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B U R E A U G R A V I M E T R I Q U E
I N T E R N A T I O N A L

Paris

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B U L L E T I N D ' I N F O R M A T I O N

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T A B L E des M A T I E R E S

1ère Partie

2ème Partie

Dr. S. CORON

Erratum : Bull. Inf. N° 31, Mars 1973, tableau p.I-51 et carte hors texte,
lire 30 au lieu de 10, entre 69°...70°N et 17°...18°E.G. ;
lire -22 au lieu de 22, entre 63°...64°N et 19°...20°E.G.

CORRECTIONS ISOSTATIQUES pour la région de la MEDITERRANEE OCCIDENTALE

(Airy, T = 20 km et T = 30 km)

A plusieurs reprises, les Géophysiciens se sont adressés au B.G.I. pour connaître les anomalies isostatiques de la Méditerranée et des régions adjacentes.

Etant donné la concentration internationale des efforts pour l'étude systématique des bassins méditerranéens, suivant le "Projet Géodynamique, il a semblé intéressant de calculer les corrections isostatiques de cette région et d'en publier les résultats. Ces corrections seront utiles pour des études régionales, mais ne sont pas suffisamment précises pour des études locales fines étant donné l'approximation faite du relief. Des cartes d'anomalies isostatiques sont aussi en cours de préparation.

A) Cartes et Tableaux de corrections isostatiques totales

On a choisi l'hypothèse classique d'Airy-Heiskanen pour les 2 profondeurs de compensation T = 20 km et T = 30 km.

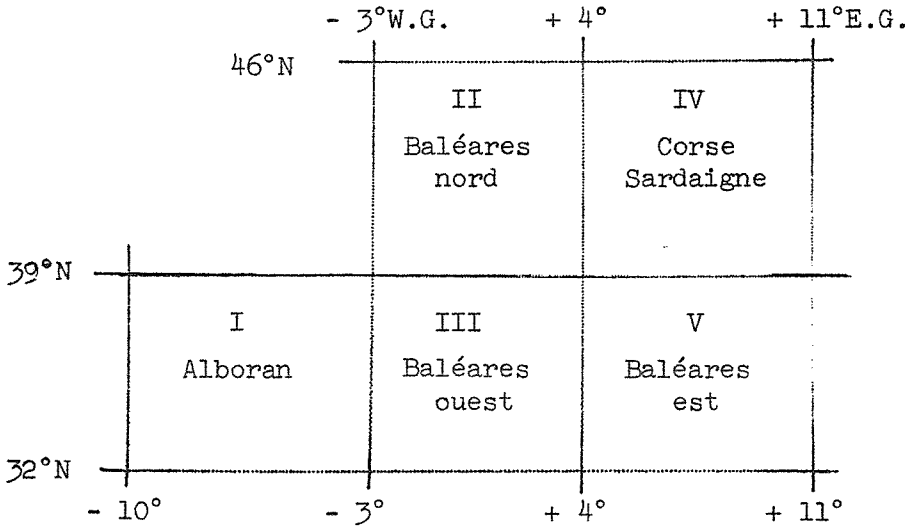
Les corrections totales comprennent les corrections isostatiques des zones A à O_2 et les corrections topo-isostatiques des zones 18 à 1 de Hayford.

Dans une première étape, les calculs ont été effectués pour la Méditerranée Occidentale, ensuite ils seront étendus progressivement à l'est.

1 - CARTES

Les 5 premières cartes présentées dans ce Bulletin couvrent la Mer d'Alboran, le système Baléarique et les îles de Corse et de Sardaigne ; elles débordent sur l'Afrique du Nord, la péninsule Ibérique, la France, la Suisse et l'Italie.

Le schéma ci-dessous indique les coordonnées géographiques des 5 cartes présentées :



Sur chaque carte, la valeur de la correction au mGal est inscrite toutes les 15' de degré. A partir de ces valeurs, des courbes d'égale correction sont tracées tous les 20 mGal.

Ces cartes permettent une interpolation à vue de la correction isostatique pour une station de pesanteur donnée.

Les cartes établies dans l'hypothèse d'Airy T = 20 km (feuilles jaunes) se trouvent ci-après :
p.I-9 (Carte I), p.I-14 (Carte II), p.I-19 (Carte III), p.I-24 (Carte IV), p.I-30 (Carte V).

Les cartes établies dans l'hypothèse d'Airy T = 30 km (feuilles bleues) se trouvent aux pages suivantes :
p.I-37 (Carte I), p.I-42 (Carte II), p.I-47 (Carte III), p.I-52 (Carte IV), p.I-58 (Carte V).

2 - TABLEAUX

De plus, à la suite de chaque carte, on a publié des tableaux qui donnent une valeur plus précise (au 1/10° mGal) des corrections de ces mêmes points. *

La lecture se fait de la manière suivante :

LAT. = latitude en degré et minute
LONG. = degré de longitude d'ouest en est.
COR. TOUTES LES 15 MIN. LONG. = correction toutes les 15' de longitude, progression d'ouest en est.

Airy 30 km

LAT.	LONG.	COR. TOUTES LES 15 MIN. LONG.			
33 45	2	108.4	102.5	95.6	89.7
33 45	3	84.6	79.6	75.0	70.2
34 0	-3	94.4	98.8	99.5	99.3
34 0	-2	100.1	102.7	105.4	106.6
34 0	-1	106.7	106.0	105.1:	104.7
34 0	0	104.8	105.5	106.3	107.6
34 0	1	109.9	112.1	113.6	113.8
34 0	2	112.1	107.5	101.5	96.3
34 0	3	90.5	84.4	78.5	72.8
34 15	-3	74.9	82.0	87.5	90.8

Ainsi, pour 34°00'N et - 2°30'W.G. on lit : 99,5 mGal
" et + 2°00'E.G. on lit : 112,1 mGal
" et + 2°45'E.G. on lit : 96,3 mGal

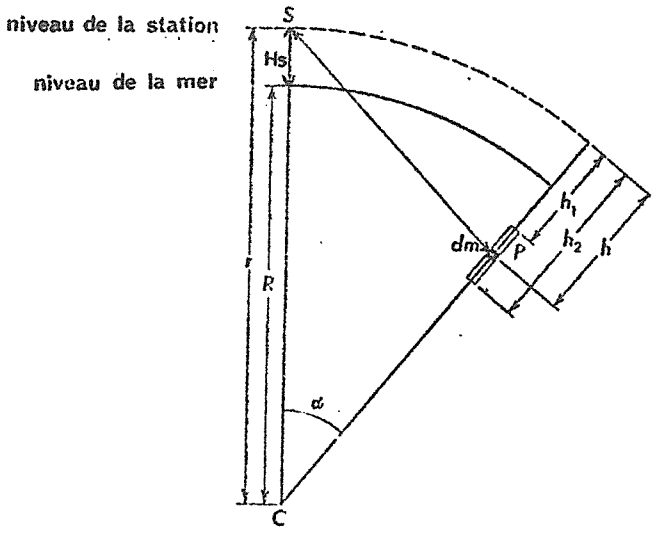
* Note : Ces résultats peuvent être fournis par le B.G.I. sur cartes perforées.

B) Calcul des corrections

1 - CORRECTIONS ISOSTATIQUES DES ZONES A - O_2:

- METHODE

De 0 à 166,7 km, les corrections ont été calculées selon la méthode exposée par T.J. KUKKAMÄKI dans "Gravimetric reductions with electronic computers". Publ. Isost. Inst. IAG n°30, Helsinki, 1955.



Le relief, situé autour de chaque point est décomposé en prismes. Chaque prisme a pour bases deux trapèzes sphériques situés, l'un au niveau de la mer, l'autre à l'altitude H lue sur la carte d'altitudes moyennes.

L'épaisseur de la masse compensatrice du relief d'altitude H est donnée par :

$$h_2 - h_1 = \frac{0,6}{2,67} H$$

On calcule l'influence F, sur le point considéré S, de la masse compensatrice comprise entre les niveaux h_1 et h_2, toute la masse étant supposée concentrée sur la droite CP, entre h_1 et h_2.

(h_1 = profondeur de compensation + H_S.)

$$F = k\rho\, dx\, r \left\{ [(1 - 16x^2 + 24x^4)(1 - i) + (3 - 20x^2 + 24x^4)(1 - ij)y_2 + (-1 + 2x^2)(1 - ij^2)y_2^2] \frac{1}{\sqrt{T_2}} - 2(1 - 6x^2 + 6x^4) \ln \frac{\sqrt{T_2} + y_2 + 2x^2}{\sqrt{T_1} + y_1 + 2x^2} \right\}$$

où k = constante de gravitation universelle

ρ = densité de la masse compensatrice (3,27 - 2,67)

$$x = \sin\frac{\alpha}{2}\ ,\ y = \frac{h}{r},\quad y_1 = \frac{h_1}{r},\quad y_2 = \frac{h_2}{r}$$

$$T = 4x^2 + 4x^2y + y^2 \qquad i = \frac{\sqrt{T_2}}{\sqrt{T_1}} \quad \text{et} \quad \dot{J} = \frac{y_1}{y_2}$$

dans les cas où x = 0, le quotient

$$\frac{\sqrt{T_2} + y_2 + 2x^2}{\sqrt{T_1} + y_1 + 2x^2}$$

est indéterminé ; on le remplace par sa limite : y_1 / y_2

Les corrections ont été calculées à l'aide d'un ordinateur IBM 360/65.

- FICHIER DE CARTES PERFOREES

Chaque trapèze sphérique correspond à un carreau de 20' x 20' de grade dans lequel figure une altitude moyenne. Les dimensions de carreau ont été choisies en fonction des cartes d'altitudes moyennes antérieurement publiées par le Comité National Français de Géodésie et Géophysique. L'ensemble de ces carreaux, dont les valeurs sont reportées sur cartes perforées, constitue le fichier des altitudes moyennes.

2 - CORRECTIONS TOPO-ISOSTATIQUES DES ZONES 18-1

Evaluées toutes les 15' x 15' de degré sur des cartes d'isocorrection. On a reproduit p.I-65 et I-66 les agrandissements des 2 cartes extraites de : W. HEISKANEN, E. NISKANEN & P. KÄRKI - "Topographic-isostatic reduction maps for Europe and North Atlantic in the Hayford zones zones 18-1 for the Airy-Heiskanen system T = 30 km and T = 20 km". Publ. Isost. Inst. IAG, n°31 (1959)

Ainsi on peut se rendre compte de l'importance relative des zones proches A - O_2 et des zones lointaines.

C) Documents utilisés

I - CARTES D'ALTITUDES MOYENNES *

France et Pays limitrophes (1)
modifiée au large des Iles Baléares (8)
Afrique du Nord (2) modifiée par (8).
Espagne (3)
Portugal (4)
Italie ((5)

1 - COM. NAT. FR. GEOD. & GEOPHYS. - Carte d'altitudes moyennes, France et Pays limitrophes. R.P. LEJAY, Paris, 1948, 1/2.000.000°, carreaux 20' x 20' de grade, Paris.

2 - COM. NAT. FR. GEOD. & GEOPHYS. - Cartes des altitudes moyennes de l'Afrique du Nord. S. CORON, Paris, 1950, 1/2.000.000°, carreaux 20' x 20' de grade Paris.

3 - INST. GEOGR. CATASTR. - Cartes des altitudes moyennes, Madrid, reçues au B.G.I. en 1967, 1/500.000°, carreaux de 3'20" x 5' de degré Madrid.

4 - INST. GEOGR. CADASTR. - Cartes d'altitudes moyennes, Lisbonne, 1960, 1/2.000.000°, carreaux de 5' x 5' de degré Greenwich.

5 - COM. GEOD. ITAL. - Carta quadretta delle altitudine medie dell'Italia e delle regioni limitrofe e delle profondità medie dei mari circostanti. S. BALLARIN, Pise, 1959, 1/2.000.000°, carreaux de 10' x 15' de degré Monte Mario

II - CARTES BATHYMETRIQUES COMPLEMENTAIRES

Océan Atlantique (6)
Golfe de Gascogne (7)
Mer Méditerranée (8)

6 - BUREAU HYDROGR. INT. - Carte générale bathymétrique des océans établie par le Service Hydrogr. Français. Gebco 43, 1/1.000.000°.

7 - SERVICE HYDROGR. MARINE - Carte bathymétrique du Golfe de Gascogne, France, 1967, 1/220.000° environ.

8 - SACLANT ASW RES. CENTER, LA SPEZIA (T.D. ALLAN) & OSSER. GEOF. SPER., TRIESTE (C. MORELLI) - Cartes bathymétriques, 1/750.000°, publiées dans : "A geophysical study of the Mediterranean sea". Boll. Geof. teor. appl., v.XIII, n°50, 1971.

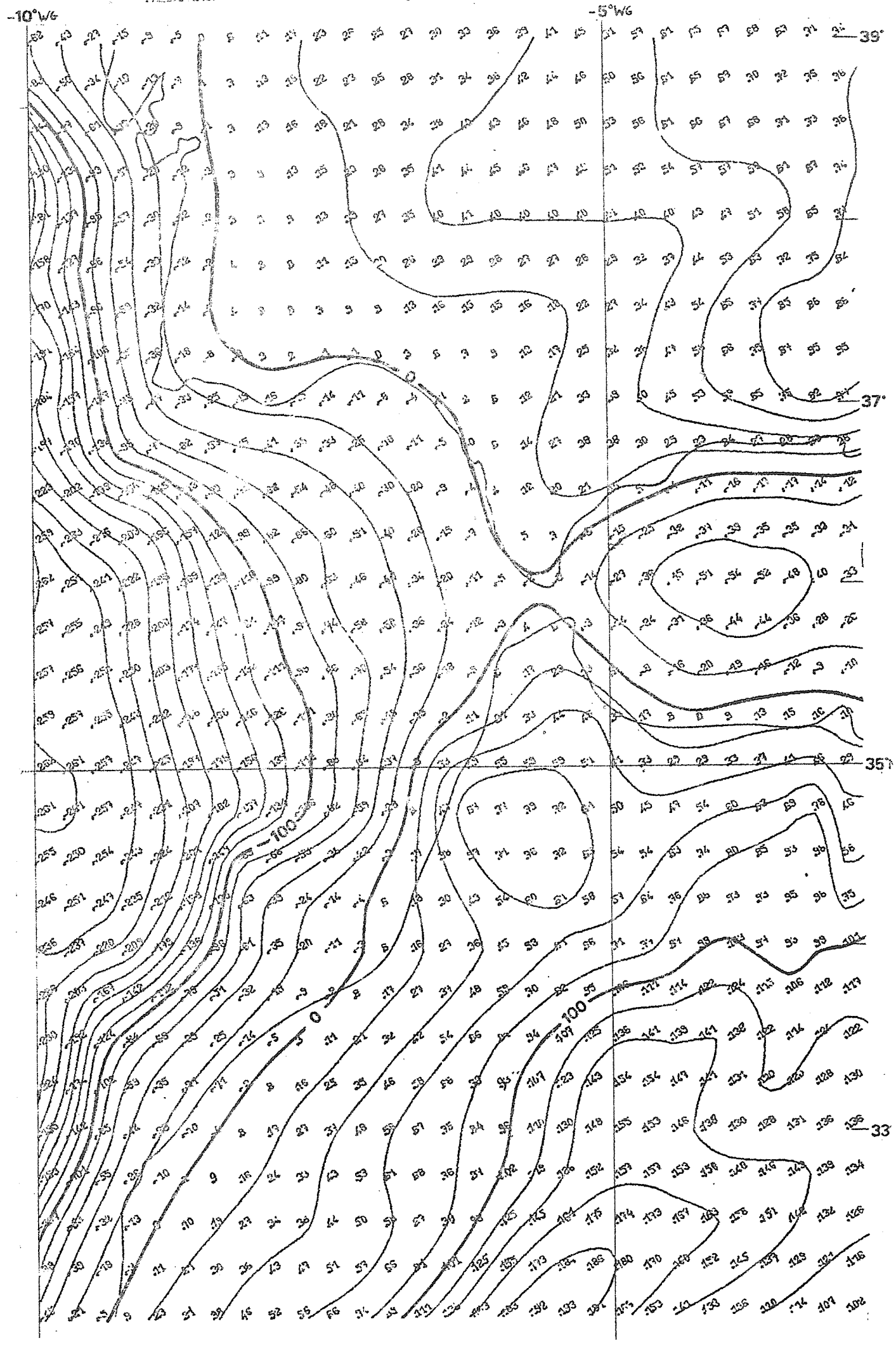
J. BOUVET (B.G.I.) et J.M. LUBART (I.P.G.)
P a r i s

* Voir Bull. Inf. B.G.I., n°26, Décembre 1963.

D) CORRECTIONS ISOSTATIQUES TOTALES

Hypothèse d'Airy

T = 20 km


-10°WG
-5°WG
39°
37°
35°
33°
0
-100
100

I - ALBORAN

AIRY 20 KM

LAT.	LONG.	COR.	TOUTES	LES	15 MIN.	LONG.
32 0	-10	-44.5	-21.1	-5.0	9.7	
32 0	-9	22.9	30.8	38.4	45.9	
32 0	-8	51.7	57.9	65.5	73.8	
32 0	-7	88.7	111.4	137.7	162.9	
32 0	-6	182.7	192.3	192.7	181.4	
32 0	-5	166.7	152.9	140.6	132.5	
32 0	-4	126.2	120.2	114.2	107.4	
32 15	-10	-77.6	-38.8	-17.8	-2.5	
32 15	-9	10.8	21.2	29.6	37.5	
32 15	-8	43.0	46.7	50.5	56.8	
32 15	-7	66.3	80.7	101.3	128.6	
32 15	-6	154.6	173.0	184.2	185.8	
32 15	-5	179.6	170.1	159.7	152.3	
32 15	-4	145.1	137.1	128.8	121.1	
32 30	-10	-106.5	-62.7	-31.9	-13.2	
32 30	-9	0.2	10.3	18.5	26.7	
32 30	-8	33.8	38.3	43.6	50.4	
32 30	-7	58.2	66.6	78.8	99.2	
32 30	-6	124.6	144.8	160.9	169.8	
32 30	-5	174.0	173.1	166.5	162.6	
32 30	-4	157.6	150.8	142.3	132.0	
32 45	-10	-152.6	-101.4	-54.6	-26.4	
32 45	-9	-10.3	0.8	9.0	16.2	
32 45	-8	24.1	32.9	42.9	52.6	
32 45	-7	60.6	67.7	76.0	86.5	
32 45	-6	101.6	119.3	138.2	151.8	
32 45	-5	157.2	156.8	153.2	149.9	
32 45	-4	147.6	145.9	143.0	138.6	
33 0	-10	-194.9	-141.8	-85.4	-43.6	
33 0	-9	-22.8	-10.2	-0.3	8.0	
33 0	-8	16.5	26.8	37.3	47.9	
33 0	-7	57.8	67.4	75.1	83.8	
33 0	-6	96.2	110.3	129.9	148.0	
33 0	-5	155.4	153.2	145.9	137.6	
33 0	-4	130.1	127.8	131.4	135.7	
33 15	-10	-224.0	-173.8	-101.7	-58.5	
33 15	-9	-35.2	-21.3	-11.0	-1.7	
33 15	-8	7.8	16.1	24.6	34.8	
33 15	-7	45.8	57.5	67.8	78.7	
33 15	-6	93.0	106.5	123.4	143.0	
33 15	-5	154.4	154.4	147.3	140.8	
33 15	-4	131.2	119.9	120.4	128.1	
33 30	-10	-229.7	-191.6	-123.7	-83.9	
33 30	-9	-58.2	-38.7	-24.8	-14.2	
33 30	-8	-5.0	3.0	11.3	21.1	
33 30	-7	31.5	42.2	53.6	66.3	
33 30	-6	80.5	93.5	106.9	124.7	
33 30	-5	138.4	140.6	138.9	140.5	
33 30	-4	137.7	122.4	113.9	120.1	
33 45	-10	-225.8	-202.7	-167.2	-142.0	
33 45	-9	-112.4	-78.5	-50.9	-32.0	
33 45	-8	-19.1	-9.6	-1.7	7.5	
33 45	-7	17.3	26.7	36.6	47.9	
33 45	-6	58.6	70.4	82.4	94.8	

I - ALBORAN

AIRY 20 KM

LAT.	LONG.	COR. TOUTES LES 15 MIN. LONG.			
33 45	-5	106.4	110.7	114.0	121.9
33 45	-4	124.0	114.7	105.5	111.8
34 0	-10	-238.4	-236.8	-219.5	-208.7
34 0	-9	-178.7	-136.2	-96.4	-60.6
34 0	-8	-35.4	-20.1	-10.8	-2.5
34 0	-7	6.1	16.0	26.8	36.3
34 0	-6	45.0	53.3	60.8	65.5
34 0	-5	70.9	76.6	87.3	99.6
34 0	-4	102.6	96.8	92.6	99.0
34 15	-10	-246.3	-251.1	-247.2	-235.3
34 15	-9	-211.8	-177.5	-124.6	-62.6
34 15	-8	-38.6	-24.3	-13.7	-3.6
34 15	-7	6.3	17.9	30.1	42.5
34 15	-6	54.0	60.0	60.6	57.6
34 15	-5	57.1	63.5	75.6	87.6
34 15	-4	92.7	93.2	94.7	98.3
34 30	-10	-255.4	-256.1	-253.6	-243.3
34 30	-9	-223.9	-200.9	-149.1	-88.5
34 30	-8	-68.3	-52.6	-37.7	-21.5
34 30	-7	-2.6	17.0	38.4	57.0
34 30	-6	71.0	75.7	72.0	63.0
34 30	-5	53.8	54.1	63.4	73.6
34 30	-4	79.9	85.3	92.6	97.8
34 45	-10	-260.7	-260.7	-256.9	-246.8
34 45	-9	-230.8	-206.6	-181.9	-157.0
34 45	-8	-133.6	-105.9	-82.3	-59.2
34 45	-7	-27.6	8.2	46.6	67.2
34 45	-6	76.5	78.6	72.1	60.7
34 45	-5	50.4	44.6	46.6	54.1
34 45	-4	60.2	62.8	68.5	78.4
35 0	-10	-261.6	-260.5	-257.2	-246.6
35 0	-9	-224.8	-197.2	-177.5	-156.1
35 0	-8	-135.4	-111.9	-87.8	-64.2
35 0	-7	-37.4	-3.3	33.0	48.8
35 0	-6	55.1	58.5	59.3	51.2
35 0	-5	41.2	32.7	28.9	29.3
35 0	-4	32.9	37.4	41.4	45.7
35 15	-10	-259.2	-256.8	-255.0	-242.5
35 15	-9	-212.4	-187.7	-168.1	-146.2
35 15	-8	-125.5	-110.5	-89.6	-68.5
35 15	-7	-47.5	-23.4	-2.1	11.0
35 15	-6	21.4	32.9	44.0	44.6
35 15	-5	33.0	17.3	7.7	5.8
35 15	-4	9.3	12.8	14.8	15.7
35 30	-10	-257.2	-256.1	-251.3	-230.1
35 30	-9	-203.4	-177.4	-155.1	-132.3
35 30	-8	-111.1	-99.2	-85.9	-69.5
35 30	-7	-54.1	-36.0	-17.8	-4.8
35 30	-6	6.1	16.6	23.4	19.0
35 30	-5	5.1	-7.8	-16.2	-20.3
35 30	-4	-19.0	-16.0	-11.9	-9.2
35 45	-10	-256.7	-254.5	-248.7	-226.1
35 45	-9	-199.6	-173.6	-147.3	-124.3
35 45	-8	-107.1	-90.8	-73.6	-57.7

I - ALBORAN

AIRY 20 KM

LAT.	LONG.	COR.	TOUTES	LES	15	MIN.	LONG.
35 45	-7	-50.1	-37.5	-23.7	-11.8		
35 45	-6	-3.0	3.8	5.7	-3.0		
35 45	-5	-14.2	-23.5	-30.9	-36.4		
35 45	-4	-43.7	-43.7	-36.1	-27.8		
36 0	-10	-262.2	-250.9	-241.3	-222.4		
36 0	-9	-199.3	-169.3	-138.5	-116.4		
36 0	-8	-98.7	-80.4	-62.6	-45.6		
36 0	-7	-44.1	-34.1	-20.4	-10.9		
36 0	-6	-5.4	-1.9	-2.6	-13.7		
36 0	-5	-27.0	-36.4	-45.2	-51.2		
36 0	-4	-54.0	-52.2	-48.1	-39.6		
36 15	-10	-258.8	-233.1	-215.8	-202.8		
36 15	-9	-185.8	-157.3	-120.2	-98.9		
36 15	-8	-82.2	-68.3	-59.7	-50.6		
36 15	-7	-40.2	-28.2	-14.8	-6.6		
36 15	-6	-0.0	5.4	6.5	-2.7		
36 15	-5	-15.1	-24.8	-31.5	-36.7		
36 15	-4	-39.3	-35.4	-35.3	-32.9		
36 30	-10	-222.5	-202.2	-178.6	-158.1		
36 30	-9	-144.6	-112.8	-89.9	-74.7		
36 30	-8	-62.3	-53.5	-47.5	-39.5		
36 30	-7	-29.9	-20.0	-9.7	-3.9		
36 30	-6	4.1	11.8	19.9	21.2		
36 30	-5	14.6	4.9	-3.7	-11.4		
36 30	-4	-15.9	-16.6	-16.8	-14.0		
36 45	-10	-197.4	-169.9	-131.6	-95.0		
36 45	-9	-76.5	-62.0	-52.6	-44.8		
36 45	-8	-40.9	-37.7	-32.5	-25.3		
36 45	-7	-17.5	-10.9	-5.0	-0.1		
36 45	-6	6.2	14.2	26.8	37.5		
36 45	-5	37.7	29.7	24.6	23.2		
36 45	-4	24.0	27.2	28.2	30.4		
37 0	-10	-183.7	-156.6	-117.1	-78.8		
37 0	-9	-47.2	-32.5	-24.8	-19.4		
37 0	-8	-16.0	-15.0	-14.3	-11.4		
37 0	-7	-8.0	-4.2	-0.6	2.1		
37 0	-6	6.3	12.2	21.1	32.7		
37 0	-5	38.5	39.7	45.3	52.8		
37 0	-4	58.7	65.1	75.2	82.2		
37 15	-10	-191.1	-163.5	-106.0	-64.7		
37 15	-9	-35.9	-17.8	-7.6	-2.7		
37 15	-8	2.5	2.2	-0.6	-0.6		
37 15	-7	0.4	2.8	5.7	6.6		
37 15	-6	8.6	12.1	17.4	24.7		
37 15	-5	31.5	37.8	47.0	57.5		
37 15	-4	66.4	74.7	87.2	95.4		
37 30	-10	-169.5	-143.0	-96.0	-58.3		
37 30	-9	-32.3	-13.5	-2.2	4.4		
37 30	-8	8.4	7.1	6.9	8.6		
37 30	-7	9.7	12.6	15.7	15.3		
37 30	-6	14.9	15.8	18.2	21.9		
37 30	-5	26.6	33.5	43.3	54.0		
37 30	-4	64.8	76.5	85.0	87.6		
37 45	-10	-158.0	-127.0	-86.1	-53.8		

