041575

DISPLAYS for LARSYS Software System: An Overview

Developed by James D. Russell and John C. Lindenlaub

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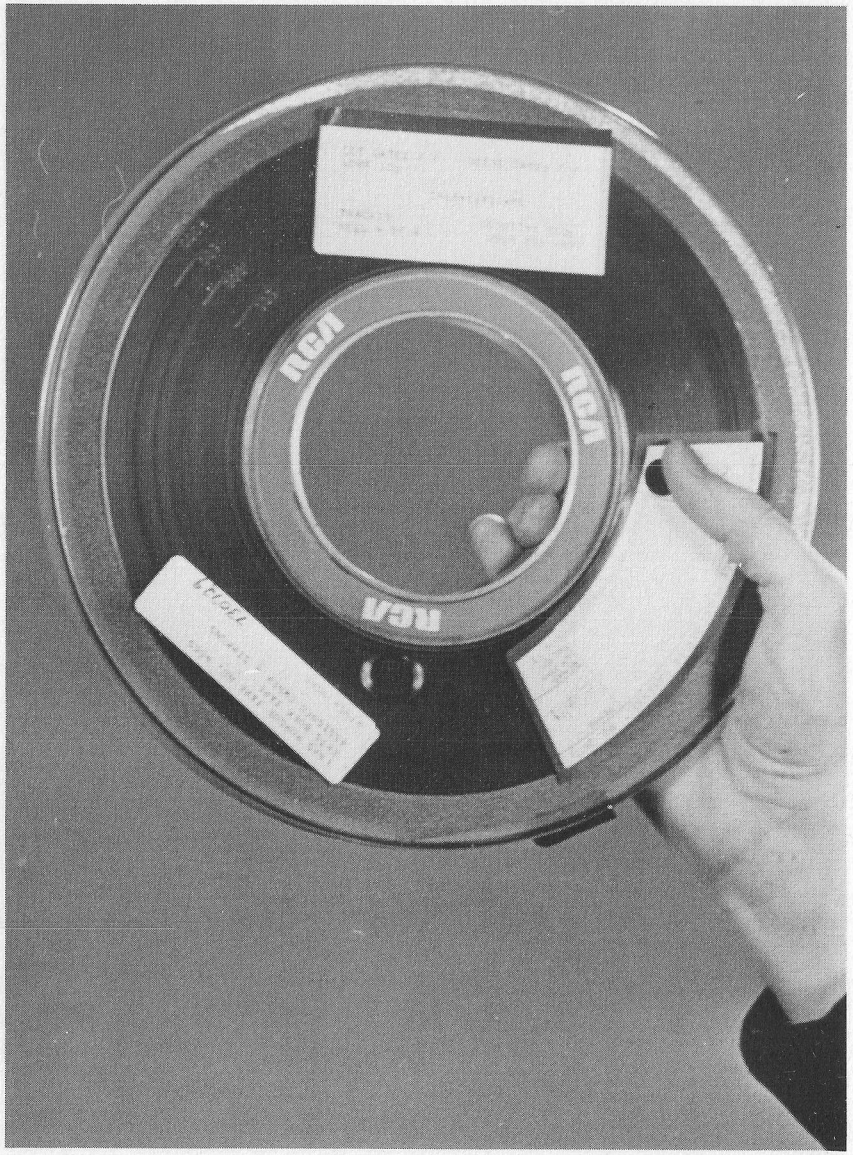
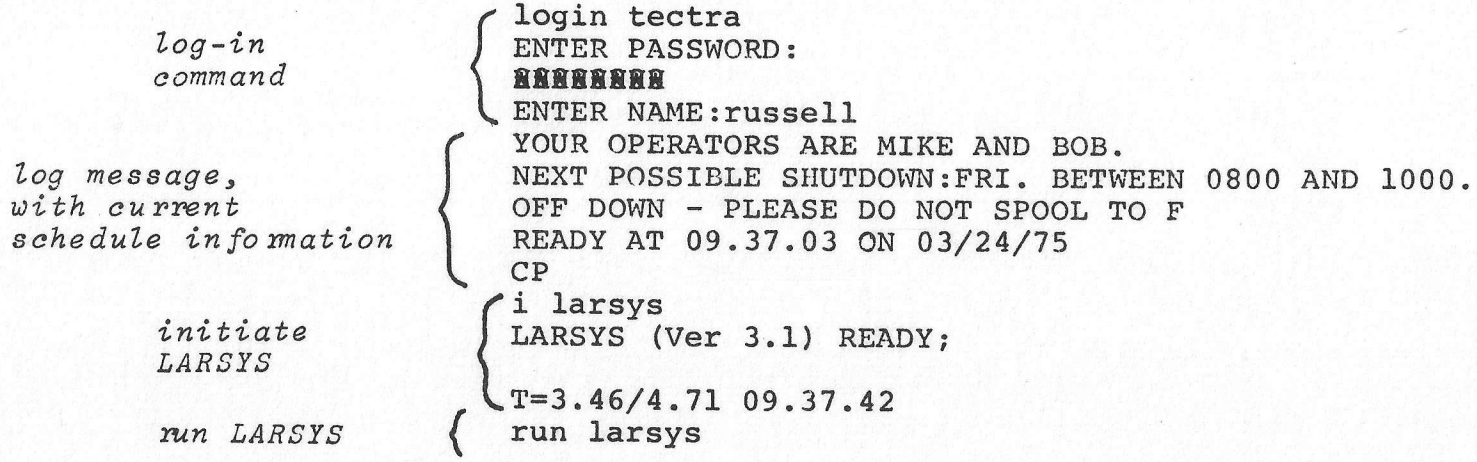
Purdue University, West Lafayette, Indiana 47907



DISPLAY 1

DISPLAY 2


log-in command
log message, with current schedule information
initiate LARSYS
run LARSYS
login tectra
ENTER PASSWORD:
ENTER NAME:russell
YOUR OPERATORS ARE MIKE AND BOB.
NEXT POSSIBLE SHUTDOWN:FRI. BETWEEN 0800 AND 1000.
OFF DOWN - PLEASE DO NOT SPOOL TO F
READY AT 09.37.03 ON 03/24/75
CP
i larsys
LARSYS (Ver 3.1) READY;
T=3.46/4.71 09.37.42
run larsys

DISPLAY 3

BTLARSYS
JAMES RUSSELL

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

MAR 24,1975
10 14 58 PM
LARSYS VERSION 3

TAPE NUMBER..... 1000
CONTINUATION CODE..... 0
FLIGHT LINE.. PURDUE FLT LN C1
PLATFORM ALTITUDE. 2600 FEET

FILE NUMBER..... 1
NUMBER OF DATA CHANNELS.... 12
DATE DATA TAKEN..... 6/28/66
GROUND HEADING.... 180 DEGREES
NUMBER OF LINES..... 950

RUN NUMBER..... 66000600
NUMBER OF DATA SAMPLES... 228
TIME DATA TAKEN.... 1229 HOURS
REFORMATTING DATE.JAN 27,1971

CHANNEL	SPECTRAL BAND LOWER	SPECTRAL BAND UPPER	CALIBRATION PULSE VALUES C0	C1	C2
1	0.40	0.44	31.00	41.05	63.05
2	0.44	0.46	31.00	42.45	67.30
3	0.46	0.48	31.00	41.85	63.05
4	0.48	0.50	31.00	44.90	72.05
5	0.50	0.52	31.00	59.10	128.4
6	0.52	0.55	31.00	66.25	139.4
7	0.55	0.58	31.00	59.45	119.7
8	0.58	0.62	31.00	94.80	229.4
9	0.62	0.66	31.00	96.90	232.3
10	0.66	0.72	31.00	126.4	248.7
11	0.72	0.80	31.00	100.5	221.4
12	0.80	1.00	31.00	85.30	214.5

