

# Newsletter Belgian Solar Observers

Results and news for solar observers

Volume 15

Number 168

February 2010

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## Content Newsletter

Graphics and relative number for this month

Daily Wolfnumbers by the members

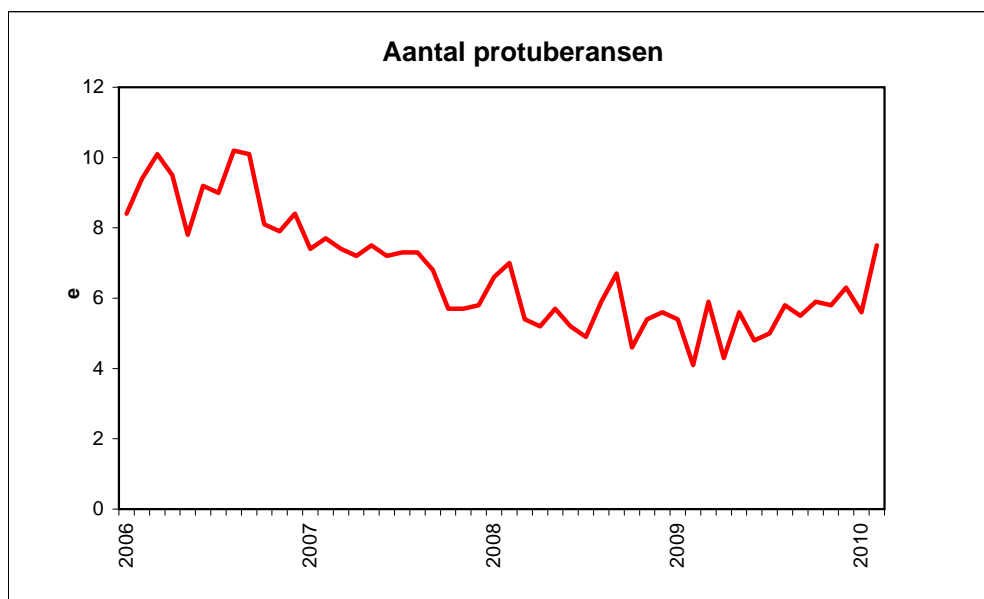
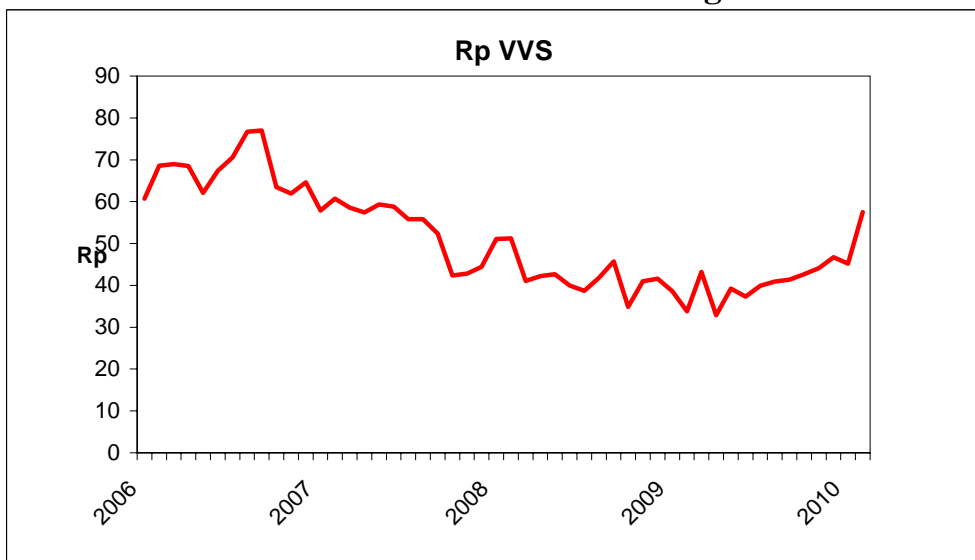
Monthly sunspot report

Polar faculae and CV numbers

Prominence numbers by the members

Monthly prominence report

Photo album and drawings



### Mean of february observations

|                  |              |      |            |      |        |       |
|------------------|--------------|------|------------|------|--------|-------|
| Groups :         | N            | 1,28 | Wolfnumb N | 20,5 | Beck : | 207,2 |
|                  | S            | 0,64 | S          | 9    | CV     | 19,7  |
|                  | N+S          | 1,84 | N+S        | 29,5 |        |       |
| 221 observations | 28 observers |      |            |      |        |       |



