

*Georgi Dobrovolski
Solar Observatory*

*Annual
Report
for
2015*

Supplement

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 **Introduction.**

This supplement (which can be considered as a stand-alone publication) was prompted by the Solar Influences Data-analysis Centre / Sunspot Index and Long-term Solar Observations (SIDC/SILSO) decision to remove their scaling factor of 0.6, and introduce other minor factors into the evaluation of the International Relative Sunspot Number (R_i).

The evaluation of the new GDSO Version 2 Wolf Number (R_{GD2}), is done in the same manner as that to obtain the old R_{GD} , that being the observed monthly, annual or rotational means multiplied by a monthly, annual or rotational mean k co-efficients.

When spotless observations occur, true quotients are either 0 or ∞ , therefore they are discarded for the purposes of obtaining co-efficients (labelled k_2).

Other values are explained on the following page.

Important points:

- The telescope used for observing the Sun is a 76 mm refractor with projection screen.
- Months and years end at 24h 00m on the last day of the Co-ordinated Universal Time (UTC) month or year.
- Data have been back-dated to March 1973, with some data of the early years not as reliable as later years.
- The GDSO was manned part-time up to May 1989, and nearly full-time since that date.
- As 1982 involved a 6-week-long trip to the United Kingdom and continental Europe, the values (observed and corrected) for June are interpolated. There was also a break in November 2015. Values for this break are yet to be interpolated. They will appear in the GDSO Annual Report for 2016.

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The following are formulæ used in the analysis of sunspot data etc.

σ (sample standard deviation) is computed as:

$$\sqrt{\frac{\sum k^2 - \frac{(\sum k)^2}{n_k}}{n_k - 1}}$$

The annual σ result is computed from a total pool of k values.

σ^{mw} (annual standard deviation based on the SIDC's formula)

is computed as:

$$\frac{\sum (\sigma \times n_k)}{\sum n_k}$$

$E\sigma$ (estimate of standard deviation) is computed as:

$$\frac{\sqrt{\sum (\sigma^2 \times n_k)}}{\sum n_k}$$



Smoothing Formulæ.

The following are the two formulæ used in the smoothing of GDSO sunspot data. All are based on monthly means (\bar{x}).

Data suffixed (S^W) are computed as:

$$\frac{\sum_{-5}^{+5} \bar{x} + \frac{\bar{x}_{+6} + \bar{x}_{-6}}{2}}{12}$$

Data suffixed (S^{B13}) are computed as:

$$\frac{0.75(\bar{x}_{+6} + \bar{x}_{-6}) + 2(\bar{x}_{+5} + \bar{x}_{-5}) + 3(\bar{x}_{+4} + \bar{x}_{-4}) + 4(\bar{x}_{+3} + \bar{x}_{-3}) + 5(\bar{x}_{+2} + \bar{x}_{-2}) + 6(\bar{x}_{+1} + \bar{x}_{-1}) + 6.5\bar{x}_0}{48}$$

CORRECTED VERSION 2 WOLF NUMBERS for 1973 - 2015.

As the GDSO is in suburban Auckland, it can suffer terrible atmospheric conditions, hence the 'observed' Wolf Numbers have to be upgraded to give reflections of international results. International Wolf Number results are computed by the Solar Influences Data-Analysis Centre (SIDC), at the Observatoire Royal de Belgique, Bruxelles, Belgium.

Below are the 'observed' Wolf Numbers (WN) along with the monthly 'Version 2' co-efficients (k2) and the corrected values (R_{GD2}) for 1973 - 2015. The SIDC's final values (S_n) are also stated.

$I/GDSO_2$ = SIDC's mean (of days observed by the GDSO) divided by the GDSO's monthly mean.

$I/GDSO_{k2}$ = SIDC's mean (of days with GDSO k2 values) divided by the GDSO's observed mean for the *same* days.

n = number of GDSO observations.

n_k = number of k values.

σ_2 = sample standard deviation of k2 values.

σ^{mw2} = annual σ computed on the SIDC's monthly-weighted formula.

$E\sigma_2$ = annual estimate of standard deviation.

See note concerning R_{GD2} ,
pages iv & xvi, GDSO
Annual Report for 2015.

| | WN | k2 | R_{GD2} | σ_2 | R_{GDm2} | $I/GDSO_2$ | $I/GDSO_{k2}$ | n | n_k | S_n |
|------------|---------------------|--------|-----------|-------------------------|------------|------------|----------------------|----|-------|-------|
| 1973 Jan | — | — | — | — | — | — | — | — | — | 61.8 |
| Feb | — | — | — | — | — | — | — | — | — | 60.9 |
| Mar | 36.00 | 2.3333 | 84.00 | ∞ | 84.00 | 2.3333 | 2.3333 | 1 | 1 | 65.4 |
| Apr | 30.00 | 3.0743 | 92.23 | 0.3655 | 92.08 | 3.0593 | 3.0593 | 9 | 9 | 81.8 |
| May | 8.75 | 5.8235 | 50.96 | 1.3837 | 55.26 | 7.3000 | 5.8857 | 8 | 5 | 60.3 |
| Jun | 6.23 | 4.4972 | 28.02 | 0.5787 | 36.07 | 8.3704 | 4.3704 | 13 | 5 | 56.1 |
| Jul | 9.57 | 2.9734 | 28.46 | 1.0856 | 30.83 | 3.7164 | 3.0597 | 14 | 10 | 33.2 |
| Aug | 12.50 | 3.2919 | 41.15 | 0.8797 | 40.81 | 3.2114 | 3.1486 | 14 | 10 | 36.6 |
| Sep | 41.21 | 1.9832 | 81.74 | 0.5618 | 81.87 | 1.9931 | 1.9931 | 14 | 12 | 84.1 |
| Oct | 12.79 | 3.1850 | 40.72 | 0.9239 | 41.24 | 3.3073 | 2.9218 | 14 | 8 | 43.7 |
| Nov | 11.79 | 3.4977 | 41.22 | 1.6987 | 41.05 | 3.4545 | 3.1455 | 14 | 8 | 34.3 |
| Dec | 8.60 | 3.1278 | 26.90 | 1.2997 | 27.50 | 3.3372 | 2.9593 | 20 | 10 | 33.3 |
| 1973 Means | 15.36 | 3.2410 | 49.79 | — | 49.85 | 3.2517 | 2.8714 | — | — | 54.1 |
| | $\sigma_2 = 1.3251$ | | | $\sigma^{mw2} = 0.9420$ | | | $E\sigma_2 = 0.1165$ | | | |
| 1974 Jan | 19.15 | 2.1123 | 40.46 | 0.5488 | 40.69 | 2.1486 | 2.1004 | 13 | 9 | 39.4 |
| Feb | 14.00 | 2.3544 | 32.96 | 0.6970 | 34.74 | 2.7357 | 2.2286 | 10 | 7 | 37.3 |
| Mar | 8.87 | 2.6793 | 23.76 | 0.9825 | 26.15 | 3.4887 | 2.6917 | 15 | 12 | 30.9 |
| Apr | 18.38 | 2.9409 | 54.04 | 0.9468 | 56.36 | 3.3197 | 2.7551 | 16 | 11 | 57.5 |
| May | 18.29 | 2.3318 | 42.64 | 0.4930 | 43.95 | 2.5469 | 2.3672 | 7 | 3 | 56.3 |
| Jun | 24.22 | 2.1498 | 52.07 | 1.0824 | 51.09 | 2.0275 | 2.0275 | 9 | 9 | 51.5 |
| Jul | 27.50 | 2.7879 | 76.67 | 1.0322 | 73.61 | 2.4545 | 2.4545 | 8 | 8 | 79.1 |
| Aug | 31.08 | 1.5719 | 48.86 | 0.5215 | 48.74 | 1.5603 | 1.5282 | 12 | 11 | 47.9 |
| Sep | 22.40 | 2.9442 | 65.95 | 0.5769 | 65.57 | 2.8929 | 2.7589 | 10 | 8 | 57.2 |
| Oct | 18.56 | 2.8864 | 53.56 | 0.7419 | 53.96 | 2.9521 | 2.8024 | 9 | 7 | 67.2 |
| Nov | 11.90 | 2.6326 | 31.33 | 0.7955 | 33.49 | 3.1765 | 2.5546 | 10 | 7 | 35.9 |
| Dec | 12.33 | 2.6293 | 32.43 | 1.3910 | 34.10 | 3.0360 | 2.5405 | 9 | 7 | 29.6 |
| 1974 Means | 18.56 | 2.4901 | 46.22 | — | 46.71 | 2.5690 | 2.3274 | — | — | 49.2 |
| | $\sigma_2 = 0.9268$ | | | $\sigma^{mw2} = 0.8318$ | | | $E\sigma_2 = 0.0874$ | | | |

