## POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JULY 1945

By LUCY T. DAY

[Equatorial Division, U. S. Naval Observatory]

[Communicated by Commodore J. F. Hellweg, U. S. N. (Ret.) Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under longitude, latitude, area of spot or group, and spot count are included assumed longitude of center of the disk, assumed latitude of center of the disk, total area of spots and groups and total spot count.

| Date | Eastern standard time | Mount-Wilson group No. | Heliographic: Difference in longitude | Heliographic: Longitude | Heliographic: Latitude | Heliographic: Distance from center of disk | Area of spot or group | Spot count | Plate quality | Observatory |
|---|---|---|---|---|---|---|---|---|---|---|
| *1945* | *h m* | | ° | ° | ° | ° | | | | |
| July 1 | 9 1 | 7785 | +9 | 318 | −29 | 33 | 24 | 8 | VG | Mt. Wilson. |
| | | 7784 | +70 | 19 | −23 | 73 | 48 | 7 | | |
| | | 7784 | +75 | 24 | −24 | 76 | 24 | 1 | | |
| | | 7781 | +78 | 27 | −14 | 79 | 73 | 1 | | |
| | | | | (309) | (+3) | | 169 | 17 | | |
| 2 | 10 20 | | | None | None | | | | (†) | Do. |
| 3 | 11 2 | 7785 | +31 | 312 | −30 | 45 | 12 | 2 | G | U. S. Naval. |
| | | 7785 | +35 | 316 | −29 | 46 | 12 | 4 | | |
| | | | | (281) | (+3) | | 24 | 6 | | |
| 4 | 10 26 | 7785 | +43 | 311 | −33 | 53 | 6 | 1 | G | Do. |
| | | 7785 | +45 | 313 | −31 | 56 | 12 | 4 | | |
| | | 7785 | +49 | 317 | −30 | 57 | 12 | 5 | | |
| | | 7786 | +57 | 325 | −17 | 60 | 6 | 1 | | |
| | | | | (268) | (+3) | | 36 | 11 | | |
| 5 | 10 30 | 7785 | +58 | 313 | −32 | 64 | 48 | 2 | F | Do. |
| | | 7785 | +60 | 315 | −30 | 66 | 24 | 1 | | |
| | | 7785 | +61 | 316 | −29 | 67 | 73 | 3 | | |
| | | 7786 | +70 | 325 | −17 | 71 | 48 | 1 | | |
| | | | | (255) | (+3) | | 193 | 7 | | |
| 6 | 10 20 | 7788 | −76 | 166 | −4 | 76 | 12 | 3 | G | Do. |
| | | 7787 | +54 | 296 | −8 | 56 | 12 | 1 | | |
| | | 7787 | +57 | 299 | −8 | 59 | 12 | 1 | | |
| | | 7785 | +70 | 312 | −33 | 74 | 48 | 3 | | |
| | | 7785 | +80 | 322 | −31 | 80 | 109 | 2 | | |
| | | | | (242) | (+3) | | 193 | 10 | | |
| 7 | 10 38 | 7788 | −62 | 166 | −3 | 63 | 16 | 2 | G | Do. |
| | | 7789 | −31 | 197 | −32 | 47 | 6 | 1 | | |
| | | 7789 | −29 | 199 | −31 | 44 | 6 | 1 | | |
| | | 7787 | +68 | 296 | −7 | 68 | 6 | 1 | | |
| | | 7787 | +72 | 300 | −7 | 72 | 6 | 1 | | |
| | | | | (228) | (+4) | | 40 | 6 | | |
| 8 | 11 4 | 7791 | −85 | 130 | −19 | 85 | 242 | 1 | G | Do. |
| | | 7790 | −78 | 137 | +20 | 78 | 12 | 1 | | |
| | | 7790 | −75 | 140 | +18 | 75 | 36 | 1 | | |
| | | 7788 | −50 | 165 | −3 | 51 | 6 | 3 | | |
| | | | | (215) | (+4) | | 296 | 6 | | |
| 9 | 10 34 | 7795 | −88 | 114 | −23 | 88 | 12 | 1 | G | Do. |
| | | 7795 | −80 | 122 | −21 | 80 | 97 | 1 | | |
| | | 7794 | −80 | 122 | −17 | 80 | 145 | 1 | | |
| | | 7791 | −80 | 122 | −19 | 80 | 242 | 7 | | |
| | | 7793 | −77 | 125 | +23 | 77 | 24 | 4 | | |
| | | 7791 | −70 | 132 | −20 | 72 | 388 | 1 | | |
| | | 7790 | −64 | 138 | +20 | 64 | 97 | 1 | | |
| | | 7790 | −60 | 142 | +18 | 61 | 109 | 2 | | |
| | | 7792 | +71 | 273 | +15 | 71 | 12 | 2 | | |
| | | | | (202) | (+4) | | 1126 | 20 | | |
| 10 | 10 35 | 7795 | −70 | 119 | −23 | 73 | 97 | 1 | F | Do. |
| | | 7794 | −67 | 122 | −16 | 69 | 48 | 4 | | |
| | | 7791 | −67 | 122 | −21 | 70 | 291 | 1 | | |
| | | 7793 | −66 | 123 | +24 | 67 | 6 | 1 | | |
| | | 7793 | −61 | 128 | +23 | 62 | 48 | 1 | | |
| | | 7791 | −57 | 132 | −20 | 61 | 388 | 1 | | |
| | | 7790 | −50 | 139 | +20 | 52 | 109 | 3 | | |
| | | 7790 | −46 | 143 | +18 | 47 | 97 | 1 | | |
| | | 7796 | +15 | 204 | −21 | 28 | 12 | 2 | | |
| | | | | (189) | (+4) | | 1096 | 15 | | |
| 11 | 10 41 | 7793 | −57 | 119 | +25 | 59 | 48 | 1 | VG | Do. |
| | | 7795 | −56 | 120 | −24 | 61 | 73 | 1 | | |
| | | 7794 | −56 | 120 | −18 | 60 | 24 | 2 | | |
| | | 7791 | −53 | 123 | −21 | 58 | 291 | 1 | | |
| | | 7794 | −53 | 123 | −16 | 57 | 97 | 4 | | |
| | | 7794 | −50 | 126 | −17 | 53 | 48 | 5 | | |
| | | 7793 | −50 | 126 | +23 | 52 | 97 | 7 | | |
| | | 7793 | −47 | 129 | +22 | 50 | 61 | 1 | | |
| | | 7791 | −42 | 134 | −20 | 47 | 339 | 1 | | |
| | | 7790 | −37 | 139 | +20 | 40 | 97 | 2 | | |
| | | 7790 | −31 | 145 | +18 | 34 | 109 | 2 | | |
| | | | | (176) | (+4) | | 1284 | 27 | | |

