General Disclaimer

One or more of the Following Statements may affect this Document

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.

- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.

- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.

- This document is paginated as submitted by the original source.

- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.

Produced by the NASA Center for Aerospace Information (CASI)

CR 86297

VOLUME II

FEASIBILITY STUDY

OF

MICROWAVE RADIOMETRIC REMOTE SENSING

Computer Printouts

by

Ronald A. Porter and Edwin T. Florance

29 January 1969

FACILITY FORM 602

N70-14447 (ACCESSION NUMBER) (THRU)

249 (PAGES) 1 (CODE)

CR-86297 (NASA CR OR TMX OR AD NUMBER) 13 (CATEGORY)

Prepared Under Contract No. NAS 12-629 by

RONALD A. PORTER
Professional Engineer
Cambridge, Massachusetts

for Electronics Research Center

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

RECEIVED JAN 1970 NASA STI FACILITY INPUT BRANCH

PRECEDING PAGE BLANK NOT FILMED.

TABLE OF CONTENTS

Section	Title	Page
PART I	COMPUTED TARGET AND BACKGROUND BRIGHTNESS TEMPERATURES AND CONTRASTS	1st Section
PART II	COMPUTED SKY BRIGHTNESS TEMPERATURES AND ATMOSPHERIC TRANSMISSION FACTORS	2nd Section

PART I

COMPUTED TARGET AND BACKGROUND

BRIGHTNESS TEMPERATURES AND CONTRASTS

GLOSSARY OF TERMS

MATERIAL: The letter (S) or (D) after material indicates specular or diffuse, respectively.

FREQUENCY: All frequencies in GHz.

AREA: Target or background area, in square nautical miles. All background areas fill antenna beamspot; area of beamspot is given, as a function of antenna beam nadir angle, along the center of third page of each set of data.

POLARIZATION: VER = vertical (E-vector parallel to plane of incidence.)

HOR = horizontal (E-vector perpendicular to plane of incidence.)

TITLE : Title of report from which source (input) data taken.

A-G: Aerojet - General Corp., Space Division, El Monte, Calif.

NADIR ANG: Nadir angle of antenna beam.

TA: Apparent temperature.

TB: Brightness temperature.

SURF TEMP: Surface temperature of material or background, as measured or assigned.

FREQ: Frequency (GHz) of data.

RAYTHEON : Raytheon Space and Information Systems Div., Sudbury, Mass.

REIGLER: Data from Reference (5), by R. L. Riegler, Name is misspelled in computer printouts.

THEORETICAL : Means emissivites of indicated materials were calculated from dielectric permittivites.

CALCULATED : Same meaning as above.

BTL : Bell Telephone Laboratories.

MATERIAL= SILT LOAM (S)

FREQUENCY= 13.4 AREA= 2.0

POLARIZATION= VER TITLE= A-G SGD A-9-6 FIGURE 1-5

TEMPERATURE= 291.1

NADIR ANG	TA	EMISSIVITY
0.00	259.90	0.879
30.00	254.80	0.858
45.00	260.90	0.883
60.00	267.80	0.909
70.00	271.60	0.923

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= SILT LOAM (S)

FREQUENCY= 13.4 AREA= 2.0°

POLARIZATION= HOR TITLE= A-G SGD 29-6 FIGURE 1-52

TEMPERATURE= 291.1

NADIR ANG	TA	EMISSIVITY
0.00	253.20	0.850
30.00	239.70	0.797
45.00	220.90	0.724
60.00	204.20	0.658
70.00	183.10	0.568

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SILT LOAM (S)		C-6 SGD 829-6 FIGURE 1-52	291.1	13.4	2.-0
BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)		C-6 FIGURE 1-113 (BACKGROUND)	287.3	13.4	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	US STANDARD	VER	256.35	250.47	257.67	265.15	269.20	
		VER	265.62	266.84	269.11	273.85	272.53	
		HOR	248.10	233.18	212.88	195.38	172.59	
		HOR	263.72	262.08	258.82	262.06	261.25	
			APPARENT TEMP. CONTRASTS					
		VER	-9.33	-16.36	-11.13	-2.99	-0.37	
		HOR	-15.62	-28.90	-44.70	-22.93	-9.76	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.000
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	256.63	250.87	259.04	265.51	269.57	
		VER	265.86	267.00	269.27	273.97	272.74	
		HOR	248.47	233.80	213.95	197.28	176.06	
		HOR	263.91	262.31	259.15	262.44	261.83	
			APPARENT TEMP. CONTRASTS					
		VER	-9.21	-16.13	-10.93	-2.91	-0.35	
		HOR	-15.42	-28.51	-43.97	-22.41	-9.44	

MATERIAL= SILT LOAM (S)

FREQUENCY= 37.0 AREA= 2.0

POLARIZATION= VER TITLE= A-G SGD 29-6 FIGURE 1-52

TEMPERATURE= 291.1

NADIR ANG	TA	EMISSIVITY
0.00	255.40	0.867
30.00	258.10	0.876
45.00	266.50	0.905
60.00	271.70	0.922
70.00	273.50	0.923

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968

MATERIAL= SILT LOAM (S)

FREQUENCY= 37.0 AREA= 2.0

POLARIZATION= HOR TITLE= A-G SGD 29-6 FIGURE 1-52

TEMPERATURE= 291.1

NADIR ANG	TA	EMISSIVITY
0.00	256.20	0.871
30.00	244.20	0.826
45.00	230.60	0.771
60.00	224.10	0.734
70.00	203.70	0.622

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR-A
SILT LOAM (S)		A-6 SGD 29-6 FIGURE 1-52	291.1	37.0	2.00
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR-A**
SANDY LOAM (WEED-COVERED) (D)		A-6 FIGURE 1-113 (BACKGROUND)	287.3	37.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	US STANDARD	VER	255.49	258.22	265.99	270.76	271.77	
		VER	281.18	280.36	279.59	281.22	277.94	
		HOR	256.53	245.54	233.05	227.68	209.98	
		HOR	281.69	278.62	277.62	276.47	272.48	
			APPARENT TEMP. CONTRASTS					
		VER	-25.68	-19.40	-6.01	-1.76	-0.33	
		HOR	-25.16	-28.97	-21.24	-8.22	-3.37	
BEAMSPOT AREA (SQ. NM)			1.485	2.284	4.196	11.867	37.075	-0.000
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	258.74	261.49	268.49	272.84	273.95	
		VER	280.88	280.13	279.57	280.42	277.64	
		HOR	259.64	250.69	241.42	240.17	232.64	
		HOR	281.33	278.64	277.78	276.83	274.00	
			APPARENT TEMP. CONTRASTS					
		VER	-22.15	-16.32	-4.81	-1.28	-0.20	
		HOR	-21.69	-24.48	-17.33	-6.18	-2.23	

MATERIAL= SILT LOAM (S)

FREQUENCY= 13.4 AREA= 2,0?

POLARIZATION= VER TITLE= A-6 SGD 82,9-6 FIGURE 1-5?

TEMPERATURE= 295.8

NADIR ANG	TA	EMISSIVITY
0.00	272.10	0.911
30.00	264.60	0.882
45.00	270.00	0.901
60.00	277.70	0.930
70.00	276.70	0.925

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

PRECEDING PAGE BLANK NOT FILMED.

MATERIAL= SILT LOAM (S)

FREQUENCY= 13.4 AREA= 2.0°

POLARIZATION= HOR TITLE= A-G SGD 82-6 FIGURE 1-5?

TEMPERATURE= 295.8

NADIR ANG	TA	EMISSIVITY
0.00	268.50	0.895
30.00	250.50	0.826
45.00	231.10	0.748
60.00	218.10	0.697
70.00	196.30	0.605

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
SILT LOAM (S)	A-G SGD 829-6 FIGURE 1-5*	295.8	13.4	2.00

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED) (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	REA..

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JULY SUMMER	VER	269.88	261.62	267.20	275.61	274.46	
		VER	265.88	267.06	269.37	274.18	273.02	
		HOR	265.27	245.56	223.60	210.23	186.83	
		HOR	263.92	262.32	259.13	262.47	261.86	
			APPARENT TEMP. CONTRASTS					
		VER	4.00	-5.43	-2.11	0.49	0.16	
		HOR	1.35	-16.77	-34.57	-17.97	-8.26	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.000
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	269.84	261.65	267.16	275.43	274.23	
		VER	265.84	267.00	269.27	273.97	272.74	
		HOR	265.26	245.72	224.03	211.04	188.51	
		HOR	263.90	262.31	259.15	262.44	261.83	
			APPARENT TEMP. CONTRASTS					
		VER	4.00	-5.36	-2.05	0.50	0.16	
		HOR	1.37	-16.59	-34.16	-17.68	-8.07	

MATERIAL= SILT LOAM (S)

FREQUENCY= 37.0 AREA= 2.0°

POLARIZATION= VER TITLE= °-G SGD 9.9.6 FIGURE 1-5°

TEMPERATURE= 295.8

NADIR ANG	TA	EMISSIVITY
0.00	278.50	0.938
30.00	267.80	0.898
45.00	275.00	0.923
60.00	279.90	0.938
70.00	277.20	0.921

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968

MATERIAL= SILT LOAM (S)

FREQUENCY= 37.0 AREA= 2.0

POLARIZATION= HOR TITLE= A-G SGD 8/9.6 FIGURE 1-5

TEMPERATURE= 295.8

NADIR ANG	TA	EMISSIVITY
0.00	276.40	0.931
30.00	255.70	0.856
45.00	247.10	0.821
60.00	238.90	0.781
70.00	223.90	0.701

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE	SURF TEMP.	FREQ	AP-A
SILT LOAM (S)			A-6 SGD 829.6 FIGURE 1-53	295.8	37.0	2.0
BACKGROUND MATERIAL			**SOURCE**	**SURF TEMP.**	**FREQ**	**AR-A**
SANDY LOAM (WEED-COVERED) (D)			A-6 FIGURE 1-113 (BACKGROUND)	287.3	37.0	REA .
NADIR ANGLES (DEGREES)		0	30	45	60	70	80
FREQ (GH_Z) WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0 JULY SUMMER	VER	279.16	269.70	276.27	280.46	278.33	
	VER	281.98	281.33	279.87	282.66	280.35	
	HOR	277.42	259.54	252.68	247.65	239.16	
	HOR	282.46	279.69	278.98	278.42	275.72	
		APPARENT TEMP. CONTRASTS					
	VER	-2.82	-10.18	-1.72	-0.37	-0.11	
	HOR	-5.04	-17.64	-13.54	-5.19	-1.97	
BEAMSPOT AREA (SQ. NM)		1.484	2.284	4.196	11.867	37.075	-0.0-0
		APPARENT TEMPERATURES					
37.0 CLOUDY STAND	VER	278.56	269.86	275.72	279.00	276.61	
	VER	280.88	280.13	278.57	280.42	277.64	
	HOR	276.95	260.62	254.71	251.15	245.71	
	HOR	281.33	278.64	277.78	276.83	274.00	
		APPARENT TEMP. CONTRASTS					
	VER	-2.33	-8.99	-1.36	-0.24	-0.06	
	HOR	-4.37	-15.78	-11.00	-4.33	-1.53	

15.

MATERIAL= SANDY LOAM (EXPOSED SOIL) (S)

FREQUENCY= 13.4 AREA= 2.00

POLARIZATION= VER TITLE= A-G REP. SGD 829-6 FIG. 1-116

TEMPERATURE= 289.7

NADIR ANG	TA	EMISSIVITY
0.00	281.70	0.968
30.00	276.40	0.948
45.00	280.60	0.964
60.00	281.40	0.967
70.00	278.10	0.954

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= SANDY LOAM (EXPOSED SOIL) (D)

FREQUENCY= 13.4 AREA= 2.00

POLARIZATION= HOR TITLE= A-G REP. SGD 829-6 FIG. 1-116

TEMPERATURE= 289.7

NADIR ANG	TA	EMISSIVITY
0.00	281.70	0.968
30.00	273.50	0.936
45.00	274.60	0.933
60.00	273.20	0.935
70.00	266.20	0.907

MATERIAL= SANDY LOAM (WEED-COVERED) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (EXPOSED SOIL) (D)			A-G REP. SGD 829-6 FIG. 1-116	289.7	13.4	2.00
BACKGROUND MATERIAL			**SOURCE**	**SURF TEMP.**	**FREQ**	**AR-A**
SANDY LOAM (WEED-COVERED) (D)			A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	9EA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	US STANDARD	VER	280.48	274.88	279.28	280.00	276.28	
		VER	266.03	267.13	269.31	273.92	272.45	
		HOR	280.48	271.55	270.69	271.19	263.49	
		HOR	264.09	262.44	259.15	262.18	261.12	
			APPARENT TEMP. CONTRASTS					
		VER	14.45	7.76	9.70	2.09	0.42	
		HOR	16.38	9.11	11.23	3.10	0.26	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.000
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	280.55	275.07	279.36	280.04	276.38	
		VER	266.35	267.44	269.58	274.07	272.64	
		HOR	280.55	271.80	270.96	271.45	263.98	
		HOR	264.46	262.84	259.64	262.63	261.65	
			APPARENT TEMP. CONTRASTS					
		VER	14.20	7.63	9.52	2.05	0.41	
		HOR	16.09	8.95	11.02	3.03	0.26	

MATERIAL= SANDY LOAM (EXPOSED SOIL) (D)

FREQUENCY= 37.0 AREA= 2.0

POLARIZATION= VER TITLE= A-6 REP. GD 829-6 FIG. 1-116

TEMPERATURE= 289.7

NADIR ANG	TA	EMISSIVITY
0.00	288.40	0.991
30.00	288.30	0.994
45.00	287.50	0.991
60.00	287.40	0.992
70.00	284.90	0.981

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-6 FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968

MATERIAL= SANDY LOAM (EXPOSED SOIL) (D)

FREQUENCY= 37.0 AREA= 2.00

POLARIZATION= HOR TITLE= A-G REP. SGD 829-6 FIG. 1-116

TEMPERATURE= 289.7

NADIR ANG	TA	EMISSIVITY
0.00	288.70	0.994
30.00	286.90	0.997
45.00	285.30	0.982
60.00	280.60	0.964
70.00	275.90	0.945

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP-A
SANDY LOAM (EXPOSED SOIL) (D)	4-6 REP. 4GD 829-6 FIG. 1-116	289.7	37.0	2.0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	4-6 FIGUR 1-113 (BACKGROUND)	287.3	37.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	US STANDARD	VER	286.38	286.93	285.96	285.61	282.39	
		VER	281.55	280.74	279.95	281.29	277.70	
		HOR	287.1(	287.64	283.87	279.34	274.77	
		HOR	282.02	279.10	278.03	276.63	272.04	
			APPARENT TEMP. CONTRASTS					
		VER	4.8	5.43	3.34	0.73	0.25	
		HOR	5.07	7.48	2.78	0.46	0.15	
BEAMSPOT AREA (SQ. NM)			1.48	2.284	4.196	11.867	37.075	-0.0 0
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	285.66	285.95	284.89	283.98	280.74	
		VER	281.51	280.74	279.14	280.50	277.24	
		HOR	286.26	286.51	283.25	279.27	275.39	
		HOR	281.89	279.43	278.42	277.00	273.26	
			APPARENT TEMP. CONTRASTS					
		VER	4.17	4.56	2.74	0.59	0.19	
		HOR	4.37	6.20	2.30	0.38	0.11	

MATERIAL= PLAYA SEDIMENTS (DRY) (S)

FREQUENCY= 13.4 AREA= 3.00

POLARIZATION= VER TITLE= A-G KEP SGD 829-6 FIG 1-96

TEMPERATURE= 300.6

NADIR ANG	TA	EMISSIVITY
0.00	265.80	0.876
30.00	266.60	0.879
45.00	273.10	0.902
60.00	281.30	0.930
70.00	281.60	0.930

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= PLAYA SEDIMENTS (DRY) (S)

FREQUENCY= 13.4 AREA= 3.0

POLARIZATION= HOR TITLE= A-G KEP GD 829-6 FIG 1-86

TEMPERATURE= 300.8

NADIR ANG	TA	EMISSIVITY
0.00	265.80	0.875
30.00	254.50	0.834
45.00	243.70	0.794
60.00	221.80	0.709
70.00	192.90	0.599

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR-A
PLAYA SEDIMENTS (DRY) (S)		A-G KEP SGD 829-6 FIG 1-86	300.8	13.4	3.00
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR-A**
SANDY LOAM (WEED-COVERED) (D)		A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JULY SUMMER	VER	264.18	265.09	271.91	280.13	280.30	
		VER	265.88	267.06	269.37	274.18	273.02	
		HOR	263.83	251.96	240.60	217.05	188.07	
		HOR	263.92	262.32	259.13	262.47	261.86	
			APPARENT TEMP. CONTRASTS					
		VER	-1.70	-1.97	2.54	3.07	1.20	
		HOR	-0.09	-10.36	-19.53	-23.43	-12.19	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.000

			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	264.15	265.10	271.84	279.92	279.98	
		VER	265.84	267.00	269.27	273.97	272.74	
		HOR	263.84	252.08	240.87	217.70	189.74	
		HOR	263.90	262.31	259.15	262.44	261.83	
			APPARENT TEMP. CONTRASTS					
		VER	-1.71	-1.90	2.57	3.07	1.20	
		HOR	-0.05	-10.23	-19.28	-23.04	-11.90	

MATERIAL= PLAYA SEDIMENTS (DRY) (S)

FREQUENCY= 37.0 AREA= 3.0

POLARIZATION= VER TITLE= A-G KEP GD 829-6 FIG 1-86

TEMPERATURE= 300.8

NADIR ANG	TA	EMISSIVITY
0.00	270.10	0.894
30.00	270.10	0.893
45.00	274.40	0.907
60.00	280.70	0.926
70.00	280.10	0.919

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968

MATERIAL= PLAYA SEDIMENTS (DRY) (S)

FREQUENCY= 37.0 AREA= 3.0

POLARIZATION= HOR TITLE= A-G KEP SGD 829-6 FIG 1-86

TEMPERATURE= 300.8

NADIR ANG	TA	EMISSIVITY
0.00	265.80	0.882
30.00	256.80	0.850
45.00	243.30	0.801
60.00	227.10	0.737
70.00	205.20	0.636

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941

APPARENT TE PERATURE AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP-A
PLAYA SE I ENTS (DRY) (S)	-G KEP GD 829-6 FIG 1-86	300.8	37.0	3. 0

BAC, GROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SANDY LO M (WEED-COVERED) (D)	-G FIGUR 1-113 (BACKGROUND)	287.3	37.0	REA •

NADIR ANGLES (DEGREES)		0	30	45	60	70	80
FREQ (GHZ) WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0 JULY SUMMER	VER	272.3	272.52	276.57	281.83	281.52	
	VER	281.9	281.33	279.87	282.66	280.35	
	HOR	269.27	261.93	251.58	241.54	230.04	
	HOR	282.46	279.69	278.98	278.42	275.72	
		APPARENT TEMP. CONTRASTS					
	VER	-9.6	-8.80	-2.36	-0.21	0.09	
	HOR	-13.1	-17.76	-10.59	-9.32	-3.70	
BEAMSPOT AREA (SQ. NM)		1.48	2.284	4.196	11.867	37.075	-0.0-0

			APPARENT TEMPERATURES				
37.0	CLOUDY STAND	VER	272.3	272.59	276.18	280.42	279.44
		VER	280.88	280.13	278.57	280.42	277.64
		HOR	269.6	262.94	253.91	246.16	238.73
		HOR	281.3	278.64	277.78	276.83	274.00
			APPARENT TEMP. CONTRASTS				
		VER	-8.49	-7.54	-1.71	-0.00	0.15
		HOR	-11.7	-15.70	-17.07	-7.75	-2.85

MATERIAL= PLAYA SEDIMENTS (WET) (S)

FREQUENCY= 13.4 AREA= 2.00

POLARIZATION= VER TITLE= A-G KEP S&D 829-6 FIG 1-09

TEMPERATURE= 300.6

NADIR ANG	TA	EMISSIVITY
0.00	221.60	0.730
30.00	199.40	0.652
45.00	211.10	0.690
60.00	237.30	0.777
70.00	255.10	0.837

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= PLAYA SEDIMENTS (WET) (S)

FREQUENCY= 13.4 AREA= 2.0°

POLARIZATION= HOR TITLE= A-G KEP S&D 829-6 FIG 1-89

TEMPERATURE= 300.6

NADIR ANG	TA	EMISSIVITY
0.00	221.80	0.729
30.00	179.40	0.579
45.00	161.00	0.511
60.00	135.20	0.411
70.00	114.80	0.328

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

29 FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
PLAYA SEDIMENTS (WET)		A-G KEP SGD 829-6 FIG 1-89	300.6	13.4	2.00
(S)					
BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED)		A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	3EA .
(D)					

NADIR ANGLES (DEGREES)		0	30	45	60	70	80
FREQ (GHZ) WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4 JULY SUMMER	VER	221.20	198.72	210.32	236.31	254.22	
	VER	265.88	267.06	269.37	274.18	273.02	
	HOR	220.90	177.43	158.47	131.90	112.49	
	HOR	263.92	262.32	259.13	262.47	261.86	
		APPARENT TEMP. CONTRASTS					
	VER	-44.68	-68.34	-57.44	-13.03	-2.07	
	HOR	-43.02	-84.90	-97.93	-44.91	-16.44	
BEAMSPOT AREA (SQ. NM)		0.727	1.119	2.056	5.815	18.167	-0.0-0
		APPARENT TEMPERATURES					
13.4 SUMMER RAIN	VER	225.10	204.74	216.66	242.07	259.39	
	VER	266.77	268.00	270.30	274.89	274.18	
	HOR	224.82	184.91	169.14	149.76	140.95	
	HOR	264.93	263.59	260.94	264.57	264.90	
		APPARENT TEMP. CONTRASTS					
	VER	-41.67	-63.26	-52.19	-11.29	-1.63	
	HOR	-40.11	-78.68	-89.31	-39.49	-13.65	
		APPARENT TEMPERATURES					
13.4 CLOUDY STAND	VER	221.53	199.30	210.91	236.75	254.47	
	VER	265.84	267.00	269.27	273.97	272.74	
	HOR	221.24	178.19	158.61	133.90	115.81	
	HOR	263.91	262.31	259.15	262.44	261.83	
		APPARENT TEMP. CONTRASTS					
	VER	-44.31	-67.70	-56.78	-12.80	-2.01	
	HOR	-42.66	-84.12	-96.84	-44.21	-16.08	

MATERIAL= PLAYA SEDIMENTS (WET) (S)

FREQUENCY= 37.0 AREA= 2.00

POLARIZATION= VER TITLE= A-C KEP S.P 829-6 FIG 1-09

TEMPERATURE= 300.6

NADIR ANG	TA	EMISSIVITY
0.00	244.90	0.809
30.00	221.30	0.724
45.00	230.30	0.753
60.00	252.80	0.826
70.00	264.10	0.860

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968

MATERIAL= PLAYA SEDIMENTS (WET) (B)

FREQUENCY= 37.0 AREA= 2.00

POLARIZATION= HOR TITLE= A-6 KEP SGD 829-6 FIG 1-89

TEMPERATURE= 300.6

NADIR ANG	TA	EMISSIVITY
0.00	247.50	0.818
30.00	204.10	0.665
45.00	185.90	0.597
60.00	162.30	0.499
70.00	141.00	0.389

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-6 FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AREA
PLAYA SEDIMENTS (WET) (S)		A-6 KEP SGD 829-6 FIG 1-99	300.6	37.0	2.00
BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AREA
SANDY LOAM (WEED-COVERED) (D)		A-6 FIGURE 1-113 (BACKGROUND)	287.3	37.0	REA .

NADIR ANGLES (DEGREES)		0	30	45	60	70	80
FREQ (GH_z) WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0 JULY SUMMER	VER	250.65	230.74	240.14	260.37	270.66	
	VEP	281.98	281.33	279.87	282.66	280.35	
	HOR	252.92	216.21	203.39	190.73	185.05	
	HOR	282.46	279.69	278.98	278.42	275.72	
		APPARENT TEMP. CONTRASTS					
	VER	-31.33	-44.30	-18.94	-3.76	-0.52	
	HOR	-29.54	-55.59	-36.03	-14.78	-4.89	
BEAMSPOT AREA (SQ. NM)		1.485	2.284	4.196	11.867	37.075	-0.00
		APPARENT TEMPERATURES					
37.0 SUMMER RAIN	VER	272.07	267.29	270.34	277.39	276.69	
	VER	280.51	279.94	279.00	278.04	275.71	
	HOR	272.88	262.88	263.76	268.29	272.04	
	HOR	280.68	279.46	278.81	277.54	275.51	
		APPARENT TEMP. CONTRASTS					
	VER	-8.44	-11.08	-7.17	-0.11	0.05	
	HOR	-7.8	-14.53	-7.17	-1.56	-0.19	
		APPARENT TEMPERATURES					
37.0 CLOUDY STAND	VER	252.42	234.55	243.70	262.16	270.83	
	VER	280.88	280.13	279.57	280.42	277.64	
	HOR	254.52	221.33	210.95	202.95	203.16	
	HOR	281.33	278.64	277.78	276.83	274.00	
		APPARENT TEMP. CONTRASTS					
	VER	-28.41	-39.91	-16.62	-3.08	-0.37	
	HOR	-26.81	-50.19	-31.86	-12.45	-3.82	

MATERIAL= BEACH SAND (DRY) (D)

FREQUENCY= 13.4 AREA= 0.1"

POLARIZATION= VER TITLE= A-G REP. 629 R-4 FIGURE 1-26

TEMPERATURE= 307.5

NADIR ANG	TA	EMISSIVITY
0.00	274.00	0.862
30.00	269.00	0.842
45.00	267.00	0.834
60.00	267.00	0.834
70.00	260.00	0.805

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= BEACH SAND (DRY) (D)

FREQUENCY= 13.4 AREA= 0.10

POLARIZATION= HOR TITLE= A-G REP. 629 R-4 FIGURE 1-27

TEMPERATURE= 304.3

NADIR ANG	TA	EMISSIVITY
0.00	274.00	0.878
30.00	265.00	0.842
45.00	259.50	0.819
60.00	249.00	0.776
70.00	240.00	0.740

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
BEACH SAND (DRY) (D)	A-G REP. 829 R-4 FIGURE 1-26	307.5	13.4	0.10

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED) (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JULY SUMMER	VER	266.46	260.60	258.32	258.45	250.35	
		VER	266.29	267.40	269.61	274.26	272.93	
		HOR	268.39	257.95	251.36	239.20	229.44	
		HOR	264.37	262.75	259.52	262.62	261.71	
			APPARENT TEMP. CONTRASTS					
		VER	0.02	-0.61	-0.55	-0.27	-0.12	
		HOR	0.55	-0.43	-0.40	-0.40	-0.18	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.000
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	266.67	260.87	258.59	258.67	250.65	
		VER	266.35	267.44	269.58	274.07	272.64	
		HOR	268.56	258.23	251.71	239.72	230.15	
		HOR	264.46	262.84	259.64	262.63	261.65	
			APPARENT TEMP. CONTRASTS					
		VER	0.04	-0.59	-0.53	-0.26	-0.12	
		HOR	0.56	-0.41	-0.39	-0.39	-0.17	

MATERIAL= BEACH SAND (DRY) (D)

FREQUENCY= 37.0 AREA= 0.1'

POLARIZATION= VER TITLE= A-G REP. 29 R-4 FIGURE 4-26

TEMPERATURE= 307.5

NADIR ANG	TA	EMISSIVITY
0.00	276.00	0.870
30.00	276.00	0.870
45.00	276.00	0.870
60.00	276.00	0.870
70.00	270.00	0.845

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968

MATERIAL= BEACH SAND (DRY) (D)

FREQUENCY= 37.0 AREA= 0.1°

POLARIZATION= HOR TITLE= A-G REP. 629 R-4 FIGURE 1-27

TEMPERATURE= 304.3

NADIR ANG	TA	EMISSIVITY
0.00	277.00	0.884
30.00	272.00	0.864
45.00	264.50	0.831
60.00	261.00	0.816
70.00	256.00	0.795

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR-A
BEACH SAND (DRY)	(D)	T-G REP. 29 R-4 FIGURE 1-26	307.5	37.0	0.0

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED)	(D)	T-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	BEA •

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JULY SUMMER	VER	274.85	274.93	275.07	275.36	270.84	
		VER	282.46	281.82	280.35	282.74	280.03	
		HOR	275.54	271.05	263.93	261.61	259.01	
		HOR	282.91	280.34	279.52	278.60	275.12	
			APPARENT TEMP. CONTRASTS					
		VER	-0.51	-0.30	-0.13	-0.06	-0.02	
		HOR	-0.56	-0.41	-0.37	-0.14	-0.04	
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	-0.0-0
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	275.95	275.85	275.68	275.30	270.68	
		VER	281.51	280.74	279.14	280.50	277.24	
		HOR	276.39	272.26	265.81	263.48	260.92	
		HOR	281.89	279.43	278.42	277.00	273.26	
			APPARENT TEMP. CONTRASTS					
		VER	-0.37	-0.21	-0.08	-0.04	-0.02	
		HOR	-0.37	-0.31	-0.30	-0.11	-0.03	

MATERIAL= LIMESTONE (S)

FREQUENCY= 9.5 AREA= 1.00

POLARIZATION= VER TITLE= RAYTHEON RUN NO. 132

TEMPERATURE= 291.0

NADIR ANG	TB	EMISSIVITY
0.00	234.12	0.802
30.00	236.37	0.810
45.00	243.07	0.833
60.00	265.62	0.911
70.00	253.76	0.868

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= LIMESTONE (S)

FREQUENCY= 9.5 AREA= 1.0

POLARIZATION= HOR TITLE= RAYTHEON RUN NO. 133

TEMPERATURE= 289.5

NADIR ANG	TB	EMISSIVITY
0.00	276.56	0.955
30.00	252.93	0.873
45.00	238.17	0.820
60.00	217.41	0.745
70.00	195.53	0.665

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP-A
LIMESTONE (S)	RAYTHEON RUN NO. 132	291.0	9.5	1.-0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED) (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
9.5	US STANDARD	VER	234.37	236.79	243.50	265.62	254.15	
		VER	265.69	266.84	269.11	273.85	272.53	
		HOR	276.46	253.35	238.63	218.40	197.96	
		HOR	263.72	262.08	258.82	262.06	261.25	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-31.31	-26.85	-12.46	-1.42	-1.01	
		HOR	12.74	-7.81	-9.82	-7.51	-3.48	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.0-0
			BRIGHTNESS TEMPERATURES					
9.5	CLOUDY STAND	VER	234.89	237.36	244.10	265.96	255.00	
		VER	265.84	267.00	269.27	273.97	272.74	
		HOR	276.51	253.70	239.29	219.77	200.60	
		HOR	263.96	262.31	259.15	262.44	261.83	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-30.95	-26.49	-12.25	-1.38	-0.98	
		HOR	12.61	-7.69	-9.66	-7.34	-3.37	

MATERIAL= LIMESTONE (S)

FREQUENCY= 16.5 AREA= 1.0°

POLARIZATION= VER TITLE= RAYTHEON , RUN NO. 135

TEMPERATURE= 308.5

NADIR ANG	TB	EMISSIVITY
0.00	213.21	0.684
30.00	213.95	0.685
45.00	219.14	0.701
60.00	234.75	0.750
70.00	221.85	0.699

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= LIMESTONE (S)

FREQUENCY= 16.5 AREA= 1.00

POLARIZATION= HOR TITLE= RAYTHEON GUN NO. 136

TEMPERATURE= 310.0

NADIR ANG	TB	EMISSIVITY
0.00	252.20	0.809
30.00	235.21	0.752
45.00	215.65	0.685
60.00	208.83	0.658
70.00	187.31	0.576

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
LIMESTONE (S)	RAYTHEON RUN NO. 135	308.5	16.5	1.-0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED) (D)	FIG 1-113 (BACKGROUND)	287.3	13.4	REA .

