A STATISTICAL ANALYSIS OF FRACTURES AND RELATED POSTGLACIAL STRESS FIELD IN THE KRAFLA FISSURE SWARM, NE-ICELAND

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Abstract

The length and orientation of 1080 fractures cutting postglacial rocks within the Krafla fissure swarm has been measured, using a digitizing table. The results indicate: 50 % of the cumulative length of fractures has a trend between N6E - N18E, while all fractures has a trend lying N40E. (b) Short fractures predominate, the average fracture length is 340 m. (c) The Krafla caldera and its shallow magma chamber beneath Leirhnjukur has not affected the stress field significantly in postglacial time, because fracture trends in this area does not deviate from the general fracture trend elsewhere. (d) The most intensily fractured areas are found in the middle part of the fissure swarm, near Hrutafell and Mofell. This is partly a result from burial of many older fractures further south, however, the intense fracturing reflects that this area suffers from the highest amount of spreading or dilation within the Krafla fissure swarm in postglacial time. It is concluded that the orientation of the stress field affecting the

Krafla fissure swarm has been fairly constant during postglacial time, the stress field having roughly the same orientation along the whole length of the fissure swarm.

Introduction

The Krafla fissure swarm is located at the divergent plate boundary in northern Iceland. Here, the plate boundary is defined by five en-echelon aligned fissure swarms, the Krafla swarm being the largest of these (Fig. 1). The Krafla fissure swarm stretches from lake Myvatn northwards into the sea at Axarfjordur, the main fracture pattern both in the Krafla fissure swarm and in the surrounding Theystareykir and Fremri Namur fissure swarms is shown in Fig. 2. The Krafla fissure swarm dissects the Krafla central volcano and its associated caldera (Saemundsson, 1977).

The present rifting episode (1975-) has resulted in a up to 8-10 m widening of the Krafla fissure swarm in the middle part of its length (Tryggvason, 1986). Also, approximately 20 intrusive events related to dike injection from a shallow magma chamber located beneath Leirhnjukur, Krafla 3) (Einarsson, 1978) have occurred, 9 of which has lead to basaltic fissure eruptions (Björnsson, 1985). In this report, statistical data as well as an analysis of the postglacial stress field are presented, based length/orientation measurements of 1080 fractures.

The purpose of this analysis has been an attempt to solve some of the following problems: (a) What is the variation in the orientation of the postglacial stress field in the Krafla fissure swarm in space and time? (b) How much has the Krafla central volcano and its associated shallow magma chamber affected the postglacial stress field in the Krafla fissure swarm? (c) How is the along-strike variation of

fracture spatial distribution, or frequency, in the Krafla fissure swarm? (d) What is the length distribution of fractures within the Krafla fissure swarm, and is there any correlation between fracture length and strike?

This study is a spin-off of a larger, detailed study of fracture geometry, formation and associated volcanism (Opheim & Gudmundsson, 1988). For a more comprehensive description of the Krafla fissure swarm, and the geology of NE-Iceland in general, the reader is referred to the earlier mentioned paper, and, for instance, Saemundsson 1978, Björnsson 1985 and Tryggvason 1980, 1984, 1986.

Fracture geometry and formation

The fractures can be divided into two groups, pure tension fractures and normal faults. Pure tension fractures are by far the most frequent. They occur single or in clusters, alone or associated with normal faults. Commonly, they are offset, parallel or en echelon aligned. Generally speaking, pure tension fractures and normal faults have the greatest width near the middle part of their length. Also, fractures tend to split up near their ends, always following the columnar jointing in the thin pahoehoe lava Normal faults are always large structures as compared with pure tension fractures, the latter occuring in all sizes. faults commonly form nested grabens, and the largest normal faults clearly define a large central graben in some areas of the fissure swarm.

Fractures are known to be polygenetic, because movements on preexisting fractures has been observed during rifting

episodes (Björnsson, 1977). Also, field observations indicate that normal faults develop from pure tension fractures when these attain a certain length (Opheim & Gudmundsson, 1988). No lateral, or strike-slip displacement has been observed on any fracture, indicating that no oblique stress component(s) is present at the time of fracture formation.

It is likely that several tectonic processes are invoked in fracture formation in the Krafla fissure swarm. These processes include plate tectonic stress, dike intrusions, and magma reservoir magmatic pressure changes. A comprehensive discussion of the involvement of these processes in fracture formation within the Krafla fissure swarm is given by Opheim and Gudmundsson (1988).

Stress field analysis

A few, important assumptions must be considered, as an introduction to the following analysis.

First, all fractures are assumed to have formed as pure Mode 1 fractures (Schmidt & Rossmanith, 1983), that is, they are formed by tensile stresses acting perpendicular to the fracture plane. The orientation of maximum (relative) tensile stress at the time of fracture formation is thus perpendicular to fracture strike or orientation.

Secondly, the orientation of a fracture is measured as a straight line between the ends of the fracture. According to this, the analysis invokes a simplification where curved fractures were measured.

Methods

The data are obtained from (a) 1:20,000 scale maps, published by Technisches Universitat Braunschweig 1982, covering the area from Myvatn to Mofell (Fig. 3) and (b) 35,700 scale maps compiled from Icelandic Geodetic Survey aerial photographs covering the area north of Mofell to the outwash plains of the river Jökulsa a Fjöllum. From these maps, the orientation (0) and length (L) of all fractures cutting postglacial lava flows and cover have been measured. This was done by using a digitizing table connected to a 20-MB Corona PC, supplied with the FAS-2 (Fracture Analysis System) software system (Gardner, 1985). Here, fracture was measured from end-to-end as a straight segment. According to the two different map type coverage, study area was divided into two parts, north (Gjastykki) and south (Krafla) of Mofell (Fig. 4). These two areas were divided into subareas (Figs. 4), from each of which length/orientation data are presented (Fig. 5, 6). Furthermore, results from a statistical analysis of the data are given in Appendix 1.

Discussion

The results (Figs. 4, 5, 6 and Appendix 1) show that the strike of fissures has little variation throughout the whole length of the fissure swarm. The results show that approximately 50% of fractures strikes N6E - N18E along the whole swarm (Figure 5, Appendix 1). Furthermore, the highest

value of mean length of fractures also lie in this interval, while long fractures are more uncommon outside this orientation interval (Appendix 1). Short fractures are much more frequent than are long fractures (Appendix 1), similar to what is found in other Icelandic fissure swarms (Gudmundsson, 1987 a,b). The average length of 1080 fractures is 340 m, which is somewhat shorter than found within the Thingvellir fissure swarm (Gudmundsson, 1987 a).

The results show that fractures within the Krafla central volcano (Krafla 1 & 2, Fig. 6) has trends that does not deviate from the fracture trends elsewhere. This indicate that the prescence of the Krafla central volcano, its caldera and the shallow magma chamber beneath Leirhnjukur, has probably not influenced the orientation of the stress field in postglacial time.

Fracture spatial density, or frequency, varies much along the fissure swarm. In the areas around Myvatn and within the Krafla caldera this is partly a result of the postglacial volcanism. The maximum fracture spatial density is found near Mofell (Mofell 2 & Gjastykki 1, Fig. 6). This is probably due to the highest values of spreading or dilation during postglacial time occurring in these areas (Bernauer, 1943, Opheim and Gudmundsson, 1988).

As a preliminary conclusion, based on the previous discussion, and the data set (Fig. 5, 6 and Appendix 1), the orientation of postglacial stress field has (a) not changed during postglacial time, and (b), the postglacial stress field has more or less the same orientation along the whole length of Krafla fissure swarm.

Acknowledgements

This report is a byproduct of a study of fracture formation and related volcanism in the Krafla fissure swarm with Dr. A. Gudmundsson. I thank him for ideas as well as suggesting changes in this paper. Furthermore, I will thank Hördur Halldorson for patience and technical assistance, Dr. Gudmundur Sigvaldason for software assistance and Avar Johannesson for figure preparation.

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Figure list

Fig. 1 Fissure swarms in NE-Iceland. T=Theystareykir, K=Krafla, F=Fremri Namur, A=Askja and Kv=Kverkfjöll.

Fig. 2. Main fracture patterns within the Krafla fissure swarm and the adjacent Theystareykir and Fremri Namur fissure swarms.

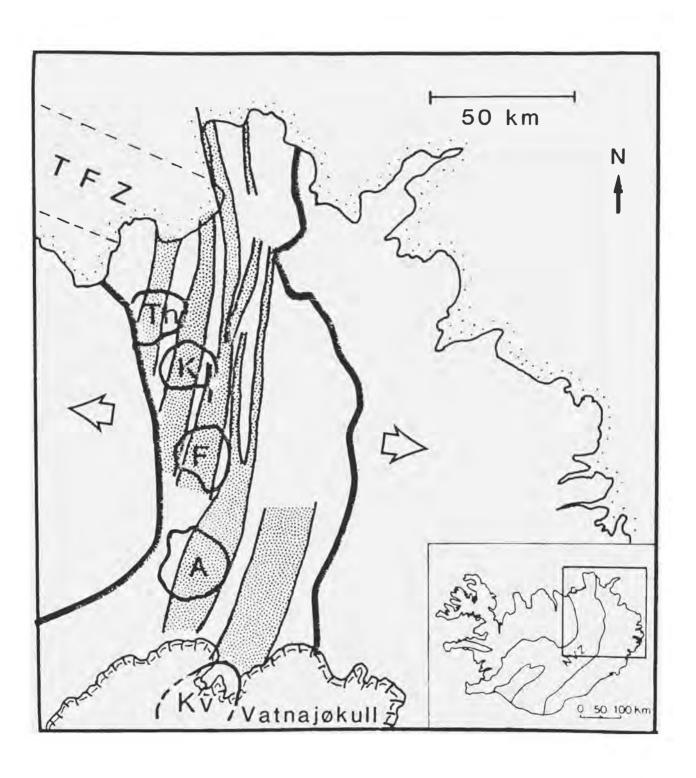
Fig. 3. The Krafla fissure swarm with the main fracture pattern and the lavas from the Myvatn fires and the recent Krafla lavas.

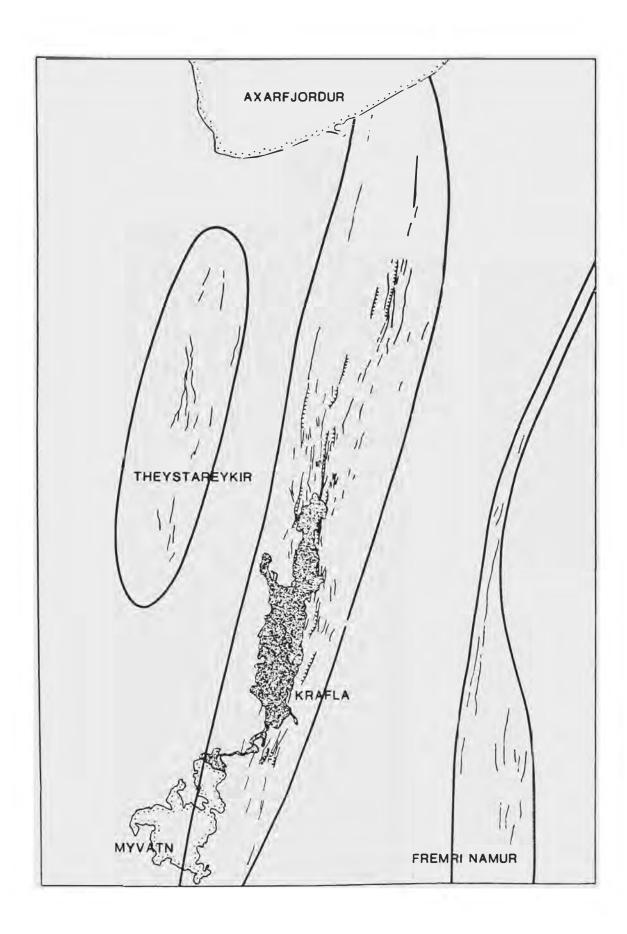
Fig. 4. Fracture maps from each of the 10 subareas put together to show an outline of the spatial distribution and frequency of fractures, within different parts of the fissure swarm. The star denotes the mountain Mofell. The map is not to scale in E-W direction.

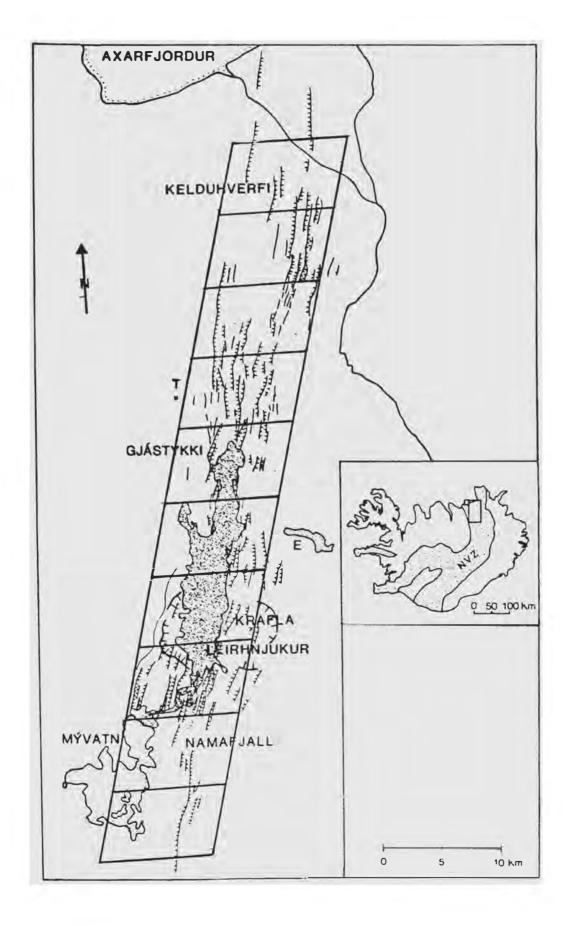
Fig. 5. Length/orientation datas from the two main areas, Krafla (south of Mofell) and Gjastykki (north of Mofell). The data sets are presented both as rosediagrams and histograms.

