

S.I.D.C. SUMMARY OF URSIGRAMS

1983 DECEMBER  $r'_{im} = 33.4$

|        | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| $R'_I$ | 29  | 23  | 17  | 17  | 21  | 35  | 41  | 54  | 68  | 82  | 76  | 66  | 66  | 52  | 50  |
| PPSI   | 2   | 2   | 1   | 1   | 1   | 4   | 10  | 10  | 13  | 23  | 25  | 18  | 12  | 13  | 17  |
| 10,7cm | 93  | 92  | 91  | 95  | 95  | 101 | 102 | 101 | 112 | 111 | 106 | 104 | 104 | 100 | 95  |
| COS    | 79  | 70  | 71  | 69  | 74  | 81  | 79  | 77  | 77  | 85  | 90  | 98  | 90  | 85  | 86  |
| XFI    | 0   | 0   | 0   | 0   | 3   | 35  | 22  | 8   | 15  | 7   | 1   | 3   | 6   | 4   | 14  |
| XI     | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 2/0 | 1/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| $A_K$  | 15  | 8   | 4   | 4   | 18  | 32  | 36  | 12  | 3   | 24  | 37  | 24  | 26  | 26  | 20  |

|        | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| $R'_I$ | 35  | 34  | 36  | 27  | 25  | 25  | 15  | 19  | 17  | 21  | 27  | 12  | 10  | 11  | 13  | 10  |
| PPSI   | 10  | 10  | 11  | 20  | 11  | 9   | 4   | 3   | 2   | 2   | 1   | 0   | 1   | 0   | 1   | 1   |
| 10,7cm | 98  | 95  | 93  | 89  | 86  | 85  | 86  | 86  | 86  | 87  | 86  | 86  | 84  | 84  | 84  | 87  |
| COS    | 86  | 89  | 86  | 79  | 74  | 75  | 73  | 69  | 69  | 69  | 74  | 77  | 68  | 64  | 71  |     |
| XFI    | 7   | 12  | 2   | 5   | 3   | 1   | 0   | 0   | 3   | 1   | 0   | 0   | 0   | 0   | 0   | 1   |
| XI     | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| $A_K$  | 6   | 6   | 8   | 10  | 5   | 4   | 16  | 6   | 21  | 14  | 24  | 19  | 13  | 8   | 30  | 37  |

SSC

$R'_I$ : provisional International Sunspot-Numbers .

PPSI : Prompt Photometric Sunspot Index in  $0.00001 \text{ W/m}^2$  .

10.7 cm: 2800 MHz solar flux from the ursigrams .

COS : Thousands of cosmic rays counts from the ursigrams .

XFI: X-flare Index from the SIDC .

XI : X-flare Index from the ursigrams .

$A_K$ : Geomagnetic Index from the Meudon ursigrams .