DISPLAY 4

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

RUN NUMBER..... 66000600
FLIGHT LINE.. PURDUE FLT LN C1
DATA TAPE..... 210
REFORMATTING DATE..JAN 27,1971

DATE..... 6/28/66
TIME..... 1229
ALTITUDE..... 2600
GROUND HEADING.... 180 DEGREES

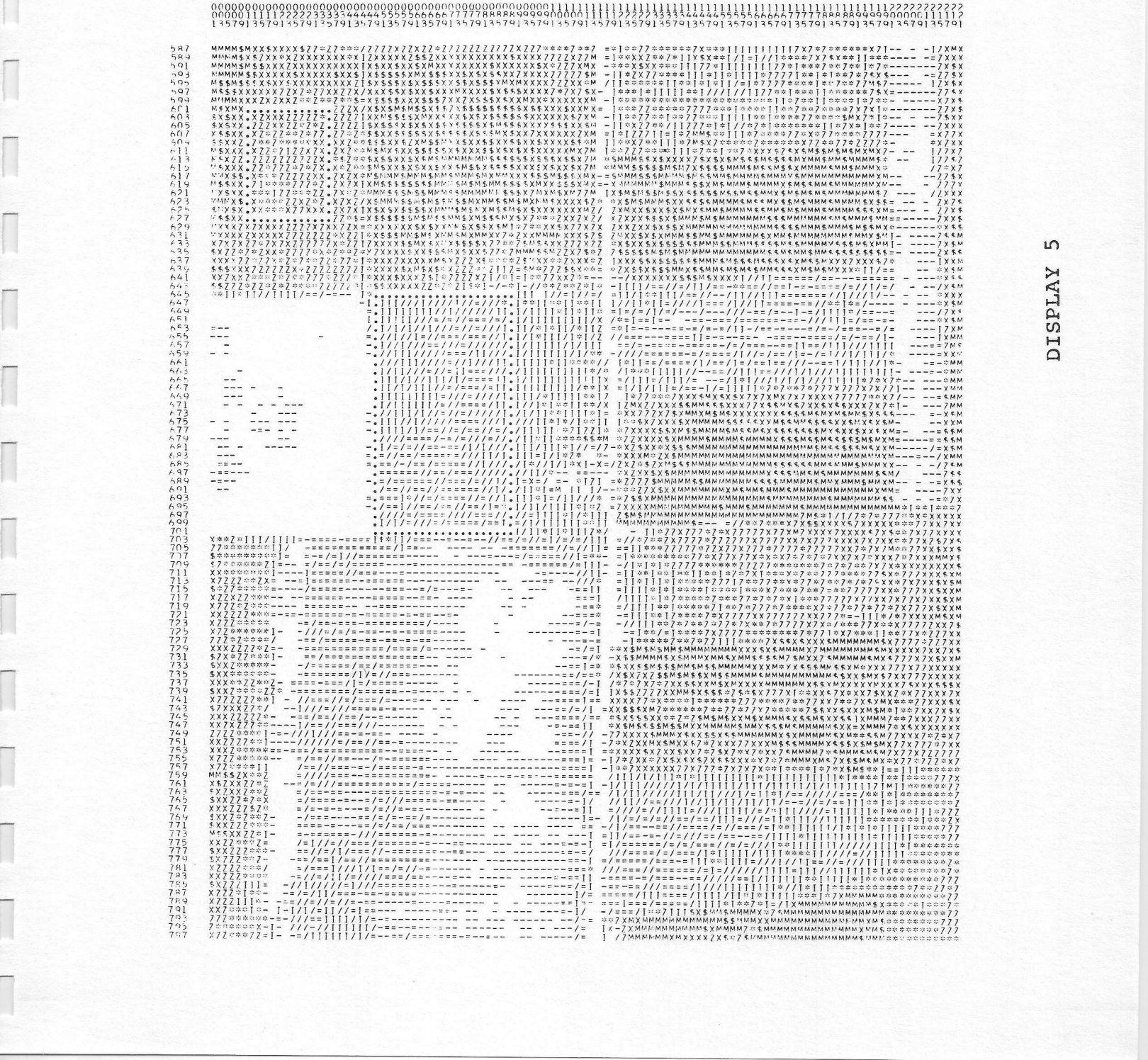
CHANNEL 9 SPECTRAL BAND 0.62 TO 0.66 MICROMETERS CALIBRATION CODE = 1 CO = 31.00

THE CHARACTER SET USED FOR DISPLAY IS

FROM	43.5	TO 54.5	DISPLAYED AS M
FROM	54.5	TO 56.5	DISPLAYED AS $
FROM	56.5	TO 59.5	DISPLAYED AS X
FROM	59.5	TO 62.5	DISPLAYED AS Z
FROM	62.5	TO 68.5	DISPLAYED AS *
FROM	68.5	TO 73.5	DISPLAYED AS I
FROM	73.5	TO 76.5	DISPLAYED AS /
FROM	76.5	TO 81.5	DISPLAYED AS =
FROM	81.5	TO 88.5	DISPLAYED AS -
FROM	88.5	TO 153.5	DISPLAYED AS
TRAIN FIELD BOUNDARIES MARKED WITH .			
TEST FIELD BOUNDARIES MARKED WITH ,			

HISTOGRAM BLOCK(S)

RUN NUMBER..... 66000600
LINES..... (587, 797, 2)
COLUMNS..... (1, 222, 2)
CALIBRATION CODE..... 1



DISPLAY 5

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

RUN NUMBER..... 66000600	DATE..... 6/28/66
FLIGHT LINE.. PURDUE FLT LN C1	TIME..... 1229
DATA TAPE..... 210	ALTITUDE..... 2600
REFORMATTING DATE.JAN 27,1971	GROUND HEADING.... 180 DEGREES

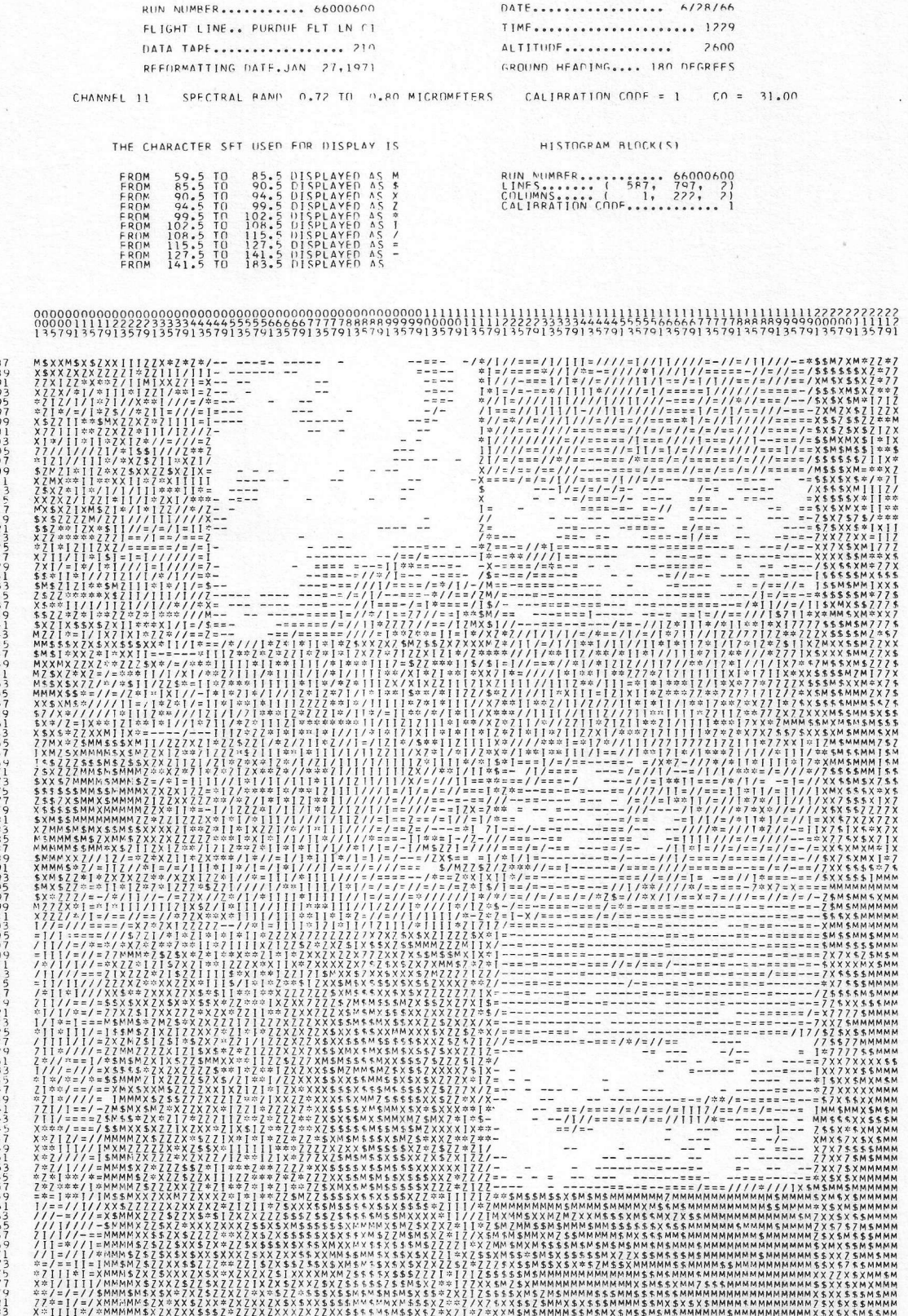
CHANNEL 11 SPECTRAL BAND 0.72 TO 0.80 MICROMETERS CALIBRATION CODE = 1 CO = 31.00