See footnotes at end of table.

## POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JULY 1945—Continued

| Date | Eastern standard time | Mount-Wilson group No. | Heliographic: Difference in longitude | Heliographic: Longitude | Heliographic: Latitude | Heliographic: Distance from center of disk | Area of spot or group | Spot count | Plate quality | Observatory |
|---|---|---|---|---|---|---|---|---|---|---|
| *1945* | *h m* | | ° | ° | ° | ° | | | | |
| July 12 | 10 29 | 7795 | −43 | 119 | −24 | 50 | 61 | 1 | VG | U. S. Naval. |
| | | 7793 | −42 | 120 | +25 | 46 | 61 | 13 | | |
| | | 7791 | −39 | 123 | −21 | 47 | 291 | 1 | | |
| | | 7794 | −39 | 123 | −17 | 45 | 194 | 9 | | |
| | | 7793 | −39 | 123 | +22 | 41 | 12 | 8 | | |
| | | 7791 | −37 | 125 | −18 | 43 | 73 | 15 | | |
| | | 7793 | −35 | 127 | +21 | 38 | 48 | 9 | | |
| | | 7793 | −31 | 131 | +21 | 36 | 48 | 1 | | |
| | | 7791 | −30 | 132 | −20 | 37 | 291 | 1 | | |
| | | 7790 | −24 | 138 | +20 | 28 | 61 | 10 | | |
| | | 7790 | −21 | 141 | +18 | 25 | 12 | 3 | | |
| | | 7790 | −19 | 143 | +17 | 23 | 73 | 9 | | |
| | | 7796 | +43 | 205 | −21 | 49 | 24 | 5 | | |
| | | | | (162) | (+4) | | 1249 | 85 | | |
| 13 | 10 20 | 7795 | −31 | 118 | −24 | 41 | 48 | 1 | F | Do. |
| | | 7793 | −29 | 120 | +25 | 35 | 48 | 5 | | |
| | | 7793 | −28 | 121 | +28 | 36 | 291 | 1 | | |
| | | 7793 | −27 | 122 | +23 | 33 | 97 | 4 | | |
| | | 7791 | −27 | 122 | −21 | 37 | 291 | 2 | | |
| | | 7794 | −27 | 122 | −17 | 35 | 145 | 6 | | |
| | | 7791 | −24 | 125 | −18 | 32 | 48 | 7 | | |
| | | 7793 | −22 | 127 | +22 | 27 | 36 | 1 | | |
| | | 7793 | −18 | 131 | +22 | 25 | 36 | 1 | | |
| | | 7791 | −18 | 131 | −20 | 30 | 267 | 1 | | |
| | | 7790 | −11 | 138 | +20 | 20 | 97 | 6 | | |
| | | 7790 | −7 | 142 | +18 | 17 | 12 | 1 | | |
| | | 7790 | −6 | 143 | +17 | 16 | 73 | 5 | | |
| | | 7796 | +55 | 204 | −20 | 59 | 61 | 1 | | |
| | | 7796 | +57 | 206 | −21 | 60 | 73 | 1 | | |
| | | | | (149) | (+4) | | 1623 | 43 | | |
| 14 | 9 20 | 7795 | −18 | 119 | −24 | 33 | 48 | 1 | VG | Mt. Wilson. |
| | | 7793 | −17 | 120 | +25 | 27 | 12 | 1 | | |
| | | 7793 | −14 | 123 | +23 | 24 | 97 | 12 | | |
| | | 7794 | −13 | 124 | −17 | 25 | 170 | 17 | | |
| | | 7791 | −12 | 125 | −20 | 27 | 291 | 1 | | |
| | | 7791 | −7 | 130 | −20 | 25 | 73 | 16 | | |
| | | 7793 | −7 | 130 | +22 | 20 | 97 | 21 | | |
| | | 7793 | −5 | 132 | +22 | 19 | 24 | 1 | | |
| | | 7791 | −4 | 133 | −20 | 24 | 218 | 1 | | |
