

SERVIÇO METEOROLÓGICO DE ANGOLA

CENTRO GEOFÍSICO DE BELAS

LUANDA

$\lambda = 8^{\circ} 55' S$ $\kappa = 13^{\circ} 10' E$; $h = 53$ mm $\phi = 7^{\circ} 11' S$ $\Lambda = 80^{\circ} 33' F$

JANUARY 1977

Geomagnetic Bulletin

LUANDA

Scale values of the Askania variometers:

$e_D = 3,6 \gamma/mm$; $e_H = 3,5 \gamma/mm$; $e_Z = 3,4 \gamma/mm$

Time scale of variometers: 20 mm/h.

Range for K=9; 350 γ

INDICES OF GEOMAGNETIC ACTIVITY

GR DAY 1977	K - Indices for three-hour interval									Char. 0.1.2
	h-00 h-03	h-03 h-06	h-06 h-09	h-09 h-12	h-12 h-15	h-15 h-18	h-18 h-21	h-21 h-24	SUM	
1	1	0	2	2	2	1	1	1	10	0
2	2	0	2	2	0	1	1	1	9	0
3	2	1	0	2	1	2	2	2	12	1
4	1	0	1	1	1	2	2	1	9	0
5	2	2	2	2	1	2	3	1	15	1
6	2	2	1	3	3	1	2	0	14	1
7	2	1	1	2	0	0	0	1	7	0
8	1	1	2	2	2	0	0	1	9	0
9	1	1	1	1	1	1	0	1	7	0
10	1	0	0	1	1	1	1	1	6	0
11	1	1	2	2	2	2	3	2	17	1
12	1	0	2	1	0	1	1	2	8	0
13	2	1	1	0	0	1	1	1	7	0
14	1	1	1	2	2	4	4	3	18	1
15	2	1	1	2	1	1	2	1	10	0
16	1	1	-	1	1	1	0	0	-	-
17	0	0	0	-	3	3	1	1	-	-
18	1	1	3	2	0	0	0	1	8	0
19	1	0	1	1	0	2	3	2	10	0
20	1	1	1	1	2	1	1	2	10	0
21	0	0	0	1	2	1	0	0	4	0
22	0	1	2	2	1	0	0	1	7	0
23	2	1	0	1	1	1	1	1	8	0
24	2	1	1	1	2	2	1	0	10	0
25	1	1	2	1	3	3	2	2	15	1
26	1	1	0	0	0	0	0	1	3	0
27	0	0	1	2	2	3	2	0	10	0
28	0	0	1	1	1	1	4	4	12	1
29	2	1	1	2	0	1	1	1	9	0
30	3	2	2	3	4	4	5	5	28	2
31	4	3	2	1	3	1	0	0	14	1

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SEISMICITY OF ANGOLA

ANGOLA

1968 - 1969 - 2 -

DAILY MEAN				SUDDEN COMMENCEMENTS AND BAYS				
DAY	D	H	Z	DAY	TIME (GMT)	TYPE	Quality A.B.C.	Sense of chief Movement D H Z
1	-09	51,8	23 382	02	00 52	b	B	+ + -
2		508	386	03	21 40	bp	B	+ + -
3		518	392	08	11 02	b	B	+ -
4		515	377	14	13 36	si	B	- -
5		507	392	15	20 21	bp	B	+ +
6		516	392	16	20 24	bp	A	+ + +
7		512	396	18	06 22	si	A	+ - +
8		515	411	28	20 09	ssc	A	- - -
9		505	408	30	00 21	si	A	- - +
10		514	418					
11		514	395					
12		505	384					
13		505	396					
14		508	387					
15		509	391					
16		505	390					
17		507	398					
18		512	393					
19		518	400					
20		513	397					
21		504	402					
22		501	397					
23		510	417					
24		511	410					
25		509	403					
26		499	404					
27		504	415					
28		512	406					
29		514	375					
30		504	350					
31		501	369					

Pi, Pc							
DAY	TIME (GMT)		TYPE	QUALITY A.B.C	LARGEST OSCILLATIONS		REMARKS
	Begin	End			PERIOD	Range	
	h m	h m					
03	21 39	21 50	Pi 2	B			
07	00 14	00 33	Pc 4	B			
16	03 41	03 53	Pc 4	A			
17/18	23 54	00 30	Pc 4	A			
19	23 25	23 30	Pc 4	A			
22	23 11	23 30	Pi 2	A			