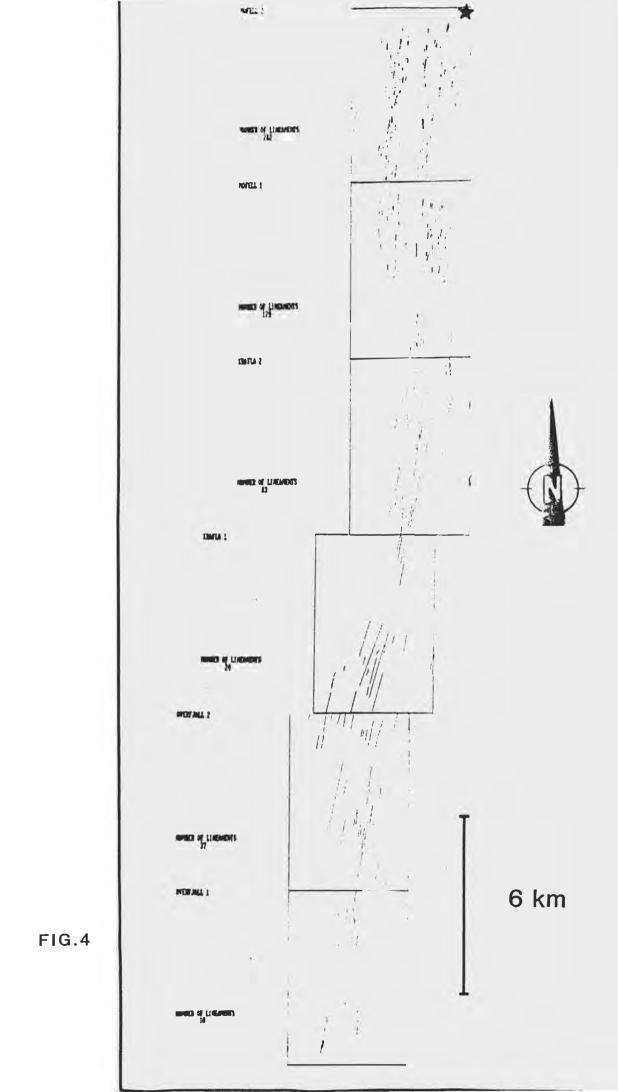
Fig. 6. Length/orientation data from each of the 10 subareas (Fig. 4) shown both in rosediagrams and

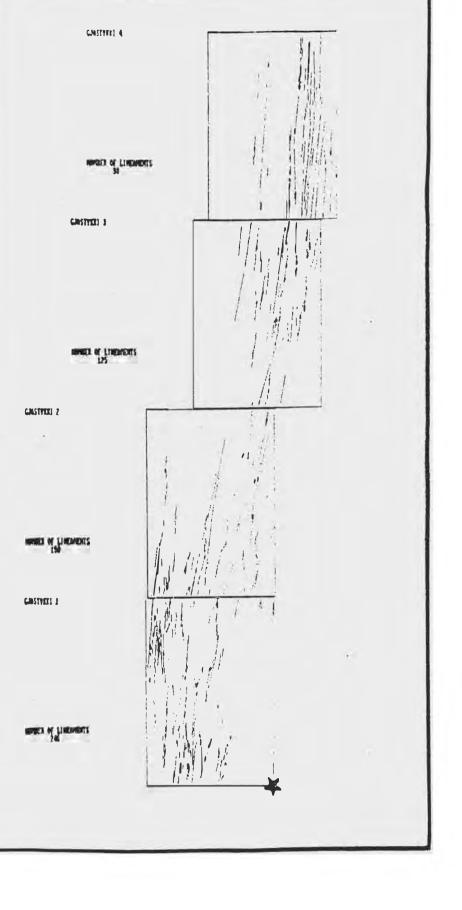
histograms.

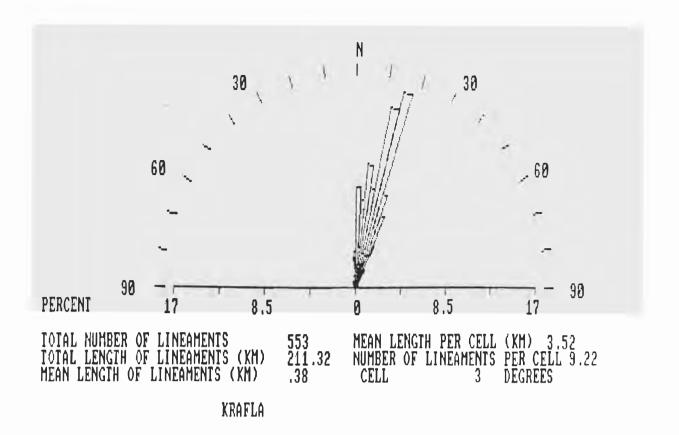


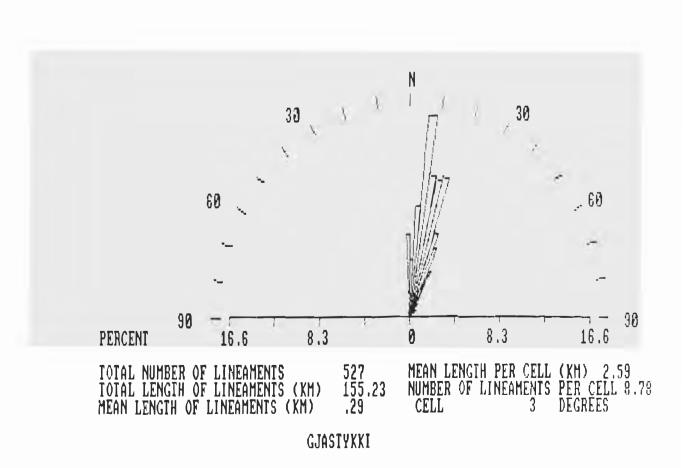


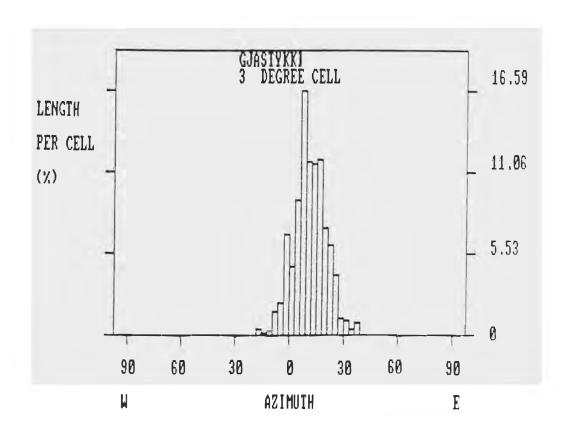












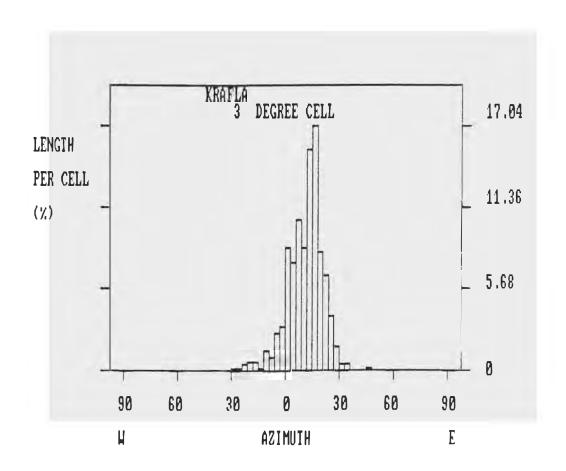
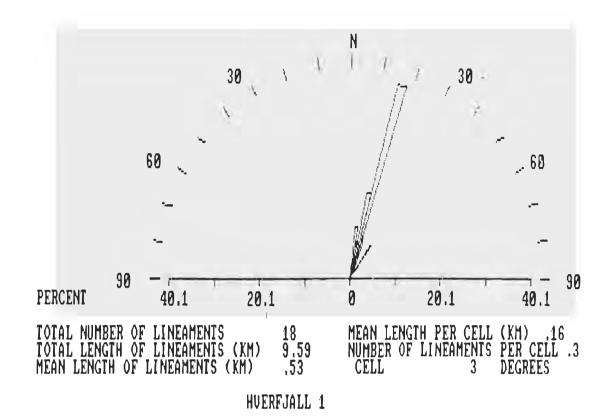
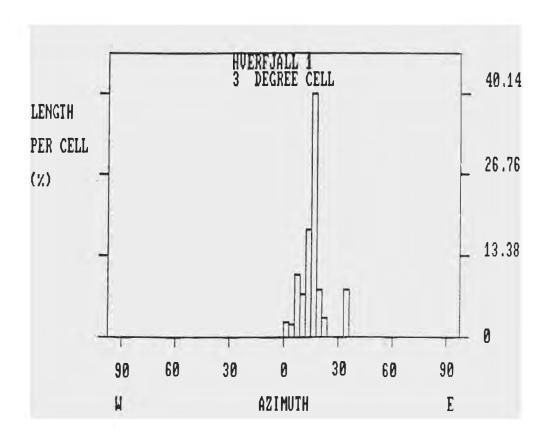


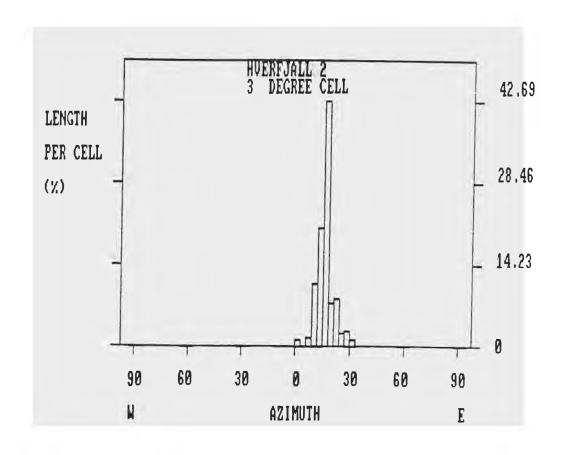
FIG.5

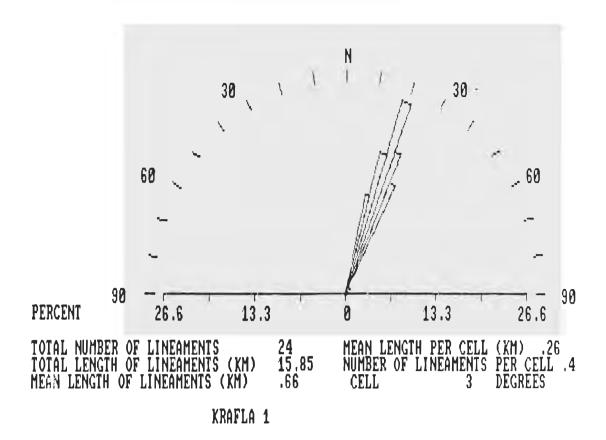


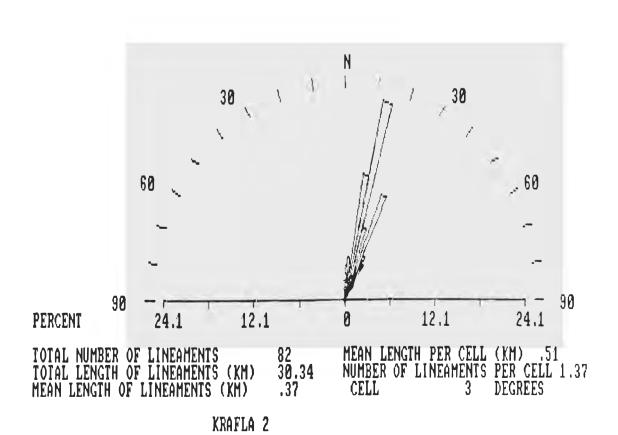
N 30 30 60 60 90 90 21.3 42.7 21.3 42.7 PERCENT TOTAL NUMBER OF LINEAMENTS TOTAL LENGTH OF LINEAMENTS (KM) MEAN LENGTH OF LINEAMENTS (KM) 37 20.01 MEAN_LENGTH PER CELL (KM) .33 NUMBER OF LINEAMENTS PER CELL .62 CELL 3 DEGREES .54 HUERFJALL 2

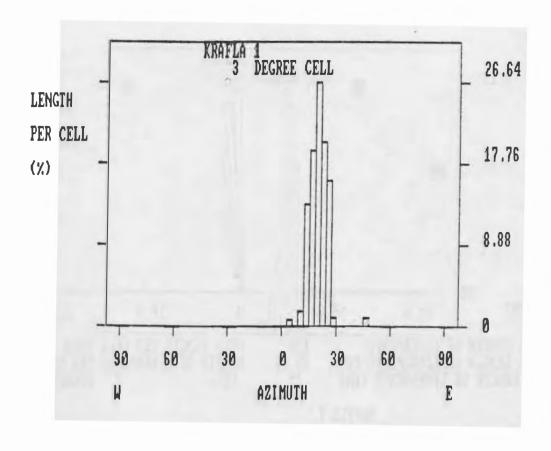
FIG.6

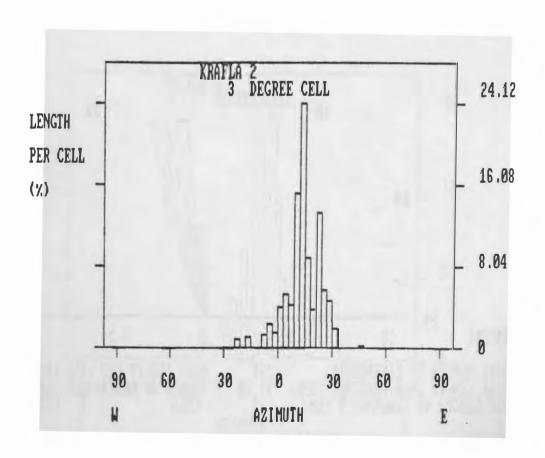


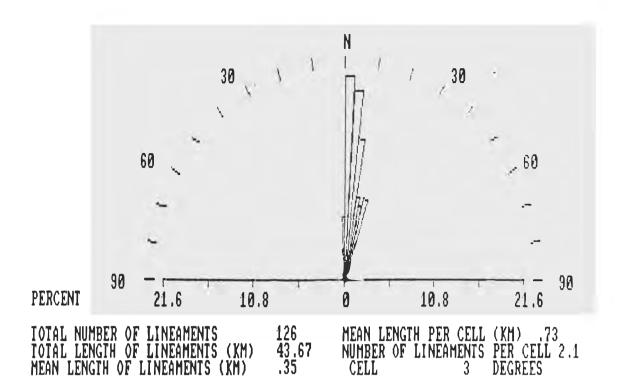




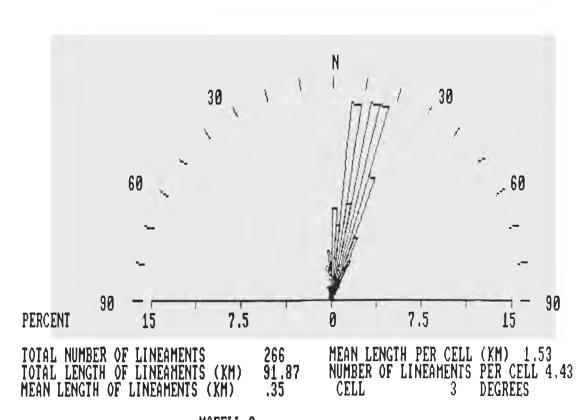




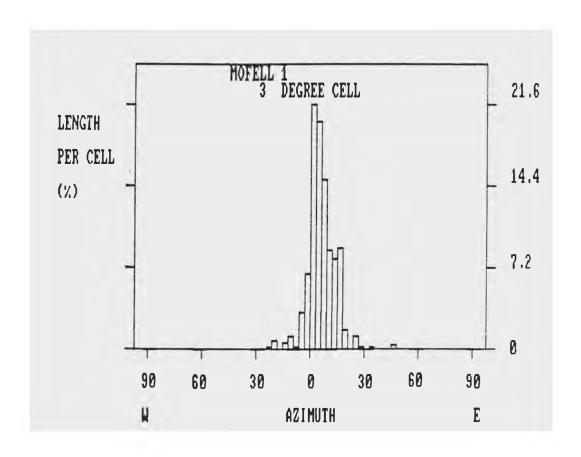


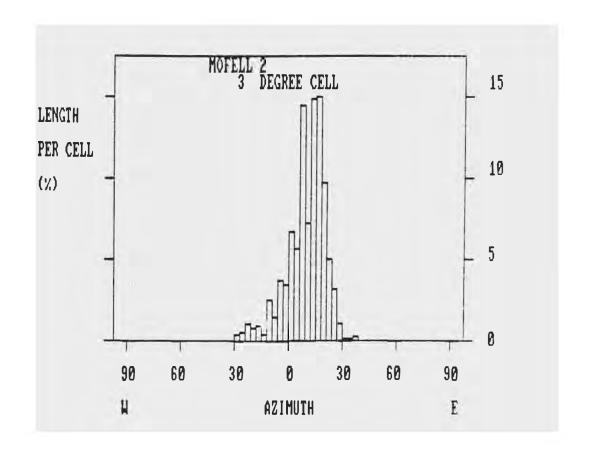


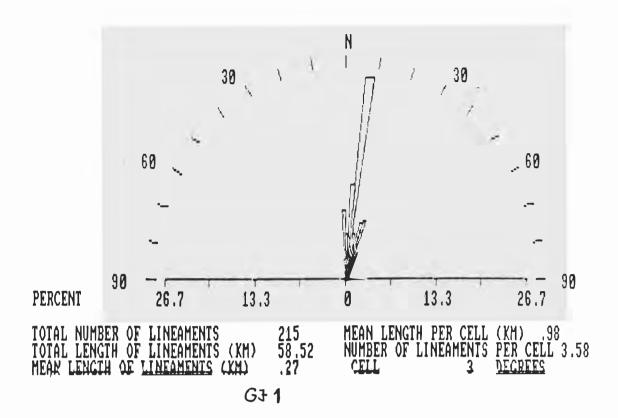
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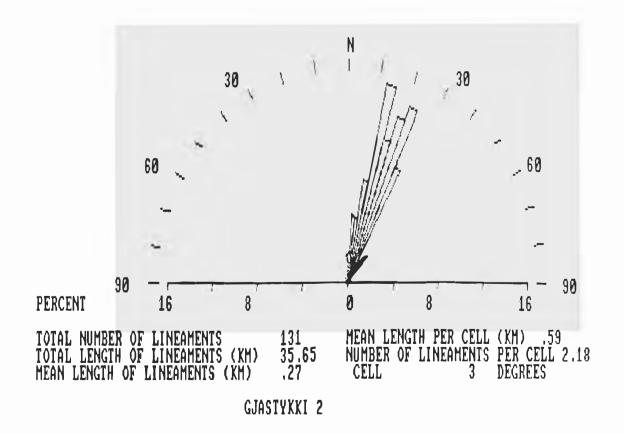