| | | 7790 | +2 | 139 | +21 | 17 | 48 | 7 | | |
| | | 7790 | +7 | 144 | +17 | 16 | 61 | 12 | | |
| | | 7796 | +68 | 205 | −19 | 70 | 145 | 2 | | |
| | | 7796 | +71 | 208 | −20 | 78 | 194 | 1 | | |
| | | | | (137) | (+4) | | 1478 | 93 | | |
| 15 | 9 16 | 7798 | −45 | 78 | −27 | 55 | 12 | 2 | VG | Do. |
| | | 7797 | −25 | 98 | −30 | 42 | 145 | 15 | | |
| | | 7795 | −5 | 118 | −24 | 28 | 48 | 1 | | |
| | | 7794 | −2 | 121 | −17 | 22 | 121 | 15 | | |
| | | 7793 | −2 | 121 | +24 | 20 | 12 | 1 | | |
| | | 7793 | 0 | 123 | +23 | 19 | 73 | 12 | | |
| | | 7791 | 0 | 123 | −20 | 24 | 291 | 1 | | |
| | | 7791 | +7 | 130 | −19 | 23 | 48 | 14 | | |
| | | 7793 | +3 | 130 | +22 | 20 | 73 | 2 | | |
| | | 7791 | +9 | 132 | −20 | 26 | 218 | 1 | | |
| | | 7791 | +11 | 134 | −19 | 25 | 24 | 7 | | |
| | | 7790 | +15 | 138 | +21 | 23 | 12 | 2 | | |
| | | 7790 | +18 | 141 | +17 | 23 | 48 | 14 | | |
| | | 7796 | +81 | 204 | −19 | 81 | 194 | 2 | | |
| | | 7796 | +85 | 208 | −20 | 85 | 194 | 2 | | |
| | | | | (123) | (+4) | | 1513 | 91 | | |
| 16 | 9 18 | 7798 | −31 | 79 | −27 | 43 | 48 | 4 | G | Do. |
| | | 7797 | −12 | 98 | −30 | 36 | 194 | 2 | | |
| | | 7795 | +9 | 119 | −24 | 29 | 48 | 1 | | |
| | | 7793 | +11 | 121 | +24 | 23 | 48 | 6 | | |
| | | 7794 | +12 | 122 | −17 | 24 | 48 | 12 | | |
| | | 7791 | +12 | 122 | −20 | 27 | 291 | 1 | | |
| | | 7793 | +20 | 130 | +22 | 26 | 97 | 17 | | |
| | | 7791 | +22 | 132 | −19 | 31 | 36 | 11 | | |
| | | 7791 | +28 | 138 | −17 | 34 | 218 | 1 | | |
| | | 7790 | +31 | 141 | +18 | 35 | 24 | 5 | | |
| | | | | (110) | (+4) | | 1052 | 60 | | |
| 17 | 9 12 | 7800 | −61 | 36 | −22 | 66 | 24 | 2 | VG | Do. |
| | | 7799 | −47 | 50 | +25 | 51 | 12 | 1 | | |
| | | 7798 | −19 | 78 | −27 | 36 | 48 | 15 | | |
| | | 7798 | −15 | 82 | −25 | 32 | 97 | 20 | | |
| | | 7797 | −2 | 95 | −27 | 31 | 24 | 4 | | |
| | | 7797 | −1 | 96 | −28 | 32 | 73 | 10 | | |
| | | 7797 | +3 | 100 | −30 | 34 | 97 | 5 | | |
| | | 7795 | +22 | 119 | −23 | 35 | 48 | 1 | | |
| | | 7791 | +24 | 121 | −18 | 32 | 24 | 7 | | |
| | | 7794 | +25 | 122 | −17 | 32 | 24 | 6 | | |
| | | 7793 | +26 | 123 | +24 | 32 | 12 | 6 | | |
| | | 7791 | +26 | 123 | −19 | 34 | 242 | 9 | | |
| | | 7793 | +33 | 130 | +22 | 37 | 36 | 11 | | |
| | | 7791 | +36 | 133 | −18 | 42 | 218 | 5 | | |
| | | 7791 | +39 | 136 | −16 | 43 | 36 | 3 | | |
| | | 7790 | +45 | 142 | +18 | 47 | 12 | 2 | | |
| | | | | (97) | (+5) | | 1027 | 107 | | |

## POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JULY 1945—Continued

| Date | Eastern standard time | Mount-Wilson group No. | Heliographic: Difference in longitude | Heliographic: Longitude | Heliographic: Latitude | Heliographic: Distance from center of disk | Area of spot or group | Spot count | Plate quality | Observatory |
|---|---|---|---|---|---|---|---|---|---|---|
| *1945* | *h m* | | ° | ° | ° | ° | | | | |
| July 18 | 11 31 | 7800 | −51 | 31 | −25 | 57 | 6 | 1 | G | U. S. Naval. |
| | | 7800 | −47 | 35 | −24 | 54 | 6 | 4 | | |
| | | 7799 | −37 | 45 | +26 | 41 | 24 | 4 | | |
| | | 7799 | −33 | 49 | +24 | 38 | 12 | 5 | | |
| | | 7798 | −7 | 75 | −28 | 34 | 48 | 7 | | |
| | | 7798 | +1 | 83 | −27 | 32 | 48 | 3 | | |
| | | 7797 | +11 | 93 | −31 | 38 | 48 | 7 | | |
| | | 7801 | +13 | 95 | −12 | 20 | 12 | 4 | | |
| | | 7797 | +18 | 100 | −33 | 43 | 36 | 5 | | |
| | | 7795 | +35 | 117 | −25 | 46 | 24 | 3 | | |
| | | 7794 | +39 | 121 | −15 | 43 | 12 | 5 | | |
| | | 7791 | +40 | 122 | −20 | 47 | 170 | 3 | | |
| | | 7793 | +48 | 130 | +21 | 50 | 6 | 1 | | |
| | | 7791 | +50 | 132 | −20 | 55 | 194 | 1 | | |
| | | | | (82) | (+5) | | 646 | 53 | | |
| 19 | 9 6 | 7800 | −38 | 33 | −25 | 48 | 12 | 2 | P | Mt. Wilson. |
| | | 7800 | −32 | 39 | −24 | 43 | 16 | 3 | | |
| | | 7799 | −24 | 47 | +26 | 31 | 48 | 13 | | |
| | | 7799 | −18 | 53 | +25 | 27 | 97 | 2 | | |
| | | 7798 | +8 | 79 | −28 | 35 | 24 | 2 | | |
| | | 7798 | +10 | 81 | −27 | 33 | 48 | 6 | | |
| | | 7798 | +15 | 86 | −26 | 34 | 61 | 2 | | |
| | | 7797 | +27 | 98 | −30 | 44 | 24 | 1 | | |
| | | 7797 | +31 | 102 | −32 | 48 | 36 | 3 | | |
| | | 7795 | +50 | 121 | −25 | 57 | 12 | 1 | | |
| | | 7791 | +53 | 124 | −20 | 57 | 145 | 2 | | |
| | | 7793 | +61 | 132 | +21 | 61 | 12 | 1 | | |
| | | 7791 | +62 | 133 | −21 | 65 | 194 | 1 | | |
| | | | | (71) | (+5) | | 729 | 39 | | |
| 20 | 12 3 | 7800 | −24 | 32 | −25 | 37 | 6 | 1 | F | U. S. Naval. |
| | | 7799 | −11 | 45 | +24 | 23 | 73 | 4 | | |
| | | 7799 | −8 | 48 | +23 | 20 | 48 | 1 | | |
| | | 7799 | −2 | 54 | +23 | 18 | 194 | 2 | | |