# Sunspotnumbers VVS Belgium

Month: February 2010

| Day | GROUPS |      |      | WOLFNUMBER |      |      | RE'   | CV   | OBS |
|-----|--------|------|------|------------|------|------|-------|------|-----|
|     | N      | S    | N+S  | N          | S    | N+S  |       |      |     |
| 1   | 1      | 0    | 1    | 15,9       | 0    | 15,9 | 66    | 9    | 13  |
| 2   |        |      |      |            |      |      |       |      | 1   |
| 3   | 1      | 0    | 1    | 13,5       | 0    | 13,5 | 98    | 8    | 6   |
| 4   | 1      | 0    | 1    | 11,0       | 0    | 11,0 | 37    | 7    | 7   |
| 5   | 1      | 0    | 1    | 13,8       | 0    | 13,8 | 38    | 8    | 8   |
| 6   | 2      | 0    | 2    | 33,9       | 0    | 33,9 | 173   | 15   | 15  |
| 7   |        |      |      |            |      |      |       |      |     |
| 8   | 3      | 0    | 3    | 55,3       | 0    | 55,3 | 904   | 59   | 4   |
| 9   | 2      | 1    | 3    | 42,1       | 10,3 | 52,4 | 577   | 35   | 9   |
| 10  | 2      | 1    | 3    | 41,1       | 11   | 52,1 | 668   | 46   | 10  |
| 11  | 2      | 0    | 2    | 40,6       | 0    | 40,6 | 425   | 43   | 9   |
| 12  | 2      | 0    | 2    | 38,3       | 0    | 38,3 | 473   | 60   | 11  |
| 13  | 2      | 0    | 2    | 37,4       | 0    | 37,4 | 390   | 34   | 7   |
| 14  | 3      | 0    | 3    | 42         | 0    | 42,0 | 291   | 28   | 1   |
| 15  | 2      | 0    | 2    | 28,8       | 0    | 28,8 | 98    | 12   | 4   |
| 16  | 2      | 0    | 2    | 28,8       | 0    | 28,8 | 96    | 9    | 21  |
| 17  | 2      | 1    | 1    | 19,3       | 17,5 | 36,8 | 58    | 6    | 6   |
| 18  | 0      | 2    | 2    | 0          | 28   | 28,0 | 114   | 9    | 11  |
| 19  | 0      | 1    | 1    | 0          | 22,3 | 22,3 | 69    | 3    | 4   |
| 20  | 0      | 1    | 1    | 0          | 20   | 20,0 | 145   | 18   | 14  |
| 21  | 0      | 1    | 1    | 0          | 16,4 | 16,4 | 44    | 9    | 14  |
| 22  | 0      | 1    | 1    | 0          | 16,7 | 16,7 | 59    | 9    | 6   |
| 23  | 0      | 2    | 2    | 0          | 29,5 | 29,5 | 136   |      | 2   |
| 24  | 1      | 2    | 3    | 12,1       | 19   | 31,1 | 85    | 17   | 11  |
| 25  | 1      | 1    | 2    | 13         | 15,7 | 28,7 | 63    | 14   | 6   |
| 26  | 1      | 1    | 2    | 13,9       | 12,9 | 26,8 | 44    | 8    | 5   |
| 27  | 1      | 1    | 2    | 11,5       | 4,9  | 16,4 | 29    | 6    | 16  |
| 28  |        |      |      |            |      |      |       |      |     |
|     | 1,28   | 0,64 | 1,84 | 20,5       | 9,0  | 29,5 | 207,2 | 19,7 | 221 |

Monthly mean: **29,5** Covering: **25/28** Spotless days: **0**  
 Observations: **221** Number of observers: **28**

V.V.S. BELGIUM SOLAR SECTION FRANKY DUBOIS

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Observers:

De Ceuninck ; Janssens ; Publ obs Mira ; Bourgeois ; R.Dezeure ; F.Feys  
 De Backer ; Dubois ; Gysel ; Kleber ; Deman ; Taillieu ; Carels ; Dewaele  
 Meeus ; Steen ; KSB ; Gabriel ; Claeys ; Thooris ; J.Bonse ; P.De Reu  
 Claes ; Verboven ; Van Loo ; Son ; Coeckelberghs ; Gadyne ; Dekelver  
 S.Dufoer ; G.Gubbels ; J Bavais ; A. De Kerchove ; J.Bruyland ; Van Hessche

# VVS Belgian Solar Observers Prominence number Rp

| Month : February 2010 |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     | asm | Lille |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
|-----------------------|------|---|---|-----|----|------|-----------|-----|-----|-----|-----|------|-------|---------------|-----|-----|-----|------|------|-----|----------|-----|-----|-------|-------|-----|-----|-----------|-----|------|-------|-----|-----|----|----------|------|---|---|---|----|-------|
| J. Janssens           |      |   |   |     |    | PST  | F. Dubois |     |     |     |     |      | PST   | E. De Ceunick |     |     |     |      |      | PST | L. Meeus |     |     |       |       |     | PST | J. Hamsch |     |      |       |     |     | 60 | G. Deman |      |   |   |   |    | 20/20 |
| Day                   | time | Q | W | H   | e  | Rp   | time      | Q   | W   | H   | e   | Rp   | time  | Q             | W   | H   | e   | Rp   | time | Q   | W        | H   | e   | Rp    | time  | Q   | W   | H         | e   | Rp   | time  | Q   | W   | H  | e        | Rp   |   |   |   |    |       |
| 1                     |      |   |   |     |    |      | 10.27     | 4   | 1   | 6   | 9   | 69   | 10.00 | 3,5           | 2   | 3   | 3   | 33   |      |     |          |     |     |       |       |     |     |           |     | 9.35 | 3     | 1   | 6   | 11 | 71       |      |   |   |   |    |       |
| 2                     |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 3                     |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 4                     |      |   |   |     |    |      | 14.50     | 3   | 2   | 5   | 6   | 56   | 15.00 | 3,5           | 2   | 6   | 7   | 67   |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 5                     |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 6                     | 0,38 | 4 | 2 | 7   | 16 | 86   |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 7                     |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 8                     |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 9                     |      |   |   |     |    |      | 15.03     | 2   | 2   | 3   | 5   | 35   | 11.15 | 3,0           | 3   | 2   | 2   | 22   |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 10                    |      |   |   |     |    |      | 15.11     | 3   | 1,5 | 6   | 7   | 67   |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 11                    |      |   |   |     |    |      | 15.00     | 3   | 2   | 3   | 5   | 35   |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 12                    |      |   |   |     |    |      | 9.53      | 3   | 1,5 | 3   | 4   | 34   | 10.15 | 3,0           | 3   | 2   | 2   | 22   |      |     |          |     |     |       | 14u00 | 3   | 2   | 4         | 4   | 44   | 10.20 | 3   | 2   | 4  | 7        | 47   |   |   |   |    |       |
| 13                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 14                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 15                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 16                    |      |   |   |     |    |      | 13.40     | 4   | 1   | 5   | 6   | 56   | 11.00 | 3,0           | 3,5 | 4   | 5   | 45   |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    | 11.55    | 3    | 2 | 5 | 8 | 58 |       |
| 17                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 18                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 19                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 20                    |      |   |   |     |    |      | 8.43      | 4   | 1,5 | 4   | 6   | 46   | 10.00 | 4,0           | 2,5 | 5   | 5   | 55   |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 21                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 22                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 23                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 24                    |      |   |   |     |    |      | 15.30     | 3,5 | 1,5 | 4   | 4   | 44   | 16.00 | 3,5           | 3   | 4   | 4   | 44   |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 25                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 26                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 27                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 28                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 29                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 30                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
| 31                    |      |   |   |     |    |      |           |     |     |     |     |      |       |               |     |     |     |      |      |     |          |     |     |       |       |     |     |           |     |      |       |     |     |    |          |      |   |   |   |    |       |
|                       | 1    | 4 | 2 | 7,0 | 16 | 86,0 | 9         | 3,3 | 1,6 | 4,3 | 5,8 | 49,1 | 7     | 3,4           | 2,7 | 3,7 | 4,0 | 41,1 | ###  | ### | ###      | ### | ### | ###   | 2     | 2,5 | 2,3 | 4,5       | 6,0 | 51,0 | 3     | 3,0 | 1,7 | 5  | 8,7      | 58,7 |   |   |   |    |       |