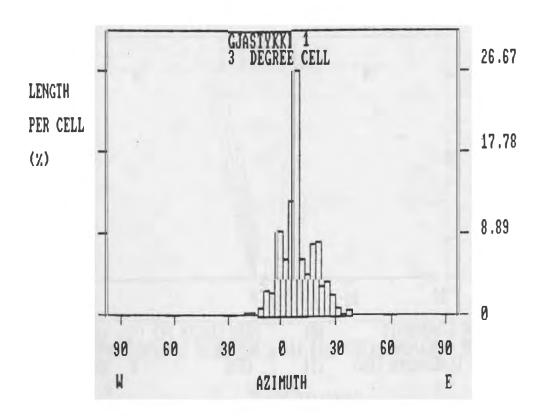
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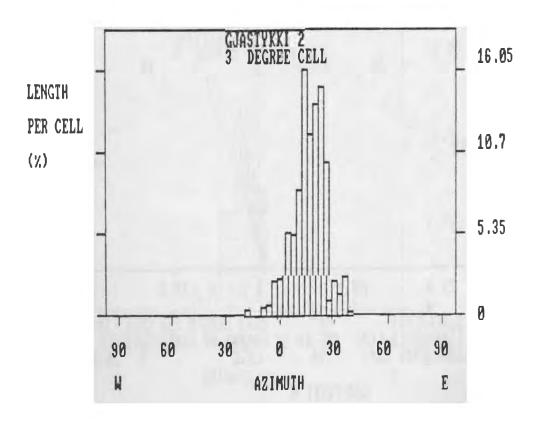


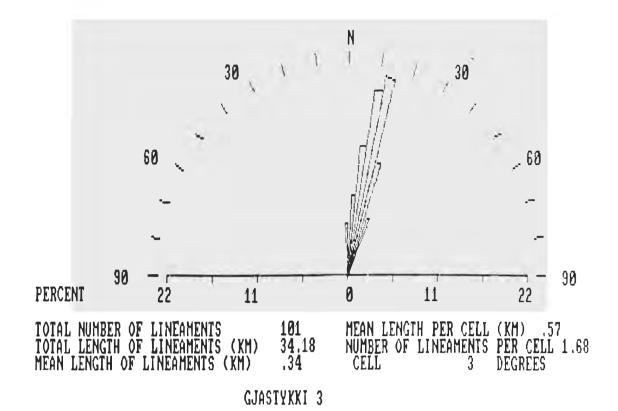


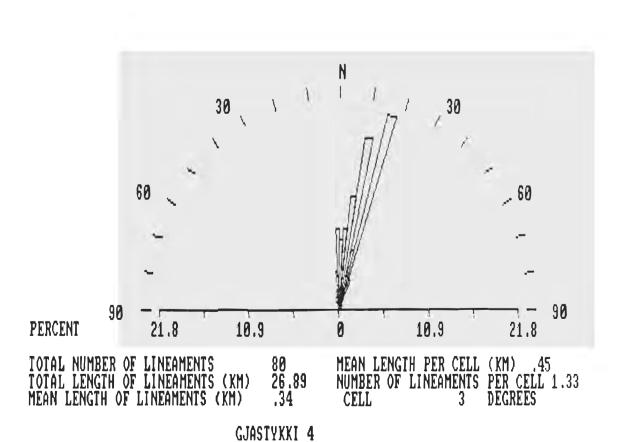


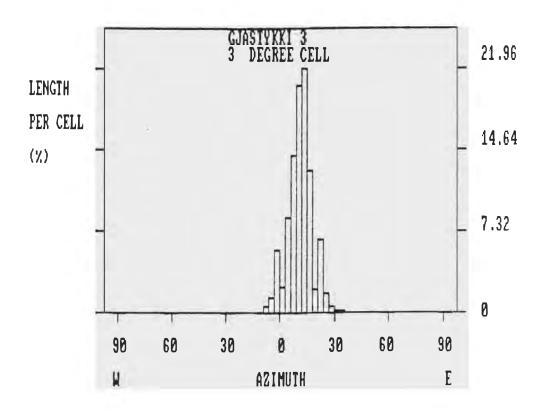


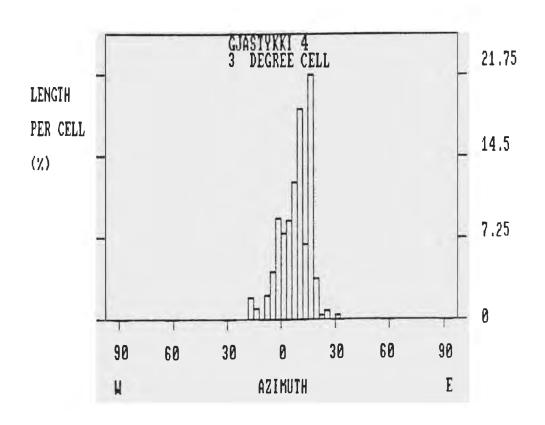












Appendix 1

Statistical data from each of the 10 subareas as well as from the two main areas, Krafla and Gjastykki.

HVERFJALL 2

X Y

ORIGIN

1.350 0.012

SHIFT

0.000 0.000

ROTATIONAL CORRECTION -0.000

SCALE FACTOR 1.000

X-SCALE Y-SCALE 33.934 21.320

NUMBER OF LINEAMENTS 37



HVERFJALL 1

Y X

ORIGIN

1.354 0.012

SHIFT

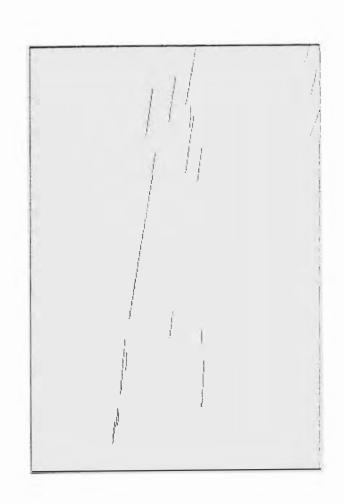
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ROTATIONAL CORRECTION -0.001

SCALE FACTOR 1.000

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NUMBER OF LINEAMENTS 18



KRAFLA 2

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ORIGIN

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SHIFT

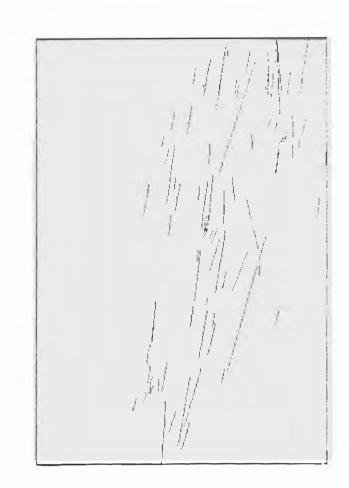
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ROTATIONAL CORRECTION 0.000

SCALE FACTOR 1.000

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NUMBER OF LINEAMENTS 83



KRAFLA 1

X

ORIGIN

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SHIFT

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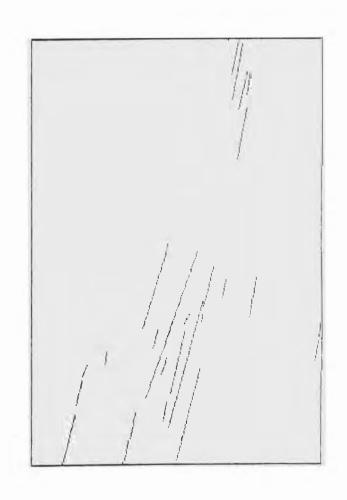
ROTATIONAL CORRECTION

-0.000

SCALE FACTOR

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NUMBER OF LINEAMENTS



MOFELL 2

X Y

ORIGIN

1.358 0.016

SHIFT

0.000 0.000

ROTATIONAL CORRECTION -0.000

SCALE FACTOR 1.000

X-SCALE Y-SCALE 26.167 18.936

NUMBER OF LINEAMENTS 282



HOFELL 1

X Y

ORIGIN

1.350 0.016

SHIFT

0.000 0.000

ROTATIONAL CORRECTION -0.000

SCALE FACTOR 1.000

X-SCALE Y-SCALE 30.660 19.888

NUMBER OF LINEAMENTS 129



GJASTYKKI 2

X Y

ORIGIN

4.154 0.319

SHIFT

0.000 0.000

ROTATIONAL CORRECTION

-0.200

SCALE FACTOR 1.000

X-SCALE Y-SCALE 43.336 31.930

NUMBER OF LINEAMENTS 150



GJASTYKKI 1

X Y

ORIGIN

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SHIFT

0.000 0.000

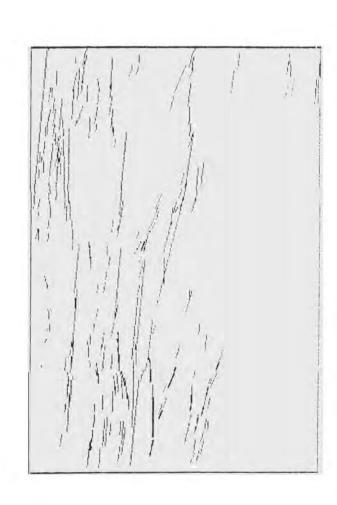
ROTATIONAL CORRECTION

0.000

SCALE FACTOR 1.000

X-SCALE Y-SCALE 52.433 30.206

NUMBER OF LINEAMENTS 246



GJASTYKKI 4

X Y

ORIGIN

4.189 0.315

SHIFT

0.000 0.000

ROTATIONAL CORRECTION -0.001

SCALE FACTOR

1,000

X-SCALE Y-SCALE 43.603 52.119

NUMBER OF LINEAMENTS 98



GJASTYKKI 3

X Y

ORIGIN

4.142 0.307

SHIFT

0.000 0.000

ROTATIONAL CORRECTION 0.001

SCALE FACTOR 1.000

X-SCALE Y-SCALE 48.236 30.537

NUMBER OF LINEAMENTS 125



SCALE FACTOR 25480. FRAFLA

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	0.	c.	0.	С.	0.	0.	-72 0.
AZIMUTH FREQUENCY PERCENT		0.	0.		0.	0.	-51 O.
FREQUENCY	-48 0. .00	0.	0.	0.	0.	0.	-30 1
FREQUENCY		6.	6.	6.	4.		11.
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AZIMUTH FREQUENCY PERCENT	78 0. .00	0.	0.		0.		

KRAFLA SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH

LENGTH FREQUENCY PERCENT	.00 261. 47.20	.23 150. 27.12	.47 73. 13.20	.70 34. 6.15	.93 14. 2.53	1.17 7. 1.27	1.40 1.
LENGTH FREQUENCY PERCENT	1.63 2. .36	1.87 4. .72	2.10 4. .36	2.33 3. .54	2.57 1. .18	2.80 0. .00	3.03 0. .00
LENGTH FREQUENCY PERCENT	3.27 1. .16						

AVERAGE .38 STD DEVIATION = .40 FREQUENCY = 553

KRAFLA SCALE FACTOR 25480.

UNITS ARE KILOMETERS

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12W	TO	9W	12	2.89		.24		. 18		.67	.10
9W	TO	5W	11	1.95		.18		. 13		. 49	.07
6W	TO	ЗW	22	5.63		.26		. 20		.87	.07
3 W	TO	0	22	6.57		.30		. 24		1.09	. 11
O.M	ΙU	U	22	0.57		. 50		. 44		1.03	* ± ±

KRAFLA SCALE FACTOR = 25460.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

0 TO 3E 48 18.06 .38 .28 1.12 .10 3E TO 6E 46 15.65 .34 .45 2.46 .07 6E TO 9E 54 22.33 .41 .50 2.66 .07 9E TO 12E 52 17.99 .35 .25 1.20 .08 12E TO 15E 78 32.66 .42 .31 1.75 .06 15E TO 16E 65 36.03 .55 .61 3.50 .09 18E TO 21E 41 17.54 .43 .29 1.38 .07 21E TO 24E 29 14.03 .48 .53 1.98 .07 24E TO 27E 16 8.06 .50 .63 2.28 .08 27E TO 30E 17 3.49 .21 .12 .57 </th <th>CELL</th> <th>FREQ- UENCY</th> <th></th> <th></th> <th>STANDARD DEVIATION</th> <th>MAXIMUM LENGTH</th> <th>MINIMUM LENGTH</th>	CELL	FREQ- UENCY			STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
81E TO 84E NO OBSERVATIONS FOR THIS CELL 84E TO 87E NO OBSERVATIONS FOR THIS CELL	3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 16E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 33E 33E TO 36E 36E TO 39E 39E TO 42E 42E TO 45E 45E TO 51E 51E TO 54E 51E TO 54E 54E TO 57E 57E TO 60E 60E TO 63E 63E TO 69E 63E TO 72E 72E TO 75E 78E TO 81E 81E TO 84E	46 54 52 78 65 41 29 16 17 6 4	15.85 22.33 17.99 32.66 36.03 17.54 14.03 8.06 3.49 1.05 .99	.34 .41 .35 .42 .55 .43 .48 .50 .21 .18 .25 .13 NO OBSERVA NO OBSERVA	.45 .50 .25 .31 .61 .29 .53 .63 .12 .10 .17 .08 .TIONS FOR THTIONS FOR TH.	2.46 2.68 1.20 1.75 3.50 1.38 1.98 2.28 .57 .37 .46 .19 HIS CELL	.07 .08 .08 .09 .07 .07 .08 .10 .10

TOTAL FREQUENCY = 553
TOTAL LENGTH 211.32
AVERAGE LENGTH = .38
STD. DEVIATION = .40

KRAFLA SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

		CELL	FREQ- UENCY	TOTAL LENGTH	PERCENT LENGTH	AVERAGE LENGTH	STANDARD DEVIATION
9074WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	TO 87W TO 84W TO 81W TO 75W TO 75W TO 75W TO 66W TO 66W TO 66W TO 51W TO 51W TO 48W TO 48W TO 48W TO 36W	TO 27W	1	NO OBSE	RVATIONS FOR RVATI	THIS CELL	.00
	27W 24W		2 6	.58 1.16	.28 .55	.29 19	.02 .07
	21W		5	1.38	.65	.23	.10
	13W		6	1.34	.63	.22	.21
	15W		4	.60	.28	15	.03
	12W 9W		12 11	2.89 1.95	1.37 .92	.24 .18	.18 13
	5 W		22	5.68	2.69	.26	.20
	3 W		22	5.57	3.11	.30	. 24

KRAFLA SCALE FACTOR = 25460.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

	CELL	FREQ- UENCY	TOTAL LENGTH	PERCENT LENGTH	AVERAGE LENGTH	STANDARD DEVIATION
39E	O TO SE 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 18E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 36E 36E TO 39E TO 42E	48 46 54 52 78 65 41 29 16 17 6 4 2		8.54 7.50 10.57 8.51 15.45 17.05 8.30 6.64 3.81 1.65 .50 .47 .13 RVATIONS FOR		.28 .45 .50 .25 .31 .61 .29 .53 .63 .12 .10
42E 48E 51E 57E 63E 63E 69E 72E 78E 81E 84E 87E	T0 45E 45E T0 48E T0 51E T0 54E T0 57E T0 60E T0 63E T0 66E T0 72E T0 75E T0 75E T0 76E T0 81E T0 84E T0 87E T0 90E	3	NO OBSET NO	RVATIONS FOR .22 RVATIONS FOR	THIS CELL	.06

TOTAL FREQUENCY = 553
TOTAL LENGTH = 211.32
AVERAGE LENGTH = .36
STD. DEVIATION = .40

STANDARD DEVIATION OF LENGTH BY CELL = 7.92

GJASTYKKI

SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT		0.	0.	0.	0.	0.	
AZIMUTH FREQUENCY PERCENT	-69 0. .00	-66 0. .00	-63 0. .00	-60 0. .00	-57 0.	-54 0. .00	-51 0. .00
AZIMUTH FREQUENCY PERCENT		0.	0.	0.	0.	0.	0.
FREQUENCY	-27 0. .00	0.	1.	5.	4.	3.	12.
AZIMUTH FREQUENCY PERCENT	-6 14. 2.66	31.	24.	56.	77.	51.	49.
AZIMUTH FREQUENCY PERCENT	67.	38.	38.	25.	10.	30 8. 1.52	6.
AZIMUTH FREQUENCY PERCENT	7.	1.	0.	0.	0.	51 0. .00	0.
FREQUENCY	57 0. .00	Ο.	0.	0.	0.	0.	0.
AZIMUTH FREQUENCY PERCENT		0.	0.	0.	0.		

