	12	5	9	8	9	8	15	20	24	22	22	24	14	
MED	X 42	X 44	X 44	X 48	0 X 47	X 47	X 51	X 50	0 X 54	60	X 60	X 59	0 X 51	0 X 54	0 X 52	0 X 49	0 X 53	0 X 49	0 X 49	0 X 48	X 47	X 46	X 46	X 42	
UQ	X 45	X 46	46	X 50	0 X 50	0 X 52	X 54	X 60	X 64	X 64	X 65	X 65	X 66	X 68	X 63	0 X 62	X 56	0 X 52	0 X 51	0 X 49	0 X 49	0 X 49	X 48	X 46	
LQ	X 41	X 42	X 42	X 43	45	40	0 X 44	41	0 X 50	0 X 53	0 X 54	0 X 49	0 X 51	0 X 52	0 X 47	0 X 47	0 X 48	0 X 49	0 X 48	0 X 46	X 46	X 45	X 42	X 41	

DEC. 1985

FXI (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

DEC. 1985

F₀F₂ (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION		Lat. 69° 00.4' S, Long. 39° 35.4' E											Sweep 4 MHz to 15 MHz in 20 sec in automatic operation											
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	A	A	B	A	A	A	B	B	A	S	H 42	S	B	B	B	B	B	B	B	36	32	A	A
2	A	A	31	A	B	B	A	A	B	B	B	B	B	B	B	B	S	B	B	R 40	32	32	A	A
3	A	B	B	B	B	A	A	A	B	B	B	B	B	B	B	B	B	B	B	H 40	34	36	36	35
4	35	40	A	A	A	34	35	A	B	B	B	B	A	S	B	B	B	B	H 45	H 43	A	A	A	A
5	A	B	A	A	B	B	B	A	37	38	A	A	A	46	49	48	49	43	41	40	40	38	34	A
6	A	A	B	A	A	A	A	A	47	48	48	48	45	48	A	B	A	43	H 43	43	41	39	40	37
7	A	B	A	A	F 34	A	A	H 55	F 58	F 62	62	58	60	62	A	62	S	48	45	45	43	40	35	F 30
8	A	34	37	45	57	50	53	54	57	56	S	A	A	A	S	A	A	A	A	43	42	36	36	36
9	37	37	42	A	F 35	A	A	A	45	52	54	60	A	67	A	A	A	R 45	R 45	43	40	43	43	36
10	R 38	40	A	F	A	A	A	S	H 42	54	66	61	S	F 66	70	B	B	B	A	36	A	A	A	A
11	A	A	A	33	B	B	B	A	A	B	B	B	A	S	R 41	S	42	43	43	43	40	40	40	A
12	37	A	A	A	A	A	42	S	J 54	J 56	J 54	S	S	S	41	41	S	S	D 45	42	43	43	33	31