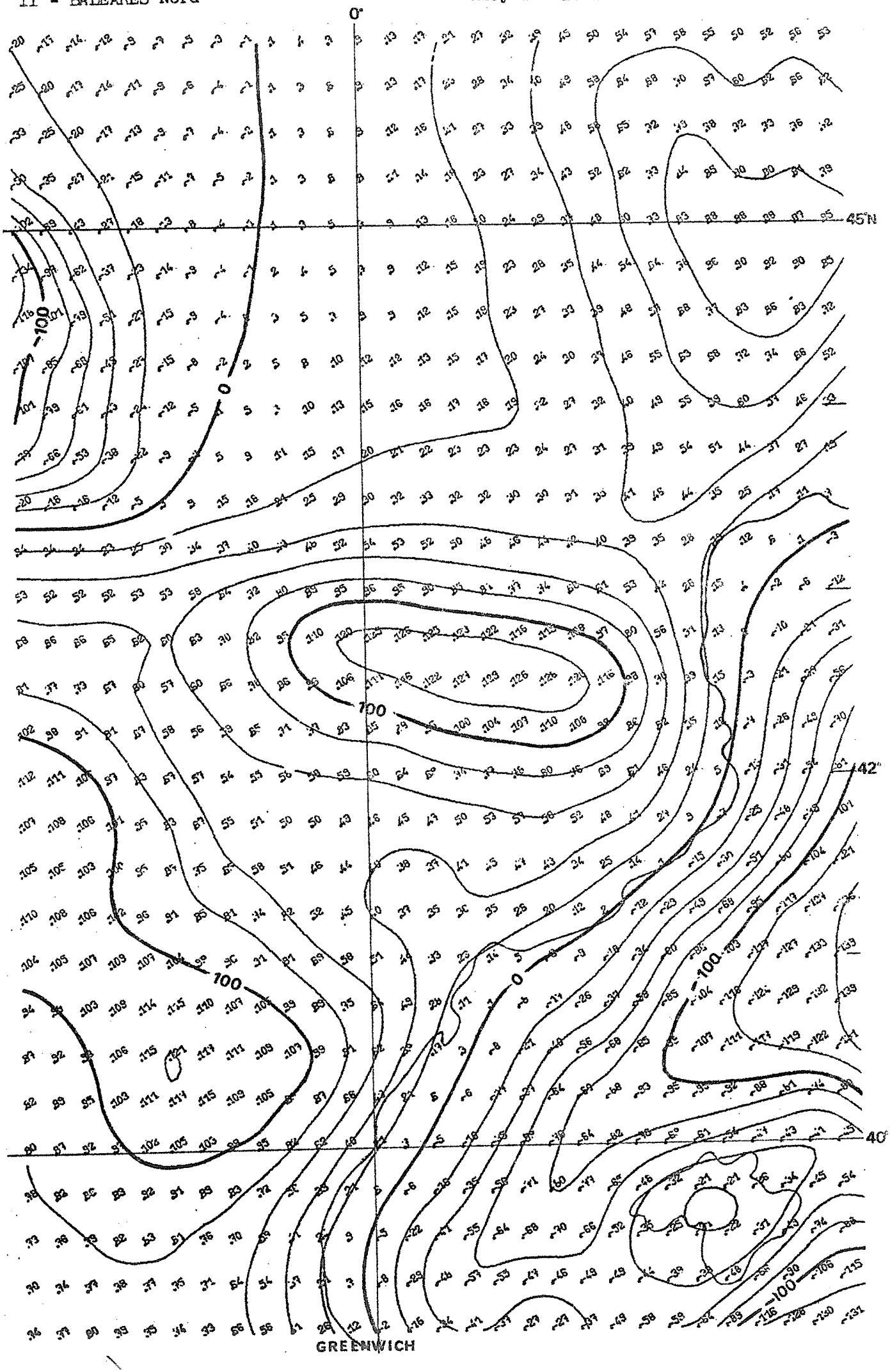
I - ALBORAN

AIRY 20 KM

LAT.	LONG.	COR.	TOUTES	LES	15 MIN.	LONG.
37 45	-9	-30.3	-12.3	-2.1	3.7	
37 45	-8	7.5	8.4	10.5	14.8	
37 45	-7	19.9	25.7	29.2	28.9	
37 45	-6	27.5	26.8	27.2	27.6	
37 45	-5	29.2	32.4	37.1	43.9	
37 45	-4	53.1	62.7	71.6	75.4	
38 0	-10	-180.5	-137.3	-95.0	-57.3	
38 0	-9	-30.3	-11.7	-2.4	2.5	
38 0	-8	7.2	9.9	13.2	19.2	
38 0	-7	26.8	34.7	39.9	41.0	
38 0	-6	39.7	40.0	40.1	40.2	
38 0	-5	40.6	39.5	40.1	43.3	
38 0	-4	47.0	51.0	57.8	65.4	
38 15	-10	-189.6	-134.8	-92.7	-56.9	
38 15	-9	-28.6	-12.1	-2.8	3.4	
38 15	-8	9.5	13.3	14.8	20.0	
38 15	-7	27.6	35.4	41.0	44.0	
38 15	-6	44.8	45.6	46.9	48.7	
38 15	-5	50.7	51.5	54.2	56.9	
38 15	-4	57.2	57.8	61.4	66.6	
38 30	-10	-148.5	-96.6	-61.1	-36.6	
38 30	-9	-19.5	-9.1	-0.7	6.6	
38 30	-8	12.5	15.7	18.0	21.4	
38 30	-7	28.0	34.3	37.8	40.0	
38 30	-6	42.8	45.9	48.0	49.9	
38 30	-5	52.7	56.2	61.2	65.5	
38 30	-4	66.8	68.3	70.6	73.4	
38 45	-10	-82.5	-55.5	-34.3	-19.3	
38 45	-9	-12.6	-6.5	0.5	7.2	
38 45	-8	13.0	18.0	21.7	23.1	
38 45	-7	24.8	27.9	30.9	34.1	
38 45	-6	38.2	41.5	43.9	46.1	
38 45	-5	50.0	55.5	61.2	65.2	
38 45	-4	67.7	69.5	72.1	74.8	
39 0	-10	-61.8	-42.5	-27.4	-14.8	
39 0	-9	-8.9	-5.1	0.4	5.8	
39 0	-8	11.2	17.1	22.7	25.5	
39 0	-7	25.4	26.9	29.7	33.3	
39 0	-6	35.8	38.5	41.4	45.2	
39 0	-5	50.8	56.9	61.3	65.1	
39 0	-4	67.0	67.6	69.0	70.9	

II - BALEARES Nord

Airy T = 20 km



II - BALEARES Nord

AIRY 20. KM

LAT.		LONG.	CUR.	TOUTES LES 15 MIN.		LONG.
39	0	-3	73.9	77.3	79.9	78.8
39	0	-2	75.3	73.9	72.5	66.4
39	0	-1	56.2	41.0	26.2	12.4
39	0	0	-2.0	-18.3	-34.0	-41.4
39	0	1	-37.3	-26.5	-26.8	-37.1
39	0	2	-49.4	-57.9	-59.0	-64.2
39	0	3	-89.3	-115.6	-128.4	-129.9
39	15	-3	70.4	74.0	77.1	77.7
39	15	-2	76.5	75.4	70.9	64.0
39	15	-1	53.8	37.1	20.5	6.9
39	15	0	-8.4	-29.1	-46.0	-56.9
39	15	1	-54.6	-47.3	-45.9	-49.3
39	15	2	-48.8	-43.8	-39.1	-37.6
39	15	3	-47.6	-66.0	-90.0	-106.3
39	30	-3	72.8	75.9	79.3	82.0
39	30	-2	83.0	81.1	75.6	69.8
39	30	-1	58.8	41.1	23.7	9.5
39	30	0	-4.6	-22.4	-41.0	-55.1
39	30	1	-64.4	-68.4	-69.6	-66.2
39	30	2	-52.4	-35.1	-25.4	-21.4
39	30	3	-22.1	-31.2	-49.4	-73.9
39	45	-3	78.1	81.9	85.5	89.2
39	45	-2	91.9	90.8	88.6	83.0
39	45	-1	71.6	56.0	38.6	21.1
39	45	0	6.1	-6.3	-18.3	-34.5
39	45	1	-56.1	-71.1	-79.9	-76.9
39	45	2	-64.5	-47.7	-31.8	-20.9
39	45	3	-20.5	-25.9	-33.6	-44.8
40	0	-3	80.4	86.5	91.8	97.0
40	0	-2	102.1	104.7	103.3	99.3
40	0	-1	94.7	81.6	61.5	39.7
40	0	0	21.4	7.0	-4.9	-16.4
40	0	1	-35.1	-58.7	-76.4	-83.8
40	0	2	-81.6	-76.1	-69.2	-61.1
40	0	3	-53.6	-47.0	-42.6	-41.4
40	15	-3	82.1	88.5	94.9	103.1
40	15	-2	111.2	117.0	114.9	108.6
40	15	-1	105.0	98.6	86.7	65.6
40	15	0	42.4	21.4	5.6	-6.0
40	15	1	-17.4	-37.2	-63.6	-80.2
40	15	2	-88.0	-92.6	-94.5	-94.5
40	15	3	-92.4	-88.0	-81.3	-74.0
40	30	-3	86.5	91.8	97.6	106.2
40	30	-2	115.4	120.6	116.6	110.6
40	30	-1	109.3	106.9	96.5	81.3
40	30	0	61.6	38.9	17.3	3.0
40	30	1	-7.9	-20.5	-39.6	-56.4
40	30	2	-68.1	-85.1	-99.9	-106.6
40	30	3	-111.1	-116.8	-119.1	-122.4
40	45	-3	93.9	98.5	103.0	109.3
40	45	-2	113.8	115.0	110.4	106.5
40	45	-1	104.9	98.8	88.7	75.2
40	45	0	64.1	48.9	27.8	11.3
40	45	1	0.7	-8.0	-16.6	-25.5

II - BALEARES Nord

AIRY 20. KM

LAT.	LONG.	COR.TOUTES LES 15 MIN.LONG.			
		-37.4	-57.5	-84.7	-104.2
40 45	2	-116.2	-123.9	-128.7	-132.1
40 45	3	104.1	104.8	107.1	108.5
41 0	-3	107.4	104.3	99.8	96.2
41 0	-2	91.3	80.5	68.8	58.4
41 0	-1	50.9	43.6	33.0	22.9
41 0	0	13.5	5.4	-2.2	-9.4
41 0	1	-17.9	-33.5	-59.7	-85.3
41 0	2	-102.7	-116.6	-127.0	-132.5
41 0	3	110.2	108.2	106.0	101.9
41 15	-3	96.4	90.5	85.4	80.6
41 15	-2	73.5	62.4	51.6	44.6
41 15	-1	40.1	37.0	35.1	36.2
41 15	0	35.3	28.3	20.3	12.0
41 15	1	1.8	-11.7	-29.0	-48.7
41 15	2	-67.9	-94.8	-116.9	-126.8
41 15	3	105.3	105.2	103.4	100.3
41 30	-3	94.9	86.8	74.9	64.7
41 30	-2	56.1	51.2	46.3	43.8
41 30	-1	40.2	37.5	37.3	40.5
41 30	0	44.9	46.5	42.9	34.3
41 30	1	24.7	13.9	0.7	-14.5
41 30	2	-29.5	-50.8	-79.7	-103.9
41 30	3	107.2	108.2	105.6	101.3
41 45	-3	94.5	82.8	66.8	55.4
41 45	-2	51.2	49.7	50.2	48.6
41 45	-1	46.0	45.2	46.9	49.5
41 45	0	52.6	56.5	57.6	52.4
41 45	1	47.5	41.0	26.9	9.5
41 45	2	-7.3	-25.2	-47.5	-75.0
41 45	3	111.5	111.4	106.3	97.1
42 0	-3	82.5	67.4	57.0	53.6
42 0	-2	54.8	55.9	57.7	59.2
42 0	-1	60.1	63.7	69.3	73.7
42 0	0	76.5	78.1	79.7	76.3
42 0	1	69.3	61.2	45.5	23.7
42 0	2	4.7	-12.5	-31.3	-54.3
42 0	3	101.7	97.5	93.9	80.8
42 15	-3	67.4	57.7	55.5	58.3
42 15	-2	65.4	70.6	76.8	83.0
42 15	-1	85.0	87.6	94.6	100.3
42 15	0	104.0	106.9	109.9	108.3
42 15	1	99.5	85.0	62.1	34.7
42 15	2	11.9	-6.8	-26.3	-48.5
42 15	3	80.6	77.1	73.2	66.7
42 30	-3	59.9	57.3	60.2	66.2
42 30	-2	75.7	85.5	96.2	106.0
42 30	-1	111.1	115.9	122.4	127.4
42 30	0	128.9	127.6	128.3	125.5
42 30	1	115.9	98.2	69.6	38.6
42 30	2	15.1	-3.0	-20.6	-38.9
42 30	3	67.9	66.8	65.7	65.1
42 45	-3	61.5	59.5	63.0	70.3
42 45	-2	81.5	95.4	109.7	120.2
42 45	-1				

II - BALEARES Nord

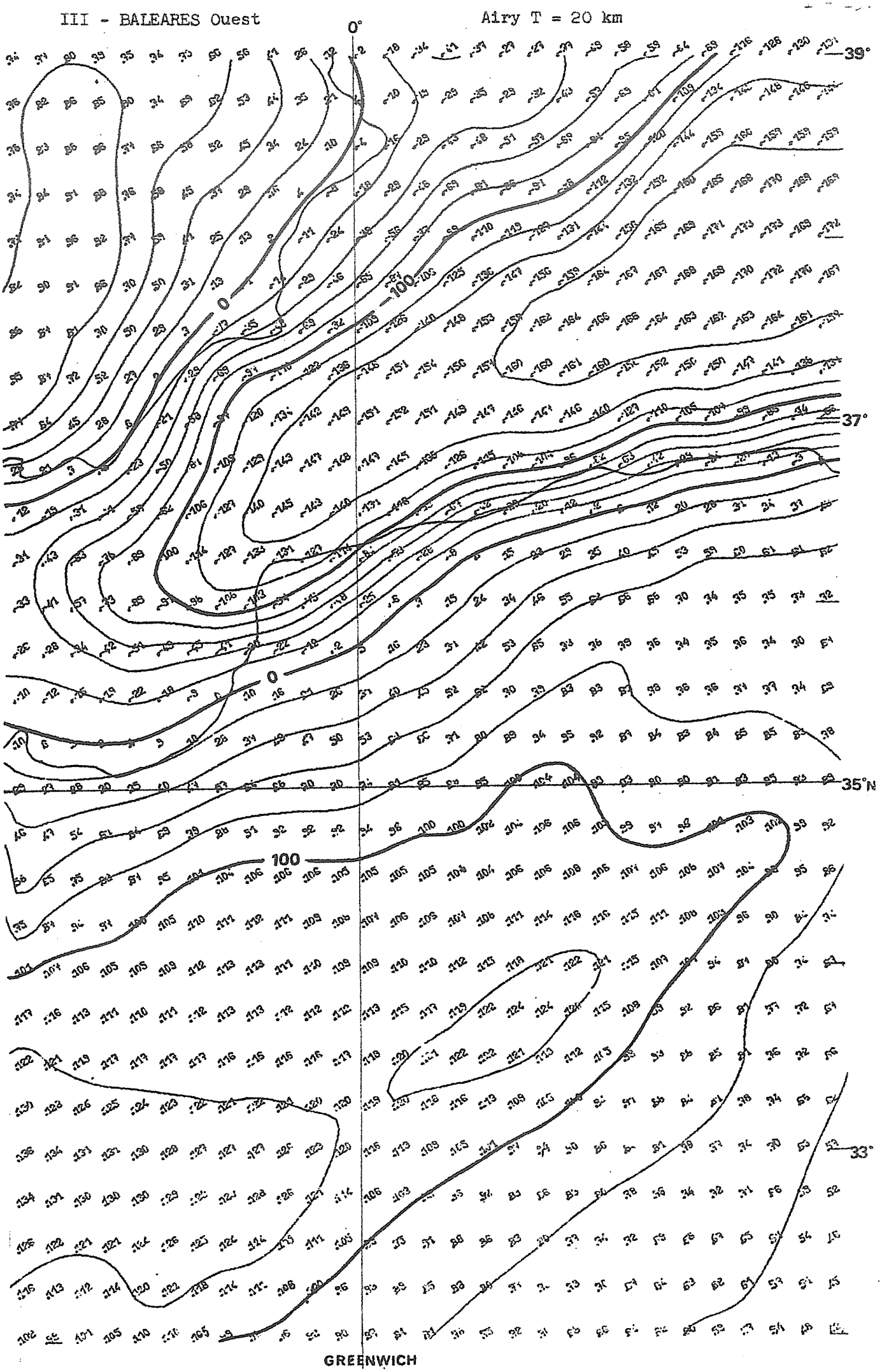
AIRY 20. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
42 45	0	125.2	126.3	124.7	123.2
42 45	1	122.1	118.3	114.5	107.9
42 45	2	96.8	79.5	55.5	31.2
42 45	3	12.8	0.0	-10.3	-20.5
43 0	-3	53.2	51.6	51.7	52.3
43 0	-2	52.6	53.3	57.6	64.1
43 0	-1	72.2	80.1	88.7	94.3
43 0	0	96.3	95.1	89.8	85.0
43 0	1	81.2	77.4	73.7	68.1
43 0	2	61.2	52.5	42.1	28.2
43 0	3	14.5	4.4	-2.3	-7.7
43 15	-3	23.7	23.8	23.5	22.9
43 15	-2	25.4	29.6	34.0	37.2
43 15	-1	39.6	42.7	47.5	51.7
43 15	0	53.5	53.3	52.4	50.2
43 15	1	48.0	45.5	43.6	41.8
43 15	2	40.2	38.9	35.4	28.2
43 15	3	19.2	11.6	5.6	1.1
43 30	-3	-20.0	-17.9	-16.1	-12.1
43 30	-2	-4.9	3.0	9.9	14.5
43 30	-1	17.7	21.2	25.1	28.6
43 30	0	30.4	31.7	32.5	32.4
43 30	1	31.7	30.4	30.1	31.3
43 30	2	34.8	40.9	45.6	44.1
43 30	3	35.1	24.9	17.3	11.4
43 45	-3	-78.7	-66.3	-52.8	-37.7
43 45	-2	-21.7	-9.1	-0.6	4.9
43 45	-1	8.5	11.4	14.5	17.4
43 45	0	19.6	21.3	22.2	22.7
43 45	1	23.1	23.0	24.1	26.9
43 45	2	31.3	39.0	48.6	53.5
43 45	3	50.9	44.4	36.6	27.1
44 0	-3	-100.7	-79.2	-61.2	-42.9
44 0	-2	-23.8	-12.2	-5.0	0.7
44 0	-1	4.9	7.5	10.0	12.6
44 0	0	14.6	15.6	16.4	17.3
44 0	1	18.1	19.2	22.1	26.8
44 0	2	32.3	40.1	48.9	55.1
44 0	3	58.7	60.4	57.3	46.0
44 15	-3	-106.8	-85.0	-66.3	-46.7
44 15	-2	-27.1	-14.5	-7.6	-2.1
44 15	-1	1.9	5.0	7.9	10.4
44 15	0	11.5	12.5	13.1	15.3
44 15	1	17.4	20.3	24.1	29.4
44 15	2	36.9	45.6	54.5	62.7
44 15	3	68.2	72.2	73.5	66.1
44 30	-3	-118.3	-100.5	-79.2	-50.9
44 30	-2	-27.2	-15.3	-8.7	-3.9
44 30	-1	-0.0	3.0	5.1	7.1
44 30	0	8.5	9.8	12.0	15.0
44 30	1	18.5	22.5	27.2	32.7
44 30	2	39.4	48.2	57.3	57.6
44 30	3	77.3	82.7	85.7	83.4
44 45	-3	-134.1	-97.0	-61.8	-37.3

II - BALEARES Nord

AIRY 20. KM

LAT.	LONG.	COR. TOUTES LES 15 MIN. LONG.			
44 45	-2	-22.8	-14.2	-8.8	-4.2
44 45	-1	-0.9	1.7	3.5	5.3
44 45	0	7.2	9.3	11.9	15.0
44 45	1	18.8	23.0	28.3	35.2
44 45	2	44.0	53.7	64.0	75.7
44 45	3	85.5	90.0	92.1	90.4
45 0	-3	-102.1	-68.8	-43.4	-27.4
45 0	-2	-18.0	-12.6	-8.0	-4.4
45 0	-1	-1.2	1.0	2.8	4.6
45 0	0	6.6	9.5	12.7	16.3
45 0	1	19.8	23.9	29.4	37.2
45 0	2	45.0	60.1	72.6	83.4
45 0	3	87.6	88.2	86.2	86.7
45 15	-3	-49.7	-35.4	-26.5	-20.5
45 15	-2	-15.3	-10.8	-7.4	-4.5
45 15	-1	-1.6	0.6	3.1	5.7
45 15	0	8.1	10.7	14.4	18.3
45 15	1	22.5	27.4	33.7	42.5
45 15	2	52.2	61.8	73.4	83.9
45 15	3	85.3	80.4	79.5	81.0
45 30	-3	-32.5	-24.9	-20.1	-16.6
45 30	-2	-13.1	-9.5	-6.9	-4.0
45 30	-1	-1.5	0.9	3.3	6.1
45 30	0	9.0	12.3	16.3	21.4
45 30	1	27.1	32.6	39.3	48.4
45 30	2	57.9	64.6	71.5	79.1
45 30	3	78.3	71.8	72.7	75.5
45 45	-3	-24.9	-20.0	-16.7	-13.9
45 45	-2	-11.1	-8.5	-5.9	-3.7
45 45	-1	-1.4	1.1	3.3	6.0
45 45	0	9.1	12.5	17.2	22.7
45 45	1	28.0	33.6	40.3	49.4
45 45	2	58.2	63.7	67.5	70.8
45 45	3	66.8	59.9	61.8	66.3
46 0	-3	-20.2	-15.8	-14.2	-11.5
46 0	-2	-6.4	-7.2	-5.1	-3.5
46 0	-1	-1.1	1.2	3.9	7.0
46 0	0	9.9	13.3	16.9	21.3
46 0	1	26.6	32.4	38.5	44.6
46 0	2	53.2	53.8	56.3	57.8
46 0	3	54.3	49.9	51.7	55.9


III - BALEARES Ouest
Airy T = 20 km
0°
39°
37°
35°N
33°
0
100
GREENWICH

III - BALEARES Ouest

AIRY 20. KM

LAT.	LONG.	COR.	TOUTES	LES 15	MIN. LONG.
32 0	-3	102.1	99.9	100.9	104.9
32 0	-2	109.8	109.6	104.2	99.6
32 0	-1	98.0	95.6	92.2	90.1
32 0	0	87.0	84.0	80.5	77.7
32 0	1	74.8	71.8	69.6	67.6
32 0	2	65.9	64.2	61.8	59.9
32 0	3	58.7	56.9	53.7	48.1
32 15	-3	115.6	112.5	111.8	114.0
32 15	-2	120.2	122.2	118.3	114.1
32 15	-1	111.2	106.4	100.3	96.3
32 15	0	92.5	88.6	85.3	82.7
32 15	1	79.8	77.2	74.7	72.5
32 15	2	70.0	67.2	64.4	62.5
32 15	3	62.1	61.0	57.0	51.0
32 30	-3	125.6	122.0	120.5	121.4
32 30	-2	123.9	125.8	125.0	124.4
32 30	-1	123.6	118.7	110.7	104.6
32 30	0	99.0	95.0	91.4	88.4
32 30	1	85.9	82.8	80.1	77.1
32 30	2	74.1	71.7	69.4	67.7
32 30	3	66.9	65.4	61.3	54.4
32 45	-3	134.0	131.2	130.2	130.4
32 45	-2	129.6	128.6	128.5	129.0
32 45	-1	128.1	125.5	120.8	114.1
32 45	0	108.1	103.0	98.8	95.5
32 45	1	92.4	89.1	85.7	83.0
32 45	2	80.1	77.6	75.5	73.7
32 45	3	72.3	70.6	65.9	59.1
33 0	-3	136.4	133.6	131.2	131.0
33 0	-2	129.8	127.8	126.7	126.7
33 0	-1	127.1	125.6	122.3	119.5
33 0	0	115.9	113.2	108.5	104.5
33 0	1	101.1	96.7	93.5	89.9
33 0	2	86.4	84.1	81.4	78.3
33 0	3	76.5	74.0	70.0	63.4
33 15	-3	130.4	127.8	125.5	124.6
33 15	-2	123.9	122.7	121.9	121.2
33 15	-1	121.9	121.2	120.0	119.7
33 15	0	119.4	119.6	117.8	115.9
33 15	1	113.3	109.1	105.2	100.0
33 15	2	94.4	90.9	87.6	84.1
33 15	3	81.1	77.6	73.6	68.0
33 30	-3	122.8	120.7	118.5	117.0
33 30	-2	116.5	116.5	116.5	116.3
33 30	-1	116.2	116.0	116.0	116.5
33 30	0	117.6	119.5	121.0	121.8
33 30	1	122.1	120.9	117.9	111.9
33 30	2	104.5	98.5	92.9	88.4
33 30	3	84.5	80.5	76.3	71.5
33 45	-3	116.5	116.1	113.0	110.9
33 45	-2	109.9	111.2	112.3	112.9
33 45	-1	113.0	114.1	111.6	112.2
33 45	0	112.6	115.3	117.0	118.8
33 45	1	122.0	123.9	123.5	120.2

III - BALEARES Ouest

AIRY 20. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
33 45	2	115.4	107.9	98.9	92.2
33 45	3	86.4	81.1	76.6	72.3
34 0	-3	101.0	105.8	106.4	104.6
34 0	-2	104.8	108.5	112.0	113.3
34 0	-1	112.9	111.3	110.0	108.9
34 0	0	108.7	109.5	110.3	111.9
34 0	1	114.9	118.4	121.0	122.1
34 0	2	120.8	115.4	107.1	100.9
34 0	3	94.0	86.7	79.8	73.9
34 15	-3	75.4	86.6	94.1	97.4
34 15	-2	100.3	105.2	109.7	111.4
34 15	-1	112.0	110.5	108.8	107.6
34 15	0	106.9	106.3	106.0	106.5
34 15	1	108.3	110.6	113.8	115.6
34 15	2	116.4	115.3	111.1	107.5
34 15	3	102.7	95.9	89.5	84.0
34 30	-3	57.7	65.3	75.2	81.8
34 30	-2	87.3	94.7	101.1	103.9
34 30	-1	105.5	105.6	105.5	105.3
34 30	0	104.5	105.0	104.5	103.9
34 30	1	104.4	105.7	107.8	108.4
34 30	2	108.3	107.1	106.1	107.7
34 30	3	107.4	104.1	99.9	95.4
34 45	-3	46.2	46.9	54.0	60.7
34 45	-2	63.7	68.8	79.0	87.7
34 45	-1	91.4	91.6	91.7	91.6
34 45	0	93.8	97.7	100.1	100.2
34 45	1	101.6	104.0	105.5	105.5
34 45	2	102.6	98.9	97.1	98.1
34 45	3	101.0	103.1	102.2	98.8
35 0	-3	29.3	27.2	27.7	30.4
35 0	-2	34.7	40.1	46.9	56.8
35 0	-1	64.2	67.7	69.7	70.4
35 0	0	73.6	80.7	85.0	88.1
35 0	1	94.7	100.2	103.7	103.8
35 0	2	98.8	93.1	89.7	89.5
35 0	3	91.2	93.4	94.9	93.1
35 15	-3	10.3	5.6	2.9	2.0
35 15	-2	3.5	9.3	17.9	28.1
35 15	-1	36.9	43.3	47.4	49.7
35 15	0	53.2	61.2	66.3	71.1
35 15	1	80.2	88.5	94.2	95.1
35 15	2	91.5	87.0	83.9	83.0
35 15	3	84.0	84.8	84.6	82.6
35 30	-3	-10.2	-12.0	-15.1	-18.9
35 30	-2	-21.6	-17.8	-9.9	0.2
35 30	-1	10.1	15.4	21.4	25.5
35 30	0	31.1	39.9	44.9	51.5
35 30	1	61.6	70.4	78.7	82.8
35 30	2	83.0	81.1	77.9	76.1
35 30	3	76.3	77.4	77.3	73.7
35 45	-3	-25.7	-28.1	-34.2	-42.0
35 45	-2	-51.1	-49.0	-44.8	-41.0
35 45	-1	-30.0	-22.4	-12.0	-2.3

III - BALEARES Ouest

AIRY 20. KM

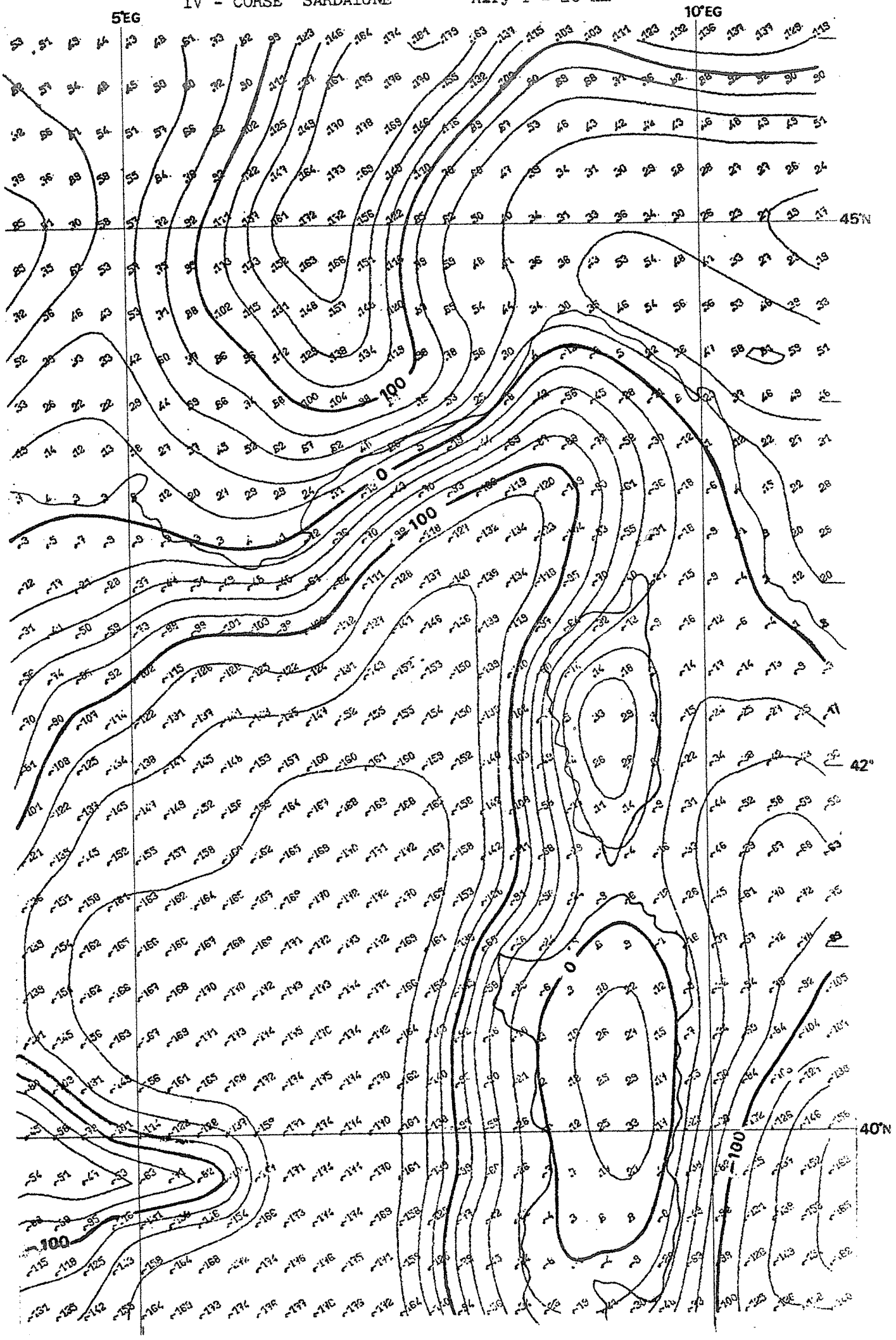
LAT.	LONG.	COR.	TOUTES	LES	15	MIN.	LONG.
35 45	0	5.4	15.7	22.9	31.3		
35 45	1	42.1	53.3	65.0	72.8		
35 45	2	77.7	78.8	76.3	73.9		
35 45	3	74.8	75.8	73.7	69.9		
36 0	-3	-33.3	-40.7	-56.5	-73.1		
36 0	-2	-89.1	-90.7	-97.6	-107.6		
36 0	-1	-103.0	-93.8	-75.0	-48.0		
36 0	0	-25.0	-5.1	6.8	15.0		
36 0	1	24.3	34.2	45.6	55.1		
36 0	2	61.9	65.8	68.1	70.1		
36 0	3	73.7	75.2	74.9	73.4		
36 15	-3	-31.2	-43.4	-63.2	-78.4		
36 15	-2	-89.0	-100.0	-114.0	-127.3		
36 15	-1	-133.2	-131.4	-127.2	-113.8		
36 15	0	-83.9	-53.4	-28.1	-8.0		
36 15	1	6.3	14.7	22.5	29.0		
36 15	2	34.8	40.4	44.9	52.9		
36 15	3	59.4	59.7	60.5	61.4		
36 30	-3	-12.2	-19.1	-31.2	-40.7		
36 30	-2	-58.5	-81.5	-105.6	-127.1		
36 30	-1	-140.3	-145.0	-143.1	-140.3		
36 30	0	-130.8	-117.7	-95.0	-67.1		
36 30	1	-42.1	-28.6	-20.2	-12.0		
36 30	2	-2.0	6.3	11.5	19.7		
36 30	3	28.0	31.3	33.9	37.1		
36 45	-3	28.1	20.5	6.8	-5.3		
36 45	-2	-22.5	-49.8	-81.1	-109.3		
36 45	-1	-129.0	-142.5	-147.0	-148.2		
36 45	0	-146.7	-144.6	-138.3	-126.2		
36 45	1	-115.4	-107.7	-103.6	-96.3		
36 45	2	-81.7	-63.4	-42.3	-29.2		
36 45	3	-24.0	-20.1	-13.2	-2.9		
37 0	-3	77.2	63.5	45.1	27.6		
37 0	-2	6.2	-21.4	-57.5	-96.5		
37 0	-1	-120.2	-134.0	-141.9	-148.8		
37 0	0	-151.0	-151.9	-151.1	-148.9		
37 0	1	-146.9	-145.6	-147.0	-146.4		
37 0	2	-140.1	-127.0	-109.8	-104.5		
37 0	3	-107.3	-99.4	-85.9	-73.7		
37 15	-3	94.9	87.1	71.8	51.5		
37 15	-2	26.7	1.9	-29.0	-69.1		
37 15	-1	-96.5	-109.9	-121.6	-136.2		
37 15	0	-146.1	-150.8	-153.6	-155.3		
37 15	1	-157.2	-160.1	-160.4	-161.2		
37 15	2	-160.3	-156.3	-152.3	-149.9		
37 15	3	-150.1	-146.8	-140.5	-137.9		
37 30	-3	87.6	85.5	81.2	70.2		
37 30	-2	50.3	28.7	7.4	-16.6		
37 30	-1	-34.6	-48.7	-68.7	-91.6		
37 30	0	-108.9	-126.1	-139.8	-147.7		
37 30	1	-153.0	-158.5	-161.9	-164.1		
37 30	2	-165.5	-165.5	-164.2	-163.4		
37 30	3	-162.4	-163.2	-163.6	-160.6		
37 45	-3	82.3	89.7	91.1	86.0		