CORRECTED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------------------|-------------------------------|---------------------|----------------------------------|----|----------------|------|
| 1975 Jan | 8.29 | 2.7598 | 22.87 | 0.6456 | 23.39 | 2.9483 | 2.7586 | 7 | 5 | 27.3 |
| Feb | 12.00 | 1.9167 | 23.00 | 0.9694 | 24.05 | 2.1786 | 1.7262 | 7 | 4 | 16.7 |
| Mar | 4.18 | 1.5606 | 6.53 | 0.1500 | 8.81 | 3.1957 | 1.5652 | 11 | 2 | 16.9 |
| Apr | 0.00 | — | 0.00 | ∞ | 0.00 | ∞ | ∞ | 11 | 0 | 7.7 |
| May | 1.71 | 4.0000 | 6.86 | ∞ | 10.52 | 10.4167 | 4.0000 | 7 | 1 | 13.1 |
| Jun | 5.29 | 3.1010 | 16.39 | 1.4874 | 17.45 | 3.7027 | 2.9459 | 7 | 3 | 16.7 |
| Jul | 26.29 | 1.7347 | 45.60 | 0.2954 | 44.92 | 1.6576 | 1.6576 | 7 | 7 | 40.4 |
| Aug | 9.22 | 3.1317 | 28.88 | 0.9713 | 34.29 | 4.8916 | 3.2169 | 9 | 4 | 56.7 |
| Sep | 3.67 | 2.4848 | 9.11 | 0.4484 | 13.59 | 6.1515 | 2.4848 | 9 | 3 | 20.3 |
| Oct | 9.20 | 1.7475 | 16.08 | 0.3798 | 16.52 | 1.8913 | 1.7717 | 10 | 7 | 13.6 |
| Nov | 11.80 | 2.1872 | 25.81 | 0.6482 | 25.11 | 2.0085 | 2.0085 | 10 | 6 | 27.9 |
| Dec | 3.00 | 2.2909 | 6.87 | 0.1907 | 8.30 | 3.7179 | 2.2821 | 13 | 3 | 11.6 |
| 1975 Means | 7.28 | 2.2720 | 16.54 | — | 18.17 | 2.9466 | 2.1336 | — | — | 22.5 |
| | σ ² = 0.8335 | | | σ ^{mw} ₂ = 0.5841 | | | Eσ ² = 0.1022 | | | |
| 1976 Jan | 4.18 | 1.8634 | 7.79 | 0.1195 | 8.23 | 2.1739 | 1.8478 | 11 | 3 | 11.9 |
| Feb | 4.11 | 1.4149 | 5.82 | 0.3889 | 6.25 | 1.7297 | 1.4324 | 9 | 3 | 6.4 |
| Mar | 9.11 | 2.5962 | 23.65 | 0.6537 | 24.92 | 3.0122 | 2.5854 | 9 | 5 | 31.5 |
| Apr | 21.67 | 1.5246 | 33.03 | 0.5059 | 32.73 | 1.4821 | 1.4821 | 9 | 9 | 27.3 |
| May | 6.43 | 2.1117 | 13.58 | 1.2693 | 14.67 | 2.6222 | 2.1111 | 7 | 4 | 18.2 |
| Jun | 9.00 | 2.1223 | 19.10 | 0.7513 | 19.27 | 2.1778 | 2.0444 | 10 | 6 | 17.9 |
| Jul | 1.20 | 1.0000 | 1.20 | ∞ | 1.97 | 2.9167 | 1.0000 | 10 | 1 | 2.9 |
| Aug | 9.89 | 2.1258 | 21.02 | 0.7695 | 21.87 | 2.3820 | 2.0899 | 9 | 7 | 24.1 |
| Sep | 9.80 | 1.3468 | 13.20 | 0.3527 | 15.03 | 1.9082 | 1.3163 | 10 | 5 | 20.0 |
| Oct | 14.22 | 2.1203 | 30.16 | 0.5284 | 30.47 | 2.1875 | 2.0234 | 9 | 7 | 29.7 |
| Nov | 5.62 | 1.2803 | 7.19 | 0.2131 | 7.49 | 1.4384 | 1.2877 | 13 | 6 | 7.9 |
| Dec | 14.41 | 1.5101 | 21.76 | 0.3820 | 21.61 | 1.4776 | 1.4776 | 17 | 14 | 22.3 |
| 1976 Means | 9.27 | 1.7714 | 16.42 | — | 16.89 | 1.9254 | 1.7193 | — | — | 18.4 |
| | σ ² = 0.6679 | | | σ ^{mw} ₂ = 0.5201 | | | Eσ ² = 0.0697 | | | |
| 1977 Jan | 9.50 | 2.3495 | 22.32 | 0.8804 | 24.55 | 3.0526 | 2.2632 | 12 | 8 | 23.8 |
| Feb | 15.08 | 1.7292 | 26.08 | 0.6041 | 27.92 | 2.0939 | 1.6961 | 12 | 8 | 33.3 |
| Mar | 5.23 | 1.5839 | 8.29 | 0.6360 | 10.04 | 2.5882 | 1.6029 | 13 | 6 | 13.0 |
| Apr | 4.25 | 2.1622 | 9.19 | 0.5444 | 10.65 | 3.1961 | 2.2157 | 12 | 4 | 19.0 |
| May | 10.50 | 1.8609 | 19.54 | 0.2113 | 21.65 | 2.4643 | 1.8929 | 8 | 5 | 27.0 |
| Jun | 24.45 | 1.9677 | 48.12 | 0.6953 | 48.59 | 2.0260 | 2.0260 | 11 | 11 | 54.9 |
| Jul | 11.55 | 2.8757 | 33.20 | 1.4954 | 32.92 | 2.8031 | 2.7087 | 11 | 9 | 30.6 |
| Aug | 20.60 | 2.4136 | 49.72 | 0.9037 | 47.78 | 2.1311 | 2.1311 | 10 | 10 | 43.0 |
| Sep | 29.13 | 2.1445 | 62.46 | 0.5105 | 62.18 | 2.1159 | 2.1159 | 8 | 8 | 62.4 |
| Oct | 33.75 | 2.1718 | 73.30 | 0.7441 | 70.95 | 1.9630 | 1.9630 | 8 | 8 | 62.1 |
| Nov | 18.77 | 2.2344 | 41.94 | 0.7522 | 41.60 | 2.1803 | 2.1230 | 13 | 12 | 41.6 |
| Dec | 34.33 | 1.9719 | 67.70 | 0.8472 | 64.75 | 1.7136 | 1.7136 | 18 | 18 | 61.4 |
| 1977 Means | 18.13 | 2.1363 | 38.72 | — | 38.63 | 2.1205 | 1.9773 | — | — | 39.3 |
| | σ ² = 0.8456 | | | σ ^{mw} ₂ = 0.7793 | | | Eσ ² = 0.0797 | | | |