THE CHARACTER SET USED FOR DISPLAY IS

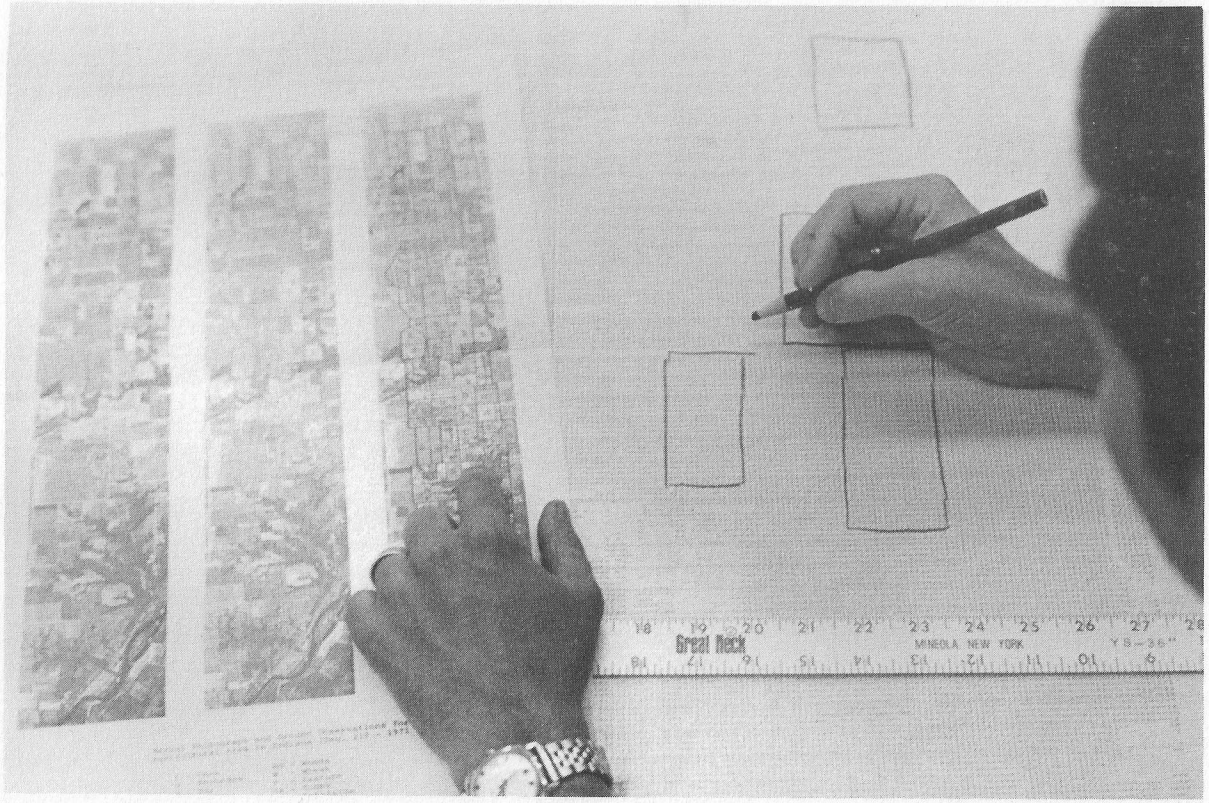
FROM	59.5	TO 85.5	DISPLAYED AS M
FROM	85.5	TO 90.5	DISPLAYED AS $
FROM	90.5	TO 94.5	DISPLAYED AS X
FROM	94.5	TO 99.5	DISPLAYED AS Z
FROM	99.5	TO 102.5	DISPLAYED AS *
FROM	102.5	TO 108.5	DISPLAYED AS I
FROM	108.5	TO 115.5	DISPLAYED AS /
FROM	115.5	TO 127.5	DISPLAYED AS =
FROM	127.5	TO 141.5	DISPLAYED AS -
FROM	141.5	TO 183.5	DISPLAYED AS

HISTOGRAM BLOCK(S)

RUN NUMBER..... 66000600
LINES..... (587, 797, 2)
COLUMNS..... (1, 222, 2)
CALIBRATION CODE..... 1



DISPLAY 6



DISPLAY 7

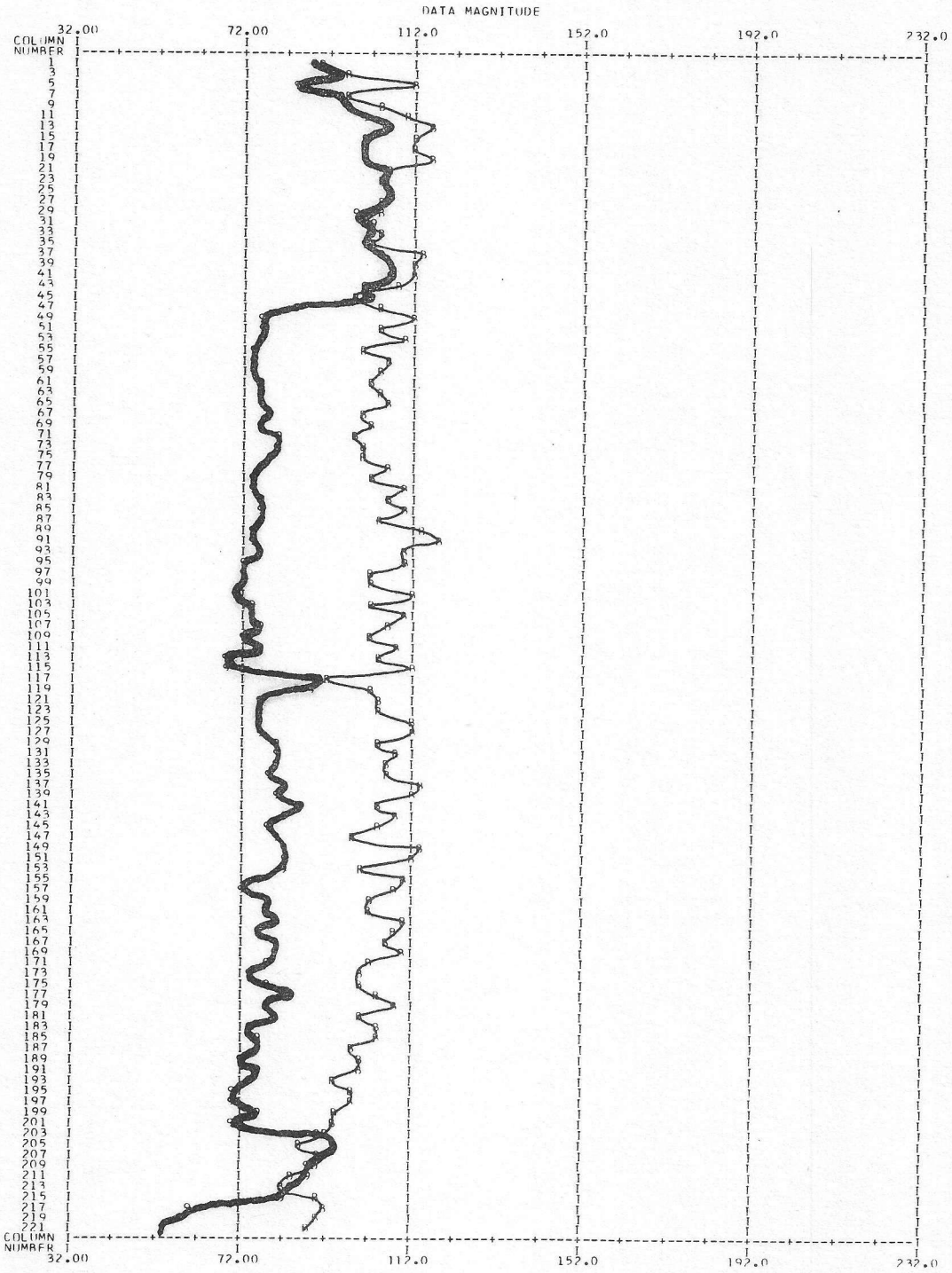
LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

****** GRAPH OF LINE 659 ******

RUN NUMBER..... 66000600
FLIGHT LINE.. PURDUE FLT LN C1
DATA TAPE..... 210
REFORMATING DATE. JAN 27,1971

DATE..... 6/28/66
TIME..... 1229
ALTITUDE..... 2600
GROUND HEADING.... 180 DEGREES

CHANNEL 9 SPECTRAL BAND 0.62 TO 0.66 MICROMETERS DISPLAYED AS.. 9 CALCODE = 1 CO = 31.00
CHANNEL 11 SPECTRAL BAND 0.72 TO 0.80 MICROMETERS DISPLAYED AS.. 8 CALCODE = 1 CO = 31.00



CALIBRATION FOR LINE 659

CHANNEL	C0 MEAN	C0 VARIANCE	C1 MEAN	C1 VARIANCE	C2 MEAN	C2 VARIANCE
9	31.0	1.0	96.0	4.0	230.0	1.0
11	31.0	4.0	99.0	5.0	218.0	3.0

ROLL WAS NOT CALCULATED FOR THIS DATA.