III - BALEARES Ouest

AIRY 20. KM

LAT.	LONG.	CUR. TOUTES LES 15 MIN. LONG.			
37 45	-2	69.6	49.7	30.8	13.1
37 45	-1	-3.5	-13.5	-28.6	-46.1
37 45	0	-65.1	-87.3	-106.4	-124.6
37 45	1	-135.9	-147.1	-155.7	-158.8
37 45	2	-164.0	-166.7	-167.0	-168.2
37 45	3	-168.7	-169.8	-172.4	-170.0
38 0	-3	77.1	91.2	96.1	91.6
38 0	-2	77.1	59.3	41.1	24.7
38 0	-1	13.1	1.5	-10.6	-23.7
38 0	0	-39.0	-55.7	-76.5	-99.1
38 0	1	-110.3	-119.2	-126.7	-130.8
38 0	2	-144.2	-155.7	-165.0	-169.2
38 0	3	-170.8	-172.7	-173.3	-169.4
38 15	-3	73.5	83.5	90.7	88.1
38 15	-2	76.0	58.4	45.2	37.4
38 15	-1	25.9	16.0	3.7	-7.5
38 15	0	-17.9	-29.1	-47.9	-68.9
38 15	1	-81.2	-85.6	-90.7	-97.7
38 15	2	-112.0	-131.6	-151.6	-160.2
38 15	3	-164.6	-167.9	-169.3	-168.9
38 30	-3	77.5	82.5	87.7	86.0
38 30	-2	76.9	65.7	57.8	52.1
38 30	-1	44.5	34.1	25.8	10.0
38 30	0	-4.4	-15.8	-28.9	-42.5
38 30	1	-46.2	-50.6	-56.6	-68.6
38 30	2	-80.7	-95.2	-120.2	-144.2
38 30	3	-155.2	-160.1	-159.2	-155.7
38 45	-3	78.2	81.9	85.6	85.1
38 45	-2	79.6	74.2	69.3	62.4
38 45	-1	53.2	43.9	34.6	21.1
38 45	0	4.0	-10.2	-18.5	-29.3
38 45	1	-34.5	-29.4	-31.9	-42.9
38 45	2	-56.6	-68.8	-80.9	-100.7
38 45	3	-135.7	-144.6	-147.9	-145.8
39 0	-3	73.9	77.3	79.9	78.8
39 0	-2	75.3	73.9	72.5	66.4
39 0	-1	56.2	41.0	26.2	12.4
39 0	0	-2.0	-18.3	-34.0	-41.4
39 0	1	-37.5	-26.5	-26.8	-37.1
39 0	2	-49.4	-57.9	-59.0	-54.2
39 0	3	-69.3	-115.6	-128.4	-129.9

IV - CORSE SARDAIGNE Airy T = 20 km



IV - CORSE SARDAIGNE

AIRY 20. KM

LAT.		LONG.	COR.	TOUTES	LES	15 MIN.	LONG.
39	0	4	-130.9	-134.6	-142.4	-155.4	
39	0	5	-163.8	-169.2	-173.0	-174.3	
39	0	6	-176.0	-176.6	-176.4	-175.5	
39	0	7	-172.0	-163.8	-140.4	-94.2	
39	0	8	-56.3	-34.3	-23.2	-18.6	
39	0	9	-20.9	-30.4	-47.6	-73.4	
39	0	10	-100.4	-125.3	-136.2	-137.6	
39	0	11	-139.6	-140.6	-141.8	-144.5	
39	15	4	-114.6	-117.8	-124.7	-143.4	
39	15	5	-156.4	-164.3	-168.4	-172.1	
39	15	6	-174.2	-175.9	-176.4	-174.7	
39	15	7	-171.1	-159.4	-125.4	-78.6	
39	15	8	-44.5	-24.2	-8.3	-1.0	
39	15	9	-4.0	-8.7	-25.5	-62.6	
39	15	10	-98.6	-126.4	-142.9	-153.7	
39	15	11	-162.1	-168.9	-175.6	-179.1	
39	30	4	-87.7	-88.1	-95.1	-117.7	
39	30	5	-130.9	-138.1	-146.2	-154.3	
39	30	6	-165.8	-172.5	-174.3	-173.9	
39	30	7	-169.1	-158.4	-128.6	-77.1	
39	30	8	-42.3	-22.6	-4.1	3.3	
39	30	9	6.0	7.9	-8.4	-49.3	
39	30	10	-91.8	-120.7	-138.9	-152.9	
39	30	11	-165.1	-175.8	-135.1	-193.7	
39	45	4	-54.3	-50.9	-47.4	-53.4	
39	45	5	-63.2	-71.4	-81.9	-101.2	
39	45	6	-147.4	-170.6	-173.9	-173.9	
39	45	7	-169.5	-161.4	-138.7	-99.6	
39	45	8	-59.8	-26.4	-6.7	7.1	
39	45	9	16.9	21.0	3.9	-37.6	
39	45	10	-82.0	-114.6	-137.0	-151.9	
39	45	11	-163.4	-176.4	-185.9	-190.5	
40	0	4	-45.1	-57.9	-77.6	-101.4	
40	0	5	-114.1	-121.9	-128.0	-136.6	
40	0	6	-158.5	-171.3	-174.0	-173.5	
40	0	7	-169.6	-161.3	-138.3	-99.8	
40	0	8	-58.9	-25.5	-4.2	11.5	
40	0	9	24.7	33.1	16.7	-22.7	
40	0	10	-67.5	-102.1	-125.5	-146.2	
40	0	11	-157.8	-170.1	-132.8	-186.9	
40	15	4	-80.0	-102.9	-131.2	-148.6	
40	15	5	-156.4	-161.1	-165.3	-167.6	
40	15	6	-171.6	-174.0	-174.5	-173.9	
40	15	7	-169.8	-162.4	-139.9	-95.2	
40	15	8	-49.7	-21.0	2.0	17.7	
40	15	9	24.5	28.6	16.6	-14.7	
40	15	10	-50.3	-83.8	-108.6	-127.1	
40	15	11	-136.0	-151.2	-172.6	-179.3	
40	30	4	-130.7	-144.5	-156.3	-162.7	
40	30	5	-166.7	-168.9	-170.9	-173.1	
40	30	6	-174.3	-175.1	-176.0	-174.1	
40	30	7	-172.0	-164.4	-143.1	-91.5	
40	30	8	-45.5	-18.4	3.0	18.0	
40	30	9	25.6	26.5	15.1	-7.4	

IV - CORSE SARDAIGNE

AIRY 20. KM

LAT.	LONG.	COR. TOUTES LES 15 MIN. LONG.			
40 30	10	-33.9	-58.7	-83.9	-104.3
40 30	11	-107.2	-115.9	-140.6	-145.8
40 45	4	-138.5	-153.8	-161.9	-165.5
40 45	5	-167.0	-168.1	-169.9	-170.4
40 45	6	-171.7	-172.6	-173.2	-173.7
40 45	7	-171.0	-165.9	-152.7	-115.0
40 45	8	-58.0	-24.5	-5.6	8.7
40 45	9	18.4	21.5	11.5	-9.1
40 45	10	-32.3	-54.4	-75.4	-91.3
40 45	11	-104.6	-113.4	-111.5	-111.0
41 0	4	-139.4	-154.4	-161.7	-165.0
41 0	5	-165.8	-166.0	-167.0	-167.9
41 0	6	-169.3	-170.7	-172.0	-173.2
41 0	7	-171.9	-168.5	-160.5	-138.7
41 0	8	-85.1	-45.6	-24.3	-6.2
41 0	9	5.9	9.3	-0.5	-16.4
41 0	10	-36.7	-57.4	-71.6	-77.5
41 0	11	-89.2	-98.7	-101.9	-101.5
41 15	4	-136.1	-151.0	-157.7	-161.4
41 15	5	-162.5	-162.2	-163.8	-164.7
41 15	6	-167.0	-169.1	-170.4	-172.2
41 15	7	-171.5	-170.4	-165.1	-153.4
41 15	8	-128.3	-91.3	-55.9	-24.2
41 15	9	-9.3	-5.9	-12.1	-26.4
41 15	10	-45.0	-60.7	-69.6	-71.8
41 15	11	-74.7	-81.1	-90.0	-89.9
41 30	4	-121.3	-135.2	-145.2	-152.3
41 30	5	-155.2	-156.7	-158.0	-159.5
41 30	6	-162.2	-165.1	-167.6	-170.2
41 30	7	-171.3	-171.9	-166.6	-158.1
41 30	8	-141.8	-110.9	-67.9	-28.6
41 30	9	-6.5	-4.0	-15.8	-32.7
41 30	10	-47.6	-58.8	-66.8	-68.0
41 30	11	-63.0	-60.8	-61.7	-57.4
41 45	4	-101.2	-122.2	-136.7	-144.5
41 45	5	-146.7	-148.6	-151.5	-155.6
41 45	6	-159.1	-163.5	-166.5	-167.7
41 45	7	-168.6	-168.0	-164.8	-158.2
41 45	8	-141.9	-107.5	-56.2	-17.3
41 45	9	10.8	13.3	-9.0	-30.5
41 45	10	-44.2	-52.4	-57.6	-59.0
41 45	11	-51.7	-43.3	-37.8	-29.6
42 0	4	-81.4	-108.4	-124.5	-134.4
42 0	5	-138.1	-141.1	-144.7	-148.1
42 0	6	-153.1	-157.4	-159.5	-160.0
42 0	7	-160.5	-160.0	-158.7	-152.4
42 0	8	-139.7	-103.2	-49.0	-3.5
42 0	9	25.7	26.0	0.4	-22.2
42 0	10	-34.3	-37.9	-41.9	-42.8
42 0	11	-35.7	-26.9	-18.0	-6.1
42 15	4	-70.0	-89.9	-106.9	-114.2
42 15	5	-122.3	-130.8	-137.3	-141.0
42 15	6	-143.2	-144.7	-147.1	-151.3
42 15	7	-154.8	-154.5	-153.6	-149.5

IV - CORSE SARDAIGNE

AIRY 20. KM

LAT.	LONG.	COR. TOUTES LES 15 MIN. LONG.			
42 15	8	-138.8	-104.1	-46.5	5.2
42 15	9	32.7	29.0	6.7	-15.4
42 15	10	-24.0	-24.5	-26.5	-24.5
42 15	11	-16.8	-8.9	-1.0	9.4
42 30	4	-56.4	-74.3	-85.1	-91.9
42 30	5	-102.1	-115.2	-125.6	-128.3
42 30	6	-124.6	-122.4	-124.3	-130.8
42 30	7	-143.1	-151.8	-152.9	-149.7
42 30	8	-139.0	-110.2	-60.1	-13.8
42 30	9	13.8	18.0	3.3	-13.9
42 30	10	-16.8	-14.0	-13.3	-9.7
42 30	11	-2.9	5.1	13.8	22.2
42 45	4	-30.9	-41.1	-50.1	-58.9
42 45	5	-73.2	-88.9	-99.4	-100.8
42 45	6	-103.3	-99.3	-102.3	-111.7
42 45	7	-127.2	-140.9	-145.8	-145.8
42 45	8	-138.8	-119.0	-96.6	-64.2
42 45	9	-31.9	-12.5	-9.4	-15.5
42 45	10	-11.7	-5.8	-3.5	0.6
42 45	11	8.0	17.8	28.6	34.4
43 0	4	-12.2	-15.5	-21.2	-27.6
43 0	5	-36.7	-47.4	-51.2	-49.0
43 0	6	-47.8	-48.0	-60.8	-84.6
43 0	7	-110.6	-127.5	-137.0	-140.2
43 0	8	-139.3	-134.0	-117.6	-95.4
43 0	9	-70.1	-39.5	-20.5	-15.3
43 0	10	-9.5	-3.6	3.4	12.1
43 0	11	20.3	26.3	33.5	38.1
43 15	4	-2.6	-5.0	-6.9	-8.5
43 15	5	-9.4	-8.8	-2.9	3.2
43 15	6	4.0	-0.5	-12.1	-36.0
43 15	7	-69.7	-98.9	-117.6	-126.9
43 15	8	-132.3	-133.6	-123.1	-104.0
43 15	9	-83.2	-55.0	-30.7	-18.0
43 15	10	-8.9	-0.8	9.2	20.4
43 15	11	28.3	31.8	34.6	37.8
43 30	4	6.5	3.8	2.7	3.4
43 30	5	6.3	11.8	20.3	26.9
43 30	6	29.4	29.0	23.9	10.8
43 30	7	-12.6	-42.6	-70.4	-92.8
43 30	8	-108.6	-118.7	-119.5	-109.2
43 30	9	-89.6	-61.0	-35.5	-18.2
43 30	10	-5.6	4.2	14.5	22.1
43 30	11	27.7	33.8	39.5	43.7
43 45	4	18.6	13.8	12.0	13.1
43 45	5	18.3	27.4	37.3	44.5
43 45	6	52.2	62.3	66.9	62.0
43 45	7	47.5	28.2	5.4	-18.8
43 45	8	-43.8	-69.0	-87.1	-87.9
43 45	9	-73.3	-51.8	-29.6	-12.1
43 45	10	1.3	12.4	22.2	26.5
43 45	11	30.5	37.7	46.1	51.9
44 0	4	33.4	25.6	22.2	22.0
44 0	5	28.8	44.4	59.1	66.2

IV - CORSE SARDAIGNE

AIRY 20. KM

LAT.	LONG.	COR.TOUTES LES 15 MIN.LONG.			
44 0	6	73.9	87.5	100.2	104.2
44 0	7	97.7	88.0	74.6	53.4
44 0	8	25.1	-8.4	-41.7	-56.0
44 0	9	-44.5	-28.4	-10.7	5.5
44 0	10	20.1	36.6	45.9	48.8
44 0	11	47.6	46.7	47.4	45.5
44 15	4	51.9	39.1	33.2	32.5
44 15	5	41.9	60.3	76.7	86.0
44 15	6	95.5	111.5	128.9	138.2
44 15	7	134.0	118.9	98.0	77.5
44 15	8	55.9	30.2	3.5	-11.6
44 15	9	-8.4	5.0	21.6	35.6
44 15	10	47.1	57.8	61.2	59.0
44 15	11	51.4	44.6	37.0	28.7
44 30	4	71.6	55.0	45.9	43.3
44 30	5	53.2	71.1	88.1	101.6
44 30	6	114.7	131.2	147.7	157.0
44 30	7	147.9	119.8	86.8	65.4
44 30	8	54.1	43.5	33.8	29.5
44 30	9	34.8	46.3	54.3	56.1
44 30	10	56.4	53.3	46.2	39.3
44 30	11	32.9	26.5	20.3	15.1
44 45	4	84.8	74.5	61.6	52.8
44 45	5	57.4	75.1	95.0	113.1
44 45	6	133.1	152.3	168.3	165.6
44 45	7	151.3	116.0	78.9	58.6
44 45	8	47.8	40.7	35.7	35.7
44 45	9	43.2	52.7	53.5	47.8
44 45	10	40.7	32.9	27.1	22.5
44 45	11	18.8	15.8	13.3	11.0
45 0	4	85.0	80.7	70.1	58.3
45 0	5	57.2	72.2	92.0	110.5
45 0	6	136.9	161.1	171.8	171.5
45 0	7	155.6	122.3	85.4	62.1
45 0	8	49.5	40.4	34.1	31.2
45 0	9	32.6	35.5	34.1	30.1
45 0	10	26.3	23.0	20.5	18.5
45 0	11	16.6	15.1	13.4	11.7
45 15	4	78.5	75.5	69.4	57.7
45 15	5	54.7	68.5	77.9	96.8
45 15	6	122.2	146.7	163.8	173.3
45 15	7	168.6	145.4	110.0	79.0
45 15	8	59.6	46.9	38.5	33.7
45 15	9	31.2	30.1	29.1	28.1
45 15	10	27.5	27.2	26.5	25.5
45 15	11	24.2	22.4	20.1	16.9
45 30	4	72.3	65.7	61.3	53.5
45 30	5	51.1	56.5	66.4	81.6
45 30	6	101.7	125.1	149.0	169.8
45 30	7	177.9	169.1	145.9	115.9
45 30	8	83.5	55.5	53.0	45.9
45 30	9	42.7	41.7	41.8	43.1
45 30	10	45.6	48.4	48.9	49.4
45 30	11	50.9	46.7	37.3	28.3

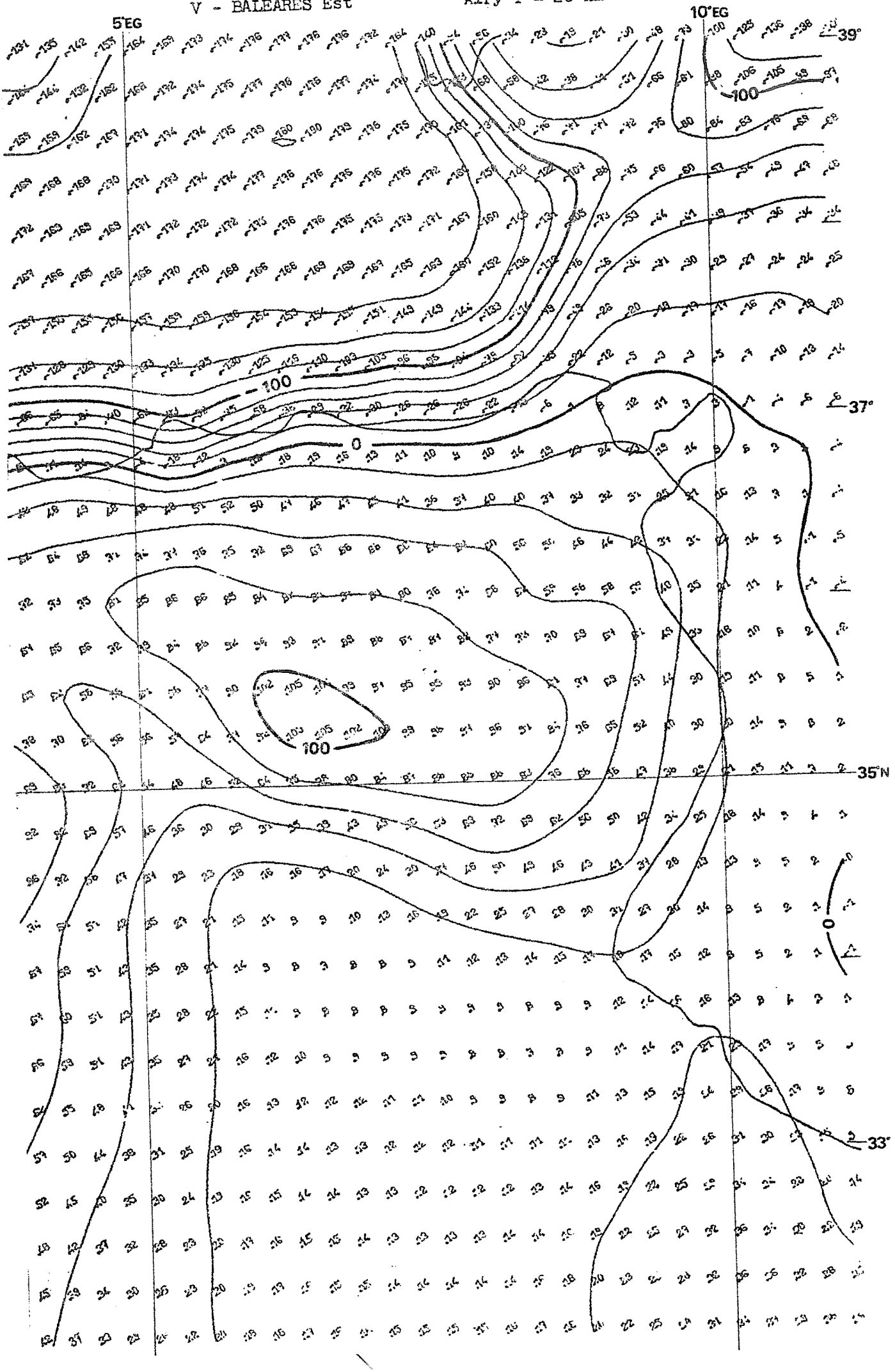
IV - CORSE SARDAIGNE

AIRY 20. KM

LAT.	LONG.	COR.TOUTES	LES 15 MIN.	LONG.
45 45	4	62.3	57.1	54.0	47.5
45 45	5	45.1	49.8	59.9	72.1
45 45	6	89.5	111.4	136.8	161.4
45 45	7	175.2	176.3	169.5	155.3
45 45	8	131.7	102.2	80.2	69.3
45 45	9	67.6	70.8	76.1	81.8
45 45	10	87.6	92.1	92.1	90.0
45 45	11	90.0	84.9	72.4	58.7
46 0	4	53.1	51.4	49.4	43.8
46 0	5	42.6	48.3	61.3	72.6
46 0	6	82.4	99.7	122.5	145.9
46 0	7	163.5	174.3	181.0	179.3
46 0	8	163.0	136.8	115.4	103.0
46 0	9	103.1	110.5	122.5	132.3
46 0	10	135.6	136.5	136.8	129.2
46 0	11	113.6	115.2	111.8	101.0

V - BALEARES Est

Airy T = 20 km



V - BALEARES Est

AIRY 20. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
32 0	4	42.0	37.0	32.8	29.1
32 0	5	25.5	22.2	19.9	18.4
32 0	6	18.0	17.2	16.4	15.9
32 0	7	15.2	15.0	15.1	15.2
32 0	8	15.6	16.6	18.3	20.1
32 0	9	22.4	24.9	27.8	30.9
32 0	10	34.0	36.9	38.7	38.2
32 0	11	38.1	37.6	34.2	34.1
32 15	4	44.5	38.9	34.3	30.2
32 15	5	26.3	22.5	19.6	17.8
32 15	6	16.9	16.1	15.3	14.8
32 15	7	14.2	14.2	14.2	14.3
32 15	8	14.4	15.6	17.6	20.3
32 15	9	23.1	25.3	28.2	32.1
32 15	10	35.8	36.3	32.4	27.9
32 15	11	25.1	23.4	21.8	20.7
32 30	4	47.5	41.7	36.7	32.1
32 30	5	27.6	23.4	19.7	17.2
32 30	6	16.1	15.3	14.6	14.0
32 30	7	13.3	12.7	12.7	13.0
32 30	8	13.5	14.4	16.2	19.2
32 30	9	22.1	24.5	27.2	31.7
32 30	10	35.9	34.1	28.1	22.4
32 30	11	18.6	16.2	13.9	12.7
32 45	4	51.9	45.1	39.6	34.6
32 45	5	29.5	24.0	18.9	16.2
32 45	6	14.9	14.3	13.8	13.1
32 45	7	12.5	11.9	11.8	11.9
32 45	8	12.2	12.9	14.0	15.9
32 45	9	19.2	22.3	25.0	29.3
32 45	10	33.9	33.5	27.5	19.6
32 45	11	14.2	11.0	8.4	7.0
33 0	4	56.6	50.1	43.8	37.7
33 0	5	31.3	24.8	19.3	15.9
33 0	6	14.1	13.5	13.4	12.8
33 0	7	12.3	12.0	11.5	11.0
33 0	8	10.6	10.5	11.3	12.0
33 0	9	15.9	19.0	21.9	26.3
33 0	10	30.8	30.3	23.0	15.0
33 0	11	9.7	6.4	4.0	2.6
33 15	4	61.7	55.1	47.9	40.6
33 15	5	32.8	25.5	20.4	16.0
33 15	6	13.2	12.3	11.9	11.6
33 15	7	11.3	11 0	10.3	9.5
33 15	8	8.6	8.3	8.9	10.7
33 15	9	12.6	15.3	18.8	24.0
33 15	10	28.6	25.7	16.7	9.7
33 15	11	5.5	3.0	1.1	-0.5
33 30	4	65.6	58.7	51.2	42.9
33 30	5	34.7	27.3	21.1	15.7
33 30	6	11.7	10.3	9.8	9.7
33 30	7	9.6	9.6	9.1	8.3
33 30	8	7.5	7.2	7.6	8.3
33 30	9	11.0	13.8	17.2	21.3

V - BALEARES Est

AIRY 20. KM

LAT.	LONG.	COR.	TOUTES	LES	15	MIN.	LONG.
33 30	10	22.8	17.0	9.7	5.2		
33 30	11	2.5	0.6	-0.9	-2.4		
33 45	4	66.9	60.0	51.4	42.9		
33 45	5	35.2	28.2	21.5	15.0		
33 45	6	10.7	8.8	7.9	7.9		
33 45	7	8.3	8.7	9.2	9.0		
33 45	8	8.5	8.4	8.7	9.6		
33 45	9	11.7	13.8	15.5	15.7		
33 45	10	13.0	8.1	4.4	2.6		
33 45	11	0.9	-1.1	-2.4	-3.6		
34 0	4	67.4	59.2	50.7	42.5		
34 0	5	35.0	27.8	20.7	13.8		
34 0	6	9.3	7.6	7.2	7.6		
34 0	7	8.4	9.6	10.9	12.0		
34 0	8	12.8	13.8	15.4	17.1		
34 0	9	18.3	16.9	14.6	12.0		
34 0	10	8.3	4.5	2.3	0.9		
34 0	11	-0.5	-1.9	-3.0	-4.1		
34 15	4	73.6	61.3	50.6	42.3		
34 15	5	34.6	27.3	20.6	14.6		
34 15	6	10.8	9.3	9.3	10.3		
34 15	7	12.5	15.6	18.7	22.2		
34 15	8	25.1	27.3	28.2	30.0		
34 15	9	30.8	27.3	19.9	13.9		
34 15	10	8.9	4.9	2.4	0.7		
34 15	11	-1.0	-2.2	-3.2	-4.1		
34 30	4	85.9	71.9	58.4	47.1		
34 30	5	36.7	28.5	22.5	18.2		
34 30	6	15.8	15.7	17.0	19.5		
34 30	7	23.8	29.8	37.4	45.9		
34 30	8	50.3	49.3	46.0	42.8		
34 30	9	40.7	37.0	27.7	19.2		
34 30	10	13.0	8.8	4.9	1.8		
34 30	11	-0.1	-1.5	-2.6	-3.6		
34 45	4	92.4	81.8	69.4	57.4		
34 45	5	45.5	35.3	30.4	28.6		
34 45	6	31.2	34.7	38.7	43.3		
34 45	7	49.4	56.4	63.3	69.2		
34 45	8	71.8	68.6	62.4	55.7		
34 45	9	49.6	42.2	33.5	24.6		
34 45	10	17.9	14.0	9.4	4.4		
34 45	11	1.0	-0.7	-1.9	-3.0		
35 0	4	89.4	82.7	71.5	62.0		
35 0	5	54.2	47.6	45.8	52.0		
35 0	6	64.1	74.5	78.2	80.3		
35 0	7	83.8	86.5	87.9	88.1		
35 0	8	87.9	83.0	76.2	68.3		
35 0	9	58.2	46.9	37.5	28.6		
35 0	10	20.5	15.2	11.1	6.7		
35 0	11	2.0	-0.6	-2.0	-3.3		
35 15	4	78.2	69.5	62.2	57.3		
35 15	5	55.5	56.9	64.0	76.8		
35 15	6	92.2	102.5	104.7	102.0		
35 15	7	100.1	99.7	98.3	97.3		