GJASTYKKI SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH

LENGTH	.00	.18	.37	.55	.73	.91	1.10
FREQUENCY	245.	176.	46.	20.	15.	11.	5.
FERCENT	46.49	33.40	8.73	3.80	2.85	2.09	.95
LENGTH	1.28	1.46	1.65	1.83	2.01	2.20	2.38
FREQUENCY	0.	3.	2.	2.	0.	1.	0.
PERCENT	.00	.57	.38	.38	.00	.19	.00
LENGTH FREQUENCY PERCENT	2.56 1. .19						
AVERAGE =	.29 STD	DEVIA	TION =	.30	FREQUENCY	=	527

GJASTYKKI SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MINIMU LENGTH
90W 87W 84W 81W 75W 72W 66W 63W	TO 37W TO 84W TO 31W TO 73W TO 75W TO 72W TO 69W TO 66W TO 63W TO 60W			NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT	TIONS FOR TO TOO TOO TOO TOO TOO TOO TOO TOO TO	HIS CELL	
50W 57W 54W 51W 48W 45W 42W 36W 36W 33W 30W 27W	TO 57W TO 54W TO 51W TO 48W TO 45W TO 42W TO 39W TO 36W TO 33W TO 30W TO 27W TO 24W			NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT	TIONS FOR TO	HIS CELL HIS CELL HIS CELL	
24W 21W 18W 15W 12W 9W 6W 3W	T0 21W T0 18W T0 15W T0 12W T0 9W T0 6W T0 3W T0 0	1 5 4 3 12 14 31	.16 .83 .40 .62 2.68 3.50 10.75	NO OBSERVAT	ONS FOR T .00 .07 .01 .10 .06 .24 .23	HIS CELL .16 .23 .11 .29 .35 1.01	.16 .11 .10 .10 .14 .10

GJASTYKKI SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

CELL	FREQ-	TOTAL	AVERAGE	STANDARD	MAXIMUM	MINIMUM
	UENCY	LENGTH	LENGTH	DEVIATION	LENGTH	LENGTH
0 TO 3E 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 18E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 33E 33E TO 36E 36E TO 39E 39E TO 42E 42E TO 45E 45E TO 48E 48E TO 51E 51E TO 54E 54E TO 57E 57E TO 60E 60E TO 63E 63E TO 69E 69E TO 72E 72E TO 75E 75E TO 78E 78E TO 81E 81E TO 87E <t< td=""><td>24 56 77 51 49 67 38 25 10 8 6 7</td><td>7.35 14.37 25.76 18.49 18.13 18.52 11.51 9.64 6.55 2.01 1.62 .83 1.35 .13</td><td>NO OBSERVA NO OBSERVA</td><td>TIONS FOR TITIONS FOR TITIONS</td><td>HIS CELL HIS CELL</td><td>.09 .09 .10 .09 .09 .09 .10 .11 .10 .10</td></t<>	24 56 77 51 49 67 38 25 10 8 6 7	7.35 14.37 25.76 18.49 18.13 18.52 11.51 9.64 6.55 2.01 1.62 .83 1.35 .13	NO OBSERVA	TIONS FOR TITIONS	HIS CELL	.09 .09 .10 .09 .09 .09 .10 .11 .10 .10

TOTAL FREQUENCY = 527
TOTAL LENGTH = 155.23
AVERAGE LENGTH = .29
STD. DEVIATION = .30

GJASTYKKI SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

			CELL	FREQ+ UENCY		L GTH	PEPCENT LENGTH			AGE GTH	STANDARD DEVIATION
98887776666655554443333322	TO	48W 45W 42W 39W 36W 330W 27W 24W 21W 21W 15W 12W 9W	TO 16W TO 15W TO 12W TO 9W TO 6W TO 3W	1 5 4 3		OBSERVO OBSERV	/ATIONS	FOR	THIS THIS THIS THIS THIS THIS THIS THIS	CELL CELL CELL CELL CELL CELL CELL CELL	.00 .07 .01 .10 .06
		5W 3W	TO O	31	10.7		6.93			35	.23

GJASTYKKI SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

CELL	FREQ- UENCY		PERCENT LENGTH		STANDARD DEVIATION
O TO 3E 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 15E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 33E 33E TO 36E 36E TO 39E 39E TO 42E 42E TO 45E 45E TO 48E 45E TO 51E 51E TO 54E 54E TO 57E 57E TO 60E 60E TO 63E 60E TO 63E 60E TO 69E 60E TO 72E 72E TO 75E 75E TO 75E 76E TO 81E 61E TO 84E 84E 84E TO 87E 87E TO 90E	24 56 77 51 49 67 38 25 1 8 6 7	NO OBSE	4.73 9.26 16.59 11.91 11.68 11.93 7.41 6.21 4.22 1.30 1.04 .53 .87 .08 RVATIONS FOR	THIS CELL	.26 .17 .36 .44 .38 .32 .34 .24 .20 .08 .11 .03 .10

TOTAL FREQUENCY = 527
TOTAL LENGTH 155.23
AVERAGE LENGTH .29
STD. DEVIATION = .30

STANDARD DEVIATION OF LENGTH BY CELL = 5.75

SJASTYKKI 1

SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERGENT	0.	0.	Ο.	Ο.	O.	-75 0.	0.
AZIMUTH FREQUENCY PERCENT	Ο.	0.	0.	Ο.	0.		Ο.
FREQUENCY		0.	Ο.	0.	0.		Ō.
AZIMUTH FREQUENCY PERCENT		0.	1.	1.	1	З.	7.
AZIMUTH FREQUENCY PERCENT	მ.	16.	11.	26.	39.	9 14. 6.51	11.
AZIMUTH FREQUENCY PERCENT	25.	16.	12.	11.	7	30 2. .93	1.
AZIMUTH FREQUENCY PERCENT		0.	0.	0.	0.	0.	0.
AZIMUTH FREQUENCY PERCENT	57 0. .00	60 0. 00	63 0. .00	66 0. 00	69 0. .00	72 0. .00	75 0. .00
FREQUENCY	78 0. .00	0.	0.	Ο.	0.		

GJASTYKKI 1 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH

LENGTH	.00	.15	.30	.44	59	.74	.89
FREQUENCY	64.	99.	28.	7.	4.	4.	3.
PERCENT	29.77	4 6 .05	13.02	3.26	1 86	1.86	1 40
LENGTH	1.03	1.18	1.33	1.48	1.62	1.77	1.92
FREQUENCY	2.	2.	0.	0.	0.	1.	0.
PERCENT	.93	.93	.00	.00	00	.47	.00
LENGTH FREQUENCY PERCENT	2.07 1. .47						
AVERAGE	.27 ST	D. DEVIA	ATION =	.27	FREQUENCY	=	215

GJASTYKKI 1 SCALE FACTOR 35700.

UNITS LAREKILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
90WW 81WW 752WW WW 752WW WW WW 752WW WW	TO 87W TO 84W TO 81W TO 75W TO 75W TO 72W TO 66W TO 66W TO 67W TO 57W TO 54W TO 54W TO 45W TO 45W TO 36W TO 36W TO 36W TO 36W TO 36W TO 27W TO 24W	UENCY	LENGTH	NO OBSERVATINO OBS	TIONS FOR THE TI	HIS CELL	LENGTH
24W	TO 21W				TIONS FOR TH		4.0
21W	TO 18W	1	. 16	.16	.00	.16	.16
18W	TO 15W	1	. 19	. 19	.00	. 19	.19
15W	TO 12W	1	.10	. 10	.00	. 10	.10
12W	TO 9W	3	.62	.21	.10	.29	.10
9₩	TO SW	7	1.70	. 24	.08	.35	. 14
6W	TO 3W	8	1.59	. 20	. 11	.38	.10
ЗW	TO O	16	5.39	.34	.24	.96	. 10

GJASTYKKI 1

SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

CELL	FREQ-	TOTAL	AVERAGE	STANDARD	MAXIMUM	MINIMUM
	UENCY	LENGTH	LENGTH	DEVIATION	LENGTH	LENGTH
0 TO 3E 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 18E TO 21E 21E TO 24E 24E TO 27E 27E TO 3OE 30E TO 33E 30E TO 36E 30E TO 36E 30E TO 42E 42E TO 45E 42E TO 45E 45E TO 51E 51E TO 54E 51E TO 54E 54E TO 60E 60E TO 68E 60E TO 68E 60E TO 72E 72E TO 75E 75E TO 76E 78E TO 81E 81E TO 87E 87E TO 90E	11 26 39 14 11 25 16 12 11 7 2 1 3	3.59 7.27 15.61 3.65 2.59 4.55 4.75 1.96 2.24 1.45 .55 .18 .41	NO OBSERVA	ATIONS FOR THE TIONS FOR THE ATIONS FOR THE	1.01 .79 2.21 .83 .49 .39 1.80 .32 .33 .47 .18 .19 HIS CELL HIS CELL	.09 .10 .09 .10 .09 .10 .11 .14 .18 .10

TOTAL FREQUENCY = 215
TOTAL LENGTH = 58.52
AVERAGE LENGTH = .27
STD. DEVIATION = .27

GJASTYKKI 1 SCALE FACTOR = 35700

UNITS ARE KILOMETERS

		CELL	FREQ- UENCY	TOTA LENG	-	PERCENT LENGTI		AVERA LENG		STA DE V I	
81W TO 778W TO 778W TO 775W TO 775W TO 669W TO 669W TO 666W TO 666W TO 6557W TO 6557W TO 6557W TO 654W TO 6448W TO 6448W TO 6448W TO 6448W TO 653W TO	344WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	TO 16W TO 15W TO 12W TO 9U TO 6W	1 1 1 3 7		OBSERV	VATIONS	FOR	THIS THIS THIS THIS THIS THIS THIS THIS	CELL CELL CELL CELL CELL CELL CELL CELL		.00 .00 .00 .10
	6W 3W	TO 3W TO O	8 16	1.5 5.3		2.72 9.20			20 34		.11

SCALE FACTOR = 35700. GJASTYKKI 1

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

CELL	FREQ- UENCY	TOTAL LENGTH	PERCENT LENGTH	AVERAGE LENGTH	STANDARD DEVIATION
O TO 38 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 15E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 33E 33E TO 36E 36E TO 39E 39E TO 42E 42E TO 45E 45E TO 48E 48E TO 51E 51E TO 54E 54E TO 60E 60E TO 63E 63E TO 66E 66E TO 69E 69E TO 72E 72E TO 75E 75E TO 75E 75E TO 81E 51E TO 84E 84E 84E TO 87E	11 26 39 14 11 25 16 12 11 7 2	3.59 7.27 15.61 3.65 2.59 4.55 4.75 1.96 2.24 1.45 .18 .41 NO OBSSE NO OBSS	6.14 12.41 26.67 6.24 4.42 7.77 8.12 3.34 5.82 2.47 .94	.35 .26 .40 .26 .24 .18 .30 .16 .20 .21 .28 .18 .14 THIS CELL THIS CELL	.32 .18 .44 .20 .14 .08 .41 .07 .08 .20 .00
87E TO 90E		140 0131	RVATIONS FOR	THIS CELL	

TOTAL FREQUENCY = 215 TOTAL LENGTH = 58,52 . 27 AVERAGE LENGTH = .27 STD. DEVIATION =

STANDARD DEVIATION OF LENGTH BY CELL = 2.48

GJASTYKKI 2

SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	-90 0. .00	0.	-84 0. .00	Ο.	Ο.	0.	- 7 2 0
AZIMUTH FREQUENCY PERCENT	-69 0. .00	0.	-63 0. .00	0.		0.	-51 0,
AZIMUTH FREQUENCY PERCENT	-48 0. .00		-42 0. .00	0.		0.	-30 0,
AZIMUTH FREQUENCY PERCENT	-27 0. .00	-24 0. .00		1.		0.	-9 1.
AZIMUTH FREQUENCY PERCENT			0 4. 3.05				12 13. 9.
AZIMUTH FREQUENCY PERCENT	15 21. 16.03	18 12. 9.16	21 18. 13.74	12.		4.	33 4, 3.
AZIMUTH FREQUENCY PERCENT	4.		42 0. .00	0.		0.	54 0.
AZIMUTH FREQUENCY PERCENT	57 0. .00	0.		0.	69 0. .00	0.	75 0,
	78 0. .00	0.		0.	0.		

