

UNION RADIO - SCIENTIFIQUE INTERNATIONALE

International Scientific Radio Union

U. R. S. I.

BULLETIN MENSUEL

MONTHLY BULLETIN

OCTOBRE 1938

OCTOBER 1938

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INFORMATIONS

1.- PUBLICATION DU COMPTE-RENDU DE L'ASSEMBLEE GENERALE 1938 :

Nous invitons Messieurs les Présidents des Comités Nationaux à communiquer aux Membres de l'U.R.S.I. les conditions de publication et de vente du Compte-Rendu de l'Assemblée Générale de Venise (Volume V).

Le Volume se composera de deux fascicules :

- le premier fascicule, contenant plus de cent mémoires dont un grand nombre n'a jamais été publié, sortira de presse très prochainement;
- le deuxième fascicule contiendra le compte-rendu des séances et la partie administrative.

Le prix de vente du Volume est fixé à 150 francs belges (30 belgas) pour les Membres de l'U.R.S.I.

Après le 1er Janvier 1939, le Volume sera mis en vente dans le commerce au prix de 200 francs belges (40 belgas)

Nous invitons les Membres à nous renvoyer le plus rapidement possible les bulletins de souscription insérés dans ce Bulletin Mensuel.

1.- Publication of the Proceedings of the General Assembly:

The Proceedings are to be published in two fascicules:

- fascicule 1 : papers presented to the General Assembly .
- fascicule 2 : proceedings of meetings and administrative details.

The price of the Volume is fixed for the Members of the U.R.S.I. to 150 Belgian francs (30 Belgas).

The Members of the U.R.S.I. are requested to address to the General Secretary's Office as soon as possible the subscription forms.

2.- BULLETIN MENSUEL:

A partir du 1er Janvier 1939, le Secrétariat Général mettra à la disposition des Comités Nationaux trois exem-

2.- MONTHLY BULLETIN:

From January 1, 1939, the General Secretary's Office shall put to the disposition of the National Committees three co-

-plaires du Bulletin par unité statutaire.

Les Comités Nationaux désireux de recevoir un plus grand nombre de Bulletins sont priés de s'adresser au Secrétariat Général qui fournira des abonnements supplémentaires au prix unitaire de 60 francs belges (12 belgas) par an.

-pies of the bulletin per statutory unit.

National Committees wishing to receive more copies are requested to inform the General Secretary's Office. The supplementary copies are furnished at the annual price of 60 Belgian francs (12 belgas) per copy.

3.- DOCUMENTATION :

Le Centro Volpi di Elettrologia à Venise édite depuis le mois de Février 1938, un Bulletin ayant pour but de faire connaître les recherches effectuées en Italie dans le domaine de l'électricité.

Tout ce qui paraît en Italie dans les domaines des sciences se rattachant à l'électricité est publié en résumé dans ce Bulletin, rédigé en plusieurs langues.

Les résumés sont présentés sous une forme permettant de les classer dans un fichier, ils sont imprimés sur un seul côté de chaque feuille, leur verso porte le texte italien.

Les Membres de l'U.R.S.I. désireux d'obtenir de plus amples renseignements sur le Bulletin sont invités à s'adresser au Centro Volpi di Elettrologia, Palazzo Vendramin, Venise, en se recommandant du Secrétariat Général de l'U.R.S.I. et en mentionnant la langue dans laquelle ils désirent obtenir un exemplaire du Bulletin.

D O C U M E N T S

COMITE NATIONAL ALLEMAND

N° 517 : Beobachtungen über kurzezeitiges Aussetzen im Kurzwellen-Funkdienst vom 14.2.1936 bis 31.7.1937.

COMITE NATIONAL AMERICAIN

N° 518 : URSIGRAMS - U.S. Revised Code

COMITE NATIONAL FRANCAIS

N° 519 : Renforcement des atmosphériques et évanouissements brusques pour la période du 1er au 30 Septembre 1938.