| Month : February 2010 |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      | asp | asp  | PST   |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
|-----------------------|-------|-----|-----|-----|-----|------|-----------------|-----|-----|-----|----|------|------|----------|---|-----|-----|------|------|-----|-----------|------|-----|------|-------|-----|-----|------------|-----|-----|------|-----|-----|----|------------|------|--|--|--|--|-----|
| O. Steen              |       |     |     |     |     | PST  | H. Coekelberghs |     |     |     |    |      | PST  | J. Claes |   |     |     |      |      | PST | A Gabriel |      |     |      |       |     | 60  | R.Blondeel |     |     |      |     |     | 60 | G. Gubbels |      |  |  |  |  | PST |
| Day                   | time  | Q   | W   | H   | e   | Rp   | time            | Q   | W   | H   | e  | Rp   | time | Q        | W | H   | e   | Rp   | time | Q   | W         | H    | e   | Rp   | time  | Q   | W   | H          | e   | Rp  | time | Q   | W   | H  | e          | Rp   |  |  |  |  |     |
| 1                     | 9,10  | 3,5 | 2   | 5   | 7   | 57   |                 |     |     |     |    |      |      |          |   |     |     |      | 9:30 | 3   | 2         | 5    | 10  | 60   |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 2                     |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 3                     |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 4                     | 15,15 | 3   | 2   | 7   | 7   | 77   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 5                     | 16,00 | 3   | 2,5 | 5   | 6   | 56   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 6                     |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 7                     |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 8                     |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 9                     | 12,20 | 3   | 2   | 3   | 4   | 34   |                 |     |     |     |    |      | 1330 | 3        | 2 | 4   | 6   | 46   |      |     |           |      |     |      | 13:10 | 2   | 2   | 8          | 14  | 94  |      |     |     |    |            |      |  |  |  |  |     |
| 10                    | 14,15 | 3,5 | 2   | 7   | 9   | 79   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 11                    | 13,30 | 3,5 | 2,5 | 4   | 6   | 46   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 12                    | 8,35  | 3   | 2,5 | 3   | 4   | 34   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 13                    | 12,30 | 3   | 2,5 | 4   | 4   | 44   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 14                    |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 15                    |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 16                    | 12,25 | 3,5 | 2   | 5   | 5   | 55   | 0,53            | 3   | 4   | 7   | 11 | 81   | 1230 | 3        | 2 | 5   | 7   | 57   |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 17                    | 9,00  | 3,5 | 2   | 5   | 5   | 55   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 18                    |       |     |     |     |     |      |                 |     |     |     |    |      |      | 1230     | 3 | 2   | 5   | 8    | 58   |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 19                    | 15,20 | 3   | 2   | 5   | 6   | 56   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 20                    | 8,45  | 3,5 | 2   | 4   | 6   | 46   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 21                    | 16,00 | 3   | 2   | 5   | 6   | 56   |                 |     |     |     |    |      |      | 1330     | 3 | 2   | 3   | 4    | 34   |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 22                    |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 23                    |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 24                    | 14,25 | 3   | 2   | 6   | 6   | 66   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 25                    | 9,40  | 3   | 2,5 | 4   | 5   | 45   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 26                    | 14,20 | 3   | 2   | 6   | 10  | 70   |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 27                    | 11,50 | 3   | 2,5 | 4   | 4   | 44   | 0,53            | 3   | 2   | 6   | 7  | 67   |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 28                    |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 29                    |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 30                    |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
| 31                    |       |     |     |     |     |      |                 |     |     |     |    |      |      |          |   |     |     |      |      |     |           |      |     |      |       |     |     |            |     |     |      |     |     |    |            |      |  |  |  |  |     |
|                       | 17    | 3,2 | 2,2 | 4,8 | 5,9 | 54,1 | 2               | 3,0 | 3,0 | 6,5 | 9  | 74,0 | 4    | 3        | 2 | 4,3 | 6,3 | 48,8 | 17   | 2,5 | 2,0       | 5,82 | 10  | 67,5 | ###   | ### | ### | ###        | ### | ### | 1    | 3,0 | 2,0 | 6  | 12,0       | 72,0 |  |  |  |  |     |