GJASTYKKI 2

SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH

LENGTH	.00	.12	.24	.37	49	.61	73
FREQUENCY	29.	60.	20.	5.	6.	4.	0.
PERCENT	22.14	45.80	15.27	3.82	4.58	J.O5	.00
LENGTH	.86	.98	1.10	1 22	1.35	1.47	1.59
FREQUENCY	4.	O.		1	O.	1.	0.
FERCENT	3.05	.00		.76	.00	.76	00
LENGTH FREQUENCY PERCENT	1.71 1. .76						

AVERAGE = .27 STD. DEVIATION = .27 FREQUENCY = 131

GJASTYKKI 2 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
30W 87W 84W 81W 78W 75W	T 87W T0 84W T0 81W T0 73W T0 75W T0 72W			NO OBSERVAT NO OBSERVAT NO OBSERVAT NO OBSERVAT	TIONS FOR TH TIONS FOR TH TIONS FOR TH TIONS FOR TH TIONS FOR TH TIONS FOR TH	HS CELL HS CELL HS CELL	
72W 69W 66W 63W	TO 69W TO 66W TO 63W TO 60W			NO OBSERVAT NO OBSERVAT	FIONS FOR TH FIONS FOR TH FIONS FOR TH FIONS FOR TH	IS CELL	
60W 57W 54W	TO 57W TO 54W TO 51W			NO OBSERVAT NO OBSERVAT NO OBSERVAT	TIONS FOR TH TIONS FOR TH TIONS FOR TH	IS CELL IS CELL IS CELL	
51W 48W 45W 42W	TO 48W TO 45W TO 42W TO 39W			NO OBSERVAT NO OBSERVAT	FIONS FOR TH FIONS FOR TH FIONS FOR TH FIONS FOR TH	IS CELL	
39W 36W 33W 30W	TO 36W TO 33W TO 30W TO 27W			NO OBSERVA	TIONS FOR TH	IS CELL	
27W 24W 21W	TO 24W TO 21W TO 18W		4.7	NO OBSERVAT NO OBSERVAT NO OBSERVAT	TIONS FOR TH TIONS FOR TH TIONS FOR TH	IS CELL	4.7
18W 15W 12W 9W	TO 15W TO 12W TO 9W TO 6W	1	.17		.00 FIONS FOR TH FIONS FOR TH .00		.17
6W 3W	TO 3W	2	.29 .83	.14	.07	.19	.10

GJASTYKKI 2 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

CE	ELL	FREQ- UENCY	AVERAGE LENGTH			MINIMUM LENGTH
0 T 6E T 12E T 15E T 18E T 18E T 24E T 24E T 30E T 33E T 39E T 42E T 48E T 48E T 51E T 54E T 54E T 56E T 66E T 66E T 69E T 69E T	3E 3	•	LENGTH .22 .24 .16 .33 .44 .20 .41 .30 .30 .18 .21 .13 .24 .13 NO OBSERV	DEVIATION . 04 . 20 . 06 . 22 . 57 . 12 . 35 . 25 . 27 . 09 . 08 . 02 . 11 . 00 ATIONS FOR ATIONS FOR ATIONS FOR ATIONS FOR ATIONS FOR	LENGTH .26 .70 .29 .68 1.84 .51 1.24 .92 .98 .24 .32 .14 .33 .13 THIS CELL	
78E T 81E T 84E T	78E 0 81E 0 84E 0 87E		NO OBSERV NO OBSERV NO OBSERV	ATIONS FOR TATIONS FOR TATIONS FOR	THIS CELL THIS CELL THIS CELL THIS CELL	

TOTAL FREQUENCY = 131
TOTAL LENGTH = 35.64
AVERAGE LENGTH .27
STD. DEVIATION = .27

GJASTYKKI 2 SCALE FACTOR = 35700

UNITS ARE KILOMETERS

			CELL			1CY EQ−			PERCEN' LENGT		.AVER		STANDA DEVIATI
30M	TO	87W					NO	OBSER	VATIONS	FOR	THIS	CELL	
87W	TO	847					NO	OBSER	RVATIONS	FOR	THIS	CELL	
84W	ΤO	31W					NO	OBSER	RVATIONS	FOR	THIS	CELL	
31W	TO	73W					NO	OBSER	RVATIONS	FOR	THIS	CELL	
78W	ΤO	75W					NO	OBSER	CVATIONS	FOR	THIS	CELL	
75W	TO	72W					NO	OBSER	CVATIONS	FOR	THIS	CELL	
72W	ΤO	69W					NO	OBSER	RVATIONS	FOR	THIS	CELL	
69W		68W					БИ	OBSER	CVATIONS	FOR	THIS	CELL	
66W		63W							RVATIONS		THIS	CELL	
63W		60W					NO	OBSER	RVATIONS	FOR	THIS	CELL	
60W		57W							RVATIONS			CELL	
57W		544							RVATIONS				
54W		51W							EVATIONS				
51W		48W							RVATIONS				
43 W		45W							RVATIONS			CELL	
45W		42W							RVATIONS			CELL	
42W		39W							RVATIONS			CELL	
391/		36W							RVATIONS		THIS		
36W		WEE							CVATIONS			CELL	
ЗЗW		30M							RVATIONS			CELL	
SOW		27W							RVATIONS		THIS	CELL	
27W		24W							RVATIONS			CELL	
24W	ΤO	21W							RVATIONS		THIS		
21W	TO	18W					NO	OBSER	EVATIONS	FOR			
		18W	ΤO	15W	1	L	. 1		. 47			17	.00
15W		12W							RVATIONS				
12W	TO	9W							RVATIONS	FOR			
		9W	ΤO	6 W	1		. 2		.59			21	.00
		6W	TO	WE	2		. 2		.81			14	.07
		ЗW	TO	0	3	3	. 5	33	2.33		• =	28	.10

GJASTYKKI 3

SCALE FACTOR = 65700.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	Ο.	Ο,	0.	0.	0.	Ο.	0.
AZIMUTH FREQUENCY PERCENT	-69 0. .00	-66 0. .00	-63 0. .00	-60 0.	-57 0.	-54 0. .00	-51 0. .00
AZIMUTH FREQUENCY PERCENT	0.	0.	0.	0.	0.		0.
AZIMUTH FREQUENCY PERCENT	Ο.	0.	0.	0.	0.		1.
AZIMUTH FREQUENCY PERCENT	2.	8.	3.	13.	13.		16.
AZIMUTH FREQUENCY PERCENT	14.	З.	7.	2.	1.	30 1. .99	1.
AZIMUTH FREQUENCY PERCENT	0.	0.	0.	0.	0.	51 0. .00	Ο.
AZIMUTH FREQUENCY PERCENT	Ο.	0.	0.	o.	0.		્રે .
AZIMUTH FREQUENCY PERCENT	78 0. .00	0.	0.	Ο.	0.		

GJASTYKKI 3 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH	
------------------------	--

LENGTH	.00	.18	.37	55	73	.91	1 10
FREQUENCY	41.	33.	11.	7.	3.	2.	1
FERCENT	40.59	32.67	10.89	6.93	2.97	1.98	.99
LENGTH	1.28	1.46	1.65	1.83	2.01	2.20	2.38
FREQUENCY	0.	2.	0.	0.	C.	0.	
PERCENT	.00	1.98	.00	.00	.00	.00	
LENGTH FREQUENCY PERCENT	2.56 1. .99						

AVERAGE = .34 STD. DEVIATION = .37 FREQUENCY 101

GJASTYKKI 3 SCALE FACTOR = 35700

UNITS ARE KILOMETERS

CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MININ LENGT
90W TO 87W 87W TO 84W 84W TO 81W TO 78W TO 75W TO 72W TO 69W 69W TO 66W 66W TO 57W 57W TO 54W 54W TO 51W 51W TO 45W 48W TO 45W 45W TO 39W 39W TO 36W 36W TO 36W 36W TO 30W 30W TO 27W 27W TO 24W 24W TO 21W TO 18W 18W TO 15W 15W TO 12W 15W TO 15W 15W TO 12W 15W TO 12W 15W TO 12W			LENGTH NO OBSERVA NO OBSERVA	DEVIATION TIONS FOR TI	LENGTH HIS CELL	
12W TO 9W 9W TO 6W 6W TO 3W 3W TO O	1 2 8	.20 .49 1.96	NO OBSERVAT .20 .24 .25	FIONS FOR TH .00 .03 .16	HIS CELL .20 .26 .61	. 2({ . 2; { . 1;

GJASTYKKI 3 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

CELL	FREQ- UENCY		AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
0 TO 3E 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 18E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 33E 30E TO 33E 33E TO 36E 36E TO 39E 39E TO 42E 42E TO 45E 45E TO 48E 45E TO 51E 51E TO 54E 54E TO 57E 57E TO 60E 60E TO 63E 63E TO 66E 66E TO 69E 69E TO 72E 72E TO 75E 75E TO 78E 78E TO 81E 81E TO 84E 81E TO 84E	3 13 16 16 14 3 7 2 1 1	.82 2.96 4.84 6.97 7.51 4.39 .74 2.24 .65 .21 .10	NO OBSERVA	TIONS FOR T	HIS CELL	.10 .09 .10 .10 .10 .13 .15 .21 .10 .13

TOTAL FREQUENCY	=	101
TOTAL LENGTH	=	34.18
AVERAGE LENGTH	=	.34
STD. DEVIATION	=	.37

GJASTYKKI 3

SCALE FACTOR = 35700

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH	PERCENT LENGTH	AVERAGE LENGTH	STANDA DEVIATION
90W TO 87W 87W 84W 84W TO 81W 81W TO 78W 75W TO 75W 75W TO 69W 69W TO 66W 66W TO 57W 57W TO 54W 51W TO 45W 48W TO 45W 45W TO 39W 39W TO 36W 33W TO 36W 33W TO 30W 30W TO 27W 27W TO 24W 24W TO 21W 21W TO 18W 15W TO 12W 15W TO 12W 15W TO 90W 66W 30W 30W TO 27W 27W TO 24W 24W TO 21W 21W TO 18W 15W TO 15W 15W TO 12W 18W TO 90W 66W 30W 30W 30W 30W 30W 30W 30W 30W 30W 30	TO 6W TO 3W	1 2 8	NO OBSER	VATIONS FOR VATION	THIS CELL	.00
· · ·		_				•

GJASTYKKI 3 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

3E TO 6E 13 2.96 8.65 .23 .15 6E TO 9E 13 4.84 14.15 .37 .30 9E TO 12E 16 6.97 20.39 .44 .64 12E TO 15E 16 7.51 21.96 .47 .39 15E TO 18E 14 4.39 12.84 .31 .38 18E TO 21E 3 .74 2.17 .25 .23 21E TO 24E 7 2.24 6.56 .32 .36 24E TO 27E 2 .65 1.89 .32 .24 27E TO 30E 1 .21 .61 .21 .00 30E TO 33E 1 .10 .29 .10 .00 33E TO 36E 1 .13 .38 .13 .00 3SE TO 42E		CELL			PERCENT LENGTH		
60ETO 63ENO OBSERVATIONS FOR THIS CELL63ETO 66ENO OBSERVATIONS FOR THIS CELL66ETO 69ENO OBSERVATIONS FOR THIS CELL69ETO 72ENO OBSERVATIONS FOR THIS CELL72ETO 75ENO OBSERVATIONS FOR THIS CELL75ETO 78ENO OBSERVATIONS FOR THIS CELL78ETO 81ENO OBSERVATIONS FOR THIS CELL81ETO 84ENO OBSERVATIONS FOR THIS CELL84ETO 87ENO OBSERVATIONS FOR THIS CELL87ETO 90ENO OBSERVATIONS FOR THIS CELL	39E 42E 45E 48E 51E 54E 57E 60E 63E 66E 72E 75E 81E 84E	O TO 3E 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 18E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 33E 33E TO 36E TO 42E TO 45E TO 48E TO 51E TO 54E TO 57E TO 60E TO 63E TO 66E TO 69E TO 72E TO 75E TO 78E TO 81E TO 84E TO 87E	3 13 13 16 16 14 3 7 2	.82 2.96 4.84 6.97 7.51 4.39 .74 2.24 .65 .21 .10 .13 NO OBSE	2.39 8.65 14.15 20.39 21.96 12.84 2.17 6.56 1.89 .61 .29 .38 RVATIONS FOR	.27 .23 .37 .44 .47 .31 .25 .32 .32 .21 .10 .13 THIS CELL	. 23 . 15 . 30 . 64 . 39 . 38 . 23 . 36 . 24 . 00

TOTAL FREQUENCY = 101
TOTAL LENGTH = 34.18
AVERAGE LENGTH = .34
STD. DEVIATION = .37

STANDARD DEVIATION OF LENGTH BY CELL = 1.58

GJASTYKKI 4

SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	0.	Ο.	Ο.	-81 0. .00	Ο.	0.	-72 0
AZIMUTH FREQUENCY PERCENT	0.	Ο.	0.	-60 0. .00	0.	Ο.	-51 0.
AZIMUTH FREQUENCY PERCENT	_	-45 0. .00	-42 0. .00	-39 0. .00	-36 0. .00	-33 0. .00	-30 O.
AZIMUTH FREQUENCY PERCENT		0.		З.		0.	-9 3. 3.7
AZIMUTH FREQUENCY PERCENT	2.		6.	3 9. 11.25	12.	9 13. 16.25	
AZIMUTH FREQUENCY PERCENT	15 8. 10.00	18 6. 7.50	21 1. 1.25	24 1. 1.25	27 0. .00	30 1. 1.25	33 O. .0
AZIMUTH FREQUENCY PERCENT	Ο.	0.	0.	45 0. .00	Ο.	Ο.	
AZIMUTH FREQUENCY PERCENT	0.	Ο.	0.	66 0. .00	0.	0.	Ο.
AZIMUTH FREQUENCY PERCENT	78 0. .00	0.	84 0. .00	0.	90		

GJASTYKKI 4 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH

LENGTH	.00	.13	.26	.39	.52	65	.78
FREQUENCY	17.	33.	11.	5.	3.	3.	2.
PERCENT	21.25	41.25	13.75	6.25	3.75	3.75	2.50
LENGTH	.91	1.05	1.18	1 31	1 44	1 57	1.70
FREQUENCY	3.	1.	0.	0.	0.	0.	1.
PERCENT	3.75	1.25	.•0	.•0	.00	00	1 25
LENGTH FREQUENCY PERCENT	1.83 1. 1.25						
AVERAGE =	.34 51	rd. DEVI	ATION =	.35	FREQUENC	Y =	80

GJASTYKKI 4

SCALE FACTOR = 35700

UNITS ARE KILOMETERS

	CELI		REQ- ENCY	TOTAL LENGTI		ERAGE NGTH		NDARD ATIO			AXIMUM ENGTH	MINIM LENGT
90W	TΩ	87W			NO	OBSERVA	TIONS	FOR	TH	I S	CELL	
87W		84W				OBSERVA						
84W		81W				OBSERVA						
81W		78W				OBSERVA						
78W		75W				OBSERVA						
75W		72W				OBSERVA						
72W		69W				OBSERVA						
69W		66W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
66W	TO	63W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
63W	TO	60W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
60W	TO	57W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
57W	TO	54W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
54W	TO	51W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
51W	TO	48W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
48W	TO	45W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
45W	TO	42W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
42W	TO	39W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
39W	TO	36W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
36W	TO	33W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
33W	TO	30W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
ЗOW	TO	27W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
27W	TO	24W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
24W	TO	21W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
21W	TO	18W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
18W	TO	15W	3	.52		. 17		.09			.28	. 11
15W	TO	12W	3	.30		.10		.01			. 11	. 10
12W	TO	9W			NO	OBSERVA	TIONS	FOR	TH	IS	CELL	
9W	TO	6W	3	.59		.20		.02			.21	. 18
6W	TO	ЗW	2	1.13		.57		.63			1.01	. 12
ЗW	TO	0	4	2.41		.60		. 25			.93	. 34

GJASTYKKI 4 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

	CELL	FREQ- UENCY	AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
0 3EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE	TO 3E TO 6E TO 9E TO 12E TO 15E TO 18E TO 24E TO 27E TO 30E TO 50E TO 60E TO 57E TO 60E TO 60E TO 72E		LENGTH .35 .26 .26 .39 .23 .73 .16 .14 .21 NO OBSERVA	DEVIATION .36 .11 .22 .46 .15 .62 .08 .00 .00 TIONS FOR THIONS FO	1.05 .48 .75 1.76 .49 1.96 .31 .14 .21	
72E 75E 78E 51E 54E 57E	TO 72E TO 75E TO 78E TO 81E TO 84E TO 87E TO 90E		NO OBSERVATINO OBSERVATINO OBSERVATINO OBSERVATINO OBSERVATINO OBSERVATI	FIONS FOR TH FIONS FOR TH FIONS FOR TH FIONS FOR TH	HS CELL HS CELL HS CELL HS CELL	

TOTAL FREQUENCY = 80
TOTAL LENGTH = 26.69
AVERAGE LENGTH = .34
STD. DEVIATION = .35

GJASTYKKI 4 SCALE FACTOR = 35700.