Évanouissements signalés par les Ursigrammes Japonais en Août 1938.

COMITE NATIONAL JAPONAIS

N° 520 : URSIGRAMS - Japanese Code

COMITE NATIONAL ALLEMAND

DOCUMENT N° 517

BEOBACHTUNGEN UBER KURZZEITIGES AUSSETZEN IM

KURZWELLEN-FUNKDIENST

vom 14.2.1936 bis 31.7. 1937

Les moyens matériels dont dispose le Secrétariat Général ne permettant pas la publication du susdit document dans le Bulletin Mensuel, le document complet est publié en Annexe au présent Bulletin.

COMITE NATIONAL AMERIQUE

DOCUMENT N° 518

U.R.S.I.G.R.A.M.S

U.S. REVISED CODE (1)

(Science Service Research Aid Announcement, n°475, Aug. 15, 1938)

Cooperating with the American Section of the International Scientific Radio Union, Science Service collects daily data on terrestrial magnetism, the solar constant, sunspots, and other phenomena, in order that they may be distributed by radio and other means to those interested.

The United States Navy by giving radio transmission to the daily cosmic data message, the United States Army by transmitting by radio to Washington data from outlying points, the United States Coast and Geodetic Survey by furnishing magnetic data, the Mount Wilson Observatory of the Carnegie Institution of Washington by furnishing sunspot data, the Astrophysical Observatory of the Smithsonian Institution by furnishing solar constant values, the National Bureau of Standards by furnishing Kennelly-Heaviside layer heights, participate actively and fundamentally in the project.

Transmission schedule : The Ursigrams in code described are transmitted by radio-telegraphy, using International Morse Code, daily including Sunday from Navy radio station, NAA, Arlington, at 22:30 Greenwich time (5:30 p.m., Eastern Standard Time) on frequency of 9250 kilocycles at all times, plus the addition of 4390 kilocycles from November 1 to March 31, inclusive, also from Naval Radio Station, San Francisco, at end of 02:18 weather broadcast, usually about 03:10 GCT, on 32.8, 113, 9090 and 12540 kcs; by Wide World Broadcasting Foundation's WIXAL, Boston, Mass., in plain English by voice Mondays through Fridays on 11.79 mgc. at 21:55 GCT (4:55 p.m. EST).

Time used : Greenwich time, reckoned from midnight, is used in the Ursigrams. This is variously known as Greenwich Mean Time (G.M.T.), Greenwich Civil Time (G.C.T.), Universal Time, Weltzeit, etc. It is the time used by astronomers

(1) Reprints may be obtained by request at the General Secretary's Office in Brussels.

throughout the world since 1925 when they changed the astronomical day so that it begins at midnight instead of at noon. Noon or 12:00 Greenwich Time is 7 a.m. United States Eastern Standard Time, etc.

Code used : The letters URSI are the distinguishing sign at the beginning of the cosmic data message. URSI are the initials of the Union Radio-Scientifique Internationale (International Scientific Radio Union). Each class of data is coded separately and preceded by an identifying word, namely, RAD for solar constant, MAG for terrestrial magnetism, SOL for sunspots, KHL for Kennelly-Heaviside layer heights. The data are expressed in a number code in groups of five, similar to that used in the transmission of meteorological information. Plain English will be added when extraordinary phenomena demand it. The message is signed SCIENSERC, the cable address of Science Service. Unused figures are transmitted as X.

R.A.D. (Solar Constant)

First figure indicates day of week :

1 - Sunday	3 - Tuesday	5 - Thursday	7 - Saturday
2 - Monday	4 - Wednesday	6 - Friday	

Second, third and fourth figures :

Decimal fractional portion of solar constant value; add one to obtain complete value. When 933 is transmitted, the solar constant is 1.933 calories. The solar constant of radiation is defined as the total intensity of solar radiation outside the earth's atmosphere at the earth's mean distance from the sun and is expressed in calories per square centimeter per minute -- the calorie, being the amount of heat required to warm one gram of water at 15 degrees C through 1 degree C and the unit intensity of radiant intensity being defined as that which, if completely absorbed by a surface at right angles to the beam, will produce one calorie of heat per square centimeter per minute.