V - BALEARES Est

AIRY 20. KM

LAT.	LONG.	COR.	TOUTES	LES	15 MIN.	LONG.
35 15	8	95.5	90.6	83.9	75.8	
35 15	9	64.9	51.9	40.1	29.5	
35 15	10	19.7	13.7	9.8	6.4	
35 15	11	1.9	-1.4	-3.3	-4.4	
35 30	4	68.7	61.8	57.8	58.1	
35 30	5	61.3	67.6	77.4	90.4	
35 30	6	101.6	105.3	103.5	99.6	
35 30	7	96.7	95.3	94.6	92.7	
35 30	8	89.6	86.1	80.9	76.7	
35 30	9	66.8	57.3	44.1	30.4	
35 30	10	18.6	11.2	7.6	5.0	
35 30	11	0.7	-2.9	-4.7	-5.1	
35 45	4	66.9	65.1	65.9	71.6	
35 45	5	78.5	83.5	88.4	91.8	
35 45	6	94.1	92.9	90.5	89.2	
35 45	7	88.0	87.4	86.5	82.8	
35 45	8	77.4	73.1	70.3	69.3	
35 45	9	66.9	60.7	48.5	33.0	
35 45	10	18.4	10.1	5.7	1.7	
35 45	11	-1.6	-4.6	-6.9	-8.5	
36 0	4	72.3	72.7	75.2	80.8	
36 0	5	84.9	85.6	86.0	85.4	
36 0	6	84.0	82.2	81.0	81.3	
36 0	7	81.3	79.8	78.0	74.2	
36 0	8	68.3	62.1	58.5	58.4	
36 0	9	57.8	54.9	47.6	35.3	
36 0	10	20.9	10.9	4.0	-0.8	
36 0	11	-3.8	-6.8	-10.0	-12.7	
36 15	4	62.3	63.7	66.0	70.7	
36 15	5	74.4	77.1	78.0	75.0	
36 15	6	71.6	68.5	66.8	68.0	
36 15	7	68.0	66.0	64.2	62.4	
36 15	8	60.3	55.9	49.9	45.9	
36 15	9	44.1	41.7	37.2	30.7	
36 15	10	22.6	14.0	4.9	-1.0	
36 15	11	-4.8	-8.5	-12.7	-17.0	
36 30	4	43.4	48.4	49.0	48.0	
36 30	5	47.7	48.3	51.2	52.0	
36 30	6	49.7	47.0	46.0	46.5	
36 30	7	45.1	41.4	37.7	36.9	
36 30	8	39.8	39.9	36.8	33.1	
36 30	9	32.3	30.9	25.4	20.7	
36 30	10	16.1	12.6	7.1	1.0	
36 30	11	-4.4	-9.1	-14.8	-20.8	
36 45	4	5.3	10.8	13.7	8.6	
36 45	5	-3.9	-17.8	-12.2	3.4	
36 45	6	11.9	17.5	18.6	15.7	
36 45	7	13.3	11.3	10.0	9.2	
36 45	8	10.2	14.3	18.9	23.1	
36 45	9	23.9	22.6	19.1	13.9	
36 45	10	9.0	6.0	2.9	0.6	
36 45	11	-4.3	-10.2	-17.3	-24.0	
37 0	4	-66.3	-64.5	-64.2	-70.3	
37 0	5	-82.4	-93.1	-91.7	-74.8	

V - BALEARES Est

AIRY 20. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
37 0	6	-57.8	-38.3	-28.7	-32.1
37 0	7	-30.1	-25.6	-25.6	-26.2
37 0	8	-21.8	-15.2	-7.7	0.6
37 0	9	7.6	12.0	11.4	7.1
37 0	10	3.1	-0.9	-4.1	-5.5
37 0	11	-7.7	-12.6	-18.4	-21.7
37 15	4	-130.7	-128.4	-129.0	-129.8
37 15	5	-132.7	-134.0	-135.2	-130.3
37 15	6	-124.6	-115.8	-109.9	-108.6
37 15	7	-103.2	-95.6	-98.2	-93.7
37 15	8	-79.0	-61.8	-38.6	-21.7
37 15	9	-11.7	-5.4	-2.8	-3.4
37 15	10	-4.8	-7.3	-10.4	-12.6
37 15	11	-14.2	-16.5	-18.4	-17.3
37 30	4	-156.7	-155.7	-155.0	-155.9
37 30	5	-157.0	-159.1	-159.1	-155.8
37 30	6	-154.3	-153.1	-154.2	-154.8
37 30	7	-151.3	-149.1	-149.0	-144.1
37 30	8	-133.2	-113.9	-79.0	-44.9
37 30	9	-26.1	-20.1	-18.0	-17.3
37 30	10	-16.7	-15.9	-16.8	-18.6
37 30	11	-20.3	-21.3	-19.8	-17.0
37 45	4	-166.8	-165.5	-165.0	-166.4
37 45	5	-167.9	-169.5	-169.8	-168.0
37 45	6	-168.0	-168.3	-168.9	-168.7
37 45	7	-166.8	-165.0	-163.4	-160.3
37 45	8	-152.3	-137.7	-111.8	-77.8
37 45	9	-46.1	-34.4	-31.1	-30.0
37 45	10	-29.0	-25.8	-24.3	-23.7
37 45	11	-25.3	-28.2	-29.3	-26.2
38 0	4	-171.5	-169.3	-168.8	-169.4
38 0	5	-170.7	-172.2	-172.2	-172.4
38 0	6	-175.3	-176.3	-176.2	-175.4
38 0	7	-174.7	-173.2	-171.0	-166.7
38 0	8	-159.7	-148.2	-131.3	-105.1
38 0	9	-73.2	-53.3	-43.9	-40.5
38 0	10	-38.6	-37.1	-35.6	-34.1
38 0	11	-33.5	-35.3	-37.7	-38.1
38 15	4	-169.1	-168.0	-168.1	-170.0
38 15	5	-171.0	-172.8	-174.0	-174.1
38 15	6	-177.2	-178.4	-178.1	-177.9
38 15	7	-176.3	-174.5	-171.5	-166.3
38 15	8	-157.6	-140.2	-122.0	-107.3
38 15	9	-88.1	-75.0	-65.7	-60.0
38 15	10	-57.4	-54.2	-49.2	-46.8
38 15	11	-47.6	-46.4	-47.7	-55.6
38 30	4	-158.6	-158.8	-162.1	-167.1
38 30	5	-171.1	-173.5	-174.4	-175.3
38 30	6	-178.6	-180.0	-179.9	-178.9
38 30	7	-177.5	-174.8	-169.7	-160.6
38 30	8	-137.4	-100.1	-75.9	-71.1
38 30	9	-70.7	-72.2	-75.4	-79.9
38 30	10	-84.1	-83.2	-75.8	-68.5
38 30	11	-68.3	-70.4	-72.9	-81.9

V - BALEARES Est

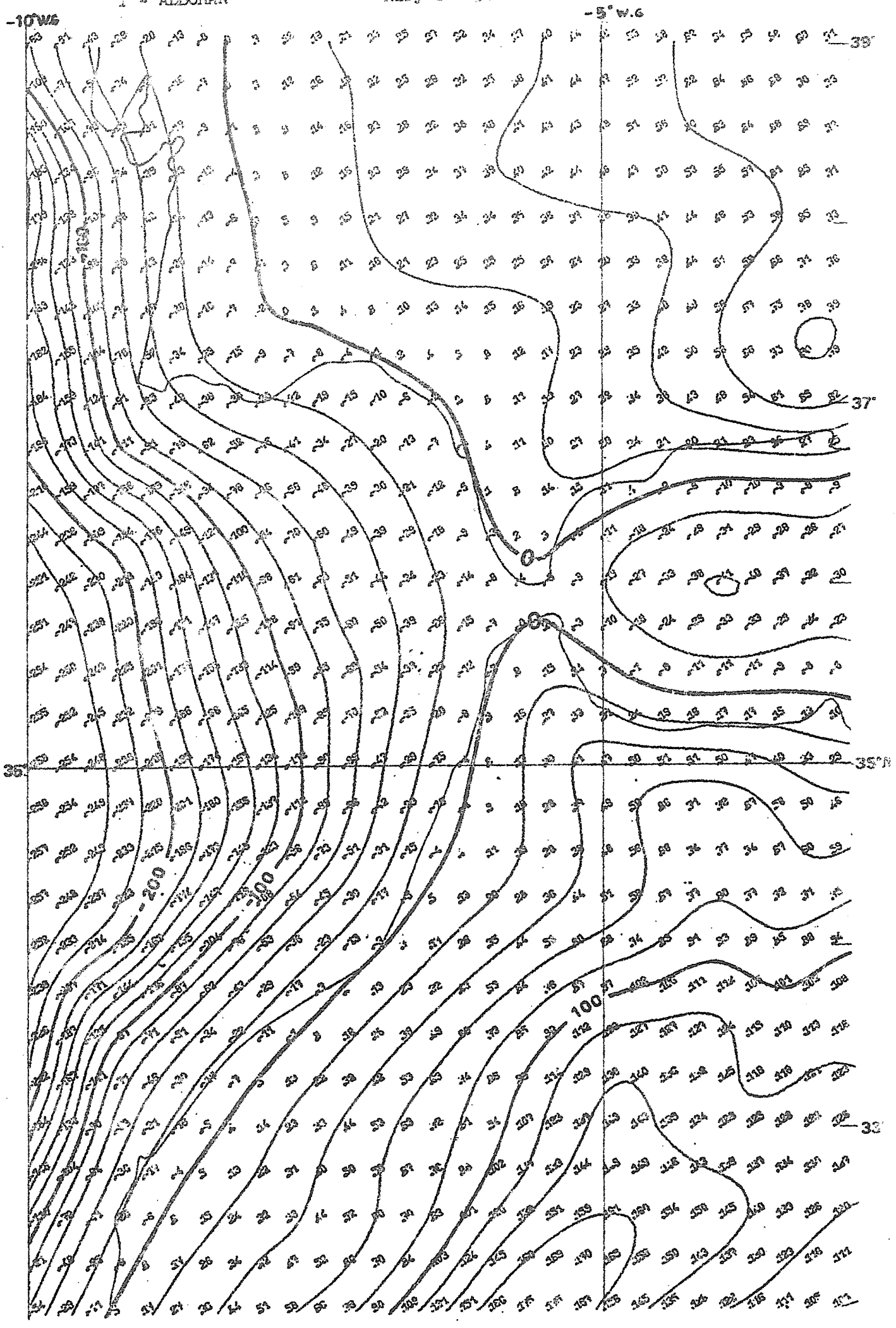
AIRY 20. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
38 45	4	-143.9	-144.1	-151.5	-162.4
38 45	5	-168.1	-171.6	-174.3	-175.3
38 45	6	-177.1	-177.9	-177.6	-176.9
38 45	7	-174.4	-169.5	-154.6	-122.9
38 45	8	-87.9	-57.7	-41.6	-38.4
38 45	9	-41.4	-51.0	-65.6	-80.9
38 45	10	-97.5	-106.0	-104.7	-98.8
38 45	11	-97.4	-99.3	-102.6	-108.8
39 0	4	-130.9	-134.6	-142.4	-155.4
39 0	5	-163.8	-169.2	-173.0	-174.3
39 0	6	-176.0	-176.6	-176.4	-175.5
39 0	7	-172.0	-163.8	-140.4	-94.2
39 0	8	-56.3	-34.3	-23.2	-18.6
39 0	9	-20.9	-30.4	-47.6	-73.4
39 0	10	-100.4	-125.3	-136.2	-137.6
39 0	11	-139.6	-140.6	-141.8	-144.5

E) CORRECTIONS ISOSTATIQUES TOTALES

Hypothèse d'Airy

T = 30 km


-10°W.G
-5° W.G
39°
37°
35°N
36
0
100
200
-100
-200

I - ALBORAN

AIRY 30 KM

LAT.	LONG.	COR.	TOUTES	LES	15 MIN.	LONG.
32 0	-10	-53.6	-28.9	-10.5	4.8	
32 0	-9	17.2	27.0	35.5	43.9	
32 0	-8	51.1	58.1	65.6	75.5	
32 0	-7	90.2	109.4	130.6	151.0	
32 0	-6	166.4	174.7	175.1	167.3	
32 0	-5	156.1	145.0	135.1	127.7	
32 0	-4	121.7	116.2	110.7	105.2	
32 15	-10	-80.8	-47.6	-24.8	-8.1	
32 15	-9	5.5	17.0	26.1	34.2	
32 15	-8	41.7	46.8	52.1	59.5	
32 15	-7	70.1	84.2	102.6	124.1	
32 15	-6	144.8	159.9	168.6	169.9	
32 15	-5	165.4	158.0	149.8	143.0	
32 15	-4	136.7	129.8	122.7	116.1	
32 30	-10	-110.3	-71.5	-40.9	-20.4	
32 30	-9	-5.7	5.6	14.9	23.8	
32 30	-8	31.6	37.5	44.2	51.5	
32 30	-7	60.0	70.1	82.9	100.9	
32 30	-6	120.4	137.6	150.8	158.7	
32 30	-5	161.2	159.5	154.4	150.2	
32 30	-4	145.3	139.5	132.9	125.5	
32 45	-10	-148.0	-103.8	-63.7	-35.5	
32 45	-9	-16.6	-4.2	5.2	13.2	
32 45	-8	21.8	31.1	40.3	49.8	
32 45	-7	58.4	66.8	76.0	87.7	
32 45	-6	102.2	117.3	133.0	144.0	
32 45	-5	149.0	149.4	146.0	142.6	
32 45	-4	139.4	136.6	133.6	129.9	
33 0	-10	-184.4	-138.3	-90.2	-52.9	
33 0	-9	-30.9	-16.1	-5.2	3.9	
33 0	-8	13.6	23.4	33.4	43.5	
33 0	-7	53.2	62.9	71.8	81.3	
33 0	-6	93.5	107.1	123.2	136.7	
33 0	-5	143.3	143.1	138.9	133.5	
33 0	-4	127.9	125.2	126.0	127.6	
33 15	-10	-211.8	-167.4	-110.9	-70.9	
33 15	-9	-46.2	-30.2	-16.8	-6.8	
33 15	-8	3.0	12.8	21.6	32.0	
33 15	-7	42.4	53.2	62.9	73.8	
33 15	-6	86.4	99.5	114.1	129.0	
33 15	-5	138.3	139.8	135.9	131.8	
33 15	-4	124.7	118.2	117.5	120.9	
33 30	-10	-226.4	-186.8	-135.3	-97.4	
33 30	-9	-71.0	-50.5	-33.9	-21.6	
33 30	-8	-11.3	-1.0	8.1	17.8	
33 30	-7	27.9	38.3	48.8	60.3	
33 30	-6	72.9	85.1	98.2	112.2	
33 30	-5	123.0	126.6	126.9	127.0	
33 30	-4	123.8	115.3	110.1	112.8	
33 45	-10	-237.6	-206.5	-171.3	-144.1	
33 45	-9	-115.9	-87.0	-62.1	-42.7	
33 45	-8	-28.6	-16.8	-6.8	3.6	
33 45	-7	12.5	22.5	32.2	42.5	
33 45	-6	52.7	64.2	75.8	86.9	

I - ALBORAN

AIRY 30 KM

LAT.	LONG.	COR.	TOUTES	LES	15 MIN.	LONG.
33 45	-5	96.5	101.9	106.2	111.2	
33 45	-4	111.5	105.3	100.5	103.2	
34 0	-10	-251.5	-233.3	-213.5	-195.0	
34 0	-9	-168.9	-135.3	-104.2	-75.8	
34 0	-8	-52.9	-35.9	-23.4	-12.5	
34 0	-7	-2.5	7.3	17.0	26.1	
34 0	-6	34.5	43.5	52.7	60.3	
34 0	-5	67.6	74.2	82.5	90.7	
34 0	-4	92.8	88.5	84.7	87.8	
34 15	-10	-256.9	-247.6	-237.2	-222.8	
34 15	-9	-199.9	-173.6	-146.7	-119.0	
34 15	-8	-88.4	-63.5	-45.1	-30.2	
34 15	-7	-16.7	-5.1	4.7	12.8	
34 15	-6	19.8	28.0	36.2	43.5	
34 15	-5	50.6	58.2	67.4	76.7	
34 15	-4	80.0	76.8	72.0	70.5	
34 30	-10	-257.2	-251.7	-244.9	-233.3	
34 30	-9	-215.1	-195.7	-172.5	-148.0	
34 30	-8	-123.2	-96.2	-73.1	-50.9	
34 30	-7	-30.9	-15.2	-4.2	4.0	
34 30	-6	11.1	19.3	28.1	37.8	
34 30	-5	46.4	55.7	65.6	74.3	
34 30	-4	77.3	73.7	66.8	60.0	
34 45	-10	-258.3	-254.2	-248.7	-237.0	
34 45	-9	-219.9	-200.6	-180.2	-159.3	
34 45	-8	-137.4	-111.6	-88.7	-65.7	
34 45	-7	-42.1	-23.2	-10.2	-0.8	
34 45	-6	8.9	17.8	28.1	38.7	
34 45	-5	48.4	58.5	66.4	71.2	
34 45	-4	71.6	66.9	58.2	50.1	
35 0	-10	-258.1	-253.5	-248.0	-236.4	
35 0	-9	-216.4	-194.6	-174.3	-154.6	
35 0	-8	-134.2	-111.6	-89.6	-68.9	
35 0	-7	-47.4	-29.1	-15.1	-4.3	
35 0	-6	5.9	17.2	29.5	40.7	
35 0	-5	47.3	50.2	51.4	51.1	
35 0	-4	49.8	46.6	40.2	33.3	
35 15	-10	-255.2	-252.0	-244.8	-231.8	
35 15	-9	-208.6	-185.8	-165.7	-144.9	
35 15	-8	-125.4	-108.6	-89.4	-70.3	
35 15	-7	-52.4	-34.6	-20.0	-8.0	
35 15	-6	2.8	15.3	27.3	33.2	
35 15	-5	30.9	24.4	19.1	17.6	
35 15	-4	16.9	16.8	15.1	12.6	
35 30	-10	-253.5	-249.9	-241.7	-224.8	
35 30	-9	-201.0	-177.0	-155.4	-133.2	
35 30	-8	-114.4	-99.7	-85.0	-68.8	
35 30	-7	-54.3	-38.9	-24.5	-12.2	
35 30	-6	-1.7	8.2	15.2	14.3	
35 30	-5	6.9	-1.4	-7.5	-10.9	
35 30	-4	-11.3	-10.5	-8.7	-8.0	
35 45	-10	-251.4	-246.8	-237.5	-219.7	
35 45	-9	-195.6	-171.3	-146.8	-125.3	
35 45	-8	-107.9	-91.0	-75.3	-59.8	

I - ALBORAN

AIRY 30 KM

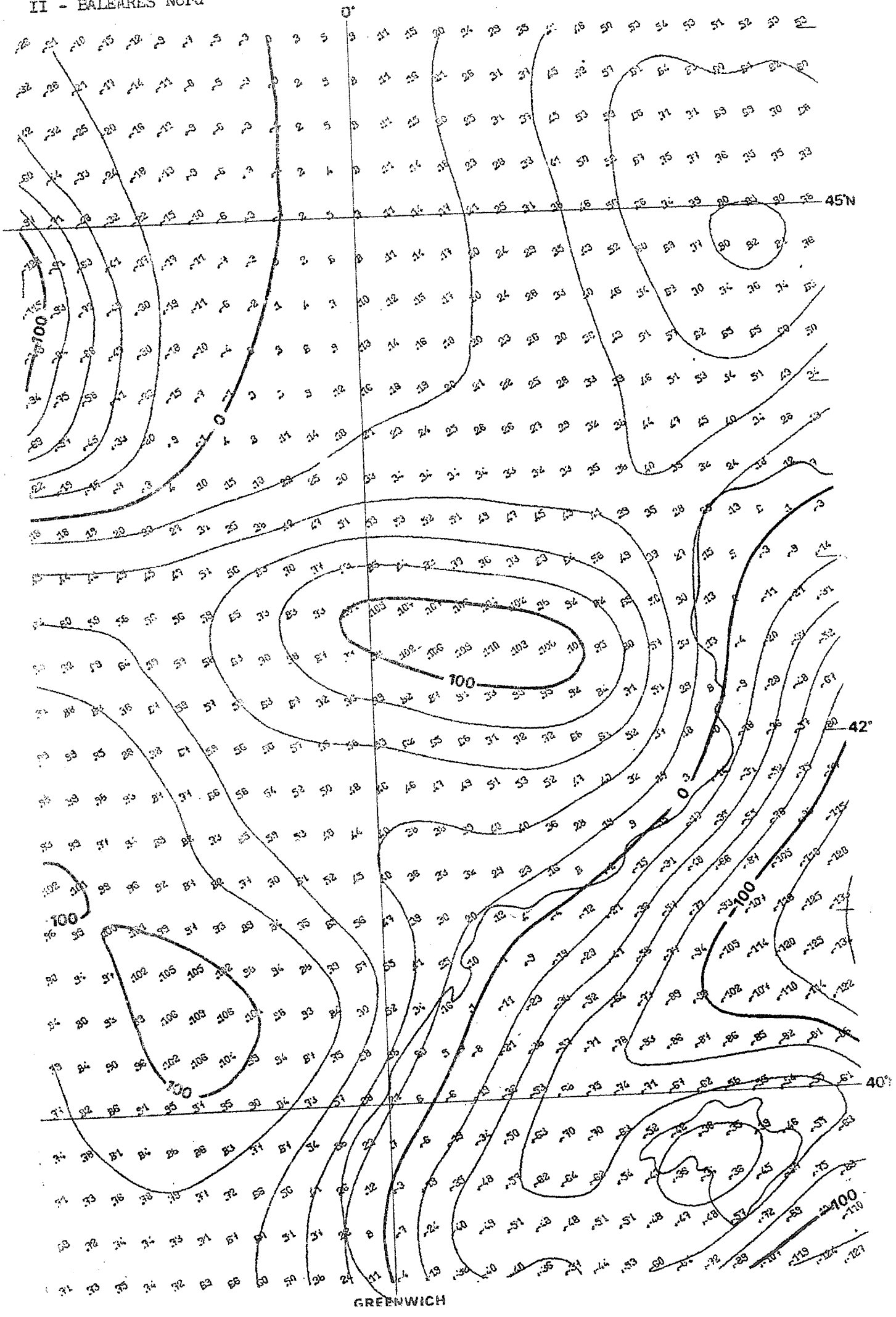
LAT.	LONG.	COR.	TOUTES	LES	15 MIN.	LONG.
35 45	-7	-49.8	-38.6	-26.1	-15.3	
35 45	-6	-7.1	-0.4	2.1	-2.5	
35 45	-5	-10.4	-17.8	-24.0	-28.8	
35 45	-4	-32.6	-32.5	-28.7	-24.0	
36 0	-10	-251.3	-242.2	-230.2	-212.9	
36 0	-9	-190.1	-164.4	-137.1	-115.7	
36 0	-8	-98.0	-81.1	-65.8	-51.4	
36 0	-7	-43.9	-34.2	-23.0	-13.8	
36 0	-6	-7.9	-3.6	-3.0	-9.8	
36 0	-5	-19.0	-26.8	-33.2	-38.4	
36 0	-4	-40.7	-39.5	-36.8	-31.9	
36 15	-10	-243.9	-225.5	-208.8	-194.1	
36 15	-9	-175.6	-149.3	-121.0	-100.0	
36 15	-8	-83.5	-69.8	-59.6	-48.9	
36 15	-7	-39.1	-28.5	-17.7	-9.6	
36 15	-6	-3.4	1.9	3.3	-2.1	
36 15	-5	-10.5	-18.3	-24.1	-28.7	
36 15	-4	-30.6	-29.2	-28.2	-26.3	
36 30	-10	-218.4	-198.9	-176.7	-156.3	
36 30	-9	-138.7	-115.6	-93.8	-77.7	
36 30	-8	-65.8	-56.3	-48.2	-39.0	
36 30	-7	-30.0	-20.9	-12.3	-5.3	
36 30	-6	1.0	8.0	14.1	15.2	
36 30	-5	10.7	3.9	-2.3	-7.6	
36 30	-4	-10.1	-10.1	-9.6	-8.3	
36 45	-10	-196.0	-173.4	-140.9	-111.2	
36 45	-9	-91.0	-75.8	-62.0	-52.3	
36 45	-8	-45.7	-40.5	-34.1	-27.0	
36 45	-7	-19.5	-12.7	-7.0	-1.9	
36 45	-6	4.2	11.3	20.4	27.4	
36 45	-5	27.9	24.0	21.1	20.3	
36 45	-4	21.0	23.3	25.8	27.0	
37 0	-10	-184.3	-158.5	-123.9	-90.9	
37 0	-9	-64.5	-48.3	-37.9	-30.0	
37 0	-8	-25.0	-21.8	-18.6	-14.5	
37 0	-7	-10.2	-5.8	-2.2	1.5	
37 0	-6	5.6	11.1	19.3	27.2	
37 0	-5	31.8	33.9	37.8	43.3	
37 0	-4	48.3	54.1	61.2	65.2	
37 15	-10	-181.6	-155.3	-114.4	-77.9	
37 15	-9	-52.0	-34.1	-22.6	-14.6	
37 15	-8	-9.2	-6.5	-6.2	-4.0	
37 15	-7	-1.4	1.5	4.2	6.1	
37 15	-6	8.4	12.4	17.4	23.3	
37 15	-5	29.0	34.5	41.9	50.3	
37 15	-4	58.0	65.8	74.8	80.0	
37 30	-10	-168.9	-142.7	-105.2	-71.7	
37 30	-9	-46.4	-28.2	-15.8	-7.3	
37 30	-8	-1.8	0.3	1.4	4.4	
37 30	-7	7.5	10.2	12.9	14.0	
37 30	-6	14.6	16.3	19.1	22.5	
37 30	-5	26.8	32.6	40.4	49.1	
37 30	-4	58.3	67.4	74.9	78.4	
37 45	-10	-165.6	-133.3	-98.4	-67.6	

I - ALBORAN

AIRY 30 KM

LAT.	LONG.	COR.	TOUTES	LES 15	MIN. LONG
37 45	-9	-43.4	-25.9	-13.8	-5.7
37 45	-8	-0.5	2.9	6.3	11.1
37 45	-7	16.1	20.5	23.3	24.6
37 45	-6	24.5	25.2	26.4	27.4
37 45	-5	29.8	33.0	37.5	43.7
37 45	-4	51.3	59.3	66.4	71.0
38 0	-10	-178.8	-138.0	-101.0	-67.9
38 0	-9	-42.1	-24.4	-12.7	-5.5
38 0	-8	0.4	5.1	9.7	14.9
38 0	-7	21.1	27.3	31.7	34.0
38 0	-6	34.1	35.0	36.0	36.7
38 0	-5	37.8	38.5	40.5	44.0
38 0	-4	48.3	52.7	58.3	64.5
38 15	-10	-182.7	-133.9	-95.7	-64.0
38 15	-9	-39.2	-23.0	-11.8	-3.5
38 15	-8	2.7	7.6	11.8	16.4
38 15	-7	22.8	29.1	33.9	37.3
38 15	-6	39.2	40.3	41.8	43.6
38 15	-5	45.6	47.3	49.7	52.9
38 15	-4	55.1	57.1	60.7	64.9
38 30	-10	-150.3	-105.4	-72.6	-48.8
38 30	-9	-31.2	-19.3	-9.4	-0.9
38 30	-8	5.1	9.9	13.8	17.9
38 30	-7	23.0	28.0	31.8	35.8
38 30	-6	38.4	40.8	43.2	45.3
38 30	-5	48.1	51.4	55.6	59.5
38 30	-4	61.7	63.7	66.3	69.0
38 45	-10	-102.7	-73.6	-50.9	-34.4
38 45	-9	-23.8	-15.7	-7.4	0.3
38 45	-8	6.8	11.6	16.2	19.2
38 45	-7	21.8	24.7	27.9	32.3
38 45	-6	35.3	38.2	40.8	43.5
38 45	-5	47.3	52.0	56.9	61.5
38 45	-4	63.7	65.7	67.9	70.3
39 0	-10	-83.3	-60.9	-42.8	-28.9
39 0	-9	-19.8	-13.3	-6.3	0.3
39 0	-8	6.6	12.1	17.9	21.2
39 0	-7	22.7	24.5	27.4	31.7
39 0	-6	34.2	37.0	40.1	43.6
39 0	-5	48.2	53.2	57.7	61.6
39 0	-4	63.7	64.9	66.3	68.1