NADIR ANGLES (DEGREES)		0	30	45	60	70	80
FREQ (GHz) WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
16.5 JULY SUMMER	VER	217.02	218.19	224.08	240.09	230.97	
	VER	265.8[illegible]	267.06	269.37	274.18	273.02	
	HOR	253.9[illegible]	238.23	220.61	216.54	201.20	
	HOR	263.92	262.32	259.13	262.47	261.86	
		CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
	VER	-48.8[illegible]	-43.67	-29.03	-5.86	-2.31	
	HOR	-9.9[illegible]	-21.53	-19.74	-7.90	-3.34	
BEAMSPOT AREA (SQ. NM)		0.727	1.119	2.056	5.815	18.167	-0.0.0
		BRIGHTNESS TEMPERATURES					
16.5 CLOUDY STAND	VER	217.7[illegible]	218.95	224.88	240.71	232.25	
	VER	265.84	267.00	269.27	273.97	272.74	
	HOR	254.0[illegible]	238.64	221.49	217.90	203.82	
	HOR	263.9[illegible]	262.31	259.15	262.44	261.83	
		CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
	VER	-48.14	-42.94	-21.59	-5.72	-2.23	
	HOR	-9.8[illegible]	-21.15	-19.32	-7.66	-3.19	

MATERIAL= BLACK PUMICE (D)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= REIGLER FIGURE 23

TEMPERATURE= 298.0

NADIR ANG	TB	EMISSIVITY
0.00	264.00	0.883
30.00	271.00	0.908
45.00	267.50	0.896
60.00	257.00	0.861
70.00	248.00	0.830

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= BLACK PUMICE (D)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= PETGLER FIGURE 23

TEMPERATURE= 298.0

NADIR ANG	TB	EMISSIVITY
0.00	266.00	0.890
30.00	260.00	0.869
45.00	260.00	0.869
60.00	259.00	0.867
70.00	259.00	0.866

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
BLACK PUMICE (D)	REIGLER FIGURE 23	298.0	10.0	REA •

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	REA •

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	JULY SUMMER	VER	264.36	271.49	268.11	258.33	249.93	
		VER	266.29	267.40	269.61	274.26	272.93	
		HOR	266.36	260.41	260.46	260.01	259.93	
		HOR	264.37	262.75	259.52	262.62	261.71	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-1.93	4.09	-1.51	-15.93	-23.00	
		HOR	1.99	-2.34	0.94	-2.61	-1.78	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.0-0
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	264.53	271.55	268.18	258.49	250.19	
		VER	266.35	267.44	269.58	274.07	272.64	
		HOR	266.50	260.61	260.64	260.15	259.98	
		HOR	264.46	262.84	259.64	262.63	261.65	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-1.82	4.12	-1.40	-15.58	-22.45	
		HOR	2.04	-2.23	1.00	-2.49	-1.67	

MATERIAL= BLACK PUMICE (D)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= PETGLER FIGURE 24

TEMPERATURE= 304.0

NADIR ANG	Tb	EMISSIVITY
0.00	279.00	0.910
30.00	282.00	0.923
45.00	285.50	0.940
60.00	291.00	0.954
70.00	292.00	0.955

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968

MATERIAL= BLACK PUMICE (D)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= PEIGLER FIGURE 24

TEMPERATURE= 304.0

NADIR ANG	TB	EMISSIVITY
0.00	282.00	0.920
30.00	284.00	0.930
45.00	282.50	0.925
60.00	280.00	0.915
70.00	277.00	0.903

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP-A
BLACK PUMICE (D)	ZEIGLER FIGURE 24	304.0	35.0	BEA .

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP-A
SANDY LOAM (WEED-COVERED) (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	JULY SUMMER	VER	281.3	284.25	287.96	290.56	289.97	
		VER	282.48	281.82	280.35	282.74	280.03	
		HOR	283.6	285.85	284.62	282.32	279.84	
		HOR	282.91	280.34	279.52	278.60	275.12	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-1.1	2.43	7.61	7.82	9.94	
		HOR	0.69	5.51	5.10	3.72	4.73	
BEAMSPOT AREA (SQ. NM)			1.48	2.284	4.196	11.867	37.075	-0.0 0
35.0	CLOUDY STAND	VER	281.4	283.88	286.73	288.03	286.12	
		VER	281.5	280.74	279.14	280.50	277.24	
		HOR	283.5	285.28	283.93	281.04	279.88	
		HOR	281.8	279.43	278.42	277.00	273.26	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-0.0	3.14	7.59	7.53	8.88	
		HOR	1.6	5.85	5.41	4.04	4.61	

MATERIAL= WHEAT (D)

FREQUENCY= 10.0 AREA= 0.25

POLARIZATION= VER TITLE= PEIGLER FIGURE 20

TEMPERATURE= 297.0

NADIR ANG	TB	EMISSIVITY
0.00	285.00	0.960
30.00	284.00	0.955
45.00	284.50	0.957
60.00	280.00	0.940
70.00	280.00	0.940

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= HEAT (D)

FREQUENCY= 10.0 AREA= 0.25

POLARIZATION= HOR TITLE= PEIGLER FIGURE 20

TEMPERATURE= 297.0

NADIR ANG	TB	EMISSIVITY
0.00	281.00	0.946
30.00	286.00	0.961
45.00	286.50	0.962
60.00	287.00	0.963
70.00	282.00	0.947

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
WHEAT (D)		REIGLER FIGURE 20	297.0	10.0	0.05
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR-A**
SANDY LOAM (WEED-COVERED) (D)		A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	JULY SUMMER	VER	285.35	283.91	284.45	279.61	279.56	
		VER	266.29	267.40	269.61	274.26	272.93	
		HOR	281.38	285.61	285.86	286.05	281.49	
		HOR	264.37	262.75	259.52	262.62	261.71	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	6.56	3.69	1.80	0.23	0.09	
		HOR	5.85	5.11	3.20	1.01	0.27	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.000

				BRIGHTNESS TEMPERATURES				
10.0	CLOUDY STAND	VER	285.25	283.80	284.28	279.41	279.20	
		VER	266.35	267.44	269.58	274.07	272.64	
		HOR	281.33	285.48	285.67	285.75	281.10	
		HOR	264.46	262.84	259.64	262.63	261.65	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	6.50	3.66	1.79	0.23	0.09	
		HOR	5.80	5.06	3.17	0.99	0.27	

MATERIAL= OATS (D)

FREQUENCY= 10.0 AREA= 0.15

POLARIZATION= VER TITLE= PEIGLER FIGURE 19

TEMPERATURE= 298.0

NADIR ANG	TB	EMISSIVITY
0.00	278.00	0.932
30.00	277.00	0.928
45.00	273.00	0.914
60.00	261.00	0.873
70.00	260.00	0.868

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= OATS (D)

FREQUENCY= 10.0 AREA= 0.15

POLARIZATION= HOR TITLE= REIGLER FIGURE 19

TEMPERATURE= 298.0

NADIR ANG	TB	EMISSIVITY
0.00	283.00	0.951
30.00	284.00	0.951
45.00	278.00	0.932
60.00	272.00	0.911
70.00	265.00	0.888

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
OATS (D)	ZEIGLER FIGURE 19	298.0	10.0	0.15

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SANDY LOAM (WEED-COVERED) (D)	ZEIGLER FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	JULY SUMMER	VER	278.32	277.18	273.21	261.70	260.48	
		VER	266.23	267.40	269.61	274.26	272.93	
		HOR	283.73	283.72	278.30	272.38	266.03	
		HOR	264.37	262.75	259.52	262.62	261.71	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	2.45	1.31	0.26	-0.32	-0.10	
		HOR	4.00	2.81	1.37	0.25	0.04	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.0.0
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	278.32	277.16	273.20	261.80	260.52	
		VER	266.36	267.44	269.58	274.07	272.64	
		HOR	283.66	283.61	278.23	272.31	265.96	
		HOR	264.46	262.84	259.64	262.63	261.65	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	2.47	1.30	0.26	-0.32	-0.10	
		HOR	3.96	2.78	1.36	0.25	0.04	

MATERIAL= ALFALFA (D)

FREQUENCY= 10.0 AREA= 0.15

POLARIZATION= VER TITLE= REIGLER FIGURE 18

TEMPERATURE= 297.0

NADIR ANG	TB	EMISSIVITY
0.00	279.00	0.938
30.00	277.00	0.930
45.00	275.00	0.924
60.00	272.00	0.913
70.00	272.00	0.913

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL: ALFALFA (D)

FREQUENCY= 10.0 AREA= 0,15

POLARIZATION= HOR TITLE= PETGLER FIGURE 1a

TEMPERATURE= 297.0

NADIR ANG	TB	EMISSIVITY
0.00	274.00	0.920
30.00	274.00	0.918
45.00	275.00	0.922
60.00	277.00	0.928
70.00	272.00	0.911

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
ALFALFA (D)	REIGLER FIGURE 18	297.0	10.0	0.15

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	JULY SUMMER	VER	279.11	276.83	275.13	272.05	272.09	
		VER	266.29	267.40	269.61	274.26	272.93	
		HOR	274.00	273.43	274.57	276.25	271.54	
		HOR	264.37	262.75	259.52	262.62	261.71	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	2.64	1.26	0.40	-0.06	-0.01	
		HOR	1.99	1.43	1.10	0.35	0.08	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	-0.0-0
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	279.08	276.81	275.10	271.98	271.89	
		VER	266.35	267.44	269.58	274.07	272.64	
		HOR	274.04	273.46	274.54	276.11	271.35	
		HOR	264.46	262.84	259.64	262.63	261.65	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	2.63	.26	0.40	-0.05	-0.01	
		HOR	1.98	1.42	1.09	0.35	0.08	

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 10.0 AREA= 1.0

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	123.02	0.420
45.00	142.32	0.487
60.00	178.07	0.613
70.00	217.63	0.755
80.00	268.49	0.947

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 10.0 AREA= 1.0

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	99.75	0.336
45.00	86.64	0.284
60.00	69.32	0.210
70.00	57.48	0.149
80.00	53.70	0.079

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
FRESH WATER (RIVERS) (S)	THEORETICAL	293.0	10.0	1.00

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	4-6 FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	110.26	122.97	142.22	178.03	217.58	268.59
		VER	265.69	266.84	269.11	273.85	272.53	253.27
		HOR	110.26	99.83	86.64	69.19	57.40	53.74
		HOR	263.72	262.08	258.82	262.06	261.25	225.96
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-155.42	-128.56	-61.72	-16.48	-3.02	0.01
		HOR	-153.46	-144.99	-83.75	-33.17	-11.22	-1.24
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.841
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	112.15	124.98	144.37	180.25	219.52	269.09
		VER	265.84	267.00	269.27	273.97	272.74	254.03
		HOR	112.15	102.15	89.68	73.85	64.55	67.65
		HOR	263.91	262.31	259.15	262.44	261.83	229.11
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-153.69	-126.91	-60.75	-16.12	-2.93	0.00
		HOR	-151.75	-143.13	-82.44	-32.43	-10.86	-1.06

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 35.0 AREA= 1.00

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	165.81	0.527
45.00	186.68	0.600
60.00	220.67	0.726
70.00	250.15	0.846
80.00	269.20	0.931

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 35.0 AREA= 1.00

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	Tb	EMISSIVITY
0.00	151.22	0.477
30.00	141.86	0.430
45.00	131.25	0.368
60.00	120.96	0.277
70.00	121.79	0.199
80.00	152.81	0.107

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR-A
FRESH WATER (RIVERS) (S)		THEORETICAL	283.0	35.0	1.00
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SANDY LOAM (WEED-COVERED) (D)		A-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	151.14	165.76	186.58	220.65	250.24	269.06
		VER	281.18	280.36	278.59	281.22	277.94	268.04
		HOR	151.14	141.90	151.28	120.97	121.80	152.98
		HOR	281.69	278.62	277.62	276.47	272.48	266.34
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-87.66	-50.18	-21.93	-5.10	-0.75	0.00
		HOR	-88.01	-59.86	-34.88	-13.10	-4.06	-0.40
BEAMSPOT AREA (SQ. NM)			1.485	2.284	4.196	11.867	37.075	283.249
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	167.66	182.44	202.84	234.27	258.74	271.53
		VER	280.88	280.13	278.57	280.42	277.64	272. 1
		HOR	167.68	162.16	157.52	159.01	173.48	219.15
		HOR	281.33	278.64	277.78	276.83	274.00	270.83
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-76.31	-42.77	-18.05	-3.89	-0.51	-0.10
		HOR	-76.61	-51.00	-28.66	-9.93	-2.71	-0.18

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 10.0 AREA= 1.0

POLARIZATION= VER TITLE= THEORETIC L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	125.33	0.418
45.00	145.04	0.485
60.00	181.66	0.611
70.00	222.37	0.754
80.00	275.47	0.950

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= 1-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 10.0 AREA= 1.00

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	101.55	0.334
45.00	88.16	0.282
60.00	70.42	0.209
70.00	58.25	0.148
80.00	54.09	0.078

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
FRESH WATER (RIVERS) (S)	THEORETICAL	290.0	10.0	1.0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED) (D)	1-6 FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEAM

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	112.30	125.30	145.01	181.66	222.41	275.64
		VER	265.69	266.84	269.11	273.85	272.53	253.97
		HOR	112.30	101.59	88.03	70.35	58.14	54.50
		HOR	263.72	262.08	259.82	262.06	261.25	225.96
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-153.39	-126.48	-60.37	-15.85	-2.76	0.06
		HOR	-151.42	-143.42	-83.08	-32.97	-11.18	-1.04
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	139.811
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	114.16	127.31	147.15	183.85	224.27	275.79
		VER	265.84	267.00	269.27	273.97	272.74	254.03
		HOR	114.16	103.89	91.07	75.00	65.28	67.91
		HOR	263.98	262.31	259.15	262.44	261.83	229.11
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-151.66	-124.84	-58.41	-15.50	-2.67	0.15
		HOR	-149.72	-141.56	-81.76	-32.24	-10.82	-1.16

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 35.0 AREA= 1.00

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.07	0.457
30.00	163.77	0.506
45.00	185.02	0.578
60.00	220.29	0.705
70.00	251.94	0.830
80.00	274.70	0.938

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 35.0 AREA= 1.0

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	139.74	0.410
45.00	129.31	0.350
60.00	119.46	0.263
70.00	120.78	0.188
80.00	152.45	0.101

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL — SOURCE — SURF TEMP. — FREQ — AR A
FRESH WATER (RIVERS) (B) — THEORETICAL — 290.0 — 35.0 — 1.00

BACKGROUND MATERIAL — SOURCE — SURF TEMP. — FREQ — AR A
SANDY LOAM (WEED-COVERED) (D) — A-G FIGURE 1-113 (BACKGROUND) — 287.3 — 37.0 — BEAM

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	149.14	163.90	185.04	220.35	251.91	274.25
		VER	281.18	280.36	278.59	281.22	277.94	268.94
		HOR	149.14	139.66	120.23	119.49	120.71	152.53
		HOR	281.69	278.62	277.62	276.47	272.48	266.34
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-89.01	-51.03	-29.30	-5.13	-0.70	0.02
		HOR	-89.36	-60.85	-35.37	-13.23	-4.09	-0.40
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.29
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	166.13	181.09	201.89	234.53	260.57	275.03
		VER	280.88	280.13	278.57	280.42	277.64	272.01
		HOR	166.13	160.44	156.03	158.07	172.93	219.10
		HOR	281.33	278.64	277.78	276.83	274.00	270.83
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-77.36	-43.37	-18.28	-3.87	-0.46	0.01
		HOR	-77.66	-51.76	-29.02	-10.01	-2.73	-0.18

72.

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 10.0 AREA= 0.05

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	123.02	0.420
45.00	142.32	0.487
60.00	178.07	0.613
70.00	217.63	0.755
80.00	268.49	0.947

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 10.0 AREA= 0.05

POLARIZATION= HOR TITLE= THEORETIC, L

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	99.75	0.336
45.00	86.64	0.284
60.00	69.32	0.210
70.00	57.48	0.149
80.00	53.70	0.079

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
FRESH WATER (CANALS)(S)	THEORETICAL	283.0	10.0	0.5

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	110.26	122.97	142.22	178.03	217.58	268.59
		VER	265.69	266.84	269.11	273.85	272.53	253.97
		HOR	110.26	99.83	86.64	69.19	57.40	53.74
		HOR	263.72	262.08	259.82	262.06	261.25	225.06
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-10.69	-6.43	-3.09	-0.82	-0.15	0. 1
		HOR	-10.56	-7.25	-4.19	-1.66	-0.56	-0.16
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.811
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	112.15	124.98	144.37	180.25	219.52	269.19
		VER	265.84	267.00	269.27	273.97	272.74	254.03
		HOR	112.15	102.15	89.68	73.85	64.55	67.65
		HOR	263.90	262.31	259.15	262.44	261.83	229.11
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-10.57	-6.35	-3.04	-0.81	-0.15	0. 1
		HOR	-10.41	-7.16	-4.12	-1.62	-0.54	-0.16

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 35.0 AREA= 0.05

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	165.81	0.527
45.00	186.68	0.600
60.00	220.67	0.726
70.00	250.15	0.846
80.00	269.20	0.931

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 35.0 AREA= 0.05

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	141.86	0.430
45.00	131.25	0.368
60.00	120.96	0.277
70.00	121.79	0.199
80.00	152.81	0.107

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
FRESH WATER (CANALS) (S)		THEORETICAL	283.0	35.0	0.05
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SANDY LOAM (WEED-COVERED) (D)		E-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	151.14	165.76	186.58	220.65	250.24	269.06
		VER	281.18	280.36	279.59	281.22	277.94	268.04
		HOR	151.14	141.90	131.28	120.97	121.80	152.68
		HOR	281.69	278.62	277.62	276.47	272.48	266.34
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-4.38	-2.51	-1.10	-0.26	-0.04	0.00
		HOR	-4.40	-2.99	-1.74	-0.66	-0.20	-0.02
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.209
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	167.68	182.44	202.84	234.27	258.74	271.53
		VER	280.88	280.13	279.57	280.42	277.64	272.01
		HOR	167.68	162.16	157.52	159.01	173.48	219.05
		HOR	281.33	278.64	277.78	276.83	274.00	270.03
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-3.82	-2.14	-0.90	-0.19	-0.03	-0.00
		HOR	-3.83	-2.55	-1.43	-0.50	-0.14	-0.01

78.

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 10.0 AREA= 0.0E

POLARIZATION= VER TITLE= THEORETIC L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	125.33	0.418
45.00	145.04	0.485
60.00	181.66	0.611
70.00	222.37	0.754
80.00	275.47	0.950

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 10.0 AREA= 0.05

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	101.55	0.334
45.00	88.16	0.282
60.00	70.42	0.209
70.00	58.25	0.148
80.00	54.09	0.078

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
FRESH WATER (CANALS) (S)			THEORETICAL		290.0	10.0	0.5
BACKGROUND MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
SANDY LOAM (WEED-COVERED) (D)			SEE FIGURE	1-113 (BACKGROUND)	287.3	13.4	BEA

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	112.36	125.30	145.01	181.66	222.41	275.-4
		VER	265.69	266.84	269.11	273.85	272.53	253.-7
		HOR	112.36	101.59	88.03	70.35	58.14	54.-0
		HOR	263.72	262.08	259.82	262.06	261.25	225.-6
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-10.52	-6.32	-3.02	-0.79	-0.14	0.-1
		HOR	-10.42	-7.17	-4.15	-1.65	-0.56	-0. 6
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.811
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	114.18	127.31	147.15	183.85	224.27	275.-9
		VER	265.84	267.00	269.27	273.97	272.74	254.-3
		HOR	114.18	103.89	91.07	75.00	65.28	67.-1
		HOR	263.91	262.31	259.15	262.44	261.83	229.-1
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-10.43	-6.24	-2.97	-0.77	-0.13	0.-1
		HOR	-10.36	-7.08	-4.09	-1.61	-0.54	-0. 6

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 35.0 AREA= 0.05

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	163.77	0.506
45.00	185.02	0.578
60.00	220.29	0.705
70.00	251.94	0.830
80.00	274.70	0.938

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 35.0 AREA= 0.05

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	139.74	0.410
45.00	129.31	0.350
60.00	119.46	0.263
70.00	120.78	0.188
80.00	152.45	0.101

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
FRESH WATER (CANALS) (S)	THEORETICAL	290.0	35.0	0.5

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	149.14	163.90	185.04	220.35	251.91	274.-5
		VER	281.18	280.36	27a.59	281.22	277.94	268.94
		HOR	149.14	139.66	12a.23	119.49	120.71	152.53
		HOR	281.69	278.62	277.62	276.47	272.48	266.-4
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-4.45	-2.55	-1.11	-0.26	-0.04	0.00
		HOR	-4.47	-3.04	-1.77	-0.66	-0.20	-0.02
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.209

84.

			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	166.13	181.09	201.89	234.53	260.57	275.03
		VER	280.88	280.13	27a.57	280.42	277.64	272.-1
		HOR	166.13	160.44	156.03	158.07	172.93	219.10
		HOR	281.33	278.64	277.78	276.83	274.00	270.03
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-3.87	-2.17	-0.91	-0.19	-0.02	0.00
		HOR	-3.88	-2.59	-1.45	-0.50	-0.14	-0.01

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETIC L

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	123.02	0.420
45.00	142.32	0.487
60.00	178.07	0.613
70.00	217.63	0.755
80.00	268.49	0.947

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	99.75	0.336
45.00	86.64	0.284
60.00	69.32	0.210
70.00	57.48	0.149
80.00	53.70	0.079

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
FRESH WATER (LAKES) (S)	THEORETICAL	283.0	10.0	BEA .

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SANDY LOAM (WEED-COVERED) (D)	FIG. 1-113 (BACKGROUND)	287.3	13.4	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	110.26	122.97	142.22	178.03	217.58	268.-9
		VER	265.69	266.84	269.11	273.85	272.53	253.-7
		HOR	110.25	99.83	86.64	69.19	57.40	53.-4
		HOR	263.72	262.08	258.82	262.06	261.25	225.-6
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-155.42	-143.87	-126.89	-95.92	-54.95	15.-2
		HOR	-153.45	-162.25	-179.13	-192.87	-203.85	-172.-2
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	139.81
10.0	CLOUDY STAND	VER	112.15	124.98	144.37	180.25	219.52	269. 9
		VER	265.85	267.00	269.27	273.97	272.74	254.-3
		HOR	112.15	102.15	89.68	73.85	64.55	67.-5
		HOR	263.91	262.31	259.15	262.44	261.83	229.-1
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-153.69	-142.02	-124.90	-93.72	-53.22	14.-6
		HOR	-151.75	-160.16	-166.47	-198.59	-197.27	-161. 6

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	165.81	0.527
45.00	186.68	0.600
60.00	220.67	0.726
70.00	250.15	0.846
80.00	269.20	0.931

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= C-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY = 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	141.86	0.430
45.00	131.25	0.368
60.00	120.96	0.277
70.00	121.79	0.199
80.00	152.81	0.107

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= G-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE		SURF TEMP.	FREQ	AR A
FRESH WATER (LAKES) (S)			THEORETICAL		283.0	35.0	BEA •
BACKGROUND MATERIAL			SOURCE		SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)			A-G FIGURE 1-113 (BACKGROUND)		287.3	37.0	BEA •
NADIR ANGLES (DEGREES)		0	30	45	60	70	80
FREQ (GHZ) WEATHER MOD.	POLAR.		BRIGHTNESS TEMPERATURES				
35.0 US STANDARD	VER	151.1.	165.76	186.58	220.65	250.24	269.·6
	VER	281.18	280.36	278.59	281.22	277.94	268.84
	HOR	151.14	141.90	131.28	120.97	121.80	152.·8
	HOR	281.69	278.62	277.62	276.47	272.48	266.·4
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT				
	VER	-130.03	-114.60	-92.01	-60.57	-27.69	0.·2
	HOR	-130.54	-136.71	-146.34	-155.51	-150.68	-113.·7
BEAMSPOT AREA (SQ. NM)		1.48	2.284	4.196	11.867	37.075	283.2·9
			BRIGHTNESS TEMPERATURES				
35.0 CLOUDY STAND	VER	167.68	182.44	209.84	234.27	258.74	271.·3
	VER	280.88	280.13	278.57	280.42	277.64	272. 1
	HOR	167.68	162.16	157.52	159.01	173.48	219.·5
	HOR	281.33	278.64	277.78	276.83	274.00	270.·3
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT				
	VER	-113.2·	-97.68	-75.73	-46.14	-18.89	-0. 9
	HOR	-113.64	-116.48	-120.26	-117.82	-100.52	-51. 8

90.

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETIC, L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	125.33	0.418
45.00	145.04	0.485
60.00	181.66	0.611
70.00	222.37	0.754
80.00	275.47	0.950

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= 1-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	101.55	0.334
45.00	88.16	0.282
60.00	70.42	0.209
70.00	58.25	0.148
80.00	54.09	0.078

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
FRESH WATER (LAKES) (S)	THEORETICAL	290.0	10.0	REA .