SERVICO METEOROLÓGICO DE ANGOLA

CENTRO GEOFÍSICO DE BELAS

LUANDA

$\varphi = 8^{\circ} 55' S$; $\lambda = 13^{\circ} 10' E$; $h = 53 \text{ m}$ $\odot = 7^{\circ} 11' S$; $\lambda = 80^{\circ} 33' E$

FEBRUARY 1977

Geomagnetic Bulletin

LUANDA

Scale values of the Askania variometers:
 $e_D = 3,5 \gamma / \text{mm}$; $e_H = 3,5 \gamma / \text{mm}$; $e_Z = 3,4 \gamma / \text{mm}$

Time scale of variometers: 20 mm/h

Range for K = 9;350 γ

INDICES OF GEOMAGNETIC ACTIVITY

GR DAY 1977	K - Indices for three-hour interval									Char. 0.1.2.
	00 ^h 03 ^h	03 ^h 06 ^h	06 ^h 09 ^h	09 ^h 12 ^h	12 ^h 15 ^h	15 ^h 18 ^h	18 ^h 21 ^h	21 ^h 24 ^h	SUM	FULL DAY
1	1	1	1	1	1	1	1	0	7	0
2	2	2	3	-	2	0	1	1	-	-
3	0	1	1	0	1	0	1	3	7	0
4	1	2	1	1	1	0	0	1	7	0
5	2	3	3	2	1	0	0	0	11	1
6	0	0	2	0	3	2	4	3	14	1
7	2	2	2	1	0	2	1	2	12	1
8	1	1	1	1	2	4	4	3	13	1
9	2	3	3	3	4	-	2	1	-	-
10	2	0	1	2	4	3	1	2	15	1
11	2	1		1	2	2	0	1	11	1
12	0	0	0	1	0	0	0	1	2	0
13	1	0	0	0	0	1	2	1	5	0
14	1	1	1	0	1	1	2	2	9	0
15	1	0	2	2	1	2	1	2	11	1
16	0	1	2	2	0	1	1	1	8	1
17	0	0	1	1	1	2	1	3	9	0
18	3	4	4	-	3	2	2	2	-	-
19	4	3	3	2	2	2	1	1	18	1
20	2	2	1	2	2	0	0	1	10	0
21	1	0	1	2	3	2	1	0	10	0
22	-	-	-	-	-	-	2	2	-	-
23	0	1	1	1	1	2	2	-	-	-
24	2	2	2	2	2	1	3	0	14	1
25	1	1	1	1	1	1	1	2	9	0
26	0	0	1	2	0	1	1	0	5	0
27	0	0	1	2	1	1	1	0	6	0
28	2	0	1	-	2	1	1	2	-	-

DAY	DAILY MEAN			SUDDEN COMMENCEMENTS AND BAYS				
	D	H	Z	DAY	TIME (GMT)	TYPE	Quality A.B.C.	Sense of chief Movement D H Z
1	-09° 500	23 394	-22 630	10	00 ⁿ 08 ^m	bp	A	+
2	501	393	631	13	00 50	bp	B	+
3	505	400	629	14	20 06	bp	B	- + -
4	499	403	630	17	23 37	sl	B	- - +
5	505	411	628	19	14 28	bp	B	+ + -
6	506	391	632	25	20 49	bp	A	+ +
7	503	390	630	27	23 54	bp	A	- + -
8	501	389	630					
9	492	380	6					
10	505	386	628					
11	505	380	630					
12	503	397	631					
13	506	394	633					
14	508	387	635					
15	504	391	633					
16	504	391	632					
17	501	393	633					
18	500	405	639					
19	499	409	638					
20	505	414	639					
21	498	412	637					
22	-	-	-					
23	-09° 497	23 405	-22 639					
24	503	395	63					
25	502	397	638					
26	494	394	641					
27	500	404	640					
28	494	408	644					

pi, pc							
DAY	TIME (GMT)		TYPE	Quality A.B.C.	LARGEST OSCILLATIONS		REMARKS
	Begin	End			Period	Range	
01	22 ^h 30 ^m	22 ^h 54 ^m	Pi 2	A			
02	22 24	22 33	Pi 2	B			
05	23 27	23 35	Pi 2	B			
09	12 00	12 37	Pc 4	B			
10	21 56	22 08	Pc 4	A			
11	21 45	22 00	Pc 4	B			
27/28	23 54	00 20	Pc 4	A			