13	F 35	A	A	F	A	A	A	35	A	A	A	A	B	B	B	B	B	A	A	A	A	A	A	A
14	A	A	B	A	A	F 30	A	A	A	A	S	B	B	B	B	S	S	B	R 45	40	H 40	A	R 41	A
15	B	A	A	A	B	B	B	A	A	B	B	B	B	S	S	40	S	43	H 43	43	42	41	37	A
16	A	A	B	B	A	A	45	51	S	A	B	B	A	A	A	A	B	43	41	42	43	R 45	R 45	B
17	A	A	A	A	B	B	A	S	49	51	57	57	A	A	A	S	43	47	S	U 48	45	F 40	36	40
18	40	A	B	A	45	49	50	F 66	65	64	A	B	62	71	78	65	B	A	B	A	40	43	F 50	F 49
19	F 47	F 44	F 39	F	39	A	A	B	B	B	B	B	B	B	B	B	B	B	B	43	A	A	F 37	A
20	B	F	F	A	40	B	S	A	F 60	59	B	B	B	B	B	B	B	B	B	A	43	40	37	36
21	40	36	B	A	A	A	A	A	A	A	S	S	S	40	A	A	40	40	43	43	A	A	43	42
22	34	A	A	A	A	H 42	A	A	A	S	60	62	S	S	S	S	H 50	S	H 47	H 49	48	45	37	A
23	F 37	38	40	A	A	A	A	H 43	S	S	S	J 57	S	S	41	40	A	60	U 50	A	45	R 44	43	41
24	A	A	F 35	A	A	S	F 32	F 34	A	A	B	B	B	B	H 43	S	45	46	41	H 42	A	42	39	36
25	A	35	38	41	42	42	45	46	53	A	S	A	A	A	S	S	S	45	43	40	41	40	42	A
26	A	A	A	A	A	35	A	A	B	A	A	42	S	43	S	S	50	S	H 42	B	43	42	F 40	B
27	35	A	A	43	42	F 40	45	43	A	A	S	49	46	46	54	56	53	55	43	43	40	42	F 40	A
28	F	A	A	F	A	B	A	F 34	B	B	36	41	B	B	B	B	B	B	35	35	S	A	A	A
29	B	B	A	A	A	B	A	B	B	A	43	44	42	A	S	43	B	43	43	H 40	H 40	42	43	38
30	34	37	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A	A
31	A	B	A	A	B	F	B	A	H 42	B	B	B	B	B	B	H 43	B	R 37	36	33	A	A	34	F 30
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	12	9	7	4	8	8	7	10	12	11	9	12	5	9	3	9	8	15	20	24	22	22	24	14
MED	37	37	38	42	41	41	45	44	48	54	54	53	46	48	46	43	47	43	43	42	41	40	40	36
UQ	39	40	40	44	44	46	48	54	58	58	60	59	60	66	62	56	50	46	45	43	43	43	42	40
LQ	35	36	36	37	37	34	38	35	44	52	48	43	45	46	41	41	42	43	42	40	40	39	36	35