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	FIG. 1-113 (BACKGROUND)	267.3	13.4	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	112.3	125.30	145.01	181.66	222.41	275.54
		VER	265.6	266.84	269.11	273.85	272.53	253.17
		HOR	112.3	101.59	88.03	70.35	58.14	54.30
		HOR	263.7	262.08	258.82	262.06	261.25	225.16
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-153.3	-141.53	-125.10	-92.19	-50.12	22.36
		HOR	-151.4	-160.50	-170.79	-191.71	-203.11	-171.35
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.841
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	114.1	127.31	147.15	183.85	224.27	275.79
		VER	265.8	267.00	269.27	273.97	272.74	254.03
		HOR	114.1	103.89	91.07	75.00	65.28	67.01
		HOR	263.9	262.31	259.15	262.44	261.83	229.11
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-151.6	-139.70	-123.13	-90.12	-48.47	29.36
		HOR	-149.7	-158.42	-168.08	-187.44	-196.55	-161.10

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	163.77	0.506
45.00	185.02	0.578
60.00	220.29	0.705
70.00	251.94	0.830
80.00	274.70	0.938

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	139.74	0.410
45.00	129.31	0.350
60.00	119.46	0.263
70.00	120.78	0.188
80.00	152.45	0.101

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= C-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
FRESH WATER (LAKES) (S)		THEORETICAL	290.0	35.0	REA •
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SANDY LOAM (WEED-COVERED) (D)		A-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	REA •

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	149.14	163.90	185.04	220.35	251.91	274.-5
		VER	281.18	280.36	278.59	281.22	277.94	268.94
		HOR	149.14	139.66	129.23	119.49	120.71	152.53
		HOR	281.69	278.62	277.62	276.47	272.48	266.34
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-132.04	-116.47	-9?.55	-60.87	-26.02	5.81
		HOR	-132.55	-138.96	-148.39	-156.99	-151.77	-113.82
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.289

			BRIGHTNESS TEMPERATURES					
96. 35.0	CLOUDY STAND	VER	166.13	181.09	201.89	234.53	260.57	275.-3
		VER	280.88	280.13	278.57	280.42	277.64	272. 1
		HOR	166.13	160.44	156.03	158.07	172.93	219.10
		HOR	281.33	278.64	277.78	276.83	274.00	270.93
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-114.76	-99.04	-76.68	-45.89	-17.07	3.-2
		HOR	-115.20	-118.20	-121.74	-118.75	-101.08	-51.73

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= -G REP. SGD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	235.60	0.899
30.00	240.80	0.921
45.00	242.40	0.926
60.00	237.90	0.907
70.00	223.30	0.844

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= /-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.877
30.00	243.00	0.852
45.00	239.00	0.832
60.00	241.00	0.843
70.00	236.00	0.818

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP. SGD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	236.30	0.898
30.00	234.30	0.893
45.00	228.80	0.869
60.00	216.40	0.815
70.00	197.80	0.733

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	244.00	0.845
30.00	241.00	0.830
45.00	234.00	0.796
60.00	221.00	0.733
70.00	213.00	0.694

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SNOW (DRY) (S)	A-G REP. GD 829-6 FIG. 1-148	261.0	13.4	BEA .

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
STONEY LOAM (SNOW) VER (D)	A-G FIGURE 1-76 (BACKGROUND)	273.0	13.4	BEA .
STONEY LOAM (BARE) HOR (D)	A-G FIGURE 1-76 (BACKGROUND)	275.7	13.4	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JANUARY WINT	VER	235.16	240.83	242.19	237.66	222.68	
		VER (SNOW)	239.93	233.38	228.26	231.58	225.82	
		HOR	234.90	233.71	227.79	214.71	195.56	
		HOR (BARE)	233.65	229.73	220.85	204.79	195.90	
			APPARENT TEMP. CONTRASTS					
		VER	-4.74	7.45	13.94	6.08	-3.14	
		HOR	1.24	3.98	6.94	9.92	-0.34	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	283.249
13.4	CLOUDY STAND	VER	235.62	241.34	242.79	238.62	224.65	
		VER	240.41	234.08	229.22	232.84	227.86	
		HOR	235.42	234.33	228.66	216.28	198.58	
		HOR	234.23	230.51	221.96	206.77	199.11	
			APPARENT TEMP. CONTRASTS					
		VER	-4.81	7.26	13.58	5.78	-3.21	
		HOR	1.14	3.82	6.69	9.51	-0.53	

MATERIAL= SNOW (DRY) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G REP. SGD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	137.00	0.436
30.00	124.70	0.380
45.00	118.90	0.354
60.00	129.50	0.402
70.00	143.40	0.465

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	253.00	0.888
30.00	250.00	0.869
45.00	248.00	0.859
60.00	247.00	0.854
70.00	242.00	0.825

MATERIAL= SNOW (DRY) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= -6 REP. GD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	136.90	0.436
30.00	124.40	0.379
45.00	114.70	0.335
60.00	117.90	0.350
70.00	126.60	0.389

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= -6 FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.864
30.00	247.00	0.859
45.00	245.00	0.850
60.00	239.00	0.820
70.00	232.00	0.786

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SNOW (DRY)	(D)	A-G REP. NO 829-6 FIG. 1-148	261.0	37.0	BEA.

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
STONEY LOAM (SNOW)	VER (D)	A-G FIGURE 1-76 (BACKGROUND)	273.0	37.0	BEA.
STONEY LOAM (BARE)	HOR (D)	A-G FIGURE 1-72 (BAKGROUND)	275.7	37.0	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	134.85	123.30	119.23	133.21	151.34	
		VER (SNOW)	246.08	241.65	239.54	238.91	233.47	
		HOR	134.83	123.08	115.07	122.13	135.82	
		HOR (BARE)	242.58	241.52	239.61	233.30	226.95	
			APPARENT TEMP. CONTRASTS					
		VER	-111.15	-118.35	-120.31	-105.69	-82.13	
		HOR	-107.75	-118.44	-124.55	-111.18	-91.13	
BEAMSPOT AREA (SQ. NM)			1.485	2.284	4.196	11.867	37.075	283.2-9
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	167.97	160.91	160.54	175.85	194.91	
		VER	252.9	249.96	248.99	249.84	248.20	
		HOR	167.97	160.74	157.53	168.24	185.08	
		HOR	250.67	250.20	249.38	246.25	244.27	
			APPARENT TEMP. CONTRASTS					
		VER	-84.9	-89.05	-88.45	-73.99	-53.29	
		HOR	-82.7	-89.46	-91.84	-78.01	-59.20	

MATERIAL= SNOW (WET) (D)

FREQUENCY= 13.4 AREA= BEAM SPOT

POLARIZATION= VER TITLE= A-6 REP. NO. 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	263.10	0.955
30.00	262.80	0.954
45.00	261.80	0.949
60.00	259.50	0.940
70.00	253.60	0.875

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 13.4 AREA= BEAM SPOT

POLARIZATION= VER TITLE= A-6 FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.877
30.00	243.00	0.852
45.00	239.00	0.832
60.00	241.00	0.843
70.00	236.00	0.818

MATERIAL= [illegible] (WET) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP. NO. 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	261.20	0.947
30.00	259.80	0.941
45.00	253.80	0.916
60.00	246.70	0.887
70.00	238.80	0.855

MATERIAL= STONEY LOAM (BARC) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	244.00	0.945
30.00	241.00	0.930
45.00	234.00	0.796
60.00	221.00	0.733
70.00	213.00	0.694

APPARENT TEMPERATURE AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SNOW (WET) (D)		A-G REP. GD 829-6 FIG. 1-155	274.1	13.4	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
STONEY LOAM (SNOW)	VER (D)	A-G FIGURE 1-76 (BACKGROUND)	273.0	13.4	BEA .
STONEY LOAM (BARE)	HOR (D)	A-G FIGURE 1-72 (BACKGROUND)	275.7	13.4	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JANUARY WINT	VER	262.0	261.72	260.39	258.00	241.17	
		VER (SNOW)	240.4	233.91	228.73	231.76	225.57	
		HOR	259.8	258.29	251.71	244.16	236.00	
		HOR (BARE)	234.2	230.34	221.42	205.10	195.48	
			APPARENT TEMP. CONTRASTS					
		VER	21.5	27.82	31.65	26.23	15.60	
		HOR	25.6	27.95	30.29	39.06	40.52	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	283.2 9
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	262.37	262.12	260.86	258.64	242.57	
		VER	241.31	234.98	230.03	233.18	227.52	
		HOR	260.3	258.78	252.42	245.22	237.59	
		HOR	235.33	231.54	222.95	207.34	198.53	
			APPARENT TEMP. CONTRASTS					
		VER	21.0	27.14	30.84	25.46	15.06	
		HOR	24.97	27.24	29.47	37.87	39.06	

MATERIAL= SNOW (WET) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G REP. SGD 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	262.90	0.953
30.00	262.10	0.949
45.00	261.10	0.944
60.00	260.80	0.943
70.00	258.00	0.931

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	253.00	0.888
30.00	250.00	0.869
45.00	248.00	0.859
60.00	247.00	0.854
70.00	242.00	0.825

MATERIAL= SNOW (WET) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= 1-6 REP. NGD 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	262.70	0.953
30.00	259.40	0.937
45.00	249.60	0.895
60.00	247.00	0.884
70.00	238.20	0.847

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= 1-6 FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.864
30.00	247.00	0.859
45.00	245.00	0.850
60.00	239.00	0.820
70.00	232.00	0.786

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SNOW (WET) (D)		A-G REP. GD 829-6 FIG. 1-155	274.1	37.0	BEA •
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
STONEY LOAM (SNOW)	VER (D)	A-G FIGUR 1-76 (BACKGROUND)	273.0	37.0	BEA •
STONEY LOAM (BARE)	HOR (D)	A-G FIGURE 1-72 (BACKGROUND)	275.7	37.0	BEAM

FREQ (GH_z)	WEATHER MOD.	POLAR.	NADIR ANGLES (DEGREES) 0	30	45	60	70	80
			APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	262.26	261.29	260.09	259.80	257.11	
		VER (SNOW)	246.0[illegible]	241.65	239.54	238.91	233.47	
		HOR	262.26	258.48	248.75	246.52	239.00	
		HOR (BARE)	242.5[illegible]	241.52	239.61	233.30	226.95	
			APPARENT TEMP. CONTRASTS					
		VER	16.27	19.64	20.55	20.89	23.64	
		HOR	19.6[illegible]	16.97	9.14	13.21	12.05	
BEAMSPOT AREA (SQ. NM)			1.48[illegible]	2.284	4.196	11.867	37.075	283.2[illegible]9
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	265.37	264.78	264.15	264.48	263.47	
		VER	252.9[illegible]	249.96	248.99	249.84	248.20	
		HOR	265.37	262.68	256.86	255.25	251.86	
		HOR	250.67	250.20	249.38	246.25	244.27	
			APPARENT TEMP. CONTRASTS					
		VER	12.47	14.82	15.16	14.64	15.27	
		HOR	14.7[illegible]	12.48	6.48	9.00	7.58	

MATERIAL= ICE (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G REP S_D 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	258.10	0.964
30.00	258.10	0.963
45.00	256.60	0.957
60.00	242.90	0.901
70.00	255.30	0.950

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.877
30.00	243.00	0.852
45.00	239.00	0.832
60.00	241.00	0.843
70.00	236.00	0.918

MATERIAL= ICE (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP SAD 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	258.10	0.963
30.00	249.90	0.929
45.00	234.70	0.867
60.00	203.60	0.736
70.00	205.00	0.737

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	244.00	0.845
30.00	241.00	0.830
45.00	234.00	0.796
60.00	221.00	0.733
70.00	213.00	0.694

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP-A
ICE (S)		A-G REP 829-6 FIG 1-158	267.3	13.4	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
STONEY LOAM (SNOW) VER (D)		A-G FIGURE 1-76 (BACKGROUND)	273.0	13.4	BEA .
STONEY LOAM (BARE) HOR (D)		A-G FIGURE 1-72 (BACKGROUND)	275.7	13.4	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80	
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES						
13.4	JANUARY WINT	VER	257.75	257.50	255.96	241.71	254.37		
		VER(SNOW)	239.95	233.38	229.26	231.58	225.82		
		HOR	257.42	248.64	239.66	199.53	201.03		
		HOR (BARE)	233.66	229.73	220.85	204.79	195.90		
			APPARENT TEMP. CONTRASTS						
		VER	17.8	24.12	27.71	10.13	28.54		
		HOR	23.83	18.91	14.81	-5.25	5.13		
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	283.2	9
			APPARENT TEMPERATURES						
13.4	CLOUDY STAND	VER	258.08	257.80	256.36	242.64	255.22		
		VER	240.48	234.08	229.22	232.84	227.86		
		HOR	257.75	249.08	239.49	201.58	203.93		
		HOR	234.29	230.51	221.96	206.77	199.11		
			APPARENT TEMP. CONTRASTS						
		VER	17.53	23.71	27.14	9.80	27.36		
		HOR	23.46	18.56	14.52	-5.19	4.82		

MATERIAL= ICE (S)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= C-G REP 5UD 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	248.40	0.928
30.00	249.80	0.933
45.00	253.80	0.948
60.00	247.00	0.919
70.00	251.20	0.933

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= C-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	253.00	0.888
30.00	250.00	0.869
45.00	248.00	0.859
60.00	247.00	0.854
70.00	242.00	0.825

MATERIAL= ICE (S)

FREQUENC = 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= [illegible] REP 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	248.50	0.928
30.00	241.20	0.900
45.00	236.50	0.881
60.00	212.10	0.780
70.00	213.10	0.774

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= REP 829-6 FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.864
30.00	247.00	0.859
45.00	245.00	0.850
60.00	239.00	0.820
70.00	232.00	0.786

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
ICE (S)		A-G REP S.D 829-6 FIG 1-158	257.3	37.0	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP-A**
STONEY LOAM (SNOW) VER (D)		A-G FIGURE 1-76 (BACKGROUND)	273.0	37.0	BEA .
STONEY LOAM (BARE) HOR (D)		A-G FIGURE 1-72 (BACKGROUND)	275.7	37.0	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_z)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	249.32	250.70	254.49	248.44	252.39	
		VER (SNOW)	244.4	240.02	239.20	238.43	234.45	
		HOR	249.32	242.78	239.78	217.56	219.94	
		HOR (BARE	240.65	239.76	239.19	232.72	228.15	
			APPARENT TEMP. CONTRASTS					
		VER	4.96	10.68	14.29	10.01	17.94	
		HOR	8.67	3.01	0.59	-15.16	-8.20	
BEAMSPOT AREA (SQ. NM)			1.48	2.284	4.196	11.867	37.075	283.29
114.								
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	253.13	254.78	259.50	255.58	260.29	
		VER	249.4	246.50	246.33	249.19	250.39	
		HOR	253.13	248.32	246.29	233.95	241.03	
		HOR	246.42	246.48	246.54	245.45	246.95	
			APPARENT TEMP. CONTRASTS					
		VER	3.73	8.28	12.18	6.39	9.90	
		HOR	6.71	1.84	-2.26	-11.50	-5.92	

MATERIAL= SNOW (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= C-C REP. 29 R-4 FIGURE 1-84

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	267.00	0.972
30.00	265.00	0.962
45.00	258.00	0.926
60.00	248.00	0.876
70.00	242.00	0.847

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= C-C FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.877
30.00	243.00	0.852
45.00	239.00	0.832
60.00	241.00	0.843
70.00	236.00	0.818

MATERIAL= SNOW (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP. 29 R-4 FIGURE 1-85

TEMPERATURE= 272.9

NADIR ANG	TA	EMISSIVITY
0.00	260.00	0.927
30.00	260.00	0.927
45.00	261.50	0.938
60.00	259.00	0.921
70.00	249.00	0.865

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	244.00	0.845
30.00	241.00	0.830
45.00	234.00	0.796
60.00	221.00	0.733
70.00	213.00	0.694

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SNOW (D)		A-G REP. 29 R-4 FIGURE 1-84	273.0	13.4	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
STONEY LOAM (SNOWVER (D)		A-G FIGURE 1-76 (BACKGROUND)	273.0	13.4	BEA .
STONEY LOAM (BARE) HOR (D)		A-G FIGURE 1-72 (BACKGROUND)	275.7	13.4	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JANUARY WINT	VER	265.43	262.78	253.34	240.35	233.03	
		VER (SNOW)	240.44	233.91	228.73	231.76	225.57	
		HOR	253.5	253.50	256.39	251.96	237.58	
		HOR (BARE)	234.2	230.34	221.42	205.10	195.48	
			APPARENT TEMP. CONTRASTS					
		VER	24.99	28.88	24.61	8.58	7.46	
		HOR	19.22	23.16	34.96	46.86	42.10	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	283.259
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	265.73	263.14	253.98	241.50	234.71	
		VER	241.31	234.98	230.03	233.18	227.52	
		HOR	254.05	254.09	256.95	252.76	239.10	
		HOR	235.33	231.54	222.95	207.34	198.53	
			APPARENT TEMP. CONTRASTS					
		VER	24.39	28.16	23.96	8.32	7.20	
		HOR	18.72	22.55	34.00	45.42	40.57	

MATERIAL= SNOW (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G REP. 29 R-4 FIGURE 1-84

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	260.00	0.927
30.00	259.00	0.921
45.00	257.00	0.910
60.00	256.00	0.904
70.00	251.00	0.876

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	253.00	0.888
30.00	250.00	0.869
45.00	248.00	0.859
60.00	247.00	0.854
70.00	242.00	0.825

MATERIAL= SNOW (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= [illegible]-G REP. 29 P-4 FIGURE [illegible]-85

TEMPERATURE= 272.9

NADIR ANG	TA	EMISSIVITY
0.00	262.00	0.938
30.00	258.00	0.916
45.00	254.00	0.893
60.00	241.00	0.819
70.00	226.00	0.734

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= [illegible]-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.864
30.00	247.00	0.859
45.00	245.00	0.850
60.00	239.00	0.820
70.00	232.00	0.786

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SNOW (D)	A-G REP. 29 R-4 FIGURE 1-84	273.0	37.0	BEA .

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
STONEY LOAM (SNOW) VER (D)	A-G FIGURE 1-76 (BACKGROUND)	273.0	37.0	BEA .
STONEY LOAM (BARE) HOR (D)	A-G FIGURE 1-72 (BACKGROUND)	275.7	37.0	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	255.1[illegible]	253.78	251.29	250.11	244.41	
		VER(SNOW)	246.0[illegible]	241.65	239.54	238.91	233.47	
		HOR	257.65	252.52	247.29	230.99	213.87	
		HOR (BARE)	242.5[illegible]	241.52	239.61	233.30	226.95	
			APPARENT TEMP. CONTRASTS					
		VER	9.16	12.13	11.75	11.21	10.95	
		HOR	15.07	11.01	7.67	-2.31	-13.07	
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.29
120.	37.0	CLOUDY STAND	VER	259.8[illegible]	259.01	257.57	257.62	255.21	
			VER	252.9[illegible]	249.96	248.99	249.84	248.20	
			HOR	261.7[illegible]	258.06	254.63	244.33	235.64	
			HOR	250.67	250.20	248.38	246.25	244.27	
			APPARENT TEMP. CONTRASTS					
		VER	6.9[illegible]	9.05	8.59	7.78	7.01	
		HOR	11.0[illegible]	7.86	5.26	-1.91	-8.64	

MATERIAL= BEACH SAND (WET)(S)

FREQUENCY= 13.4 AREA= 0.1?

POLARIZATION= VER TITLE= -6 REP. 29 R-4 FIGURE 4-46

TEMPERATURE= 285.6

NADIR ANG	TA	EMISSIVITY
0.00	262.00	0.906
30.00	256.00	0.880
45.00	253.50	0.864
60.00	252.00	0.848
70.00	247.00	0.803
80.00	225.00	0.567

MATERIAL= SEA WATER (S)

FREQUENCY= 16.5 AREA= BEAMSPOT

POLARIZATION= VER TITLE= RAYTHEON RUN 8

TEMPERATURE= 288.0

NADIR ANG	TB	EMISSIVITY
0.00	142.87	0.483
30.00	138.90	0.467
45.00	150.79	0.507
60.00	188.48	0.637
70.00	211.71	0.715
80.00	228.62	0.761

MATERIAL= BEACH SAND (WET) (S)

FREQUENCY= 13.4 AREA= 0.1

POLARIZATION= HOR TITLE= A-G REP. 29 R-4 FIGURE 4-37

TEMPERATURE= 290.5

NADIR ANG	TA	EMISSIVITY
0.00	218.00	0.710
30.00	212.00	0.680
45.00	205.50	0.631
60.00	191.00	0.543
70.00	178.00	0.411
80.00	170.00	0.076

MATERIAL= SEA WATER (S)

FREQUENCY= 16.5 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= RAYTHEON RUN 9

TEMPERATURE= 288.0

NADIR ANG	TB	EMISSIVITY
0.00	159.33	0.542
30.00	136.14	0.458
45.00	128.09	0.425
60.00	104.95	0.332
70.00	98.19	0.291
80.00	84.91	0.182

APPARENT TE[illegible]PERATURE[illegible], AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
BEACH SAND (WET) (S)	[illegible]-6 REP. 29 R-4 FIGURE [illegible]-46	285.6	13.4	0.[illegible]0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SEA WATER (S)	RAYTHEON UN 8	288.0	16.5	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_z)	WEATHER MOD.	POLAR.			APPARENT TEMPERATURES			
13.4	US STANDARD	VER	259.1[illegible]	251.94	247.65	243.65	232.28	175.[illegible]1
		VER	146.0[illegible]	142.78	155.29	192.73	216.03	234.[illegible]1
		HOR	207.86	199.62	186.30	163.10	129.63	53.[illegible]3
		HOR	162.2[illegible]	140.34	133.32	113.42	110.84	109.[illegible]9
					CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS			
		VER	44.9[illegible]	28.19	19.98	2.53	0.26	-0.[illegible]2
		HOR	18.1[illegible]	15.31	7.45	2.47	0.30	-0.[illegible]2
BEAMSPOT AREA (SQ. NM)			0.251[illegible]	0.387	0.711	2.012	6.286	48.0[illegible]1
					APPARENT TEMPERATURES			
13.4	SUMMER RAIN	VER	260.57[illegible]	254.15	250.71	248.37	240.94	209.[illegible]2
		VER	178.5[illegible]	180.39	195.75	229.92	251.40	269.[illegible]1
		HOR	212.7[illegible]	205.83	195.02	178.04	156.63	125.[illegible]1
		HOR	190.8[illegible]	178.61	180.81	183.93	203.90	242.[illegible]9
					CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS			
		VER	32.6[illegible]	19.05	7.73	0.92	-0.17	-0.[illegible]2
		HOR	8.7[illegible]	7.03	2.00	-0.29	-0.75	-0.[illegible]4
					APPARENT TEMPERATURES			
13.4	CLOUDY STAND	VER	259.3[illegible]	252.28	248.14	244.42	233.77	182.[illegible]3
		VER	151.6[illegible]	149.28	169.48	199.72	223.30	243.[illegible]2
		HOR	208.6[illegible]	200.66	187.79	165.70	134.48	67.[illegible]7
		HOR	167.0[illegible]	146.95	141.78	126.81	130.27	145.[illegible]0
					CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS			
		VER	42.8[illegible]	26.60	19.04	2.22	0.17	-0.[illegible]3
		HOR	16.5[illegible]	13.87	6.47	1.93	0.07	-0.[illegible]6

MATERIAL= BEACH SAND (WET) (S)

FREQUENCY= 37.0 AREA= 0.1°

POLARIZATION= VER TITLE= C-6 REP. 29 R-4 FIGURE 1-46

TEMPERATURE= 285.6

NADIR ANG	TA	EMISSIVITY
0.00	256.00	0.878
30.00	255.00	0.872
45.00	256.50	0.873
60.00	256.00	0.860
70.00	250.00	0.808
80.00	240.00	0.635

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	151.74	0.467
30.00	166.56	0.517
45.00	187.85	0.589
60.00	222.94	0.716
70.00	254.00	0.840
80.00	275.19	0.941

MATERIAL= EACH SAND (WET) (S)

FREQUENCY= 37.0 AREA= 0.1

POLARIZATION= HOR TITLE= [illegible] REP. 29 R-4 FIGURE [illegible]-37

TEMPERATURE= 290.5

NADIR ANG	TA	EMISSIVITY
0.00	257.00	0.856
30.00	249.00	0.816
45.00	242.00	0.770
60.00	231.00	0.683
70.00	216.00	0.525
80.00	216.00	0.194

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	151.74	0.467
30.00	142.25	0.420
45.00	131.51	0.359
60.00	121.10	0.270
70.00	121.89	0.194
80.00	152.90	0.104

APPARENT TEMPERATURE AND CONTRASTS

TARGET MATERIAL		SOURCE		SURF TEMP.	FREQ	AP A
BEACH SAND (WET) (S)		A-C REP.	29 R-4 FIGURE 4-46	285.6	37.0	0.40
BACKGROUND MATERIAL		SOURCE		SURF TEMP.	FREQ	AP A
SEA WATE (S)		CALCULATE		290.0	35.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	US STANDARD	VER	253.9	252.74	253.72	252.38	244.45	228.84
		VER	151.71	166.67	187.73	222.86	253.96	275.49
		HOR	252.1	242.55	239.39	215.63	189.80	166.17
		HOR	151.71	142.18	131.43	121.08	121.94	152.46
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	6.86	3.77	1.57	0.25	-0.03	-0.12
		HOR	6.77	4.39	2.41	0.80	0.18	0.00
BEAMSPOT AREA (SQ. NM)			1.48	2.284	4.196	11.867	37.075	283.269
			APPARENT TEMPERATURES					
37.0	SUMMER RAIN	VER	271.27	272.05	273.59	274.69	274.26	271.31
		VER	238.69	249.17	260.76	272.19	275.08	271.09
		HOR	271.7	270.20	270.10	271.46	272.54	271.05
		HOR	238.69	242.41	249.11	261.11	269.79	271.01
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	2.21	1.00	0.31	0.02	-0.00	-0.10
		HOR	2.21	1.22	0.50	0.09	0.01	0.00
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	256.94	256.52	256.05	258.45	255.16	253.18
		VER	168.37	183.45	204.11	236.43	261.93	275.13
		HOR	255.83	248.11	240.83	230.99	219.11	225.36
		HOR	168.37	162.59	157.84	159.29	173.74	219.10
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	5.93	3.20	1.29	0.19	-0.02	-0.11
		HOR	5.93	3.74	1.98	0.60	0.12	0.00

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= [illegible] REP. [illegible] 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TB	EMISSIVITY
0.00	235.60	0.899
30.00	240.80	0.921
45.00	242.40	0.926
60.00	237.90	0.907
70.00	223.30	0.844
80.00	217.30	0.482

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	138.37	0.476
45.00	158.18	0.547
60.00	192.95	0.675
70.00	227.69	0.807
80.00	261.39	0.944

MATERIAL= ALFALFA (D)

FREQUENCY= 10.0 AREA= 0.15

POLARIZATION= VER TITLE= REIGLER FIGURE 18

TEMPERATURE= 297.0

NADIR ANG	TB	EMISSIVITY
0.00	279.00	0.938
30.00	277.00	0.930
45.00	275.00	0.924
60.00	272.00	0.913
70.00	272.00	0.913

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948

MATERIAL= ALFALFA (D)

FREQUENCY= 10.0 AREA= 0,15

POLARIZATION= HOR TITLE= REIGLER FIGURE 1a

TEMPERATURE= 297.0

NADIR ANG	TB	EMISSIVITY
0.00	274.00	0.920
30.00	274.00	0.918
45.00	275.00	0.922
60.00	277.00	0.928
70.00	272.00	0.911

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
ALFALFA (D)	REIGLER FIGURE 18	297.0	10.0	0.15

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED (D)	A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA .

NADIR ANGLES (DEGREES):		0	30	45	60	70	80
FREQ (GHz) WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0 JULY SUMMER	VER	279.11	276.83	275.13	272.05	272.09	
	VER	266.29	267.40	269.61	274.26	272.93	
	HOR	274.00	273.43	274.57	276.25	271.54	
	HOR	264.37	262.75	259.52	262.62	261.71	
		CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
	VER	2.64	1.26	0.40	-0.06	-0.01	
	HOR	1.99	1.43	1.10	0.35	0.08	
BEAMSPOT AREA (SQ. NM)		0.727	1.119	2.056	5.815	18.167	-0.0-0
		BRIGHTNESS TEMPERATURES					
10.0 CLOUDY STAND	VER	279.08	276.81	275.10	271.98	271.89	
	VER	266.35	267.44	269.58	274.07	272.64	
	HOR	274.04	273.46	274.54	276.11	271.35	
	HOR	264.46	262.84	259.64	262.63	261.65	
		CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
	VER	2.63	.26	0.40	-0.05	-0.01	
	HOR	1.98	1.42	1.09	0.35	0.08	

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 10.0 AREA= 1.0

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	123.02	0.420
45.00	142.32	0.487
60.00	178.07	0.613
70.00	217.63	0.755
80.00	268.49	0.947

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 10.0 AREA= 1.0

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	99.75	0.336
45.00	86.64	0.284
60.00	69.32	0.210
70.00	57.48	0.149
80.00	53.70	0.079

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
FRESH WATER (RIVERS) (S)	THEORETICAL	283.0	10.0	1.00

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	7-6 FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	110.26	122.97	142.22	178.03	217.58	268.59
		VER	265.69	266.84	269.11	273.85	272.53	253.27
		HOR	110.26	99.83	86.64	69.19	57.40	53.74
		HOR	263.72	262.08	258.82	262.06	261.25	225.86
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-155.42	-128.56	-61.72	-16.48	-3.02	0.01
		HOR	-153.46	-164.99	-83.75	-33.17	-11.22	-1.24
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.841
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	112.15	124.98	144.37	180.25	219.52	269.09
		VER	265.84	267.00	269.27	273.97	272.74	254.03
		HOR	112.15	102.15	89.68	73.85	64.55	67.65
		HOR	263.91	262.31	259.15	262.44	261.83	229.11
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-153.69	-126.91	-60.75	-16.12	-2.93	0.00
		HOR	-151.75	-143.13	-82.44	-32.43	-10.86	-1.56

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 35.0 AREA= 1.00

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	165.81	0.527
45.00	186.68	0.600
60.00	220.67	0.726
70.00	250.15	0.846
80.00	269.20	0.931

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 35.0 AREA= 1.00

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	Tb	EMISSIVITY
0.00	151.22	0.477
30.00	141.86	0.430
45.00	131.25	0.368
60.00	120.96	0.277
70.00	121.79	0.199
80.00	152.81	0.107

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= C-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE			SURF TEMP.	FREQ	AR-A
FRESH WATER (RIVERS) (S)			THEORETICAL			283.0	35.0	1.00
BACKGROUND MATERIAL			SOURCE			SURF TEMP.	FREQ	AP A
SANDY LOAM (WEED-COVERED) (D)			A-G FIGURE 1-113 (BACKGROUND)			287.3	37.0	BEA .
NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	151.14	165.76	186.58	220.65	250.24	269.06
		VER	281.18	280.36	279.59	281.22	277.94	268.04
		HOR	151.14	141.90	131.28	120.97	121.80	152.96
		HOR	281.69	278.62	277.62	276.47	272.48	266.34
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-87.66	-50.18	-21.93	-5.10	-0.75	0.00
		HOR	-88.01	-59.86	-34.88	-13.10	-4.06	-0.40
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.209
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	167.66	182.44	202.84	234.27	258.74	271.53
		VER	280.88	280.13	279.57	280.42	277.64	272. 1
		HOR	167.68	162.16	157.52	159.01	173.48	219.15
		HOR	281.33	278.64	277.78	276.83	274.00	270.83
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-76.31	-42.77	-18.05	-3.89	-0.51	-0.10
		HOR	-76.61	-51.00	-28.66	-9.93	-2.71	-0.18

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 10.0 AREA= 1.0

POLARIZATION= VER TITLE= THEORETIC L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	125.33	0.418
45.00	145.04	0.485
60.00	181.66	0.611
70.00	222.37	0.754
80.00	275.47	0.950

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 10.0 AREA= 1.00

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	101.55	0.334
45.00	88.16	0.282
60.00	70.42	0.209
70.00	58.25	0.148
80.00	54.09	0.078

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.0

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
FRESH WATER (RIVERS) (S)	THEORETICAL	290.0	10.0	1.00

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED) (C)	1-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEAM

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	112.30	125.30	145.01	181.66	222.41	275.64
		VER	265.69	266.84	269.11	273.85	272.53	253.97
		HOR	112.30	101.59	88.03	70.35	58.14	54.60
		HOR	263.72	262.08	259.82	262.06	261.25	225.06
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-153.39	-126.48	-60.37	-15.85	-2.76	0.06
		HOR	-151.42	-143.42	-83.08	-32.97	-11.18	-1.04
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	139.811
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	114.16	127.31	147.15	183.85	224.27	275.79
		VER	265.84	267.00	269.27	273.97	272.74	254.03
		HOR	114.16	103.89	91.07	75.00	65.28	67.91
		HOR	263.98	262.31	259.15	262.44	261.83	229.11
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-151.66	-124.84	-58.41	-15.50	-2.67	0.15
		HOR	-149.72	-141.56	-81.76	-32.24	-10.82	-1.16

69

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 35.0 AREA= 1.00

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	163.77	0.506
45.00	185.02	0.578
60.00	220.29	0.705
70.00	251.94	0.830
80.00	274.70	0.938

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (RIVERS) (S)

FREQUENCY= 35.0 AREA= 1.00

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	139.74	0.410
45.00	129.31	0.350
60.00	119.46	0.263
70.00	120.78	0.188
80.00	152.45	0.101

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE			SURF TEMP.	FREQ	AR A
FRESH WATER (RIVERS) (B)			THEORETICAL			290.0	35.0	1.00
BACKGROUND MATERIAL			SOURCE			SURF TEMP.	FREQ	AR-A
SANDY LOAM (WEED-COVERED) (D)			A-G FIGURE 1-113 (BACKGROUND)			287.3	37.0	REA..
NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	149.14	163.90	185.04	220.35	251.91	274.75
		VER	281.18	280.36	278.59	281.22	277.94	268.94
		HOR	149.14	139.66	120.23	119.49	120.71	152.53
		HOR	281.69	278.62	277.62	276.47	272.48	266.34
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-89.01	-51.00	-29.30	-5.13	-0.70	0.02
		HOR	-89.36	-60.85	-35.37	-13.23	-4.09	-0.40
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.29
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	166.13	181.09	201.89	234.53	260.57	275.03
		VER	280.88	280.13	278.57	280.42	277.64	272.01
		HOR	166.13	160.44	156.03	158.07	172.93	219.10
		HOR	281.33	278.64	277.78	276.83	274.00	270.83
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-77.36	-43.37	-18.28	-3.87	-0.46	0.01
		HOR	-77.66	-51.76	-29.02	-10.01	-2.73	-0.18

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 10.0 AREA= 0.05

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	123.02	0.420
45.00	142.32	0.487
60.00	178.07	0.613
70.00	217.63	0.755
80.00	268.49	0.947

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 10.0 AREA= 0.05

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	99.75	0.336
45.00	86.64	0.284
60.00	69.32	0.210
70.00	57.48	0.149
80.00	53.70	0.079

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.782

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
FRESH WATER (CANALS)(S)		THEORETICAL	283.0	10.0	0.5
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SANDY LOAM (WEED-COVERED) (D)		A-G FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	110.26	122.97	142.22	178.03	217.58	268.59
		VER	265.69	266.84	269.11	273.85	272.53	253.97
		HOR	110.28	99.83	86.64	69.19	57.40	53.74
		HOR	263.72	262.08	258.82	262.06	261.25	225.86
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-10.69	-6.43	-3.09	-0.82	-0.15	0. 1
		HOR	-10.56	-7.25	-4.19	-1.66	-0.56	-0.36
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.811
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	112.15	124.98	144.37	180.25	219.52	269.39
		VER	265.84	267.00	269.27	273.97	272.74	254.03
		HOR	112.15	102.15	89.68	73.85	64.55	67.65
		HOR	263.96	262.31	259.15	262.44	261.83	229.11
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-10.57	-6.35	-3.04	-0.81	-0.15	0. 1
		HOR	-10.41	-7.16	-4.12	-1.62	-0.54	-0.36

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 35.0 AREA= 0.05

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	165.81	0.527
45.00	186.68	0.600
60.00	220.67	0.726
70.00	250.15	0.846
80.00	269.20	0.931

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 35.0 AREA= 0.05

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	141.86	0.430
45.00	131.25	0.368
60.00	120.96	0.277
70.00	121.79	0.199
80.00	152.81	0.107

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
FRESH WATER (CANALS) (S)		THEORETICAL	283.0	35.0	0.05
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SANDY LOAM (WEED-COVERED) (D)		E-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	151.14	165.76	186.58	220.65	250.24	269.06
		VER	281.18	280.36	279.59	281.22	277.94	268.04
		HOR	151.14	141.90	131.28	120.97	121.80	152.68
		HOR	281.69	278.62	277.62	276.47	272.48	266.34
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-4.38	-2.51	-1.10	-0.26	-0.04	0.00
		HOR	-4.40	-2.99	-1.74	-0.66	-0.20	-0.02
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.209
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	167.68	182.44	202.84	234.27	258.74	271.53
		VER	280.88	280.13	278.57	280.42	277.64	272.01
		HOR	167.68	162.16	157.52	159.01	173.48	219.05
		HOR	281.33	278.64	277.78	276.83	274.00	270.23
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-3.82	-2.14	-0.90	-0.19	-0.03	-0.00
		HOR	-3.83	-2.55	-1.43	-0.50	-0.14	-0.01

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 10.0 AREA= 0.0E

POLARIZATION= VER TITLE= THEORETIC L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	125.33	0.418
45.00	145.04	0.485
60.00	181.66	0.611
70.00	222.37	0.754
80.00	275.47	0.950

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 10.0 AREA= 0.05

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	101.55	0.334
45.00	88.16	0.282
60.00	70.42	0.209
70.00	58.25	0.148
80.00	54.09	0.078

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
FRESH WATER (CANALS) (S)			THEORETICAL		290.0	10.0	0.5
BACKGROUND MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
SANDY LOAM (WEED-COVERED) (D)			SEE FIGURE 1-113 (BACKGROUND)		297.3	13.4	BEA .
NADIR ANGLES (DEGREES)		0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES				
10.0	US STANDARD	VER	112.3	125.30	145.01	181.66	222.41	275.-4
		VER	265.6	266.84	269.11	273.85	272.53	253.-7
		HOR	112.3	101.59	88.03	70.35	58.14	54.-0
		HOR	263.7	262.08	259.82	262.06	261.25	225.-6
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-10.5	-6.32	-3.02	-0.79	-0.14	0.-1
		HOR	-10.4	-7.17	-4.15	-1.65	-0.56	-0. 6
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.811
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	114.1	127.31	147.15	183.85	224.27	275.-9
		VER	265.8	267.00	269.27	273.97	272.74	254.-3
		HOR	114.1	103.89	91.07	75.00	65.28	67.-1
		HOR	263.9	262.31	259.15	262.44	261.83	229.-1
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-10.4	-6.24	-3.97	-0.77	-0.13	0.-1
		HOR	-10.3	-7.08	-4.09	-1.61	-0.54	-0. 6

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 35.0 AREA= 0.05

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	163.77	0.506
45.00	185.02	0.578
60.00	220.29	0.705
70.00	251.94	0.830
80.00	274.70	0.938

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (CANALS) (S)

FREQUENCY= 35.0 AREA= 0.05

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	139.74	0.410
45.00	129.31	0.350
60.00	119.46	0.263
70.00	120.78	0.188
80.00	152.45	0.101

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
FRESH WATER (CANALS) (S)		THEORETICAL	290.0	35.0	0.5
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SANDY LOAM (WEED-COVERED) (D)		A-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	149.14	163.90	185.04	220.35	251.91	274.55
		VER	281.18	280.36	279.59	281.22	277.94	268.94
		HOR	149.14	139.66	129.23	119.49	120.71	152.53
		HOR	281.69	278.62	277.62	276.47	272.48	266.74
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-4.45	-2.55	-1.11	-0.26	-0.04	0.00
		HOR	-4.47	-3.04	-1.77	-0.66	-0.20	-0.02
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.209
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	166.13	181.09	201.89	234.53	260.57	275.03
		VER	280.88	280.13	279.57	280.42	277.64	272.41
		HOR	166.13	160.44	156.03	158.07	172.93	219.10
		HOR	281.33	278.64	277.78	276.83	274.00	270.03
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-3.87	-2.17	-0.91	-0.19	-0.02	0.00
		HOR	-3.88	-2.59	-1.45	-0.50	-0.14	-0.01

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETIC L

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	123.02	0.420
45.00	142.32	0.487
60.00	178.07	0.613
70.00	217.63	0.755
80.00	268.49	0.947

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	110.35	0.376
30.00	99.75	0.336
45.00	86.64	0.284
60.00	69.32	0.210
70.00	57.48	0.149
80.00	53.70	0.079

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
FRESH WATER (LAKES) (S)	THEORETICAL	283.0	10.0	BEA .

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SANDY LOAM (WEED-COVERED) (D)	1-6 FIGURE 1-113 (BACKGROUND)	287.3	13.4	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	110.26	122.97	142.22	178.03	217.58	268.-9
		VER	265.69	266.84	269.11	273.85	272.53	253.-7
		HOR	110.26	99.83	86.64	69.19	57.40	53.74
		HOR	263.72	262.08	258.82	262.06	261.25	225.-6
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-155.42	-143.87	-126.89	-95.82	-54.95	15.-2
		HOR	-153.46	-162.25	-179.13	-192.87	-203.85	-172.-2
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.-1
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	112.15	124.98	144.37	180.25	219.52	269. 9
		VER	265.8-	267.00	269.27	273.97	272.74	254.-3
		HOR	112.15	102.15	89.68	7-.85	64.55	67.-5
		HOR	263.9-	262.31	259.15	262.44	261.83	229.-1
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-153.69	-142.02	-124.90	-93.72	-53.22	14.-6
		HOR	-151.75	-160.16	-166.47	-198.59	-197.27	-161. 6

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	165.81	0.527
45.00	186.68	0.600
60.00	220.67	0.726
70.00	250.15	0.846
80.00	269.20	0.931

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 283.0

NADIR ANG	TB	EMISSIVITY
0.00	151.22	0.477
30.00	141.86	0.430
45.00	131.25	0.368
60.00	120.96	0.277
70.00	121.79	0.199
80.00	152.81	0.107

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= C-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE		SURF TEMP.	FREQ	AR A
FRESH WATER (LAKES) (S)			THEORETICAL		283.0	35.0	REA •
BACKGROUND MATERIAL			SOURCE		SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)			A-G FIGURE 1-113 (BACKGROUND)		287.3	37.0	REA •
NADIR ANGLES (DEGREES)		0	30	45	60	70	80
FREQ (GH_Z) WEATHER MOD.	POLAR.			BRIGHTNESS TEMPERATURES			
35.0 US STANDARD	VER	151.1.	165.76	186.58	220.65	250.24	269.·6
	VER	281.18	280.36	279.59	281.22	277.94	268.84
	HOR	151.14	141.90	131.28	120.97	121.80	152.·8
	HOR	281.69	278.62	277.62	276.47	272.48	266.·4
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT				
	VER	-130.03	-114.60	-9·.01	-60.57	-27.69	0.·2
	HOR	-130.54	-136.71	-146.34	-155.51	-150.68	-113.·7
BEAMSPOT AREA (SQ. NM)		1.48·	2.284	4.196	11.867	37.075	283.2·9
.06							
			BRIGHTNESS TEMPERATURES				
35.0 CLOUDY STAND	VER	167.68	182.44	20·.84	234.27	258.74	271.·3
	VER	280.88	280.13	27·.57	280.42	277.64	272. 1
	HOR	167.6·	162.16	15·.52	159.01	173.48	219.·5
	HOR	281.33	278.64	277.78	276.83	274.00	270.·3
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT				
	VER	-113.2·	-97.68	-75.73	-46.14	-18.89	-0. 9
	HOR	-113.6·	-116.48	-12·.26	-117.82	-100.52	-51. 8

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETIC, L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	125.33	0.418
45.00	145.04	0.485
60.00	181.66	0.611
70.00	222.37	0.754
80.00	275.47	0.950

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= 1-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	268.30	0.924
30.00	269.00	0.928
45.00	271.00	0.936
60.00	275.40	0.953
70.00	274.10	0.948
80.00	254.60	0.871

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	101.55	0.334
45.00	88.16	0.282
60.00	70.42	0.209
70.00	58.25	0.148
80.00	54.09	0.078

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	266.80	0.917
30.00	264.70	0.911
45.00	261.50	0.899
60.00	264.50	0.910
70.00	263.50	0.906
80.00	226.80	0.762

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
FRESH WATER (LAKES) (S)	THEORETICAL	290.0	10.0	REA .

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
SANDY LOAM (WEED-COVERED) (D)	FIGURE 1-113 (BACKGROUND)	257.3	13.4	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	112.3	125.30	145.01	181.66	222.41	275.54
		VER	265.6	266.84	269.11	273.85	272.53	253.17
		HOR	112.3	101.59	88.03	70.35	58.14	54.30
		HOR	263.7	262.08	258.82	262.06	261.25	225.16
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-153.39	-141.53	-125.10	-92.19	-50.12	22.56
		HOR	-151.4	-160.50	-170.79	-191.71	-203.11	-171.05
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.851
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	114.1	127.31	147.15	183.85	224.27	275.79
		VER	265.8	267.00	269.27	273.97	272.74	254.03
		HOR	114.1	103.89	91.07	75.00	65.28	67.01
		HOR	263.9	262.31	259.15	262.44	261.83	229.11
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-151.6	-139.70	-123.13	-90.12	-48.47	29.36
		HOR	-149.7	-158.42	-168.08	-187.44	-196.55	-161.10

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	163.77	0.506
45.00	185.02	0.578
60.00	220.29	0.705
70.00	251.94	0.830
80.00	274.70	0.938

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.20	0.980
30.00	281.50	0.977
45.00	280.00	0.970
60.00	282.90	0.982
70.00	279.30	0.968
80.00	271.40	0.910

MATERIAL= FRESH WATER (LAKES) (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	139.74	0.410
45.00	129.31	0.350
60.00	119.46	0.263
70.00	120.78	0.188
80.00	152.45	0.101

MATERIAL= SANDY LOAM (WEED-COVERED) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-113 (BACKGROUND)

TEMPERATURE= 287.3

NADIR ANG	TA	EMISSIVITY
0.00	282.70	0.982
30.00	280.00	0.970
45.00	279.00	0.966
60.00	277.60	0.961
70.00	272.60	0.941
80.00	260.60	0.892

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
FRESH WATER (LAKES) (S)		THEORETICAL	290.0	35.0	REA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SANDY LOAM (WEED-COVERED) (D)		A-G FIGURE 1-113 (BACKGROUND)	287.3	37.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	149.14	163.90	185.04	220.35	251.91	274.-5
		VER	281.18	280.36	278.59	281.22	277.94	268.94
		HOR	149.14	139.66	129.23	119.49	120.71	152.53
		HOR	281.69	278.62	277.62	276.47	272.48	266.34
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-132.04	-116.47	-93.55	-60.87	-26.02	5.81
		HOR	-132.55	-138.96	-148.39	-156.99	-151.77	-113.82
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.289
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	166.13	181.09	201.89	234.53	260.57	275.-3
		VER	280.88	280.13	278.57	280.42	277.64	272. 1
		HOR	166.13	160.44	156.03	158.07	172.93	219.10
		HOR	281.33	278.64	277.78	276.83	274.00	270.93
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-114.76	-99.04	-76.68	-45.89	-17.07	3.-2
		HOR	-115.20	-118.20	-121.74	-118.75	-101.08	-51.73

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= -G REP. SGD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	235.60	0.899
30.00	240.80	0.921
45.00	242.40	0.926
60.00	237.90	0.907
70.00	223.30	0.844

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= /-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.877
30.00	243.00	0.852
45.00	239.00	0.832
60.00	241.00	0.843
70.00	236.00	0.818

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP. SGD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	236.30	0.898
30.00	234.30	0.893
45.00	228.80	0.869
60.00	216.40	0.815
70.00	197.80	0.733

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	244.00	0.845
30.00	241.00	0.830
45.00	234.00	0.796
60.00	221.00	0.733
70.00	213.00	0.694

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SNOW (DR_1) (S)	A-G REP. GD 829-6 FIG. 1-148	261.0	13.4	BEA .

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
STONEY LOAM (SNOW) VER (D)	A-G FIGURE 1-76 (BACKGROUND)	273.0	13.4	BEA .
STONEY LOAM (BARE) HOR (D)	A-G FIGURE 1-76 (BACKGROUND)	275.7	13.4	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JANUARY WINT	VER	235.16	240.63	240.19	237.66	222.68	
		VER (SNOW)	239.95	233.38	228.26	231.58	225.82	
		HOR	234.90	233.71	227.79	214.71	195.56	
		HOR (BARE)	233.65	229.73	226.85	204.79	195.90	
			APPARENT TEMP. CONTRASTS					
		VER	-4.74	7.45	13.94	6.08	-3.14	
		HOR	1.24	3.98	6.94	9.92	-0.34	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	283.209
13.4	CLOUDY STAND	VER	235.62	241.34	240.79	238.62	224.65	
		VER	240.43	234.08	229.22	232.84	227.86	
		HOR	235.42	234.33	228.66	216.28	198.58	
		HOR	234.29	230.51	221.96	206.77	199.11	
			APPARENT TEMP. CONTRASTS					
		VER	-4.81	7.26	13.58	5.78	-3.21	
		HOR	1.14	3.82	6.69	9.51	-0.53	

MATERIAL= SNOW (DRY) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= J-G REP. SGD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	137.00	0.436
30.00	124.70	0.380
45.00	118.90	0.354
60.00	129.50	0.402
70.00	143.40	0.465

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= J-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	253.00	0.888
30.00	250.00	0.869
45.00	248.00	0.859
60.00	247.00	0.854
70.00	242.00	0.825

MATERIAL= SNOW (DRY) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP. NO 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	136.90	0.436
30.00	124.40	0.379
45.00	114.70	0.335
60.00	117.90	0.350
70.00	126.60	0.389

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.864
30.00	247.00	0.859
45.00	245.00	0.850
60.00	239.00	0.820
70.00	232.00	0.786

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SNOW (DRY)	(D)	A-G REP. NO 829-6 FIG. 1-148	261.0	37.0	BEA.

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
STONEY LOAM (SNOW)	VER (D)	A-G FIGUR 1-76 (BACKGROUND)	273.0	37.0	BEA.
STONEY LOAM (BARE)	HOR (D)	A-G FIGURE 1-72 (BAKGROUND)	275.7	37.0	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	134.85	123.30	116.23	133.21	151.34	
		VER (SNOW)	246.08	241.65	236.54	238.91	233.47	
		HOR	134.83	123.08	115.07	122.13	135.82	
		HOR (BARE)	242.58	241.52	236.61	233.30	226.95	
			APPARENT TEMP. CONTRASTS					
		VER	-111.13	-118.35	-120.31	-105.69	-82.13	
		HOR	-107.75	-118.44	-124.55	-111.18	-91.13	
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.2-9
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	167.97	160.91	160.54	175.85	194.91	
		VER	252.9	249.96	248.99	249.84	248.20	
		HOR	167.97	160.74	157.53	168.24	185.08	
		HOR	250.67	250.20	249.38	246.25	244.27	
			APPARENT TEMP. CONTRASTS					
		VER	-84.9	-89.05	-88.45	-73.99	-53.29	
		HOR	-82.7	-89.46	-91.84	-78.01	-59.20	

20.

MATERIAL= SNOW (WET) (D)

FREQUENCY= 13.4 AREA= BEAM SPOT

POLARIZATION= VER TITLE= A-G REP. GD 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	263.10	0.955
30.00	262.80	0.954
45.00	261.80	0.949
60.00	259.50	0.940
70.00	253.60	0.875

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 13.4 AREA= BEAM SPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.877
30.00	243.00	0.852
45.00	239.00	0.832
60.00	241.00	0.843
70.00	236.00	0.818

MATERIAL= [illegible] (WET) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP. NO. 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	261.20	0.947
30.00	259.80	0.941
45.00	253.80	0.916
60.00	246.70	0.887
70.00	238.80	0.855

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	244.00	0.845
30.00	241.00	0.830
45.00	234.00	0.796
60.00	221.00	0.733
70.00	213.00	0.694

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SNOW (WET) (D)	A-G REP. GD 829-6 FIG. 1-155	274.1	13.4	BEA.

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
STONEY LOAM (SNOW)	VER (D)	A-G FIGURE 1-76 (BACKGROUND)	273.0	13.4	BEA.
STONEY LOAM (BARE)	HOR (D)	A-G FIGURE 1-72 (BACKGROUND)	275.7	13.4	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JANUARY WINT	VER	262.0[illegible]	261.72	260.39	258.00	241.17	
		VER (SNOW)	240.4[illegible]	233.91	228.73	231.76	225.57	
		HOR	259.8[illegible]	258.29	251.71	244.16	236.00	
		HOR (BARE)	234.2[illegible]	230.34	221.42	205.10	195.48	
			APPARENT TEMP. CONTRASTS					
		VER	21.5[illegible]	27.82	31.65	26.23	15.60	
		HOR	25.6	27.95	30.29	39.06	40.52	
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	283.2 9
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	262.37	262.12	260.86	258.64	242.57	
		VER	241.31	234.98	230.03	233.18	227.52	
		HOR	260.3	258.78	252.42	245.22	237.59	
		HOR	235.33	231.54	225.95	207.34	198.53	
			APPARENT TEMP. CONTRASTS					
		VER	21.0[illegible]	27.14	30.84	25.46	15.06	
		HOR	24.97	27.24	26.47	37.87	39.06	

MATERIAL= SNOW (WET) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G REP. SGD 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	262.90	0.953
30.00	262.10	0.949
45.00	261.10	0.944
60.00	260.80	0.943
70.00	258.00	0.931

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	253.00	0.888
30.00	250.00	0.869
45.00	248.00	0.859
60.00	247.00	0.854
70.00	242.00	0.825

MATERIAL= SNOW (WET) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= T-G REP. NOD 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	262.70	0.953
30.00	259.40	0.937
45.00	249.60	0.895
60.00	247.00	0.884
70.00	238.20	0.847

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= T-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.864
30.00	247.00	0.859
45.00	245.00	0.850
60.00	239.00	0.820
70.00	232.00	0.766

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SNOW (WET) (D)		A-G REP. GD 829-6 FIG. 1-155	274.1	37.0	BEA

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
STONEY LOAM (SNOW) VER (D)		A-G FIGUR 1-76 (BACKGROUND)	273.0	37.0	BEA
STONEY LOAM (BARE) HOR (D)		A-G FIGURE 1-72 (BACKGROUND)	275.7	37.0	BEAM

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	262.26	261.29	260.09	259.80	257.11	
		VER (SNOW)	246.0[illegible]	241.65	239.54	238.91	233.47	
		HOR	262.26	258.48	248.75	246.52	239.00	
		HOR (BARE)	242.5[illegible]	241.52	239.61	233.30	226.95	
			APPARENT TEMP. CONTRASTS					
		VER	16.27	19.64	20.55	20.89	23.64	
		HOR	19.6[illegible]	16.97	9.14	13.21	12.05	
BEAMSPOT AREA (SQ. NM)			1.48[illegible]	2.284	4.196	11.867	37.075	283.2[illegible]9
37.0	CLOUDY STAND	VER	265.37	264.78	264.15	264.48	263.47	
		VER	252.9[illegible]	249.96	248.99	249.84	248.20	
		HOR	265.37	262.68	255.86	255.25	251.86	
		HOR	250.67	250.20	248.38	246.25	244.27	
			APPARENT TEMP. CONTRASTS					
		VER	12.47	14.62	15.16	14.64	15.27	
		HOR	14.7[illegible]	12.48	6.48	9.00	7.58	

MATERIAL= ICE (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G REP S_D 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	258.10	0.964
30.00	258.10	0.963
45.00	256.60	0.957
60.00	242.90	0.901
70.00	255.30	0.950

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.877
30.00	243.00	0.852
45.00	239.00	0.832
60.00	241.00	0.843
70.00	236.00	0.918

MATERIAL= ICE (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP S.D 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	258.10	0.963
30.00	249.90	0.929
45.00	234.70	0.867
60.00	203.60	0.736
70.00	205.00	0.737

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	244.00	0.845
30.00	241.00	0.830
45.00	234.00	0.796
60.00	221.00	0.733
70.00	213.00	0.694

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP-A
ICE (S)		A-G REP SOD 829-6 FIG 1-158	267.3	13.4	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
STONEY LOAM (SNOW)	VER (D)	A-G FIGURE 1-76 (BACKGROUND)	273.0	13.4	BEA .
STONEY LOAM (BARE)	HOR (D)	A-G FIGURE 1-72 (BACKGROUND)	275.7	13.4	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JANUARY WINT	VER	257.7[illegible]	257.50	255.96	241.71	254.37	
		VER(SNOW)	239.9[illegible]	233.38	229.26	231.58	225.82	
		HOR	257.4[illegible]	248.64	239.66	199.53	201.03	
		HOR (BARE)	233.6[illegible]	229.73	220.85	204.79	195.90	
			APPARENT TEMP. CONTRASTS					
		VER	17.8[illegible]	24.12	27.71	10.13	28.54	
		HOR	23.9[illegible]	18.91	14.81	-5.25	5.13	
BEAMSPOT AREA (SQ. NM)			0.72[illegible]	1.119	2.056	5.815	18.167	283.2 9
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	258.0[illegible]	257.80	256.36	242.64	255.22	
		VER	240.4[illegible]	234.08	229.22	232.84	227.86	
		HOR	257.75	249.08	239.49	201.58	203.93	
		HOR	234.29	230.51	221.96	206.77	199.11	
			APPARENT TEMP. CONTRASTS					
		VER	17.55	23.71	27.14	9.80	27.36	
		HOR	23.46	18.56	14.52	-5.19	4.82	

MATERIAL= ICE (S)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= C-G REP 500 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	248.40	0.928
30.00	249.80	0.933
45.00	253.80	0.948
60.00	247.00	0.919
70.00	251.20	0.933

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= C-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	253.00	0.888
30.00	250.00	0.869
45.00	248.00	0.859
60.00	247.00	0.854
70.00	242.00	0.825

MATERIAL= ICE (S)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= [illegible] REP S.D 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	248.50	0.928
30.00	241.20	0.900
45.00	236.50	0.881
60.00	212.10	0.780
70.00	213.10	0.774

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= [illegible] FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.864
30.00	247.00	0.859
45.00	245.00	0.850
60.00	239.00	0.820
70.00	232.00	0.786