# Prominence number Rp

## Belgian solar observers

Month: February 2010

| Day | Q           | Wedel       |  | H          | e          | Rp          | el. Obs  | Stdev       | OBS       |
|-----|-------------|-------------|--|------------|------------|-------------|----------|-------------|-----------|
| 1   | 3,1         | 1,9         |  | 5,4        | 8,8        | 62,8        | 1        | 6,7         | 6         |
| 2   | 1           | 4           |  | 3,0        | 6          | 36          |          |             | 1         |
| 3   | 3           | 2           |  | 5          | 9          | 59          |          |             | 1         |
| 4   | 3,2         | 2           |  | 6          | 6,7        | 66,7        |          | 10,5        | 3         |
| 5   | 2,5         | 2,3         |  | 5,5        | 8          | 63          |          | 9,9         | 2         |
| 6   | 4           | 2           |  | 7          | 16         | 86          |          |             | 1         |
| 7   |             |             |  |            |            |             |          |             |           |
| 8   | 2,5         | 2           |  | 6          | 10         | 70          |          | 33,9        | 2         |
| 9   | 2,7         | 2,3         |  | 2,7        | 3,7        | 30,7        | 1        | 7,2         | 4         |
| 10  | 2,8         | 1,8         |  | 7          | 9          | 79          |          | 7,6         | 3         |
| 11  | 3           | 2,3         |  | 3,5        | 5,5        | 40,5        |          | 7,8         | 2         |
| 12  | 2,8         | 2           |  | 3,8        | 5,6        | 43,6        | 1        | 10,4        | 6         |
| 13  | 3           | 2,5         |  | 4          | 4          | 44          |          |             | 1         |
| 14  |             |             |  |            |            |             |          |             |           |
| 15  | 2           | 2           |  | 4          | 9          | 49          |          |             | 1         |
| 16  | 2,9         | 2,4         |  | 5,3        | 7,7        | 60,7        |          | 13,6        | 9         |
| 17  | 2,3         | 2,3         |  | 4,7        | 6,7        | 53,7        |          | 5,7         | 3         |
| 18  | 2,3         | 2,6         |  | 4,8        | 7,5        | 55,5        |          | 6,7         | 4         |
| 19  | 2,3         | 3           |  | 4          | 5,5        | 45,5        |          | 14,8        | 2         |
| 20  | 3,2         | 2,3         |  | 5,3        | 7,7        | 60,7        |          | 13,6        | 6         |
| 21  | 3           | 2           |  | 4          | 5          | 45          | 1        | 15,6        | 3         |
| 22  | 3           | 2           |  | 5          | 7          | 57          |          |             | 1         |
| 23  | 2           | 3,5         |  | 7          | 7          | 77          |          |             | 1         |
| 24  | 2,9         | 2,4         |  | 5          | 5,6        | 55,6        |          | 11,5        | 5         |
| 25  | 1,5         | 2,8         |  | 6          | 8,5        | 68,5        | 1        | 0,7         | 3         |
| 26  | 3           | 2           |  | 6          | 11         | 71          |          | 1,4         | 2         |
| 27  | 2,8         | 2,4         |  | 5          | 7,6        | 57,6        |          | 16,9        | 5         |
| 28  |             |             |  |            |            |             |          |             |           |
|     | <b>2,67</b> | <b>2,35</b> |  | <b>5,0</b> | <b>7,5</b> | <b>57,5</b> | <b>5</b> | <b>10,8</b> | <b>77</b> |

Monthly mean: **57,5**    Covering:  
 Observations: **77**    Number of observers: **11**

**V.V.S. BELGIUM SOLAR SECTION    FRANKY DUBOIS**

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 B8920 Langemark  
 Belgium  
 e-mail : astrosun@skynet.be

**Observers:**

**Steen ; Dubois ; Meeus ; De Ceuninck ; Coeckelberghs ; Janssens  
 Hamsch ; Claes ; Gabriel ; Blondeel ; Deman ; G.Gubbels ; T.Spaninks**