DAY	DAILY MEAN			SUDDEN COMMENCEMENTS AND BAYS				
	D	H	Z	DAY	TIME (GMT)	TYPE	Quality A.B.C.	Sense of chief Movement D H Z
1	-09° 50,2	23 404	-22 627	10	22 42	si	B	+ + -
2	49,6	397	626	13	21 34	bp	A	- + -
3	49,2	408	626	18	00 45	bps	A	+ + +
4	49,1	410	631	23	01 30	bp	B	+ +
5	49,1	407	630	27	06 06	ssc	A	+ + -
6	49,5	406	630					
7	49,1	408	634					
8	49,6	408	632					
9	49,0	370	635					
10	49,5	374	630					
11	48,6	385	634					
12	49,0	373	633					
13	49,5	379	632					
14	49,6	388	636					
15	49,0	395	637					
16	48,6	392	636					
17	49,0	381	637					
18	48,8	401	638					
19	49,2	412	639					
20	50,7	394	645					
21	50,0	390	631					
22	49,0	392	641					
23	50,4	383	647					
24	49,7	381	647					
25	49,2	395	640					
26	48,6	383	642					
27	48,4	414	636					
28	48,9	376	635					
29	49,0	400	642					
30	-	-	-					
31	-	-	-					



pi, pc							
DAY	TIME (GMT)		T I P E	QUALITY A.B.C	LARGEST OSCILLATIONS		REMARKS
	Begin	End			Period	Range	
02	12 ^h 47 ^m	13 ^h 04 ^m	Pc4	B			
02	22 45	23 34	Pc4	B			
04	09 41	12 08	Pc4	A			
04	21 41	23 52	Pc5	A			
06	23 40	23 54	Pi2	A			
08	02 22	02 34	Pi2	B			
14/15	23 48	00 04	Pi2	B			
16	01 13	01 30	Pc5	B			
18	00 45	00 54	Pi2	B			

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LUANDA

$\varphi = 8^{\circ} 55' S$; $\lambda = 13^{\circ} 10' E$; $h = 53 m$ $\Phi = 7^{\circ} 11' S$; $\Lambda = 80^{\circ} 33' E$

JUNE 1977

geomagnetic Bulletin

LUANDA

Scale values of the Askania-variometers:

$e_D = 3,6 \gamma / mm$; $e_H = 3,5 \gamma / mm$; $e_Z = 3,4 \gamma / mm$

Time scale of variometers: 20 mm/h.

Range for K = 9; 350 γ

INDICES OF GEOMAGNETIC ACTIVITY

GR Day 1977	K - Indices for three-hour interval									Char 0.1.2 FULL DAY
	^h 00 _h 03	^h 03 _h 06	^h 06 _h 09	^h 09 _h 12	^h 12 _h 15	^h 15 _h 18	^h 18 _h 21	^h 21 _h 24	SUM	
1	2	2	1	1	1	1	2	2	12	1
2	2	1	0	2	3	3	2	2	15	1
3	1	1	1	0	1	0	0	0	4	0
4	2	1	2	0	2	2	0	0	9	0
5	2	2	1	2	2	1	1	0	11	1
6	0	1	1	0	1	1	0	0	4	0
7	1	0	0	1	2	2	0	0	6	0
8	1	1	1	0	1	0	0	1	5	0
9	1	1	0	0	2	1	1	2	8	0
10	2	1	1	2	2	2	0	0	10	0
11	0	0	0	0	1	2	0	1	4	0
12	0	0	2	1	0	0	0	0	3	0
13	0	0	0	1	1	1	1	2	6	0
14	3	1	1	0	1	1	0	1	8	0
15	1	1	0	1	1	1	1	1	7	0
16	0	0	1	1	2	2	1	2	9	0
17	1	0	1	1	2	1	0	0	6	0
18	0	0	1	2	1	2	2	1	9	0
19	1	0	-	-	0	1	0	0	-	-
20	2	-	1	1	1	1	0	0	-	-
21	0	0	0	0	0	1	1	1	3	0
22	1	1	1	1	1	2	0	1	8	0
23	1	0	0	0	0	1	0	1	3	0
24	1	1	0	0	1	1	0	1	5	0
25	0	0	1	1	1	1	1	0	5	0
26	0	0	1	1	1	1	0	1	5	0
27	1	1	0	0	1	1	0	0	4	0
28	0	0	1	2	1	1	1	0	6	0
29	0	0	1	2	1	0	0	0	4	0
30	0	0	1	1	-	1	1	1	-	-