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
ICE (S)		A-G REP S.D 829-6 FIG 1-158	257.3	37.0	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP-A**
STONEY LOAM (SNOW) VER (D)		A-G FIGUR 1-76 (BACKGROUND)	273.0	37.0	BEA .
STONEY LOAM (BARE) HOR (D)		A-G FIGURE 1-72 (BACKGROUND)	275.7	37.0	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	249.32	250.70	254.49	248.44	252.39	
		VER (SNOW)	244.4	240.02	238.20	238.43	234.45	
		HOR	249.32	242.78	238.78	217.56	219.94	
		HOR (BARE	240.65	239.76	238.19	232.72	228.15	
			APPARENT TEMP. CONTRASTS					
		VER	4.96	10.68	16.29	10.01	17.94	
		HOR	8.67	3.01	0.59	-15.16	-8.20	
BEAMSPOT AREA (SQ. NM)			1.48	2.284	4.196	11.867	37.075	283.29
114.			APPARENT TEMPERATURES					
37.0	CLOUDY LAND	VER	253.13	254.78	258.50	255.58	260.29	
		VER	249.4	246.50	246.33	249.19	250.39	
		HOR	253.13	248.32	246.29	233.95	241.03	
		HOR	246.42	246.48	246.54	245.45	246.95	
			APPARENT TEMP. CONTRASTS					
		VER	3.73	8.28	12.18	6.39	9.90	
		HOR	6.71	1.84	-3.26	-11.50	-5.92	

MATERIAL= SNOW (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= -6 REP. 29 R-4 FIGURE 1-84

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	267.00	0.972
30.00	265.00	0.962
45.00	258.00	0.926
60.00	248.00	0.876
70.00	242.00	0.847

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= 6-6 FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.877
30.00	243.00	0.852
45.00	239.00	0.832
60.00	241.00	0.843
70.00	236.00	0.818

MATERIAL= SNOW (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= ,-G REP. 29 R-4 FIGURE 1-83

TEMPERATURE= 272.9

NADIR ANG	TA	EMISSIVITY
0.00	260.00	0.927
30.00	260.00	0.927
45.00	261.50	0.938
60.00	259.00	0.921
70.00	249.00	0.865

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= /-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	244.00	0.845
30.00	241.00	0.830
45.00	234.00	0.796
60.00	221.00	0.733
70.00	213.00	0.694

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SNOW (D)		A-G REP. 29 R-4 FIGURE 1-84	273.0	13.4	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
STONEY LOAM (SNOWVER (D)		A-G FIGURE 1-76 (BACKGROUND)	273.0	13.4	BEA .
STONEY LOAM (BARE) HOR (D)		A-G FIGURE 1-72 (BACKGROUND)	275.7	13.4	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JANUARY WINT	VER	265.43	262.78	253.34	240.35	233.03	
		VER (SNOW)	240.44	233.91	228.73	231.76	225.57	
		HOR	253.5	253.50	256.39	251.96	237.58	
		HOR (BARE)	234.2	230.34	221.42	205.10	195.48	
			APPARENT TEMP. CONTRASTS					
		VER	24.99	28.88	24.61	8.58	7.46	
		HOR	19.22	23.16	34.96	46.86	42.10	
BEAMSPOT AREA (SQ. NM)			0.7	1.119	2.056	5.815	18.167	283.2-9
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	265.7	263.14	253.98	241.50	234.71	
		VER	241.3	234.98	230.03	233.18	227.52	
		HOR	254.0	254.09	256.95	252.76	239.10	
		HOR	235.3	231.54	222.95	207.34	198.53	
			APPARENT TEMP. CONTRASTS					
		VER	24.39	28.16	23.96	8.32	7.20	
		HOR	18.7	22.55	34.00	45.42	40.57	

MATERIAL= SNOW (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G REP. 29 R-4 FIGURE 1-84

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	260.00	0.927
30.00	259.00	0.921
45.00	257.00	0.910
60.00	256.00	0.904
70.00	251.00	0.876

MATERIAL= STONEY LOAM (SNOW) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-76 (BACKGROUND)

TEMPERATURE= 273.0

NADIR ANG	TA	EMISSIVITY
0.00	253.00	0.888
30.00	250.00	0.869
45.00	248.00	0.859
60.00	247.00	0.854
70.00	242.00	0.825

MATERIAL= SNOW (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= C-G REP. 29 P-4 FIGURE C-85

TEMPERATURE= 272.9

NADIR ANG	TA	EMISSIVITY
0.00	262.00	0.938
30.00	258.00	0.916
45.00	254.00	0.893
60.00	241.00	0.819
70.00	226.00	0.734

MATERIAL= STONEY LOAM (BARE) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= C-G FIGURE 1-72 (BACKGROUND)

TEMPERATURE= 275.7

NADIR ANG	TA	EMISSIVITY
0.00	248.00	0.864
30.00	247.00	0.859
45.00	245.00	0.850
60.00	239.00	0.820
70.00	232.00	0.786

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SNOW (D)		A-G REP. 29 R-4 FIGURE 1-84	273.0	37.0	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
STONEY LOAM (SNOW) VER (D)		A-G FIGUR 1-76 (BACKGROUND)	273.0	37.0	BEA .
STONEY LOAM (BARE) HOR (D)		A-G FIGURE 1-72 (BACKGROUND)	275.7	37.0	BEAM.

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	255.1	253.78	251.29	250.11	244.41	
		VER(SNOW)	246.0	241.65	239.54	238.91	233.47	
		HOR	257.65	252.52	247.29	230.99	213.87	
		HOR (BARE)	242.5	241.52	239.61	233.30	226.95	
			APPARENT TEMP. CONTRASTS					
		VER	9.16	12.13	11.75	11.21	10.95	
		HOR	15.07	11.01	7.67	-2.31	-13.07	
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.29
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	259.8	259.01	257.57	257.62	255.21	
		VER	252.9	249.96	249.99	249.84	248.20	
		HOR	261.7	258.06	254.63	244.33	235.64	
		HOR	250.67	250.20	249.38	246.25	244.27	
			APPARENT TEMP. CONTRASTS					
		VER	6.9	9.05	8.59	7.78	7.01	
		HOR	11.03	7.86	5.26	-1.91	-8.64	

MATERIAL= BEACH SAND (WET)(S)

FREQUENCY= 13.4 AREA= 0.1

POLARIZATION= VER TITLE= -9 REP. 29 R-4 FIGURE 4-46

TEMPERATURE= 285.6

NADIR ANG	TA	EMISSIVITY
0.00	262.00	0.906
30.00	256.00	0.880
45.00	253.50	0.864
60.00	252.00	0.848
70.00	247.00	0.803
80.00	225.00	0.567

MATERIAL= SEA WATER (S)

FREQUENCY= 16.5 AREA= BEAMSPOT

POLARIZATION= VER TITLE= RAYTHEON RUN 8

TEMPERATURE= 288.0

NADIR ANG	TB	EMISSIVITY
0.00	142.87	0.483
30.00	136.90	0.467
45.00	150.79	0.507
60.00	188.48	0.637
70.00	211.71	0.715
80.00	228.62	0.761

MATERIAL= BEACH SAND (WET) (S)

FREQUENCY= 13.4 AREA= 0.1

POLARIZATION= HOR TITLE= A-G REP. 29 R-4 FIGURE 4-37

TEMPERATURE= 290.5

NADIR ANG	TA	EMISSIVITY
0.00	218.00	0.710
30.00	212.00	0.680
45.00	203.50	0.631
60.00	191.00	0.543
70.00	178.00	0.411
80.00	170.00	0.076

MATERIAL= SEA WATER (S)

FREQUENCY= 16.5 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= RAYTHEON RUN 9

TEMPERATURE= 288.0

NADIR ANG	TB	EMISSIVITY
0.00	159.33	0.542
30.00	136.14	0.458
45.00	128.09	0.425
60.00	104.95	0.332
70.00	98.19	0.291
80.00	84.91	0.182

APPARENT TE[illegible]PERATURE[illegible] AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
BEACH SAND (WET)(S)	[illegible]-6 REP. 29 P-4 FIGURE [illegible]-46	295.6	13.4	0.-0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SEA WATE (S)	RAYTHEON UN 8	298.0	16.5	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.			APPARENT TEMPERATURES			
13.4	US STANDARD	VER	259.11	251.94	247.65	243.65	232.28	175.-1
		VER	146.0[illegible]	142.78	155.29	192.73	216.03	234.-1
		HOR	207.86	199.62	184.30	163.10	129.63	53.-3
		HOR	162.22	140.34	133.32	113.42	110.84	109.-9
				CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS				
		VER	44.94	28.19	19.98	2.53	0.26	-0. 2
		HOR	18.15	15.31	7.45	2.47	0.30	-0.-2
BEAMSPOT AREA (SQ. NM)			0.251	0.387	0.711	2.012	6.286	48.0 1
				APPARENT TEMPERATURES				
13.4	SUMMER RAIN	VER	260.57	254.15	250.71	248.37	240.94	209.-2
		VER	178.5[illegible]	180.39	195.75	229.92	251.40	269.-1
		HOR	212.7[illegible]	205.83	195.02	178.04	156.63	125.-1
		HOR	190.8[illegible]	178.61	180.81	183.93	203.90	242.-9
				CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS				
		VER	32.61	19.05	7.73	0.92	-0.17	-0.-2
		HOR	8.71	7.03	2.00	-0.29	-0.75	-0.-4
				APPARENT TEMPERATURES				
13.4	CLOUDY STAND	VER	259.3[illegible]	252.28	240.14	244.42	233.77	182.-3
		VER	151.6[illegible]	149.28	160.48	199.72	223.30	243.-2
		HOR	208.6[illegible]	200.66	187.79	165.70	134.48	67.-7
		HOR	167.0[illegible]	146.95	141.78	126.81	130.27	145.-0
				CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS				
		VER	42.8[illegible]	26.60	18.04	2.22	0.17	-0.-3
		HOR	16.5[illegible]	13.87	6.47	1.93	0.07	-0.-6

MATERIAL= BEACH SAND (WET) (S)

FREQUENCY= 37.0 AREA= 0.1°

POLARIZATION= VER TITLE= C-G REP. 29 R-4 FIGURE 1-46

TEMPERATURE= 285.6

NADIR ANG	TA	EMISSIVITY
0.00	256.00	0.878
30.00	255.00	0.872
45.00	256.50	0.873
60.00	256.00	0.860
70.00	250.00	0.808
80.00	240.00	0.635

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	151.74	0.467
30.00	166.56	0.517
45.00	187.85	0.589
60.00	222.94	0.716
70.00	254.00	0.840
80.00	275.19	0.941

MATERIAL= EACH SAND (WET) (S)

FREQUENCY= 37.0 AREA= 0.1

POLARIZATION= HOR TITLE= RSC REP. 29 R-4 FIGURE 4-37

TEMPERATURE= 290.5

NADIR ANG	TA	EMISSIVITY
0.00	257.00	0.856
30.00	249.00	0.816
45.00	242.00	0.770
60.00	231.00	0.683
70.00	216.00	0.525
80.00	216.00	0.194

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	151.74	0.467
30.00	142.25	0.420
45.00	131.51	0.359
60.00	121.10	0.270
70.00	121.89	0.194
80.00	152.90	0.104

APPARENT TE[illegible]PERATURE[illegible] AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
BEACH SAND (WET) (S)	[illegible] REP. 29 P-4 FIGURE [illegible]-46	285.6	37.0	0.[illegible]0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SEA WATER (S)	CALCULATE	290.0	35.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	US STANDARD	VER	253.3[illegible]	252.74	253.72	252.38	244.45	228.84
		VER	151.71	166.67	187.73	222.86	253.96	275.[illegible]9
		HOR	252.1[illegible]	242.55	232.39	215.63	189.80	166.[illegible]7
		HOR	151.71	142.18	131.43	121.08	121.94	152.[illegible]6
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	6.8[illegible]	3.77	1.57	0.25	-0.03	-0.[illegible]2
		HOR	6.77	4.39	2.41	0.80	0.18	0.[illegible]0
BEAMSPOT AREA (SQ. NM)			1.48[illegible]	2.284	4.196	11.867	37.075	283.2[illegible]9

			APPARENT TEMPERATURES					
37.0	SUMMER RAIN	VER	271.[illegible]7	272.05	273.59	274.69	274.26	271.[illegible]1
		VER	238.6[illegible]	249.17	260.76	272.19	275.08	271.[illegible]9
		HOR	271.7[illegible]	270.20	270.10	271.46	272.54	271.[illegible]5
		HOR	238.6[illegible]	242.41	240.11	261.11	269.79	271.[illegible]1
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	2.2[illegible]	1.00	[illegible].31	0.02	-0.00	-0.[illegible]0
		HOR	2.2[illegible]	1.22	[illegible].50	0.09	0.01	0.[illegible]0
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	256.9[illegible]	256.52	256.05	258.45	255.16	253.[illegible]8
		VER	168.37	183.45	204.11	236.43	261.93	275.[illegible]3
		HOR	256.8[illegible]	248.11	240.83	230.99	219.11	225.[illegible]6
		HOR	168.3[illegible]	162.59	157.84	159.29	173.74	219.[illegible]0
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	5.9[illegible]	3.20	1.29	0.19	-0.02	-0.[illegible]1
		HOR	5.9[illegible]	3.74	1.98	0.60	0.12	0.[illegible]0

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= C-6 REP. 560 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TB	EMISSIVITY
0.00	235.60	0.899
30.00	240.80	0.921
45.00	242.40	0.926
60.00	237.90	0.907
70.00	223.30	0.844
80.00	217.30	0.482

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	138.37	0.476
45.00	158.18	0.547
60.00	192.95	0.675
70.00	227.69	0.807
80.00	261.39	0.944

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= 1-6 REP. NGD 829-6 FIG. 1-14B

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	236.30	0.898
30.00	234.30	0.893
45.00	228.80	0.869
60.00	216.40	0.815
70.00	197.80	0.733
80.00	183.10	0.122

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	114.77	0.384
45.00	102.38	0.327
60.00	87.16	0.244
70.00	79.50	0.174
80.00	89.42	0.093

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SNOW (DP_1) (S)		A-6 REP. EGD 829-6 FIG. 1-148	261.0	13.4	REA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
SEA WATE (S)		CALCULATE	273.0	17.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_z)	WEATHER MOD.	POLAR.			APPARENT TEMPERATURES			
13.4	JANUARY WINT	VER	235.1	240.83	242.19	237.66	222.68	141. 2
		VER	122.6	135.72	155.35	190.16	224.99	259. 3
		HOR	234.9	233.71	227.79	214.71	195.56	59. 7
		HOR	122.6	111.67	96.41	81.03	70.19	71. 1
					CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS			
		VER	112.5	105.11	86.84	47.50	-2.31	-117. 1
		HOR	112.3	122.04	128.37	133.68	125.37	-12. 4
BEAMSPOT AREA (SQ. NM)			0.251	0.387	0.711	2.012	5.286	48.0 1
					APPARENT TEMPERATURES			
13.4	CLOUDY STAND	VER	235.6	241.34	242.79	238.62	224.65	151. 0
		VER	131.2	144.85	164.91	199.61	232.97	263. 1
		HOR	235.4	234.33	229.66	216.28	198.58	75. 0
		HOR	131.2	122.37	110.45	102.45	102.32	129. 8
					CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS			
		VER	104.3	96.49	77.88	39.01	-8.32	-112. 1
		HOR	104.1	111.96	116.20	113.83	96.26	-54. 8

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-6 REP. SGD 829-6 FIG. 1-14B

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	137.00	0.436
30.00	124.70	0.380
45.00	118.90	0.354
60.00	129.50	0.402
70.00	143.40	0.465
80.00	140.80	0.454

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	170.23	0.567
45.00	190.42	0.641
60.00	222.29	0.764
70.00	248.25	0.873
80.00	261.75	0.924

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= NRC REP. NSD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	136.90	0.436
30.00	124.40	0.379
45.00	114.70	0.335
60.00	117.90	0.350
70.00	126.60	0.389
80.00	126.20	0.387

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	146.37	0.466
45.00	135.38	0.401
60.00	124.20	0.304
70.00	123.99	0.219
80.00	153.61	0.118

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SNOW (DRY) (S)		1-6 REP. NGD 829-6 FIG. 1-148	261.0	37.0	REA .

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SEA WATER (S)		CALCULATED	273.0	35.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
7.0	JANUARY WINT	VER	134.83	123.30	119.23	133.21	151.34	162.44
		VER	158.38	171.23	189.32	218.74	243.77	255.80
		HOR	134.83	123.08	115.07	122.13	135.82	150.45
		HOR	158.38	147.67	134.03	115.64	103.40	103.81
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	-23.55	-47.93	-70.09	-85.52	-92.43	-92.56
		HOR	-23.55	-24.60	-13.97	6.49	32.42	47.04
BEAMSPOT AREA (SQ. NM)			1.48	2.284	4.196	11.867	37.075	283.259
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	167.97	160.91	160.54	175.85	194.91	217. 5
		VER	186.59	197.38	210.33	235.84	254.80	264.06
		HOR	167.97	160.74	157.53	168.24	185.08	211.08
		HOR	186.59	179.79	171.96	164.30	164.86	187.79
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	-18.62	-36.47	-51.78	-60.00	-59.89	-47. 1
		HOR	-18.62	-19.05	-14.43	3.94	20.22	23.09

MATERIAL= SNOW (WET) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= [illegible] REP. [illegible] 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	263.10	0.955
30.00	262.80	0.954
45.00	261.80	0.949
60.00	259.50	0.940
70.00	253.60	0.875
80.00	239.50	0.858

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	138.37	0.476
45.00	158.18	0.547
60.00	192.95	0.675
70.00	227.69	0.807
80.00	261.39	0.944

MATERIAL= SNOW (WET) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= 1-6 REP. NGD 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	261.20	0.947
30.00	259.80	0.941
45.00	253.80	0.916
60.00	246.70	0.887
70.00	238.80	0.855
80.00	223.40	0.792

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	114.77	0.384
45.00	102.38	0.327
60.00	87.16	0.244
70.00	79.50	0.174
80.00	89.42	0.093

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
SNOW (WET) (D)			C-G REP. GD 829-6 FIG. 1-155		274.1	13.4	REA •
BACKGROUND MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
SEA WATER (S)			CALCULATE		273.0	17.0	REA •

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.			APPARENT TEMPERATURES			
13.4	JANUARY WINT	VER	262.0	261.72	260.34	258.00	241.17	237.74
		VER	126.3	138.71	157.37	190.70	224.51	258.45
		HOR	259.8	258.29	251.71	244.16	236.00	220.62
		HOR	126.3	115.19	101.41	82.30	68.12	59.62
					CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS			
		VER	135.6	123.01	103.01	67.29	15.66	-21.10
		HOR	133.5	143.10	150.30	161.86	167.89	161.10
BEAMSPOT AREA (SQ. NM)			0.251	0.387	0.711	2.012	6.286	48.0-1
					APPARENT TEMPERATURES			
13.4	CLOUDY STAND	VER	262.37	262.12	260.96	258.64	242.57	239.19
		VER	139.94	151.78	160.47	200.71	231.80	262.14
		HOR	260.3	258.78	250.42	245.22	237.59	224.15
		HOR	139.9	130.51	110.24	105.01	97.32	104.18
					CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS			
		VER	122.42	110.34	91.39	57.93	10.78	-22.15
		HOR	120.3	128.27	137.18	140.20	140.27	119.17

MATERIAL= SNOW (WET) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= -6 REP. NGD 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	262.90	0.953
30.00	262.10	0.949
45.00	261.10	0.944
60.00	260.80	0.943
70.00	258.00	0.931
80.00	254.30	0.915

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	170.23	0.567
45.00	190.42	0.641
60.00	222.29	0.764
70.00	248.25	0.873
80.00	261.75	0.924

MATERIAL= SNOW (WET) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= -3 REP. NGD 829-6 FIG. 1-155

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	262.70	0.953
30.00	259.40	0.937
45.00	249.60	0.895
60.00	247.00	0.884
70.00	238.20	0.847
80.00	236.10	0.838

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	146.37	0.466
45.00	135.38	0.401
60.00	124.20	0.304
70.00	123.99	0.219
80.00	153.61	0.118

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SNOW (WET) (D)		A-G REP. NGD 829-6 FIG. 4-155	274.1	37.0	REA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
SEA WATER (S)		CALCULATE	273.0	35.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	262.26	261.29	260.09	259.80	257.11	254. 7
		VER	158.38	171.23	189.32	218.74	243.77	255. 0
		HOR	262.26	258.48	249.75	246.52	239.00	239. 3
		HOR	158.38	147.67	134.03	115.64	103.40	103. 1
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	103.88	90.07	76.77	41.06	13.34	-0. 2
		HOR	103.88	110.81	114.72	130.88	135.60	136. 2
BEAMSPOT AREA (SQ. NM)			1.483	2.284	4.196	11.867	37.075	283.209
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	265.37	264.78	264.15	264.43	263.47	263. 8
		VER	186.59	197.38	213.33	235.64	254.80	264. 6
		HOR	265.37	262.68	256.86	255.25	251.86	256. 5
		HOR	186.59	179.79	171.96	164.30	164.86	187. 9
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	78.77	67.41	51.82	28.63	8.67	-0. 8
		HOR	78.77	82.89	83.90	90.95	87.00	68. 6

MATERIAL= ICE (ICEBERGS) (S)

FREQUENCY= 13.4 AREA= 0.10

POLARIZATION= VER TITLE= [illegible] REP 629-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	258.10	0.964
30.00	258.10	0.963
45.00	256.60	0.957
60.00	242.90	0.901
70.00	255.30	0.950
80.00	235.20	0.545

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	Tb	EMISSIVITY
0.00	125.01	0.429
30.00	138.37	0.476
45.00	158.18	0.547
60.00	192.95	0.675
70.00	227.69	0.807
80.00	261.39	0.944

MATERIAL= ICE (ICEBERGS) (S)

FREQUENCY= 13.4 AREA= 0.1

POLARIZATION= HOR TITLE= C-C REP SAD 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	258.10	0.963
30.00	249.90	0.929
45.00	234.70	0.867
60.00	203.60	0.736
70.00	205.00	0.737

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	114.77	0.384
45.00	102.38	0.327
60.00	87.16	0.244
70.00	79.50	0.174

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
ICE (ICE EGGS) (S)	S-6 REP S D 829-6 FIG 1-158	267.3	13.4	0.0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SEA WATER (S)	CALCULATE	273.0	17.0	BEA

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
13.4	JANUARY WINT	VER	257.75	257.50	255.96	241.71	254.37	159. 8
		VER	122.6	135.72	155.35	190.16	224.99	259.3
		HOR	257.4	248.64	230.66	199.53	201.03	
		HOR	122.6	111.67	98.41	81.03	70.19	
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	53.7	31.45	10.14	2.56	0.47	-0.1
		HOR	53.6	35.37	18.87	5.89	2.08	0.4
BEAMSPOT AREA (SQ. NM)			0.251	0.387	0.711	2.012	6.286	48.01
			APPARENT TEMPERATURES					
13.4	CLOUDY STAND	VER	258.0	257.80	256.36	242.64	255.22	168. 7
		VER	131.2	144.85	164.91	199.61	232.97	263.1
		HOR	257.75	249.08	232.49	201.58	203.93	
		HOR	131.29	122.37	112.45	102.45	102.32	
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	50.3	29.17	12.86	2.14	0.35	-0. 0
		HOR	50.2	32.72	17.01	4.93	1.62	0.4

MATERIAL= ICE (ICEBERGS) (S)

FREQUENCY= 37.0 AREA= 0.1

POLARIZATION= VER TITLE= -6 REP S.D 829-6 FIG 1-159

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	248.40	0.928
30.00	249.80	0.933
45.00	253.80	0.948
60.00	247.00	0.919
70.00	251.20	0.933
80.00	229.60	0.436

MATERIAL= SEA WATER (3)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	170.23	0.567
45.00	190.42	0.641
60.00	222.29	0.764
70.00	248.25	0.873
80.00	261.75	0.924

MATERIAL= ICE (ICEBERGS) (S)

FREQUENCY= 37.0 AREA= 0.1

POLARIZATION= HOR TITLE= A-C REP 5.0 829-6 FIG 1-158

TEMPERATURE= 267.3

NADIR ANG	TA	EMISSIVITY
0.00	248.50	0.928
30.00	241.20	0.900
45.00	236.50	0.881
60.00	212.10	0.780
70.00	213.10	0.774

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	146.37	0.466
45.00	135.38	0.401
60.00	124.20	0.304
70.00	123.99	0.219

APPARENT TE PERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
ICE (ICE EGGS) (S)		1-6 REP S D 829-6 FIG 1-158	267.3	37.0	0.0

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SEA WATER (S)		CALCULATE	273.0	35.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	APPARENT TEMPERATURES					
37.0	JANUARY WINT	VER	249.32	250.70	250.49	248.44	252.39	176.6
		VER	151.43	165.84	185.91	217.97	244.48	257. 0
		HOR	249.32	242.78	230.78	217.56	219.94	
		HOR	151.4	141.03	128.34	113.37	107.78	
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	6.6	3.72	1.63	0.26	0.02	-0.3
		HOR	6.6	4.46	2.63	0.88	0.30	0.2
BEAMSPOT AREA (SQ. NM)			1.48	2.284	4.196	11.867	37.075	283.29
			APPARENT TEMPERATURES					
37.0	CLOUDY STAND	VER	253.13	254.78	252.50	255.58	260.29	236.8
		VER	171.45	185.95	205.55	234.80	256.39	266.8
		HOR	253.13	248.32	246.29	233.95	241.03	
		HOR	171.45	165.70	160.65	161.21	174.64	
			CONTRASTS-TARGET APPARENT, BACKGROUND BRIGHTNESS					
		VER	5.51	3.01	1.26	0.18	0.01	-0.1
		HOR	5.51	3.62	2.04	0.61	0.18	0. 2

MATERIAL= FRESH WATER (OCEAN AREAS) (S)

FREQUENCY= 10.0 AREA= 0.50

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	125.33	0.418
45.00	145.04	0.485
60.00	181.66	0.611
70.00	222.37	0.754
80.00	275.47	0.950

MATERIAL= SEA WATER (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	110.92	0.392
30.00	123.46	0.437
45.00	142.44	0.506
60.00	177.21	0.633
70.00	214.85	0.773
80.00	260.38	0.950

MATERIAL= FRESH WATER (OCEAN AREAS) (S)

FREQUENCY= 10.0 AREA= 0.5

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	112.39	0.374
30.00	101.55	0.334
45.00	88.16	0.282
60.00	70.42	0.209
70.00	58.25	0.148
80.00	54.09	0.078

MATERIAL= SEA WATER (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	110.92	0.392
30.00	100.39	0.351
45.00	87.31	0.297
60.00	69.93	0.221
70.00	57.97	0.157
80.00	53.96	0.083

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
FRESH WATER (OCEAN AREAS) (S)	THEORETICAL	290.0	10.0	0.0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR-A
SEA WATER (S)	CALCULATED	273.0	10.0	BEAM

NADIR ANGLES (DEGREES)			0	30	45	60	70	90
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	112.3	125.30	145.01	181.66	222.41	275.54
		VER	110.91	123.34	142.45	177.23	214.87	260.17
		HOR	112.3	101.59	88.03	70.35	58.14	54.40
		HOR	110.81	100.50	87.28	70.00	58.00	53.96
			BRIGHTNESS TEMP. CONTRASTS					
		VER	1.0	0.88	0.62	0.38	0.21	0.05
		HOR	1.0	0.48	0.18	0.03	0.00	0.00
BEAMSPOT AREA (SQ. NM)			0.72	1.119	2.056	5.815	18.167	138.841
			BRIGHTNESS TEMPERATURES					
10.0	SUMMER RAIN	VER	123.3	136.98	157.42	194.29	233.08	277.41
		VER	121.71	134.91	154.72	189.81	225.83	265.88
		HOR	123.3	115.01	105.54	96.79	97.70	125.43
		HOR	121.71	113.80	104.64	96.27	97.37	125.21
			BRIGHTNESS TEMP. CONTRASTS					
		VER	1.1	0.93	0.66	0.39	0.20	0.04
		HOR	1.1	0.54	0.22	0.04	0.01	0.00
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	114.1	127.31	147.15	183.85	224.27	275.09
		VER	112.6	125.32	144.56	179.42	216.78	261.01
		HOR	114.1	103.89	91.07	75.00	65.28	67.01
		HOR	112.67	102.79	90.29	74.63	65.11	67.63
			BRIGHTNESS TEMP. CONTRASTS					
		VER	1.0	0.89	0.63	0.38	0.21	0.05
		HOR	1.0	0.49	0.19	0.03	0.00	0.00

MATERIAL= FRESH WATER (OCEAN AREAS) (S)

FREQUENCY= 17.0 AREA= 0.5°

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	122.95	0.396
30.00	136.55	0.441
45.00	156.99	0.510
60.00	193.83	0.637
70.00	232.54	0.776
80.00	276.01	0.948

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	138.37	0.476
45.00	158.18	0.547
60.00	192.95	0.675
70.00	227.69	0.807
80.00	261.39	0.944

MATERIAL= FRESH WATER (OCEAN AREAS) (S)

FREQUENCY= 17.0 AREA= 0.5°

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	122.95	0.396
30.00	112.67	0.354
45.00	100.34	0.300
60.00	85.44	0.223
70.00	76.23	0.158
80.00	88.84	0.084

MATERIAL= SEA WATER(S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TE	EMISSIVITY
0.00	125.01	0.429
30.00	114.77	0.384
45.00	102.38	0.327
60.00	87.16	0.244
70.00	79.50	0.174
80.00	89.42	0.093

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE			SURF TEMP.	FREQ	AP A
FRESH WATER (OCEAN AREAS) (S)			THEORETIC L			290.0	17.0	0. 0
BACKGROUND MATERIAL			SOURCE			SURF TEMP.	FREQ	AP A
SEA WATER (S)			CALCULATE			273.0	17.0	REA .
NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
17.0	US STANDARD	VER	123.04	136.58	157.07	193.94	232.60	276. 2
		VER	125.03	138.30	159.10	193.00	227.64	261.26
		HOR	123.04	112.79	100.40	85.49	78.13	88.07
		HOR	125.03	114.66	102.33	87.06	79.39	89.76
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-1.99	-1.72	-0.72	0.23	0.39	0.15
		HOR	-1.99	-1.87	-1.36	-0.39	-0.10	-0. 1
BEAMSPOT AREA (SQ. NM)			0.254	0.387	0.711	2.012	6.286	48.071
			BRIGHTNESS TEMPERATURES					
17.0	SUMMER RAIN	VER	161.11	175.97	197.11	230.84	259.19	278.34
		VER	161.85	176.27	196.54	228.37	254.22	271.41
		HOR	161.11	158.58	159.52	167.81	189.20	238.20
		HOR	161.85	159.18	159.07	168.03	189.18	238.10
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-0.74	-0.30	0.40	0.61	0.40	0.17
		HOR	-0.74	-0.60	-0.39	-0.05	0.00	0.00
			BRIGHTNESS TEMPERATURES					
17.0	CLOUDY STAND	VER	129.52	143.39	164.19	200.88	238.04	276.59
		VER	131.26	144.85	164.91	199.61	232.97	263.71
		HOR	129.52	120.73	110.78	101.16	101.36	129.05
		HOR	131.26	122.37	110.45	102.45	102.32	129.18
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-1.77	-1.46	-0.51	0.32	0.40	0.13
		HOR	-1.73	-1.64	-1.17	-0.32	-0.08	-0. 0

MATERIAL= FRESH WATER (OCEAN AREAS) (S)

FREQUENCY= 35.0 AREA= 0.50

POLARIZATION= VER TITLE= THEORETIC, L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	163.77	0.506
45.00	185.02	0.578
60.00	220.29	0.705
70.00	251.94	0.830
80.00	274.70	0.938

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	170.23	0.567
45.00	190.42	0.641
60.00	222.29	0.764
70.00	248.25	0.873
80.00	261.75	0.924

MATERIAL= FRESH WATER (OCEAN AREAS) (S)

FREQUENCY= 35.0 AREA= 0.5

POLARIZATION= HOR TITLE= THEORETIC L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	149.03	0.457
30.00	139.74	0.410
45.00	129.31	0.350
60.00	119.46	0.263
70.00	120.78	0.188
80.00	152.45	0.101

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	146.37	0.466
45.00	135.38	0.401
60.00	124.20	0.304
70.00	123.99	0.219
80.00	153.61	0.118

PRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
FRESH WATER (OCEAN AREAS) (S)		THEORETICAL	290.0	35.0	0. 0
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
SEA WATER (S)		CALCULATE	273.0	35.0	REA..