Fifth figure indicates character of solar constant value :

3 - Satisfactory	5 - Satisfactory minus (not quite satisfactory)	7 - Unsatisfactory.
------------------	---	---------------------

Example : RAD 79333 - Saturday, solar constant, 1.933 calories, satisfactory.

Dr. C.G. Abbot announces that solar values discontinued as of March 16, 1937, will probably be resumed early in the year 1939 and will be data supplied by the Astrophysical Observatory of the Smithsonian Institution, being the results of solar constant determinations of that organization's observers at Montezuma amplified possibly by that organization's observations obtained at the stations Table Mountain, Calif., and Jerome, N.Mex.

M.A.G. (Terrestrial Magnetism)

First group :

First figure indicates day of week :

1 - Sunday	3 - Tuesday	5 - Thursday	7 - Saturday
2 - Monday	4 - Wednesday	6 - Friday	

Second figure :

3 - Quiet day	5 - Day of moderate disturbance
7 - Greatly disturbed day	

Third figure :

3 - Day marked by bay, a disturbance lasting only an hour or so, with <u>departure</u> from normal curve in one direction only, as
5 - Day marked by rapid pulsations
7 - Day marked by long-period pulsations or oscillations
9 - Day marked by irregular oscillations
X - not used

Fourth figure indicates that second group gives time of:

3 - Beginning of disturbance
5 - End of disturbance
7 - Beginning of disturbance -- end given in third group
X - not used.

Fifth figure

Unused and sent as X

Second group :

Gives Greenwich time of beginning or ending of disturbance as indicated by fourth figure of the first group; if there is a beginning and end on the same day, a third group will give time of ending.

First and second figures :

Hours, preceded by zero if less than ten

Third and fourth figures :

Minutes, preceded by zero if less than ten

Fifth figure:

Tenths of minutes, in the case of a sudden commencement of a disturbance; other times will be given to whole minutes only and X will be fifth figure.

Third group: See explanation above

Example : MAG 1535X 0840X - Sunday, day of moderate disturbance marked by bay -- disturbance ends 08:40 Greenwich time.

Terrestrial magnetic data are supplied by the United States Coast and Geodetic Survey from its Observatory at Cheltenham, Maryland. The period covered (since November 1, 1937) is the Greenwich day specified by the day of the week given by the first figure of the first group.

MANILA URSIGRAM

MAG, transmitted at stated intervals by Miguel Selga, Director, Weather Bureau, The Government of the Philippine Islands, Department of Agriculture and Commerce, Weather Bureau, Central Office, Manila. These data are in the same general code as the American MAG.

S.O.L. (Sunspots)

First figure indicates day of week :

1 - Sunday	3 - Tuesday	5 - Thursday	7 - Saturday
2 - Monday	4 - Wednesday	6 - Friday	

Second and third figures indicate :

Number of groups of sunspots, preceded by zero if less than ten

Fourth and fifth figures indicate total number of sunspots -- preceded by zero if less than ten.

Example -- 1938, May 23, SOL 21325⁺

+ Add 100 to number of spots. Monday, thirteen groups of sunspots containing a total of 125 spots. Wolf number equals K (10g plus s) where g is the number of groups, s the number of spots, and K a reduction factor - for Mount Wilson about 0.53; the Wolf number for the example given above is 135. The provisional Wolf number from Zurich for that day was 119.

Plain English descriptions of unusual solar phenomena will be added where necessary. Sunspot data are furnished by the Mt. Wilson Observatory of the Carnegie Institution of Washington, Pasadena, California, from observations made at about 16:00 Greenwich time (8 a.m. Pacific Standard Time) or as soon thereafter as weather permits.