THE GEOMAGNETIC BULLETIN OF THE MONTHS OF APRIL AND MAY 1977 WERE NOT PUBLISHED ON ACCOUNT OF A TECHNICAL DAMAGE IN THE VARIOGRAPH.

pi , pc							
DAY	TIME (GMT)		TYPE	QUALITY A,B,C	LARGEST OSCILLATIONS		REMARKS
	Begin	End			Period	Range	
07	01 ^h 55 ^m	02 ^h 14 ^m	pc ₄	B			
07	19 47	20 05	pi ₂	B			
08/09	22 47	00 58	pc ₄	A			
09	22 41	23 31	pc ₄	B			
14	00 48	01 18	pc ₄	A			
14	21 12	21 22	pi ₂	A			
15	19 51	20 06	pi ₂	B			
24	23 36	23 46	pi ₂	B			

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LUANDA

$\varphi = 8^{\circ} 55' S$; $\lambda = 13^{\circ} 10' E$; $h = 53$ $\phi = 7^{\circ} 11' S$; $\lambda = 80^{\circ} 33' E$

JULY
1977

Geomagnetic Bulletin

LUANDA

Scale values of the Askania variometers:

$e_D = 3,6 \gamma / \text{mm}$; $e_H = 3,5 \gamma / \text{mm}$; $e_Z = 3,4 \gamma / \text{mm}$

Time scale of variometers: 20 mm/h.

Range for K = 9;350 γ

INDICES OF GEOMAGNETIC ACTIVITY

GR DAY 1977	K - Indices for three-hour interval									Char. v.l.2
	00h- 03h	03h- 06h-	06h- 09h-	09h 12h	12h- 15h	15h- 18h	18h- 21h	21h- 24h	SUM	FULL DAY
1	2	2	2	3	1	1	1	0	12	1
2	1	1	0	1	2	2	2	0	9	0
3	0	1	0	1	2	2	1	1	8	0
4	2	2	1	1	1	1	0	2	10	0
5	1	1	0	1	0	1	2	1	7	0
6	1	2	3	3	4	3	3	3	22	1
7	3	1	2	0	1	1	0	1	9	0
8	1	1	1	1	0	2	1	1	8	0
9	1	0	1	2	1	1	1	2	9	0
10	2	0	0	0	2	2	2	2	10	0
11	2	1	0	1	-	0	0	1	-	-
12	0	0	0	1	0	0	0	1	2	0
13	0	0	1	1	1	2	1	0	6	0
14	1	3	2	2	1	2	1	0	14	1
15	1	1	1	2	1	2	1	1	10	0
16	0	0	1	3	3	3	2	2	14	1
17	1	1	1	0	0	1	1	0	5	0
18	0	0	0	0	1	1	0	0	2	0
19	1	0	0	2	3	3	2	1	12	1
20	2	2	3	2	4	2	3	3	21	1
21	0	0	0	1	1	1	2	0	5	0
22	0	1	0	1	1	1	1	1	6	0
23	2	1	1	2	1	1	1	0	9	0
24	0	1	1	1	2	2	1	1	9	0
25	2	1	1	1	1	1	0	1	8	0
26	0	-	-	-	2	2	0	0	-	-
27	0	0	1	0	2	2	1	0	6	0
28	0	1	1	0	0	0	0	0	2	0
29	4	5	4	4	5	4	3	2	31	2
30	2	3	3	3	2	2	2	2	19	1
31	2	2	-	-	2	2	2	1	-	-