| | | 7798 | +21 | 77 | −29 | 39 | 24 | 4 | | |
| | | 7798 | +28 | 84 | −28 | 43 | 73 | 2 | | |
| | | 7795 | +64 | 120 | −25 | 68 | 12 | 1 | | |
| | | 7791 | +67 | 123 | −20 | 70 | 145 | 1 | | |
| | | 7793 | +72 | 128 | +22 | 72 | 6 | 2 | | |
| | | 7791 | +79 | 135 | −20 | 79 | 242 | 1 | | |
| | | | | (56) | (+5) | | 823 | 19 | | |
| 21 | 10 24 | 7799 | +3 | 46 | +25 | 22 | 61 | 18 | G | Do. |
| | | 7799 | +6 | 49 | +23 | 19 | 24 | 5 | | |
| | | 7799 | +11 | 54 | +23 | 21 | 194 | 4 | | |
| | | 7798 | +32 | 75 | −28 | 45 | 12 | 3 | | |
| | | 7798 | +42 | 85 | −27 | 51 | 36 | 3 | | |
| | | 7791 | +81 | 124 | −20 | 81 | 145 | 1 | | |
| | | | | (43) | (+5) | | 472 | 34 | | |
| 22 | 9 5 | 7802 | −68 | 323 | +28 | 69 | 6 | 1 | F | Mt. Wilson. |
| | | 7800 | +7 | 38 | −23 | 28 | 12 | 2 | | |
| | | 7799 | +14 | 45 | +24 | 23 | 73 | 19 | | |
| | | 7799 | +20 | 51 | +25 | 28 | 36 | 16 | | |
| | | 7799 | +25 | 56 | +25 | 31 | 194 | 5 | | |
| | | 7798 | +56 | 87 | −25 | 61 | 24 | 2 | | |
| | | | | (31) | (+5) | | 345 | 45 | | |
| 23 | 12 2 | 7802 | −49 | 327 | +32 | 53 | 6 | 1 | G | U. S. Naval. |
| | | 7803 | −48 | 328 | +24 | 51 | 12 | 1 | | |
| | | 7803 | −46 | 330 | +23 | 48 | 12 | 1 | | |
| | | 7799 | +28 | 44 | +24 | 33 | 48 | 5 | | |
| | | 7799 | +29 | 45 | +23 | 33 | 97 | 1 | | |
| | | 7799 | +32 | 48 | +23 | 36 | 24 | 7 | | |
| | | 7799 | +40 | 56 | +22 | 42 | 194 | 1 | | |
| | | (*) | +41 | 57 | +35 | 47 | 6 | 2 | | |
| | | 7798 | +68 | 84 | −25 | 70 | 6 | 1 | | |
| | | | | (16) | (+5) | | 405 | 20 | | |
| 24 | 10 56 | 7804 | −60 | 303 | −32 | 67 | 6 | 1 | F | Do. |
| | | 7803 | −35 | 328 | +24 | 39 | 12 | 1 | | |
| | | 7799 | +41 | 44 | +24 | 43 | 109 | 8 | | |
| | | 7799 | +49 | 52 | +23 | 51 | 12 | 3 | | |
| | | 7799 | +51 | 54 | +23 | 53 | 145 | 1 | | |
| | | | | (3) | (+5) | | 284 | 14 | | |
| 25 | 10 24 | 7804 | −51 | 299 | −31 | 59 | 6 | 1 | F | Do. |
| | | 7803 | −23 | 327 | +23 | 28 | 12 | 2 | | |
| | | 7799 | +53 | 43 | +24 | 55 | 73 | 7 | | |
| | | 7799 | +65 | 55 | +22 | 66 | 6 | 1 | | |
| | | 7799 | +66 | 56 | +22 | 67 | 121 | 1 | | |
| | | | | (350) | (+5) | | 218 | 12 | | |



## POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JULY 1945—Continued

| Date | Eastern Standard time | Mount-Wilson group No. | Heliographic: Difference in longitude | Heliographic: Longitude | Heliographic: Latitude | Heliographic: Distance from center of disk | Area of spot or group | Spot count | Plate quality | Observatory |
|---|---|---|---|---|---|---|---|---|---|---|
| *1945* | *h m* | | ° | ° | ° | ° | | | | |
| July 26 | 10 21 | 7805 | −78 | 259 | +16 | 78 | 170 | 1 | F | U. S. Naval. |
| | | 7804 | −41 | 296 | −31 | 53 | 12 | 4 | | |
| | | 7803 | −6 | 331 | +22 | 18 | 12 | 5 | | |
| | | 7799 | +80 | 57 | +22 | 80 | 194 | 1 | | |
| | | | | (337) | (+5) | | 388 | 11 | | |
| 27 | 10 13 | 7805 | −64 | 260 | +16 | 64 | 194 | 1 | F | Do. |
| | | 7804 | −30 | 294 | −31 | 47 | 12 | 1 | | |
| | | 7806 | −11 | 313 | +17 | 17 | 24 | 1 | | |
| | | 7806 | −9 | 315 | +18 | 16 | 36 | 2 | | |
| | | | | (324) | (+5) | | 266 | 5 | | |
| 28 | 11 35 | 7805 | −50 | 260 | +16 | 51 | 145 | 1 | G | Do. |
| | | 7806 | +3 | 313 | +17 | 12 | 24 | 1 | | |
| | | 7806 | +4 | 314 | +18 | 14 | 24 | 1 | | |
| | | | | (310) | (+6) | | 193 | 3 | | |
| 29 | 9 45 | 7807 | −63 | 235 | +24 | 64 | 12 | 1 | P | Mt. Wilson. |
| | | 7805 | −37 | 261 | +17 | 42 | 145 | 1 | | |
| | | 7806 | +17 | 315 | +17 | 21 | 16 | 2 | | |
| | | | | (298) | (+6) | | 173 | 4 | | |
| 30 | 10 31 | (*) | −80 | 204 | −20 | 80 | 24 | 1 | VG | U. S. Naval. |
| | | (*) | −80 | 204 | −24 | 80 | 24 | 1 | | |
| | | 7807 | −51 | 233 | +24 | 53 | 6 | 2 | | |
| | | 7805 | −24 | 260 | +16 | 25 | 145 | 1 | | |
| | | 7808 | −19 | 265 | −3 | 22 | 6 | 1 | | |
| | | | | (284) | (+6) | | 205 | 6 | | |
| 31 | 10 51 | 7807 | −36 | 235 | +24 | 39 | 12 | 3 | G | Do. |
| | | 7805 | −11 | 260 | +17 | 17 | 97 | 1 | | |
| | | | | (271) | (+6) | | 109 | 4 | | |

Mean daily area for 31 days=570

*Not numbered.
†Data from Mount Wilson charts.
VG=very good; G=good; F=fair; P=poor.

## PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR JULY 1945

[Based on observations at Zurich except as indicated by an asterisk. Data furnished through the courtesy of Prof. W. Brunner, Swiss Federal Observatory, Zurich, Switzerland]

| July 1945 | Relative numbers | July 1945 | Relative numbers | July 1945 | Relative numbers |
|---|---|---|---|---|---|
| 1 | 14 | 11 | 57 | 21 | *a*41 |
| 2 | 0 | 12 | *Wc*80 | 22 | 35 |
| 3 | *Wc*7 | 13 | 100 | 23 | 27 |
| 4 | 8 | 14 | *a*98 | 24 | 28 |
| 5 | 19 | 15 | *Eaacc*105 | 25 | 31 |
| 6 | 34 | 16 | *99 | 26 | *d*33 |
| 7 | 18 | 17 | *Eac*88 | 27 | 8 |
| 8 | *d*32 | 18 | *a*76 | 28 | 19 |
| 9 | *dd*29 | 19 | 87 | 29 | 18 |
| 10 | *Ec*51 | 20 | 44 | 30 | 17 |
| | | | | 31 | 9 |

Mean, 31 days=41.9

*Observed at Locarno.
*a* Passage of an average sized group through the central meridian.
*b* Passage of a large group through the central meridian.
*c* New formation of a group developing into a middle sized or large center of activity; E, on the eastern part of the Sun's disk; W, on the western part; M, in the central circle zone.
*d* Entrance of a large or average sized center of activity on the east limb.