## OBSERVATOIRE ROYAL DE BELGIQUE

## DEPARTEMENT 4. RADIOASTRONOMIE ET PHYSIQUE SOLAIRE

## NOMBRES RELATIFS DE WOLF JOURNALIERS

PROVISOIRES

PROVISIONAL

## SUNSPOT RELATIVE NUMBERS

STATION UCCLE BELGIUM

DECEMBRE 1983

| DATE | UT   | NOMBRE<br>DE<br>GROUPES | NOMBRE<br>DE<br>TACHES | NOMBRE<br>DE<br>WOLF | NOMB REL<br>ZONE<br>CENTRALE | PPSI<br>10-6<br>WM-2 | QUAL | OBS |
|------|------|-------------------------|------------------------|----------------------|------------------------------|----------------------|------|-----|
| 1    | 1220 | 3                       | 18                     | 48                   | 33                           | 20.                  | 4.   | AK  |
| 2    | 0900 | 2                       | 7                      | 27                   | 15                           | 7.                   | 2    | HB  |
| 3    | 0850 | 1                       | 5                      | 15                   | 15                           | 4.                   | 2    | HB  |
| 4    | 1000 | 2                       | 7                      | 27                   | 27                           | 8.                   | 2    | AK  |
| 5    | 0850 | 1                       | 1                      | 11                   | 0                            | 1.                   | 2    | ST  |
| 6    | 1334 | 3                       | 14                     | 44                   | 0                            | 11.                  | 1    | ST  |
| 7    | 1150 | 6                       | 27                     | 87                   | 39                           | 154.                 | 2    | AK  |
| 10   | 1033 | 5                       | 49                     | 99                   | 54                           | 248.                 | 2    | HB  |
| 11   | 1140 | 4                       | 49                     | 89                   | 44                           | 213.                 | 2    | AK  |
| 13   | 1140 | 4                       | 42                     | 82                   | 19                           | 104.                 | 1    | ST  |
| 14   | 1110 | 3                       | 20                     | 50                   | 21                           | 111.                 | 3    | ST  |
| 15   | 1012 | 4                       | 24                     | 64                   | 22                           | 174.                 | 1    | ST  |
| 16   | 1206 | 2                       | 19                     | 39                   | 21                           | 96.                  | 1    | ST  |
| 17   | 1034 | 2                       | 11                     | 31                   | 0                            | 55.                  | 1    | HB  |
| 18   | 1027 | 3                       | 15                     | 45                   | 33                           | 67.                  | 3    | HB  |
| 19   | 1005 | 1                       | 11                     | 21                   | 21                           | 247.                 | 1    | ST  |
| 20   | 1117 | 1                       | 9                      | 19                   | 19                           | 63.                  | 1    | ST  |
| 21   | 0925 | 1                       | 17                     | 27                   | 27                           | 56.                  | 1    | ST  |
| 23   | 1123 | 2                       | 14                     | 34                   | 0                            | 32.                  | 1    | ST  |
| 24   | 1110 | 1                       | 1                      | 11                   | 0                            | 14.                  | 1    | AK  |
| 26   | 1033 | 3                       | 7                      | 37                   | 25                           | 10.                  | 3    | HB  |
| 30   | 1045 | 1                       | 5                      | 15                   | 15                           | 4.                   | 1    | HB  |
| 31   | 1020 | 1                       | 5                      | 15                   | 15                           | 4.                   | 3    | AK  |

LE SOLEIL A ETE OBSERVE 23 JOURS SUR 31 POSSIBLES  
LE NOMBRE RELATIF DE WOLF MOYEN EST DE 40.7

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NORMALISED UCCLE OBSERVATIONAL SUNSPOT NUMBERS

U' = K'U FOR 1983      DECEMBER

K' = 1.079 (\*)

|   |    |    |     |    |    |    |     |    |     |
|---|----|----|-----|----|----|----|-----|----|-----|
| 1 | 51 | 7  | 93  | 13 | 88 | 19 | 22  | 25 | *** |
| 2 | 29 | 8  | *** | 14 | 53 | 20 | 20  | 26 | 39  |
| 3 | 16 | 9  | *** | 15 | 69 | 21 | 29  | 27 | *** |
| 4 | 29 | 10 | 106 | 16 | 42 | 22 | *** | 28 | *** |
| 5 | 11 | 11 | 96  | 17 | 33 | 23 | 36  | 29 | *** |
| 6 | 47 | 12 | *** | 18 | 48 | 24 | 11  | 30 | 16  |
|   |    |    |     |    |    |    |     | 31 | 16  |

THE SUN WAS OBSERVED 23 DAYS ON 31 POSSIBLE  
THE NORMALISED RELATIVE MONTHLY MEAN WOLF NUMBER IS 43

\* K' IS THE MEAN OF THE MONTHLY K'S FOR THE LAST FIVE YEARS

UCCLE OBSERVATIONAL MAJOR SUNSPOTS FOR 1983      DECEMBER  
E AND F BRUNNER'S TYPE GROUPS

| UCCLE EAST LIMB |      | DATE AND TYPE |     |          | WEST LIMB |  |
|-----------------|------|---------------|-----|----------|-----------|--|
| NO              | DATE | IST OBS       | CMP | LAST OBS | DATE      |  |

NONE

PROBABLE RETURN OF MAJOR GROUPS FOR 1983      JANUARY

| NO | NEW EAST LIMB | NEW CMP | NEW WEST LIMB |
|----|---------------|---------|---------------|
|----|---------------|---------|---------------|

NONE