UNITS ARE KILOMETERS

			CELI		REQ- ENCY	TOTA				RCENT ENGT		AVER LEN		STA DEVI	NDA
90W	TO	87W				NO	OBS	SERV	/ATI	ONS	FOR	THIS	CELL		
87W	TO	84W				NO	OBS	ERV	ATI	ONS	FOR	THIS	CELL		
84W	TO	81W				NO	OBS	ERV	/ATI	ONS	FOR	THIS	CELL		
81W	TO	78W				NO	OBS	ERV	ATI	ONS	FOR	THIS	CELL		
78W	TO	75W				NO	OBS	SERV	/ATI	ONS	FOR	THIS	CELL		
75W	TO	72W				NO	OBS	ERV	ATI	ONS	FOR	THIS	CELL		
72W	TO	69W				NO	OBS	SERV	/ATI	ONS	FOR	THIS	CELL		
69W	TO	66W				NO	OBS	ERV	ATI	ONS	FOR	THIS	CELL		
66W	TO	63W											CELL		
63W	TO	60W											CELL		
60W		57W											CELL		
57W		54W											CELL		
54W		51W											CELL		
51W		48W											CELL		
48W		45W													
45W		42W											CELL		
42W	TO	39W				ИО							CELL		
39W		36W											CELL		
36W		33W											CELL		
ЗЗW	TO												CELL		
ЗОW	TO	27W											CELL		
27W		24W											CELL		
24W		21W											CELL		
21W	TO	18W						ERV			FOR		CELL		
		18W	TO	15W	3		52			93			17		. 09
		15W	TO	12W	3		30			.12			10		. 01
12W	TO	9 W						ERV			FOR		CELL		
		9 W	TO	6W	3		59			2.18			20		. 02
		6W	TO	ЗW	2	1.1				1.21			57		. 63
		ЗW	TO	0	4	2.4	41		8	3.97		•	60		. 25

GJASTYKKI 4 SCALE FACTOR 35700.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

	CELL	FREQ- UENCY	TOTAL LENGTH	FERCENT LENGTH	AVERAGE LENGTH	
33E 36E 39E 42E 45E 46E 51E 57E 60E	O TO 3E 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 18E TO 21E 21E TO 27E TO 30E 30E TO 33E TO 36E TO 39E TO 42E TO 45E TO 45E TO 51E TO 57E TO 60E TO 63E TO 66E		LENGTH 2.07 2.37 3.33 5.04 1.81 5.85 .98 .14 .21 NO OBSE	LENGTH 7.70 8.82 12.37 18.75 6.72 21.76 3.65 .51 .77 RVATIONS FOR	LENGTH .35 .26 .20 .39 .23 .73 .16 .14 .21 THIS CELL	
66E 69E 72E 75E 78E 51E 84E	TO 69E TO 72E TO 75E TO 76E TO 81E TO 84E TO 87E TO 90E		NO OBSE	RVATIONS FOR	THIS CELL	

TOTAL FREQUENCY 80
TOTAL LENGTH = 26.89
AVERAGE LENGTH = .34
STD. DEVIATION = .35

STANDARD DEVIATION OF LENGTH BY CELL = 1.17

HVERFJALL 1

SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	0.	Ο.	Ο.	-81 0. .00	0.	0.	Ο.
AZIMUTH FREQUENCY PERCENT	0.	0.	0.	-60 0. .00	0.	0.	0.
AZIMUTH FREQUENCY PERCENT	0.	Ο.	0.	-39 0. .00	0.	0.	0.
AZIMUTH FREQUENCY PERCENT	-27 0. .00	-24 0. .00	-21 0. .00	-18 0. .00	-15 0. .00	-12 0. .00	-9 0. .00
AZIMUTH FREQUENCY PERCENT				3 1. 5.56			
AZIMUTH FREQUENCY PERCENT	4.	1.	1.	24 0. .00	Ο.	Ο.	2.
AZIMUTH FREQUENCY PERCENT	0.	Ο,	Ο.	45 0. .00	0.	0.	0.
AZIMUTH FREQUENCY PERCENT	57 0. .00	60 0.	63 0. .00	66 0. .00	69 0. .00	72 0. .00	75 0. .00
FREQUENCY	78 0. .00	Ο.	Ο.	Ο.	Ο.		

HVERFJALL 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

DISTRIBUTI	ON BY	LENGTH
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LENGTH FREQUENCY PERCENT	.00 1 5.56	.15 6. 33.33	31 3. 16.67	.46 3. 16.67	.61 3. 16.67	77 1. 5.56	.92 0. 00
LENGTH FREQUENCY PERCENT	1.07 0. 00	1.23 0. 00	1.38 0. 00	1.53 0. .00	1.69 0. .00	1.84 0. 00	1.99 0. 00
LENGTH FREQUENCY PERCENT	2.15 1. 5.56						
AVERAGE	53 S 1	rd. DEVIA	ATION	49	FREQUENCY	7 =	18

HVERFJALL 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH		RAGE GTH	STANI			AXIMUM ENGTH	MINIMU LENGTH
90W 87W 84W 78W 75W 72W 66W 66W 57W 54W 45W	TO 87W TO 84W TO 81W TO 78W TO 75W TO 72W TO 69W TO 66W TO 66W TO 57W TO 54W TO 51W TO 48W TO 48W TO 42W		LENGTH	NO (GTH OBSERVAT OBSERVAT	TIONS	FOR FOR FOR FOR FOR FOR FOR FOR FOR FOR	THIS THIS THIS THIS THIS THIS THIS THIS	CELL CELL CELL CELL CELL CELL CELL CELL	LENGTH
42W 39W 36W 33W 27W 24W 21W 15W 12W 9W 6W 3W	TO 30W TO 27W TO 24W TO 21W TO 18W TO 15W TO 12W TO 9W TO 6W TO 3W			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	OBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVATOBSERVAT	I ONS	FOR FOR FOR FOR FOR FOR FOR FOR	THIS THIS THIS THIS THIS THIS THIS THIS	CELL CELL CELL CELL CELL CELL CELL CELL	

HVERFJALL 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

CE	LL		TOTAL LENGTH						AXIMUM ENGTH	
0 T 3E T 12E T 12E T 15E T 21E T 24E T 27E T 30E T 33E T 39E T 42E T 45E T 45E T 51E T 54E T 57E T 60E T 63E T 66E T 72E T 75E T 78E T 78E	0 3E 0 6E 0 9E 0 12E 0 15E 0 18E 0 21E 0 24E	UENCY 1 1 3 1 4 4 1 1	.27 .23 .99 .70 1.69 3.85 .77 .33	NO O O O O O NO O O O O O O O O O O O O O O O O O O O	TH .27 .23 .33 .70 .42 .96 .77 .33 BSERVAT	IONS IONS IONS IONS IONS IONS IONS IONS	00 00 25 00 23 90 00 FOR 11 FOR 15 15 FOR 15 15 FOR 15 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 15 FOR 15 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 15 FOR 15 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15 FOR 15	THIS THIS THIS THIS THIS THIS THIS THIS	.27 .23 .61 .70 .64 2.30 .77 .33 CELL CELL CELL CELL CELL CELL CELL CE	.27 .23 .13 .70 .15
	0 87E 0 90E				BSERVAT BSERVAT					

TOTAL FREQUENCY = 18
TOTAL LENGTH = 9.59
AVERAGE LENGTH = .53
STD. DEVIATION = .49

HVERFJALL 1

SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

			CELL	FREQ- UENCY	TOTA		PERCEN' LENGTI		AVER/		STANDARI DEVIATION
90W	TO	87W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
87W	TO	84W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
84W	TO	81W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
81W	TO	78W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
78W	TO	75W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
75W	TO	72W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
72W	TO	69W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
69W	TO	66W			NO	OBSERV	COLLA	FOR	THIS	CELL	
66W	TO	63W			NO	OBSERV	CATIONS	FOR	THIS	CELL	
63W	TO	60W			NO	OBSERV	CATIONS	FOR	THIS	CELL	
60W	TO	57W			NO	OBSERV	CATIONS	FOR	THIS	CELL	
57W	TO	54W			NO	OBSERV	COLLA	FOR	THIS	CELL	
54W	TO	51W			NO	OBSERV	CATIONS	FOR	THIS	CELL	
51W	TO	48W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
48W	TO	45W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
45W	TO	42W			NO	OBSERV	COLLA	FOR	THIS	CELL	
42W	TO	39W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
39W	TO	36W			NO	OBSERV	CATIONS	FOR	THIS	CELL	
36W	TO	ззи			NO	OBSERV	COLLA	FOR	THIS	CELL	
ЗЗW	TO	ЗOW			NO	OBSERV	COLLA	FOR	THIS	CELL	
ЗOW	TO	27W			NO	OBSERV	CATIONS	FOR	THIS	CELL	
27W	TO	24W			NO	OBSERV	ZNOITA	FOR	THIS	CELL	
24W	TO	21W			NO	OBSERV	CATIONS	FOR	THIS	CELL	
21W	TO	18W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
18W	TO	15W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
15W	TO	12W			NO	OBSERV	CHOITA	FOR	THIS	CELL	
12W	TO	9 W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
9 W	TO	6W			NO	OBSERV	ATIONS	FOR	THIS	CELL	
6W	TO	ЗW			NO	OBSERV	ATIONS	FOR	THIS	CELL	
ЗW	TO	0			NO	OBSERV	ATIONS	FOR	THIS	CELL	

HVERFJALL 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

		CELL			PERCENT LENGTH		
	0 3E 6E	TO 3E TO 6E TO 9E	1 1 3	.23	2.84 2.40 10.31		
	9E 12E	TO 12E TO 15E	1		7.30 17.61		
	15E	TO 18E	4	3.85	40.14	.96	
	18E 21E	TO 21E TO 24E	<u>1</u> 1		8.03 3.45		.00
24E 27E 30E	TO 27E TO 30E TG 33E			NO OBSE	RVATIONS FOR EVATIONS FOR EVATIONS FOR	THIS CELL THIS CELL	
36EE 45EE 45EE 54EE 554EE 5566 5758 5758 5758 5758 5758 5758 5758	33E T0 39E T0 42E T0 48E T0 48E T0 51E T0 54E T0 57E T0 63E T0 66E T0 69E T0 72E T0 78E T0 78E T0 81E T0 84E T0 87E T0 90E	TO 36E	2	NO OBSE	7.93 RVATIONS FOR	THIS CELL	. 1 1

TOTAL FREQUENCY = 18
TOTAL LENGTH = 9.59
AVERAGE LENGTH = .53
STD. DEVIATION = .49

STANDARD DEVIATION OF LENGTH BY CELL = .57

HVERFJALL 2

SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	-90 0. .00	0.		-81 0. .00	0.	Ο.	-72 0. .00
AZIMUTH FREQUENCY PERCENT	-69 0. .00	0.	0.	-60 0. .00	0.	0.	-51 O. .00
AZIMUTH FREQUENCY PERCENT	0.	0.	0.	-39 0. .00	0.	0.	-30 0. .00
AZIMUTH FREQUENCY PERCENT	-27 0. .00	0.	0.	-18 0. .00	0.	0.	-9 0. .00
AZIMUTH FREQUENCY PERCENT	-6 0. .00	-3 0. .00	0 1. 2.70	3 0. .00	6 1. 2.70	5.	12 8. 21.62
AZIMUTH FREQUENCY PERCENT	11.		4.	24 1. 2.70	2.	1.	0.
AZIMUTH FREQUENCY PERCENT	Ο.	0.	Ο.	45 0. .00	0.	0.	0.
AZIMUTH FREQUENCY PERCENT	Ο.	0.	0.	66 0. .00	0.	0.	0.
AZIMUTH FREQUENCY PERCENT	7 8 0.	0.	Ο.	87 0. .00	Ο.		

HVERFJALL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH

LENGTH	.00	.13	.26	.40	.53	.66	.79
FREQUENCY	2.	8.	4.	9.	4.	4.	2.
PERCENT	5.41	21.62	10.81	24.32	10.81	10.81	5.41
LENGTH	.92	1.05	1.19	1.32	1.45	1.58	1.71
FREQUENCY	2.	0.		0.	0.	0.	0.
PERCENT	5.41	.00		.00	.00	.00	.00
LENGTH FREQUENCY PERCENT	1.85 2. 5.41						

AVERAGE .54 STD. DEVIATION = .42 FREQUENCY = 37

HVERFJALL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH		ERAGE NGTH	STANI			AXIMUM ENGTH	MINIMUM LENGTH
90W 87W 84W 78W 75W 66W 63W 45W 45W 45W 45W 45W 45W 45W 45W 45W 45	TO 87W TO 84W TO 81W TO 75W TO 75W TO 75W TO 69W TO 66W TO 63W TO 60W TO 57W TO 54W TO 51W TO 45W TO 45W TO 39W TO 39W TO 36W TO 33W TO 36W TO 33W TO 30W TO 27W TO 24W TO 15W TO 15W TO 15W TO 15W TO 15W TO 3W				OBSERVATORSERVATORSERVATORSERV	20017 20017 20017 20017 20017 20017 20017 20017 20017 20017 20017 20017 20017 20017 20017 20017 20017 20017	FOR	THIS THIS THIS THIS THIS THIS THIS THIS	CELL CELL CELL CELL CELL CELL CELL CELL	
ЗW	TO O			NO	OBSERVAT	rions	FOR	THIS	CELL	

HVERFJALL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE STANDARD MAXIMUM MINIMUM LENGTH DEVIATION LENGTH LENGTH	-
0 TO 3E 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 18E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 33E 33E TO 36E 39E TO 42E 42E TO 45E 45E TO 48E 45E TO 51E 51E TO 54E 54E TO 57E 57E TO 60E 60E TO 63E 63E TO 66E 66E TO 69E 69E TO 72E 72E TO 75E 75E TO 78E 78E TO 81E 81E			LENGTH DEVIATION LENGTH LENGTH .27 .00 .27 .27 NO OBSERVATIONS FOR THIS CELL .35 .35 .45 .29 .80 .13 .52 .16 .79 .25 .78 .63 1.98 .19 .52 .28 .76 .21 .43 .41 1.01 .12 .46 .00 .46 .46 .27 .06 .32 .23 .21 .00 .21 .21 NO .0BSERVATIONS FOR THIS CELL NO .0BSERVATIONS FOR THIS CELL NO .0BSERVATIONS FOR THIS CELL NO .0BSERVATIONS FOR THIS CELL NO .0BSERVATIONS FOR THIS CELL .00 .0BSERVATIONS FOR THIS CELL NO .0BSERVATIONS FOR THIS CELL .00 .0BSERVATIONS FOR THIS CELL NO .0BSERVATIONS FOR THIS CELL .00 .0BSERVATIONS FOR THIS CELL NO .0BSERVATIONS FOR THIS CELL .00 .00	-
84E TO 87E 87E TO 90E			NO OBSERVATIONS FOR THIS CELL NO OBSERVATIONS FOR THIS CELL	