CORRECTED **VERSION 2 WOLF NUMBERS** for **1973 - 2015** continued.

| | WN | k2 | R _{GD} ² | σ^2 | R _{GDm} ² | I/GDSO ₂ | I/GDSO _{k2} | n | n _k | Sn |
|------------|---------------------|--------|------------------------------|--------------------------|-------------------------------|---------------------|----------------------|----|----------------|-------|
| 1978 Jan | 32.65 | 2.2199 | 72.48 | 0.6340 | 72.60 | 2.2312 | 2.1164 | 20 | 17 | 73.7 |
| Feb | 75.17 | 1.9272 | 144.86 | 0.4605 | 144.16 | 1.8991 | 1.8991 | 12 | 12 | 132.6 |
| Mar | 63.71 | 2.3506 | 149.77 | 1.7782 | 136.99 | 1.7489 | 1.7489 | 7 | 7 | 108.4 |
| Apr | 82.50 | 1.8286 | 150.86 | 0.4345 | 147.70 | 1.7136 | 1.7136 | 8 | 8 | 141.2 |
| May | 68.78 | 1.9006 | 130.72 | 0.4341 | 129.07 | 1.8288 | 1.8288 | 9 | 9 | 117.1 |
| Jun | 74.67 | 2.1647 | 161.63 | 0.7663 | 154.42 | 1.8750 | 1.8750 | 6 | 6 | 134.6 |
| Jul | 46.89 | 2.4811 | 116.34 | 1.1409 | 113.34 | 2.2891 | 2.2891 | 9 | 9 | 99.7 |
| Aug | 35.57 | 2.8142 | 100.10 | 1.5918 | 94.45 | 2.3373 | 2.3373 | 7 | 7 | 82.4 |
| Sep | 80.71 | 2.5988 | 209.76 | 0.4766 | 207.60 | 2.5186 | 2.5186 | 7 | 7 | 195.7 |
| Oct | 86.00 | 2.1268 | 182.91 | 0.3955 | 181.41 | 2.0746 | 2.0746 | 12 | 12 | 177.1 |
| Nov | 60.82 | 2.7619 | 167.97 | 1.1813 | 160.16 | 2.3767 | 2.3767 | 11 | 11 | 138.5 |
| Dec | 72.15 | 2.0166 | 145.50 | 0.3502 | 145.82 | 2.0299 | 2.0299 | 13 | 13 | 173.9 |
| 1978 Means | 62.83 | 2.2405 | 140.78 | — | 136.99 | 2.0596 | 2.0497 | — | — | 131.0 |
| | $\sigma^2 = 0.8714$ | | | $\sigma^{mw_2} = 0.7438$ | | | $E\sigma^2 = 0.0795$ | | | |
| 1979 Jan | 110.25 | 2.0910 | 230.54 | 0.2758 | 229.40 | 2.0601 | 2.0601 | 16 | 16 | 235.9 |
| Feb | 93.00 | 2.3186 | 215.63 | 0.3881 | 213.70 | 2.2563 | 2.2563 | 6 | 6 | 194.7 |
| Mar | 77.80 | 2.4580 | 191.23 | 0.5084 | 190.02 | 2.4113 | 2.4113 | 5 | 5 | 195.3 |
| Apr | 77.33 | 1.8866 | 145.90 | 0.5757 | 143.12 | 1.7787 | 1.7787 | 9 | 9 | 143.7 |
| May | 95.83 | 2.1403 | 205.11 | 0.6089 | 200.24 | 1.9878 | 1.9878 | 6 | 6 | 190.3 |
| Jun | 109.22 | 1.9781 | 216.05 | 0.3845 | 213.70 | 1.9135 | 1.9135 | 9 | 9 | 211.7 |
| Jul | 104.88 | 2.1771 | 228.32 | 0.6640 | 227.63 | 2.1573 | 2.1573 | 8 | 8 | 225.7 |
| Aug | 83.63 | 2.6806 | 224.17 | 0.9314 | 213.90 | 2.3124 | 2.3124 | 8 | 8 | 201.4 |
| Sep | 108.60 | 2.4435 | 265.37 | 0.5010 | 262.05 | 2.3517 | 2.3517 | 5 | 5 | 266.9 |
| Oct | 95.63 | 2.5019 | 239.25 | 0.4354 | 237.71 | 2.4536 | 2.4536 | 8 | 8 | 263.6 |
| Nov | 110.20 | 2.3941 | 263.83 | 0.6026 | 260.52 | 2.3040 | 2.3040 | 10 | 10 | 259.5 |
| Dec | 98.00 | 2.3680 | 232.06 | 0.5267 | 231.65 | 2.3553 | 2.3553 | 11 | 11 | 249.6 |
| 1979 Means | 98.62 | 2.2611 | 222.99 | — | 220.22 | 2.1767 | 2.1767 | — | — | 220.1 |
| | $\sigma^2 = 0.5594$ | | | $\sigma^{mw_2} = 0.5163$ | | | $E\sigma^2 = 0.0541$ | | | |
| 1980 Jan | 98.90 | 2.4452 | 241.83 | 0.2869 | 239.62 | 2.3782 | 2.3782 | 10 | 10 | 226.1 |
| Feb | 89.40 | 2.5149 | 224.83 | 0.3380 | 223.22 | 2.4609 | 2.4609 | 5 | 5 | 219.4 |
| Mar | 68.17 | 2.8889 | 196.93 | 0.9043 | 195.56 | 2.8289 | 2.8289 | 6 | 6 | 178.7 |
| Apr | 98.70 | 2.5030 | 247.05 | 0.4009 | 245.76 | 2.4640 | 2.4640 | 10 | 10 | 232.2 |
| May | 123.71 | 2.0637 | 255.31 | 0.3592 | 255.92 | 2.0785 | 2.0785 | 7 | 7 | 254.7 |
| Jun | 111.83 | 2.0689 | 231.37 | 0.3522 | 230.42 | 2.0432 | 2.0432 | 6 | 6 | 222.7 |
| Jul | 91.83 | 1.9486 | 178.94 | 0.2478 | 178.80 | 1.9437 | 1.9437 | 6 | 6 | 192.9 |
| Aug | 73.00 | 1.4841 | 108.34 | 0.0344 | 108.23 | 1.4795 | 1.4795 | 2 | 2 | 191.7 |
| Sep | 91.60 | 2.6003 | 238.19 | 0.6237 | 237.06 | 2.5633 | 2.5633 | 5 | 5 | 219.6 |
| Oct | 120.25 | 2.0849 | 250.71 | 0.3526 | 248.35 | 2.0260 | 2.0260 | 8 | 8 | 233.3 |
| Nov | 110.13 | 2.0025 | 220.53 | 0.2295 | 220.02 | 1.9886 | 1.9886 | 8 | 8 | 209.5 |
| Dec | 120.93 | 2.0841 | 252.03 | 0.4360 | 247.64 | 1.9752 | 1.9752 | 15 | 15 | 246.9 |
| 1980 Means | 104.33 | 2.2485 | 234.59 | — | 231.99 | 2.1737 | 2.1737 | — | — | 218.9 |
| | $\sigma^2 = 0.4983$ | | | $\sigma^{mw_2} = 0.3919$ | | | $E\sigma^2 = 0.0456$ | | | |