**Q : Seeing scale SIDC**

**W : transparency scale of Wedel , see <http://members.chello.be/j.janssens/>**

**H : number of prominence groups at the limb**

**e : total of individual prominences at the limb**

**Rp :  $H \cdot 10 + e$**

**More info at : <http://members.chello.be/j.janssens/>**

Different Relative Sunspotnumbers

Month : February 2010

| CV   |          |         |         |          |            |               |           |             |             |            | Pettisindex SN |            |           |          |               | Intersol IS |          |       |          |          |           |               |       |      |
|------|----------|---------|---------|----------|------------|---------------|-----------|-------------|-------------|------------|----------------|------------|-----------|----------|---------------|-------------|----------|-------|----------|----------|-----------|---------------|-------|------|
| Date | F.Dubois | O.Steen | L.Meets | J.Carels | J.Janssens | P.J. Dekelver | G.Gubbels | H.De Backer | D.Van Hesse | R.Verboven | Mean           | R.Verboven | G.Gubbels | F.Dubois | P.J. Dekelver | O.Steen     | J.Carels | Mean  | F.Dubois | J.Carels | G.Gubbels | P.J. Dekelver | Mean  |      |
| 1    | 9        | 9       |         |          |            |               | 11        | 11          | 5           |            | 9,0            |            | 15        | 14       |               | 13          |          | 14,0  |          | 7        |           | 7             |       | 7,0  |
| 2    |          |         |         |          |            |               |           |             |             |            |                |            |           |          |               |             |          |       |          |          |           |               |       |      |
| 3    | 7        | 7       |         |          |            |               | 7         | 10          |             |            | 7,8            |            | 10        | 10       |               | 11          |          | 10,3  |          | 1        |           | 5             |       | 3,0  |
| 4    | 7        | 4       |         |          |            |               |           | 10          |             |            | 7,0            |            |           | 10       |               | 10          |          | 10,0  |          | 1        |           |               |       | 1,0  |
| 5    | 10       | 4       |         |          |            |               |           | 10          |             |            | 8,0            |            |           | 10       |               | 10          |          | 10,0  |          | 1        |           |               |       | 1,0  |
| 6    | 12       | 4       | 23      |          | 23         |               | 13        |             | 23          | 8          | 15,1           |            | 25        | 27       |               | 10          |          | 20,7  |          |          |           | 17            |       | 20,0 |
| 7    |          |         |         |          |            |               |           |             |             |            |                |            |           |          |               |             |          |       |          |          |           |               |       |      |
| 8    |          |         |         |          |            |               | 59        |             |             |            | 59,0           |            | 110       |          |               |             |          | 110,0 |          |          |           | 38            |       | 38,0 |
| 9    | 44       | 38      |         | 30       |            |               |           | 26          |             |            | 34,5           |            |           | 76       |               | 70          | 65       | 70,3  |          | 28       | 31        |               |       | 29,5 |
| 10   | 52       | 40      |         |          |            |               |           | 45          |             |            | 45,7           |            |           | 86       |               | 69          |          | 77,5  |          | 35       |           |               |       | 35,0 |
| 11   | 48       | 21      |         | 56       |            |               |           | 48          |             |            | 43,3           |            |           | 66       |               | 45          | 69       | 60,0  |          | 27       | 29        |               |       | 28,0 |
| 12   | 59       | 39      |         | 86       |            |               |           | 54          |             |            | 59,5           |            |           | 64       |               | 52          | 53       | 56,3  |          | 24       | 23        |               |       | 23,5 |
| 13   | 56       | 18      |         | 28       |            |               |           |             |             |            | 34,0           |            |           | 68       |               | 61          | 62       | 63,7  |          | 26       | 20        |               |       | 23,0 |
| 14   | 28       |         |         |          |            |               |           |             |             |            | 28,0           |            |           | 39       |               |             |          | 39,0  |          | 13       |           |               |       | 13,0 |
| 15   |          | 9       |         | 11       |            |               |           | 16          |             |            | 12,0           |            |           |          |               | 24          | 39       | 31,5  |          |          | 14        |               |       | 14,0 |
| 16   | 10       | 3       | 13      | 8        |            | 3             | 13        | 10          |             |            | 8,6            |            | 29        | 27       | 14            | 8           | 18       | 19,2  |          | 15       | 11        | 15            | 12    | 13,3 |
| 17   | 8        | 4       |         | 5        |            |               |           |             |             |            | 5,7            |            |           | 19       |               | 12          | 13       | 14,7  |          | 18       | 14        |               |       | 16,0 |
| 18   |          |         | 6       |          |            | 7             | 14        |             |             |            | 9,0            |            | 37        |          | 13            |             |          | 25,0  |          |          |           | 18            | 21    | 19,5 |
| 19   |          | 2       |         |          |            | 3             |           |             |             |            | 2,5            |            |           |          | 13            | 6           |          | 9,5   |          |          |           | 12            |       | 12,0 |
| 20   | 16       | 3       | 19      | 22       |            |               |           | 28          |             |            | 17,6           |            |           | 31       |               | 8           | 26       | 21,7  |          | 15       | 9         |               |       | 12,0 |
| 21   | 8        | 6       | 8       |          |            | 3             | 12        | 12          |             | 12         | 8,7            | 14         | 15        | 15       | 8             | 13          |          | 12,8  |          | 7        |           | 9             | 7     | 7,7  |
| 22   |          | 6       |         |          |            |               |           | 12          |             |            | 9,0            |            |           |          |               | 13          |          | 13,0  |          |          |           |               |       |      |
| 23   |          |         |         |          |            |               |           |             |             |            |                |            |           |          |               |             |          |       |          |          |           |               |       |      |
| 24   | 16       | 14      |         | 10       |            |               |           | 28          |             |            | 17,0           |            |           | 27       |               | 17          | 27       | 23,7  |          | 11       | 11        |               |       | 11,0 |
| 25   | 11       | 14      |         |          |            |               |           | 18          |             |            | 14,3           |            |           | 19       |               | 16          |          | 17,5  |          | 12       |           |               |       | 12,0 |
| 26   | 8        | 7       |         |          |            |               |           |             |             |            | 7,5            |            |           | 17       |               | 16          |          | 16,5  |          | 11       |           |               |       | 11,0 |
| 27   | 6        | 8       |         |          |            | 3             | 4         |             | 11          |            | 6,4            | 11         | 6         | 14       | 5             | 12          |          | 9,3   |          | 8        |           | 8             | 4     | 6,7  |
| 28   |          |         |         |          |            |               |           |             |             |            |                |            |           |          |               |             |          |       |          |          |           |               |       |      |
| ##   | 21,8     | 12,4    | 13,8    | 28,4     | 23,0       | 3,8           | 16,6      | 22,5        | 13,0        | 10,0       | 19,5           | 12,5       | 30,9      | 33,6     | 10,6          | 23,6        | 41,3     | 31,50 | 14,9     | 18,0     | 14,6      | 11,2          | 15,53 |      |