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	149.14	163.90	185.04	220.35	251.91	274.-5
		VER	155.83	170.32	190.48	222.34	248.32	261.-0
		HOR	149.14	139.66	120.23	119.49	120.71	152.53
		HOR	155.83	146.42	135.47	124.28	123.94	153.-0
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-2.2	-1.41	-2.65	-0.08	0.05	0. 2
		HOR	-2.2	-1.48	-2.74	-0.20	-0.04	-0.-0
BEAMSPOT AREA (SQ. NM)			1.48	2.284	4.196	11.867	37.075	283.2-9
			BRIGHTNESS TEMPERATURES					
35.0	SUMMER RAIN	VER	237.85	248.40	260.21	271.91	275.00	271.-9
		VER	238.04	248.00	259.94	269.70	273.00	271.-6
		HOR	237.85	241.71	248.65	260.94	269.74	271.-1
		HOR	238.04	241.79	248.44	260.49	269.41	271.-6
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-0.01	0.09	0.15	0.09	0.03	0.-0
		HOR	-0.0	-0.02	0.02	0.02	0.00	0. 0
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	166.15	181.09	201.89	234.53	260.57	275.-3
		VER	171.45	185.95	205.55	234.80	256.39	266.-8
		HOR	166.15	160.44	156.03	158.07	172.93	219.-0
		HOR	171.45	165.70	160.65	161.21	174.64	219.-0
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-1.7	-1.06	-2.44	-0.01	0.06	0. 1
		HOR	-1.7	-1.15	-2.55	-0.13	-0.02	-0.-0

MATERIAL= FRESH WATER (OCEAN AREAS) (S)

FREQUENCY= 94.0 AREA= 0.5°

POLARIZATION= VER TITLE= THEORETIC, L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	214.27	0.604
30.00	227.59	0.657
45.00	244.15	0.731
60.00	264.32	0.842
70.00	273.62	0.922
80.00	270.86	0.901

MATERIAL= SEA WATER (S)

FREQUENCY= 94.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	218.98	0.681
30.00	230.79	0.732
45.00	245.03	0.801
60.00	261.33	0.899
70.00	267.97	0.953
80.00	266.78	0.882

MATERIAL= FRESH WATER (OCEAN AREAS) (S)

FREQUENCY= 94.0 AREA= 0.50

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	214.27	0.604
30.00	209.92	0.552
45.00	207.04	0.481
60.00	211.18	0.371
70.00	225.98	0.272
80.00	255.88	0.149

MATERIAL= SEA WATER (S)

FREQUENCY= 94.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	218.98	0.681
30.00	214.64	0.628
45.00	211.29	0.554
60.00	213.92	0.436
70.00	227.09	0.324
80.00	255.75	0.180

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
FRESH WATER (OCEAN AREAS)	(S)	THEORETICAL	290.0	94.0	0.00

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SEA WATER	(S)	CALCULATE	273.0	94.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
94.0	US STANDARD	VER	214.21	227.55	244.22	264.34	273.63	270.97
		VER	219.01	230.75	244.97	261.37	267.93	266.77
		HOR	214.21	209.92	207.06	211.18	226.00	255.08
		HOR	219.01	214.62	211.23	213.96	227.10	255.74
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-4.80	-3.20	-0.64	0.90	0.55	0.15
		HOR	-4.80	-4.70	-3.59	-0.84	-0.11	0.10
BEAMSPOT AREA (SQ. NM)			0.201	0.317	0.582	1.645	5.140	39.24
			BRIGHTNESS TEMPERATURES					
94.0	SUMMER RAIN	VER	272.13	271.60	270.46	268.39	266.60	264.24
		VER	271.33	270.96	270.06	268.28	266.59	264.24
		HOR	272.13	271.47	270.35	268.37	266.60	264.24
		HOR	271.33	270.93	270.09	268.32	266.60	264.24
			BRIGHTNESS TEMP. CONTRASTS					
		VER	0.80	0.64	0.34	0.03	0.00	0.00
		HOR	0.80	0.53	0.23	0.02	0.00	0.00
			BRIGHTNESS TEMPERATURES					
94.0	CLOUDY STAND	VER	243.76	253.03	269.91	271.32	271.95	266.70
		VER	244.56	252.69	261.13	268.29	269.26	266.11
		HOR	243.76	244.47	247.55	255.91	263.92	266.11
		HOR	244.56	245.13	247.82	255.66	263.52	266.12
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-0.80	0.33	1.53	0.92	0.26	0.10
		HOR	-0.80	-0.66	-0.24	0.08	0.04	0.00

MATERIAL= SEA WATER (S)

FREQUENCY= 1.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	110.60	0.373
30.00	123.40	0.417
45.00	143.00	0.484
60.00	179.72	0.610
70.00	221.18	0.755
80.00	277.77	0.959

MATERIAL= SEA WATER (S)

FREQUENCY= 1.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	101.33	0.362
30.00	113.20	0.405
45.00	131.41	0.471
60.00	165.73	0.596
70.00	204.96	0.741
80.00	260.24	0.952

MATERIAL= SEA WATER (S)

FREQUENCY= 1.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	110.60	0.373
30.00	99.46	0.333
45.00	85.55	0.282
60.00	66.59	0.209
70.00	52.47	0.148
80.00	42.59	0.078

MATERIAL= SEA WATER (S)

FREQUENCY= 1.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	101.33	0.362
30.00	91.12	0.323
45.00	78.42	0.273
60.00	61.25	0.202
70.00	48.67	0.143
80.00	40.61	0.075

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SEA WATER (S)		THEORETICAL	290.0	1.0	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SEA WATER (S)		CALCULATED	273.0	1.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
1.0	US STANDARD	VER	110.56	123.47	143.07	179.66	221.10	277.-7
		VER	101.31	113.22	131.45	165.74	204.99	260.-1
		HOR	110.56	99.52	85.68	66.71	52.50	42.-7
		HOR	101.31	91.22	79.54	61.36	48.73	40.-5
			BRIGHTNESS TEMP. CONTRASTS					
		VER	9.25	10.25	11.61	13.92	16.21	17.-5
		HOR	9.25	8.29	7.15	5.35	3.77	2.-2
BEAMSPOT AREA (SQ. NM)			72.711	111.946	205.658	581.689	1817.37913	886.4-6
			BRIGHTNESS TEMPERATURES					
1.0	SUMMER RAIN	VER	111.32	124.30	143.97	180.63	222.13	278.-0
		VER	102.10	114.08	132.40	166.78	206.04	261.-5
		HOR	111.32	100.45	86.91	68.59	55.40	48.-0
		HOR	102.10	92.18	79.79	63.26	51.66	46.-1
			BRIGHTNESS TEMP. CONTRASTS					
		VER	9.23	10.21	11.57	13.85	16.09	17.-4
		HOR	9.23	8.27	7.12	5.32	3.74	1.-9
			BRIGHTNESS TEMPERATURES					
1.0	CLOUDY STAND	VER	110.56	123.49	143.09	179.68	221.22	277. 7
		VER	101.32	113.25	131.48	165.77	205.01	260.-2
		HOR	110.5	99.54	85.72	66.76	52.58	42.-4
		HOR	101.32	91.25	79.57	61.41	48.82	40.-2
			BRIGHTNESS TEMP. CONTRASTS					
		VER	9.25	10.24	11.61	13.92	16.20	17.-5
		HOR	9.25	8.29	7.15	5.35	3.77	2.-2

MATERIAL= SEA WATER (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	115.96	0.387
30.00	129.13	0.432
45.00	149.15	0.500
60.00	186.06	0.627
70.00	226.56	0.769
80.00	277.51	0.958

MATERIAL= SEA WATER (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	110.92	0.392
30.00	123.46	0.437
45.00	142.44	0.506
60.00	177.21	0.633
70.00	214.95	0.773
80.00	260.38	0.950

MATERIAL= SEA WATER (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETIC L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	115.96	0.387
30.00	104.84	0.346
45.00	91.04	0.293
60.00	72.64	0.217
70.00	59.86	0.154
80.00	54.92	0.082

MATERIAL= SEA WATER (S)

FREQUENCY= 10.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	110.92	0.392
30.00	100.39	0.351
45.00	87.31	0.297
60.00	69.93	0.221
70.00	57.97	0.157
80.00	53.96	0.083

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
SEA WATER (S)			THEORETICAL		290.0	10.0	BEA
BACKGROUND MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
SEA WATER (S)			CALCULATE		273.0	10.0	BEA
NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
10.0	US STANDARD	VER	115.9	129.26	140.22	186.09	226.48	277.-7
		VER	110.81	123.34	140.45	177.25	214.87	260.-7
		HOR	115.9	104.97	91.12	72.56	59.77	55. 2
		HOR	110.81	100.50	87.28	70.00	58.00	53.-6
			BRIGHTNESS TEMP. CONTRASTS					
		VER	5.17	5.91	6.77	8.84	11.60	17.10
		HOR	5.17	4.47	3.84	2.56	1.76	1. 6
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.811
			BRIGHTNESS TEMPERATURES					
10.0	SUMMER RAIN	VER	126.75	140.64	161.25	198.17	236.43	279.-0
		VER	121.71	134.91	154.72	189.81	225.83	265.-8
		HOR	126.75	118.15	108.35	98.73	99.04	126.-3
		HOR	121.71	113.80	104.64	96.27	97.37	125.-1
			BRIGHTNESS TEMP. CONTRASTS					
		VER	5.04	5.74	6.53	8.36	10.60	13.-2
		HOR	5.04	4.35	3.71	2.46	1.56	0.-1
			BRIGHTNESS TEMPERATURES					
10.0	CLOUDY STAND	VER	117.82	131.21	151.29	188.18	228.21	277.-0
		VER	112.67	125.32	146.56	179.42	216.78	261.-1
		HOR	117.82	107.24	94.10	77.17	66.86	68.-6
		HOR	112.67	102.79	90.29	74.63	65.11	67.-3
			BRIGHTNESS TEMP. CONTRASTS					
		VER	5.1	5.88	6.73	8.76	11.42	16. 9
		HOR	5.1	4.45	3.82	2.54	1.75	1. 4

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	126.18	0.407
30.00	139.97	0.453
45.00	160.62	0.523
60.00	197.59	0.651
70.00	235.93	0.789
80.00	277.42	0.954

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	138.37	0.476
45.00	158.18	0.547
60.00	192.95	0.675
70.00	227.69	0.807
80.00	261.39	0.944

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETIC

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	126.18	0.407
30.00	115.65	0.364
45.00	102.95	0.309
60.00	87.44	0.230
70.00	79.65	0.164
80.00	89.52	0.087

MATERIAL= SEA WATER (S)

FREQUENCY= 17.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	125.01	0.429
30.00	114.77	0.384
45.00	102.38	0.327
60.00	87.16	0.244
70.00	79.50	0.174
80.00	89.42	0.093

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SEA WATER (S)		THEORETIC L	290.0	17.0	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
SEA WATER (S)		CALCULATE	273.0	17.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.		BRIGHTNESS TEMPERATURES				
17.0	US STANDARD	VER	126.07	139.86	160.58	197.60	235.85	277.62
		VER	125.03	138.30	15 .10	193.00	227.64	261.76
		HOR	126.07	115.52	102.83	87.33	79.63	89.62
		HOR	125.03	114.66	102.33	87.06	79.39	89.46
				BRIGHTNESS TEMP. CONTRASTS				
		VER	1.04	1.56	2.48	4.60	8.21	15.47
		HOR	1.04	0.86	0.50	0.27	0.24	0. 6
BEAMSPOT AREA (SQ. NM)			0.251	0.387	0.711	2.012	6.286	48.041
				BRIGHTNESS TEMPERATURES				
17.0	SUMMER RAIN	VER	163.42	178.36	190.50	232.97	260.66	278.62
		VER	161.85	176.27	196.54	228.37	254.22	271.61
		HOR	163.42	160.58	160.17	168.88	189.88	238.14
		HOR	161.85	159.18	159.07	168.03	189.18	238.10
				BRIGHTNESS TEMP. CONTRASTS				
		VER	1.56	2.09	2.96	4.60	6.44	6.71
		HOR	1.56	1.40	1.10	0.85	0.70	0.74
				BRIGHTNESS TEMPERATURES				
17.0	CLOUDY STAND	VER	132.43	146.52	167.49	204.25	240.91	277.62
		VER	131.29	144.85	166.91	199.61	232.97	263.71
		HOR	132.43	123.33	113.07	102.84	102.68	129.76
		HOR	131.29	122.37	112.45	102.45	102.32	129.68
				BRIGHTNESS TEMP. CONTRASTS				
		VER	1.14	1.66	2.59	4.65	7.95	13.80
		HOR	1.14	0.97	0.62	0.40	0.36	0.48

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	151.74	0.467
30.00	166.56	0.517
45.00	187.85	0.589
60.00	222.94	0.716
70.00	254.00	0.840
80.00	275.19	0.941

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	170.23	0.567
45.00	190.42	0.641
60.00	222.29	0.764
70.00	248.25	0.873
80.00	261.75	0.924

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETIC L

TEMPERATURE= 290.0

NADIR ANG	Tb	EMISSIVITY
0.00	151.74	0.467
30.00	142.25	0.420
45.00	131.51	0.359
60.00	121.10	0.270
70.00	121.89	0.194
80.00	152.90	0.104

MATERIAL= SEA WATER (S)

FREQUENCY= 35.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	155.88	0.515
30.00	146.37	0.466
45.00	135.38	0.401
60.00	124.20	0.304
70.00	123.99	0.219
80.00	153.61	0.118

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SEA WATER (S)		THEORETICAL	290.0	35.0	BEA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SEA WATER (S)		CALCULATE	273.0	35.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	US STANDARD	VER	151.71	166.67	187.73	222.86	253.96	275. 9
		VER	155.83	170.32	190.48	222.34	248.32	261.-0
		HOR	151.71	142.18	131.43	121.08	121.94	152. 6
		HOR	155.83	146.42	135.47	124.28	123.94	153. 0
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-4.12	-3.65	-2.75	0.52	5.64	13. 9
		HOR	-4.12	-4.24	-4.04	-3.19	-2.00	-0.-4
BEAMSPOT AREA (SQ. NM)			1.485	2.284	4.196	11.867	37.075	283.2-9
			BRIGHTNESS TEMPERATURES					
35.0	SUMMER RAIN	VER	238.66	249.17	260.76	272.19	275.08	271. 9
		VER	238.06	248.00	259.94	269.70	273.00	271.-6
		HOR	238.69	242.41	249.11	261.11	269.79	271.-1
		HOR	238.0	241.79	248.44	260.49	269.41	271.-6
			BRIGHTNESS TEMP. CONTRASTS					
		VER	0.61	1.16	1.82	2.48	2.08	0.-3
		HOR	0.61	0.62	0.66	0.62	0.38	0.-5
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	168.37	183.45	204.11	236.43	261.93	275.-3
		VER	171.45	185.95	205.55	234.80	256.39	266.-8
		HOR	168.37	162.59	157.84	159.29	173.74	219.-0
		HOR	171.45	165.70	160.65	161.21	174.64	219.-0
			BRIGHTNESS TEMP. CONTRASTS					
		VER	-3.08	-2.49	-1.44	1.64	5.54	P. 5
		HOR	-3.0	-3.10	-2.81	-1.93	-0.89	-0.-0

MATERIAL= SEA WATER (S)

FREQUENCY= 94.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	215.94	0.614
30.00	229.14	0.666
45.00	245.48	0.739
60.00	265.19	0.850
70.00	274.01	0.927
80.00	270.86	0.901

MATERIAL= SEA WATER (S)

FREQUENCY= 94.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	218.98	0.681
30.00	230.79	0.732
45.00	245.03	0.801
60.00	261.33	0.899
70.00	267.97	0.953
80.00	266.78	0.882

MATERIAL= SEA WATER (S)

FREQUENCY= 94.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	215.94	0.614
30.00	211.45	0.561
45.00	208.34	0.490
60.00	212.02	0.378
70.00	226.41	0.278
80.00	255.95	0.152

MATERIAL= SEA WATER (S)

FREQUENCY= 94.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	218.98	0.681
30.00	214.64	0.628
45.00	211.29	0.554
60.00	213.92	0.436
70.00	227.09	0.324
80.00	255.75	0.180

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
SEA WATER	(S)		THEORETICAL		290.0	94.0	PEA .
BACKGROUND MATERIAL			SOURCE		SURF TEMP.	FREQ	AP A
SEA WATER	(S)		CALCULATE		273.0	94.0	PEA .
NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.			BRIGHTNESS TEMPERATURES			
94.0	US STANDARD	VER	216.02	229.06	245.41	265.25	273.99	270.57
		VER	219.01	230.75	244.97	261.37	267.93	266.57
		HOR	216.02	211.43	209.40	211.97	226.44	255.54
		HOR	219.01	214.62	211.23	213.96	227.10	255.54
					BRIGHTNESS TEMP. CONTRASTS			
		VER	-3.01	-1.69	2.44	3.87	6.06	4. 9
		HOR	-3.01	-3.19	-2.83	-1.99	-0.66	0.50
BEAMSPOT AREA (SQ. NM)			0.20E	0.317	0.592	1.645	5.140	39.24
					BRIGHTNESS TEMPERATURES			
94.0	SUMMER RAIN	VER	272.16	271.62	270.46	268.39	266.60	264.64
		VER	271.33	270.96	270.06	268.28	266.59	264.64
		HOR	272.16	271.48	270.36	268.37	266.60	264.64
		HOR	271.33	270.93	270.09	268.32	266.60	264.64
					BRIGHTNESS TEMP. CONTRASTS			
		VER	0.83	0.65	0.40	0.11	0.01	0.00
		HOR	0.83	0.55	0.27	0.05	0.00	0.00
					BRIGHTNESS TEMPERATURES			
94.0	CLOUDY STAND	VER	244.73	253.76	263.41	271.58	272.01	266.50
		VER	244.64	252.69	261.13	268.29	269.26	266.51
		HOR	244.73	245.20	249.10	256.14	264.00	266.51
		HOR	244.64	245.13	247.82	255.66	263.52	266. 2
					BRIGHTNESS TEMP. CONTRASTS			
		VER	0.09	1.07	3.28	3.29	2.75	0. 9
		HOR	0.01	0.07	-0.28	0.48	0.48	0.00

MATERIAL= SEA WATER (S)

FREQUENCY= 140.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	245.19	0.682
30.00	254.85	0.733
45.00	265.35	0.802
60.00	274.78	0.899
70.00	275.98	0.954
80.00	271.16	0.883

MATERIAL= SEA WATER (S)

FREQUENCY= 140.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATED

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	244.34	0.741
30.00	252.81	0.789
45.00	261.93	0.853
60.00	270.12	0.937
70.00	271.84	0.973
80.00	269.94	0.870

MATERIAL= SEA WATER (S)

FREQUENCY= 140.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	245.19	0.682
30.00	243.66	0.629
45.00	244.07	0.555
60.00	250.55	0.436
70.00	260.85	0.325
80.00	269.47	0.181

MATERIAL= SEA WATER (S)

FREQUENCY= 140.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	244.34	0.741
30.00	243.16	0.690
45.00	243.72	0.617
60.00	250.04	0.493
70.00	260.24	0.372
80.00	269.25	0.211

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SEA WATER (S)		THEORETICAL	290.0	140.0	REA .
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AR A**
SEA WATER (S)		CALCULATE	273.0	140.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_z)	WEATHER MOD.	POLAR.			BRIGHTNESS TEMPERATURES			
140.0	US STANDARD	VER	245.25	254.84	265.32	274.76	275.97	271.06
		VER	244.38	252.78	264.93	270.13	271.85	269.04
		HOR	245.25	243.65	244.04	250.53	260.86	269.07
		HOR	244.38	243.15	243.75	250.03	260.24	269.05
					BRIGHTNESS TEMP. CONTRASTS			
		VER	0.87	2.05	3.40	4.63	4.12	1.02
		HOR	0.87	0.50	0.29	0.50	0.62	0.02
BEAMSPOT AREA (SQ. NM)			0.09	0.143	0.262	0.742	2.317	17.705
					BRIGHTNESS TEMPERATURES			
140.0	SUMMER RAIN	VER	270.03	269.18	268.09	266.59	265.43	264.09
		VER	269.77	269.03	268.02	266.58	265.43	264.09
		HOR	270.03	269.17	268.08	266.59	265.43	264.09
		HOR	269.77	269.04	268.04	266.59	265.43	264.09
					BRIGHTNESS TEMP. CONTRASTS			
		VER	0.26	0.16	0.06	0.01	0.00	0.00
		HOR	0.26	0.14	0.05	0.00	0.00	0.00
					BRIGHTNESS TEMPERATURES			
140.0	CLOUDY STAND	VER	265.54	269.56	270.59	272.94	270.55	266.64
		VER	263.43	267.08	270.01	270.98	269.65	266.49
		HOR	265.54	266.21	267.68	269.78	269.69	266.62
		HOR	263.43	264.43	266.31	269.00	269.40	266.61
					BRIGHTNESS TEMP. CONTRASTS			
		VER	2.15	2.49	2.58	1.95	0.90	0.05
		HOR	2.15	1.79	1.36	0.78	0.29	0.01

MATERIAL= SEA WATER (S)

FREQUENCY= 220.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= THEORETIC, L

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	271.77	0.748
30.00	274.72	0.796
45.00	276.70	0.859
60.00	276.42	0.941
70.00	274.41	0.975
80.00	271.43	0.869

MATERIAL= SEA WATER (S)

FREQUENCY= 220.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	268.60	0.789
30.00	271.52	0.834
45.00	273.78	0.891
60.00	274.53	0.963
70.00	273.64	0.985
80.00	271.39	0.861

MATERIAL= SEA WATER (S)

FREQUENCY= 220.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 290.0

NADIR ANG	TB	EMISSIVITY
0.00	271.77	0.748
30.00	272.03	0.698
45.00	272.90	0.625
60.00	274.18	0.501
70.00	273.88	0.379
80.00	271.42	0.215

MATERIAL= SEA WATER (S)

FREQUENCY= 220.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= CALCULATE

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	268.60	0.789
30.00	269.48	0.742
45.00	271.06	0.670
60.00	273.27	0.545
70.00	273.58	0.418
80.00	271.41	0.240

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
SEA WATER (S)		THEORETICAL	290.0	220.0	REA •

BACKGROUND MATERIAL		SOURCE	SURF TEMP.	FREQ	AR A
SEA WATER (S)		CALCULATED	273.0	220.0	REA •

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_z)	WEATHER MOD.	POLAR.		BRIGHTNESS TEMPERATURES				
220.0	US STANDARD	VER	271.7[illegible]	274.71	276.70	276.42	274.41	271. 3
		VER	268.6[illegible]	271.53	273.78	274.53	273.64	271.79
		HOR	271.7[illegible]	272.04	272.90	274.18	273.88	271.42
		HOR	268.6[illegible]	269.48	271.05	273.27	273.58	271.41
				BRIGHTNESS TEMP. CONTRASTS				
		VER	3.1[illegible]	3.18	2.92	1.90	0.77	0.24
		HOR	3.1[illegible]	2.55	1.85	0.91	0.30	0.01
BEAMSPOT AREA (SQ. NM)			0.03	0.058	0.106	0.300	0.938	7.1-0
				BRIGHTNESS TEMPERATURES				
220.0	SUMMER RAIN	VER	191.06	203.96	220.90	242.94	252.08	223.09
		VER	188.67	200.00	214.35	232.48	238.02	206.20
		HOR	191.0[illegible]	177.62	158.00	124.67	91.88	47.79
		HOR	188.67	176.84	156.71	127.23	95.25	50.13
				BRIGHTNESS TEMP. CONTRASTS				
		VER	2.3[illegible]	3.96	6.55	10.46	14.06	16.79
		HOR	2.3[illegible]	0.79	-0.71	-2.56	-3.38	-2.24
				BRIGHTNESS TEMPERATURES				
220.0	CLOUDY STAND	VER	272.9[illegible]	272.75	271.81	269.80	267.96	265.13
		VER	271.43	271.48	270.96	269.51	267.92	265.13
		HOR	272.9[illegible]	272.39	271.47	269.71	267.95	265.13
		HOR	271.43	271.30	270.87	269.55	267.93	265.13
				BRIGHTNESS TEMP. CONTRASTS				
		VER	1.55	1.27	0.85	0.29	0.05	0.10
		HOR	1.55	1.09	0.61	0.16	0.02	0.10

MATERIAL= FRESH WATER (SPNG RIVERS PNDS) (S)

FREQUENCY= 17.0 AREA= 1.00

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	123.98	0.425
30.00	137.29	0.472
45.00	157.03	0.543
60.00	191.71	0.670
70.00	226.41	0.802
80.00	260.20	0.938

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G REP. SGD 829-6 FIG. 1-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	235.60	0.899
30.00	240.80	0.921
45.00	242.40	0.926
60.00	237.90	0.907
70.00	223.30	0.844
80.00	217.30	0.482

MATERIAL= FRESH WATER (SPNG RIVERS PNDS) (S)

FREQUENCY= 17.0 AREA= 1.00

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	123.98	0.425
30.00	113.81	0.381
45.00	101.53	0.324
60.00	86.50	0.242
70.00	79.03	0.172
80.00	89.19	0.092

MATERIAL= SNOW (DRY) (S)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G REP. #GD 829-6 FIG. 4-148

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	236.30	0.898
30.00	234.30	0.893
45.00	228.80	0.869
60.00	216.40	0.815
70.00	197.80	0.733
80.00	183.10	0.122

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL			SOURCE		SURF TEMP.	FREQ	AR A
FRESH WATER (SPNG RIVERS PNDS) (S)			THEORETIC L		273.0	17.0	1.-0
BACKGROUND MATERIAL			SOURCE		SURF TEMP.	FREQ	AR A
SNOW (DRY) (S)			C-G REP. GD 829-6	FIG. 1-148	261.0	13.4	REA ..