CORRECTED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------------------|-------------------------------|---------------------|----------------------------------|----|----------------|-------|
| 1981 Jan | 83.15 | 1.9914 | 165.59 | 0.3331 | <i>164.50</i> | 1.9519 | 1.9519 | 13 | 13 | 156.6 |
| Feb | 96.50 | 1.8526 | 178.78 | 0.2183 | <i>178.10</i> | 1.8316 | 1.8316 | 4 | 4 | 189.9 |
| Mar | 114.80 | 1.7556 | 201.54 | 0.1250 | <i>201.63</i> | 1.7578 | 1.7578 | 5 | 5 | 196.6 |
| Apr | 127.80 | 1.8104 | 231.37 | 0.3977 | <i>231.48</i> | 1.8130 | 1.8130 | 10 | 10 | 225.3 |
| May | 116.67 | 1.6636 | 194.09 | 0.2939 | <i>193.28</i> | 1.6429 | 1.6429 | 6 | 6 | 194.7 |
| Jun | 76.50 | 1.9577 | 149.77 | 0.8594 | <i>142.73</i> | 1.6819 | 1.6819 | 6 | 6 | 131.6 |
| Jul | 126.43 | 1.7132 | 216.60 | 0.5164 | <i>211.50</i> | 1.5921 | 1.5921 | 7 | 7 | 205.3 |
| Aug | 124.86 | 1.8962 | 236.75 | 0.4860 | <i>234.26</i> | 1.8364 | 1.8364 | 7 | 7 | 242.5 |
| Sep | 103.00 | 1.9461 | 200.45 | 0.0763 | <i>200.46</i> | 1.9466 | 1.9466 | 2 | 2 | 245.3 |
| Oct | 115.00 | 1.6461 | 189.30 | 0.1430 | <i>190.46</i> | 1.6765 | 1.6765 | 5 | 5 | 216.2 |
| Nov | 42.50 | 2.2466 | 95.48 | 0.1627 | <i>95.65</i> | 2.2588 | 2.2588 | 2 | 2 | 186.0 |
| Dec | 106.50 | 1.5578 | 165.91 | 0.3979 | <i>166.88</i> | 1.5853 | 1.5853 | 6 | 6 | 195.4 |
| 1981 Means | 106.05 | 1.8238 | 193.42 | — | <i>191.27</i> | 1.7630 | 1.7630 | — | — | 198.9 |
| | σ ² = 0.4209 | | | σ ^{mw} ₂ = 0.3743 | | | Eσ ² = 0.0492 | | | |
| 1982 Jan | 89.74 | 1.7379 | 155.95 | 0.4837 | <i>152.05</i> | 1.6076 | 1.6076 | 19 | 19 | 149.8 |
| Feb | 156.80 | 1.6900 | 264.99 | 0.1527 | <i>263.52</i> | 1.6620 | 1.6620 | 10 | 10 | 230.9 |
| Mar | 137.63 | 1.5767 | 217.00 | 0.1665 | <i>216.71</i> | 1.5704 | 1.5704 | 8 | 8 | 221.1 |
| Apr | 115.67 | 1.6487 | 190.70 | 0.1618 | <i>190.41</i> | 1.6412 | 1.6412 | 6 | 6 | 170.3 |
| May | 51.00 | 2.1139 | 107.81 | 0.1829 | <i>107.21</i> | 2.0784 | 2.0784 | 2 | 2 | 119.3 |
| Jun | *68.47 | — | *165.49 | — | — | — | — | 0 | 0 | 163.7 |
| Jul | 103.63 | 2.1995 | 227.92 | 2.6913 | <i>199.86</i> | 1.3872 | 1.3872 | 8 | 8 | 139.4 |
| Aug | 109.67 | 1.4955 | 164.01 | 0.2118 | <i>162.12</i> | 1.4438 | 1.4438 | 6 | 6 | 161.9 |
| Sep | 97.67 | 1.5500 | 151.39 | 0.1536 | <i>151.03</i> | 1.5392 | 1.5392 | 3 | 3 | 167.4 |
| Oct | 78.78 | 2.0125 | 158.54 | 0.3084 | <i>158.28</i> | 2.0028 | 2.0028 | 9 | 9 | 134.3 |
| Nov | 62.33 | 2.0234 | 126.13 | 0.7275 | <i>122.94</i> | 1.8699 | 1.8699 | 9 | 9 | 127.5 |
| Dec | 89.50 | 1.8415 | 164.82 | 0.2896 | <i>163.19</i> | 1.7869 | 1.7869 | 14 | 14 | 169.0 |
| 1982 Means | 100.78 | 1.8083 | 182.23 | — | <i>177.11</i> | 1.6559 | 1.6559 | — | — | 162.4 |
| | σ ² = 0.8402 | | | σ ^{mw} ₂ = 0.5322 | | | Eσ ² = 0.0891 | | | |
| 1983 Jan | 70.27 | 1.7222 | 121.01 | 0.2952 | <i>120.25</i> | 1.6898 | 1.6898 | 15 | 15 | 115.5 |
| Feb | 49.40 | 1.8248 | 90.14 | 0.4098 | <i>88.10</i> | 1.7004 | 1.7004 | 10 | 10 | 73.1 |
| Mar | 44.57 | 2.2260 | 99.22 | 0.8824 | <i>94.57</i> | 1.9135 | 1.9135 | 7 | 7 | 88.7 |
| Apr | 60.00 | 2.0447 | 122.68 | 0.4932 | <i>121.37</i> | 1.9792 | 1.9792 | 8 | 8 | 109.6 |
| May | 85.80 | 1.5903 | 136.45 | 0.2953 | <i>136.10</i> | 1.5781 | 1.5781 | 5 | 5 | 132.5 |
| Jun | 68.20 | 1.7916 | 122.19 | 0.2227 | <i>122.46</i> | 1.8035 | 1.8035 | 5 | 5 | 131.5 |
| Jul | 74.42 | 1.6589 | 123.45 | 0.2581 | <i>122.69</i> | 1.6282 | 1.6282 | 12 | 12 | 108.9 |
| Aug | 41.75 | 2.4505 | 102.31 | 0.4284 | <i>100.21</i> | 2.2994 | 2.2994 | 4 | 4 | 96.0 |
| Sep | 42.50 | 1.5220 | 64.68 | 0.2458 | <i>63.87</i> | 1.4647 | 1.4647 | 4 | 4 | 69.9 |
| Oct | 33.29 | 1.7063 | 56.80 | 0.2798 | <i>59.48</i> | 1.9485 | 1.7768 | 7 | 5 | 72.5 |
| Nov | 13.83 | 1.9752 | 27.32 | 0.5848 | <i>28.44</i> | 2.2169 | 1.9317 | 18 | 11 | 45.7 |
| Dec | 25.29 | 1.7999 | 45.51 | 0.5160 | <i>44.94</i> | 1.7316 | 1.6921 | 14 | 13 | 45.6 |
| 1983 Means | 47.49 | 1.8423 | 87.48 | — | <i>86.35</i> | 1.7709 | 1.7467 | — | — | 91.0 |
| | σ ² = 0.4798 | | | σ ^{mw} ₂ = 0.4199 | | | Eσ ² = 0.0457 | | | |