TOTAL FREQUENCY = 37
TOTAL LENGTH = 20.01
AVERAGE LENGTH = .54
STD. DEVIATION = .42

HVERFJALL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

			CELL	FREQ- UENCY	TOTA		PERCENT		AVERA LENG		STANDARD DEVIATION
90W	TO	87W			NO	OBSER	VATIONS	FOR	THIS	CELL	
87W	TO	84W			NO	OBSER	VATIONS	FOR	THIS	CELL	
84W	TO	81W			NO	OBSER	VATIONS	FOR	THIS	CELL	
81W	TO	78W			NO	OBSER	CHOITAV	FOR	THIS	CELL	
78W	TO	75W			NO	OBSER	ZNOITAV	FOR	THIS	CELL	
75W	TO	72W			NO	OBSER	ZNOITAV	FOR	THIS	CELL	
72W	TO	69W			NO	OBSER	VATIONS	FOR	THIS	CELL	
69W	TO	66W			NO	OBSER	CATIONS	FOR	THIS	CELL	
66W	TO	63W			NO	OBSER	CHOITAV	FOR	THIS	CELL	
63W	TO	60W			NO	OBSER	CHOITAV	FOR	THIS	CELL	
60W	TO	57W			NO	OBSER	VATIONS	FOR	THIS	CELL	
57W	TO	54W			NO		VATIONS				
54W	TO	51W			NO	OBSER	VATIONS	FOR	THIS	CELL	
51W	TO	48W			NO		VATIONS				
48W	TO	45W			NO	OBSER	VATIONS	FOR	THIS	CELL	
45W	TO	42W			NO		CONTIONS				
42W	TO	39W			NO	OBSER	ZATIONS	FOR	THIS	CELL	
39W	TO	36W			NO	OBSER	VATIONS	FOR	THIS	CELL	
36W	TO	ЗЗW			NO	OBSER	VATIONS	FOR	THIS	CELL	
WEE	TO	WOE			NO	OBSER	VATIONS	FOR	THIS	CELL	
ЗOW	TO	27W			NO	OBSER	CONTIONS	FOR	THIS	CELL	
27W	TO	24W			NO	OBSER	CONTIONS	FOR	THIS	CELL	
24W	TO	21W			NO	OBSER	ROITAV	FOR	THIS	CELL	
21W	TO	18W			NO	OBSER	VATIONS	FOR	THIS	CELL	
18W	TO	15W			NO	OBSER	VATIONS	FOR	THIS	CELL	
15W	TO	12W			NO	OBSER	VATIONS	FOR	THIS	CELL	
12W	TO	9W			NO		ZATIONS				
9 W	TO	6W			NO	OBSER	COLTAV	FOR	THIS	CELL	
6W	TO	ЗW			NO		VATIONS				
ЗW	TO	0			NO	OBSER	VATIONS	FOR	THIS	CELL	

HVERFJALL 2

SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

			CELL	FREQ- UENCY	TOTAL LENGTH	PERCENT LENGTH	AVERAGE LENGTH	STANDARD DEVIATION
3E	TO	0 6E	то зе	1	.27	1.32 ERVATIONS FOR	.27	.00
OL	10	6E	TO 9E	1	.35	1.73	.35	. 00
		9E	TO 12E	5	2.22	11.11	. 45	.29
		12E	TO 15E	8	4.15	20.73	,52	.16
		15E	TO 18E	11	8.54	42.69	.78	.63
		18E	TO 21E	3	1.56	7.79	.52	.28
		21E	TO 24E	4	1.71	8.54	. 43	. 41
		24E	TO 27E	1	. 46	2.30	. 46	.00
		27E	TO 30E	2	.54	2.71	.27	.06
		30E	TO 33E	1	.21	1.07	.21	.00
33E	TO	36E				ERVATIONS FOR		
36E		39E				ERVATIONS FOR		
39E		42E				ERVATIONS FOR		
42E		45E				ERVATIONS FOR		
45E		48E				ERVATIONS FOR		
48E		51E				ERVATIONS FOR		
51E		54E				ERVATIONS FOR		
54E		57E				ERVATIONS FOR		
57E		60E				ERVATIONS FOR		
60E		63E				ERVATIONS FOR		
63E 66E		66E 69E				ERVATIONS FOR ERVATIONS FOR		
69E		72E				ERVATIONS FOR		
72E		75E				ERVATIONS FOR		
75E		78E				ERVATIONS FOR		
78E		81E				ERVATIONS FOR		
81E		84E				ERVATIONS FOR		
84E		87E				ERVATIONS FOR		
87E		90E				ERVATIONS FOR		
- —								

TOTAL FREQUENCY = 37
TOTAL LENGTH = 20.01
AVERAGE LENGTH = .54
STD. DEVIATION = .42

STANDARD DEVIATION OF LENGTH BY CELL = 1.27

KRAFLA 1

SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	Ο.	0.	Ο.		Ο.	0.	Ο.
AZIMUTH FREQUENCY PERCENT	-69 0. .00	-66 0.	-63 0. .00	-60 0. .00	-57 0. .00	-54 0. .00	-51 0.
AZIMUTH FREQUENCY PERCENT	Ο.	Ο.	Ο.	-39 0. .00	Ο.	Ο.	Ο.
AZIMUTH FREQUENCY PERCENT	Ο.	0.	Ο.	-18 0. .00	Ō.	Ο.	0.
AZIMUTH FREQUENCY PERCENT	-6 0.	-3 0. .00	o o. .oo	3 1. 4.17	6 0. .00	9 1. 4.17	12 4. 16.67
AZIMUTH FREQUENCY PERCENT	6.	6.	2.	24 2. 8.33	1.	Ο.	О.
AZIMUTH FREQUENCY PERCENT	Ο.	Ο.	Ο.	45 1. 4.17	Ο.	Ο.	Ο.
AZIMUTH FREQUENCY FERCENT	57 0.	60 0.	63 0. .00	66 0. .00	69 0.	72 0. .00	75 0. .00
FREQUENCY	0.	0.	Ο.	87 0. .00	Ο.		

KRAFLA 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

DISTR	IBUT	ION	BY	LENGTH	
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LENGTH	.00	.15	.30	.46	.61	.76	.91
FREGUENCY	1.	8.	1.	5.	3.	2.	0.
PERCENT	4.17	33.33	4.17	20.63	12.50	5.33	.00
LENGTH	1.06	1.22	1.37	1.52	1.67	1.83	1.95
FREQUENCY	0.	1.	1.	0.	0.	1.	
PERCENT	.00	4.17	4.17	.00	.00	4.17	
LENGTH FREQUENCY PERCENT	2.13 1. 4.17						

AVERAGE = .66 STD DEVIATION = .56 FREQUENCY 24

KRAFLA 1 SCALE FACTOR 25480.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH	STANDARD DEVIATION		MINIMUM LENGTH
9584WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	TO 87W TO 84W TO 81W TO 75W TO 75W TO 75W TO 66W TO 66W TO 66W TO 54W TO 54W TO 54W TO 54W TO 36W TO 37W TO 38W TO	UENCY	LENGTH	NO OBSERVATINO OBSERVATINO OBSERVATINO OBSERVATINO OBSERVATINO OBSERVATINO OBSERVATINO OBSERVATI	TIONS FOR TIONS	THIS CELL	LENGTH
12W 9W 6W	TO 9W TO 6W TO 3W			NO OBSERVAT NO OBSERVAT NO OBSERVAT	TIONS FOR	THIS CELL THIS CELL	
3W	TO O			NO OBSERVAT			

KRAFLA 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

	CELL		FREQ- UENCY			ERAGE NGTH				AXIMUM ENGTH	
0 3E 6E	T0 T0 T0	3E 6E 9E	1	.12		OBSERVA .12 OBSERVA		.00		.12	.12
●E	TO :		1	.28	,,,	. 28		. •0		.28	. 28
12E	TO	15E	4	2.12		.53		. 27		.80	.15
15E	TO :	18E	6	3.04		.51		.20		.71	.25
18E	TO :	21E	6	4.22		.70		. 40		1.35	. 28
21E	TO :	24E	2	3.19		1.60		. 42		1.69	1.30
24E	TO:	27E	2	2.54		1.27	1	. 43		2.28	.26
27E	TO 3		1	. 17		. 17		. •0		. 17	. 17
30E	TO :					OBSERVA				CELL	
33E	TO 3					OBSERVA				CELL	
36E	TO (OBSERVA				CELL	
3 9 E	TO 4					OBSERVA				CELL	
42E	TO 4				NO	OBSERVA			THIS	CELL	
45E	TO 4		1	.16		. 16		.00		. 16	.16
48E	TO 5				NO	OBSERVA	TIONS	FOR	THIS	CELL	
51E	TO !	54E			NO	OBSERVA				CELL	
54E	TO 5				NO	OBSERVA				CELL	
57E	TO 8	50E			NO	OBSERVA	TIONS	FOR	THIS	CELL	
60E	TO 6	83E			CN	OBSERVA	TIONS	FOR	THIS	CELL	
63E	TO 8	36E			NO	OBSERVA	TIONS	FOR	THIS	CELL	
66E	TO 6	59E			NO	OBSERVA	TIONS	FOR	THIS	CELL	
69E	TO	72E			NO	OBSERVA	TIONS	FOR	THIS	CELL	
72E	TO T	75E			NO	OBSERVA				CELL	
75E	TO	78E			NO	OBSERVA			THIS	CELL	
7SE	TO 8	51E			NO	OBSERVA	TIONS	FOR	THIS	CELL	
81E	TO 8	84E			NO	OBSERVA	TIONS	FOR	THIS	CELL	
84E	TO 8				NO	OBSERVA	TIONS	FOR	THIS	CELL	
87E	TO 9	90E			NO	OBSERVA	RIONS	FOR	THIS	CELL	

TOTAL FREQUENCY 24
TOTAL LENGTH = 15.85
AVERAGE LENGTH = .66
STD. DEVIATION = .56

KRAFLA 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAI LENG'	_	PERCENT LENGTH		AVERA LENG		STANDARD DEVIATION
90W TO 87W 87W TO 84W 84W TO 81W 70 75W 70 72W 70 69W 70 66W 70 66W 70 57W 57W 70 54W 54W 70 39W 70 36W 36W 36W 70 36W 36W 36W 70 36W			NO ()		ATIONS	FOR	THIS THIS THIS THIS THIS THIS THIS THIS	CELL CELL CELL CELL CELL CELL CELL CELL	DEVIATION
6W TO 3W 3W TO O	!			OBSERVA OBSERVA					

KRAFLA 1 SCALE FACTOR 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

		CELL	FREQ- UENCY			AVERAGE LENGTH	STANDARD DEVIATION
0	TO 3E 3E	TO 6E	1	.12	RVATIONS FOR	.12	.00
6E	TO 9E 9E 12E 15E 18E 21E	TO 12E TO 15E TO 18E TO 21E TO 24E	1 4 6 6 2	.28 2.12 3.04 4.22	RVATIONS FOR 1.77 13.39 19.20 26.65 20.13	.28 .51 .70	.00 .27 .20 .40
30E 33E 36E 39E 42E	24E 27E TO 33E TO 36E TO 39E TO 42E TO 45E	TO 27E TO 30E	1	2.54 .17 NO OBSE NO OBSE NO OBSE	16.03 1.05 RVATIONS FOR RVATIONS FOR RVATIONS FOR RVATIONS FOR	1.27 .17 THIS CELL THIS CELL THIS CELL	1.43
48E 51E 54E 57E 63E 63E 69E 72E 75E 78E 81E 84E 87E	45E T0 51E T0 54E T0 57E T0 60E T0 63E T0 66E T0 72E T0 75E T0 78E T0 81E T0 84E T0 87E T0 90E	TO 46E	1	NO OBSE	1.02 RVATIONS FOR	THIS CELL	.00

TOTAL FREQUENCY = 24
TOTAL LENGTH = 15.85
AVERAGE LENGTH = .66
STD. DEVIATION = .56

STANDARD DEVIATION OF LENGTH BY CELL = .87

KRAFLA 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	-90 0. .00	Ο.	Ο.	0.	-78 0. .00	Ο.	-72 0. .00
	-69 0. .00	Ο.	0.	0.		0.	O.
AZIMUTH FREQUENCY PERCENT	-48 0. .00	О.	0.	0.		0.	Ο.
AZIMUTH FREQUENCY PERCENT	-27 0.	1.	0.	2.	-15 0. .00	Ο,	٠.
AZIMUTH FREQUENCY PERCENT	2.	З.	4.	5.	6 3. 3.66	11.	
AZIMUTH FREQUENCY PERCENT	8.	4.	7.	1.	27 6. 7.32	3.	Ο.
AZIMUTH FREQUENCY PERCENT	0.	0.	Ο.	1.	48 0. .00	Ο.	Ο.
AZIMUTH FREGUENCY PERCENT	Ο.	0.	0.	C).	69 0. .00	Ο.	Ο.
FREQUENCY	78 0. .00	О.	Ο.	0.	Ο.		

KRAFLA 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH

LENGTH	.00	.13	.26	.40	.53	.66	.79
FREQUENCY	11.	27.	21.	7.	4.	4.	5.
PERCENT	13.41	32.93	25.61	8.54	4.85	4.88	6.10
LENGTH	.92	1.06	1.19	1.32	1.45	1.58	1.72
FREQUENCY	1.		0.	0.	0.	0.	1.
PERCENT	1.22		.00	.00	.00	.00	1.22
LENGTH FREQUENCY PERCENT	1.85 1. 1.22						

AVERAGE = .37 STD DEVIATION = .33 FREQUENCY = 82

KRAFLA 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

	CELL			AVERAGE LENGTH	STANDARD DEVIATION		MINIMUM LENGTH
90W 87W 54W 78W 75W 69W 63W 60W 57W	TO 87W TO 84W TO 81W TO 78W TO 75W TO 72W TO 66W TO 66W TO 67W TO 57W TO 54W			NO OBSERVA'	TIONS FOR TH	IS CELL	
54W 51W 48W 45W 42W 39W 36W 30W 27W	T0 54W T0 48W T0 45W T0 42W T0 39W T0 36W T0 33W T0 30W T0 27W T0 24W			NO OBSERVA'	TIONS FOR TH	IS CELL	
24W 21W	TO 21W TO 18W	1	.28	.28 NO OBSERVA	.00 Tions for th	.28 IS CELL	. 28
18W 15W 12W	TO 15W TO 12W TO 9W	2	.36		.15 TIONS FOR TH TIONS FOR TH		.09
9W 6W 3W	TO 6W TO 3W TO 0	2 2 3	. 44 . 75 . 45	.22 .37 .15	.21 .08 .04	.37 .43 .18	.07 .32 .11

KRAFLA 2 SCALE FACTOR 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

	CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
0 3E 6E 9E 13E 15E 21E 24E 27E 30E 33E	TO 3E TO 6E TO 9E TO 12E TO 15E TO 18E TO 24E TO 27E TO 30E TO 33E TO 36E	4 5 3 11 19 8 4 7 1 6 3	1.24 1.61 1.35 4.62 7.31 2.73 1.20 4.10 1.75 1.46		.13 .30 .23 .24 .29 .16 .13 .67 .00 .18 .15		.14 .14 .30 .14 .08 .18 .19 .10 1.75 .12
36EEF 45E 45E 54E 554E 554E 554E 554E 554E	TO 39E TO 42E TO 45E TO 48E TO 51E TO 54E TO 57E TO 60E TO 63E TO 66E TO 72E TO 75E TO 78E TO 81E TO 84E TO 87E TO 90E	1	.09	NO OBSERVA	TIONS FOR T	THIS CELL THIS CELL O9 THIS CELL	.09

TOTAL FREQUENCY = 82
TOTAL LENGTH = 30.33
AVERAGE LENGTH = .37
STD. DEVIATION = .33

KRAFLA 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

		CELL	FREQ- UENCY		PERCENT LENGTH		
98847776665 6 744WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	TO 87W TO 84W TO 81W TO 75W TO 75W TO 66W TO 66W TO 66W TO 57W TO 51W TO 45W TO 45W TO 39W TO 39W TO 33W TO 30W	N		NO OBSE	RVATIONS FOR	THIS CELL	
33₩ 3●₩ 27₩	TO 30W TO 27W TO 24W			NO OBSE	RVATIONS FOR RVATIONS FOR RVATIONS FOR	THIS CELL	
21W	24W TO 18W		1		.91 RVATIONS FOR		.00
15W 12W	18W TO 12W TO 9W		2		1.24 RVATIONS FOR RVATIONS FOR		.15
	9W W6 WE	TO 3W	2 2 3	.44 .75 .45	1.44 2.47 1.49	.22 .37 .15	.21 .08 .04

KRAFLA 2 SCALE FACTOR 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

		CELL	FREQ- UENCY	TOTAL LENGTH		AVERAGE LENGTH	
33E 36E 39E 42E	0 3E 6E 9E 12E 15E 21E 24E 27E 30E T0 36E T0 39E T0 42E T0 45E	TO 3E TO 6E TO 9E TO 12E TO 15E TO 18E TO 21E TO 24E TO 27E TO 30E TO 33E TO 48E	4 5 3 11 19 8 4 7 1 6 3	NO OBSER NO OBSER NO OBSER .09	4.07 5.30 4.44 15.24 24.11 8.98 3.97 13.51 5.77 4.80 1.97 RVATIONS FOR RVATIONS FOR RVATIONS FOR RVATIONS FOR	THIS CELL THIS CELL THIS CELL .09	.13 .3• .23 .24 .29 .16 .13 .67 .00 .18 .15
48E 51E 54E 57E 60E 60E 72E 75E 81E 84E 87E	T0 51E T0 54E T0 57E T0 60E T0 63E T0 66E T0 72E T0 75E T0 78E T0 78E T0 81E T0 84E T0 87E T0 90E			NO OBSERNO OBSER	RVATIONS FOR RVATI	THIS CELL	

TOTAL FREQUENCY = 82
TOTAL LENGTH = 30.33
AVERAGE LENGTH = .37
STD. DEVIATION = .33

STANDARD DEVIATION OF LENGTH BY CELL 1.29

MOFELL 1

SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	Ο.	Ο.	Ο.	0.	0.	-75 0. .00	0.
AZIMUTH FREQUENCY PERCENT							
AZIMUTH FREQUENCY PERCENT	Ο.	0.	0.	0.	Ο.	-33 0. .00	Ο.
FREQUENCY	Ο.	1.	2.	Ο.	1.	-12 2. 1.59	1.
AZIMUTH FREQUENCY PERCENT	6.	€.	17.	20.	20.		16.
AZIMUTH FREQUENCY PERCENT	10.	5.	0.	4.	1.	30 0. .00	. .
AZIMUTH FREQUENCY PERCENT	0.	0.	0.	1.	Ο.	51 0. .00	0.
AZIMUTH FREQUENCY PERCENT	0.	٥.	0.	0.	0.	72 0. .00	○.
AZIMUTH FREQUENCY PERCENT		0.	0.	0.	0.		