DEC. 1985

F₀F₂ (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

DEC. 1985

FES (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION Lat. 69° 00.4' S, Long. 39° 35.4' E Sweep 4 MHz to 15 MHz in 20 sec in automatic operation

Station	Day																									
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	40	27	36	B	36	36	36	B	B	31	28	27	26	B	B	B	B	B	B	B	23	27	41	42		
2	31	41	35	36	B	B	28	30	B	B	9	B	B	B	B	B	27	B	B	E B	25	32	23	35	35	
3	36	B	B	B	B	36	36	41	B	B	B	B	B	B	B	B	B	B	B	27	21	20	31	28		
4	32	35	37	36	32	34	35	40	B	B	B	B	30	30	B	B	B	B	22	24	36	80	42	45		
5	36	B	33	32	B	B	B	35	33	33	30	27	25	27	30	40	30	E B	30	27	32	30	28	26	32	
6	44	30	B	26	42	42	35	35	30	33	32	32	50	42	112	B	36	27	25	19	23	36	30	31		
7	31	B	60	43	36	41	36	30	35	35	35	34	32	46	80	65	34	36	28	27	20	32	31	34		
8	38	34	32	32	28	28	35	26	28	30	27	43	27	36	33	50	59	45	39	38	30	28	30	23		
9	35	36	36	30	34	35	42	40	30	27	32	40	43	45	150	95	46	35	30	27	35	36	42	25		
10	25	27	43	43	40	42	45	40	36	33	34	28	40	34	33	B	B	B	43	36	35	46	41	42		
11	37	36	37	32	B	B	B	36	41	B	B	B	30	28	30	27	33	34	26	21	22	22	26	31		
12	33	41	42	45	32	34	31	15	26	26	28	27	30	29	28	27	27	25	26	26	28	19	27	34		
13	36	42	42	70	42	42	36	28	35	32	33	28	B	B	B	B	B	26	32	37	31	60	42	43		
14	42	70	B	42	26	36	35	40	36	34	25	B	B	B	B	32	28	B	E B	32	24	22	35	E B	31	34
15	B	40	42	41	B	B	B	39	41	B	B	B	B	27	28	30	27	25	26	27	22	20	22	33		
16	70	40	B	B	40	32	35	27	28	29	B	B	26	27	24	29	B	24	21	26	23	30	21	B		
17	35	35	42	35	B	B	41	27	27	28	31	29	29	28	27	28	28	27	27	22	23	31	17	23		
18	19	27	B	36	36	28	29	31	27	24	27	B	32	28	E B	E B	B	26	B	37	65	36	35	30		
19	43	32	35	36	39	45	45	B	B	B	B	B	B	B	B	B	B	B	B	16	42	35	36	32		
20	B	45	46	35	43	B	33	41	27	29	B	B	B	B	B	B	B	26	B	120	95	31	27	32		
21	42	42	B	36	42	42	42	45	50	27	28	27	29	26	35	42	30	42	37	26	70	70	13	45		
22	32	27	33	39	40	28	41	33	35	30	28	31	32	33	36	30	30	27	E B	29	27	23	28	31	36	
23	35	35	35	42	42	42	42	28	30	25	27	27	40	42	43	36	56	42	28	63	30	35	30	36		
24	42	42	80	43	42	27	35	35	42	42	B	B	B	B	27	26	35	29	28	27	70	42	42	41		
25	70	32	35	42	45	30	32	28	32	26	32	27	43	42	59	36	37	25	30	31	22	22	35	36		
26	36	107	50	40	36	27	42	34	B	35	33	28	27	26	28	27	28	26	26	B	35	41	26	B		
27	42	65	58	34	35	35	27	30	41	32	28	27	32	33	33	35	28	33	25	28	29	28	27	71		
28	40	43	42	30	42	B	43	25	B	B	27	26	B	B	B	B	B	B	27	27	26	45	43	38		
29	B	B	46	36	28	B	42	B	B	32	27	35	36	32	30	28	B	25	E B	27	27	28	21	23	18	
30	30	36	41	35	41	72	B	B	B	B	B	B	B	B	B	B	B	B	27	43	80	B	40	35		
31	45	B	42	41	B	42	B	41	27	B	B	B	B	B	B	26	B	21	E B	30	18	36	41	22	26	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
CNT	28	26	25	28	24	23	26	27	22	22	20	18	20	20	20	20	18	22	25	29	31	30	31	29		
MED	36	36	42	36	40	36	36	34	32	30	28	28	31	31	32	30	30	26	27	27	30	32	31	34		
UQ	42	42	43	42	42	42	42	40	36	33	32	32	38	39	45	38	36	34	29	32	36	41	38	38		
LQ	32	32	35	34	34	31	35	28	28	27	27	27	28	28	28	28	28	25	26	25	23	27	26	31		