*** interpolated values**

CORRECTED **VERSION 2 WOLF NUMBERS** for **1973 - 2015** continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------|-------------------------------|---------------------|----------------------------------|----|----------------|-------|
| 1984 Jan | 36.33 | 1.9856 | 72.14 | 0.5125 | <i>70.87</i> | 1.8807 | 1.8609 | 18 | 17 | 74.8 |
| Feb | 54.50 | 1.9873 | 108.31 | 0.7466 | <i>104.30</i> | 1.7670 | 1.7670 | 10 | 10 | 110.2 |
| Mar | 70.00 | 1.8292 | 128.04 | 0.2707 | <i>126.86</i> | 1.7786 | 1.7786 | 4 | 4 | 116.7 |
| Apr | 55.64 | 1.7512 | 97.43 | 0.2864 | <i>96.68</i> | 1.7108 | 1.7108 | 11 | 11 | 90.4 |
| May | 57.14 | 1.8292 | 104.53 | 0.2453 | <i>103.54</i> | 1.7775 | 1.7775 | 7 | 7 | 96.9 |
| Jun | 42.86 | 1.5618 | 66.93 | 0.3111 | <i>65.86</i> | 1.4867 | 1.4867 | 7 | 7 | 65.1 |
| Jul | 18.22 | 2.2876 | 41.69 | 0.8230 | <i>42.20</i> | 2.3720 | 2.3720 | 9 | 9 | 55.7 |
| Aug | 27.83 | 1.5989 | 44.50 | 0.6016 | <i>42.50</i> | 1.3832 | 1.3832 | 6 | 6 | 35.0 |
| Sep | 4.63 | 1.8409 | 8.51 | 0.9321 | <i>12.38</i> | 4.3514 | 2.1081 | 8 | 2 | 22.6 |
| Oct | 4.00 | 1.3692 | 5.48 | 0.2393 | <i>7.94</i> | 3.2143 | 1.3571 | 7 | 2 | 12.6 |
| Nov | 15.00 | 1.3613 | 20.42 | 0.2802 | <i>21.46</i> | 1.5704 | 1.3704 | 9 | 7 | 26.5 |
| Dec | 11.25 | 1.3938 | 15.68 | 0.4557 | <i>17.39</i> | 1.8500 | 1.3056 | 16 | 10 | 21.4 |
| 1984 Means | 31.27 | 1.7827 | 55.74 | — | <i>55.94</i> | 1.8021 | 1.7242 | — | — | 60.5 |
| | σ ² = 0.5625 | | | σ ^{mw2} = 0.4803 | | | Eσ ² = 0.0544 | | | |
| 1985 Jan | 9.22 | 1.3213 | 12.19 | 0.1800 | <i>13.23</i> | 1.6627 | 1.3133 | 18 | 7 | 17.8 |
| Feb | 11.88 | 1.4531 | 17.26 | 0.3077 | <i>18.84</i> | 1.8526 | 1.4632 | 8 | 6 | 20.7 |
| Mar | 10.00 | 1.3397 | 13.40 | 0.3467 | <i>14.41</i> | 1.6444 | 1.2222 | 9 | 5 | 16.9 |
| Apr | 16.00 | 1.4149 | 22.64 | 0.5971 | <i>22.96</i> | 1.4750 | 1.3125 | 5 | 4 | 20.4 |
| May | 21.11 | 1.5600 | 32.93 | 0.6524 | <i>32.36</i> | 1.4789 | 1.3842 | 9 | 7 | 32.4 |
| Jun | 17.29 | 1.4346 | 24.80 | 0.5410 | <i>25.48</i> | 1.5537 | 1.4545 | 7 | 5 | 28.3 |
| Jul | 23.57 | 1.4120 | 33.28 | 0.3120 | <i>34.62</i> | 1.5818 | 1.5030 | 7 | 6 | 39.9 |
| Aug | 10.13 | 0.9250 | 9.37 | 0.1918 | <i>10.45</i> | 1.2469 | 0.9506 | 8 | 5 | 10.1 |
| Sep | 3.78 | 0.8838 | 3.34 | 0.0437 | <i>3.67</i> | 1.1471 | 0.8824 | 9 | 3 | 4.3 |
| Oct | 16.00 | 2.0053 | 32.09 | 0.7323 | <i>31.83</i> | 1.9583 | 1.8906 | 12 | 7 | 22.0 |
| Nov | 12.69 | 1.3725 | 17.42 | 0.3191 | <i>17.79</i> | 1.4606 | 1.3939 | 13 | 8 | 17.9 |
| Dec | 6.85 | 1.4591 | 9.99 | 0.3275 | <i>10.63</i> | 1.7416 | 1.4494 | 13 | 5 | 15.8 |
| 1985 Means | 12.44 | 1.4188 | 17.65 | — | <i>18.43</i> | 1.6076 | 1.4223 | — | — | 20.6 |
| | σ ² = 0.4840 | | | σ ^{mw2} = 0.3938 | | | Eσ ² = 0.0533 | | | |
| 1986 Jan | 3.10 | 0.9979 | 3.09 | 0.0913 | <i>3.83</i> | 1.7097 | 1.0000 | 10 | 2 | 2.8 |
| Feb | 33.38 | 1.2364 | 41.27 | 0.1347 | <i>41.51</i> | 1.2584 | 1.2584 | 8 | 7 | 27.9 |
| Mar | 11.08 | 1.1893 | 13.18 | 0.3582 | <i>14.26</i> | 1.4812 | 1.1805 | 12 | 7 | 13.8 |
| Apr | 16.89 | 1.3355 | 22.56 | 0.2502 | <i>22.78</i> | 1.3750 | 1.3750 | 9 | 7 | 22.4 |
| May | 9.30 | 1.2375 | 11.51 | 0.3794 | <i>12.81</i> | 1.6559 | 1.1613 | 10 | 6 | 16.1 |
| Jun | 0.00 | — | 0.00 | — | <i>0.00</i> | ∞ | ∞ | 7 | 0 | 0.6 |
| Jul | 16.43 | 1.1032 | 18.12 | 0.2701 | <i>18.89</i> | 1.2435 | 1.1217 | 7 | 5 | 18.1 |
| Aug | 8.82 | 1.1567 | 10.20 | 0.0994 | <i>11.01</i> | 1.4330 | 1.1546 | 11 | 8 | 9.9 |
| Sep | 0.00 | — | 0.00 | — | <i>0.00</i> | ∞ | ∞ | 6 | 0 | 5.1 |
| Oct | 30.11 | 1.3392 | 40.33 | 0.3469 | <i>40.66</i> | 1.3727 | 1.3727 | 9 | 8 | 40.1 |
| Nov | 11.58 | 1.0964 | 12.70 | 0.1514 | <i>13.72</i> | 1.3597 | 1.1511 | 12 | 7 | 15.4 |
| Dec | 2.00 | 1.4318 | 2.86 | 0.5922 | <i>3.75</i> | 2.7647 | 1.4118 | 17 | 3 | 5.8 |
| 1986 Means | 11.29 | 1.2201 | 13.77 | — | <i>14.52</i> | 1.4189 | 1.2477 | — | — | 14.8 |
| | σ ² = 0.2817 | | | σ ^{mw2} = 0.2570 | | | Eσ ² = 0.0371 | | | |