K.H.L. (Kennelly-Heaviside Layer)

First group:

First figure gives the place of observation :

3 - Washington, D.C. (National Bureau of Standards)

5 - Medford, Massachusetts (Tufts College)
 Others to be announced.

Second figure indicates day of week

1 - Sunday	3 - Tuesday	5 - Thursday	7 - Saturday
2 - Monday	4 - Wednesday	6 - Friday	

Third and fourth figures :

Hour of observation in Greenwich Time

Fifth figure is given as X (with exception mentioned below)

Succeeding groups :

First three figures :

Frequency, in Kc/Sec divided by 10

Fourth and fifth figures :

Would give the KHL height in km divided by 10.

When the frequency is greater than 10,000 kc/sec., the X at the end of the first group would be replaced by the first digit of the frequency, that is, by a 1 for frequencies from 10,000 to 19,999; if, in a given set of observations, the frequency changed from a value below to a value above 10,000 kc/sec, it would be necessary to insert a new first group giving the place and time and to write KHL before this group to distinguish it from the groups giving frequency and height.

Example : KHL 3417X 26516 28022 29019 30126
 KHL 3508X 95021 98025 KHL 35081 00026 01026

These signify that, for observations made at Washington on Wednesday at about 5 p.m. Greenwich time, the frequencies and heights were those given at the left below, and for observations at the same place on Thursday, at about 8 a.m. Greenwich time, the values were those given at the right below :

2650 kc/sec	160 km	9500 kc/sec	210 km
2800	220	9800	250
2900	190	10,000	260
3010	260	10,000	260

This code should be useful in the reporting of critical frequencies, from which ionizations can readily be calculated. When values not close to a critical frequency are reported, large frequency separations may be used, and indicate that the relation of frequency to height is nearly linear between the points given.

Example of cosmic data message

URSI MAG 1535X 0840X SOL 514XX 61210⁺ 70900⁺ 10870
21380 31065 41155 KHL 3417X 25011 44011 50013
52029 56030 60045 64042 72045 72062 76050 80063
820XX
+ Add 100 to number of spots

SCIENSERV

Other distribution

Upon request, Science Service will transmit the cosmic data message telegraphically over commercial channels, tolls collect. If desired, the numerals will be rendered into the following code to reduce tolls : 1 - a, 2 - d, 3 - g, 4 - k, 5 - m, 6 - n, 7 - s, 8 - t, 9 - u, 0 - w, X - x.

Science Service compiles weekly in mimeograph form the data of the daily cosmic data messages and upon specific request distributes them by mail to those who can utilize or distribute the information further. The Journal of Terrestrial Magnetism and Atmospheric Electricity, published by the Johns Hopkins Press, Baltimore, Maryland, publishes summaries of the cosmic data.

Science Service also utilizes the information of the cosmic data messages in the preparation of its service to newspapers in such a way that the public will be kept informed of the occurrence of notable changes in the phenomena reported and the possible effects upon earthly conditions.

Those interested in correlating the cosmic data with other phenomena and in studying the literature upon the fields affected by the cosmic data reported will be placed in communication with competent authorities upon application to Science Service.

COMITE NATIONAL JAPONAIS

DOCUMENT N° 520

U R S I G R A M S

JAPANESE CODE (1)

Chairman H. Nagaoka of the National Committee on Radio Research of the National Research Council of Japan under date July 12, 1932, advised his Committee and arranged to collect the data for the use of the Ursigram and broadcast it beginning on September 8, 1932. The data are collected in cooperation with the Naval Experimental and Research Establishment, the Central Meteorological Observatory of Japan, the Tokyo Astronomical Observatory, and the Department of Communications. The Ursigram is transmitted weekly, on Saturday at 1300 G.M.T. repeated at 1300 G.M.T. using following frequencies effective from April 3, 1937; summer 11980 kc, JUP 13065 kc, JAW 17400kc; winter, JAU 7320 kc, JUO 9430 kc, JAQ 9600 kc; JAW and JAQ will be used when traffic is clear.