Pi , Pc							
DAY	TIME (GMT)		TYPE	QUALITY A,B,C	LARGEST OSCILLATIONS		REMARKS
	Begin	End			Period	Range	
01	00h 14m	00h34m	Pc ₅	B			
02	00 43	00 53	Pi ₂	B			
04	22 47	23 37	Pc ₄	B			
08	22 00	22 41	Pc ₄	B			
10	00 26	00 40	Pi ₂	A			
11	23 00	23 05	Pi ₂	B			
13	00 05	00 18	Pi ₂	A			
14	02 43	02 50	Pc ₄	A			
19	01 51	02 01	Pi ₂	B			
23	02 19	02 43	Pc ₄	B			
28	00 17	00 45	Pi ₂	A			
29	00 13	00 25	Pc ₄	A			

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LUANDA
 $\varphi = 8^{\circ} 55' S$; $\lambda = 13^{\circ} 10' E$; $h = 53 m$ $\phi = 7^{\circ} 11' S$; $\lambda = 80^{\circ} 33' E$

AUGUST 1977

Geomagnetic Bulletin

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Scale values of the Askania variometers:

$e_D = 3,6 \gamma/mm$; $e_H = 3,5 \gamma/mm$; $e_Z = 3,4 \gamma/mm$

Time scale of variometers: 20 mm/h .

Range for K = $9;350 \gamma$

INDICES OF GEOMAGNETIC ACTIVITY

GR	K - Indices for three-hour interval									Char. 0.1.2.
	DAY 1977	h- 00 h	h- 03 h	h- 06 h	h- 09 h	h- 12 h	h- 15 h	h- 18 h	h- 21 h	
1	1	0	1	1	1	2	0	1	7	0
2	1	0	1	1	1	0	0	1	5	0
3	0	0	1	1	2	2	3	3	12	1
4	1	2	1	0	1	1	2	2	10	0
5	2	2	3	4	4	4	4	3	26	2
6	2	2	2	2	2	3	-	2	-	-
7	1	2	2	2	2	2	1	1	13	1
8	1	0	0	1	2	2	1	2	9	0
9	2	1	0	0	3	3	2	1	12	1
10	1	1	2	1	3	3	3	2	16	1
11	1	1	2	2	3	3	3	2	17	1
12	2	2	1	1	2	3	2	1	14	1
13	0	1	0	1	2	2	2	2	10	0
14	0	0	2	2	3	2	2	1	12	1
15	2	1	1	1	1	1	2	2	11	1
16	1	0	1	1	3	2	0	0	8	0
17	1	1	2	4	5	5	3	2	23	2
18	1	0	0	1	3	3	3	2	13	1
19	3	2	1	3	2	2	2	3	18	1
20	0	1	2	1	3	3	1	0	11	1
21	0	0	1	2	2	2	0	1	8	0
22	0	0	1	2	2	2	1	2	10	0
23	2	1	0	1	2	3	3	-	-	-
24	-	-	-	1	1	0	0	0	-	-
25	1	0	0	0	0	0	1	2	4	0
26	1	0	1	1	0	0	0	1	4	0
27	1	2	2	2	3	2	0	0	12	1
28	0	2	2	2	3	4	4	3	20	1
29	1	1	1	2	3	4	2	1	15	1
30	0	0	2	2	2	2	2	1	11	1
31	2	-	-	1	0	1	-	0	-	-

pi , pc							
DAY	TIME (GMT)		TYPE	QUALITY A,B,C	LARGEST OSCILLATIONS		REMARKS
	Begin	End			Period	Range	
02	00h38m	01 38	Pc ₄	A			
03	00 26	00 39	Pi ₂	B			
04	19 26	19 39	Pi ₂	B			
06	18 37	18 48	Pi ₂	A			
14	15 00	15 42	Pc ₂	B			
19	08 09	08 30	Pc ₄	B			
22	21 26	21 36	Pc ₄	A			
25/26	23 51	00 12	Pc ₄	A			
27	01 00	01 52	Pc ₄	A			

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$\varphi = 8^{\circ} 55' S$; $\lambda = 13^{\circ} 10' E$; $h = 53m$ $\bar{\varphi} = 7^{\circ} 11' S$; $\Lambda = 80^{\circ} 33' E$

SEPTEMBER 1977

Geomagnetic Bulletin

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Scale values of the Askania variometers:

$e_D = 3,6 \gamma / mm$; $e_H = 3,5 \gamma / mm$; $e_Z = 3,4 \gamma / mm$

Time scale of variometers: 20 mm/h

Range for K = 9;350 γ

INDICES OF GEOMAGNETIC ACTIVITY

GR	K - Indices for three - hour interval									Char. 0.1.2
	00 ^h h	03 ^h h	06 ^h h	09 ^h h	12 ^h h	15 ^h h	18 ^h h	21 ^h h	SUM	
DAY 1977	03	06	09	12	15	18	21	24		
1	1	0	-	1	0	0	0	0	-	-
2	1	0	2	-	1	1	2	2	-	-
3	2	3	2	1	2	2	0	2	14	1
4	2	2	2	1	0	0	0	0	7	0
5	0	1	0	1	2	2	0	0	6	0
6	0	0	1	-	2	2	1	1	-	-
7	1	1	0	0	1	0	0	2	5	0
8	2	2	1	1	1	0	0	0	7	0
9	-	-	-	1	2	3	3	0	-	-
10	2	1	1	1	1	2	2	2	12	1
11	0	1	2	1	2	3	4	2	15	1
12	1	0	0	1	1	0	1	2	6	0
13	2	1	-	-	3	4	5	3	-	-
14	2	1	0	1	0	2	2	2	10	0
15	0	0	0	1	1	2	1	0	5	0
16	0	0	0	1	1	1	1	1	5	0
17	1	1	0	0	0	0	0	1	3	0
18	1	2	2	2	1	-	0	0	-	-
19	2	2	2	4	4	4	5	5	28	2
20	4	2	3	3	4	5	4	2	27	2
21	2	3	3	4	4	3	3	4	26	2
22	4	3	3	3	5	5	5	4	32	2
23	3	2	2	2	3	3	3	1	19	1
24	2	3	3	2	1	2	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-

JAN 18 1978

pi , pc							
DAY	TIME (GMT)		TYPE	Quality A,B,C	LARGEST OSCILLATIONS		REMARKS
	Begin	End			Period	Range	
01	00h51m	00h54m	pi ₂	A			
02	01 24	01 39	pc ₄	B			
03	00 26	01 22	pc ₄	B			
03	23 28	23 55	pc ₄	A			
04	04 38	04 55	pc ₄	B			
04/05	23 29	00 00	pc ₄	A			
05	01 12	01 24	pi ₂	A			
06	21 31	21 51	pi ₂	B			
07	22 34	22 48	pi ₂	A			
10	00 48	00 57	pi ₂	A			
13	20 45	20 52	pi ₂	A			
18	20 59	21 26	pc ₄	A			

SERVIÇO METEOROLÓGICO DE ANGOLA
CENTRO GEOFÍSICO DE BELAS

LUANDA

$\gamma = 8^{\circ} 55' S$; $\lambda = 13^{\circ} 10' E$; $\Phi = 7^{\circ} 11' S$; $\Lambda = 80^{\circ} 33' E$

OCTOBER 1977

Geomagnetic Bulletin

LUANDA

Scale values of the Askania variometers:
 $e_D = 3,6 \gamma / \text{mm}$; $e_H = 3,5 \gamma / \text{mm}$; $e_Z = 3,4 \gamma / \text{mm}$
Time scale of variometers: 20 mm/h