Becknumber

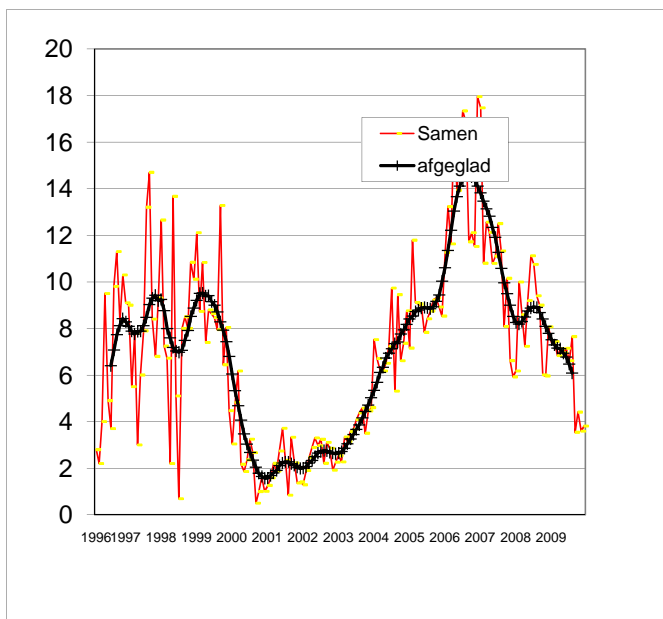
| Date | F.Dubois | O.Steen | L.Meets | P.J. Dekelver | J.Carels | G.Gubbels | E.De Ceuninck | D.Van Hesse | R.Verboven | F.Feys | A.T.Son | J.Bourgeois | H.Coeckelberghs | De Backer | Pbl Obs Mira | J.Claes | Mean  | Date |
|------|----------|---------|---------|---------------|----------|-----------|---------------|-------------|------------|--------|---------|-------------|-----------------|-----------|--------------|---------|-------|------|
| 1    | 48       | 40      |         |               |          | 48        | 56            | 32          |            | 40     |         |             |                 | 40        |              |         | 43    | 1    |
| 2    |          |         |         |               |          |           |               |             |            | 64     |         |             |                 |           |              |         | 64    | 2    |
| 3    | 37       | 111     |         |               |          | 176       |               |             |            | 198    | 56      |             |                 | 111       |              |         | 115   | 3    |
| 4    | 37       | 37      |         |               |          |           | 37            |             |            | 56     |         |             |                 | 37        |              |         | 41    | 4    |
| 5    | 37       | 37      |         |               |          |           | 41            |             |            |        |         |             |                 | 37        |              |         | 38    | 5    |
| 6    | 136      | 40      | 292     |               |          | 97        |               | 94          | 488        |        | 64      |             |                 |           | 680          |         | 236   | 6    |
| 7    |          |         |         |               |          |           |               |             |            |        |         |             |                 |           |              |         |       | 7    |
| 8    |          |         |         |               |          | 1128      |               |             |            |        |         |             |                 |           |              |         | 1128  | 8    |
| 9    | 577      | 536     |         |               | 844      |           | 348           |             |            |        | 725     |             |                 | 429       |              |         | 577   | 9    |
| 10   | 720      | 629     |         |               |          |           | 570           |             |            |        |         |             |                 | 752       |              |         | 668   | 10   |
| 11   | 520      | 200     |         |               | 825      |           | 238           |             |            |        |         |             |                 | 341       |              |         | 425   | 11   |
| 12   | 616      | 348     |         |               | 602      |           |               |             |            |        |         |             |                 | 324       |              |         | 473   | 12   |
| 13   | 644      | 128     |         |               | 399      |           |               |             |            |        |         |             |                 |           |              |         | 390   | 13   |
| 14   | 291      |         |         |               |          |           |               |             |            |        |         |             |                 |           | 100          |         | 196   | 14   |
| 15   |          | 135     |         |               | 104      |           |               |             |            |        |         |             |                 | 56        |              |         | 98    | 15   |
| 16   | 104      | 32      | 80      | 48            | 52       | 104       | 44            |             |            | 60     | 176     | 147         | 40              |           | 56           |         | 79    | 16   |
| 17   | 100      | 48      |         |               | 52       |           | 24            |             |            |        |         |             |                 |           |              |         | 56    | 17   |
| 18   |          |         | 80      | 104           |          | 260       |               |             |            | 257    | 32      | 40          |                 |           |              |         | 129   | 18   |
| 19   |          | 24      |         | 48            |          |           |               |             |            | 68     |         |             |                 |           | 28           |         | 42    | 19   |
| 20   | 252      | 32      | 216     |               | 144      |           | 112           |             |            | 228    |         |             |                 | 162       |              |         | 164   | 20   |
| 21   | 40       | 32      | 40      | 28            |          | 64        | 40            |             | 56         | 136    |         |             |                 | 40        |              |         | 53    | 21   |
| 22   |          | 32      |         |               |          |           |               |             |            | 96     |         |             |                 | 40        |              |         | 56    | 22   |
| 23   |          |         |         |               |          |           |               |             |            | 72     |         |             |                 |           |              |         | 72    | 23   |
| 24   | 130      | 40      |         |               | 72       |           | 64            |             |            | 104    |         |             |                 | 114       |              |         | 87    | 24   |
| 25   | 52       | 40      |         |               |          |           |               |             |            | 136    |         |             |                 | 114       |              |         | 86    | 25   |
| 26   | 56       | 44      |         |               |          |           |               |             |            | 88     |         | 32          |                 |           |              |         | 55    | 26   |
| 27   | 52       | 32      |         | 16            |          | 24        |               | 40          | 24         | 44     |         | 24          |                 |           |              |         | 32    | 27   |
| 28   |          |         |         |               |          |           |               |             |            |        |         |             |                 |           |              |         |       | 28   |
| ##   | 234      | 123,7   | 141,6   | 48,8          | 343,8    | 238       | 143           | 55          | 189        | 113    | 53      | 243         | 86              | 176       | 216          |         | 207,7 |      |

# Belgian Solar Observers

## Polar Faculae

Month: February 2010

| Date | Dubois<br>125mm F20 |       |   | Steen<br>102mm F15 |       |     | Deman<br>150mmF15 |       |   | Gabriel<br>250 mm F20 |       |   | Dekelver<br>150mm F8 |       |   | Janssen<br>200mmF10 |       |   | T.Spaninks<br>127mm F15 |       |   | G.Gubbels<br>114mm F7,8 |       |   | M. Szulc<br>60mm F15 |       |   |   |   |
|------|---------------------|-------|---|--------------------|-------|-----|-------------------|-------|---|-----------------------|-------|---|----------------------|-------|---|---------------------|-------|---|-------------------------|-------|---|-------------------------|-------|---|----------------------|-------|---|---|---|
|      | North               | South | Q | North              | South | Q   | North             | South | Q | North                 | South | Q | North                | South | Q | North               | South | Q | North                   | South | Q | North                   | South | Q | North                | South | Q |   |   |
|      | 1                   | 1     | 3 | 3                  | 2     | 4   | 3,5               | 0     | 5 | 3                     |       |   |                      |       |   |                     |       |   |                         | 0     | 1 | 4                       | 4     | 3 | 3                    | 1     | 5 | G |   |
| 2    |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      | 2     | 4 | G |   |
| 3    |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         | 0     | 0 | 4                       |       |   |                      | 3     | 5 | E |   |
| 4    |                     |       |   | 0                  | 3     | 3,5 |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   | 2                    | 5     | E |   |   |
| 5    |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   | 2                    | 7     | G |   |   |
| 6    |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       | 0 | 2                   | 3,0   |   |                         |       |   |                         |       | 3 | 5                    | 2     | 1 | 8 | G |
| 7    |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   | 2                    | 6     | G |   |   |
| 8    |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   | 1                    | 6     | E |   |   |
| 9    |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   | 3                    | 6     | G |   |   |
| 10   | 1                   | 5     | 3 | 1                  | 2     | 3,5 |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      |       |   |   |   |
| 11   |                     |       |   | 0                  | 0     | 3,5 |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      |       |   |   |   |
| 12   | 3                   | 6     | 3 | 0                  | 2     | 3,5 | 6                 | 10    | 3 |                       |       |   |                      |       |   |                     |       |   |                         | 0     | 0 | 3                       |       |   |                      |       |   |   |   |
| 13   |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      |       |   |   |   |
| 14   |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      |       |   |   |   |
| 15   |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      |       |   |   |   |
| 16   |                     |       |   | 1                  | 4     | 3,5 |                   |       |   |                       |       |   | 0                    | 0     | 3 |                     |       |   |                         | 0     | 1 | 4                       | 1     | 3 | 3,5                  |       |   |   |   |
| 17   |                     |       |   | 1                  | 1     | 3,5 |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      | 3     | 9 | E |   |
| 18   |                     |       |   |                    |       |     |                   |       |   |                       |       |   | 1                    | 2     | 3 |                     |       |   |                         |       |   |                         |       | 4 | 2                    | 3,5   |   |   |   |
| 19   |                     |       |   |                    |       |     |                   |       |   |                       |       |   | 0                    | 0     | 3 |                     |       |   |                         |       |   |                         |       |   |                      |       |   |   |   |
| 20   | 1                   | 2     | 3 | 0                  | 3     | 3,5 |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         | 0     | 0 | 4                       |       |   |                      | 3     | 7 | E |   |
| 21   |                     |       |   |                    |       |     |                   |       |   |                       |       |   | 0                    | 0     | 3 |                     |       |   |                         |       |   |                         |       |   |                      | 2     | 9 | E |   |
| 22   |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      | 3     | 8 | E |   |
| 23   |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      |       |   |   |   |
| 24   | 2                   | 3     | 3 |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      |       |   |   |   |
| 25   |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      | 3     | 7 | G |   |
| 26   |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      | 4     | 8 | G |   |
| 27   |                     |       |   |                    |       |     |                   |       |   |                       |       |   | 0                    | 0     | 3 |                     |       |   |                         |       |   |                         |       | 2 | 3                    | 2,5   | 4 | 8 | E |
| 28   |                     |       |   |                    |       |     |                   |       |   |                       |       |   |                      |       |   |                     |       |   |                         |       |   |                         |       |   |                      | 3     | 7 | E |   |
|      | 1,60                | 3,80  |   | 0,63               | 2,38  |     | 3,0               | 7,5   |   | #####                 | ##### |   | 0,20                 | 0,40  |   | 0,00                | 2,00  |   | 0,00                    | 0,40  |   | 2,80                    | 3,20  |   | 2,47                 | 6,76  |   |   |   |