DEC. 1985

FES (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

DEC. 1985

F-MIN (0.1 MHz)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION				Lat. 69° 00.4' S, Long. 39° 35.4' E								Sweep 4 MHz to 15 MHz in 20 sec in automatic operation														
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	25	21	15	B	20	21	21	B	B	20	13	13	13	B	B	B	B	B	B	B	13	19	19	10		
2	14	15	11	13	B	B	19	19	B	B	B	B	B	B	B	B	15	B	B	25	9	13	8	9		
3	10	B	B	B	B	15	14	14	B	B	B	B	B	B	B	B	B	B	B	11	13	14	11	12		
4	12	12	13	14	14	13	13	15	B	B	B	B	13	12	B	B	B	B	13	12	20	13	19	13		
5	15	B	13	13	B	B	B	15	13	19	22	19	15	12	11	13	18	30	15	13	13	8	8	8		
6	10	18	B	19	14	14	11	13	11	11	13	14	14	13	14	B	15	13	11	13	11	13	9	8		
7	13	B	18	11	8	12	12	9	8	13	13	11	11	9	12	14	15	14	13	13	12	8	9	8		
8	12	13	13	9	9	9	8	8	12	9	11	12	12	13	13	11	12	11	10	9	8	9	9	13		
9	9	9	13	17	10	21	13	10	13	13	13	14	13	13	13	13	13	13	13	11	8	11	12	15		
10	12	12	11	10	12	11	11	12	11	8	9	11	8	12	13	B	B	B	13	13	8	8	8	8		
11	14	13	14	8	B	B	B	13	14	B	B	B	15	14	15	13	13	12	11	13	13	12	14	15		
12	11	18	23	13	15	14	13	11	9	13	10	12	13	13	13	12	13	9	9	9	8	8	10	10		
13	13	9	15	8	13	13	14	8	19	20	13	15	B	B	B	B	B	19	14	12	13	11	12	18		
14	13	15	B	19	15	12	12	22	14	13	14	B	B	B	B	19	13	B	32	14	8	10	31	11		
15	B	21	21	21	B	9	B	25	20	B	B	B	B	15	14	14	14	14	13	13	9	8	13	13		
16	8	10	B	B	21	10	12	13	13	13	B	B	19	18	14	13	B	13	17	13	21	12	12	B		
17	13	16	13	15	B	B	13	13	12	13	13	14	13	14	14	12	12	10	13	13	9	8	13	11		
18	10	13	B	13	9	8	8	8	12	14	18	B	13	14	57	31	B	15	B	25	14	12	9	9		
19	7	9	9	12	12	14	13	B	B	B	B	B	B	B	B	B	B	B	B	14	9	9	13	14		
20	B	11	9	13	12	B	9	13	8	11	B	B	B	B	B	B	B	22	B	14	13	8	10	8		
21	8	9	B	15	13	13	13	15	13	16	13	13	13	13	13	18	15	11	9	11	13	8	10	8		
22	13	19	15	15	21	13	18	17	14	13	11	13	13	13	13	15	12	13	29	14	11	8	9	13		
23	11	12	13	13	14	13	10	8	9	10	11	18	15	14	13	13	12	14	10	9	8	9	11	9		
24	13	9	8	12	8	13	13	8	10	19	B	B	B	B	19	14	13	14	15	12	9	8	12	7		
25	8	13	15	18	12	13	14	12	13	13	15	15	14	12	13	13	12	9	9	13	10	9	9	12		
26	9	20	13	14	13	13	21	15	B	19	14	13	13	13	9	12	15	18	18	B	14	12	14	B		
27	13	10	9	9	10	10	8	8	14	13	13	12	12	12	10	11	9	9	13	22	19	13	12	8		
28	9	8	13	8	13	B	13	12	B	B	14	13	B	B	B	B	B	B	13	14	13	8	10	15		
29	B	B	13	21	15	B	18	B	B	21	14	15	15	14	12	19	B	17	27	13	13	13	13	9		
30	8	10	13	12	17	13	B	B	B	B	B	B	B	B	B	B	B	B	15	13	12	B	11	13		
31	13	B	24	21	B	12	B	13	13	B	B	B	B	B	B	15	B	14	30	15	12	9	15	12		
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31		
MED	12	13	13	13	14	13	13	13	13	16	14	15	15	14	14	15	15	14	14	13	12	9	11	11		
UQ	13	20	22	18	21	B	18	16	B	B	B	B	B	B	B	B	B	B	30	14	13	12	13	13		
LQ	10	10	13	12	12	12	12	10	12	13	13	13	13	13	13	13	13	13	13	12	9	8	9	8		

DEC. 1985

F-MIN (0.1 MHz)

The Radio Research Laboratory, Japan

IONOSPHERIC DATA

DEC. 1985

H⁺F (KM)

45° E Mean Time (G.M.T. + 3 h)