DISPLAY 8

XBLARSYS
JAMES RUSSELL

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

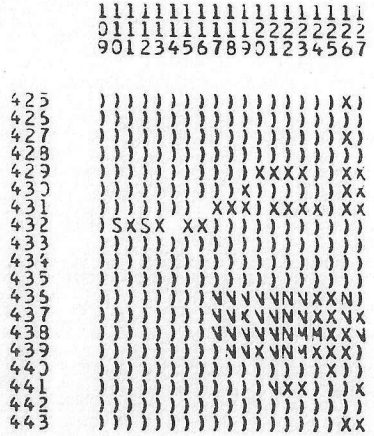
DEC 20,1974
6 52 27 PM
LARSYS VERSION 3

FIELD INFORMATION

FIELD DD1
RUN NO. 71053000
OTHER INFORMATION

TYPE SOYBEANS
NO. OF SAMPLES 361

LINES 425- 443 (BY 1)
COLUMNS 109- 127 (BY 1)



NUMBER OF POINTS PER CLUSTER

CLUSTER	1	2	3	4	5	6
SYMBOL		)	S	X	N	M
POINTS	2	285	2	42	27	3

XBLARSYS
JAMES RUSSELL

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

DEC 20,1974
6 52 26 PM
LARSYS VERSION 3

FIELD INFORMATION

FIELD J5
RUN NO. 71053000
OTHER INFORMATION

TYPE SOYBEANS
NO. OF SAMPLES 629

LINES 307- 323 (BY 1)
COLUMNS 33- 69 (BY 1)

```
          0000000000000000000000000000000000000
          3333333444444444455555555566666666655
          3456789012345678901234567890123456789
307       )))))))))))))))))))))))))))))))))))))
308       )))))))))))))))))))))))))))))))))))))
309       ))))))))))))))))))))))))))XX)))))))))))
310       ))))))))))))))))))))))))))))))))))))))
311       ))))))))))))))))))))))))))))))))))))))
312       ))))))))))))))))))))))))))))))))))))))
313       ))))))))))))))))))))))))))))))))))))))
314       ))))))))))))))))))))))))))))))))))))))
315       ))))))))))))))))))))))))))))))))))))))
316       ))))))))))))))))))))))))))))))))))))))
317       ))))))))))))))))))))))))))))))))))))))
318       ))))))))))))))))))))))))))))))))))))))
319       ))))))))))))))))))))))))))))))))))))))
320       ))))))))))))))))))))))))))))))))))))))
321       ))))))))))))))))))))))))))))))))))))))
322       ))))))))))))))))))))))))))))))))))))))
323       ))))))))))))))))))))))))))))))))))))))
```

NUMBER OF POINTS PER CLUSTER

CLUSTER	1	2	3	4	5	6
SYMBOL		)	S	X	N	M
POINTS	1	626	0	2	0	0

DISPLAY 10

XBLARSYS
JAMES RUSSELL

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

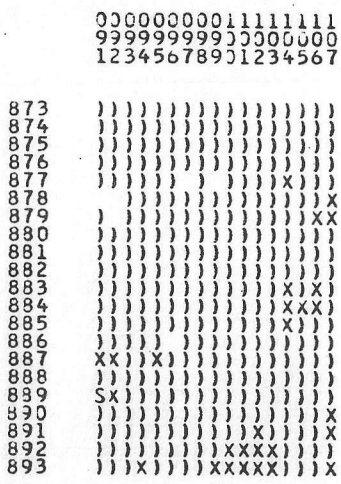
DEC 20, 1974
6 52 29 PM
LARSYS VERSION 3

FIELD INFORMATION

FIELD KK2
RUN NO. 71053900
OTHER INFORMATION

TYPE SOYBEANS
NO. OF SAMPLES 357

LINES 873- 893 (BY 1)
COLUMNS 91- 107 (BY 1)



NUMBER OF POINTS PER CLUSTER

CLUSTER	1	2	3	4	5	6
SYMBOL		)	S	X	N	M
POINTS	6	322	1	28	0	0

XBLARSYS
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DEC 20,1974
6 52 29 PM
LARSYS VERSION 3

SEPARABILITY INFORMATION

I	J	D(I,J)	D(I)	D(J)	D(I)+D(J)	QUOT
1	2	29.389	15.336	9.044	24.381	1.205
1	3	14.602	16.978	13.979	30.957	0.472
1	4	27.353	18.073	9.405	27.478	0.995
1	5	38.778	17.941	9.831	27.772	1.396
1	6	39.598	18.665	9.776	28.441	1.392
2	3	21.046	8.883	10.657	19.540	1.077
2	4	16.452	11.159	11.893	23.052	0.714
2	5	26.791	12.993	12.355	25.348	1.057
2	6	30.379	12.446	9.573	22.019	1.380
3	4	17.549	12.113	8.873	20.986	0.836
3	5	24.958	13.648	9.640	23.287	1.072
3	6	27.406	13.874	9.259	23.134	1.185
4	5	17.991	13.149	9.309	22.458	0.801
4	6	17.415	12.154	11.113	23.267	0.748
5	6	8.753	7.590	8.875	16.465	0.532

AVERAGE QUOTIENT 0.991

DISPLAY 12

XBLARSYS
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LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

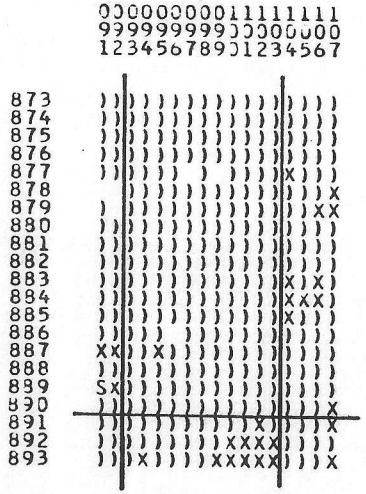
DEC 20,1974
6 52 29 PM
LARSYS VERSION 3

FIELD INFORMATION

FIELD KK2
RUN NO. 71053000
OTHER INFORMATION

TYPE SOYBEANS
NO. OF SAMPLES 357

LINES 873- 893 (BY 1)
COLUMNS 91- 107 (BY 1)



NUMBER OF POINTS PER CLUSTER

CLUSTER	1	2	3	4	5	6
SYMBOL		1	S	X	N	M
POINTS	6	322	1	28	0	0

LARSYS

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

CLASS....CORN TOTAL NUMBER OF SAMPLES... 1428

THE MEAN AND STANDARD DEVIATION VECTORS

CHANNEL	1	2	3	4	5	6	7	8	9	10	11	12
SPECTRAL BAND	0.40 - 0.44	0.44 - 0.46	0.46 - 0.48	0.48 - 0.50	0.50 - 0.52	0.52 - 0.55	0.55 - 0.58	0.58 - 0.62	0.62 - 0.66	0.66 - 0.72	0.72 - 0.80	0.80 - 1.00
MEAN	77.84	72.91	56.58	56.77	76.62	82.26	60.07	72.84	58.51	73.57	114.12	88.51
STD. DEV.	6.08	5.09	3.31	3.39	6.00	5.18	3.26	5.63	4.77	6.01	12.50	9.59

CORRELATION MATRIX

SPECTRAL BAND	0.40 - 0.44	0.44 - 0.46	0.46 - 0.48	0.48 - 0.50	0.50 - 0.52	0.52 - 0.55	0.55 - 0.58	0.58 - 0.62	0.62 - 0.66	0.66 - 0.72	0.72 - 0.80	0.80 - 1.00
0.40-0.44	1.00											
0.44-0.46	0.93	1.00										
0.46-0.48	0.91	0.90	1.00									
0.48-0.50	0.91	0.93	0.90	1.00								
0.50-0.52	0.90	0.91	0.92	0.92	1.00							
0.52-0.55	0.81	0.85	0.84	0.88	0.92	1.00						
0.55-0.58	0.73	0.77	0.81	0.83	0.86	0.92	1.00					
0.58-0.62	0.73	0.81	0.82	0.85	0.89	0.91	0.90	1.00				
0.62-0.66	0.73	0.80	0.80	0.86	0.86	0.88	0.88	0.95	1.00			
0.66-0.72	0.17	0.28	0.35	0.37	0.46	0.61	0.69	0.70	0.67	1.00		
0.72-0.80	-0.46	-0.44	-0.36	-0.40	-0.28	-0.10	-0.02	-0.14	-0.20	0.47	1.00	
0.80-1.00	-0.56	-0.51	-0.43	-0.45	-0.34	-0.15	-0.07	-0.14	-0.19	0.51	0.89	1.00

DISPLAY 14

LARSYS

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

CLASS....CORN

FIELD 12-9
RUN NO. 66000600
OTHER INFORMATION

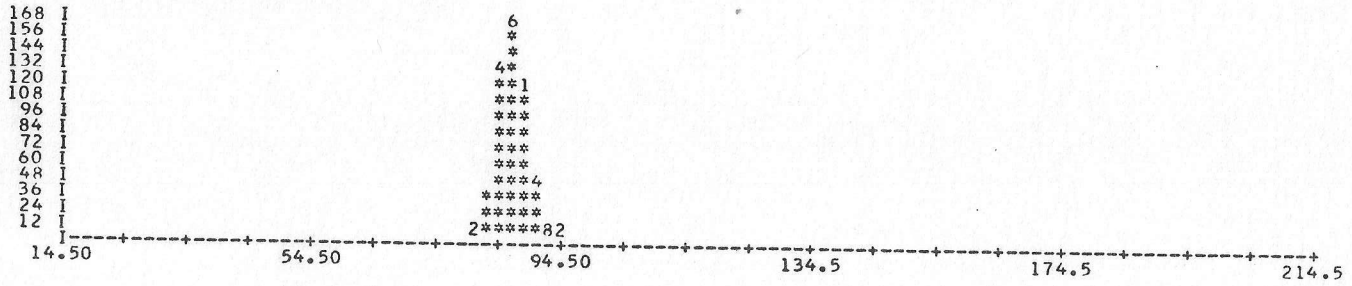
TYPE CORN4
NO. OF SAMPLES 483

LINES 603- 625 (BY 1)
COLUMNS 13- 33 (BY 1)

HISTOGRAM(S) FOR...FIELD 12-9

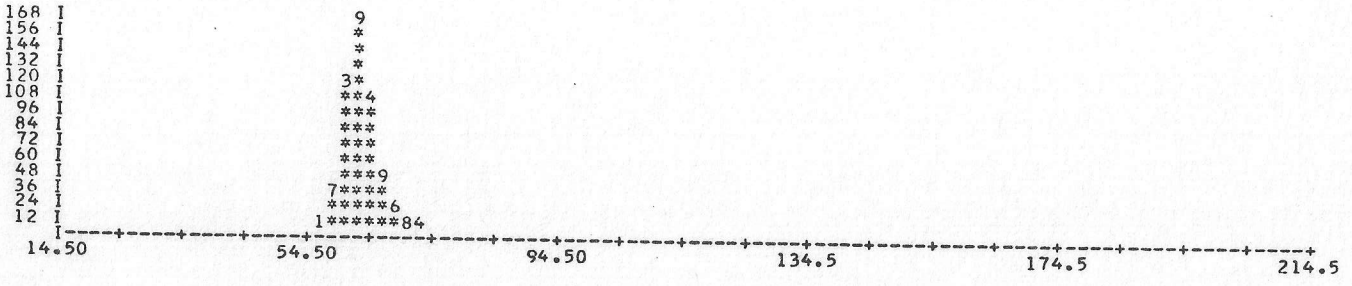
CHANNEL 1 0.40 - 0.44 MICROMETERS

EACH * REPRESENTS 12 POINT(S).