Code used :

Each class of data is coded separately and preceded by an identifying word : SOL for sunspots, MAG for terrestrial magnetism, KHL for Kennelly-Heaviside layer Heights, PRO for prominence, and FAD for fadeouts in radio communication. The data are grouped weekly beginning on Thursday and are expressed in a number-code in groups of five. Plain English will be added when extraordinary phenomena demand it.

S.O.L. (Sunspots)

The code for the sunspots is composed of seven groups of five figures; in each group the first figure indicates day of week :

1 - Sunday	3 - Tuesday	5 - Thursday	7 - Saturday
2 - Monday	4 - Wednesday	6 - Friday	

Second and third figures :

Number of groups of sunspots - preceded by zero if less than 10.

(1) Reprints may be obtained by request to the General Secretary's Office in Brussels.

Fourth and Fifth figures :

Total number of sunspots - preceded by zero if less than 10.

Plain English descriptions of unusual solar phenomena will be added where necessary. Sunspot data are furnished by the Tokyo Astronomical Observatory.

M.A.G. (Terrestrial Magnetism)

The code for terrestrial magnetism is composed of two groups of five figures.

First figure of first group indicates place of observation:

8 akioka, Ibaraki prefecture, Japan, in longitude east 140 degrees 11 minutes 21 seconds and latitude north 36 degrees 13 minutes 51 seconds at height above sea level 28.2 meters.

Second and third figures of first group:

Date on which the information commences and it is always fixed on Thursday

Fourth and fifth figures of first group:

State of terrestrial magnetism on Thursday and Friday

First to fifth figures of second group :

State of terrestrial magnetism on Saturday, Sunday, Monday, Tuesday, and Wednesday respectively.

The meaning of these figures is :

- 0 - Calm
- 1 - Rather calm
- 2 - Slight disturbance
- 3 - Disturbance
- 4 - Storm of rather sudden commencement
- 5 - Storm of sudden commencement
- 6 - Remarkable storm of rather sudden commencement
- 7 - Remarkable storm of sudden commencement
- 8 - Storm of slow commencement
- 9 - Remarkable storm of slow commencement

K.H.L. (Height of the Kennelly-Heaviside Layer)

The code for the Kennelly-Heaviside Layer consists of four groups of five figures each.

First figure of first group indicates place of observation:

7 - Tokyo

Second and third figures indicate date on which observation was made.

Fourth and fifth figures give nearest G.M.T. of first and second figures.

Fourth and fifth figures of succeeding groups of figures give two numerals indicating height in km divided by 10

Figures 00 means no echo and XX no observation

Middle (third) figure indicates two frequencies used in layer height measurement

Figures 1 2 3 4 5 6 7 represent respectively:

2000	--	4000	kcs
4000	--	6000	"
6000	--	8000	"
8000	--	10000	"
10000	--	12000	"
12000	--	14000	"
14000	--	16000	"

(in every case lower frequency corresponds to first and second figures and higher to fourth and fifth figures).

Code for PROMINENCE is composed of seven groups of five figures each. In each group:

First figure indicates figures 1 2 3 4 5 6 7 representing respectively Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday.

Second and fourth figures indicate respectively number of prominences on East and West limbs with figures 0 1 2 3 4 5 6 7 8 9 representing respectively number of 0, 1 and 2, 3 and 4, 5 and 6, 7 and 8, 9 and 10, 11 and 12, 13 and 14, 15 and 16, 17 and 18.

Third and fifth figures show for East and West limbs, respectively, sums of products of height in units of 100 seconds of arc and breadth along limb expressed in degrees. They roughly indicate total apparent area of prominence on respective limbs.