Airy T = 30 Km



II - BALEARES Nord

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES	LES 15	MIN. LONG.
39 0	-3	70.6	72.9	74.9	74.3
39 0	-2	71.6	69.1	66.1	59.8
39 0	-1	50.3	37.6	24.3	11.1
39 0	0	-3.7	-18.7	-31.9	-39.6
39 0	1	-39.8	-35.7	-36.7	-43.8
39 0	2	-52.7	-59.6	-63.9	-72.0
39 0	3	-89.2	-107.2	-119.0	-123.9
39 15	-3	68.7	71.5	73.7	74.1
39 15	-2	73.0	71.3	67.1	60.4
39 15	-1	50.7	36.6	21.9	8.1
39 15	0	-6.9	-24.3	-40.2	-48.9
39 15	1	-50.5	-48.2	-48.3	-50.6
39 15	2	-50.6	-48.4	-46.6	-48.1
39 15	3	-56.8	-71.5	-88.6	-101.7
39 30	-3	70.5	73.2	76.0	78.0
39 30	-2	78.5	76.7	72.2	65.7
39 30	-1	55.6	41.2	25.9	11.7
39 30	0	-3.0	-19.1	-35.0	-47.7
39 30	1	-56.7	-61.6	-63.8	-61.9
39 30	2	-53.7	-43.2	-36.4	-33.8
39 30	3	-36.4	-44.8	-59.1	-75.4
39 45	-3	74.3	77.7	81.0	84.1
39 45	-2	86.0	85.5	82.6	76.8
39 45	-1	67.3	54.1	38.2	22.3
39 45	0	7.4	-6.0	-19.1	-34.0
39 45	1	-50.2	-63.0	-70.3	-70.0
39 45	2	-62.7	-52.0	-42.3	-35.6
39 45	3	-35.0	-38.9	-46.3	-55.2
40 0	-3	77.0	81.8	86.4	91.0
40 0	-2	94.8	96.5	94.9	90.4
40 0	-1	83.9	72.7	56.5	38.4
40 0	0	21.3	5.4	-6.0	-19.3
40 0	1	-35.5	-53.4	-67.7	-74.5
40 0	2	-74.4	-71.2	-66.7	-61.7
40 0	3	-57.7	-54.9	-53.8	-55.3
40 15	-3	79.3	84.4	90.0	96.4
40 15	-2	102.1	105.5	104.0	99.1
40 15	-1	94.3	86.9	74.8	57.5
40 15	0	38.4	19.8	4.7	-8.0
40 15	1	-21.1	-37.9	-56.9	-70.5
40 15	2	-77.7	-82.7	-85.5	-86.8
40 15	3	-86.3	-84.6	-82.2	-81.4
40 30	-3	83.5	87.9	93.2	99.7
40 30	-2	105.6	106.6	106.1	101.4
40 30	-1	98.1	93.0	84.0	69.6
40 30	0	52.1	33.5	15.6	1.1
40 30	1	-10.7	-23.0	-38.3	-52.2
40 30	2	-63.6	-76.8	-88.6	-95.6
40 30	3	-102.4	-106.6	-110.0	-113.7
40 45	-3	93.1	93.5	97.4	101.8
40 45	-2	104.8	105.1	101.8	96.0
40 45	-1	91.4	80.1	78.6	67.0
40 45	0	51.9	41.1	24.5	10.3
40 45	1	-3.5	-9.9	-19.0	-28.7

II - BALEARES Nord

AIRY 30. KM

LAT.	LONG.	COR. TOUTES LES 15 MIN. LONG.			
40 45	2	-40.6	-57.5	-77.1	-93.5
40 45	3	-105.1	-113.5	-119.8	-124.6
41 0	-3	97.8	98.7	100.0	100.9
41 0	-2	99.8	97.1	93.2	89.0
41 0	-1	83.6	74.8	64.7	55.5
41 0	0	47.4	39.4	29.8	20.4
41 0	1	11.9	3.6	-3.6	-11.6
41 0	2	-21.4	-35.2	-56.5	-76.7
41 0	3	-93.0	-106.7	-117.8	-125.0
41 15	-3	101.5	100.6	99.1	96.4
41 15	-2	92.3	87.3	82.0	76.6
41 15	-1	69.7	60.9	52.2	45.4
41 15	0	40.2	36.4	33.4	31.7
41 15	1	28.8	23.1	15.9	7.8
41 15	2	-2.3	-15.0	-31.0	-48.4
41 15	3	-66.3	-87.1	-105.3	-117.6
41 30	-3	99.3	99.1	97.4	94.2
41 30	-2	89.2	82.1	73.2	64.9
41 30	-1	58.5	52.5	47.6	44.0
41 30	0	40.4	38.2	37.7	39.2
41 30	1	40.3	39.7	35.7	28.4
41 30	2	19.3	5.5	-4.6	-19.3
41 30	3	-35.4	-55.1	-77.8	-97.9
41 45	-3	99.3	99.6	97.5	93.2
41 45	-2	86.7	77.3	66.2	57.8
41 45	-1	53.6	51.5	50.3	48.4
41 45	0	46.3	46.1	47.4	49.3
41 45	1	51.2	52.6	51.6	46.8
41 45	2	40.3	31.8	18.9	3.0
41 45	3	-13.6	-31.1	-51.9	-74.6
42 0	-3	99.9	99.5	95.2	88.1
42 0	-2	77.7	67.0	59.4	55.9
42 0	-1	55.9	56.7	57.8	58.2
42 0	0	59.1	61.6	65.2	66.4
42 0	1	70.6	71.9	71.7	68.0
42 0	2	61.0	51.5	36.5	17.8
42 0	3	-0.3	-17.6	-36.2	-57.2
42 15	-3	91.2	86.2	83.1	75.5
42 15	-2	66.5	59.4	56.9	58.6
42 15	-1	62.7	67.2	71.9	75.9
42 15	0	78.5	81.8	86.5	90.5
42 15	1	92.9	94.5	95.2	92.2
42 15	2	83.9	70.9	51.1	28.6
42 15	3	8.4	-9.8	-28.3	-47.7
42 30	-3	74.9	72.0	66.8	64.0
42 30	-2	58.8	56.6	56.4	63.1
42 30	-1	70.3	78.2	86.7	93.4
42 30	0	97.9	102.8	106.0	109.0
42 30	1	110.2	109.4	106.5	104.4
42 30	2	95.0	79.5	57.3	33.3
42 30	3	12.7	-4.3	-20.4	-36.5
42 45	-3	61.8	60.1	59.2	57.9
42 45	-2	55.8	56.5	58.6	64.5
42 45	-1	73.0	83.2	93.4	100.9

II - BALEARES Nord

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
42 45	0	105.3	107.0	107.0	106.0
42 45	1	104.4	101.8	98.0	92.1
42 45	2	82.4	68.5	49.5	29.9
42 45	3	13.3	0.4	-10.6	-21.1
43 0	-3	45.3	44.4	44.2	44.8
43 0	-2	45.4	47.1	50.9	56.4
43 0	-1	63.1	70.1	77.0	82.5
43 0	0	84.5	84.2	81.5	78.6
43 0	1	75.6	72.7	69.2	64.2
43 0	2	57.8	49.4	39.2	27.1
43 0	3	15.1	5.3	-2.5	-8.8
43 15	-3	17.6	18.0	18.6	20.2
43 15	-2	22.9	26.9	31.0	34.6
43 15	-1	37.9	42.3	47.3	51.1
43 15	0	53.0	53.1	52.4	50.9
43 15	1	49.0	46.9	45.0	43.0
43 15	2	41.0	38.7	34.7	28.2
43 15	3	20.2	12.5	6.0	0.8
43 30	-3	-22.1	-19.0	-15.2	-9.8
43 30	-2	-2.9	4.1	10.4	14.9
43 30	-1	18.3	21.7	25.2	30.1
43 30	0	32.5	33.6	34.3	34.4
43 30	1	34.0	32.8	32.4	33.0
43 30	2	35.0	38.2	40.4	38.7
43 30	3	32.1	24.3	17.6	11.7
43 45	-3	-68.5	-57.0	-44.9	-32.5
43 45	-2	-19.7	-9.2	-1.4	4.3
43 45	-1	8.1	11.2	13.9	17.7
43 45	0	21.3	22.9	24.3	25.3
43 45	1	25.6	25.9	26.9	26.5
43 45	2	32.1	37.6	43.7	46.6
43 45	3	44.7	39.8	33.6	26.1
44 0	-3	-93.9	-74.7	-57.8	-41.3
44 0	-2	-25.7	-14.6	-7.0	-1.2
44 0	-1	3.1	6.1	8.5	11.8
44 0	0	15.5	17.5	18.7	20.1
44 0	1	21.1	22.3	24.8	27.9
44 0	2	32.8	39.0	45.7	50.7
44 0	3	53.3	53.3	50.6	42.6
44 15	-3	-105.3	-83.5	-65.7	-47.3
44 15	-2	-29.5	-17.5	-10.0	-4.4
44 15	-1	-0.0	3.2	5.8	9.7
44 15	0	12.9	14.0	16.2	18.0
44 15	1	20.3	22.7	25.7	30.3
44 15	2	36.1	43.1	50.5	57.1
44 15	3	62.2	65.0	66.0	59.6
44 30	-3	-115.4	-93.3	-71.9	-49.4
44 30	-2	-30.4	-18.5	-11.2	-5.0
44 30	-1	-1.9	1.3	3.7	7.1
44 30	0	10.3	12.1	14.8	17.4
44 30	1	20.0	23.5	27.8	33.1
44 30	2	39.5	46.4	54.4	62.6
44 30	3	70.1	74.4	76.1	73.5
44 45	-3	-123.7	-91.4	-63.0	-41.4

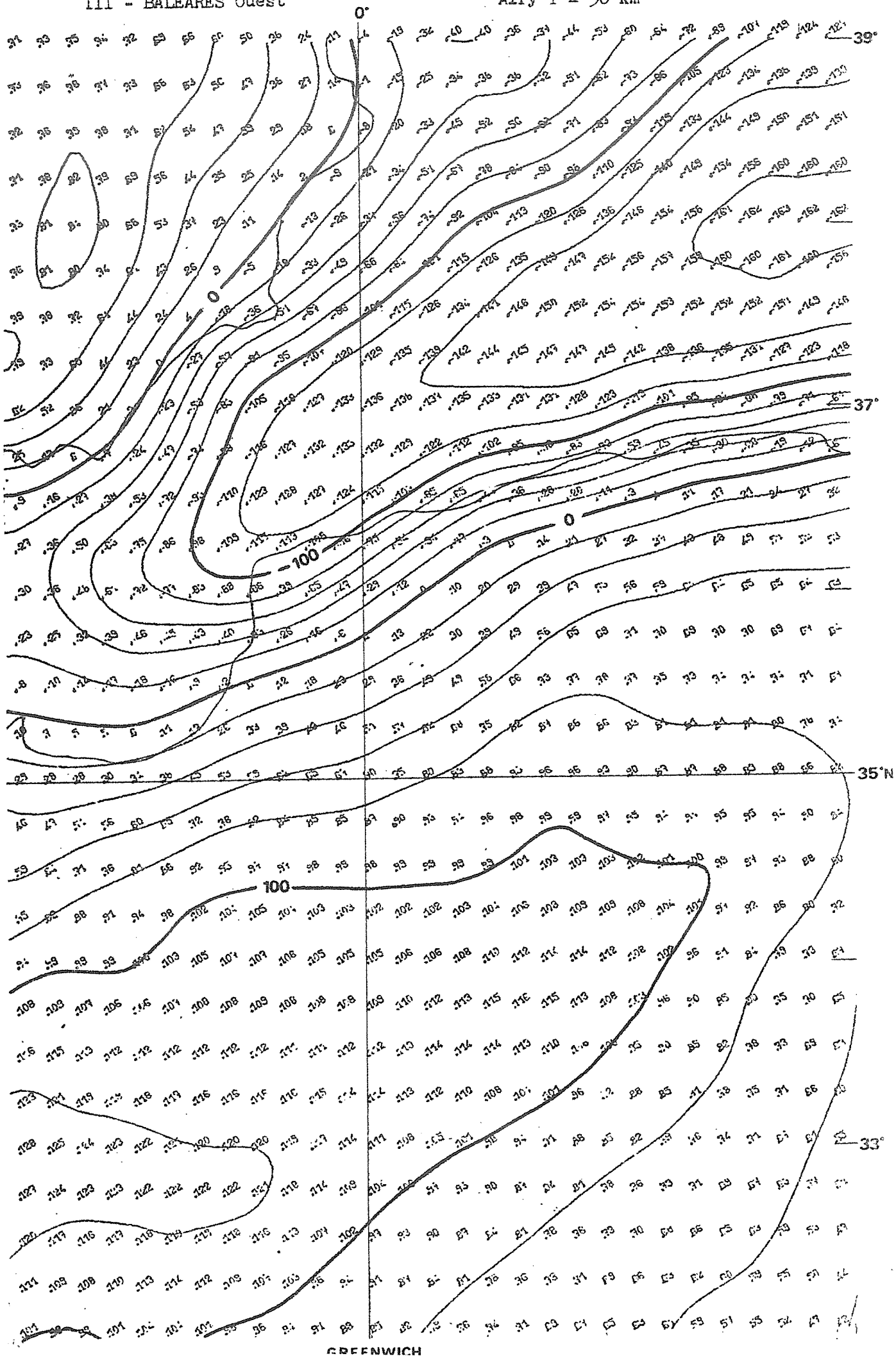
II - BALEARES Nord

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
44 45	-2	-26.8	-17.4	-11.1	-6.5
44 45	-1	-2.7	0.1	2.4	5.5
44 45	0	8.3	11.1	13.7	16.6
44 45	1	20.1	24.1	29.1	35.3
44 45	2	43.0	51.5	60.4	69.3
44 45	3	76.5	80.4	82.0	80.6
45 0	-3	-96.5	-70.6	-47.8	-31.8
45 0	-2	-21.9	-15.3	-10.3	-6.4
45 0	-1	-3.0	-0.5	1.7	4.6
45 0	0	7.4	10.7	13.5	17.0
45 0	1	20.7	25.1	30.5	37.5
45 0	2	46.3	56.1	65.9	74.4
45 0	3	76.7	79.0	80.5	79.5
45 15	-3	-60.2	-44.1	-32.9	-24.3
45 15	-2	-17.8	-13.2	-9.3	-5.8
45 15	-1	-3.1	-0.5	1.9	4.4
45 15	0	7.7	10.8	14.1	18.3
45 15	1	22.7	27.5	33.4	41.0
45 15	2	49.5	58.1	67.2	74.6
45 15	3	76.6	75.5	74.9	75.4
45 30	-3	-41.8	-32.1	-25.1	-20.2
45 30	-2	-10.0	-11.6	-8.9	-5.8
45 30	-1	-3.0	-0.6	1.8	4.6
45 30	0	8.1	11.3	15.4	20.1
45 30	1	25.3	30.5	36.8	44.5
45 30	2	52.7	59.4	65.6	70.8
45 30	3	71.2	68.8	69.1	69.7
45 45	-3	-32.1	-25.6	-20.9	-17.1
45 45	-2	-14.1	-11.4	-7.9	-5.3
45 45	-1	-3.0	-0.4	2.1	4.7
45 45	0	8.0	11.3	15.5	20.9
45 45	1	25.9	31.1	37.6	44.5
45 45	2	51.7	57.2	61.1	64.0
45 45	3	62.7	60.0	60.5	62.1
46 0	-3	-25.8	-21.3	-17.7	-14.7
46 0	-2	-12.1	-9.3	-7.3	-5.3
46 0	-1	-2.9	-0.0	2.5	5.4
46 0	0	8.7	11.3	15.0	19.5
46 0	1	24.3	29.4	35.0	40.7
46 0	2	45.8	49.7	52.9	54.2
46 0	3	53.1	51.0	51.6	53.1

III - BALEARES Ouest

Airy T = 30 km



III - BALEARES Ouest

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.		LONG.
32 0	-3	100.7	98.4	98.6	101.4
32 0	-2	104.2	104.3	101.2	98.0
32 0	-1	96.2	93.8	91.0	88.3
32 0	0	85.2	82.3	79.1	76.3
32 0	1	73.6	70.9	68.6	66.5
32 0	2	64.7	62.9	60.5	58.7
32 0	3	57.0	54.9	51.8	47.0
32 15	-3	111.4	108.7	107.9	109.6
32 15	-2	113.0	114.3	112.1	109.2
32 15	-1	106.6	102.8	98.1	93.8
32 15	0	90.5	87.0	83.8	81.0
32 15	1	78.3	75.7	73.2	70.9
32 15	2	68.5	65.9	63.4	61.6
32 15	3	60.3	58.5	55.0	49.9
32 30	-3	120.4	117.2	115.9	116.6
32 30	-2	118.0	119.3	118.7	117.8
32 30	-1	116.3	112.5	106.9	101.7
32 30	0	96.8	93.0	89.6	86.7
32 30	1	84.1	81.2	78.4	75.6
32 30	2	72.8	70.3	68.0	66.1
32 30	3	64.6	62.7	59.0	53.3
32 45	-3	126.6	124.1	122.8	122.7
32 45	-2	122.2	121.8	121.8	121.5
32 45	-1	120.8	118.3	114.4	109.2
32 45	0	104.3	100.2	96.5	93.2
32 45	1	90.4	87.0	83.9	81.1
32 45	2	78.2	75.6	73.3	71.3
32 45	3	69.4	67.1	63.1	57.3
33 0	-3	127.6	125.4	123.8	123.4
33 0	-2	122.3	121.1	120.4	120.2
33 0	-1	120.1	119.0	116.8	113.8
33 0	0	110.8	108.2	104.6	101.1
33 0	1	98.1	94.4	91.2	87.8
33 0	2	84.5	81.7	79.0	76.1
33 0	3	73.6	70.9	67.1	61.4
33 15	-3	122.5	121.0	119.4	118.6
33 15	-2	117.7	116.9	116.4	116.1
33 15	-1	116.3	115.6	114.5	114.0
33 15	0	113.5	113.1	111.5	109.7
33 15	1	107.6	104.3	100.9	96.4
33 15	2	91.9	88.1	84.6	81.0
33 15	3	78.0	74.6	70.8	65.5
33 30	-3	115.5	114.9	113.3	112.1
33 30	-2	111.6	111.7	111.8	111.8
33 30	-1	111.6	111.4	111.3	111.5
33 30	0	112.3	113.3	114.0	114.3
33 30	1	114.3	113.1	110.4	105.8
33 30	2	100.2	94.9	89.9	85.4
33 30	3	81.5	77.6	73.4	68.6
33 45	-3	108.0	108.7	107.2	105.8
33 45	-2	105.5	106.6	107.7	108.3
33 45	-1	108.5	107.9	107.6	108.2
33 45	0	108.7	110.3	111.5	112.9
33 45	1	114.8	115.8	115.2	112.5

III - BALEARES Ouest

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES	LES	15	MIN.	LONG.
33 45	2	108.4	102.5	95.6	89.7		
33 45	3	84.6	79.6	75.0	70.2		
34 0	-3	94.4	98.8	99.5	99.3		
34 0	-2	100.1	102.7	105.4	106.6		
34 0	-1	106.7	106.0	105.1	104.7		
34 0	0	104.8	105.5	106.3	107.6		
34 0	1	109.9	112.1	113.6	113.8		
34 0	2	112.1	107.5	101.5	96.3		
34 0	3	90.5	84.4	78.5	72.8		
34 15	-3	74.9	82.0	87.5	90.8		
34 15	-2	93.7	97.8	101.7	103.6		
34 15	-1	104.5	103.9	103.1	102.5		
34 15	0	102.1	102.0	102.1	102.7		
34 15	1	104.2	106.2	108.3	109.0		
34 15	2	109.0	107.5	104.2	101.1		
34 15	3	97.1	91.6	86.1	80.1		
34 30	-3	59.1	64.1	70.8	76.2		
34 30	-2	80.8	86.4	91.7	95.0		
34 30	-1	96.9	97.4	97.7	97.9		
34 30	0	98.0	98.7	99.0	99.1		
34 30	1	99.8	101.1	102.7	103.3		
34 30	2	103.0	101.6	100.5	100.4		
34 30	3	99.4	96.6	92.9	87.9		
34 45	-3	45.7	46.6	51.1	56.0		
34 45	-2	59.6	64.6	71.9	78.3		
34 45	-1	82.1	83.5	84.5	85.3		
34 45	0	87.2	90.4	92.6	93.9		
34 45	1	95.7	97.9	99.5	99.5		
34 45	2	97.3	94.8	93.5	93.9		
34 45	3	94.9	95.2	93.9	90.2		
35 0	-3	29.2	27.6	28.1	30.4		
35 0	-2	33.6	38.3	44.8	52.5		
35 0	-1	58.7	62.3	64.8	66.7		
35 0	0	70.1	75.4	79.6	83.2		
35 0	1	88.3	92.8	95.7	95.9		
35 0	2	93.0	89.5	87.1	86.7		
35 0	3	87.6	88.5	88.4	86.3		
35 15	-3	10.4	7.4	5.4	4.8		
35 15	-2	6.3	10.6	17.4	25.6		
35 15	-1	33.0	38.7	42.9	46.2		
35 15	0	50.6	57.0	62.4	67.7		
35 15	1	75.1	81.9	86.6	87.9		
35 15	2	86.2	83.3	81.3	80.5		
35 15	3	80.7	80.9	80.4	78.3		
35 30	-3	-8.4	-10.4	-13.5	-16.7		
35 30	-2	-18.2	-15.6	-9.7	-2.0		
35 30	-1	5.8	12.2	17.7	22.7		
35 30	0	28.7	35.3	42.5	49.3		
35 30	1	57.7	65.8	72.9	77.0		
35 30	2	78.0	76.7	74.9	73.4		
35 30	3	73.7	74.1	73.5	70.8		
35 45	-3	-22.5	-25.4	-31.5	-38.9		
35 45	-2	-45.5	-45.3	-43.2	-40.2		
35 45	-1	-33.3	-25.5	-15.7	-5.8		

III - BALEARES Ouest

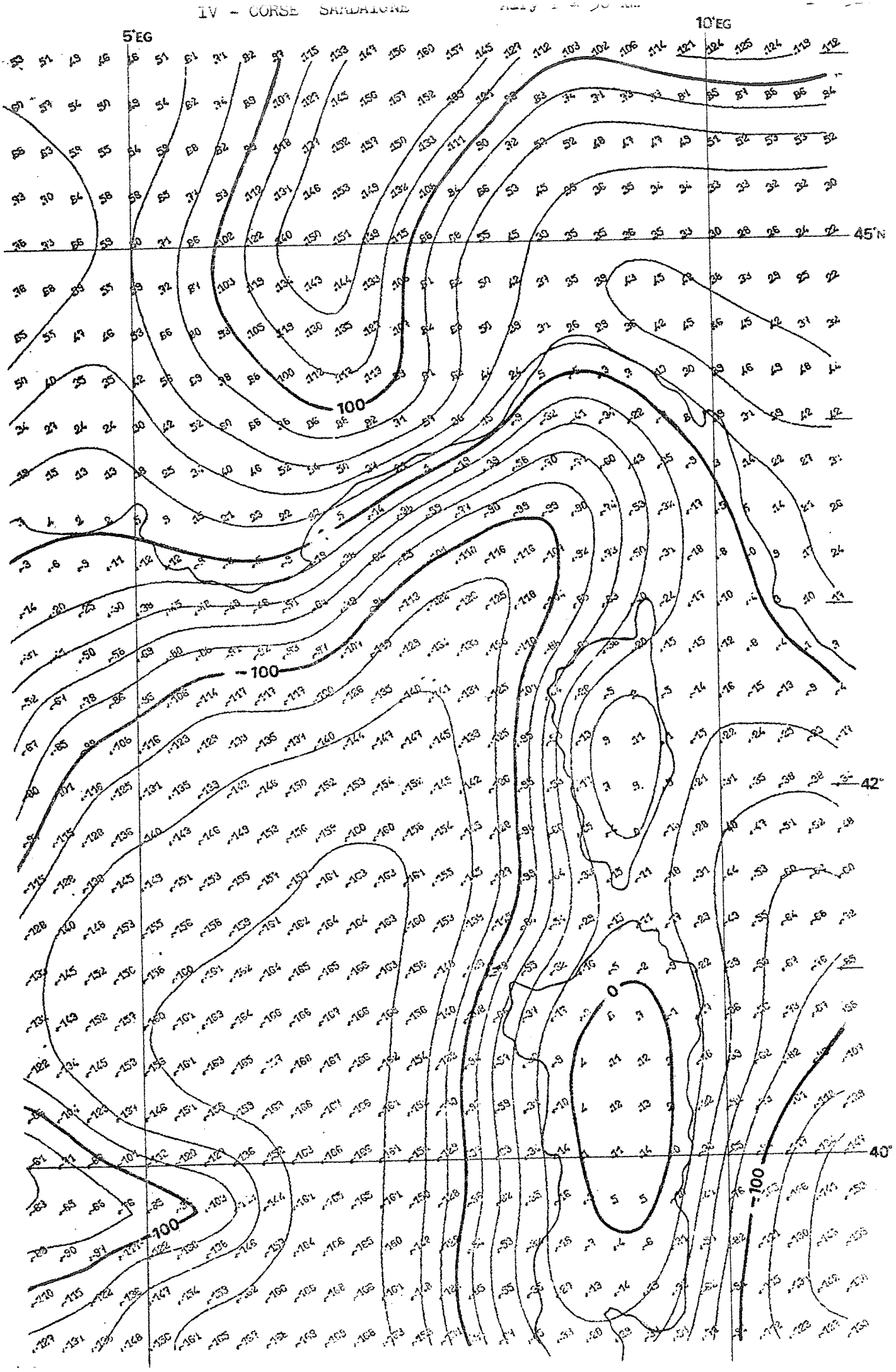
AIRY 30. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.		LONG.
35 45	0	3.5	13.3	21.5	29.5
35 45	1	39.2	48.6	58.1	64.7
35 45	2	69.0	70.6	69.9	69.0
35 45	3	69.7	70.3	69.1	66.6
36 0	-3	-30.0	-36.2	-48.1	-61.1
36 0	-2	-72.1	-77.3	-82.7	-87.6
36 0	-1	-86.0	-78.7	-65.4	-46.6
36 0	0	-28.6	-12.3	0.3	10.2
36 0	1	19.7	29.4	38.8	46.8
36 0	2	52.5	56.3	58.6	60.8
36 0	3	63.5	64.8	65.0	64.2
36 15	-3	-26.8	-35.9	-50.0	-63.4
36 15	-2	-74.8	-86.1	-98.4	-109.3
36 15	-1	-114.6	-113.4	-108.4	-96.1
36 15	0	-75.4	-53.8	-33.8	-16.7
36 15	1	-3.3	6.3	14.0	20.9
36 15	2	26.8	32.0	36.6	42.6
36 15	3	47.7	49.4	50.6	51.7
36 30	-3	-8.8	-15.7	-26.6	-37.9
36 30	-2	-53.2	-72.3	-92.8	-110.3
36 30	-1	-122.6	-127.7	-127.2	-123.8
36 30	0	-114.8	-102.5	-85.0	-64.8
36 30	1	-47.0	-35.5	-27.7	-20.0
36 30	2	-11.2	-3.0	3.6	10.9
36 30	3	17.4	20.8	23.8	27.0
36 45	-3	24.8	17.4	5.5	-7.3
36 45	-2	-24.3	-47.4	-73.9	-97.9
36 45	-1	-115.7	-127.0	-131.7	-133.4
36 45	0	-132.2	-128.6	-121.5	-111.9
36 45	1	-102.1	-95.1	-90.2	-83.3
36 45	2	-72.5	-59.1	-45.1	-35.4
36 45	3	-30.0	-25.5	-19.4	-12.1
37 0	-3	62.1	52.0	37.6	21.4
37 0	-2	1.7	-22.8	-52.7	-83.3
37 0	-1	-105.1	-118.3	-127.0	-133.3
37 0	0	-136.4	-137.7	-136.9	-135.1
37 0	1	-133.0	-131.2	-130.5	-128.4
37 0	2	-122.6	-112.7	-101.0	-95.0
37 0	3	-92.9	-87.5	-78.9	-70.5
37 15	-3	79.4	72.6	60.1	43.5
37 15	-2	22.7	-0.0	-27.2	-57.1
37 15	-1	-80.5	-94.9	-107.4	-119.8
37 15	0	-128.5	-135.1	-139.2	-141.5
37 15	1	-143.5	-145.1	-146.6	-146.9
37 15	2	-145.2	-142.1	-138.2	-136.0
37 15	3	-134.8	-131.4	-126.7	-122.5
37 30	-3	79.2	77.6	71.8	60.7
37 30	-2	43.6	24.1	3.6	-17.9
37 30	-1	-36.0	-50.8	-67.4	-85.6
37 30	0	-100.6	-114.9	-126.2	-134.4
37 30	1	-143.7	-145.7	-149.7	-151.8
37 30	2	-153.6	-154.2	-153.2	-152.4
37 30	3	-152.1	-152.1	-151.3	-148.6
37 45	-3	76.2	80.5	80.3	74.1

III - BALEARES Ouest

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
37 45	-2	60.5	43.4	25.9	9.3
37 45	-1	-4.8	-18.1	-32.8	-49.0
37 45	0	-65.7	-83.9	-100.5	-115.2
37 45	1	-126.2	-135.2	-142.7	-147.0
37 45	2	-151.8	-155.8	-157.3	-158.7
37 45	3	-159.5	-160.2	-161.4	-159.7
38 0	-3	72.7	81.3	84.0	79.7
38 0	-2	68.0	52.9	37.3	23.1
38 0	-1	11.1	-0.8	-12.9	-26.0
38 0	0	-37.4	-56.1	-74.1	-91.7
38 0	1	-103.6	-112.7	-119.7	-126.1
38 0	2	-135.7	-145.6	-153.5	-158.1
38 0	3	-160.6	-162.0	-162.9	-161.7
38 15	-3	70.6	77.5	81.6	78.9
38 15	-2	69.2	55.8	44.0	34.6
38 15	-1	25.3	13.9	2.2	-9.2
38 15	0	-20.8	-33.7	-50.5	-66.8
38 15	1	-77.8	-83.8	-89.7	-97.7
38 15	2	-109.8	-125.3	-140.1	-149.3
38 15	3	-154.4	-158.1	-160.1	-159.8
38 30	-3	72.2	75.2	79.3	77.7
38 30	-2	70.6	61.6	53.8	46.8
38 30	-1	38.6	28.8	18.3	5.8
38 30	0	-8.1	-20.3	-32.9	-44.7
38 30	1	-51.5	-55.5	-61.7	-71.2
38 30	2	-82.8	-96.5	-114.7	-132.6
38 30	3	-143.6	-148.7	-150.4	-150.7
38 45	-3	72.9	75.8	77.9	77.3
38 45	-2	72.9	67.8	62.7	55.9
38 45	-1	47.2	37.6	27.2	14.2
38 45	0	-1.2	-14.6	-24.9	-33.9
38 45	1	-38.1	-37.9	-41.6	-50.6
38 45	2	-61.7	-73.0	-85.7	-104.8
38 45	3	-122.7	-133.5	-138.2	-138.7
39 0	-3	70.6	72.9	74.9	74.3
39 0	-2	71.6	69.1	66.1	59.8
39 0	-1	50.3	37.6	24.3	11.1
39 0	0	-3.7	-18.7	-31.9	-39.6
39 0	1	-39.8	-35.7	-36.7	-43.8
39 0	2	-52.7	-59.6	-63.9	-72.0
39 0	3	-89.2	-107.2	-119.0	-123.9