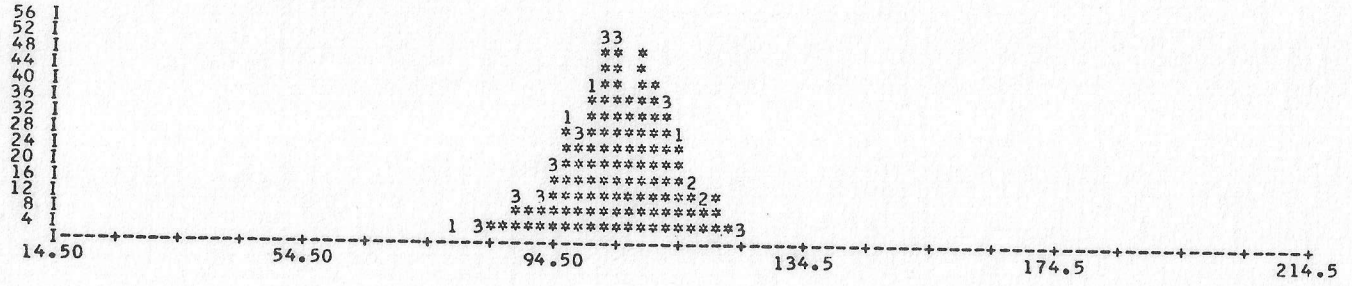
CHANNEL 9 0.62 - 0.66 MICROMETERS

EACH * REPRESENTS 12 POINT(S).



CHANNEL 11 0.72 - 0.80 MICROMETERS

EACH * REPRESENTS 4 POINT(S).



DISPLAY 15

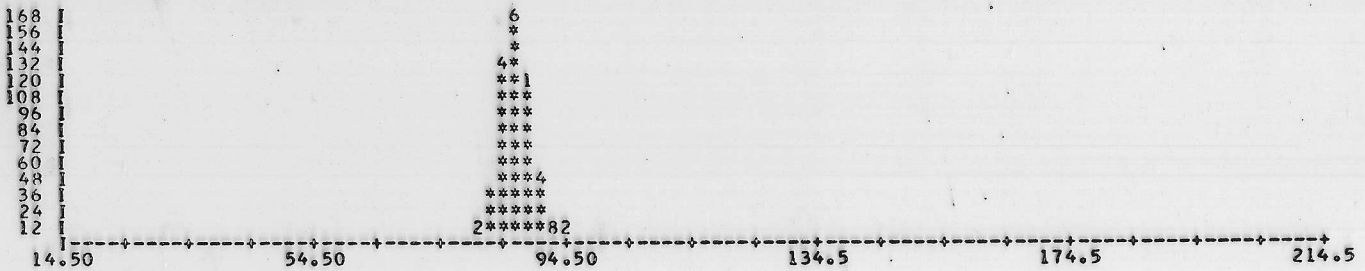
CLASS....CORN

FIELD 12-9 TYPE CORN4 LINES 603- 625 (BY 1)
RUN NO. 66000600 NO. OF SAMPLES 483 COLUMNS 13- 33 (BY 1)
OTHER INFORMATION

HISTOGRAM(S) FOR...FIELD 12-9

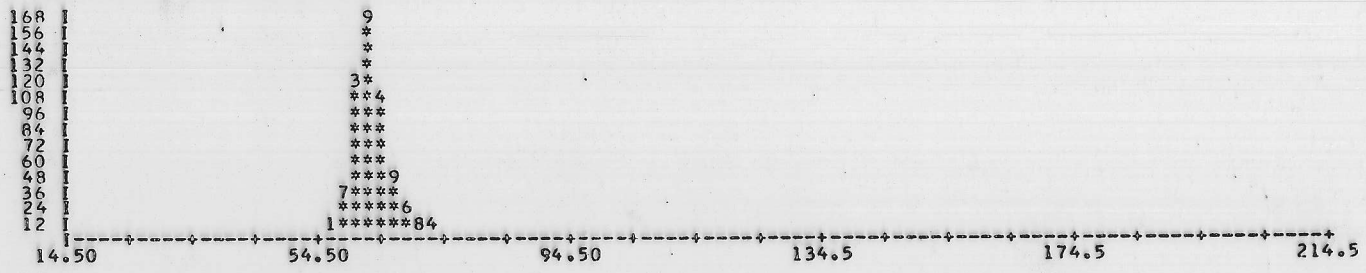
CHANNEL 1 0.40 - 0.44 MICROMETERS

EACH * REPRESENTS 12 POINT(S).



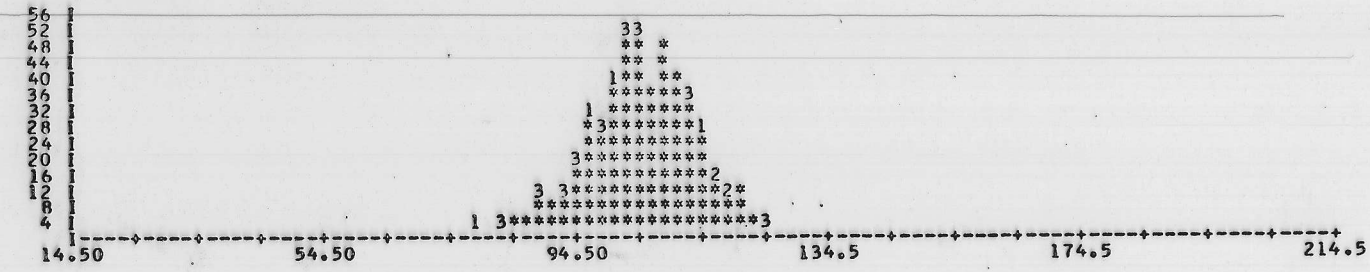
CHANNEL 9 0.62 - 0.66 MICROMETERS

EACH * REPRESENTS 12 POINT(S).



CHANNEL 11 0.72 - 0.80 MICROMETERS

EACH * REPRESENTS 4 POINT(S).



CLASS....CORN

FIELD 8-20
RUN NO. 66000600
OTHER INFORMATION

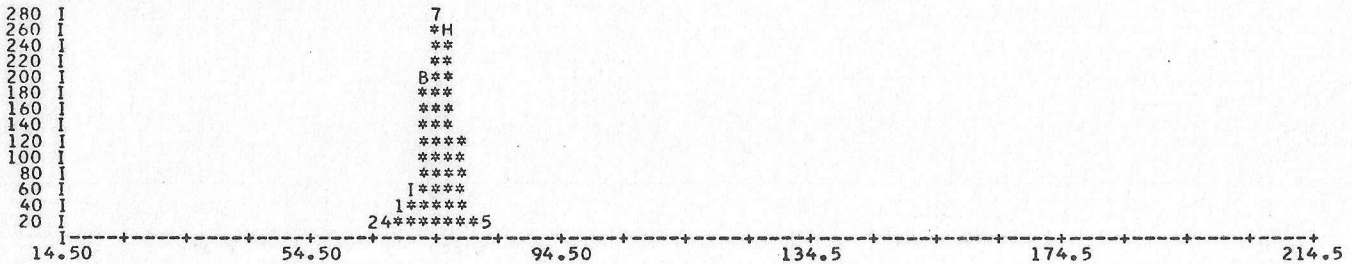
TYPE CORN5
NO. OF SAMPLES 945

LINES 669- 713 (BY 1)
COLUMNS 171- 191 (BY 1)

HISTOGRAM(S) FOR...FIELD 8-20

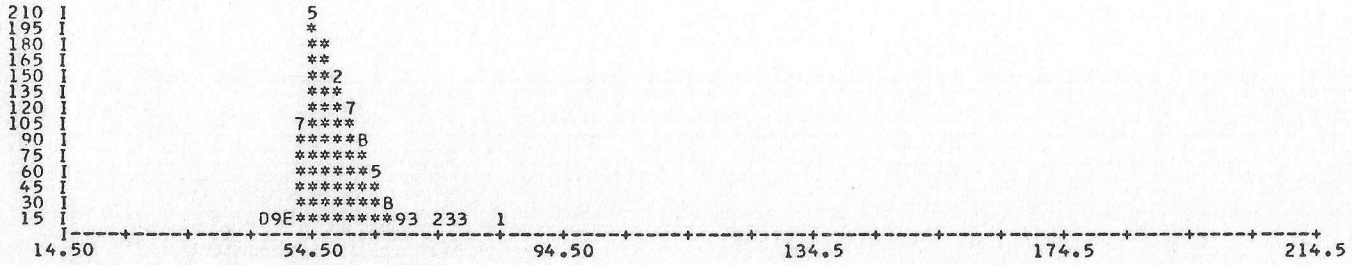
CHANNEL 1 0.40 - 0.44 MICROMETERS

EACH * REPRESENTS 20 POINT(S).