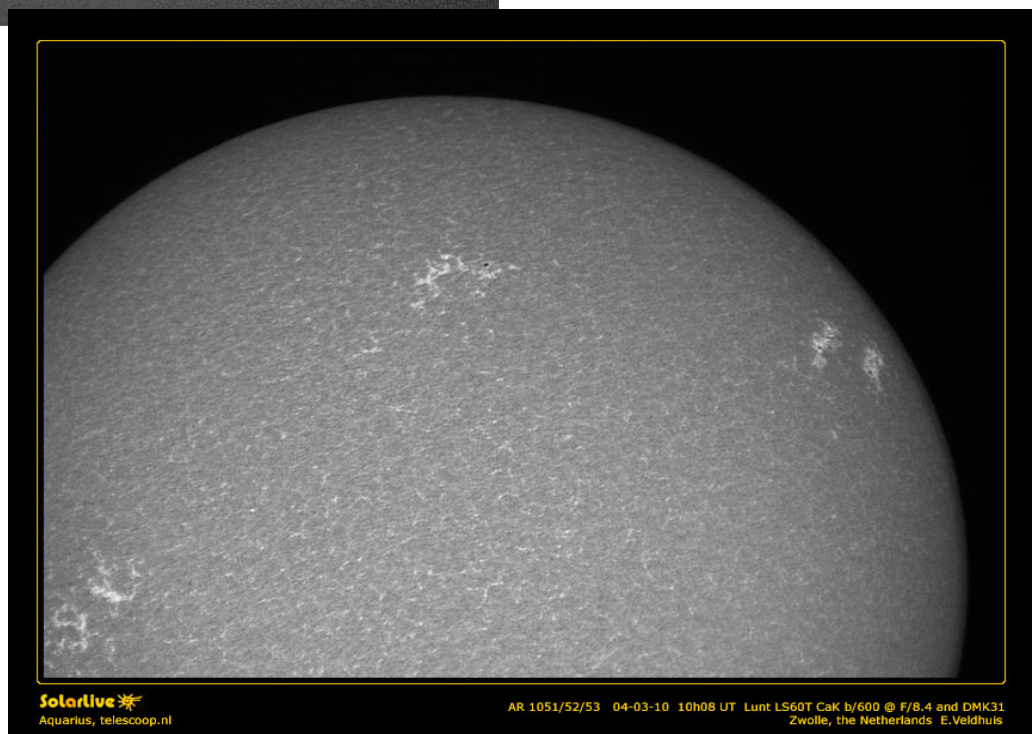
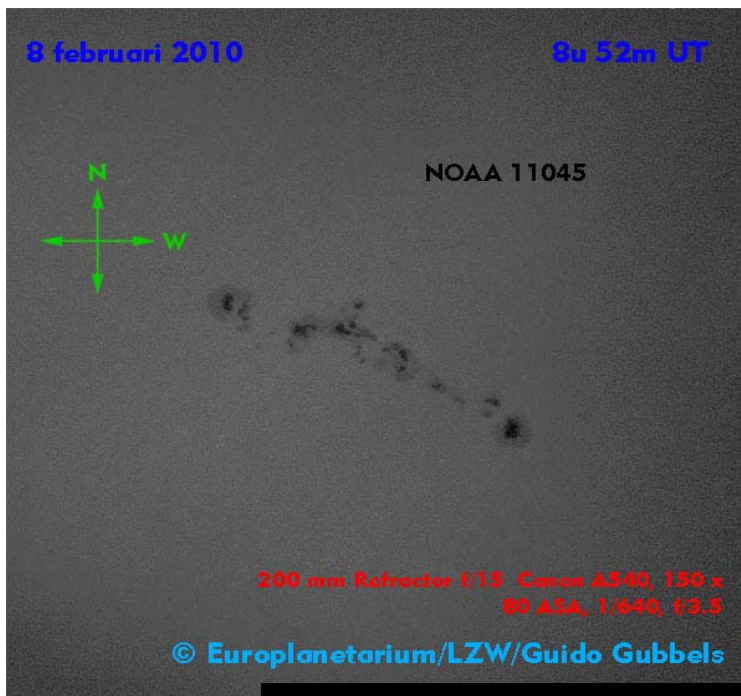


# Sunspot activity from organisations all over de world

Month :