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
17.0	JANUARY WINT	VER	121.55	134.67	15..32	188.89	223.77	257.-1
		VER	235.16	240.83	242.19	237.66	222.68	141.-2
		HOR	121.55	110.89	97.64	80.53	69.71	71.-9
		HOR	234.9.	233.71	227.79	214.71	195.56	59.-7
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-113.61	-94.87	-42.75	-8.39	0.06	0.-4
		HOR	-113.35	-109.76	-62.31	-23.08	-6.93	0.-9
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.8-1
			BRIGHTNESS TEMPERATURES					
17.0	CLOUDY STAND	VER	130.3.	143.88	163.95	198.48	231.94	262.-7
		VER	235.65	241.34	242.79	238.62	224.65	151.-0
		HOR	130.3.	121.63	111.74	102.00	101.91	129.-3
		HOR	235.42	234.33	228.66	216.28	198.58	75.-0
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-105.37	-87.10	-38.35	-6.90	0.40	0.-0
		HOR	-105.1.	-100.71	-56.87	-19.65	-5.32	0.-9

MATERIAL= FRESH WATER (SPNG RIVERS PNDS) (S)

FREQUENCY= 35.0 AREA= 1.00

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	156.10	0.516
30.00	170.45	0.568
45.00	190.62	0.642
60.00	222.38	0.764
70.00	248.10	0.872
80.00	261.20	0.920

MATERIAL= SNOW (DRY) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-148 (BACKGROUND)

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	137.00	0.436
30.00	124.70	0.380
45.00	118.90	0.354
60.00	129.50	0.402
70.00	143.40	0.465
80.00	140.80	0.454

MATERIAL= FRESH WATER (SPRG RIVERS PNDS) (S)

FREQUENCY= 35.0 AREA= 1.0

POLARIZATION= HOR TITLE= THEORETICAL

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	156.10	0.516
30.00	146.57	0.467
45.00	135.55	0.401
60.00	124.33	0.304
70.00	124.08	0.220
80.00	153.65	0.118

MATERIAL= SNOW (DRY) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-148 (BACKGROUND)

TEMPERATURE= 261.0

NADIR ANG	TA	EMISSIVITY
0.00	136.90	0.436
30.00	124.40	0.379
45.00	114.70	0.335
60.00	117.90	0.350
70.00	126.60	0.389
80.00	126.20	0.387

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
FRESH WATER (SPRING RIVERS PNDS) (S)	THEORETICAL	273.0	35.0	1.-0

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AP A
SNOW (DRY) (D)	E-G FIGURE 1-148 (BACKGROUND)	261.0	37.0	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GH_Z)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	JANUARY WINT	VER	151.72	166.09	186.15	217.97	244.27	256.-5
		VER	126.8[illegible]	115.59	11-.09	131.26	154.33	176.-1
		HOR	151.72	141.28	12-.34	113.37	107.99	126.62
		HOR	126.8[illegible]	115.35	10-.74	120.01	139.24	166.-9
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	16.8[illegible]	22.11	17.41	7.31	2.43	0.-8
		HOR	16.8[illegible]	11.35	[illegible].67	-0.56	-0.84	-0.-4
BEAMSPOT AREA (SQ. NM)			1.48[illegible]	2.284	4.196	11.867	37.075	283.2-9
			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	171.6[illegible]	186.15	205.73	234.80	256.27	266.-4
		VER	150.3[illegible]	144.55	14-.34	173.20	201.61	236.-6
		HOR	171.6[illegible]	165.90	16-.65	161.21	174.76	219.-0
		HOR	150.37	144.36	14[illegible].97	165.35	192.73	232.-8
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	14.3[illegible]	18.22	1-.68	5.19	1.47	0.-1
		HOR	14.3[illegible]	9.43	-.74	-0.35	-0.48	-0.-5

MATERIAL= FRESH WATER (SPRING RIVERS PONDS) (S)

FREQUENCY= 17.0 AREA= 1.0

POLARIZATION= VER TITLE= THEORETICAL

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	123.98	0.425
30.00	137.29	0.472
45.00	157.03	0.543
60.00	191.71	0.670
70.00	226.41	0.802
80.00	260.20	0.938

MATERIAL= SNOW (WET) (D)

FREQUENCY= 13.4 AREA= BRIGHTSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-155 (BACKGROUND)

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	263.10	0.955
30.00	262.80	0.954
45.00	261.80	0.949
60.00	259.50	0.940
70.00	253.60	0.875
80.00	239.50	0.858

MATERIAL= FRESH WATER (SPNG RIVERS PNDS)(S)

FREQUENCY= 17.0 AREA= 1.0

POLARIZATION= HOR TITLE= THEORETIC L

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	123.98	0.425
30.00	113.81	0.381
45.00	101.53	0.324
60.00	86.50	0.247
70.00	79.03	0.172
80.00	89.19	0.092

MATERIAL= SNOW (WET) (D)

FREQUENCY= 13.4 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= -G FIGURE 1-155 (BACKGROUND)

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	261.20	0.947
30.00	259.80	0.941
45.00	253.80	0.916
60.00	246.70	0.887
70.00	238.80	0.855
80.00	223.40	0.792

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	AP A
FRESH WATER (SPNG RIVERS PNDS) (S)		THEORETICAL	273.0	17.0	1.0
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**AP A**
SNOW (WET) (D)		4-6 FIGURE 1-155 (BACKGROUND)	274.1	13.4	REA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
17.0	JANUARY WINT	VER	121.55	134.67	154.32	186.89	223.77	257.01
		VER	261.82	261.56	260.24	257.93	241.34	238.57
		HOR	121.55	110.89	97.64	81.79	69.71	71. 9
		HOR	259.67	258.08	251.47	244.03	236.20	222.62
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-140.26	-113.39	-51.52	-11.87	-0.97	0.04
		HOR	-138.12	-131.54	-74.83	-27.90	-9.16	-1.09
BEAMSPOT AREA (SQ. NM)			0.727	1.119	2.056	5.815	18.167	138.811
17.0	CLOUDY STAND	VER	130.36	143.88	163.95	198.48	231.94	262.07
		VER	262.06	261.84	261.62	258.51	242.81	241.54
		HOR	130.36	121.63	111.74	103.12	101.91	129.03
		HOR	259.95	258.42	252.01	244.97	237.86	226.05
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-131.76	-105.42	-47.02	-10.32	-0.60	0.15
		HOR	-129.64	-122.24	-68.23	-24.40	-7.48	-0.90

MATERIAL= FRESH WATER (SPNG RIVERS PNDS) (S)

FREQUENCY= 35.0 AREA= 1.0

POLARIZATION= VER TITLE= THEORETIC L

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	156.10	0.516
30.00	170.45	0.568
45.00	190.62	0.642
60.00	222.38	0.764
70.00	248.10	0.872
80.00	261.20	0.920

MATERIAL= SNOW (WET) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= A-G FIGURE 1-155 (BACKGROUND)

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	262.90	0.953
30.00	262.10	0.949
45.00	261.10	0.944
60.00	260.80	0.943
70.00	258 00	0.931
80.00	254.30	0.915

MATERIAL= FRESH WATER (SPNG RIVERS PNDS' (C)

FREQUENCY= 35.0 AREA= 1.0

POLARIZATION= HOR TITLE= THEORETIC L

TEMPERATURE= 273.0

NADIR ANG	TB	EMISSIVITY
0.00	156.10	0.516
30.00	146.57	0.467
45.00	135.55	0.401
60.00	124.33	0.304
70.00	124.08	0.220
80.00	153.65	0.118

MATERIAL= SNOW (WET) (D)

FREQUENCY= 37.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= A-G FIGURE 1-155 (BACKGROUND)

TEMPERATURE= 274.1

NADIR ANG	TA	EMISSIVITY
0.00	262.70	0.953
30.00	259.40	0.937
45.00	249.60	0.895
60.00	247.00	0.884
70.00	238.20	0.847
80.00	236.10	0.838

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL		SOURCE	SURF TEMP.	FREQ	APP A
FRESH WATER (SPRING RIVERS PNDS) (S)		THEORETICAL	273.0	35.0	1.0
BACKGROUND MATERIAL		**SOURCE**	**SURF TEMP.**	**FREQ**	**APP A**
SNOW (WET) (D)		4-6 FIGURE 1-155 (BACKGROUND)	274.1	37.0	REAL

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHZ)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
35.0	JANUARY WINT	VER	151.72	166.09	186.15	217.97	244.27	256.45
		VER	261.60	260.66	259.56	259.61	257.50	256.71
		HOR	151.72	141.28	128.34	113.37	107.99	126.62
		HOR	261.60	257.70	247.76	246.14	239.86	243.79
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-74.07	-41.41	-17.50	-3.51	-0.36	0.10
		HOR	-74.07	-50.98	-28.46	-11.19	-3.56	-0.21
BEAMSPOT AREA (SQ. NM)			1.485	2.284	4.196	11.867	37.075	283.259

			BRIGHTNESS TEMPERATURES					
35.0	CLOUDY STAND	VER	171.66	186.15	205.73	234.80	256.27	266.54
		VER	263.90	263.44	263.09	264.22	264.34	266.72
		HOR	171.66	165.90	160.65	161.21	174.76	219.20
		HOR	263.90	261.02	258.88	254.74	253.77	262.14
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-62.18	-33.84	-13.67	-2.48	-0.22	-0.10
		HOR	-62.18	-41.65	-23.22	-7.88	-2.13	-0.15

MATERIAL= LIMESTONE (S)

FREQUENCY= 94.0 AREA= 1.0

POLARIZATION= VER TITLE= RAYTHEON RUN NO. 130

TEMPERATURE= 291.8

NADIR ANG	TB	EMISSIVITY
0.00	237.17	0.784
30.00	244.35	0.808
45.00	275.46	0.931
60.00	267.67	0.890
70.00	255.51	0.811

MATERIAL= GRASS (D)

FREQUENCY= 94.0 AREA= BEAMSPOT

POLARIZATION= VER TITLE= RTL 35 GHz DATA

TEMPERATURE= 304.0

NADIR ANG	TA	EMISSIVITY
0.00	293.50	0.963
30.00	290.00	0.952
45.00	287.00	0.942
60.00	283.00	0.926
70.00	280.00	0.912

MATERIAL= LIMESTONE (S)

FREQUENCY= 94.0 AREA= 1.00

POLARIZATION= HOR TITLE= RAYTHEON RUN NO. 131

TEMPERATURE= 294.0

NADIR ANG	TB	EMISSIVITY
0.00	266.85	0.893
30.00	248.73	0.818
45.00	238.84	0.770
60.00	220.90	0.669
70.00	205.37	0.542

MATERIAL= GRASS (D)

FREQUENCY= 94.0 AREA= BEAMSPOT

POLARIZATION= HOR TITLE= ATI 35 GHz DATA

TEMPERATURE= 309.0

NADIR ANG	TA	EMISSIVITY
0.00	296.50	0.958
30.00	293.00	0.945
45.00	290.25	0.936
60.00	288.00	0.929
70.00	285.00	0.916

BRIGHTNESS TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
LIMESTONE (S)	RAYTHEON RUN NO. 130	291.8	94.0	1.00

BACKGROUND MATERIAL	SOURCE	SURF TEMP.	FREQ	AR A
GRASS (D)	RTL 35 GHz DATA	304.0	94.0	BEA .

NADIR ANGLES (DEGREES)			0	30	45	60	70	80
FREQ (GHz)	WEATHER MOD.	POLAR.	BRIGHTNESS TEMPERATURES					
94.0	JULY SUMMER	VER	259.2[illegible]	264.92	280.23	278.51	277.36	
		VER	291.1[illegible]	289.39	287.88	285.87	283.93	
		HOR	275.2[illegible]	267.25	265.58	265.58	269.66	
		HOR	293.7[illegible]	291.51	289.94	288.19	285.51	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-31.9[illegible]	-24.47	-7.66	-4.47	-1.28	
		HOR	-18.5	-24.26	-24.36	-13.74	-3.08	
BEAMSPOT AREA (SQ. NM)			0.20[illegible]	0.317	0.582	1.645	5.140	283.29
			BRIGHTNESS TEMPERATURES					
94.0	CLOUDY STAND	VER	261.9[illegible]	266.09	275.96	273.40	270.85	
		VER	286.0[illegible]	283.98	281.78	278.22	274.25	
		HOR	273.67	267.85	266.69	266.52	267.67	
		HOR	288.22	285.80	283.47	279.82	275.17	
			CONTRASTS-TARGET BRIGHTNESS, BACKGROUND APPARENT					
		VER	-24.1[illegible]	-17.89	-5.82	-2.93	-0.66	
		HOR	-14.5[illegible]	-17.96	-16.78	-8.09	-1.46	

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL
MYERS CLAY (T_A = 243°K)
(SPECULAR)

SOURCE
A-G SGD 829-6 FIGURE 1-71

SURF TEMP.	FREQ	AREA
274.0	13.4	BEAM.

BACKGROUND MATERIAL
MYERS CLAY (T_A = 280°K)
(SPECULAR)

SOURCE
AS ABOVE

SURF TEMP.	FREQ	AREA
303.0	13.4	BEAM.

NADIR ANGLES (DEGREES)

FREQ (GHz)	WEATHER MODEL	POLAR.	20 APPARENT TEMPERATURES
13.4	US STANDARD	VER	243.1
		VER	279.5

APPARENT TEMPERATURE CONTRAST
-36.4

13.4	US STANDARD	VER	

BEAMSPOT AREA (SQ NM) 0.888

APPARENT TEMPERATURES

13.4	CLOUDY STAND	VER	243.4
		VER	279.7

APPARENT TEMPERATURE CONTRAST
-36.4

13.4	CLOUDY STAND	VER

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP	FREQ	AREA
MYERS CLAY (T_A = 252°K) (SPECULAR)	A-G REP. SGD 829-6, FIG 1-71	274.0	37	BEAM.

BACKGROUND MATERIAL	SOURCE	SURF TEMP	FREQ	AREA
MYERS CLAY (T_A = 287°K) (SPECULAR)	AS ABOVE	303.0	37	BEAM.

NADIR ANGLE (DEGREES) 20

FREQ.(GHz)	WEATHER MOD.	POLAR	APPARENT TEMPERATURES
37	US STANDARD	VER	252.0
		VER	285.0

APPARENT TEMPERATURE CONTRAST

37	US STANDARD	VER	-33.0

BEAMSPOT AREA (SQ NM) 1:80

194.

			APPARENT TEMPERATURES
37	CLOUDY STAND	VER	255.4
		VER	285.5

APPARENT TEMPERATURE CONTRASTS

37	CLOUDY STAND	VER	-30.1

APPARENT TEMPERATURES AND CONTRASTS

TARGET MATERIAL	SOURCE	SURF TEMP	FREQ	AREA
FOREST FIRES (T_A = 350°K) (DIFFUSE)	A-G REP. SR-8045, R-1, FIG 5	UNKNOWN	19.35	0.056 (0.1 BEAMSPOT)
FOREST (T_A = 288°K) (DIFFUSE)	AS ABOVE	UNKNOWN	19.35	BEAM.

NADIR ANGLE (DEGREES) 45

FREQ (GHz)	WEATHER MOD.	POLAR	APPARENT TEMPERATURES
19.35	JULY CLEAR	$\frac{1}{2}(T_{Ah}+T_{Av})$	347
		"	287

APPARENT TEMPERATURE CONTRAST

19.35	JULY CLEAR	$\frac{1}{2}(T_{Ah}+T_{Av})$	6.0

BEAMSPOT AREA (SQ NM) 0.558

APPARENT TEMPERATURES

19.35	CLOUDY STAND	$\frac{1}{2}(T_{Ah}+T_{Av})$	344.9
		"	286.9

APPARENT TEMPERATURE CONTRAST

19.35	CLOUDY STAND	$\frac{1}{2}(T_{Ah}+T_{Av})$	5.8

PART II

COMPUTED SKY BRIGHTNESS TEMPERATURES

AND

ATMOSPHERIC TRANSMISSION FACTORS

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

HUMIDITY PROFILE FOR JULY 45 ° MODEL - UP TO 10 KM

HEIGHT (KM)	PRESSURE (MB)	TEMPERATURE (DEG K)	RELATIVE HUMIDITY	CLOUD CONTENT (GM/CU M)	RAIN RATE (MM/ HR)
0.000	1013.25	288.16	0.750	0.0000	0.00
0.250	983.60	286.54	0.725	0.0000	0.00
0.500	954.60	284.91	0.700	0.0000	0.00
0.750	926.30	283.29	0.675	0.0000	0.00
1.000	898.70	281.66	0.650	0.0000	0.00
1.250	871.90	280.04	0.625	0.0000	0.00
1.500	845.60	278.41	0.600	0.0000	0.00
1.750	820.00	276.79	0.575	0.0000	0.00
2.000	795.01	275.16	0.550	0.0000	0.00
2.500	746.90	271.92	0.500	0.0000	0.00
3.000	701.21	268.67	0.450	0.0000	0.00
3.500	657.80	265.42	0.425	0.0000	0.00
4.000	616.60	262.18	0.400	0.0000	0.00
4.500	577.50	258.93	0.375	0.0000	0.00
5.000	540.48	255.69	0.350	0.0000	0.00
5.500	505.40	252.44	0.325	0.0000	0.00
6.000	472.17	249.20	0.300	0.0000	0.00
6.500	440.80	245.94	0.300	0.0000	0.00
7.000	411.05	242.71	0.300	0.0000	0.00
7.500	383.00	239.46	0.300	0.0000	0.00
8.000	356.51	236.23	0.300	0.0000	0.00
8.500	331.50	232.98	0.300	0.0000	0.00
9.000	308.00	229.74	0.300	0.0000	0.00
9.500	285.80	226.50	0.300	0.0000	0.00
10.000	265.00	223.26	0.300	0.0000	0.00
11.000	227.00	216.78	0.250	0.0000	0.00
12.000	193.99	216.66	0.200	0.0000	0.00

13.000	165.79	216.66	0.150	0.0000	0.000
14.000	141.70	216.66	0.100	0.0000	0.000
15.000	121.12	216.66	0.050	0.0000	0.000
16.000	103.53	216.66	-0.000	0.0000	0.000
17.000	88.50	216.66	-0.000	0.0000	0.000
18.000	75.65	216.66	-0.000	0.0000	0.000
19.000	64.67	216.66	-0.000	0.0000	0.000
20.000	55.29	216.66	-0.000	0.0000	0.000
22.000	40.47	216.66	-0.000	0.0000	0.000
24.000	29.72	216.66	-0.000	0.0000	0.000
26.000	21.88	218.66	-0.000	0.0000	0.000
28.000	16.16	220.56	-0.000	0.0000	0.000
30.000	11.97	222.55	-0.000	0.0000	0.000
35.000	5.75	226.52	-0.000	0.0000	0.000
40.000	2.87	236.52	-0.000	0.0000	0.000
45.000	1.49	250.35	-0.000	0.0000	0.000
50.000	0.80	264.17	-0.000	0.0000	0.000

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

HUMIDITY PROFILE FOR JULY 45 ° MODEL - UP TO 10 KM

FREQUENCY = 1.00 GHZ

TOTAL WATER VAPOR CONTENT = 1.623 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.7847E-02	0.99218	2.01339	2.01258
30.0	0.9059E-02	0.99098	2.32294	2.32188
45.0	0.1109E-01	0.98897	2.84087	2.83927
60.0	0.1566E-01	0.98446	4.00297	3.99982
70.0	0.2281E-01	0.97745	5.81277	5.80613
80.0	0.4410E-01	0.95686	11.14045	11.11611

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 10.00 GHZ

TOTAL WATER VAPOR CONTENT = 2.623 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1268E-01	0.98740	3.32940	3.32750
30.0	0.1464E-01	0.98546	3.84014	3.83761
45.0	0.1793E-01	0.98223	4.69405	4.69027
60.0	0.2531E-01	0.97500	6.60753	6.60005
70.0	0.3631E-01	0.96376	9.58184	9.56608
80.0	0.7166E-01	0.93085	18.31852	18.26073

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 17.00 GHZ

TOTAL WATER VAPOR CONTENT = 1.623 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.2664E-01	0.97371	7.12786	7.12134
30.0	0.3075E-01	0.96971	8.21318	8.20450
45.0	0.3766E-01	0.96305	10.02309	10.01014
60.0	0.5321E-01	0.94818	14.05828	14.03268
70.0	0.7763E-01	0.92531	20.27680	20.22309
80.0	0.1513E 00	0.85955	38.20391	38.00945

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 35.00 GHZ

TOTAL WATER VAPOR CONTENT = 1.623 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.6266E-01	0.93927	16.44657	16.41014
30.0	0.7234E-01	0.93021	18.90076	18.85245
45.0	0.8857E-01	0.91524	22.96416	22.89235
60.0	0.1251E 00	0.88237	31.89197	31.75133
70.0	0.1826E 00	0.83312	45.29658	45.00626
80.0	0.3558E 00	0.70058	81.56874	80.56703

U.S. STANDARD ATMOSPHERE 1962 4 LEVELS

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 94.00 GHZ

TOTAL WATER VAPOR CONTENT = .623 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.2461E 00	0.78186	59.20224	59.35446
30.0	0.2841E 00	0.75268	67.83955	67.25369
45.0	0.3479E 00	0.70619	80.26946	79.81802
60.0	0.4916E 00	0.61165	106.24917	105.26311
70.0	0.7174E 00	0.48800	141.71947	138.28621
80.0	0.1400E 01	0.24648	209.02406	201.37528

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 140.00 GHZ

TOTAL WATER VAPOR CONTENT = 1.623 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.4420E 00	0.64276	99.56574	98.66916
30.0	0.5103E 00	0.60030	111.47026	110.31317
45.0	0.6249E 00	0.53531	129.73421	128.09014
60.0	0.8833E 00	0.41342	164.14661	161.23003
70.0	0.1290E 01	0.27535	203.87938	198.28501
80.0	0.2524E 01	0.08012	260.45297	248.33477

U.S. STANDARD ATMOSPHERE 1962 64 LEVELS

HUMIDITY PROFILE FOR JULY 45 ° MODEL - UP TO 10 KM

FREQUENCY = 220.00 GHZ

TOTAL WATER VAPOR CONTENT = .623 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1048E 01	0.35074	182.57735	179.46186
30.0	0.1210E 01	0.29829	197.54606	193.67695
45.0	0.1481E 01	0.22733	217.39539	212.73750
60.0	0.2094E 01	0.12319	248.15098	240.08319
70.0	0.3058E 01	0.04698	270.91002	258.79651
80.0	0.5991E 01	0.00250	285.54348	265.42216

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JANUARY

HUMIDITY PROFILE FOR JANUARY 45 N MODEL - UP TO 10 KM

HEIGHT (KM)	PRESSURE (MB)	TEMPERATURE (DEG K)	RELATIVE HUMIDITY	CLOUD CONTENT (GM/CU M)	RAIN RATE (MM/ R)
0.000	1018.00	272.59	0.770	0.0000	0.000
0.250	986.50	271.70	0.762	0.0000	0.000
0.500	956.00	270.80	0.755	0.0000	0.000
0.750	926.20	269.90	0.719	0.0000	0.000
1.000	897.40	269.00	0.700	0.0000	0.000
1.250	869.30	268.11	0.688	0.0000	0.000
1.500	842.00	267.21	0.675	0.0000	0.000
1.750	815.50	266.32	0.663	0.0000	0.000
2.000	789.70	265.43	0.650	0.0000	0.000
2.500	740.40	263.64	0.600	0.0000	0.000
3.000	693.80	261.86	0.550	0.0000	0.000
3.500	649.80	258.82	0.525	0.0000	0.000
4.000	608.10	255.79	0.500	0.0000	0.000
4.500	568.60	252.77	0.488	0.0000	0.000
5.000	531.30	249.76	0.475	0.0000	0.000
5.500	496.00	246.75	0.462	0.0000	0.000
6.000	462.70	243.73	0.450	0.0000	0.000
6.500	431.30	240.73	0.425	0.0000	0.000
7.000	401.60	237.73	0.400	0.0000	0.000
7.500	373.70	234.73	0.375	0.0000	0.000
8.000	347.30	231.72	0.350	0.0000	0.000
8.500	322.60	228.73	0.337	0.0000	0.000
9.000	299.30	225.74	0.325	0.0000	0.000
9.500	277.40	222.74	0.313	0.0000	0.000
10.000	256.80	219.75	0.300	0.0000	0.000
11.000	219.90	219.16	0.250	0.0000	0.000
12.000	188.20	218.66	0.200	0.0000	0.000

12.000	161.10	218.16	0.1[illegible]0	0.0000	0.[illegible]00
14.000	137.80	217.67	0.1[illegible]0	0.0000	0.[illegible]00
16.000	117.80	217.17	0.0[illegible]0	0.0000	0.[illegible]00
18.000	100.80	216.67	-0.0[illegible]0	0.0000	0.[illegible]00
17.000	86.11	216.17	-0.0[illegible]0	0.0000	0.[illegible]00
18.000	73.57	215.68	-0.0[illegible]0	0.0000	0.[illegible]00
19.000	62.84	215.18	-0.0[illegible]0	0.0000	0.[illegible]00
20.000	53.67	215.15	-0.0[illegible]0	0.0000	0.[illegible]00
22.000	39.15	215.15	-0.0[illegible]0	0.0000	0.[illegible]00
24.000	28.56	215.15	-0.0[illegible]0	0.0000	0.[illegible]00
26.000	20.84	215.15	-0.0[illegible]0	0.0000	0.[illegible]00
28.000	15.21	215.85	-0.0[illegible]0	0.0000	0.[illegible]00
30.000	11.13	217.44	-0.0[illegible]0	0.0000	0.[illegible]00
35.000	5.18	227.86	-0.0[illegible]0	0.0000	0.[illegible]00
40.000	2.53	243.17	-0.0[illegible]0	0.0000	0.[illegible]00
45.000	1.29	258.47	-0.0[illegible]0	0.0000	0.[illegible]00
50.000	0.68	265.65	-0.0[illegible]0	0.0000	0.[illegible]00

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JANUARY

HUMIDITY PROFILE FOR JANUARY 45 N MODEL - UP TO 10 KM

FREQUENCY = 1.00 GHZ

TOTAL WATER VAPOR CONTENT = 0.820 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.9199E-02	0.99183	2.05282	2.05213
30.0	0.9465E-02	0.99058	2.36838	2.36746
45.0	0.1159E-01	0.98848	2.89633	2.89496
60.0	0.1636E-01	0.98377	4.08081	4.07810
70.0	0.2384E-01	0.97645	5.92529	5.91958
80.0	0.4612E-01	0.95493	11.35553	11.33459

MID-LAT,TUDE (45 DEG N) MODEL ATMOSPHERE JANUARY

HUMIDIT; PROFILE FOR JANUARY 45 N MODEL - UP TO 10 KM

FREQUENCY = 10.00 GHZ

TOTAL WATER VAPOR CONTENT = 2.820 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1184E-01	0.98823	2.99954	2.99823
30.0	0.1367E-01	0.98642	3.45983	3.45808
45.0	0.1673E-01	0.98340	4.22946	4.22685
60.0	0.2364E-01	0.97664	5.95435	5.94920
70.0	0.3445E-01	0.96613	8.63607	8.62521
80.0	0.6684E-01	0.93534	16.51290	16.47311

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JANUARY

HUMIDITY PROFILE FOR JANUARY 45 N MODEL - UP TO 10 KM

FREQUENCY = 17.00 GHZ

TOTAL WATER VAPOR CONTENT = 0.820 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1962E-01	0.98057	5.02183	5.01879
30.0	0.2265E-01	0.97760	5.78928	5.78523
45.0	0.2773E-01	0.97265	7.07070	7.06465
60.0	0.3918E-01	0.96158	9.93470	9.92272
70.0	0.5714E-01	0.94446	14.36683	14.34164
80.0	0.1112E 00	0.89478	27.25892	27.16726

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JANUARY

HUMIDITY PROFILE FOR JANUARY 45 N MODEL - UP TO 10 KM

FREQUENCY = 35.00 GHZ

TOTAL WATER VAPOR CONTENT = .820 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.4760E-01	0.95352	12.00608	11.98815
30.0	0.5495E-01	0.94653	13.81225	13.78846
45.0	0.6728E-01	0.93494	16.81120	16.77577
60.0	0.9504E-01	0.90934	23.43790	23.36823
70.0	0.1386E 00	0.87057	33.48670	33.34204
80.0	0.2696E 00	0.76368	61.30829	60.80113

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JANUARY

HUMIDITY PROFILE FOR JANUARY 45 N MODEL - UP TO 10 KM

FREQUENCY = 94.00 GHZ

TOTAL WATER VAPOR CONTENT = 0.820 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1651E 00	0.84782	39.60053	39.41428
30.0	0.1906E 00	0.82647	45.17345	44.92834
45.0	0.2334E 00	0.79188	54.21206	53.85236
60.0	0.3297E 00	0.71915	73.25650	72.57200
70.0	0.4809E 00	0.61821	99.79661	98.44498
80.0	0.9366E 00	0.39196	159.91985	155.81720

MID-LAT;TUDE (45 DEG N) MODEL ^TMOSPHER; JANUARY

HUMIDITY PROFILE FOR JANUARY 45 N MODEL - UP TO 10 KM

FREQUENCY = 140.00 GHZ

TOTAL WATER VAPOR CONTENT = 0.920 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.2422E 00	0.78493	56.83886	56.57572
30.0	0.2796E 00	0.75609	64.48236	64.13795
45.0	0.3423E 00	0.71010	76.68591	76.18510
60.0	0.4838E 00	0.61643	101.59639	100.66227
70.0	0.7062E 00	0.49352	134.41328	132.62298
80.0	0.1380E 01	0.25168	199.66626	194.64520