Figures 0 1 2 3 4 5 6 7 8 9 represent respectively area of 5, 5 to 15, 15 to 25, 25 to 35, 35 to 45, 45 to 55, 55 to 65, 65 to 75, 75 to 85, 85 to 95.

The code FAD for fadeouts in radio communications is composed of several groups of five figures in each group.

First figure means day of week, figures 1 2 3 4 5 6 7 representing, respectively Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday.

Remaining four figures indicate time of occurrence of phenomena in G.M.T., second and third figures giving hour, and fourth and fifth figures minutes.

Number of groups of this code will depend on number of occurrences of phenomena in the week. In case of no occurrences of

phenomenon FAD will be omitted.

Example : SOL 50806 6XXXX 7XXXX 1XXXX 2XXXX 3XXXX 41143
Add 200 to number of spots On Thursday and Wednesday
PRO 54232 6XXXX 7XXXX 1XXXX 2XXXX 3XXXX
44131 MAG 83012 21421 KHL 70303 14215 45460
15600 FAD 20150 40105

URSIGRAMMES - URSIGRAMS

COMITE NATIONAL AMERICAIN
U.S.A. NATIONAL COMMITTEE

PROGRAMME et CODE : Voir Document n°518 - p.6, Bulletin Mensuel n°10 - Octobre 1938.

PROGRAM AND CODE : See Document n°518 - p.6, Monthly Bulletin n°10 - October 1938.

M.A.G.

Date	Ursigrams	Amplification
1938 Aug. 7	13XXX	Quiet until 11 p.m. Aug. 6, then slightly disturbed to 3 a.m. Aug. 7, then quiet.
8	23XXX	Quiet
9	33XXX	Quiet
10	43XXX	Quiet until 10:22 p.m. Aug. 9, then slightly disturbed.
11	5597X 0423X 1800X	Slightly disturbed until 11:23 p.m. Aug. 9, then moderately disturbed until 1 p.m. Aug. 11, then slightly disturbed.
12	65XXX	Slightly disturbed
13	75XXX	Slightly disturbed until 4:00 a.m., the 23d, then quiet.
14	13XXX	Quiet
15	23XXX	Quiet
16	33XXX	Quiet

17	43XXX	Quiet
18	53XXX	Quiet
19	63XXX	Quiet
20	73XXX	Quiet
21	13XXX	Quiet
22	2593X 1356X	Quiet until 8:56 a.m. Aug. 22, then moderately disturbed.
23	3595X 2400X	Moderately disturbed
24	43XXX	Slightly disturbed
25	53XXX	Quiet
26	63XXX	Quiet
27	73XXX	Quiet
28	13XXX	Quiet until 10:15 a.m., Aug. 28, then slightly disturbed.
29	23XXX	Slightly disturbed
30	33XXX	Slightly disturbed until midnight, then quiet.
31	43XXX	Quiet
Sept.		
1	53XXX	Quiet
2	63XXX	Quiet
3	73XXX	Slightly disturbed until 8 a.m., Sept. 3, then quiet.

MAGNETIC CHARACTER

Date	0 h - 12 h.	12 h - 24 h
1938		
Aug.		
6	0.5	0.1
7	0.4	0.4
8	0.2	0.1
9	0.0	0.0
10	0.8	0.6
11	1.2	1.3
12	0.7	0.5
13	0.6	0.1
14	0.1	0.1
15	0.0	0.0
16	0.0	0.0
17	0.0	0.1
18	0.1	0.0
19	0.0	0.0
20	0.0	0.0
21	0.0	0.2
22	0.0	1.1
23	1.1	1.7
24	0.2	0.6
25	0.2	0.0
26	0.0	0.0
27	0.0	0.0
28	0.0	0.6
29	0.6	0.4
30	0.4	0.1
31	0.1	0.0
Sept.		
1	0.0	0.0
2	0.1	0.1

S.O.L.