CORRECTED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------------------|-------------------------------|---------------------|----------------------------------|----|----------------|-------|
| 1987 Jan | 8.47 | 1.0512 | 8.90 | 0.2072 | 9.20 | 1.1575 | 1.0551 | 15 | 10 | 9.8 |
| Feb | 1.67 | 0.7333 | 1.22 | ∞ | 1.96 | 2.0667 | 0.7333 | 9 | 1 | 3.4 |
| Mar | 12.22 | 1.2564 | 15.36 | 0.1859 | 16.05 | 1.4273 | 1.2636 | 9 | 7 | 17.4 |
| Apr | 26.40 | 1.6267 | 42.94 | 0.3903 | 43.70 | 1.7121 | 1.7121 | 5 | 5 | 46.0 |
| May | 36.89 | 1.2040 | 44.41 | 0.3741 | 43.79 | 1.1536 | 1.1536 | 9 | 9 | 39.1 |
| Jun | 6.10 | 1.4671 | 8.95 | 0.3891 | 10.07 | 2.0164 | 1.4590 | 10 | 4 | 18.8 |
| Jul | 16.00 | 1.3840 | 22.14 | 0.2451 | 21.76 | 1.3125 | 1.3125 | 5 | 3 | 38.2 |
| Aug | 40.89 | 1.3519 | 55.28 | 0.4989 | 53.22 | 1.2011 | 1.2011 | 9 | 9 | 47.9 |
| Sep | 26.09 | 1.5928 | 41.56 | 0.5981 | 40.95 | 1.5226 | 1.5226 | 11 | 11 | 42.2 |
| Oct | 40.00 | 1.5943 | 63.77 | 0.4231 | 63.32 | 1.5607 | 1.4786 | 7 | 6 | 63.4 |
| Nov | 27.43 | 1.4725 | 40.39 | 0.3779 | 40.59 | 1.4948 | 1.3698 | 7 | 6 | 48.8 |
| Dec | 22.67 | 1.3520 | 30.64 | 0.4531 | 29.74 | 1.2316 | 1.2316 | 12 | 12 | 29.1 |
| 1987 Means | 20.89 | 1.3656 | 28.52 | — | 28.62 | 1.3785 | 1.3200 | — | — | 33.9 |
| | σ ² = 0.4330 | | | σ ^{mw} ₂ = 0.3891 | | | Eσ ² = 0.0452 | | | |
| 1988 Jan | 51.71 | 1.3440 | 69.50 | 0.2050 | 69.00 | 1.3149 | 1.3149 | 14 | 14 | 70.5 |
| Feb | 31.00 | 1.5866 | 49.18 | 0.5101 | 47.79 | 1.4516 | 1.4516 | 8 | 8 | 45.4 |
| Mar | 77.09 | 1.3343 | 102.87 | 0.1940 | 102.18 | 1.3078 | 1.3078 | 11 | 11 | 91.2 |
| Apr | 83.33 | 1.3758 | 114.65 | 0.3334 | 112.54 | 1.3000 | 1.3000 | 9 | 9 | 108.8 |
| May | 44.00 | 1.4334 | 63.07 | 0.4735 | 63.27 | 1.4470 | 1.4470 | 3 | 3 | 74.2 |
| Jun | 94.00 | 1.5246 | 143.31 | 0.2871 | 142.41 | 1.4957 | 1.4957 | 5 | 5 | 124.3 |
| Jul | 108.29 | 1.3937 | 150.92 | 0.3214 | 147.66 | 1.3034 | 1.3034 | 7 | 7 | 131.4 |
| Aug | 102.71 | 1.4351 | 147.40 | 0.5513 | 141.46 | 1.2615 | 1.2615 | 7 | 7 | 139.4 |
| Sep | 117.33 | 1.3058 | 153.21 | 0.1773 | 153.62 | 1.3163 | 1.3163 | 9 | 9 | 142.7 |
| Oct | 115.90 | 1.3193 | 152.91 | 0.1144 | 152.64 | 1.3123 | 1.3123 | 10 | 10 | 156.5 |
| Nov | 123.86 | 1.3525 | 167.52 | 0.1836 | 167.25 | 1.3460 | 1.3460 | 7 | 7 | 156.8 |
| Dec | 173.20 | 1.3928 | 241.24 | 0.1690 | 239.36 | 1.3603 | 1.3603 | 10 | 10 | 231.2 |
| 1988 Means | 94.63 | 1.3863 | 131.19 | — | 129.52 | 1.3335 | 1.3335 | — | — | 123.0 |
| | σ ² = 0.2894 | | | σ ^{mw} ₂ = 0.2676 | | | Eσ ² = 0.0299 | | | |
| 1989 Jan | 177.89 | 1.3576 | 241.50 | 0.2151 | 239.66 | 1.3267 | 1.3267 | 9 | 9 | 210.1 |
| Feb | 166.67 | 1.3828 | 230.46 | 0.1585 | 229.20 | 1.3600 | 1.3600 | 9 | 9 | 208.7 |
| Mar | 121.45 | 1.3447 | 163.32 | 0.2025 | 163.12 | 1.3398 | 1.3398 | 11 | 11 | 170.4 |
| Apr | 136.00 | 1.2517 | 170.23 | 0.1608 | 170.98 | 1.2684 | 1.2684 | 2 | 2 | 166.3 |
| May | 164.14 | 1.2941 | 212.41 | 0.2018 | 210.68 | 1.2624 | 1.2624 | 14 | 14 | 195.4 |
| Jun | 228.62 | 1.3089 | 299.24 | 0.1645 | 297.11 | 1.2810 | 1.2810 | 13 | 13 | 284.5 |
| Jul | 139.58 | 1.3510 | 188.57 | 0.2815 | 185.91 | 1.2937 | 1.2937 | 19 | 19 | 180.5 |
| Aug | 162.85 | 1.4621 | 238.09 | 0.3178 | 234.81 | 1.4015 | 1.4015 | 13 | 13 | 232.0 |
| Sep | 190.50 | 1.2887 | 245.49 | 0.1291 | 244.99 | 1.2808 | 1.2808 | 10 | 10 | 225.1 |
| Oct | 173.92 | 1.2278 | 213.54 | 0.1377 | 213.36 | 1.2247 | 1.2247 | 13 | 13 | 212.2 |
| Nov | 207.30 | 1.3010 | 269.71 | 0.1737 | 266.97 | 1.2615 | 1.2615 | 10 | 10 | 238.2 |
| Dec | 163.33 | 1.3455 | 219.77 | 0.2254 | 217.59 | 1.3056 | 1.3056 | 12 | 12 | 211.4 |
| 1989 Means | 169.98 | 1.3316 | 226.35 | — | 224.45 | 1.2981 | 1.2981 | — | — | 211.1 |
| | σ ² = 0.2147 | | | σ ^{mw} ₂ = 0.2065 | | | Eσ ² = 0.0185 | | | |