IV - CORSE SARDAIGNE
5°EG
10°EG
45°N
42°
40°
100
100
100
0

IV - CORSE SARDAIGNE

AIRY 30. KM

LAT.		LONG.	COR.	TOUTES	LES 15	MIN. LONG.
39	0	4	-126.8	-130.9	-138.1	-148.0
39	0	5	-155.5	-160.9	-164.7	-166.6
39	0	6	-168.4	-169.2	-168.9	-167.5
39	0	7	-162.7	-152.8	-131.0	-97.2
39	0	8	-66.6	-45.4	-33.0	-27.6
39	0	9	-28.7	-36.5	-50.8	-71.4
39	0	10	-93.7	-112.4	-123.1	-127.3
39	0	11	-130.4	-132.9	-134.9	-137.4
39	15	4	-109.8	-114.8	-122.1	-135.9
39	15	5	-147.4	-153.7	-158.5	-161.7
39	15	6	-165.5	-167.7	-167.8	-166.0
39	15	7	-160.6	-148.1	-120.8	-84.7
39	15	8	-54.8	-34.6	-20.3	-13.3
39	15	9	-13.7	-19.4	-34.8	-62.3
39	15	10	-91.4	-114.7	-131.1	-142.0
39	15	11	-149.7	-156.4	-161.8	-165.8
39	30	4	-86.0	-89.9	-96.7	-110.9
39	30	5	-122.3	-130.0	-137.8	-146.3
39	30	6	-157.0	-163.9	-165.9	-165.2
39	30	7	-159.8	-147.7	-121.7	-84.4
39	30	8	-53.2	-31.9	-15.7	-7.2
39	30	9	-4.2	-5.8	-20.9	-51.3
39	30	10	-82.1	-111.4	-129.7	-143.2
39	30	11	-154.6	-164.5	-172.4	-178.8
39	45	4	-62.7	-65.3	-68.2	-75.9
39	45	5	-85.3	-93.7	-103.4	-118.6
39	45	6	-144.2	-160.8	-165.3	-165.1
39	45	7	-160.5	-149.5	-127.9	-95.6
39	45	8	-62.3	-34.6	-15.8	-3.4
39	45	9	4.9	5.1	-10.0	-41.3
39	45	10	-76.3	-105.0	-126.0	-141.2
39	45	11	-153.3	-164.5	-173.5	-178.1
40	0	4	-60.5	-71.2	-85.6	-101.2
40	0	5	-112.1	-119.8	-126.9	-136.0
40	0	6	-152.2	-162.5	-165.7	-165.5
40	0	7	-160.9	-150.8	-129.4	-97.4
40	0	8	-63.1	-34.2	-13.9	0.5
40	0	9	10.6	13.5	-0.2	-29.8
40	0	10	-64.6	-94.4	-116.7	-134.1
40	0	11	-146.8	-158.8	-169.0	-174.5
40	15	4	-88.4	-103.8	-122.9	-137.4
40	15	5	-145.7	-151.1	-155.6	-159.0
40	15	6	-163.2	-165.9	-166.6	-166.0
40	15	7	-161.3	-151.5	-129.7	-94.6
40	15	8	-58.5	-30.8	-10.1	4.2
40	15	9	11.8	13.2	2.1	-22.0
40	15	10	-51.0	-78.8	-100.5	-117.9
40	15	11	-128.5	-141.4	-156.6	-163.9
40	30	4	-122.1	-134.1	-144.9	-152.8
40	30	5	-157.5	-160.6	-163.0	-164.5
40	30	6	-166.8	-167.5	-167.2	-166.1
40	30	7	-162.1	-153.7	-132.4	-94.4
40	30	8	-57.0	-30.0	-9.9	3.9
40	30	9	11.3	11.7	2.1	-16.1

IV - CORSE SARDAIGNE

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES	LES	15	MIN.	LONG.
40 30	10	-38.9	-61.5	-82.1	-98.6		
40 30	11	-106.6	-116.8	-130.4	-136.2		
40 45	4	-132.2	-143.2	-151.6	-156.8		
40 45	5	-159.5	-161.3	-163.3	-164.2		
40 45	6	-165.6	-166.4	-166.5	-166.1		
40 45	7	-162.5	-155.6	-139.7	-108.1		
40 45	8	-67.6	-36.9	-17.1	-3.2		
40 45	9	5.6	7.3	-0.6	-16.7		
40 45	10	-36.1	-55.8	-72.5	-86.9		
40 45	11	-98.0	-105.7	-107.7	-107.7		
41 0	4	-133.4	-144.7	-152.1	-156.3		
41 0	5	-158.2	-159.5	-161.1	-162.2		
41 0	6	-163.5	-164.7	-165.3	-165.6		
41 0	7	-163.2	-158.1	-147.9	-125.9		
41 0	8	-88.7	-54.9	-32.4	-15.6		
41 0	9	-4.8	-1.6	-8.5	-21.9		
41 0	10	-39.1	-55.2	-67.4	-75.7		
41 0	11	-84.5	-92.1	-95.0	-94.4		
41 15	4	-128.2	-140.2	-148.3	-152.8		
41 15	5	-154.6	-156.2	-157.7	-159.1		
41 15	6	-161.0	-162.3	-163.7	-164.3		
41 15	7	-163.2	-159.8	-152.5	-138.9		
41 15	8	-114.7	-84.0	-54.0	-29.1		
41 15	9	-15.0	-11.3	-16.7	-28.6		
41 15	10	-43.2	-55.4	-64.0	-68.2		
41 15	11	-71.7	-76.5	-80.5	-79.2		
41 30	4	-114.5	-128.3	-138.2	-145.0		
41 30	5	-148.7	-150.7	-152.6	-154.5		
41 30	6	-156.9	-159.3	-161.2	-162.8		
41 30	7	-162.6	-160.6	-154.8	-144.6		
41 30	8	-127.0	-98.8	-64.2	-33.1		
41 30	9	-14.5	-10.7	-18.3	-31.2		
41 30	10	-43.7	-53.3	-59.9	-61.8		
41 30	11	-60.1	-58.7	-57.9	-53.3		
41 45	4	-96.6	-115.1	-127.9	-136.3		
41 45	5	-140.2	-142.9	-146.1	-149.0		
41 45	6	-153.0	-156.3	-158.5	-159.7		
41 45	7	-159.7	-158.4	-153.9	-144.5		
41 45	8	-127.6	-97.7	-59.5	-25.4		
41 45	9	-3.6	0.1	-12.8	-28.2		
41 45	10	-39.7	-46.5	-51.0	-52.2		
41 45	11	-48.1	-42.7	-36.8	-29.0		
42 0	4	-79.8	-100.8	-115.8	-125.3		
42 0	5	-130.7	-134.7	-138.8	-142.2		
42 0	6	-146.1	-149.5	-151.8	-153.4		
42 0	7	-153.5	-152.3	-149.1	-141.6		
42 0	8	-126.0	-95.0	-53.4	-16.5		
42 0	9	6.6	9.0	-5.4	-20.9		
42 0	10	-30.8	-35.2	-38.1	-38.4		
42 0	11	-33.5	-26.6	-18.6	-8.6		
42 15	4	-67.0	-85.0	-99.3	-108.2		
42 15	5	-115.8	-123.1	-129.2	-132.8		
42 15	6	-135.1	-137.0	-139.8	-144.0		
42 15	7	-146.5	-146.8	-144.8	-138.7		

IV - CORSE SARDAIGNE

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES	LES	15 MIN.	LONG.
42 15	8	-125.2	-95.4	-52.7	-13.4	
42 15	9	9.5	11.2	-1.1	-15.2	
42 15	10	-22.2	-24.0	-24.6	-23.2	
42 15	11	-17.3	-10.3	-2.5	6.7	
42 30	4	-52.2	-67.1	-78.1	-86.2	
42 30	5	-95.4	-105.9	-114.0	-117.3	
42 30	6	-117.2	-117.2	-120.0	-126.4	
42 30	7	-134.8	-140.4	-141.4	-136.9	
42 30	8	-125.4	-100.5	-63.9	-28.3	
42 30	9	-5.0	1.6	-4.6	-13.6	
42 30	10	-16.1	-14.7	-13.1	-9.8	
42 30	11	-3.7	3.4	11.3	18.9	
42 45	4	-31.3	-41.0	-49.5	-58.0	
42 45	5	-68.7	-80.1	-87.9	-90.7	
42 45	6	-92.1	-92.6	-97.0	-106.7	
42 45	7	-118.9	-129.4	-133.8	-132.8	
42 45	8	-125.7	-109.7	-87.7	-61.4	
42 45	9	-36.4	-19.9	-14.6	-14.8	
42 45	10	-11.9	-7.6	-3.8	0.7	
42 45	11	7.0	15.1	23.3	29.2	
43 0	4	-14.4	-19.7	-24.6	-30.3	
43 0	5	-37.5	-44.7	-47.9	-47.9	
43 0	6	-48.2	-50.8	-60.9	-78.6	
43 0	7	-98.3	-113.1	-122.4	-125.6	
43 0	8	-124.7	-118.1	-104.0	-84.8	
43 0	9	-62.8	-40.3	-24.4	-16.5	
43 0	10	-10.3	-4.0	2.8	10.1	
43 0	11	17.1	23.4	29.3	33.7	
43 15	4	-3.3	-6.4	-9.0	-11.0	
43 15	5	-12.2	-11.9	-8.8	-5.5	
43 15	6	-5.0	-9.2	-19.4	-37.9	
43 15	7	-62.3	-84.9	-101.0	10.4	
43 15	8	-115.8	-115.5	-107.2	-91.8	
43 15	9	-72.8	-50.3	-30.5	-17.6	
43 15	10	-8.3	-0.1	8.6	17.4	
43 15	11	24.3	28.9	32.7	36.2	
43 30	4	6.8	3.6	2.2	2.3	
43 30	5	4.5	9.2	15.4	20.5	
43 30	6	22.8	22.3	17.0	4.9	
43 30	7	-14.4	-37.5	-59.2	-76.9	
43 30	8	-90.4	-98.5	-99.1	-90.3	
43 30	9	-74.3	-52.8	-32.3	-16.8	
43 30	10	-5.0	4.7	13.6	20.8	
43 30	11	26.4	31.8	36.8	40.5	
43 45	4	19.4	14.6	12.7	13.4	
43 45	5	17.9	25.3	33.5	40.1	
43 45	6	46.2	52.1	54.1	49.5	
43 45	7	37.1	20.5	1.2	-18.8	
43 45	8	-38.9	-57.7	-70.4	-70.6	
43 45	9	-59.5	-42.5	-24.7	-9.5	
43 45	10	3.0	13.7	22.0	27.1	
43 45	11	31.1	36.0	41.0	44.4	
44 0	4	33.6	26.8	23.7	24.3	
44 0	5	30.1	41.5	52.2	60.1	

IV - CORSE SARDAIGNE

AIRY 30. KM

COR. TOUTES LES 15 MIN. LONG.

44	0	6	67.9	77.8	85.9	87.5
44	0	7	81.5	70.9	56.6	37.8
44	0	8	15.2	-9.7	-31.7	-40.6
44	0	9	-34.4	-21.7	-7.6	6.2
44	0	10	19.1	31.0	38.8	41.7
44	0	11	41.7	41.4	41.1	39.3
44	15	4	49.5	40.1	35.0	35.2
44	15	5	42.3	55.7	68.7	78.4
44	15	6	87.9	100.1	111.7	117.0
44	15	7	112.6	99.3	81.4	62.9
44	15	8	44.0	23.9	5.3	-4.5
44	15	9	-2.8	6.7	18.8	29.5
44	15	10	38.8	46.1	49.1	47.9
44	15	11	43.6	38.5	33.0	27.1
44	30	4	65.2	54.8	47.2	45.9
44	30	5	52.9	66.0	80.3	92.9
44	30	6	105.2	118.5	130.0	134.7
44	30	7	126.6	106.6	82.2	62.9
44	30	8	50.1	38.9	30.5	26.2
44	30	9	28.8	36.1	42.3	45.3
44	30	10	46.2	45.0	41.5	37.0
44	30	11	32.1	27.3	22.4	17.9
44	45	4	75.6	67.8	59.2	54.5
44	45	5	58.9	71.5	87.1	102.8
44	45	6	118.9	134.0	143.2	144.4
44	45	7	132.7	108.2	81.3	62.0
44	45	8	50.2	42.2	36.6	35.2
44	45	9	38.5	43.4	44.6	42.0
44	45	10	38.0	33.3	28.9	25.3
44	45	11	22.4	19.4	16.8	14.5
45	0	4	77.7	73.2	65.7	58.8
45	0	5	60.1	70.8	85.7	102.2
45	0	6	122.3	140.2	149.9	150.6
45	0	7	138.7	115.3	88.3	67.8
45	0	8	54.6	44.9	38.5	35.1
45	0	9	35.0	36.0	35.3	33.0
45	0	10	30.4	28.0	25.9	23.9
45	0	11	21.9	20.1	17.9	15.8
45	15	4	73.2	69.6	64.3	58.1
45	15	5	57.8	64.8	76.9	92.7
45	15	6	112.1	131.3	145.8	152.8
45	15	7	149.2	132.3	107.7	83.8
45	15	8	66.0	53.3	44.6	39.1
45	15	9	36.3	35.1	34.3	33.5
45	15	10	33.3	33.1	32.4	31.5
45	15	11	30.0	27.8	24.8	21.4
45	30	4	67.7	63.3	59.1	54.6
45	30	5	53.9	58.8	68.4	81.9
45	30	6	99.2	118.3	137.0	151.9
45	30	7	156.9	150.0	133.0	111.1
45	30	8	89.7	71.6	58.9	51.7
45	30	9	48.2	47.1	47.4	48.7
45	30	10	50.6	52.3	52.8	52.7
45	30	11	52.3	48.6	41.6	34.5

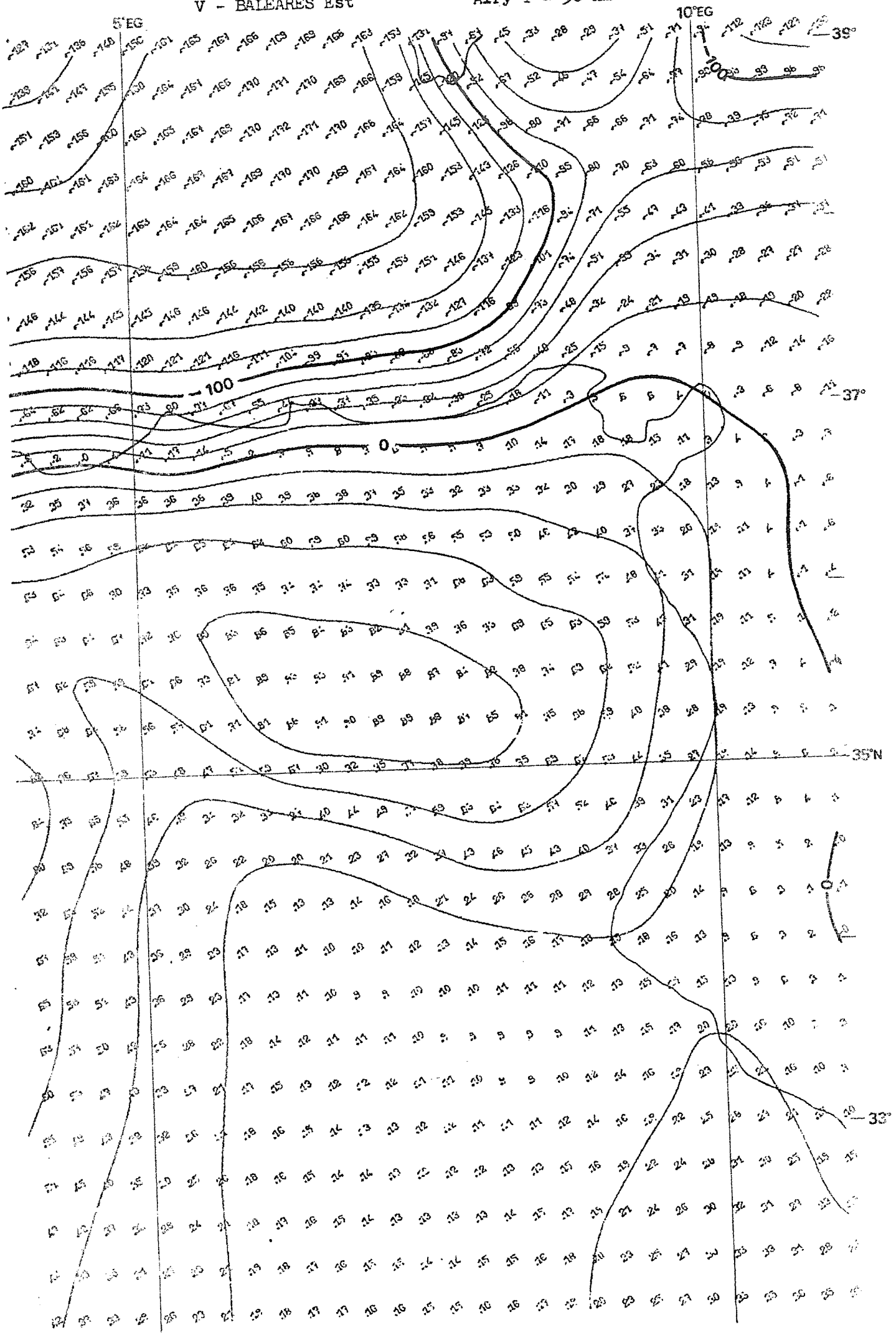
IV - CORSE SARDAIGNE

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES LES 15 MIN.	LONG.	
45 45	4	60.1	56.8	53.6	50.1
45 45	5	49.3	53.7	62.4	74.1
45 45	6	89.0	107.0	127.0	145.1
45 45	7	155.9	157.4	151.6	139.4
45 45	8	120.9	99.3	82.9	70.7
45 45	9	71.0	72.7	76.5	80.9
45 45	10	84.0	87.4	87.5	85.8
45 45	11	83.9	79.1	70.4	60.9
46 0	4	52.5	50.8	48.9	46.3
46 0	5	46.0	51.0	60.7	71.2
46 0	6	82.2	97.0	115.1	133.0
46 0	7	147.0	155.6	159.7	156.9
46 0	8	145.1	127.4	111.7	102.6
46 0	9	101.7	106.2	116.9	120.6
46 0	10	124.0	125.1	124.3	119.3
46 0	11	112.4	107.7	106.3	95.1

V - BALEARES Est

Airy T = 30 km



V - BALEARES Est

AIRY 30. KM

LAT.		LONG.	COR.	TOUTES	LES 15	MIN. LONG.
32	0	4	41.8	37.0	32.9	29.2
32	0	5	25.8	22.9	20.5	19.0
32	0	6	18.2	17.4	16.6	16.0
32	0	7	15.6	15.3	15.4	15.6
32	0	8	16.1	17.0	18.6	20.4
32	0	9	22.5	24.9	27.4	30.1
32	0	10	32.6	34.6	35.5	35.0
32	0	11	34.5	33.8	32.2	32.3
32	15	4	44.2	39.1	34.7	30.5
32	15	5	26.7	23.3	20.6	18.6
32	15	6	17.6	16.5	15.7	15.1
32	15	7	14.6	14.4	14.4	14.6
32	15	8	15.0	16.1	17.9	20.1
32	15	9	22.5	24.8	27.4	30.4
32	15	10	33.0	33.4	31.0	27.8
32	15	11	25.3	23.7	22.2	21.4
32	30	4	47.3	41.9	37.0	32.4
32	30	5	27.9	23.9	20.5	18.2
32	30	6	16.9	15.9	15.0	14.2
32	30	7	13.4	13.2	13.1	13.4
32	30	8	14.0	15.0	16.5	18.9
32	30	9	21.4	23.8	26.4	29.8
32	30	10	32.4	31.4	27.3	22.6
32	30	11	19.1	16.7	14.8	13.4
32	45	4	51.1	45.1	39.7	34.6
32	45	5	29.8	24.7	20.3	17.6
32	45	6	16.2	15.2	14.4	13.7
32	45	7	12.7	12.3	12.2	12.3
32	45	8	12.7	13.4	14.5	16.4
32	45	9	19.0	21.7	24.3	27.7
32	45	10	30.5	29.9	25.2	19.3
32	45	11	14.7	11.7	9.3	7.7
33	0	4	55.2	49.3	43.3	37.5
33	0	5	31.5	25.7	20.8	17.5
33	0	6	15.5	14.6	14.0	13.3
33	0	7	12.6	12.0	11.6	11.3
33	0	8	11.2	11.4	12.3	13.9
33	0	9	16.3	19.0	21.7	24.9
33	0	10	27.7	26.7	21.4	15.0
33	0	11	10.3	7.2	5.0	3.2
33	15	4	59.5	53.4	46.8	40.2
33	15	5	33.1	26.5	21.4	17.4
33	15	6	14.7	13.3	12.4	11.9
33	15	7	11.5	11.0	10.5	10.1
33	15	8	9.7	9.8	10.4	11.9
33	15	9	13.8	16.2	19.0	22.0
33	15	10	24.7	22.2	16.0	10.2
33	15	11	6.5	4.1	1.7	0.1
33	30	4	63.0	56.6	49.5	42.2
33	30	5	34.8	28.3	22.4	17.5
33	30	6	13.9	12.1	11.3	10.7
33	30	7	10.5	10.4	9.9	9.5
33	30	8	9.1	9.1	9.7	10.9
33	30	9	12.7	14.8	17.2	19.5

V - BALEARES Est

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES	LES	15	MIN.	LONG.
33 30	10	19.6	15.7	10.2	6.1		
33 30	11	3.2	1.1	-0.5	-2.3		
33 45	4	64.8	58.2	50.6	43.0		
33 45	5	35.8	29.2	23.0	17.2		
33 45	6	13.3	11.2	10.2	9.8		
33 45	7	9.9	10.0	10.3	10.4		
33 45	8	10.6	10.7	11.3	12.3		
33 45	9	13.3	14.7	15.4	15.1		
33 45	10	12.9	9.1	5.6	3.1		
33 45	11	1.3	-0.6	-2.1	-3.6		
34 0	4	66.5	58.8	50.9	43.2		
34 0	5	36.0	29.3	22.8	16.9		
34 0	6	13.0	11.2	10.2	10.4		
34 0	7	11.0	11.9	13.0	14.1		
34 0	8	15.1	16.3	17.2	18.3		
34 0	9	18.5	17.6	15.5	12.5		
34 0	10	9.1	5.6	3.2	1.5		
34 0	11	-0.1	-1.6	-3.0	-4.3		
34 15	4	71.9	61.9	52.4	44.2		
34 15	5	36.5	29.6	23.7	18.4		
34 15	6	15.1	13.3	13.1	14.1		
34 15	7	16.1	18.4	21.0	24.1		
34 15	8	26.4	27.9	28.1	28.8		
34 15	9	28.3	25.0	19.6	14.3		
34 15	10	9.5	5.8	2.9	1.0		
34 15	11	-0.6	-2.0	-3.3	-4.6		
34 30	4	80.0	69.2	58.1	48.2		
34 30	5	39.2	32.0	25.8	22.0		
34 30	6	20.2	19.6	20.9	23.3		
34 30	7	26.7	31.5	36.9	42.5		
34 30	8	45.6	45.3	42.8	40.1		
34 30	9	37.4	33.0	25.7	18.6		
34 30	10	12.8	8.5	4.8	2.0		
34 30	11	-0.2	-1.7	-3.1	-4.3		
34 45	4	84.3	75.4	65.1	55.2		
34 45	5	45.9	38.5	33.5	32.3		
34 45	6	34.2	37.3	40.4	44.2		
34 45	7	48.6	53.5	58.6	62.6		
34 45	8	64.0	61.7	57.0	51.5		
34 45	9	45.6	38.9	30.9	23.2		
34 45	10	16.9	12.3	8.0	3.9		
34 45	11	0.7	-1.3	-2.6	-3.9		
35 0	4	82.1	75.6	67.0	58.9		
35 0	5	52.5	47.7	47.0	51.4		
35 0	6	59.4	66.5	70.1	72.4		
35 0	7	74.9	76.9	78.4	79.0		
35 0	8	78.4	74.5	69.0	61.9		
35 0	9	53.1	43.7	34.9	26.6		
35 0	10	19.4	14.1	9.7	5.5		
35 0	11	1.6	-1.2	-2.8	-4.3		
35 15	4	74.0	67.5	61.5	57.6		
35 15	5	55.6	56.5	61.4	70.6		
35 15	6	81.1	88.4	90.6	89.8		
35 15	7	89.0	88.7	87.9	87.0		

V - BALEARES Est

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES	LES 15	MIN. LONG.
35 15	8	85.0	80.8	75.0	68.0
35 15	9	58.8	48.1	37.6	28.0
35 15	10	19.3	13.0	8.8	5.1
35 15	11	1.1	-2.0	-3.9	-5.5
35 30	4	66.7	61.9	58.8	58.8
35 30	5	61.1	65.6	72.7	81.4
35 30	6	89.3	93.0	92.6	90.6
35 30	7	88.7	87.6	86.5	84.4
35 30	8	81.5	77.9	73.5	68.7
35 30	9	61.5	51.9	40.5	28.9
35 30	10	18.7	11.6	7.2	3.5
35 30	11	-0.2	-3.6	-5.7	-7.1
35 45	4	64.2	62.8	63.5	67.1
35 45	5	71.5	75.6	79.8	83.3
35 45	6	85.7	85.3	83.7	82.8
35 45	7	81.7	80.8	79.3	76.3
35 45	8	72.5	68.6	65.4	63.1
35 45	9	59.4	53.0	42.9	30.5
35 45	10	18.6	10.7	5.4	1.1
35 45	11	-2.4	-5.5	-7.9	-10.0
36 0	4	63.4	63.8	65.9	69.5
36 0	5	72.8	74.6	75.6	75.7
36 0	6	75.4	74.3	73.5	73.6
36 0	7	73.3	72.5	70.9	67.8
36 0	8	63.2	58.6	55.3	53.6
36 0	9	51.5	47.8	40.7	30.5
36 0	10	19.3	10.6	4.1	-0.8
36 0	11	-4.3	-7.5	-10.7	-13.8
36 15	4	53.1	54.3	56.3	59.3
36 15	5	62.0	63.9	64.6	63.5
36 15	6	61.7	59.9	59.0	59.6
36 15	7	59.3	57.9	56.3	54.6
36 15	8	52.7	49.5	45.5	42.4
36 15	9	40.2	37.4	32.7	26.2
36 15	10	18.5	11.1	4.1	-1.4
36 15	11	-5.7	-9.5	-13.6	-17.8
36 30	4	31.6	35.4	36.5	36.2
36 30	5	35.6	35.8	37.9	39.4
36 30	6	39.5	38.7	38.2	38.2
36 30	7	37.1	34.9	32.8	32.2
36 30	8	33.3	33.4	32.0	30.1
36 30	9	28.9	26.9	22.7	18.0
36 30	10	13.4	9.0	4.0	-1.2
36 30	11	-6.1	-10.7	-15.7	-21.4
36 45	4	-5.7	-1.6	-0.2	-3.6
36 45	5	-10.9	-17.3	-14.3	-4.9
36 45	6	2.2	7.1	9.1	8.0
36 45	7	6.8	5.9	5.2	5.3
36 45	8	7.0	10.4	14.0	17.1
36 45	9	18.3	17.8	15.0	10.8
36 45	10	6.8	3.5	0.3	-2.8
36 45	11	-6.9	-11.8	-17.8	-23.2
37 0	4	-64.4	-62.2	-62.0	-66.2
37 0	5	-73.3	-79.5	-77.4	-67.0

V - BALEARES Est

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES	LES	15	MIN.	LONG.
37 0	6	-55.4	-43.6	-37.1	-36.8		
37 0	7	-35.2	-32.5	-31.6	-30.1		
37 0	8	-25.2	-18.3	-10.6	-3.0		
37 0	9	2.8	6.3	6.1	3.5		
37 0	10	0.3	-3.0	-5.7	-7.7		
37 0	11	-10.5	-14.6	-18.9	-21.9		
37 15	4	-118.4	-115.9	-115.5	-117.4		
37 15	5	-119.9	-120.9	-120.7	-116.2		
37 15	6	-110.6	-103.8	-98.9	-97.0		
37 15	7	-93.1	-88.9	-87.8	-83.1		
37 15	8	-72.2	-57.6	-40.0	-25.0		
37 15	9	-15.0	-9.1	-6.6	-6.7		
37 15	10	-7.8	-9.6	-12.0	-14.0		
37 15	11	-15.9	-18.0	-19.5	-19.4		
37 30	4	-145.5	-144.3	-143.6	-144.6		
37 30	5	-145.3	-146.3	-146.3	-143.8		
37 30	6	-141.9	-140.3	-140.1	-139.5		
37 30	7	-136.3	-133.7	-131.7	-126.5		
37 30	8	-116.1	-98.7	-73.3	-48.2		
37 30	9	-31.6	-23.8	-20.5	-19.2		
37 30	10	-18.6	-18.4	-18.9	-20.2		
37 30	11	-21.6	-22.6	-22.2	-20.5		
37 45	4	-157.8	-156.8	-156.2	-157.2		
37 45	5	-158.0	-159.1	-159.5	-158.1		
37 45	6	-158.2	-158.0	-158.0	-157.6		
37 45	7	-155.3	-153.1	-150.6	-145.8		
37 45	8	-137.4	-122.7	-100.8	-74.2		
37 45	9	-50.8	-38.6	-33.5	-31.4		
37 45	10	-29.9	-28.4	-27.1	-26.8		
37 45	11	-27.8	-29.6	-30.1	-28.4		
38 0	4	-162.0	-161.4	-161.3	-161.8		
38 0	5	-162.6	-163.7	-164.1	-164.6		
38 0	6	-165.9	-166.6	-166.1	-165.6		
38 0	7	-164.0	-162.2	-159.0	-153.4		
38 0	8	-145.3	-132.7	-115.9	-94.2		
38 0	9	-70.8	-55.0	-46.6	-42.9		
38 0	10	-40.8	-39.4	-37.9	-37.2		
38 0	11	-36.9	-38.2	-39.8	-40.4		
38 15	4	-160.3	-160.5	-161.2	-163.3		
38 15	5	-164.4	-165.8	-167.1	-167.4		
38 15	6	-169.2	-170.1	-169.5	-168.9		
38 15	7	-166.9	-164.2	-160.1	-153.3		
38 15	8	-142.8	-126.2	-109.6	-94.9		
38 15	9	-80.1	-69.5	-62.9	-59.5		
38 15	10	-57.8	-55.7	-52.6	-51.0		
38 15	11	-51.1	-51.4	-53.3	-57.7		
38 30	4	-151.3	-152.7	-155.7	-159.8		
38 30	5	-163.0	-165.4	-167.2	-168.6		
38 30	6	-170.3	-171.5	-171.0	-170.2		
38 30	7	-167.8	-164.2	-157.2	-145.1		
38 30	8	-124.8	-98.4	-79.5	-71.4		
38 30	9	-68.3	-68.2	-70.5	-74.1		
38 30	10	-77.9	-78.7	-75.3	-71.6		
38 30	11	-71.2	-72.7	-75.4	-80.9		