Date	S.O.L.	Date	S.O.L.
1938 Aug. 4	51570	1938 Aug. 18	51135 ⁺
5	613XX(1)	19	61210 ⁺
6	71145	20	71260
7	11165	21	11150
8	21310 ⁺	22	21155
9	31500 ⁺	23	31075
10	41385	24	41175
11	51600 ⁺	25	51505 ⁺
12	61475	26	61315 ⁺
13	71455	27	71195
14	10950	28	11370
15	21355	29	21415 ⁺
16	31260	30	31202 ⁺
17	41240	31	40910 ⁺

(1) Plates too poor to count

+ Add 100 to number of spots

L.H.L.

For Aug. 10

3417X 62044
 25011 64045
 35012 64052
 39517 70045
 400XX 70064
 41227 74049
 42523 78078
 56050 800XX
 58051

For Aug. 17

3417X 58028
 25012 58038
 35012 66036
 38013 78040
 400XX 78046
 41020 82048
 44023 82069
 52022 88054
 52029 900XX

For Aug. 24

2417X 52031
 25011 62030
 35011 70032
 38215 78038
 39027 84039
 42519 84047
 44022 92051
 52021 940XX

For Aug. 31

3417X 52039
 25011 58027
 35013 58037
 38017 64037
 39522 76042
 42019 76054
 46024 86051
 52022 880XX

MANILA URSIGRAMS

Received at Navy Department

M.A.G. for Aug. 1 to Aug. 16

255XX 355XX 475XX 575XX 659XX 759XX 159XX 257XX 33XXX
 475XX 575XX 675XX 775XX 159XX 23XXX 33XXX

M.A.G. for Aug. 17 to Aug. 31

43XXX 557XX 63XXX 73XXX 159XX 275XX 375XX 459XX 559XX
 659XX 759XX 155XX 259XX 359XX 457XX

JAPANESE URSIGRAMS

From Tokyo radio station JAP 11980 Kc, received by the R.C.A.
San Francisco Station.

Aug. 13 :

S.O.L. 51202 61440 71358 1XXXX 2XXXX 3XXXX 41384 Add
100 to number of spots every day.

P.R.O. 5XXXX 64153 74152 1XXXX 2XXXX 3XXXX 46252

M.A.G. 80441 01004

K.H.L. 71003 15215 45468 15600

F.A.D. Nil

Aug. 20 :

S.O.L. 51410 61312 71337 10824 20841 31343 41230 Thurs-
-day and Friday add 200; from Saturday to Wednesday
add 100 to number of spots.

P.R.O. 55244 64254 75431 1XXXX 25131 34352 4XXXX Friday
N W limb high prominence height 118 000 km.

M.A.G. 81152 21000

K.H.L. 71703 XX115 41344 50500

F.A.D. Nil

Aug. 27 :

S.O.L. 5XXXX 60949 71227 10954 20856 30966 4XXXX Friday
and Saturday add 100 to number of spots.

P.R.O. 5XXXX 65242 75252 15252 22331 34431 4XXXX

M.A.G. 81800 01522

K.H.L. 72403 XX115 45355 005XX

F.A.D. Nil

Sept. 3 :

S.O.L. 5XXXX 6XXXX 7XXXX 10667 21122 3XXXX 4XXXX Monday
add 100 to number of spots

P.R.O. 5XXXX 6XXXX 7XXXX 14242 24152 3XXXX 4XXXX

M.A.G. 82500 01110

K.H.L. 72103 14239 41445 516XX

F.A.D. Nil

COMITE NATIONAL FRANCAIS
FRENCH NATIONAL COMMITTEE

I.- PROGRAMME ET CODE - PROGRAM AND CODE

Le programme et le code des Ursigrammes émis sous les auspices du Comité Français de Radiotélégraphie Scientifique ont été publiés dans " L'Onde Electrique " Vol.10, n°120, Décembre 1931, p.I à X.