Range for K = 9;350 γ

INDICES OF GEOMAGNETIC ACTIVITY

GR. DAY 1977	K - Indices for three-hour interval									SUM	Char. 0.1.2 FULL DAY
	^h 00 h 03	^h 03 h 06	^h 06 h 09	^h 09 h 12	^h 12 h 15	^h 15 h 18	^h 18 h 21	^h 21 h 24			
1	-	-	-	-	2	1	0	1	-	-	
2	1	1	-	-	2	1	1	1	-	-	
3	1	1	1	1	2	3	1	1	11	1	
4	1	1	0	0	2	2	1	0	7	0	
5	0	0	0	1	2	2	1	1	7	0	
6	2	2	1	1	2	1	1	0	10	0	
7	0	0	0	0	1	1	1	1	4	0	
8	1	1	1	1	1	1	1	1	8	0	
9	0	-	-	-	1	1	1	0	-	-	
10	0	1	1	1	0	1	1	1	6	0	
11	1	1	1	1	2	1	2	3	12	1	
12	2	2	3	3	3	4	3	2	22	1	
13	1	2	1	2	2	1	2	1	12	1	
14	1	1	0	3	3	1	3	3	15	1	
15	3	2	3	3	1	2	3	3	20	1	
16	3	1	0	1	3	2	1	2	13	1	
17	1	2	2	1	3	4	3	2	18	1	
18	2	1	2	2	2	3	4	4	20	1	
19	4	3	3	3	4	4	3	3	27	2	
20	3	3	2	3	3	3	2	2	21	1	
21	2	2	3	3	2	3	3	3	21	1	
22	2	1	2	3	3	4	4	3	22	1	
23	3	1	1	2	2	3	2	2	16	1	
24	1	2	1	1	1	2	2	1	11	1	
25	0	0	1	2	2	2	2	2	11	1	
26	1	1	2	2	1	1	1	2	11	1	
27	1	0	2	3	5	6	6	5	28	2	
28	3	3	3	4	4	4	4	2	27	2	
29	2	1	1	2	3	2	1	0	12	1	
30	0	1	1	2	2	3	3	2	14	1	
31	2	2	2	1	1	0	1	1	10	0	

JAN 18 1978

pi , pc							
DAY	TIME (GMT)		TYPE	QUALITY A,B,C	LARGEST OSCILLATIONS		REMARKS
	Begin	End			Período	Range	
01	12h23m	12h33m	pi ₂	A			
02	00 44	01 03	pi ₂	A			
02	05 42	05 54	pc ₄	A			
06	02 00	02 12	pi ₂	A			
07	11 21	16 19	pc ₄	A			
08	12 09	12 17	pi ₂	B			
12	22 17	22 50	pi ₂	B			
13	20 51	21 00	pi ₂	A			
13	21 33	21 43	pc ₄	B			
15	21 24	21 51	pi ₂	A			
24	23 30	23 56	pi ₂	A			
31	06 36	20 00	pc ₄	A			

SERVIÇO METEOROLÓGICO DE ANGOLA

CENTRO GEOFÍSICO DE BELAS

LUANDA

$\varphi = 8^{\circ} 55' S$; $\lambda = 13^{\circ} 10' E$; $h = 53 m$ $\phi = 7^{\circ} 11' S$; $\Lambda = 80^{\circ} 33' E$

NOVEMBER 1977

Geomagnetic Bulletin

LUANDA

Scale values of the Askania variometers:
 $e_D = 3,6 \gamma / mm$; $e_H = 3,5 \gamma / mm$; $e_Z = 3,4 \gamma / mm$

Time scale of variometers: 20 mm/h.

Range for K = 9;350 γ

INDICES OF GEOMAGNETIC ACTIVITY

GR. DAY 1977	K - Indices for three-hour interval									Char. 0.1.2
	00 ^{h-} 03 ^h	03 ^{h-} 06 ^h	06 ^{h-} 09 ^h	09 ^{h-} 12 ^h	12 ^{h-} 15 ^h	15 ^{h-} 18 ^h	18 ^{h-} 21 ^h	21 ^{h-} 24 ^h	SUM	FULL DAY
1	1	0	0	1	1	2	2	2	9	0
2	2	1	1	1	1	1	1	0	8	0
3	0	0	2	1	1	1	1	1	7	0
4	1	1	2	2	1	3	3	3	16	1
5	2	1	0	1	1	2	1	1	9	0
6	0	1	0	1	2	3	1	1	9	0
7	1	1	1	2	2	1	1	0	9	0
8	0	1	0	0	0	0	1	0	2	0
9	1	1	1	0	1	0	1	1	6	0
10	1	1	1	0	2	3	3	2	13	1
11	0	1	0	1	1	0	0	0	3	0
12	0	1	2	2	2	2	3	2	14	1
13	0	2	1	3	4	4	3	2	19	1
14	2	2	2	4	5	4	4	5	28	2
15	3	1	1	2	4	4	4	2	21	1
16	2	0	1	3	3	2	2	1	14	1
17	1	1	0	0	1	1	0	1	5	0
18	1	1	2	1	1	1	0	0	7	0
19	1	2	1	1	1	1	1	2	10	0
20	0	0	1	0	0	1	0	0	2	0
21	2	1	1	1	0	0	1	1	7	0
22	1	0	1	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-