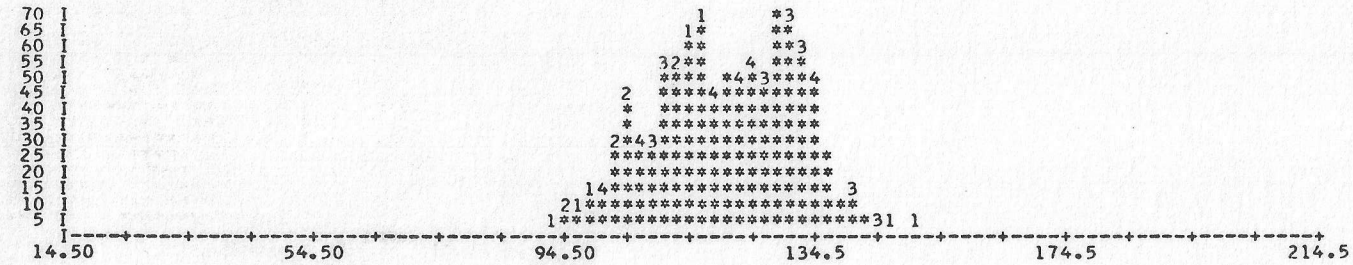
CHANNEL 9 0.62 - 0.66 MICROMETERS

EACH * REPRESENTS 15 POINT(S).



CHANNEL 11 0.72 - 0.80 MICROMETERS

EACH * REPRESENTS 5 POINT(S).



LARSYS

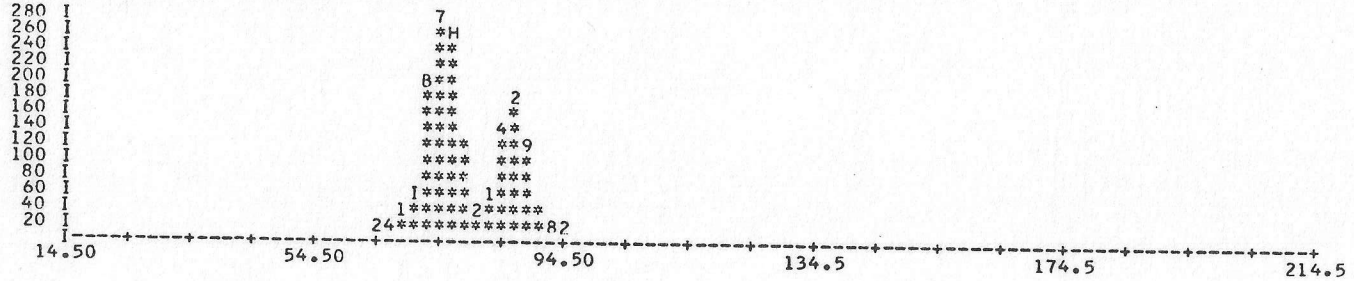
LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

CLASS....CORN TOTAL NUMBER OF SAMPLES... 1428

HISTOGRAM(S)

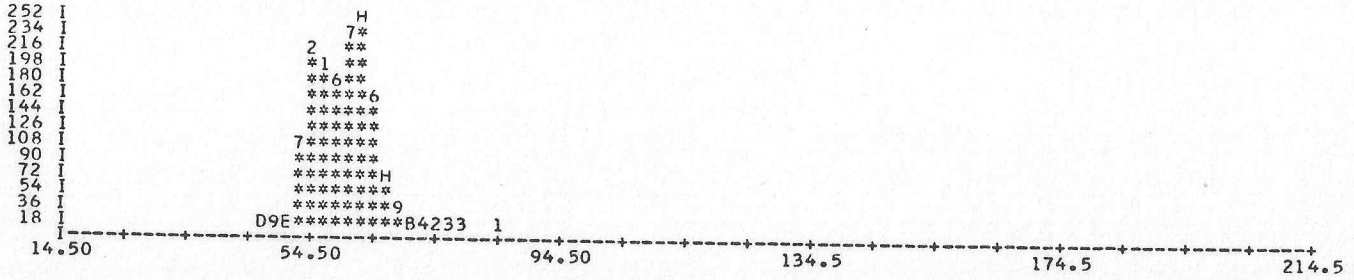
CHANNEL 1 0.40 - 0.44 MICROMETERS

EACH * REPRESENTS 20 POINT(S).



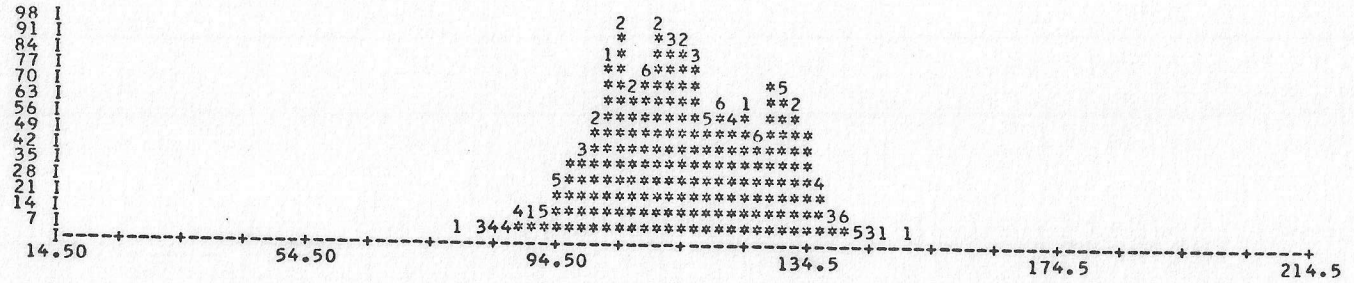
CHANNEL 9 0.62 - 0.66 MICROMETERS

EACH * REPRESENTS 18 POINT(S).



CHANNEL 11 0.72 - 0.80 MICROMETERS

EACH * REPRESENTS 7 POINT(S).



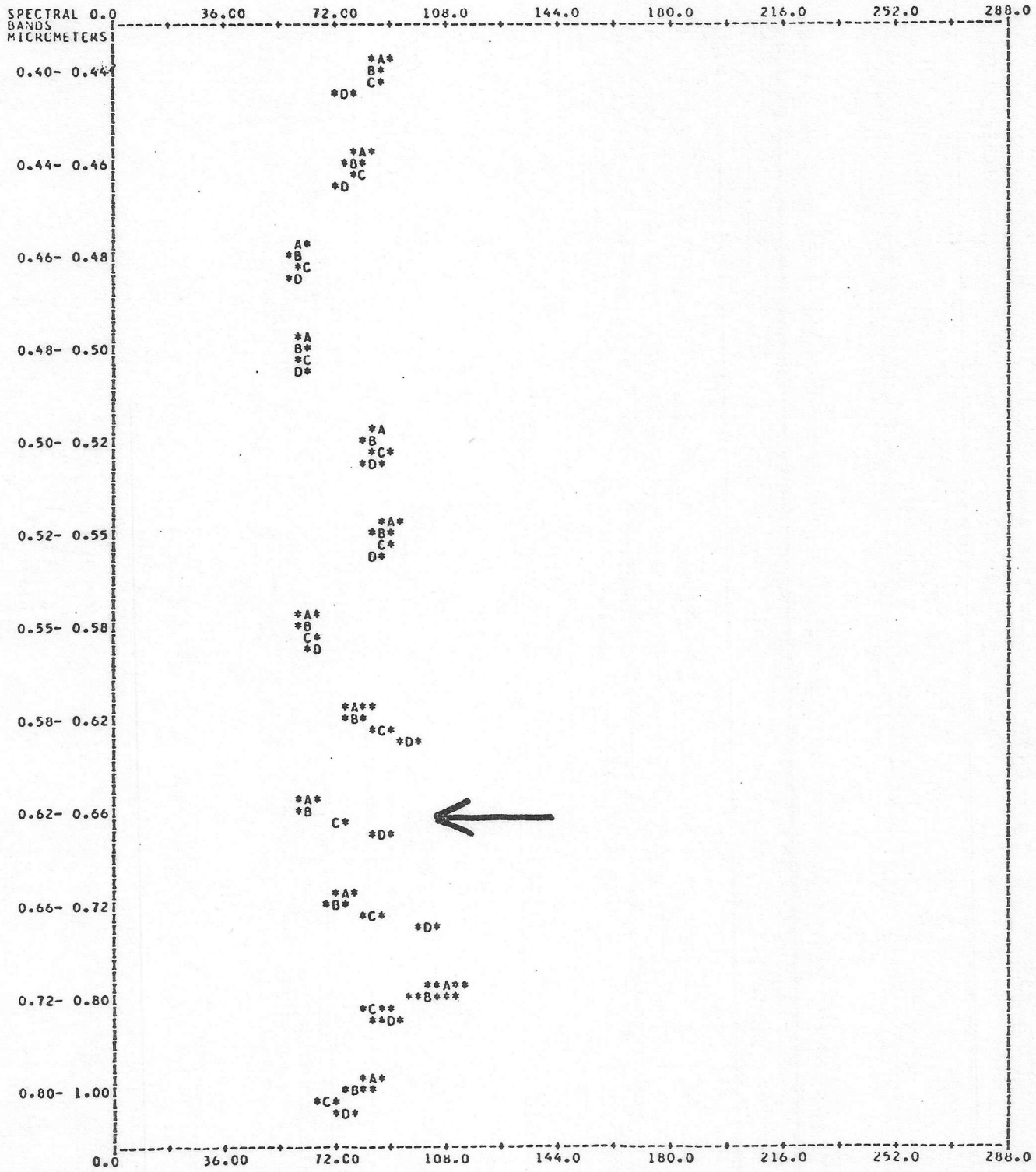
LARSYS

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

LARSYS DEMONSTRATION ** LARSYS

COINCIDENT SPECTRAL PLOT (MEAN PLUS AND MINUS ONE STD. DEV.) FOR CLASS(ES)