V - BALEARES Est

AIRY 30. KM

LAT.	LONG.	COR.	TOUTES	LES 15	MIN. LONG.
38 45	4	-139.0	-141.2	-146.9	-155.1
38 45	5	-160.2	-163.8	-166.8	-168.1
38 45	6	-169.9	-170.7	-170.4	-169.4
38 45	7	-165.8	-159.3	-144.9	-120.2
38 45	8	-91.8	-66.7	-51.5	-46.0
38 45	9	-47.1	-53.7	-64.3	-77.1
38 45	10	-89.9	-98.0	-99.9	-98.2
38 45	11	-97.9	-99.8	-102.8	-106.5
39 0	4	-126.8	-130.9	-138.1	-148.0
39 0	5	-155.5	-160.9	-164.7	-166.6
39 0	6	-168.4	-169.2	-168.9	-167.5
39 0	7	-162.7	-152.8	-131.0	-97.2
39 0	8	-66.6	-45.4	-33.0	-27.6
39 0	9	-28.7	-36.5	-50.8	-71.4
39 0	10	-93.7	-112.4	-123.1	-127.3
39 0	11	-130.4	-132.9	-134.9	-137.4

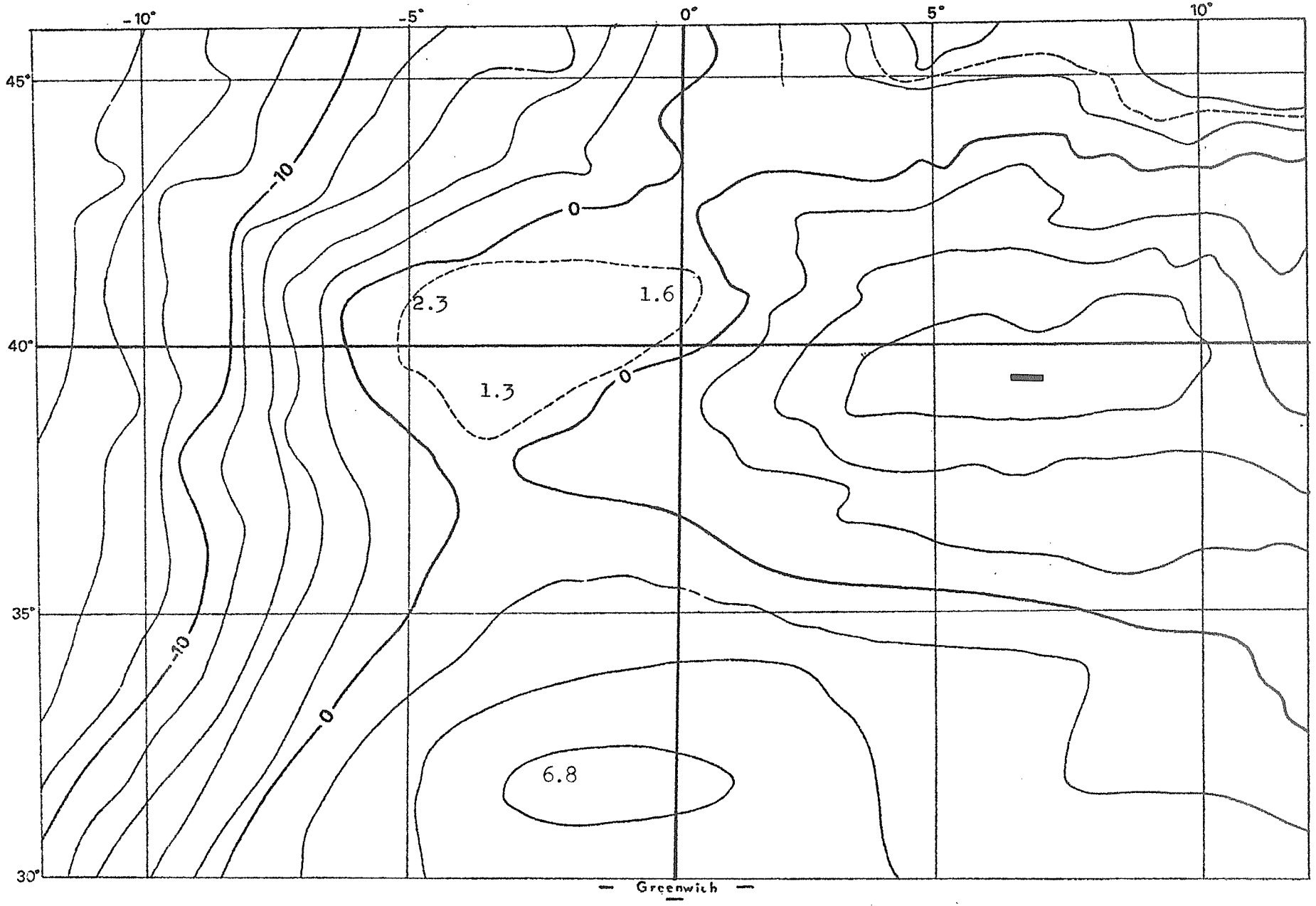
F) CORRECTIONS TOPO-ISOSTATIQUES *

(zones 18 à 1)

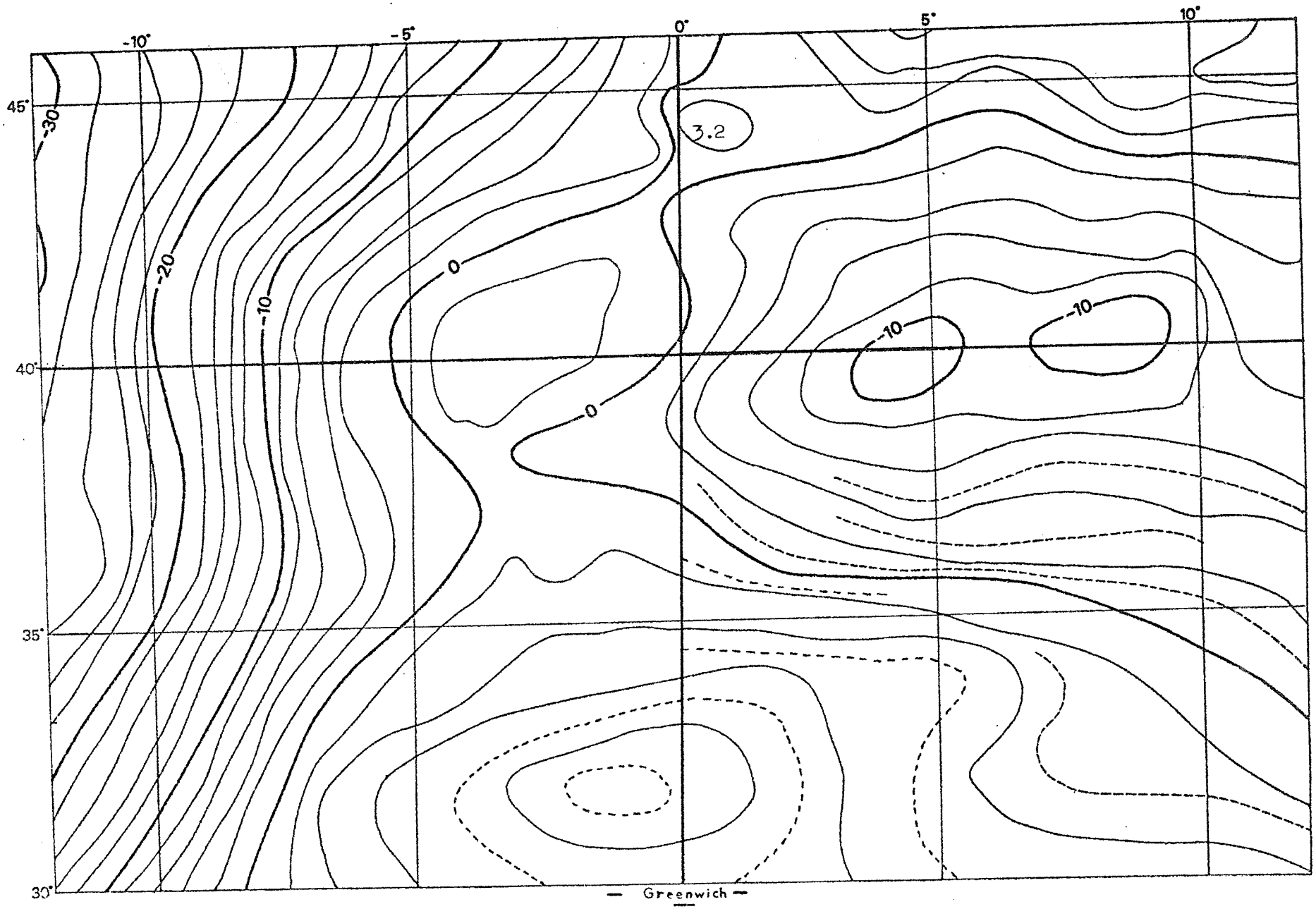
Hypothèse d'Airy, T = 20 km, Carte p.I-65.

Hypothèse d'Airy, T = 30 km, Carte p.I-66.

* Publ. Isost. Inst., IAG, n°31, Helsinki, 1959.



CORRECTIONS TOPO-ISOSTATIQUES, ZONES de HAYFORD 18-1, HYPOTHESE d'AIRY - HEISKANEN, T = 20 KM



CORRECTIONS TOPO-ISOSTATIQUES, ZONES de HAYFORD 18-1, HYPOTHESE d'AIRY - HEISKANEN, T = 30 KM

LISTE des PUBLICATIONS

reçues au

BUREAU GRAVIMETRIQUE INTERNATIONAL

(Février à Mai 1973)

CONCERNANT LES QUESTIONS DE PESANTEUR

LISTE DES PUBLICATIONS

* 59 - TALWANI M., H.R. POPPE & P.D. RABINOWITZ - "Gravimetrically determined geoid in the Western North Atlantic".
Sea Surface Topography from Space, v.2, NOAA, Tech. Rep. ERL-228, AOML 7-2, 1972.
Lamont-Doherty Geol. Obs., Contr. n°1804, p.1-34, Palisades, N.Y.

61 - ASSOCIATION INTERNATIONALE DE GEODESIE - Bulletin Géodésique n°107, Mars 1973.

a) FUBARA D.M.J. - "Non-classical determination of spatial coordinates of ocean-bottom accoustic transponders".
p.43-64.

Most current methods for acoustic-transponder-array survey are based on the assumption that certain parameters are known and held fixed. Often, however, most of these parameters are very poorly known. Using observed data, the authors outline how these inadmissible assumptions can be eliminated using a nonclassical method for determination of the spatial coordinates of ocean-bottom acoustic transponders and statistical analysis. The problems involved in the elimination process and their remedies, and the precision achievable are discussed. The influence of the number of data points and their spatial distribution is demonstrated, based on statistical tests.

b) BHATTACHARJI J.C. - "Conversion of geodetic coordinates from National Geodetic Reference Systems into Standard Earth System".
p.65-72.

The method of converting geodetic coordinates from a national geodetic reference system into the standard Earth on having known the geodetic coordinates of at least one station in common with the considered systems, is described in detail : the orientation of the Standard Earth at the initial station of the national geodetic reference system, is also determined side by side. For illustration, use has been made of the known coordinates of the Baker-Nunn station at Naini Tal, in India, being in common with the Indian Everest Spheroid and the Smithsonian Institution Standard Earth C7, system (Veis, 1967). The method advocated is likely to be more precise than the existing ones as it does not assume the parallelism of axes of reference between the Standard Earth and the national geodetic reference systems which may not necessarily hold good in actual practice.

* Les numéros font suite à ceux indiqués dans le Bull. Inf. n°31, Mars 1973.

c) PAUL M.K. - "On computation of equal area blocks".
p.73-84.

This paper describes a method of computing equal area elements (blocks) on the surface of a unit sphere. In this method, the surface is initially divided into a number of strips bounded by parallel circles. These strips are then divided into blocks with equal increment of longitude. The number of blocks may be different in different strips. Making use of this flexibility, we can obtain blocks with ratios of (mean) horizontal sides to vertical sides that are close to unity minimize the number of polar blocks.

d) TRENCOV I. - "Une propriété du nombre de Todd des matrices normales obtenues en compensation par la méthode des moindres carrés".
p.85-88.

e) PAPO H.B. - "Considered parameters in a least-squares adjustment process".
p.89-96.

Least squares adjustment processes occasionally utilize constants with a known degree of uncertainty. If the covariance matrix of the adjusted parameters is estimated without considering those uncertainties the resulting estimate is invariably too optimistic. A method is proposed by which without altering the values of the adjusted parameters their a posteriori (after the adjustment) covariance matrix can be improved by the inclusion of the effect of uncertainties in the constants.

f) GLEINSVIK P. - "A programme for digital computers comprising the basic statistical distributions".
p.97-104.

At the Division of Geodesy a programme has been devised for computation of the fundamental statistical distributions (normal, t, F and chi-squares as well as the distribution of the mean square error) on digital computers. The main features of the programme, including the above mentioned distributions as a whole, are the following :

1. No limitation as to accuracy.
2. Fully automatic procedure for computation of both probability integrals and percentage points.
3. Complete liberty as to the choice of parameter values, both with regard to the degrees of freedom (fractional) number excluded, cf. appendix) and the level of significance.
4. The programme is equally suitable for computation of single values of the different statistics as for the compilation of tables.

On the basis of the new programme extensive calculations have been carried out in order to check the accuracy of the existing statistical tables.

g) VICENTE R.O. - "The need for a standard model of the Earth's structure".
p.105-106.

62 - DELATTRE J.N. & B. CLAVE de OTAOLA - "Sur les anomalies isostatiques de la région d'In Zize (Sahara Occidental algérien)".
C.R. Acad. Sci., t.273, Sér.B, p.225-228, Paris, Juillet 1971.

Des mesures effectuées en 1963-1964 ont permis de mettre en évidence quelques caractéristiques des anomalies isostatiques de la bordure Est du Tanesrouft. Les valeurs négatives relevées à l'Ouest de l'Adrar Tideridjaouine contrastent avec le môle Suggarien d'In Ouzzal. Les isanomales de la région d'In Zize correspondent aux limites du massif volcanique.

63 - LAGRULA J., B. CLAVE de OTAOLA, J.N. DELATTRE, J.M. SCHUSTER & J.J. WALCH"- "Etude de quelques anomalies gravimétriques du Sahara algérien (promontoire d'Amguid et Tafassasset)".
C.R. Acad. Sci., t.276, Sér.D, p.1261-1265, Paris, Février 1973.

Des travaux gravimétriques effectués par l'Institut de Météorologie et de Physique du Globe de l'Algérie (IMPGA) de 1951 à 1966 ont couvert le Sahara algérien d'un réseau de mesures ; on interprète une partie de ces données, préalablement traitées par une méthode statistique nouvelle et par la transformation de Fourier. Les corrélations avec la géologie nous permettent une hypothèse concernant des anomalies négatives déjà remarquées dans une étude antérieure.

64 - DEPARTMENT OF GEODETIC ASTRONOMY, University of Thessaloniki, Greece.

a) Annual Report 1967, 2 p.

b) Annual Report 1968, 2 p.

c) Annual Report 1969, 2 p.

d) Annual Report 1970, 2 p.

65 - PHILLIPS J.D., J. WOODSIDE & C.O. BOWIN - "Magnetic and gravity anomalies in the Central Red Sea".
Hot brines & recent heavy metal deposits in the Red Sea, p.98-113, Woods Hole, 1969.

Marine magnetic and gravity profile results over the hot brine area (21°30'N, 38°E) and axial trough of the Red Sea between 25°N and 18°N latitudes confirm previous hypotheses that dense, strongly magnetic rocks underlie these areas. The gravity and magnetic anomalies in the immediate vicinity of the hot brine area appear to be part of broad, regional anomaly trends subparallel to the axial trough. It is unlikely that the heavy metal deposits of the hot brine area contribute significantly to the observed anomalies. Model studies show the configuration of bodies which could account for the axial trough anomalies to be compatible with a rifting origin associated with seafloor spreading. There appear to be at least two distinct zones of active seafloor spreading in the axial trough.

One region is located beneath the hot brine area : its spreading axis trends about N 70°E with an apparent rate of 1.5 cm/yr. The other zone, extending between 20°N and 16°N, has its spreading axis trending about N 35°W near 18°N, 40°E with an apparent rate of 1.0 cm/yr. Assuming a nearly N-S direction of separation for Africa and Arabia, the true spreading rates are 1.6 and 1.7 cm/yr, respectively. The location of the hot brine area over the northern seafloor spreading center (near 21°30'N) and the known volcanism associated with seafloor spreading zones on other mid-ocean ridges strongly suggest the heavy metal deposits and hot brine waters result from submarine volcanic emanations.

66 - POUPINET G. - "PL waves and crustal structure in Canada". Can. J. Earth Sci., v.9, p.1014-1029, Ottawa, 1972.

A study of the group velocity of PL for about fifty paths in Canada has been made.

...

The different dispersion curves are interpreted by looking for lateral variations of PL dispersion. As these curves have only one or two degrees of freedom, we label a curve with an index of dispersion. As in Santo's studies, this index is attributed to each region crossed by fitting the propagation times for a given period. Diagrams are then used giving the variation of the index with the average S velocity and the depth of the Moho. The structures found by this rather simple method are well correlated with tectonic regions and gravity measurements.

67 - BURŠA M. - "Accuracy of differences of astrogeodetic and gravimetric deflections of the vertical on the territory of Czechoslovakia". Geofys. Sbor. XVIII, n°319, p.9-26, Praha, 1970.

En se servant de la méthode de PELLINEN, on a calculé dans 29 régions d'interpolation choisies sur le territoire de la Tchécoslovaquie, les différences des déviations de la verticale astronomico-géodésiques et gravimétriques, constituant la base du nivellement astronomico-géodésique. En introduisant les corrections de PELLINEN, dues à la condensation, il est possible de caractériser la précision de ces différences par l'erreur moyenne quadratique, de $\pm$ 0,3" environ. Les différences ont été représentées graphiquement et exprimées analytiquement par des fonctions d'interpolation définies par EREMEEV, et elles peuvent servir, sur le territoire donné, de base solide pour une interpolation des déviations de la verticale astronomico-géodésiques, éventuellement gravimétriques, de même que pour une détermination du quasi-géoide, aussi précises que possible.

68 - BURŠA M. - "On the parameters of the normal Earth's gravity field". Studia Geophys. & Geod., v.16, p.396-399, Praha, 1972.

The parameters of the normal Earth's gravity field, determined from contemporary satellite data are discussed and compared with the parameters of the normal Helmert system (1901 to 1909).

...

It can be seen that the equatorial value, γ_e, only differs by 2.5 mGal from the normal gravity : 978032.5 mGal, and the uncertainty can be estimated by an error of the same order. The values of β (0.005 3009) are practically identical, their difference affecting γ by 1.1 mGal at the most.

69 - GOODACRE A.K. - "Generalized structure and composition of the deep crust and upper mantle in Canada".
J. Geophys. Res., v.77, n°17, p.3146-3161, 1972.
Earth Physics Branch, Contr. n°388, Ottawa.

Throughout most of Canada the regional Bouguer anomaly is inversely proportional to the depth of the crust-mantle boundary ; the constant of proportionality indicates that the density contrast at the crust mantle boundary is about 0.2 g/cm3. Seismic data suggest that compressional wave velocities of 7.0 to 7.5 km/sec. occur near the base of the crust, and interpretations of magnetic and electromagnetic measurements in Canada combined with analyses of heat flow data and upper mantle seismic velocity distributions from other areas suggest that the temperature in the vicinity of the crust-mantle boundary in a stable area is of the order of 1000°K and that the vertical gradient of temperature is about 15° to 20°K/km. The above results, considered together with laboratory measurements of compressional-wave velocities in rocks and petrological investigations of mafic and ultramafic mineral assemblages, are interpreted as follows : in cratonic areas of Canada, rocks such as amphibolite and-or intermediate to basic granulite probably comprise the deep crust ; garnet-peridotite is probably an important constituent of the upper mantle ; rocks of a given composition should be stable at different levels in the crust and upper mantle, and therefore, assuming that the crust-mantle boundary represents a change in chemical composition, it can be understood why large fluctuations can exist in the depth of the crust-mantle boundary. In Canada, variations of compressional wave velocity in the upper mantle may be due to regional variations of deep heat flow in some areas and, in other areas, to anisotropic propagation of seismic waves. Lateral variations of density and compressional wave velocity in the upper mantle appear to extend to a depth of at least 100 km.

70 - DONALDSON J.A. & E. IRVING - "Grenville Front and Rifting of the Canadian Shield".
Nature Phys. Sci., v.237, n°78, p.139-140, 1972.
Earth Physics Branch, Contr. n°407, Ottawa.

71 - IRVING E., J.K. PARK & J.L. ROY - "Palaeomagnetism and the origin of the Grenville Front".
Nature, v.236, n°5346, p.344-346, 1972.

72 - WALCOTT R.I. - "Gravity, flexure, and the growth of sedimentary basins at a continental edge".
Geol. Soc. America, Bull. v.83, p.1845-1858, 1972.
Earth Physics Branch, Contr. n°386, Ottawa.

73 - BEAUMONT C. & A. LAMBERT - "Crustal structure from surface load tilts, using a finite element model".
Geophys. J. R. Astr. Soc., v.29, p.203-226, 1972.
Earth Physics Branch, Contr. n°414, Ottawa.

The finite element method is used to compute the tilt response of layered elastic Earth models to a point load. Tilt response functions or Green's functions are computed for several regional crust-and-upper-mantle models and for models of possible local structure beneath Nova Scotia ...

Results suggest that the Nova Scotian crust is 35 km thick, underlain by normal mantle and that it is not of the "Appalachian" type found beneath the Gulf of St-Lawrence.

74 - JACOBY W.R. - "Plate theory, epeirogenesis and eustatic sea-level changes".
Tectonophysics, v.15, p.187-196, 1972.
Earth Physics Branch, Contr. n°404, Ottawa.

The consistent rise of the cratons with respect to sea level and the arching-up of the Precambrian shields through time may be due at least in part to the old continental lithosphere floating upwards in an environment of increasing density. A densification of the asthenosphere and oceanic lithosphere will arise from fractionation inherent in the process of plate generation and destruction and the building of new island arcs, if the system in exchange of matter is closed. Temperature variations in the mantle with time are likely to superimpose density variations with time on the general trend of densification. Other important influences on sea level are a change in total volume of free water, the area of the oceans and erosion or sedimentation on land. It is not possible to separate the above effects. The assumption of isostasy, however, permits the different effects to be interrelated and places limits on the individual effects.

75 - WALCOTT R.I. - "Past sea levels, eustasy and deformation of the Earth".
Quaternary Res., v.2, p.1-14, 1972.
Earth Physics Branch, Contr. n°389, Ottawa.

Vertical movements of the Earth's surface related to postglacial rebound, the eustatic rise in sea level and the elastic deformation of the globe due to melting of late glacial ice sheets are calculated for simplified models of the Earth. The movements of the ground are large and require a reevaluation of what is meant by eustatic sea level change. This is defined here as an ocean-wide average change in mean sea level and its measurement requires widely distributed observations weighted according to the areas of oceans they represent. Evidence of a postglacial (6000-0 years BP) relative rise in sea level comes largely from regions affected by ground subsidence related to adjacent upward postglacial rebound movements in deglaciated areas : evidence for a relative fall of sea level comes from coastlines well removed from areas of rebound and which have been affected by a rise of the continental areas through compensation for the eustatic load. It is concluded :
1) no substantial eustatic change of sea level in the past 6,000 years is required to explain postglacial sea levels ;
2) in late glacial time the eustatic curve is probably more like the sea level curve of Texas and Mexico than that of the Atlantic seaboard of the United States ;
3) that the information of past sea levels, when sufficiently widespread, can provide an important method of studying the deep mechanical structure of the Earth.

CENTRE NATIONAL pour l'EXPLOITATION des OCEANS

76 - Bull. Inf. n°49, 15 p, Janvier 1973.

77 - Bull. Inf. n°50, 21 p, Février 1973.

78 - Bull. Inf. n°51, 23 p, Mars 1973.

79 - OBENSON G.F.T. - "The covariance matrix for deflections of the vertical and undulations based on actual gravity data".
AFCRL-70-0408, Rep. n°136, Sci. Rep. n°9, 19 p, 1970.

In computing the undulation of the geoid and deflections of the vertical at any point, the computations are generally divided into those for an inner zone and those for an outer zone. In this paper, the inner zone is made up of four rectangular belts. Equations for computing the coefficients of the gravity anomalies of each rectangle are derived.

Assuming that standard errors of all anomalies are known, the coefficients obtained above can also be used to estimate the accuracies of the undulations and deflections. In a sample computation done, it was found that while there is practically no correlation with those at other points. The correlation between all the parameters is minimum for two points only if they are separated by a spherical distance of approximately 100°.

80 - EARTH PHYSICS BRANCH, Department of Energy, Mines & Resources - "The ancient oceanic lithosphere".
Can. Contr. n°1 to 11 to the Geodynamics Project, v.42, n°3, 156 p, Ottawa, 1972.

81 - SHIH K.G. - "Geological interpretation of underwater photographs obtained on the Mid-Atlantic Ridge, C.S.S. Hudson 66-019".
Bedford Inst. Ocean., Data Ser. BI-D-72-16, 225 p, November 1972.

The purpose of this report is to present the geological interpretations of the underwater photographs collected aboard C.S.S. HUDSON on the Mid-Atlantic Ridge during the 66-019 cruise. A very wide range of experiments was taken on this cruise. Underwater camera experiments were one of the various activities ...

82 - SHIH K.G. & K.S. MANCHESTER - "Geological interpretation of underwater photographs obtained on the Mid-Atlantic Ridge, C.S.S. Hudson 68-022".

As in the previous publication, the purpose of this report is to present the geological interpretations of the underwater photographs collected aboard C.S.S. HUDSON on the Mid-Atlantic Ridge during 68-022 cruise.

UNION GEODESIQUE et GEOPHYSIQUE INTERNATIONALE -

83 - Chronique n°88, p.373-384, Novembre 1972.

84 - Chronique n°89, p.385-448, Décembre 1972.

85 - Chronique n°90, p.449-512, Décembre 1972.

86 - GRAFAREND E. - "Nichtlokale Gezeitenanalyse".
Mit. Inst. Theor. Geod., Univ. Bonn, n°13, 14 S, 1973.

The classical analysis of Earth tides measurements is based on local harmonic or disharmonic effects. Here we present a nonlocal concept to analyze on a global scale measurements of different tides stations en bloc. ...

87 - SCHULLER K. & B.S. SCHULZ - "Die Anwendung der Prädiktion auf periodische Prozesse, eine Methode zur Überbrückung von Lücken in der Erdgezeitenregistrierung".
Mit. Inst. Theor Geod., Univ. Bonn, n°14, 17 S, 1973.

A method is proposed of how to bridge missing observations in Earth-tides records by least squares prediction.

88 - BIRO P. - "Der Einfluss von zeitlichen Anderung des Erdschwerefeldes auf die Höhe von Nivellementsfestpunkten".
Mit. Inst. Theor. Geod., Univ. Bonn, n°12, 12 S, 1973.

Time changes of the gravity as observed at the zeropoint of individual levelling nets are considered for the purpose of computing elevations. Herewith the Earth's elasticity is to be taken into account under the condition that the values of the Love-numbers are known. Subsequently another case is discussed with two or more of such absolute-stations within one levelling net where the secular changes of gravity have been measured with the utmost precision.

89 - BUSCHMANN E. - "Zu Stellung, Aufgaben und Problemen der geodätischen Forschung".
Vermessungstechnik, 20 jg, H. 8, S.281-284, 1972.

90 - KNEISSL M. - "Bericht über die Arbeiten 1971 des Sonderforschungs-bereiches 78 Satellitengeodäsie".
Veroff. Bayer. Komm. Int. Erdmessung, Astr. Geod. Arbeiten, H.n°29, 38 S, München, 1972.

91 - FAJNOR S. - "Der Diskretisationsfehler und sein Einfluss auf die Messresultate".
D.G.K., Reihe A : Höhere Geod., H.n°72, 54 S, München, 1972.

92 - RODDE A. - "Simultanbestimmungen der Lotabweichungskomponenten ξ und η mit dem Prismenastrolabium". (IX).
D.G.K., Reihe B : Angew. Geod., H.n°154, 119 S, Frankfurt, 1971.

The author carried out astronomical observations for the simultaneous determination of longitude and latitude on 23 stations of the West-German section of the European network of primary triangulation and on the satellite observing station Klopenheim of the Institut für Angewandte Geodäsie, Frankfurt/Main. From these observations he computed the components ξ and η of the deflection of the vertical for the stations of the primary triangulation.

93 - RODDE A. - "Simultanbestimmungen der Lotabweichungskomponenten ξ und η mit dem Prismenastrolabium". (VIII).
D.G.K., Reihe B : Angew. Geod., H.n°177, 71 S, Frankfurt, 1971.