MOFELL 1 SCALE FACTOR 25460.

UNITS ARE KILOMETERS

D)	CTP	IPHT	LON	PV	LENGT	_

LENGTH	.00	.16	.33	.49	66	62	98
FREQUENCY	49.	34.	15.	12.	4.	4.	4.
PERCENT	35.89	26.98	11.90	9.52	3.17	3.17	3.17
LENGTH	1.15	1.31	1.48	1.64	1.80	1.97	2.13
FREQUENCY	2.	0.	1.	0.		O.	0.
PERCENT	1.59	.00	.79	.00		.00	00
LENGTH FREQUENCY PERCENT	2.30 1. .79						

AVERAGE = .35 STD DEVIATION = .35 FREQUENCY = 126

MOFELL 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH			
90W 87W 84W 75W 666W 754W 45W 45W 45W 45W 36W 36W 37W 45W 36W 36W 37W 24W 36W 36W 37W 24W 36W 36W 36W 36W 36W 36W 36W 36W 36W 36	TO 84W TO 81W TO 78W TO 75W TO 72W TO 63W TO 63W TO 63W TO 57W TO 54W TO 51W TO 42W TO 42W TO 38W TO 38W TO 38W TO 38W TO 24W TO 24W TO 21W TO 15W	1 2	.16	NO OBSERVATINO OBS	TIONS FOR THE TI	IS CELL	.16
15W 12W	TO 12W TO 9W	1 2	.24 .54	.24 .27	.00 .09	.24 .33	.24 .21
9W	TO GW	1	.09	.09	.00	.09	.09
6W	TO 3W	6	1.45	. 24	.22	.61	.10
3W	TO OT	6	2.92	. 49	.36	1.09	. 14

MOFELL 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

	CELL	•	TOTAL LENGTH		STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
0 3E 6E 9E 12E 15E 18E 21E 24E	TO 3E TO 6E TO 9E TO 12E TO 15E TO 18E TO 21E TO 24E TO 27E	17 20 2• 12 16 10 5	9.43 8.81 6.59 3.86 3.55 3.91 .80	.13	.29 .62 .29 .25 .14 .31 .08 FIONS FOR TH	. 17	.15 .07 .09 .10 .06 .09
27E 30E 33E 36E 39E 42E	TO 30E TO 33E TO 36E TO 39E TO 42E TO 45E	1	. 10	.11 NO OBSERVAT NO OBSERVAT	.00 FIONS FOR TH .00 FIONS FOR TH FIONS FOR TH FIONS FOR TH	.11 IS CELL IS CELL	.10
45E 48E 51E 57E 63E 63E 75E 75E 78E 84E 87E	TO 48E TO 51E TO 54E TO 57E TO 60E TO 63E TO 66E TO 69E TO 72E TO 78E TO 78E TO 81E TO 84E TO 87E TO 90E	1	. 22	NO OBSERVATIONO OBSERVATI	TIONS FOR TH TIONS FOR TH TIONS FOR TH TIONS FOR TH	IS CELL	.22

TOTAL FREQUENCY = 126
TOTAL LENGTH = 43.67
AVERAGE LENGTH = .35
STD. DEVIATION = .35

MOFELL 1 SCALE FACTOR = 25480.

UNITS ARE KILGMETERS

		CEL	L	FREQ- UENCY			PERCENT LENGTH		AVERA LEN		STANDARD DEVIATION
90W 87W 84W 31W 78W 75W 72W 69W	TO 87 TO 84 TO 81 TO 78 TO 78 TO 78 TO 68 TO 68	4 W L W 3 W 5 W 2 W 9 W			NO NO NO NO NO	OBSER' OBSER' OBSER' OBSER' OBSER'	VATIONS VATIONS VATIONS VATIONS VATIONS VATIONS VATIONS	FOR FOR FOR FOR FOR	THIS THIS THIS THIS THIS THIS	CELL CELL CELL CELL CELL	
66W 63W 60W 57W 54W 51W	TO 63 TO 60 TO 57 TO 54 TO 51 TO 48	3 W 2 W 7 W 4 W			NO NO NO NO	OBSER'OBSER'OBSER'OBSER'	VATIONS VATIONS VATIONS VATIONS VATIONS VATIONS	FOR FOR FOR FOR	THIS THIS THIS THIS THIS	CELL CELL CELL CELL	
48W 45W 42W 39W 36W 33W	TO 45 TO 42 TO 39 TO 36 TO 36 TO 30	2W 9W 6W 8W			N O N O N O	OBSER'OBSER'OBSER'	VATIONS VATIONS VATIONS VATIONS VATIONS VATIONS	FOR FOR FOR	THIS THIS THIS THIS	CELL CELL CELL	
30W 27W	TO 27 TO 24 24 21 TO 15	W TO .W TO	21W 18W	1 2	NO . :	OBSERV 16 38	VATIONS VATIONS .36 .86 VATIONS	FOR	THIS . 1	CELL 6	.00
1 O W	15 12 9 6	W TO	12W 9W 6W 3W	1 2 1 6 6	. 2 . 5	24 34 99 45	.55 1.24 .21 3.32 6.68		.2	.4 .7 .9 .4	.00 .09 .00 .22 .36

MOFELL 1 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

		CELL	FREQ- UENCY			AVERAGE LENGTH	
	0	TO 3E	17	9.43	21.60	.50	.29
	ЗE	TO 6E	20	8.81	20.17	. 44	.62
	6E	TO 9E	20	6.59	15.09	.33	. 29
	9 E	TO 17F	12	3.86	8.84	.32	. 25
	12E	TO 15E	16	3.55	8.13	.22	. 14
	15E	TO 18E	10	3.91	8.96	.39	.31
	18E	TO 21E	5	.80	1.84	.16	.05
21E	TO 24E			NO OBSE	RVATIONS FO	R THIS CELL	
	24E	TO 27E	4	.51	1.17	. 13	.04
	27E	TO 30E	1	.10	. 24	.10	.00
30E	TO 33E				RVATIONS FO		
	33E	TO 36E	1	. 11	.24	. 11	.00
36E	TO 39E				RVATIONS FOR		
39E	TO 42E				RVATIONS FOR		
42E	TO 45E				RVATIONS FOR		
	45E	TO 48E	1	.22	.50	.22	.00
48E	TO 51E				RVATIONS FOR		
51E	TO 54E				RVATIONS FO		
54E	TO 57E				RVATIONS FOR		
57E	TO 60E				RVATIONS FO		
60E	T0 63E				RVATIONS FOR		
63E	TO 66E				RVATIONS FOR		
66E	TO 69E					THIS CELL	
69E	TO 72E					THIS CELL	
72E	70 75E				RVATIONS FO		
75E	TO 78E				RVATIONS FOR	· · · · · · · · · · · · · · · · · · ·	
78E	TO 81E				RVATIONS FOR		
51E	TO 54E				RVATIONS FOR		
84E	TO 87E				RVATIONS FOR		
87E	TO 90E			NO OBSE	RVATIONS FO	THIS CELL	

TOTAL FREQUENCY = 126
TOTAL LENGTH = 43.67
AVERAGE LENGTH = .35
STD. DEVIATION = .35

STANDARD DEVIATION OF LENGTH BY CELL = 1.99

MOFELL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMÈTERS

ANGULAR DISTRIBUTION

AZIMUTH FREQUENCY PERCENT	Ο.	0.	0.	0.	Ο.	0.	5.
AZIMUTH FREQUENCY PERCENT	-69 0. .00	-66 0.	-63 0.	-60 0. .00	-57 0.	-54 0. .00	-51 0. .00
AZIMUTH FREQUENCY PERCENT	0.	Ο.	0.	0.	0.		1.
AZIMUTH FREQUENCY PERCENT	2.	5.	3.	4.	З.		8.
AZIMUTH FREQUENCY PERCENT	14.	13.	20.	20.	30.	9 24. 9.02	27.
AZIMUTH FREQUENCY PERCENT	25.	22.	15.	9.	6.	30 2. .75	1.
AZIMUTH FREQUENCY PERCENT	36 2. .75	0.	0.	Ο.	Ο.		0.
AZIMUTH FREQUENCY PERCENT		Ο.	Ο.	0.	Q.	72 0. .00	0.
AZIMUTH FREQUENCY PERCENT		Ο.	0.	0.	0.		

MOFELL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

DISTRIBUTION BY LENGTH

LENGTH	.00	.23	.47	.70	.93	1.17	1.40
FREBUENCY	143.	67.	31.	11.	5.	4.	
PERCENT	53.76	25.19	11.65	4.14	1.88	1.50	
LENGTH	1.63	1.87	2.10	2.33	2.57	2.80	3. ● 3
FREQUENCY	1.	0.	0.	2.	1.	0.	0.
PERCENT	.38	.00	.00	.75	.38	.00	.00
LENGTH FREQUENCY PERCENT	3.27 1. .38						
AVERAGE	.35 ST	D. DEVIA	NOITA	. 40	FREQUENCY		266

MOFELL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
30W 37W 31W 318W 759W 363W 364W 45W 45W 45W 45W 45W 45W 45W 45W 45W 4	TO 87W TO 84W TO 81W TO 75W TO 75W TO 72W TO 66W TO 66W TO 66W TO 57W TO 54W TO 54W TO 45W TO 45W TO 42W TO 36W TO 36W TO 36W TO 37W TO 27W TO 24W	1 2	.35	NO OBSERVATI	TIONS FOR THE	IS CELL	.35 .28
24W 21W .8W .5W .2W 9W	T8 Z1W T0 18W T0 15W T0 12W T0 9W T0 6W T0 3W	5 3 4 3 10 8	1.00 .73 .97 .36 2.35 1.42 3.48	.20 .24 .24 .12 .24 .18	.07 .15 .26 .07 .19 .13	.31 .34 .63 .20 .57 .49	.13 .08 .07 .07 .10
3W	TO 0	13	3.20	. 25	.15	.55	. 1 1

MOFELL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

	CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH	STANDARD DEVIATION	MAXIMUM LENGTH	MINIMUM LENGTH
90W 84W W 84W W W W W W W W W W W W W W W	TO 87W TO 84W TO 81W TO 78W TO 75W TO 72W TO 66W TO 66W TO 66W TO 57W TO 51W TO 48W TO 45W TO 42W TO 39W TO 36W TO 36W TO 37W TO 37W TO 37W TO 37W TO 24W	1 2	. 35 . 58	NO OBSERVAT	TIONS FOR THE TI	IS CELL	.35s .28
24W 21W 18W 15W 12W 9W 6W 3W	TO 21W TO 18W TO 15W TO 12W TO 9W TO 6W TO 3W TO 0	5 3 4 3 10 8 14 13	1.00 .73 .97 .36 2.35 1.42 3.48 3.20	. 23 . 20 . 24 . 24 . 12 . 24 . 18 . 25 . 25	.07 .15 .26 .07 .19 .13	.30 .31 .34 .63 .20 .67 .49 .87	.13 .08 .07 .07 .10 .09

MOFELL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

TOTAL FREQUENCY = 266
TOTAL LENGTH = 91.87
AVERAGE LENGTH = .35
STD. DEVIATION = .40

CELL	FREQ- UENCY	TOTAL LENGTH	AVERAGE LENGTH		MAXIMUM LENGTH	MINIMUM LENGTH
O TO SE 3E TO 6E 6E TO 9E 9E TO 12E 12E TO 15E 15E TO 18E 18E TO 21E 21E TO 24E 24E TO 27E 27E TO 30E 30E TO 35E 30E TO 36E 30E TO 35E 36E TO 45E 42E TO 45E 45E TO 45E 45E TO 54E 51E TO 54E 51E TO 54E 51E TO 54E 51E TO 60E 60E TO 63E 60E TO 69E 60E TO 72E 72E TO 75E 75E TO 78E			LENGTH .31 .26 .45 .28 .51 .55 .41 .31 .30 .18 .12 .13 .13 NO OBSERVA	DEVIATION .25 .24 .63 .24 .41 .77 .26 .31 .22 .09 .01 .00 .08 ATIONS FOR TATIONS FOR TATI	LENGTH 1.12 1.15 2.68 1.20 1.75 3.50 .90 1.25 .61 .35 .13 .19 HIS CELL	
78E TO 81E 81E TO 84E 84E TO 87E 67E TO 90E			NO OBSERVA			

MOFELL 2 SCALE FACTOR = 25480.

UNITS ARE KILOMETERS

			CELL	FREQ- UENCY							STANDARD DEVIATION
9888777666665555443333	TO T	844WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	TO 27W TO 24W TO 21W TO 18W TO 15W TO 12W TO 9W	1 2 5 3 4 3	NO N	OBSER	VATIONS	FOR	THIS THIS THIS THIS THIS THIS THIS THIS	CELL CELL CELL CELL CELL CELL CELL CELL	.00 .02 .07 .15 .26 .07
		9W 6W WE	TO 6W TO 3W TO O	8 14 13	1. 3. 3.	43	1.55 3.78 3.49		* 4	18 25 25	.13 .21 .15

MOFELL 2 SCALE FACTOR = 25460.

UNITS ARE KILOMETERS

STATISTICAL SUMMARY OF LENGTH BY CELL

	CELL	FREQ- UENCY	TOTAL LENGTH	PERCENT LENGTH	AVERAGE LENGTH	STANDARE DEVIATION
0 3 6 9 1 2 1 1 5 1 1 1 5 1	TO 6E TO 9E TO 12E TO 15E TO 18E TO 21E TO 24E TO 30E TO 33E TO 36E TO 39E	20 30 24 27 25 21 9 6 2 1 2	NO OBSE	6.79 5.67 14.61 7.29 14.96 14.99 9.77 5.11 3.22 1.15 .26 .14 .29 RVATIONS FOR	THIS CELL	.25 .24 .63 .24 .41 .77 .26 .31 .22 .09 .01

TOTAL FREQUENCY = 266
TOTAL LENGTH 91.87
AVERAGE LENGTH = .35
STD. DEVIATION = .40

STANDARD DEVIATION OF LENGTH BY CELL = 3.38