CORRECTED **VERSION 2 WOLF NUMBERS** for **1973 - 2015** continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _{k2} | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------|-------------------------------|---------------------|--------------------------|----|----------------|-------|
| 1990 Jan | 166.78 | 1.2685 | 211.55 | 0.1799 | <i>210.89</i> | 1.2565 | 1.2565 | 9 | 9 | 227.4 |
| Feb | 146.38 | 1.2676 | 185.55 | 0.2212 | <i>182.89</i> | 1.2131 | 1.2131 | 16 | 16 | 171.8 |
| Mar | 159.15 | 1.3127 | 208.92 | 0.1223 | <i>209.28</i> | 1.3195 | 1.3195 | 13 | 13 | 191.7 |
| Apr | 160.87 | 1.2001 | 193.06 | 0.1546 | <i>191.82</i> | 1.1770 | 1.1770 | 15 | 15 | 189.7 |
| May | 157.07 | 1.1263 | 176.90 | 0.1347 | <i>176.14</i> | 1.1116 | 1.1116 | 15 | 15 | 175.2 |
| Jun | 134.13 | 1.2440 | 166.85 | 0.0973 | <i>166.42</i> | 1.2344 | 1.2344 | 16 | 16 | 153.3 |
| Jul | 140.93 | 1.1740 | 165.46 | 0.1326 | <i>164.71</i> | 1.1580 | 1.1580 | 15 | 15 | 191.1 |
| Aug | 199.23 | 1.3032 | 259.63 | 0.1269 | <i>258.93</i> | 1.2927 | 1.2927 | 13 | 13 | 252.1 |
| Sep | 121.93 | 1.3768 | 167.87 | 0.1857 | <i>167.56</i> | 1.3691 | 1.3691 | 15 | 15 | 169.1 |
| Oct | 157.15 | 1.2681 | 199.29 | 0.1515 | <i>199.02</i> | 1.2628 | 1.2628 | 13 | 13 | 199.4 |
| Nov | 130.00 | 1.3191 | 171.48 | 0.1605 | <i>170.99</i> | 1.3077 | 1.3077 | 12 | 12 | 178.8 |
| Dec | 149.44 | 1.3246 | 197.96 | 0.1983 | <i>198.31</i> | 1.3316 | 1.3316 | 9 | 9 | 197.1 |
| 1990 Means | 150.98 | 1.2609 | 190.37 | — | <i>189.60</i> | 1.2455 | 1.2455 | — | — | 191.8 |
| | σ ² = 0.1674 | | | σ ^{mw2} = 0.1537 | | | Eσ ² = 0.0124 | | | |
| 1991 Jan | 159.21 | 1.3139 | 209.19 | 0.2281 | <i>207.17</i> | 1.2759 | 1.2759 | 14 | 14 | 195.3 |
| Feb | 208.16 | 1.2011 | 250.02 | 0.1385 | <i>248.98</i> | 1.1861 | 1.1861 | 19 | 19 | 240.3 |
| Mar | 165.18 | 1.2772 | 210.96 | 0.2112 | <i>208.98</i> | 1.2411 | 1.2411 | 17 | 17 | 197.0 |
| Apr | 170.92 | 1.2832 | 219.32 | 0.2915 | <i>219.58</i> | 1.2877 | 1.2877 | 12 | 12 | 197.6 |
| May | 143.56 | 1.2115 | 173.92 | 0.1580 | <i>173.15</i> | 1.1955 | 1.1955 | 16 | 16 | 166.9 |
| Jun | 185.88 | 1.2536 | 233.02 | 0.1804 | <i>231.70</i> | 1.2323 | 1.2323 | 16 | 16 | 224.7 |
| Jul | 214.00 | 1.2205 | 261.18 | 0.1356 | <i>259.36</i> | 1.1949 | 1.1949 | 14 | 14 | 240.2 |
| Aug | 203.00 | 1.1649 | 236.48 | 0.1206 | <i>235.52</i> | 1.1508 | 1.1508 | 13 | 13 | 240.8 |
| Sep | 133.00 | 1.3440 | 178.75 | 0.1647 | <i>178.67</i> | 1.3421 | 1.3421 | 14 | 14 | 168.9 |
| Oct | 145.76 | 1.4039 | 204.64 | 0.4053 | <i>199.62</i> | 1.3006 | 1.3006 | 17 | 17 | 197.1 |
| Nov | 109.62 | 1.3620 | 149.30 | 0.2007 | <i>148.61</i> | 1.3432 | 1.3432 | 13 | 13 | 159.5 |
| Dec | 183.50 | 1.2758 | 234.12 | 0.2214 | <i>231.78</i> | 1.2376 | 1.2376 | 10 | 10 | 212.6 |