MAR 16 1978

NOVEMBER 1977

pi, po							
DAY	TIME (GMT)		TYPE	QUALITY A, B, C	LARGEST OSCILLATIONS		REMARKS
	Bengin	End			Period	Range	
	h	m					
01	02	09	02 18	pc4	A		
01	21	32	21 48	pi2	A		
02	03	17	08 00	pc4	A		
04	00	52	01 18	pi2	A		
07	21	36	21 54	pi2	B		
08	19	08	19 43	pi2	A		
08	01	34	02 00	pc4	B		
12	01	45	02 27	pc4	B		
17	21	10	21 23	pi2	B		
19	19	40	19, 51	pi2	A		
21	10	02	12 03	pc4	B		

SERVICO METEOROLÓGICO DE ANGOLA

CENTRO GEOFÍSICO DE BELAS

LUANDA

$\varphi = 8^{\circ} 55' S$; $\lambda = 13^{\circ} 10' E$; $h = 53 \text{ m}$ $\Phi = 7^{\circ} 11' S$; $\Lambda = 80^{\circ} 33' E$

DECEMBER 1977

Geomagnetic Bulletin

LUANDA

Scale values of the Askania variometers:

$e_D = 3,6 \gamma / \text{mm}$; $e_H = 3,5 \gamma / \text{mm}$; $e_Z = 3,4 \gamma / \text{mm}$

Time scale of variometers: 20 mm/h.

Range for K = 9;350 γ

INDICES OF GEOMAGNETIC ACTIVITY

GR DAY 1977	K - Indices for three-hour interval									Char. 0.1.2
	00 ^h - h 03	03 ^h - h 06	06 ^h - h 09	09 ^h - h 12	12 ^h - h 15	15 ^h - h 18	18 ^h - h 21	21 ^h - h 24	SUM	FULL DAY
1	-	-	-	-	1	1	3	2	-	-
2	3	3	1	4	4	6	6	5	32	2
3	4	3	3	3	2	3	3	2	23	2
4	2	2	2	3	3	3	4	4	23	2
5	2	2	1	1	-	2	1	2	-	-
6	1	2	3	0	0	1	1	1	9	0
7	1	1	1	0	1	1	2	0	7	0
8	1	0	0	0	0	0	0	1	2	0
9	1	1	2	1	-	0	0	0	-	-
10	0	1	0	0	0	1	1	1	4	0
11	2	2	3	4	5	3	2	2	23	2
12	1	2	0	3	2	2	2	1	13	1
13	2	1	1	0	0	2	1	0	7	0
14	2	1	0	2	2	2	1	0	10	0
15	0	1	1	1	1	0	0	0	4	0
16	0	1	0	1	1	2	2	2	9	0
17	2	2	1	1	1	0	0	0	7	0
18	0	1	-	-	-	-	-	-	-	-
19	-	-	-	-	0	1	0	0	-	-
20	0	0	0	0	0	1	1	1	3	0
21	2	2	1	0	0	1	1	1	8	0
22	1	1	0	1	1	0	1	0	5	0
23	1	1	0	1	2	0	0	0	5	0
24	1	0	1	0	0	1	1	1	5	0
25	0	0	1	0	1	1	1	1	5	0
26	0	0	0	1	0	0	1	2	4	0
27	2	2	1	0	0	0	0	0	5	0
28	1	1	1	-	1	2	3	1	-	-
29	1	2	2	3	1	2	1	1	13	1
30	2	3	2	2	2	2	2	2	17	1
31	2	3	3	3	2	2	2	2	19	1

DECEMBER 1977

pi, po							
DAY	TIME (GMT)		TYPE	QUALITY A, B, C	LARGEST OSCILLATIONS		REMARKS
	Begin	End			Period	Range	
03	03	45	19 39	pc4	A		
03	22	36	22 48	pi2	A		
06	00	05	00 20	pi2	B		
16	03	08	03 24	pc4	B		
16	14	33	16 00	pc4	A		
16	23	39	23 51	pi2	A		
19	12	15	13 45	pc4	B		
21	21	34	21 45	pi2	A		
23	23	30	23 46	pi2	A		
23	21	55	21 14	pc4	B		
24	13	22	14 05	pc4	A		