Program and code of Ursigrams emitted under the auspices of the French Radioscientific Committee, are contained in " L'Onde Electrique " Vol.10, n°120, December 1931. p. I to X.

II.- RENSEIGNEMENTS - DATA

DATE	Bulletin Météorologique Quotidien B.A.R.								Acti- vité so- laire S.O.L.	
	Lignes Isobares				Zones des Basses Hautes pressions					
	Val. de la ligne (mb.)	Coordonnées								
1938 Sept. 5	1020	15935	15420	15410	76220	1000	94114	1032	23332	
		15700					94732	1030		
		24000	24306	24109						
		23809	23016							
6	1020	15035	15520	14813	75807	1008	96915	1008	3XXXX	
		14601	14202	14408			94525	1032		
		•	14211	13510	13115					
			13325							
7	1020	15037	15721	16420	76143	995	96500	1027	---	
		16510	17205	17300	75200	1008	94224	1033		
		26100	25611	25014						
		24009	23015							

1938									
Sept.									
8	1025	16130 15700 13621	15814 15604 13528	16004 14215	76925 74300	1003 1006	95527 94824	1036 1031	52334
9	1025	15332 16200 25300 24015	15524 16112 25007 23622	77305 76735 74400	993 993 1008	94624	1037	6XXXX	
10	1025	15234 15300	15720 14511	15500 13520	77100 73900	990 1012	94723	1038	---
11	1025	15330 14900 13820	15618 14705 13629	15509 14515	76428 74207 74509	1005 1013 1013	94725	1040	---
12	1025	15032 14900 13720	15504 14404 13629	15304 16315	75503	992	94819	1038	2XXXX
13	1020	15230 14907	14926 14800	15616	76228 75325	1006 1013	94815	1028	31231
	1020	24400 23525	24309	24016					
14	1020	14533 15937 15409 15110 13914	14629 16530 15615 14804	15423 16013 15518 14512	75135 75200	1008 1013	94520	1029	41232
15	1020	14330 15700	14819	15913	75430	993	94218	1028	51332
	1020	24900 24307 22922	24804 24010	24801 23513					
16	1015	14829 15700	14522	15011	75618	999	93821 95160	1025 1027	62332
		23500	23509	23015					
17	1015	15635 15024 15100	15929 14615	15527 14805	75708	996	93718	1027	72332
18	1015	15030 15617 15000	14825 15012	15020 14705	76428	990	93627	1027	12231

1938 Sept. 19	1015	15033 14410	14721 14703	14322 14600	76225 75400	980 1005	93628	1025	22341
	20	1005	15536 14217 15000	15028 14708	14820 14910	76020	982	94232 93312	1022 1022
	21	1005	15030 14312	15025 14907	14718 15300	76020	980	94128	1023
	22	1010	14832 14805	13925 15900	14309	75225	963	95000	1015
	23	1010	15032 14215 16001	14630 14111 16705	14023 15004	75820	965	93606	1018
	24	1010	14735 14218 14302 15505	15316 13520 15007 16200	14814 14407 15403	76218 74511	984 1004	93830	1022
	25	1010	14434 15605	15020 15500	15211	76810 76430 76726	988 988 993	94507 93508	1017 1022
			24202 24202	24208	23602	74004	1006		
	26	1015	14332 14512 14302	14927 14408 14109	14318 14700 13709	76818 75313	993 1003	93726	1024
	27	1015	15135 14900 16211	14822 15111 16800	14406 15709	76031 74707	985 1011	93730	1029
Oct. 1er	28	1015	15625 14508 13906	15221 14603 13602	15016 14301 13403	76520 76015 74807	995 998 1006	94431	1037
	29	1015	15540 14712	16220 15000	15520	75708 74106	1002 1013	94128	1033
	30	1015	15233 15113	15526 14708	15018 15000	75711	1003	93827	1031
	2	1015	15327 15406	14824 15200	15214	76518 75618	994 998	94230	1037