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JANUARY

HUMIDITY PROFILE FOR JANUARY 45 N MODEL - UP TO 10 KM

FREQUENCY = 220.00 GHZ

TOTAL WATER VAPOR CONTENT = .820 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.5317E 00	0.58761	109.99271	109.07161
30.0	0.6139E 00	0.54124	122.31319	121.25992
45.0	0.7517E 00	0.47155	141.01490	139.53303
60.0	0.1062E 01	0.34559	174.05399	172.37973
70.0	0.1551E 01	0.21198	211.03880	206.78752
80.0	0.3035E 01	0.04808	256.72998	247.01211

JANUARY 60 N MODEL ATMOSPHERE 34 LEVELS

HUMIDITY PROFILE FOR JAN 60 N MODEL - 0. TO 10 KM

HEIGHT (KM)	PRESSURE (MB)	TEMPERATURE (DEG K)	RELATIVE HUMIDITY	CLOUD CONTENT (GM/CU M)	RAIN RATE (MM/ R)
0.000	1013.50	257.28	0.800	0.0000	0.000
0.250	980.40	257.79	0.775	0.0000	0.000
0.500	948.50	258.30	0.750	0.0000	0.000
0.750	917.70	258.80	0.725	0.0000	0.000
1.000	887.90	259.31	0.700	0.0000	0.000
1.250	859.10	258.51	0.700	0.0000	0.000
1.500	831.20	257.70	0.700	0.0000	0.000
1.750	804.00	256.89	0.700	0.0000	0.000
2.000	777.70	256.09	0.700	0.0000	0.000
2.500	727.40	254.47	0.675	0.0000	0.000
3.000	680.00	252.86	0.650	0.0000	0.000
3.500	635.40	251.24	0.600	0.0000	0.000
4.000	593.40	247.82	0.600	0.0000	0.000
4.500	553.60	244.41	0.575	0.0000	0.000
5.000	516.00	241.00	0.550	0.0000	0.000
5.500	480.40	237.58	0.525	0.0000	0.000
6.000	446.90	234.17	0.500	0.0000	0.000
6.500	415.20	230.76	0.475	0.0000	0.000
7.000	385.40	227.36	0.450	0.0000	0.000
7.500	357.30	223.95	0.425	0.0000	0.000
8.000	330.80	220.55	0.400	0.0000	0.000
8.500	306.00	217.15	0.375	0.0000	0.000
9.000	282.90	217.15	0.350	0.0000	0.000
9.500	261.50	217.15	0.325	0.0000	0.000
10.000	241.70	217.15	0.300	0.0000	0.000
11.000	206.50	217.15	0.200	0.0000	0.000
12.000	176.40	217.15	0.100	0.0000	0.000

13.000	150.80	217.15	0.000	0.0000	0.000
14.000	128.80	217.15	-0.000	0.0000	0.000
15.000	110.10	217.15	-0.000	0.0000	0.000
16.000	94.01	216.55	-0.000	0.0000	0.000
17.000	80.28	215.95	-0.000	0.0000	0.000
18.000	68.51	215.35	-0.000	0.0000	0.000
19.000	58.45	214.75	-0.000	0.0000	0.000
20.000	49.84	214.15	-0.000	0.0000	0.000
22.000	36.19	212.95	-0.000	0.0000	0.000
24.000	26.24	211.75	-0.000	0.0000	0.000
26.000	18.99	212.15	-0.000	0.0000	0.000
28.000	13.79	214.15	-0.000	0.0000	0.000
30.000	10.03	216.15	-0.000	0.0000	0.000
35.000	4.60	222.65	-0.000	0.0000	0.000
40.000	2.18	235.15	-0.000	0.0000	0.000
45.000	1.07	247.65	-0.000	0.0000	0.000
50.000	0.55	260.15	-0.000	0.0000	0.000

JANUARY 60 N MODEL ATMOSPHERE 24 LEVELS

HUMIDITY PROFILE FOR JAN 60 N MODEL - UP TO 10 KM

FREQUENCY = 1.00 GHZ

TOTAL WATER VAPOR CONTENT = .353 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.8547E-02	0.99149	2.07143	2.07080
30.0	0.9867E-02	0.99018	2.38981	2.38896
45.0	0.1208E-01	0.98799	2.92243	2.92118
60.0	0.1706E-01	0.98309	4.11736	4.11488
70.0	0.2485E-01	0.97545	5.97803	5.97279
80.0	0.4812E-01	0.95302	11.45730	11.43807

JANUARY 60 N MODEL ATMOSPHERE 44 LEVELS

HUMIDITY PROFILE FOR JAN 60 N MODEL - UP TO 10 KM

FREQUENCY = 10.00 GHZ

TOTAL WATER VAPOR CONTENT = 2.353 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1154E-01	0.98852	2.81838	2.81731
30.0	0.1333E-01	0.98676	3.25092	3.24950
45.0	0.1632E-01	0.98382	3.97418	3.97207
60.0	0.2304E-01	0.97722	5.59529	5.59111
70.0	0.3359E-01	0.96697	8.11596	8.10714
80.0	0.6517E-01	0.93691	15.52116	15.48882

JANUARY 60 N MODEL ATMOSPHERE 64 LEVELS

HUMIDITY PROFILE FOR JAN 60 N MODEL - 0. TO 10 KM

FREQUENCY = 17.00 GHZ

TOTAL WATER VAPOR CONTENT = .353 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1575E-01	0.98437	3.86440	3.86258
30.0	0.1819E-01	0.98198	4.45615	4.45373
45.0	0.2227E-01	0.97798	5.44487	5.44127
60.0	0.3145E-01	0.96904	7.65764	7.65051
70.0	0.4586E-01	0.95518	11.08956	11.07455
80.0	0.8910E-01	0.91476	21.11764	21.06283

JANUARY 60 N MODEL ATMOSPHERE 44 LEVELS

HUMIDITY PROFILE FOR JAN 60 N MODEL - 0. TO 10 KM

FREQUENCY = 35.00 GHZ

TOTAL WATER VAPOR CONTENT = .353 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.3910E-01	0.96165	9.68041	9.46935
30.0	0.4514E-01	0.95586	10.21319	10.89850
45.0	0.5527E-01	0.94623	13.29599	13.27410
60.0	0.7807E-01	0.92490	18.57815	18.53501
70.0	0.1138E 00	0.89241	26.63291	26.54300
80.0	0.2211E 00	0.80162	49.22015	48.90189

JANUARY 60 N MODEL ATMOSPHERE 44 LEVELS

HUMIDITY PROFILE FOR JAN 60 N MODEL - 0. TO 10 KM

FREQUENCY = 94.00 GHZ

TOTAL WATER VAPOR CONTENT = .353 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1231E 00	0.8421	28.74950	28.64927
30.0	0.1421E 00	0.8675	32.89274	32.76042
45.0	0.1739E 00	0.8403	39.66847	39.47330
60.0	0.2457E 00	0.7821	54.18577	53.81013
70.0	0.3583E 00	0.6988	75.02389	74.26927
80.0	0.6965E 00	0.4983	125.60015	123.19839

JANUARY 60 N MODEL ATMOSPHERE 44 LEVELS

HUMIDITY PROFILE FOR JAN 60 N MODEL - UP TO 10 KM

FREQUENCY = 140.00 GHZ

TOTAL WATER VAPOR CONTENT = .353 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1340E 00	0.87458	31.56221	31.47560
30.0	0.1547E 00	0.85666	36.08093	35.96668
45.0	0.1894E 00	0.82742	43.45403	43.28572
60.0	0.2677E 00	0.76516	59.18018	58.85710
70.0	0.3906E 00	0.67668	81.57761	80.93114
80.0	0.7614E 00	0.46699	134.07907	132.94192

JANUARY 60 N MODEL ATMOSPHERE 44 LEVELS

HUMIDITY PROFILE FOR JAN 60 N MODEL = 11 TO 10 KM

FREQUENCY = 220.00 GHZ

TOTAL WATER VAPOR CONTENT = .353 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.2488E 00	0.77975	56.00089	55.81554
30.0	0.2872E 00	0.75033	63.49559	63.25310
45.0	0.3517E 00	0.70348	75.04154	75.08922
60.0	0.4971E 00	0.60831	99.74320	99.08717
70.0	0.7256E 00	0.48405	131.56137	130.30730
80.0	0.1418E 01	0.24229	193.89433	190.40184

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JULY

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

HEIGHT (KM)	PRESSURE (MB)	TEMPERATURE (DEG K)	RELATIVE HUMIDITY	CLOUD CONTENT (GM/CU M)	RAIN RATE (MM/ R)
0.000	1013.50	296.22	0.750	0.0000	0.00
0.250	984.60	294.95	0.725	0.0000	0.00
0.500	956.50	293.68	0.700	0.0000	0.00
0.750	929.00	292.41	0.675	0.0000	0.00
1.000	902.20	291.14	0.650	0.0000	0.00
1.250	876.10	289.91	0.625	0.0000	0.00
1.500	850.60	288.67	0.600	0.0000	0.00
1.750	825.80	287.43	0.575	0.0000	0.00
2.000	801.60	286.20	0.550	0.0000	0.00
2.500	754.90	282.99	0.500	0.0000	0.00
3.000	710.50	279.79	0.450	0.0000	0.00
3.500	668.20	276.68	0.425	0.0000	0.00
4.000	628.00	273.57	0.400	0.0000	0.00
4.500	589.90	270.51	0.375	0.0000	0.00
5.000	553.60	267.45	0.350	0.0000	0.00
5.500	519.20	264.39	0.325	0.0000	0.00
6.000	486.60	261.33	0.300	0.0000	0.00
6.500	455.70	258.07	0.300	0.0000	0.00
7.000	426.40	254.81	0.300	0.0000	0.00
7.500	398.60	251.54	0.300	0.0000	0.00
8.000	372.40	248.28	0.300	0.0000	0.00
8.500	347.50	245.03	0.300	0.0000	0.00
9.000	324.00	241.77	0.300	0.0000	0.00
9.500	301.80	238.52	0.300	0.0000	0.00
10.000	280.90	235.27	0.300	0.0000	0.00
11.000	242.60	228.77	0.250	0.0000	0.00
12.000	208.60	222.30	0.200	0.0000	0.00

13.000	178.60	215.82	0.1[illegible]	0.0000	0.[illegible]00
14.000	152.59	215.65	0.1[illegible]0	0.0000	0.[illegible]00
15.000	130.30	215.65	0.0[illegible]0	0.0000	0.[illegible]00
16.000	111.30	215.65	-0.0[illegible]0	0.0000	0.[illegible]00
17.000	95.03	215.65	-0.0[illegible]0	0.0000	0.[illegible]00
18.000	81.21	216.79	-0.0[illegible]0	0.0000	0.[illegible]00
19.000	69.46	217.98	-0.0[illegible]0	0.0000	0.[illegible]00
20.000	59.47	219.17	-0.0[illegible]0	0.0000	0.[illegible]00
22.000	43.70	221.56	-0.0[illegible]0	0.0000	0.[illegible]00
24.000	32.23	223.94	-0.0[illegible]0	0.0000	0.[illegible]00
26.000	23.85	226.32	-0.0[illegible]0	0.0000	0.[illegible]00
28.000	17.71	229.49	-0.0[illegible]0	0.0000	0.[illegible]00
30.000	13.22	233.65	-0.0[illegible]0	0.0000	0.[illegible]00
35.000	6.52	245.17	-0.0[illegible]0	0.0000	0.[illegible]00
40.000	3.33	257.52	-0.0[illegible]0	0.0000	0.[illegible]00
45.000	1.76	269.86	-0.0[illegible]0	0.0000	0.[illegible]00
50.000	0.95	275.65	-0.0[illegible]0	0.0000	0.[illegible]00

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JULY

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 1.00 GHZ

TOTAL WATER VAPOR CONTENT = 3.125 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.7444E-02	0.99258	1.97766	1.97689
30.0	0.8594E-02	0.99144	2.28178	2.28075
45.0	0.1052E-01	0.98954	2.79061	2.78909
60.0	0.1485E-01	0.98526	3.93242	3.92941
70.0	0.2163E-01	0.97860	5.71072	5.70440
80.0	0.4179E-01	0.95907	10.94498	10.92188

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JULY

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 10.00 GHZ

TOTAL WATER VAPOR CONTENT = .125 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1451E-01	0.98559	3.97286	3.97048
30.0	0.1675E-01	0.98339	4.59172	4.57858
45.0	0.2051E-01	0.97970	5.59939	5.59469
60.0	0.2897E-01	0.97144	7.97841	7.86912
70.0	0.4224E-01	0.95864	11.41750	11.39794
80.0	0.8209E-01	0.92119	21.79419	21.72277

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JULY

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 17.00 GHZ

TOTAL WATER VAPOR CONTENT = 3.125 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

DIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.3926E-01	0.96150	10.88770	10.87602
30.0	0.4532E-01	0.95569	12.53374	12.51822
45.0	0.5550E-01	0.94601	15.27183	15.24869
60.0	0.7842E-01	0.92457	21.34537	21.29976
70.0	0.1144E 00	0. 9186	30.62150	30.52637
80.0	0.2234E 00	0.79982	56.79657	56.45781

MID-LATITUDE (45 DEG N) MODEL ATMOSPHER JULY

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 35.00 GHZ

TOTAL WATER VAPOR CONTENT = .125 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.8945E-01	0.91443	24.17736	24.11584
30.0	0.1033E 00	0.90188	27.73030	27.64887
45.0	0.1265E 00	0.88122	33.58119	33.46057
60.0	0.1787E 00	0.83637	46.09642	46.06198
70.0	0.2608E 00	0.77047	65.02091	64.54259
80.0	0.5088E 00	0.60124	113.39469	111.79978

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JULY

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 94.00 GHZ

TOTAL WATER VAPOR CONTENT = 3.125 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.3964E 00	0.67274	93.55380	92.69034
30.0	0.4577E 00	0.63275	105.05382	103.93603
45.0	0.5604E 00	0.57098	122.86154	121.26526
60.0	0.7926E 00	0.45294	157.04276	154.18030
70.0	0.1156E 01	0.31472	197.41646	192.23986
80.0	0.2259E 01	0.10445	260.24825	247.73537

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JULY

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 140.00 GHZ

TOTAL WATER VAPOR CONTENT = 0.125 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.8045E 00	0.44731	159.73958	157.60781
30.0	0.9289E 00	0.39500	175.01575	172.32896
45.0	0.1137E 01	0.32064	196.80955	193.13549
60.0	0.1608E 01	0.20034	232.35242	226.33741
70.0	0.2348E 01	0.09560	263.02458	254.22663
80.0	0.4595E 01	0.01011	290.87654	273.10149

MID-LATITUDE (45 DEG N) MODEL ATMOSPHERE JULY

HUMIDITY PROFILE FOR JULY 45 N MODEL - UP TO 10 KM

FREQUENCY = 220.00 GHZ

TOTAL WATER VAPOR CONTENT = 3.125 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.000 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1978E 01	0.13838	251.14851	244.21994
30.0	0.2284E 01	0.10192	262.14197	253.92828
45.0	0.2796E 01	0.06104	274.64289	264.42195
60.0	0.3953E 01	0.01920	287.88372	273.87572
70.0	0.5772E 01	0.00311	293.54675	275.26013
80.0	0.1130E 02	0.00001	295.42060	269.99208

U.S. STANDARD ATMOSPHERE 1962 ..4 LEVELS

CLOUD OF 0.1 GM/CU. M BETWEEN 1.0 AND 3.5 KILOMETERS

HEIGHT (KM)	PRESSURE (MB)	TEMPERATURE (DEG K)	RELATIVE HUMIDITY	CLOUD CONTENT (GM/CU M)	RAIN RATE (MM/ HR)
0.000	1013.25	288.16	0.700	0.0000	0.000
0.250	983.60	286.54	0.760	-0.0000	0.000
0.500	954.60	284.91	0.820	-0.0000	0.000
0.750	926.30	283.29	0.880	-0.0000	0.000
1.000	898.76	281.66	0.940	-0.0000	0.000
1.250	871.90	280.04	1.000	0.0500	0.000
1.500	845.60	278.41	1.000	0.1000	0.000
1.750	820.00	276.79	1.000	0.1000	0.000
2.000	795.01	275.16	1.000	0.1000	0.000
2.500	746.90	271.92	1.000	0.1000	0.000
3.000	701.21	268.67	1.000	0.1000	0.000
3.500	657.80	265.42	1.000	0.0500	0.000
4.000	616.60	262.18	0.875	-0.0000	0.000
4.500	577.50	258.93	0.750	-0.0000	0.000
5.000	540.48	255.69	0.625	-0.0000	0.000
5.500	505.40	252.44	0.500	-0.0000	0.000
6.000	472.17	249.20	0.375	0.0000	0.000
6.500	440.80	245.94	0.250	-0.0000	0.000
7.000	411.05	242.71	0.125	-0.0000	0.000
7.500	383.00	239.46	-0.000	-0.0000	0.000
8.000	356.51	236.23	-0.000	-0.0000	0.000
8.500	331.50	232.98	-0.000	-0.0000	0.000
9.000	308.00	229.74	-0.000	-0.0000	0.000
9.500	285.80	226.50	-0.000	-0.0000	0.000
10.000	265.00	223.26	-0.000	-0.0000	0.000
11.000	227.00	216.78	-0.000	-0.0000	0.000
12.000	193.99	216.66	-0.000	-0.0000	0.000

13.000	165.79	216.66	-0.000	-0.0000	0.000
14.000	141.70	216.66	-0.000	-0.0000	0.000
15.000	121.12	216.66	-0.000	-0.0000	0.000
16.000	103.53	216.66	-0.000	-0.0000	0.000
17.000	88.50	216.66	-0.000	-0.0000	0.000
18.000	75.65	216.66	0.000	0.0000	0.000
19.000	64.67	216.66	-0.000	-0.0000	0.000
20.000	55.29	216.66	-0.000	-0.0000	0.000
22.000	40.47	216.66	-0.000	-0.0000	0.000
24.000	29.72	216.66	-0.000	-0.0000	0.000
26.000	21.88	218.66	-0.000	-0.0000	0.000
28.000	16.16	220.56	-0.000	-0.0000	0.000
30.000	11.97	222.55	-0.000	-0.0000	0.000
35.000	5.75	226.52	-0.000	-0.0000	0.000
40.000	2.87	236.52	-0.000	-0.0000	0.000
45.000	1.49	250.35	-0.000	-0.0000	0.000
50.000	0.80	264.17	-0.000	-0.0000	0.000

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

CLOUD OF 0.1 GM/CU. M BETWEEN 1.0 AND 3.5 KILOMETERS

FREQUENCY = 1.00 GHZ

TOTAL WATER VAPOR CONTENT = 0.440 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.022 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.7910E-02	0.99212	2.03028	2.02946
30.0	0.9131E-02	0.99091	2.34243	2.34134
45.0	0.1118E-01	0.98888	2.86468	2.86306
60.0	0.1578E-01	0.98434	4.03647	4.03328
70.0	0.2299E-01	0.97727	5.86133	5.85461
80.0	0.4445E-01	0.95652	11.23336	11.20871

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS CLOUD OF 0.1 GM/GU. M BETWEEN 1.0 AND 3.5 KM

FREQENCY = 10.00 GHZ

TOTAL WATER VAPOR CONTENT = 2.440 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.022 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1905E-01	0.98113	5.03958	5.03615
30.0	0.2200E-01	0.97824	5.81000	5.80545
45.0	0.2693E-01	0.97343	7.09653	7.08974
60.0	0.3804E-01	0.96267	9.97260	9.95914
70.0	0.5548E-01	0.94603	14.42500	14.39672
80.0	0.1079E-00	0.89772	27.38428	27.28121

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

CLOUD OF 0.1 GM/CU. M BETWEEN 1.0 AND 3.5 KILOMETERS

FREQUENCY = 17.00 GHZ

TOTAL WATER VAPOR CONTENT = 2.440 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.022 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.4828E-01	0.95286	12.92340	12.80758
30.0	0.5574E-01	0.94578	14.75201	14.73101
45.0	0.6825E-01	0.93402	17.95418	17.92290
60.0	0.9645E-01	0.90806	25.03008	24.96856
70.0	0.1407E 00	0.86872	35.76328	35.63537
80.0	0.2745E 00	0.75992	65.53706	65.08551

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

CLOUD OF 0.1 GM/CU. M BETWEEN 1.0 AND 3.5 KILOMETERS

FREQUENCY = 35.00 GHZ

TOTAL WATER VAPOR CONTENT = 2.440 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.022 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1341E 00	0.87449	34.15359	34.04407
30.0	0.1548E 00	0.85655	39.04475	38.90027
45.0	0.1896E 00	0.82730	47.02653	46.81365
60.0	0.2679E 00	0.76499	64.05554	63.64672
70.0	0.3909E 00	0.67644	88.32198	87.50299
80.0	0.7625E 00	0.46651	146.27547	143.67943

U.S. STANDARD ATMOSPHERE 1962 4 LEVELS

CLOUD OF 0.1 GM/CU. M BETWEEN 1.0 AND 3.5 KILOMETERS

FREQUENCY = 94.00 GHZ

TOTAL WATER VAPOR CONTENT = .440 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .022 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.5703E 00	0.56537	119.41472	118.00106
30.0	0.6584E 00	0.51767	132.63448	130.82587
45.0	0.8062E 00	0.44656	152.40712	149.87347
60.0	0.1139E 01	0.32005	187.82395	183.46281
70.0	0.1663E 01	0.18962	224.86011	217.41634
80.0	0.3246E 01	0.03893	269.54880	253.77145

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

CLOUD OF 0.1 GM/CU. M BETWEEN 1.0 AND 3.5 KILOMETERS

FREQUENCY = 140.00 GHZ

TOTAL WATER VAPOR CONTENT = 2.440 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.022 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	BRIGHTNESS TEMPERATURE UP
0.0	0.9878E 00	0.37239	174.20534	171.30404
30.0	0.1140E 01	0.31966	189.06446	185.44935
45.0	0.1397E 01	0.24745	209.52863	204.67489
60.0	0.1974E 01	0.13894	240.69932	233.04575
70.0	0.2881E 01	0.05606	265.27421	253.54877
80.0	0.5632E 01	0.00358	292.27294	263.27597

U.S. STANDARD ATMOSPHERE 1962 44 LEVELS

CLOUD OF 0.1 GM/CU. M BETWEEN 1.0 AND 3.5 KILOMETERS

FREQUENCY = 220.00 GHZ

TOTAL WATER VAPOR CONTENT = 2.440 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.022 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.2002E 01	0.13503	242.72066	235.39939
30.0	0.2312E 01	0.09908	253.26292	244.60878
45.0	0.2831E 01	0.05896	265.26363	254.54890
60.0	0.4001E 01	0.01830	278.08814	263.57795
70.0	0.5842E 01	0.00290	283.86160	265.27258
80.0	0.1143E 02	0.00001	286.42047	261.69089

RAIN MODEL ATMOSPHERE - TEMPERATE LATITUDES SUMMER RAIN

FROM HANDBOOK OF GEOPHYS. CHAPTER 6 CASE I

HEIGHT (KM)	PRESSURE (MB)	TEMPERATURE (DEG K)	RELATIVE HUMIDITY	CLOUD CONTENT (GM/CU M)	RAIN RATE (MM/ H)
0.000	1013.30	291.20	1.000	0.0000	2.000
0.500	954.60	288.90	1.000	0.0150	1.010
1.000	898.80	286.70	1.000	0.0450	1.080
1.500	845.60	284.30	1.000	0.0780	1.040
2.000	795.00	282.20	1.000	0.1060	1.030
2.500	746.90	279.80	1.000	0.1340	1.050
3.000	701.20	277.70	1.000	0.1580	1.060
3.500	657.80	275.30	1.000	0.1760	0.070
4.000	616.60	273.20	1.000	0.1600	0.000
4.500	577.50	269.20	1.000	0.1400	0.520
5.000	540.50	265.20	1.000	0.1200	0.060
5.500	505.40	261.20	1.000	0.0900	0.040
6.000	472.20	257.20	1.000	0.0600	0.050
6.500	440.80	252.70	1.000	0.0400	0.090
7.000	411.10	248.20	1.000	0.0200	0.050
7.500	383.00	243.70	1.000	0.0200	0.030
8.000	356.50	239.20	1.000	0.0100	0.010
8.500	331.50	235.70	0.875	-0.0000	-0.000
9.000	308.00	232.20	0.750	-0.0000	-0.000
9.500	285.80	227.70	0.625	-0.0000	-0.000
10.000	265.00	223.20	0.500	-0.0000	-0.000
11.000	227.00	216.80	0.250	-0.0000	-0.000
12.000	194.00	216.70	-0.000	-0.0000	-0.000
13.000	165.80	216.70	-0.000	-0.0000	-0.000
14.000	141.70	216.70	-0.000	-0.0000	-0.000
15.000	121.10	216.70	-0.000	-0.0000	-0.000
16.000	103.50	216.70	-0.000	-0.0000	-0.000

RAIN MODEL ATMOSPHERE - TEMPERATE LATITUDES SUMMER RAIN

FROM HANDBOOK OF GEOPHYS. CHAPTER 6 CASE I

FREQUENCY = 1.00 GHZ

TOTAL WATER VAPOR CONTENT = 4.412 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .069 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.9750E-02	0.99030	2.61264	2.61159
30.0	0.1126E-01	0.98881	3.01404	3.01265
45.0	0.1378E-01	0.98631	3.68552	3.68344
60.0	0.1946E-01	0.98072	5.19182	5.18771
70.0	0.2837E-01	0.97203	7.53756	7.52889
80.0	0.5506E-01	0.94643	14.45546	14.42364

RAIN MODEL ATMOSPHERE - TEMPERATE LATITUDES SUMMER RAIN

FROM HANDBOOK OF GEOPHYS. CHAPTER 6 CASE I

FREQUENCY = 10.00 GHZ

TOTAL WATER VAPOR CONTENT = 4.412 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 0.069 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.5254E-01	0.94882	14.10338	14.08347
30.0	0.6066E-01	0.94114	16.21908	16.19265
45.0	0.7427E-01	0.92842	19.72850	19.68915
60.0	0.1049E 00	0.90039	27.46782	27.39053
70.0	0.1531E 00	0.85808	39.16334	39.00298
80.0	0.2980E 00	0.74229	71.27971	70.71742

RAIN MODEL ATMOSPHERE - TEMPERATE LATITUDES SUMMER RAIN

FROM HANDBOOK OF GEOPHYS. CHAPTER 6 CASE I

FREQUENCY = 17.00 GHZ

TOTAL WATER VAPOR CONTENT = .412 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .069 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION - (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.1660E 00	0.84703	42.54369	42.38618
30.0	0.1917E 00	0.82557	48.52452	48.31721
45.0	0.2347E 00	0.79082	58.22133	57.91707
60.0	0.3316E 00	0.71776	78.63871	78.05937
70.0	0.4839E 00	0.61640	107.05906	105.91347
80.0	0.9433E 00	0.38933	171.26914	167.76595

RAIN MODEL ATMOSPHERE - TEMPERATE LATITUDES SUMMER RAIN

FROM HANDBOOK OF GEOPHYS. CHAPTER 6 PAGE I

FREQUENCY = 35.00 GHZ

TOTAL WATER VAPOR CONTENT = 4.412 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .069 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.6337E 00	0.53063	131.02198	129.71177
30.0	0.7316E 00	0.48113	145.41800	143.23946
45.0	0.8958E 00	0.40828	166.08857	163.05823
60.0	0.1266E 01	0.28201	202.19447	197.05676
70.0	0.1847E 01	0.15770	238.71100	229.72863
80.0	0.3602E 01	0.02726	278.08887	260.79008

RAIN MODEL ATMOSPHERE - TEMPERATE LATITUDES SUMMER RAIN

FROM HANDBOOK OF GEOPHYS. CHAPTER 6 CASE I

FREQUENCY = 94.00 GHZ

TOTAL WATER VAPOR CONTENT = 4.412 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = 1.069 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.2446E 01	0.08665	259.37309	248.04986
30.0	0.2824E 01	0.05938	267.70823	254.55102
45.0	0.3458E 01	0.03151	276.52011	260.62336
60.0	0.4886E 01	0.00755	284.84440	264.13897
70.0	0.7129E 01	0.00080	288.12146	262.42369
80.0	0.1390E 02	0.00000	289.79508	256.40539

RAIN MODEL ATMOSPHERE - TEMPERATE LATITUDES SUMMER RAIN

FROM HANDBOOK OF GEOPHYS. CHAPTER 6 CASE I

FREQUENCY = 140.00 GHZ

TOTAL WATER VAPOR CONTENT = 4.412 PRECIPITABLE CM

TOTAL CLOUD WATER CONTENT = .069 GRAMS PER SQ CM

NADIR ANGLE (DEG)	ATTENUATION (NEPERS)	TRANSMISSION FACTOR	BRIGHTNESS TEMPERATURE DOWN	UP
0.0	0.3835E 01	0.02159	280.07576	263.84788
30.0	0.4428E 01	0.01194	283.42642	265.33345
45.0	0.5422E 01	0.00442	286.35495	265.68599
60.0	0.7662E 01	0.00047	288.57341	263.79129
70.0	0.1118E 02	0.00001	289.52905	260.71319
80.0	0.2181E 02	0.00000	290.36018	255.33649