LEGEND
A = CLASS 1 CORN A
B = CLASS 2 CORN B
C = CLASS 3 SOYBEANS
D = CLASS 4 WHEAT



DISPLAY 18

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

LARSYS DEMONSTRATION ** LARSYS

CLASSES CONSIDERED

SYMBOL	CLASS
S	SOYBEANS
C	CORN
O	OATS
W	WHEAT I
M	WHEAT II

FEATURES CONSIDERED

CHANNEL NO.	SPECTRAL BAND	
1	0.40	0.44
2	0.44	0.46
3	0.46	0.48
4	0.48	0.50
5	0.50	0.52
6	0.52	0.55
7	0.55	0.58
8	0.58	0.62
9	0.62	0.66
10	0.66	0.72
11	0.72	0.80
12	0.80	1.00

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

LARSYS DEMONSTRATION ** LARSYS

RESTORED DATA
RETENTION LEVEL .. 495

MINIMUM C
MAXIMUM 30000

DIVERGENCE **WITH** SATURATING TRANSFORM

	FEATURES	DIJ(MIN)	D(AVE)
1.	1 6 10 11	1767.	1975.
2.	1 6 10 12	1762.	1974.
3.	6 10 11 12	1773.	1974.
4.	4 6 10 12	1764.	1974.
5.	2 6 10 12	1760.	1973.
6.	2 6 10 11	1764.	1973.
7.	6 9 10 12	1774.	1973.
8.	4 6 10 11	1769.	1973.
9.	6 9 10 11	1779.	1973.
10.	6 8 10 12	1762.	1972.
11.	6 8 10 11	1768.	1972.
12.	3 6 10 12	1760.	1972.
13.	3 6 10 11	1758.	1972.
14.	5 6 10 11	1765.	1972.
15.	3 6 10 12	1750.	1971.
16.	6 7 10 12	1752.	1970.
17.	6 7 10 11	1758.	1970.
18.	1 7 10 11	1721.	1969.
19.	1 7 10 12	1716.	1968.
20.	1 6 9 10	1719.	1966.
21.	2 7 10 12	1707.	1965.
22.	2 7 10 11	1713.	1965.
23.	1 8 10 11	1698.	1964.
24.	1 8 10 12	1692.	1964.
25.	5 7 10 12	1700.	1963.
26.	5 7 10 11	1705.	1963.
27.	4 7 10 12	1680.	1962.
28.	4 7 10 11	1692.	1962.
29.	2 6 9 10	1716.	1962.
30.	1 5 10 12	1693.	1961.

WEIGHTED INTERCLASS DIVERGENCE (DIJ)

SC (10)	SC (10)	SW (10)	SM (10)	CO (10)	CW (10)	CM (10)	OW (10)	OM (10)	WM (10)
1767	1994	2000	2000	1999	2000	2000	1994	2000	1993
1762	1993	2000	2000	1999	2000	2000	1993	2000	1997
1773	1978	2000	2000	1998	2000	2000	1998	2000	1994
1764	1985	2000	2000	1999	2000	2000	1993	1999	1996
1760	1984	2000	2000	1999	2000	2000	1994	2000	1996
1764	1984	2000	2000	1999	2000	2000	1995	2000	1991
1774	1967	2000	2000	1998	2000	2000	1998	2000	1995
1769	1984	2000	2000	1998	2000	2000	1994	1999	1988
1779	1964	2000	2000	1998	2000	2000	1998	2000	1988
1762	1969	2000	2000	1998	2000	2000	1997	2000	1997
1768	1967	2000	2000	1998	2000	2000	1997	2000	1992
1760	1973	2000	2000	1998	2000	2000	1994	1999	1995
1758	1982	2000	2000	1998	2000	2000	1994	1999	1967
1765	1974	2000	2000	1997	2000	2000	1995	1999	1987
1750	1979	2000	2000	1998	2000	2000	1993	1999	1995
1752	1963	2000	2000	1998	2000	2000	1993	1999	1998
1758	1960	2000	2000	1997	2000	2000	1994	1999	1994
1721	1991	2000	2000	1998	2000	2000	1993	2000	1982
1716	1988	2000	2000	1998	2000	2000	1990	2000	1991
1719	1968	2000	2000	1999	2000	2000	1984	1998	1992
1707	1971	2000	2000	1996	2000	2000	1991	2000	1986
1713	1972	2000	2000	1996	2000	2000	1993	2000	1973
1698	1992	2000	2000	1997	2000	2000	1995	2000	1958
1692	1987	2000	2000	1996	2000	2000	1992	2000	1971
1700	1957	1999	2000	1994	2000	2000	1989	1999	1992
1705	1959	2000	2000	1994	2000	2000	1991	1999	1982
1680	1973	1998	2000	1995	2000	2000	1988	1999	1986
1692	1971	1999	2000	1995	2000	2000	1991	1999	1970
1716	1929	2000	2000	1998	2000	2000	1987	1998	1988
1693	1987	2000	2000	1997	2000	2000	1990	2000	1943

DISPLAY 20

LARSYS — LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

LARSYS DEMONSTRATION ** LARSYS

SERIAL NUMBER------- 428000001	CLASSIFIED- JAN 18,1972
RUN NUMBER---------- 66000600	DATE---------- JUNE 28,1966
FLIGHT LINE--- PURDUE FLT LN C1	TIME---------- 1229 HOURS
DATA STORAGE TAPE/FILE-- 210/ 1	ALTITUDE---------- 2600 FEET
REFORMATTING DATE- JAN 27,1971	GROUND HEADING---------- 180