The author carried out astronomical observations for simultaneous determination of longitude and latitude on 15 stations of the West-German section of the European network of primary triangulation. From these observations he computed the components ξ and η of the deflection of the vertical.

94 - GOTTSCHALK H.J. - "Versuche zur Definition des Informationsgehaltes gekrümmter kartographischer Linienelemente und zur Generalisierung". D.G.K., Reihe B : Angew. Geod., H.n°189, 92 S, Frankfurt, 1971.

The information content of a curved line is determined by means of Fourier analysis and sampling theorem of information theory or by a curvature analysis. Several methods of automatic generalization of line information are investigated by means of contour lines taken from a topographical 1:50000 scale map.

96 - KNORR H. - "Ein Automationssystem für die Herstellung und Fortführung topographischer Karten".
D.G.K., Reihe B : Angew. Geod., H.n°192, 28 S, Frankfurt, 1972.

Author examines the different phases of work for the preparation and revision of topographic maps with regard to their suitability for the use of electronic data processing. As to data acquisition, the procedures are distinguished by survey maps and derived maps. The author describes the instruments for digitizing, data output, data processing, and data recording which are available for this task. He gives a selection of the tests which so far have been performed at the Institut für Angewandte Geodäsie.

97 - KIEFER L. - "Die Berücksichtigung der Ellipsoidgestalt der Erde in der Flugnavigation".
D.G.K., Reihe C : Dissert., H.n°166, 115 S, München, 1971.

102 - BIALAS V. - "Der streit um die Figur der Erde, zur Begründung der Geodäsie im 17, und 18 Jahrhundert".
D.G.K., Reihe E : Gesch. Entw. Geod., H.n°14, 39 S, München, 1972.

In the present paper the development of Geodesy, from 1670 until nearly 1750, is expounded on the basis of the main publications. This period, famous for its controversy about the figure of the Earth, was very important for the foundation of modern Geodesy. Following their traditional procedures the geometers overrated the precision of the results. On the other side the physicists, above all Newton and Huygens, were developing their own procedures in determining the figure of the Earth. The results were contradictory, and seemed not clear enough to prove, if the Earth is an oblongum or an oblatum. In this situation, also politically rather confused after the culmination of absolutism, two expeditions were started to the northern polarcircle and to the equator. The new measurements of the meridians refuted Cassini and verified Newton's theory. Henceforth geometers and physicists have had to work commonly in the exact determination of the figure of the Earth. Just this synthesis, to which also Clairaut considerable contributed, made possible the formation of modern Geodesy.

103 - SOCIETE HELVETIQUE des SCIENCES NATURELLES - Procès verbal de la 118ème séance de la Commission Géodésique Suisse tenue au Bernerhof à Berne le 10 Juin 1972, avec des extraits des rapports sur l'activité de l'année 1971.
53 p, 1973.

104 - SCHWEIZERISCHEN GEODATISCHEN KOMMISSION - Astronomisch-geodätische Arbeiten in der Schweiz.
Bestimmungen von astronomischen Längen, Azimuten und Breiten in den Jahren 1965 bis 1970, Band 29, 118 S, Zurich, 1971.

105 - HYDROGRAPHIC DEPARTMENT - "Bathymetric magnetic and gravity investigations HMS Owen 1962-1963".
Admiralty Marine Sci., Pub. n°9, Part 1, 19 p, London, 1966.

ACADEMIE des SCIENCES U.R.S.S. - Références bibliographiques : Géophysique. (texte russe).

106 - n°6, 195 p, Moscou, 1972.

107 - n°7, 235 p, Moscou, 1972.

108 - n°8, 257 p, Moscou, 1972.

109 - n°12, 213 p, Moscou, 1972.

110 - ACADEMIE des SCIENCES U.R.S.S. - Références bibliographiques : Géophysique, index des articles 1971. (texte russe).
147 p, Moscou, 1972.

111 - ACADEMIE des SCIENCES U.R.S.S. - Références bibliographiques : Géophysique, index des auteurs 1971. (texte russe).
272 p, Moscou, 1972.

112 - ACADEMIE des SCIENCES U.R.S.S. - Références bibliographiques : Sér. 52 - Géodésie et Astronomie, index des auteurs, 1971.
43 p, Moscou, 1972. (texte russe).

113 - ACADEMIE des SCIENCES U.R.S.S. - Références bibliographiques : Sér. 52 - Géodésie et Astronomie, index des articles, 1971.
108 p, Moscou, 1972 (texte russe).

ACADEMIE des SCIENCES U.R.S.S. - Références bibliographiques : Sér. 52 - Géodésie et Astronomie. (texte russe).

114 - n°12, 44 p, Moscou, 1972.

115 - n°1, 51 p, Moscou, 1973.

116 - n°2, 43 p, Moscou, 1973.

117 - SIMON Z. - "Die Wärmeabgabe zwischen dem Gravimeter und Aussenmilieu". Inst. Geophys. Acad. Tchecosl. Sci., Trav. Geophys., t.XVI, n°320, p.35-50, Prague, 1970.

The following temperature tests were carried out with the gravimeters Canadian n°174 G and GAK-PT n°5237 : constant ambient temperature, change of the ambient temperature at a jump, sinusoidal variation of the ambient temperature and linear variation of the ambient temperature. The instrument drift versus the temperature has been derived. The results of the tests were compared with the theory of heat exchange between the gravimeter and the environment. As a result of unsatisfactory agreement, a more accurate theory was presented in Chap. 4. Its applicability was tested by means of an internal thermometer in the GAK-PT gravimeter. However, as regards a full explanation of the temperature response of a gravimeter, it is also necessary to explain temperature hysteresis and the dynamic temperature differences in the measuring system.

118 - PICK M. & M. MARVANOVA - "Elimination of the non linearity of the sharpe gravimeter scale".
Studia Geophys. & Geod., v.16, n°3, p.292-296, Prague, 1972.

A new method for calibrating the sharpe gravimeter was derived in order to eliminate the non-linearity of the scale.

119 - SCHULZ B.S. - "Die schrittweise Spektralausgleichung, eine Methode zur Erdgezeitenanalyse".
D.G.K., Reihe C : Dissert., H.n°184, 121 p, München, 1972.

120 - SCHNÄDELBACH K. - "Berechnung der geodätischen Linien durch konforme Abbidung des Ellipsoids auf die Kugel".
D.G.K., Reihe C : Dissert., H.n°185, 69 S, München, 1972.

121 - BÖHLER W. - "Uber die Satellitenbeobachtungen des deutschen Messtrupps im Weltnetz des USC & GS".
D.G.K., Reihe C : Dissert., H.n°182, 78 S, München, 1972.

122 - WOLF H. - "Lokale gravimetrische Bestimmung von Schwere-Horizontalableitungen".
D.G.K., Reihe B : Angew. Geod., H.n°194, 94 S, München, 1972.

123 - WALCOTT R.I. - "Late quaternary vertical movements in Eastern North America : quantitative evidence of glacio-isostatic Rebound".
Reviews of Geophys. & Space Physics, v.10, n°4, p.849-884, 1972.

From 18,000 to 6500 years ago the ice sheets covering North America melted, and sea level rose almost 100 meters. Since that time, sea level has remained almost constant, but the Earth has not yet completed its adjustment to the removal of the ice load. In the center of the uplifted region the ground has risen 138 meters in the last 6000 years and is rising at a rate of 2 ± 0.5 cm/yr today ; there may be another 300 ± 120 meters of vertical motion left before isostatic equilibrium is reached. This review collects the evidence of vertical movements in northern and eastern North America from different sources and disciplines to provide in one publication the quantitative data important for geophysical analyses of glacio-isostatic rebound. The paper covers evidence from the area of uplift and the peripheral zone of submergence and from the past movements and instrumentally recorded recent trends, provides a discussion of the eustatic rise in sea level, and gives an updated free-air gravity anomaly map of the deglaciated region.

124 - WOLF H. - "Zum 65. Geburtstag von Max KNEISSL".
D.G.K., Reihe E : Gesch. & Entw. der Geod., H.n°15, 38 S,
München, 1972.

125 - GRAFAREND - "Genauigkeitsmasse geodätischer Netze".
D.G K., Reihe A : Theor. Geod., H.n°73, 38 S, München, 1972.

126 - BEHLE A. - "Modellseismische Untersuchung des Systems aus Rayleighwelle und Scherwelle an der Oberfläche des elastischen Halbraumes bei verschiedenen Herdtiefen".
Hamburger Geophysikalische Einzelschriften, H.16, 66 S,
Hamburg, 1972.

Model seismic experiments have been carried out using ultrasonic techniques on a thin aluminium sheet (σ 0.25) as a two-dimensional model of an elastic half-space. An upward vertical force has been applied at five different depths $2.5 \leq H \leq 15$ cm from the free model edge to investigate the behaviour of the Rayleigh vave with varying focal depth. In order to observe also the birth of the Rayleigh pulse as predicted by NAKANO (1925), epicentral distances x have been chosen rather small : $0 \leq x \leq 30$ H.

The model seismograms have been tape-recorded and digitalized for data processing on a computer. Seismograms, amplitude spectra and hodographs of displacement are presented.

127 - DEFENSE MAPPING AGENCY, AEROSPACE CENTER - Quarterly accession list, 1 Jan. - 31 Mar. 1973.
DoD Gravity Library, 6 p, Saint-Louis, 1973.

128 - LAGRULA J. - "Sur le compartimentage de la Terre en éléments de même surface facilitant l'emploi des fonctions sphériques".
C.R. Acad. Sci. Paris, t.272, Sér. B, p.553-556, Mars 1971.

On propose un système international de compartimentage en éléments ayant rigoureusement la même surface sur la sphère de référence. Il serait possible, un peu plus compliqué, mais superflu (en géophysique) d'obtenir l'égalité des surfaces sur un ellipsoïde de révolution.

129 - LAGRULA J. - "Sur les corrections topographiques, géologiques et isostatiques".
C.R. Acad. Sci., Paris, t.272, Sér. B, p.816-820, Mars 1971.

Le traitement mathématique de la gravimétrie (fonctions sphériques, méthodes de Stokes, Molodensky, etc) exige une régularisation assurée par de laborieuses corrections topographiques, tenant compte des densités les plus plausibles, parfois même de la compressibilité de l'eau de mer. Les corrections isostatiques, très simples, fournissent les anomalies les plus régulières, réduites, par de judicieuses corrections géologiques, à un faible effet indirect et aux attractions des "structures" subcrustales.

131 - LAGRULA J. & J.M. LUBART - "Equal area blocks : a practical solution for the sphere and the ellipsoïd".
B.G.I., Bull. Inf. n°29, p.1.14-1.20, Juillet 1972.

Our blocks are limited by means of meridians and parallels with variable amplitude for longitude and latitude : it is a compromise between the continuity of the shape of the blocks and the easy use of the maps. The blocks are of strictly equal area for the sphere or for the ellipsoïd.

132 - LORIUS C., G. ROUILLON & F. HELLY - "Détermination des épaisseurs de glace par une méthode gravimétrique simplifiée - Terre Adélie, Campagnes d'été 1964-65 et 1965-66".
Expl. Pol. Fr., Pub. n°295, 35 p, Paris.

During the 1964-65 and 1965-66 summers in Adélie Land, a gravimetric prospection was carried out in the vicinity of Cape André Prud'homme, during which the thickness of the ice was measured by a simplified method based upon the differences between the values of g found at various measurement sites from that at a given reference point.

Contours were then prepared of the surfaces of the bed rock and of the overlying ice. A sounding core check of the ice made at two places where the calculations indicated it to be about 100 metres thick showed the satisfactory accuracy of ± 5 %.

133 - SANCHEZ R.N. - "The reference surface for South America".
Inst. Geog. Militar, Revista Cartog., Año XX, n°21, p.117-129, Buenos Aires, 1971.

The interesting contribution published by the Pan American Institute of Geography and History "The South American Geoid Referred to the Various Reference Systems" by Dr. I. FISCHER (n°352.2 of the Cartographic Commission and Cartographic Review n°18) explains the excellent work done by the working group on the South American datum. Here thereunder it is first intended to complete the explanation of some of the Author's computation procedures and second to clear up some controvertible points.

134 - INSTITUTO PANAMERICANO de GEOGRAFIA e HISTORIA - Curso de Hydrografia de los Paises Americanos".
Com. Cartog., Pub. n°346, 16 p, Buenos Aires, 1972.

135 - MAKRIS J., H. MENZEL & J. ZIMMERMANN - "A preliminary interpretation of the gravity field of Afar, Northeast Ethiopia".
Tectonophysics, v.15, n°1-2, p.31-39, 1972.

All existing gravity data in Afar, northeast Ethiopia, were uniformly reduced to Bouguer values and were compiled into a map of 10 mGal isogals. Five crustal models crossing Afar E-W were calculated. The results obtained were as follows :

In south Afar the crust is most probably of the continental type, slightly attenuated. Along the Wonji fault belt a series of relative maxima is built as a continuation of the Ethiopian Rift in Afar. The crust at the eastern edge of the Ethiopian Plateau is approximately 30 km thick and is strongly attenuated under the Wonji fault belt which is underlain by material of low velocity and density. Towards the Aisha horst the crust increases again to a thickness of approximately 20 km. The trends of the field are closely connected to the directions of the escarpments.

In north Afar the crust is very strongly attenuated and partly oceanized. The trend of the gravity field is parallel to that of the southern Red Sea and strikes NNW-SSE. South of 13°N this trend changes to NW-SE and seems to be the continuation of the Gulf of Aden. The Danakil mountains separate the Danakil depression from the Red Sea. They consist of sialic crust, which has been rotated in an anticlockwise direction and most probably are isostatically uncompensated.

136 - FLEISCHER U., A. KORSCHUNOW, G. SCHULZ & P.R. VOGT - "Eine gravimetrische und erdmagnetische Vermessung des südlichen Reykjanes-Rückens mit F.S. "Meteor" 22.4 - 9.6.1966, Endgültige Auswertung der Forschungsfahrt n°4".
Meteor Forsch. Ergebnisse, Reihe C, n°13, S. 64-84, 1973.

Research cruise n°4 of R.V."Meteor" investigated the crest and upper flanks of the southern Reykjanes Ridge, in the region bounded by 52°15'N, 56°45'N, 33°W, and 37°W. Tracks spaced about 20 nm were laid out on a north-south and east-west grid. The final smoothed track plot achieved acceptable relative accuracy, despite the poor navigational control.

The median rift valley, not found on the Reykjanes Ridge north of 57.5°N, begins to be a well defined feature between 53.5°N and 54.5°N. In the survey area, free-air anomalies are entirely positive with a mean of + 60 mGal. The anomaly pattern mirrors sea-floor topography. A low ($<$ + 40 mGal), associated with the rift valley trends north along 35°15'W from 53°20'N to 54°20'N. Less pronounced ($<$ + 60 mGal) it can be followed as far north as 56.5°N. Some more transverse positive ($>$ + 80 mGal) and lower ($<$ + 50 mGal) free-air anomalies trend east between 54°N and 56°N and a parallel low ($<$ 0 mGal) lies just to the south, coinciding with the Charlie Fracture Zone at 52°45'N. In contrast to our results, TALWANI et al. (1971) found relatively positive zones of free-air anomalies over the ridge axis, and parallel to it, at a morphologically smoother part of the ridge, north of 59°N.

The dependence between water depths and free-air anomalies yields an average of 2.3 g/cm^3 without, and 2.6 g/cm^{-3} with topographic correction. This value as well as the positive free-air anomalies alone evidences a small amount of isostatic compensation. Bouguer anomalies have been calculated with three-dimensional topographic correction for standard density of 2.67 g/cm^{-3} and for "true" density determined from rock samples of 2.90 g/cm^{-3}. In both cases, a slope of regional negative Bouguer values, centered on the ridge axis, points to a material in greater depths which is lighter than the normal mantle material ("root"). Similar gravimetric and seismic results, respectively, were obtained by M. TALWANI et al. (1965) south, and K. ARIÇ (1970 and 1972) north of the survey area. A thick layer of low density material under the axis may be partially molten ultrabasics ascending into the rift axis as part of the sea-floor spreading process.

The rift axis is characterized by magnetic anomalies of + 1000 to 1500 gamma amplitudes. A lineation pattern, symmetrical about the rift axis, is approximated by the model profiles computed from the standard HEIRTZLER reversal chronology and 1.12 cm/year spreading half-rate in the 095° T direction of relative motion between the Europe and Americas plates. The same rate, within measurement error, was found by HEIRTZLER et al. (1968) on the northern part of the Reykjanes Ridge.

The decay of anomaly amplitude away from the spreading axis suggests a 50 % reduction in magnetization intensity, or a similar reduction in thickness of the magnetized layer, in the first 5 my of crustal age. The former explanation is more probable ; a similar decay is found elsewhere (VOGT et al. 1970). A significant finding is that the spreading axis as well as the anomaly pattern at least back to 5 mybp is not straight like the northern Reykjanes Ridge. In contrast to the physiographic interpretation of HEEZEN who shows transverse fractures perpendicular to and offsetting the rift valley, the axis is broken into oblique sections of the order 100 km long. Spreading rates normal to these sections range from 0.97 to 1.10 cm/year. The present irregular shape of the axis was formed in the late Tertiary, some time prior to 5 mybp but after 30 mybp. A similar irregular trend, discovered from detailed surveys between 48° and 50°N, was created about 20 mybp (JOHNSON & VOGT, 1972).

137 - FROLOV A.I. - "Antarctica continent as it appears from geophysical investigation data".
Acad. Sci. USSR, Soviet Geophys. Com., 84 p, Moscow, 1971.

According to the data of gravimetric, seismic and hypsometric measurements the analysis were conducted as regards the structure of the subglacial relief, gravity field, forms of the geoid surface, isostasy and structure of the Earth's crust of the Antarctic continent.

By comparison of results of repeated determinations and analysis of correlations between the anomalies and effective heights considerable systematic errors in heights and anomalies were detected and discharged on some areas.

The book presents corrected maps-schemes of gravity anomalies, rock relief heights, geoid heights, deviations of the plumbline and crustal structure.

The presence of high mountainous massifs and their marginal deep subsidences and numerous crustal faults both on the periphery of the continent and in the central areas is the characteristic peculiarity of the structure of the sub-glacial relief of Eastern Antarctica. In the marginal zone the system of faults of the sub-latitude and sub-meridional direction forms the block structure of mountains. The deep subsidence of the sub-latitude direction forms a trough which is traced along the whole coast of Eastern Antarctica.

Eastern Antarctica is not a single massif. It is a group of large mountainous islands divided by deep and extensive depressions reaching 2000 m in depth.

According to preliminary data the average height of rocks is 300 - 400 m. The average thickness of the glacier is about 1.9 km.

The peculiarity of the gravity field of Antarctica is the domination of intensive positive anomalies with reduction in the free-air and isostatic anomalies in the marginal zone of the continent, and relatively weak positive and negative regional anomalies in interior mountainous areas. Only on the Wilkes Land and on the Victoria Land from the Oates Coast to the Southern Pole, especially in the region of deep intermountain depressions, considerable negative anomalies were obtained. This area of negative anomalies is the only region showing compensation of large positive anomalies of the marginal zone and of the central mountain parts.

The positive isostatic anomalies clearly dominate on the continent, which indicates to the absence of compensation even in the regional plan. The degree of compensation of the continent is evaluated as 85 %, however many large regions are far from being in the state of equilibrium.

Intensive positive anomalies with reduction in the free-air and the isostatic anomalies in the marginal and shelf zone are evidently caused by the subsidence of the crust in the central regions of glaciation and displacement of the subcrustal masses. Extensive belts of negative anomalies in the intermountain valley of Eastern Antarctica are caused both by deep processes in the mantle, creating a general negative background, and by the presence of deep subsidences and a thick layer of sedimentary rocks with small density.

The heights of the geoid in Antarctica in relation to the spheroid with compression 1/298,2 change from - 38m in the region of the Wilkes Land to + 32m in the region of the Enderby Land. In relation to the spheroid, corresponding to the normal Cassinis formula of 1930, which allows to calculate the anomalies, ($\alpha = 1/297$) the surface of the geoid is everywhere higher, from 5 to 70 m. Thus the fields of positive anomalies in case of reduction to the geoid are increased.

The deviation of the plumb-line on the studied parts reached 19".

The thickness of the crust in Eastern Antarctica changes from 30 - 33 km to 45 - 54 km, while in Western Antarctica it varies from 28 - 30 km to 40 - 45 km. Thus the crust in Eastern Antarctica is typically continental, whereas in Western Antarctica it somewhere approaches to that of the sub-continental type.

The densities of rocks forming the upper crustal layers, according to the geophysical studies, change from 1.9 to 3.1 g/cm^3. The average density in Eastern Antarctica is 2.69 ± 0.03 g/cm^3, and in Western Antarctica it is 2.59 ± 0.03 g/cm^3.

138 - ACADEMY of SCIENCES of the U.S.S.R. - Geophysical Bulletin n°23, 94 p, Moscow, 1971.

139 - BARANOV E.I., V.A. BUBNOV, R.P. BULATOV & I.V. PRIVALOVA - "Researches of circulation and transfer of waters of Atlantic Ocean". Acad. Sci. USSR, Soviet Geophys. Com., Ocean. Res. n°22, 286 p, Moscow, 1971.

140 - BALAKINA L.M., A.V. VVEDENSKAYA, N.V. GOLUBEVA, L.A. MISHARINA & E.I. SHIROKOVA - "Field of the Earth's elastic stresses and mechanism of earthquake Foci". Acad. Sci. USSR, Soviet Geophys. Com., Seism. n°8, 192 p, Moscow, 1972.

- Earthquake focal mechanics.
- Technique of earthquake focal mechanism determination
- Comparison of results of focal mechanism determination with the observed faults in epicenter zone on the examples of several great earthquakes.
- Geographical distribution of earthquake Foci.
- The crustal and upper mantle stress field of the marginal zone of the Pacific Ocean from the results of earthquake focal mechanism studies.
- Stress pattern and probable motion in the earthquake Foci of the Asia-Mediterranean seismic belt.
- Stresses in the earthquake Foci of the Arctic Atlantic seismic belt.
- Stresses in the earthquake Foci of the Mongolia-Baikal seismic zone.
- Field of elastic stresses of the Earth.
- Theoretical curves of the SV and SH nodal lines.

141 - MALOVITSKY Ya P. & Yu. P. NEPROCHNOV and others ... - "Structure of the Western part of the Black Sea depression". Acad. Sci. USSR, Soviet Geophys. Com., Upper Mantle n°10, 242 p, Moscow, 1972.

The Black Sea Geophysical Expedition, organized jointly by the Academy of Sciences of the USSR and the Ministry of Geology and with the participation of the Moscow State University, has carried out in 1966 complex geophysical researches of the Earth's crust in the western part of the Black Sea. Deep seismic sounding was concentrated on three profiles ; submeridional (KHERSON-cape, KEFKEN), sublatitudinal on the shelf (ZMEINY 1-cape TARKHANKUT) and sublatitudinal in the deepwater depression. The Expedition studied the structure of the Earth's crust in the major tectonic zones of the region : southern margin of the Russian Platform, the zone of Ante-Black Sea subsidences, the Scythian platform, the transition zone and the deepwater depression.

The shelf region is characterized by the continental type of the crust. Here the refracting boundaries are revealed with velocities 2,8 - 3,0 (base of the Neogene) ; 5,4 - 5,6 (upper layer of the Cretaceous deposits) ; 6,4 - 6,6 (surface of foundation) ; 6,7 - 6,8 (the Conrad surface) and 8,0 - 8,2 km/sec (the Mohorovicic discontinuity). These boundaries are located at the depths of 1-2, 3-4, 8-12, 15-17, 30-35 km correspondingly. A more precise determination of the position of the ancient Russian and young Scythian platforms has been made. This zone is characterized by a system of deep faults, by a gravity ledge, by a magnetic maximum and by a change in the character of deposition of folds. In the zone of conjugation between the Russian and the Scythian platforms a deep tectonic depression has been formed by thick (up to 10-11 km) layer of sedimentary rocks with the Neogene, Paleogene, Cretaceous and, perhaps, Jurassic - Triassic and Paleozoic (?) deposits. The sedimentary layers are complicated by a sloping folding. In the northern part of the continental slope a large deep fault is found which is manifested on all boundaries of the divide as a sudden anomalous zone of seismic records. The region of the continental slope has a transitional type of crust : a suddent increase (up to 10 km) of the sedimentary layer is observed, as well as the complex relief of the refracting boundaries, uplift of the M discontinuity and of the overlying layer towards the depression.

The deepwater depression is classified as belonging to the suboceanic type of the Earth's crust. The M discontinuity is located at the depth of 18 km. The thickness of sediments reaches 12 km. On the depth of about 4 km below the surface of the bottom a layer has been recorded with the boundary velocity 4 km/sec. The deposition of all the boundaries of the divide in the crust of the region is practically horizontal.

142 - WORLD DATA CENTER B 1 - U.S.S.R. - Catalogue of publications received by WDC B1 between July and December 1969, Longitudes and Latitudes, Seismology, Gravimetry, Geodesy, Upper mantle, Geology, Volcanology.
n°22, 30 p, Moscow, January 1970.

143 - WORLD DATA CENTER B 1 - U.S.S.R. - Catalogue of publications received by WDC B1 between July and December 1969, General and Periodicals.
n°22, 21 p, Moscow, 1970.

144 - WORLD DATA CENTER B 1 - U.S.S.R. - Catalogue of publications received by WDC B1 between January and June 1971, Longitudes and Latitudes, Seismology, Gravimetry, Geodesy, Upper mantle.
n°25, 41 p, Moscow, 1971.

145 - WORLD DATA CENTER B 1 - U.S.S.R. - Catalogue of publications received by WDC B1 between January and June 1971, General and Periodicals.
n°25, 23 p, Moscow, 1971.

146 - ACADEMY of SCIENCES of the U.S.S.R. - "The Earth crust of the Island arcs and Far East Seas".
Soviet Geophys. Com., Upper Mantle n°9, 239 p, Moscow, 1972.

a) BELIAEVSKY N.A. & A.G. RODNIKOV - "The island arcs of the Far East". p.5-26.

The paper presents a comparative characteristic of island arcs of the Far East. The island arcs are considered as morphologically expressed in the form of island ranges structures, which were formed during the Cenozoic stage of the tectogenesis. They were deposited on the heterogeneous foundation created during different stages of the geosynclinal development of which the most ancient is the Baikal (Japan) and the youngest is the Mesozoic (the Kuril Island arc). Island arcs unite crustal complexes with different structure into single structures, which are characterized by general tectonic processes active not only in the crust but in the upper mantle of the Earth as well.

b) GAINANOV A.G., E.N. ISAEV, P.A. STROEV & S.A. USHAKOV - "Isostasy and deep structure of the crust in the transition zone from the north-eastern part of the Asiatic continent to the Pacific Ocean". p.27-42.

The analysis of gravity anomalies of the Bouguer reductions and of the isostatic anomaly in complex with other geological geophysical researches allowed to determine in the Bering, Okhotsk Seas and in the Sea of Japan the major geoblocks characterized by deep structure of the crust and upper mantle. The characteristic peculiarity of the Japanese and Okhotsk regions is the domination of positive isostatic anomalies, probably caused by a somewhat increased density of the upper mantle. In the Japanese region a certain part of positive isostatic anomalies is caused, probably, by insufficiently complete compensation of the sedimentary cover. The faults with different depth of deposition were determined and traced, as well as the continuation of certain geological structures of Corea and Primorye within the shelf and continental foot.

c) PAVLOV Yu.A., P.M. SYCHEV, I.K. TUEZOV, A.I. GAINANOV & P.A. STROEV- "Anomalous gravity fields of the Far East seas and the north-western part of the Pacific Ocean".
p.43-50.

The article describes the anomalous gravity fields in the Faye and Bouguer reductions within the aquatories of the Okhotsk and Bering seas and the Sea of Japan, and adjoining parts of the Asiatic continent and Pacific Ocean. The paper presents a comparison between the gravity field and the geological structure of the region and analyses the dependence of gravity anomalies on crustal structure.

d) KROPOTKIN P.N. - "Character of the tectonic processes of the island arcs of the Far East".
p.51-67.

The paper analyses the major peculiarities of structure of island arcs of the Far East. It has been established that all the arcs have the ancient (Pre-Tertiary or Pre-Mesozoic) granitemetamorphic complex of the basement and are characterized by common features of the geological development. Their formation in the modern form is caused by crustal movements, which correspond to subcrustal compensation currents determined in the transition zone from the continent to the ocean.

e) ISAEV E.N., S.A. USHAKOV & A.G. GAINANOV - "Geophysical data of the regularities of the crustal structure in the northern part of the Pacific transition zone".
p.69-82.

The paper presents a complex analysis of the avaialble geophysical data with the purpose of determination of the basic regularities of structure of the northern part of the Pacific transition zone. A connection is established between the morphology of the anomalous magnetic field with the general structural plan of the Earth's crust. The presence of the regional positive isostatic anomalies is caused by the density inhomogeneities of the mantle. The data of geophysical researches of island arcs give evidence about the general deep processes which have caused their formation.

f) GAINANOV A.G. - "The deep structure of the crust of the south-western part of the Pacific transition zone".
p.84-92.

On the basis of a complex interpretation of geophysical data (gravimetric, magnetic, seismic) and geological-geomorphological data on the transition zone from Australia to the Coral and Tasman marginal seas, island arcs and the adjoining parts of the Pacific Ocean the sub-latitudinal and sub-meriodinal zonality has been revealed in the crustal structure. The thickness of the crust varies from 35 km in Australia to 5 km in the Tasman and Coral Seas. Superpositions are possible of the rift type structures on the arc structures. The whole area of the south-western sector of the Pacific transition zone is intersected by two fault systems. The first fault system is mainly of the north-eastern south-western strike and it is probably caused by horizontal stresses in the crust and mantle generated mainly by the rift structures of the Middle Antarctic, Indian and Pacific, Antarctic Ridges. The second fault system is mainly of the north-western south-eastern strike and it is caused, probably, by the effect of the rotation forces.