**January 2010**

| Organisation                           | Wolf<br>Total | Wolf<br>North | Wolf<br>South | Groups<br>number | Faculae | CV    | Beck  | Pettis<br>index | Intersol | Area | prom<br>MDF | prom<br>Rp | Filam &<br>plages | Radio<br>flux | Naked<br>eye |
|--|---------------|---------------|---------------|------------------|---------|-------|-------|-----------------|----------|------|-------------|------------|-------------------|---------------|--------------|
| NOAA SWO                               | 21,3          |               |               |                  |         |       |       |                 |          |      |             |            |                   | 81,1          |              |
| SIDC                                   | 13,1          | 7,5           | 5,6           |                  |         |       |       |                 |          |      |             |            |                   |               |              |
| Kanzelhöhe                             | 12,06         |               |               |                  |         |       |       |                 |          |      |             |            |                   |               |              |
| G.F.O.E.S France                       | 11,7          |               |               |                  |         |       |       |                 |          |      |             |            |                   |               | 0,02         |
| BSO Belgium                            | 18,0          | 9,6           | 8,4           | 1,17             |         | 19,50 | 170   | 23,2            | 8,86     |      |             | 45,2       |                   |               |              |
| S.O.G.S.A.S. Switzerland               | 15,6          |               |               | 1,0              |         |       |       |                 |          |      |             |            |                   |               |              |
| BAA                                    | 17,63         |               |               | 0,96             |         |       |       |                 |          |      | 2,27        |            | 1,07              |               |              |
| GsRSI Italy                            | 22,45         |               |               |                  |         |       |       |                 |          |      |             | 43,1       |                   |               |              |
| CV Helios Network                      |               |               |               |                  |         | 18,03 |       |                 |          |      |             |            |                   |               |              |
| AAVSO                                  | 13,3          |               |               |                  |         |       |       |                 |          |      |             |            |                   |               |              |
| Sonne Germany Preliminary              | 14,7          | 8,4           | 6,3           | 0,80             |         |       | 304,0 |                 |          |      |             |            |                   |               |              |
| O.A.A. Japan                           | 16,9          | 9,4           | 7,5           |                  |         |       |       |                 |          |      |             |            |                   |               |              |
| Solar Observer Society TOS Poland      | 18,2          |               |               |                  | 1,44    | 18,13 |       |                 |          | 146  |             |            |                   |               |              |
| Astronomical League of the Philippines | 14,61         |               |               | 1,11             |         |       |       |                 |          |      |             |            |                   |               |              |





SIDC Weekly bulletin on Solar and Geomagnetic  
WEEK 477 from 2010 Feb 15

#### SOLAR ACTIVITY

The flaring activity was low during the past week. There was one C1.9 flare, originating from NOAA 1048. This active region launched several B-flares during the rest of the week.

During the week, several (small) CMEs were observed by STEREO and LASCO. Non of these were earth-directed.

The solar wind speed was very low during the whole week, except on 19 February when it went up to 500 km/s.

#### GEOMAGNETIC ACTIVITY

On February 15, there was a jump in the magnetic field strength visible in the ACE data. This shock originated from the CME associated to the event that started at 12h36UT on February 13. As a consequence, the planetary K-index reached unsettled conditions ( $K_p=4$ ) for two periods in the evening of February 15.

During the rest of the week there were fluctuations in the magnetic field, but in combination the low solar wind speed, none of them were geo-effective. So geomagnetic activity was low during the rest of the week.

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SIDC Weekly bulletin on Solar and Geomagnetic activity  
WEEK 478 from 2010 Feb 22

#### SOLAR ACTIVITY

No significant flares occurred during the period, GOES X-ray levels reached only barely B2 levels on Feb 23 and Feb 24. A number of active regions were present on this disc: AR1051 in the Northern hemisphere and AR1049 and AR1050 in the Southern hemisphere.

A group of (partial) halo CMEs erupted over the solar North pole on February 28 with a projected speed of about 300km/s.

#### GEOMAGNETIC ACTIVITY

No significant geomagnetic activity was observed during the period. A weak shock arrived in the solar wind on Feb 25 around 15h00. Given the Southward Bz component of the magnetic field and low speeds (~380km/s), the geomagnetic reaction was limited to a  $K_p=2$  episode.

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SIDC Weekly bulletin on Solar and Geomagnetic activity  
WEEK 480 from 2010 Mar 08

#### SOLAR ACTIVITY

Solar activity was low during the full week. The visible disc was spotless on March 9 and 10, on March 11 two active regions became visible (NOAA AR 11054 and 11055, Catania 52 and 51 respectively).

AR 11055 did not produced any activity, AR 11054 produced a C2.3 flare on March 12 and a C1.3 on March 14. An Earth directed CME erupted from this AR on March 14, it should arrive to the Earth around March 17. Three more limb CMEs were seen between March 11 and 13 but did not arrive to the Earth.

#### GEOMAGNETIC ACTIVITY

Geomagnetic conditions were quiet to unsettled the whole week with only one active period ( $k_p=4$ ) on March 10, due to a fast wind stream.

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SIDC Weekly bulletin on Solar and Geomagnetic activity  
WEEK 481 from 2010 Mar 15

#### SOLAR ACTIVITY

Solar activity was low to very low over the full week, with just a few B subflares. The GOES X-ray background flux was mostly at A level. The largest sunspot group was Catania#52 (NOAA11054), which had spawned a halo CME on March 14. It reached its largest development on March 15 (type D,

beta/gamma) but then decayed continuously until it disappeared at the West limb on March 20, without producing any further flaring activity.

#### GEOMAGNETIC ACTIVITY

The geomagnetic field was quiet to unsettled over the entire week, with just a brief active interval on March 17. This weak disturbance was associated with a temporary enhancement of the solar wind speed that peaked at 500km/s early on March 17.

This weak solar wind enhancement could be due either to a recurrent fast solar wind stream or to the glancing blow of the slow halo CME released at the Sun on March 14. The solar wind speed then declined with a plateau at 400km/s on March 19-20, causing temporary unsettled geomagnetic levels. On March 21, all parameters finally returned to very quiet levels.

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