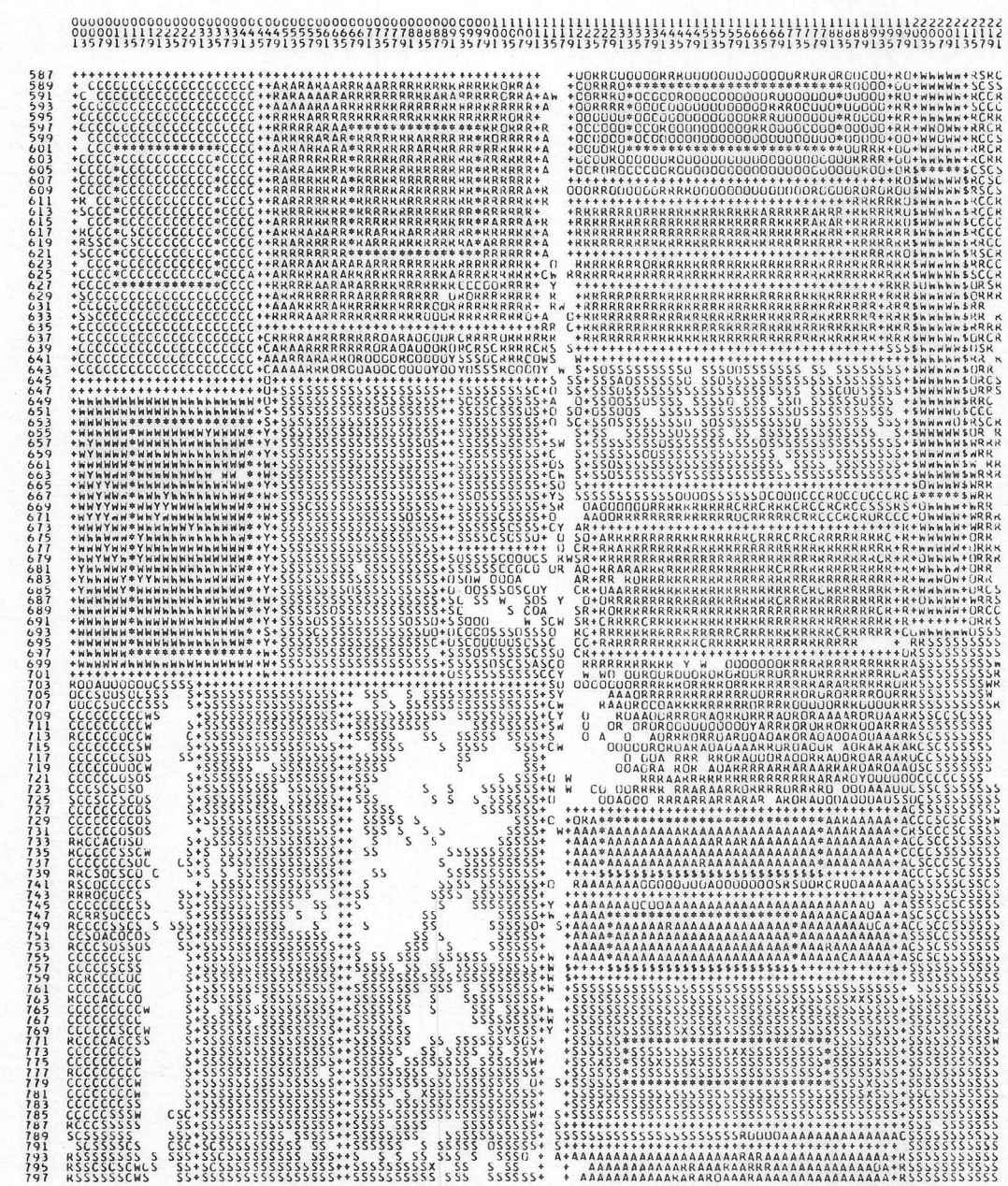
CHANNELS USED

CHANNEL 1	SPECTRAL BAND	0.40 TO 0.44 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 6	SPECTRAL BAND	0.52 TO 0.55 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 10	SPECTRAL BAND	0.66 TO 0.72 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 11	SPECTRAL BAND	0.72 TO 0.80 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00

CLASSES

SYMBOL	CLASS	GROUP	THRES PCT	SYMBOL	CLASS	GROUP	THRES PCT
S	SOYBEANS	SOYBEANS	0.5	A	ALFALFA	ALFALFA	0.5
C	CORN	CORN	0.5	Y	RYE	RYE	0.5
O	OATS	OATS	0.5	X	BR SOIL	SOIL	0.5
W	WHEAT I	WHEAT	0.5	W	WHEAT II	WHEAT	0.5
R	RED CLVR	RED CLVR	0.5				

TRAINING FIELDS OUTLINED WITH A *
TEST FIELDS OUTLINED WITH A +



NUMBER OF POINTS DISPLAYED ARE 11766

DISPLAY 21

LARSYS

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

LARSYS DEMONSTRATION ** LARSYS

SERIAL NUMBER------- 428000001	CLASSIFIED- JAN 18,1972
RUN NUMBER---------- 66000600	DATE---------- JUNE 28,1966
FLIGHT LINE--- PURDUE FLT LN C1	TIME---------- 1229 HOURS
DATA STORAGE TAPE/FILE-- 210/ 1	ALTITUDE---------- 2600 FEET
REFORMATTING DATE- JAN 27,1971	GROUND HEADING---------- 180

CHANNELS USED

CHANNEL 1	SPECTRAL BAND	0.40 TO 0.44 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 6	SPECTRAL BAND	0.52 TO 0.55 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 10	SPECTRAL BAND	0.66 TO 0.72 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 11	SPECTRAL BAND	0.72 TO 0.80 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00

CLASSES

SYMBOL	CLASS	THRES PCT	SYMBOL	CLASS	THRES PCT
S	SOYBEANS	0.5		ALFALFA	0.5
	CORN	0.5		RYE	0.5
	OATS	0.5		BR SOIL	0.5
	WHEAT I	0.5		WHEAT II	0.5
	RED CLVR	0.5			

NUMBER OF POINTS DISPLAYED ARE 11766

DISPLAY 22

LARSYS

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

LARSYS DEMONSTRATION ** LARSYS

SERIAL NUMBER------- 428000001 CLASSIFIED- JAN 18,1972

CHANNELS USED

CHANNEL 1	SPECTRAL BAND	0.40 TO	0.44 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 6	SPECTRAL BAND	0.52 TO	0.55 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 10	SPECTRAL BAND	0.66 TO	0.72 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 11	SPECTRAL BAND	0.72 TO	0.80 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00

CLASSES

	CLASS	GROUP	THRES PCT
1	SOYBEANS	SOYBEANS	0.5
2	CORN	CORN	0.5
3	OATS	OATS	0.5
4	WHEAT I	WHEAT	0.5
5	RED CLVR	RED CLVR	0.5
6	ALFALFA	ALFALFA	0.5
7	RYE	RYE	0.5
8	BR SOIL	SOIL	0.5
9	WHEAT II	WHEAT	0.5

TEST FIELD PERFORMANCE

FIELD DESIG.	GROUP	NO OF SAMPS	PCT. CORCT	NUMBER OF SAMPLES CLASSIFIED INTO: SOYBEANS	CORN	OATS	WHEAT	RED CLVR	ALFALFA	RYE	SOIL	THRSHOLD
12-3	SOYBEANS	1034	65.7	679	0	5	2	0	0	2	2	344
7-27	SOYBEANS	407	65.5	348	1	31	0	0	1	1	0	25
12-7	SOYBEANS	513	97.1	498	3	10	0	0	0	0	0	2
12-2	SOYBEANS	150	92.7	139	5	6	0	0	0	0	0	0
12-3	SOYBEANS	752	94.9	714	3	0	0	0	0	0	0	35
7-23	SOYBEANS	546	97.3	531	0	0	0	0	0	0	15	0
12-9	CORN	588	96.4	10	567	0	0	3	1	0	0	7
7-1	OATS	370	84.3	0	0	312	0	58	0	0	0	0
7-2	WHEAT	260	95.4	0	0	12	248	0	0	0	0	0
12-10	WHEAT	546	93.4	0	0	0	510	0	0	32	0	4
12-8	RED CLVR	713	86.0	0	0	18	0	613	81	0	0	1
7-29	RED CLVR	128	96.1	0	0	1	0	123	4	0	0	0
7-28	RED CLVR	175	100.0	0	0	0	0	175	0	0	0	0
	RED CLVR	385	92.2	0	15	4	0	355	6	0	0	5
7-24	ALFALFA	190	94.7	0	0	3	0	7	180	0	0	0
7-24	ALFALFA	266	90.2	1	8	11	0	4	240	0	0	2
7-22	ALFALFA	114	85.1	0	0	2	0	12	97	0	0	3
	TOTAL	7137		2920	602	415	760	1350	610	35	17	428

OVERALL PERFORMANCE(6329/ 7137) = 88.7

LARSYS

LABORATORY FOR APPLICATIONS OF REMOTE SENSING
PURDUE UNIVERSITY

LARSYS DEMONSTRATION ** LARSYS

SERIAL NUMBER------- 428000001 CLASSIFIED- JAN 18,1972

CHANNELS USED

CHANNEL 1	SPECTRAL BAND	0.40 TO	0.44 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 6	SPECTRAL BAND	0.52 TO	0.55 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 10	SPECTRAL BAND	0.66 TO	0.72 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00
CHANNEL 11	SPECTRAL BAND	0.72 TO	0.80 MICROMETERS	CALIBRATION CODE = 1	CO =	31.00

CLASSES

	CLASS	GROUP	THRES PCT		CLASS	GROUP	THRES PCT
1	SOYBEANS	SOYBEANS	0.5	6	ALFALFA	ALFALFA	0.5
2	CORN	CORN	0.5	7	RYE	RYE	0.5
3	OATS	OATS	0.5	8	BR SOIL	SOIL	0.5
4	WHEAT I	WHEAT	0.5	9	WHEAT II	WHEAT	0.5
5	RED CLVR	RED CLVR	0.5				

TEST CLASS PERFORMANCE

	GROUP	NO OF SAMPS	PCT. CORCT	NUMBER OF SAMPLES CLASSIFIED INTO SOYBEANS	CORN	OATS	WHEAT	RED CLVR	ALFALFA	RYE	SOIL	THRSHOLD
1	SOYBEANS	3402	85.5	2909	12	52	2	0	1	3	17	406
2	CORN	588	96.4	10	567	0	0	3	1	0	0	7
3	OATS	370	84.3	0	0	312	0	58	0	0	0	0
4	WHEAT	806	94.0	0	0	12	758	0	0	32	0	4
5	RED CLVR	1401	90.4	0	15	23	0	1266	91	0	0	6
6	ALFALFA	570	90.7	1	8	16	0	23	517	0	0	5
	TOTAL	7137		2920	602	415	760	1350	610	35	17	428

OVERALL PERFORMANCE(6329/ 7137) = 88.7

AVERAGE PERFORMANCE BY CLASS(541.4/ 6) = 90.2

DISPLAY 24

ANSWERS TO SELF-CHECK

(page 9 of Student Notes)

A. Multispectral Image Storage Tapes contain:

1. Data Values
2. Data Addresses
3. Identification Information
4. Calibration Information

B. Types of Control Cards used in running LARSYS programs:

1. Initialization cards
2. Function Selector cards
3. Function Control cards

C. Output of LARSYS Processing Functions:

IDPRINT yields identification records

PICTUREPRINT provide a grayscale printout

COLUMNGRAPH provides a graph of data by column

LINEGRAPH yields a graph of data by line

CLUSTER can provide maps, statistics, and separability with histograms as an option

STATISTICS can provide histograms, spectral plots, mean and correlation matrices as well as a statistics deck

SEPARABILITY indicates the statistical distances between class pairs

CLASSIFYPOINTS provides a classification file

PRINTRESULTS yields classification maps and performance tables