Station SYOWA STATION		Lat. 69° 00.4' S , Long. 39° 35.4' E										Sweep. 4 MHz to 15 MHz in 20 sec in automatic operation															
Hour Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
1	A	A	A	B	A	A	A	B	B	A	205	200	H	200	B	B	B	B	B	B	220	A	A	A			
2	A	A	E A 355	B	B	A	A	A	9	B	B	B	B	B	B	B	225	B	B	245	295	275	A	A			
3	A	B	B	B	B	A	A	A	B	B	B	B	9	B	B	B	B	B	B	E A 270	230	200	245	260			
4	E A 295	E A 315	A	A	A	E A 300	E A 280	A	B	B	B	B	A	200	B	B	B	B	B	195	225	A	A	A	A		
5	A	B	A	A	B	B	B	A	H	H	A	A	A	H	H	200	195	200	220	210	230	E A 325	210	240	H	A	
6	A	A	B	A	A	A	A	A	205	H	H	200	200	200	195	H	A	B	A	H	175	H	210	225	225	240	250
7	A	B	A	A	220	A	A	200	H	A	H	200	205	205	A	205	210	200	200	H	230	H	190	260	290	E A 330	
8	A	A	E A 325	E A 350	E A 260	225	210	200	200	210	205	A	A	A	205	A	A	A	A	E A 225	205	215	250	240			
9	260	250	H E A 325	A	F	A	A	A	200	200	190	230	A	200	A	A	A	200	200	205	205	E A 240	E A 250	E A 250	A		
10	255	E A 310	A	F	A	A	A	260	210	180	175	195	200	200	235						225	A	A	A	A		
11	A	A	A	250	B	B	B	A	A	B	B	B	A	175	H	200	210	225	210	200	H	205	230	240	260	A	
12	E A 300	A	A	A	A	A	E A 240	H	200	200	200	195	175	205	220	200	210	190	210	210	220	230	E A 270	E A 350			
13	E A 350	A	A	A	F	A	A	A	E A 250	A	A	A	A	B	B	B	B	B	A	A	A	A	A	A	A		
14	A	A	B	A	A	250	A	A	A	A	200	B	B	B	B	200	E A 270	B	E B 175	220	245	A	275	A			
15	B	A	A	A	B	B	B	A	A	B	B	B	B	195	205	200	200	200	225	210	225	230	250	A			
16	A	A	B	B	A	A	E A 325	215	205	A	B	B	A	A	A	A	B	200	H	230	205	230	230	245	B		
17	A	A	A	A	B	B	A	230	200	200	200	A	A	A	A	180	205	205	220	210	H	215	240	200	230		
18	230	A	B	A	240	E A 280	200	200	200	200	A	B	180	200	E A 300	205	B	A	B	A	E A 250	250	230	245			
19	E A 270	E A 325	E A 310	F	E A 350	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	165	A	A	260	A		
20	B	F	F	A	275	B	E A 310	A	220	200	B	B	B	B	B	B	B	E A 225	B	A	E A 300	275	245	265			
21	280	E A 325	B	A	A	A	A	A	A	A	190	200	175	E A 250	A	A	200	E A 275	200	205	H	A	A	E A 240	270		
22	E A 350	A	A	A	A	E A 240	A	A	A	205	H	190	195	200	230	220	200	200	210	220	H	210	210	225	290	A	
23	E A 300	E A 300	E A 320	A	A	A	A	200	200	190	200	230	A	A	225	210	A	225	200	A	H	E A 270	250	H	E A 300		
24	A	A	255	A	A	A	E A 250	225	A	A	B	B	B	B	230	230	210	200	H	215	225	A	E A 270	250	A	245	
25	A	265	275	E A 300	260	245	A	200	200	205	A	200	A	A	A	180	205	200	200	215	200	230	250	H	A		
26	A	A	A	A	A	210	A	A	B	A	A	190	200	195	H	195	205	205	210	210	B	245	250	235	B		
27	255	A	A	320	E A 270	240	210	200	A	A	195	195	190	190	200	205	200	H	210	190	H	200	E A 245	230	225	A	
28	F	A	A	F	A	B	A	200	B	B	205	190	H	B	B	B	B	B	B	E A 275	210	200	A	A	A		
29	B	B	A	A	A	B	A	B	B	A	200	225	210	A	H	210	200	B	240	230	210	H	215	230	H	230	
30	E A 300	E A 305	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	B	A	A		
31	A	B	A	A	B	F	B	A	200	B	B	B	B	B	B	200	B	E A 250	E A 250	210	A	A	280	E A 330			
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
CNT	12	8	7	4	7	8	8	13	14	13	15	14	11	14	13	16	14	19	21	24	23	21	24	14			
MED	E A 288	E A 308	E A 320	U 280	U A 240	U A 230	E A 245	200	200	200	H	200	200	200	H	208	200	206	205	205	210	218	235	248	245		
UQ	E A 300	E A 320	E A 325	328	266	255	E A 295	220	205	205	200	200	200	202	222	205	215	214	222	222	233	245	258	E A 300			
LQ	256	U A 266	U 274	262	240	225	208	200	200	200	H	192	195	H	185	195	H	200	200	200	200	208	210	230	234	242	

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H⁺F (KM)

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IONOSPHERIC DATA AT SYOWA STATION (ANTARCTICA)
ION.ANT.—45 July 1985—December 1985 (Not for Sale)

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（1985年7月—1985年12月）

1990年2月22日 印刷（非売品）

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編集兼発行所

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