| 1991 Means | 168.85 | 1.2751 | 215.30 | — | <i>213.24</i> | 1.2385 | 1.2385 | — | — | 203.3 |
| | σ ² = 0.2236 | | | σ ^{mw2} = 0.2046 | | | Eσ ² = 0.0166 | | | |
| 1992 Jan | 169.93 | 1.2305 | 209.10 | 0.0996 | <i>209.00</i> | 1.2287 | 1.2287 | 15 | 15 | 198.3 |
| Feb | 155.00 | 1.4789 | 229.23 | 0.2808 | <i>229.21</i> | 1.4785 | 1.4785 | 6 | 6 | 230.7 |
| Mar | 114.17 | 1.4005 | 159.88 | 0.2429 | <i>158.20</i> | 1.3562 | 1.3562 | 6 | 6 | 151.0 |
| Apr | 109.93 | 1.3304 | 146.26 | 0.1054 | <i>145.95</i> | 1.3220 | 1.3220 | 15 | 15 | 142.2 |
| May | 61.70 | 1.6634 | 102.63 | 1.2897 | <i>93.19</i> | 1.2042 | 1.2042 | 10 | 10 | 94.3 |
| Jun | 75.47 | 1.3198 | 99.60 | 0.2212 | <i>98.96</i> | 1.2942 | 1.2942 | 15 | 15 | 98.5 |
| Jul | 88.82 | 1.2973 | 115.22 | 0.2385 | <i>114.42</i> | 1.2702 | 1.2702 | 11 | 11 | 114.2 |
| Aug | 55.31 | 1.5380 | 85.06 | 0.3796 | <i>83.56</i> | 1.4562 | 1.4562 | 13 | 13 | 91.9 |
| Sep | 69.63 | 1.3436 | 93.55 | 0.2375 | <i>93.24</i> | 1.3303 | 1.3303 | 16 | 16 | 94.0 |
| Oct | 106.47 | 1.3541 | 144.17 | 0.2722 | <i>142.16</i> | 1.2974 | 1.2974 | 15 | 15 | 133.4 |
| Nov | 100.60 | 1.3312 | 133.92 | 0.1417 | <i>133.18</i> | 1.3091 | 1.3091 | 10 | 10 | 129.6 |
| Dec | 91.46 | 1.3459 | 123.10 | 0.2908 | <i>120.71</i> | 1.2675 | 1.2675 | 13 | 13 | 122.0 |
| 1992 Means | 97.68 | 1.3724 | 134.06 | — | <i>131.88</i> | 1.3054 | 1.3054 | — | — | 133.0 |
| | σ ² = 0.4063 | | | σ ^{mw2} = 0.2970 | | | Eσ ² = 0.0340 | | | |

CORRECTED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------------------|-------------------------------|---------------------|----------------------------------|----|----------------|-------|
| 1993 Jan | 64.23 | 1.3673 | 87.82 | 0.2515 | 86.78 | 1.3186 | 1.3186 | 13 | 13 | 81.4 |
| Feb | 98.83 | 1.2146 | 120.05 | 0.1427 | 119.89 | 1.2099 | 1.2099 | 12 | 12 | 127.8 |
| Mar | 83.47 | 1.2591 | 105.10 | 0.1606 | 104.58 | 1.2403 | 1.2403 | 17 | 17 | 102.4 |
| Apr | 65.33 | 1.5042 | 98.27 | 0.3191 | 96.96 | 1.4439 | 1.4439 | 15 | 15 | 94.4 |
| May | 47.60 | 1.2876 | 61.29 | 0.4024 | 60.28 | 1.2241 | 1.2241 | 15 | 15 | 78.8 |
| Jun | 50.87 | 1.3704 | 69.71 | 0.2274 | 70.23 | 1.4010 | 1.3722 | 15 | 14 | 69.6 |
| Jul | 51.64 | 1.4525 | 75.00 | 0.1703 | 74.70 | 1.4349 | 1.4349 | 11 | 11 | 80.4 |
| Aug | 45.81 | 1.3429 | 61.52 | 0.2402 | 61.30 | 1.3285 | 1.3285 | 21 | 21 | 62.5 |
| Sep | 24.59 | 1.2060 | 29.65 | 0.5253 | 29.40 | 1.1746 | 1.0646 | 17 | 14 | 31.2 |
| Oct | 48.87 | 1.6609 | 81.16 | 0.6574 | 77.91 | 1.4611 | 1.4611 | 15 | 15 | 71.1 |
| Nov | 41.88 | 1.3062 | 54.71 | 0.2590 | 53.61 | 1.2275 | 1.2275 | 17 | 17 | 48.2 |
| Dec | 59.31 | 1.3247 | 78.57 | 0.3877 | 78.03 | 1.2972 | 1.2634 | 16 | 15 | 68.4 |
| 1993 Means | 55.65 | 1.3568 | 75.50 | — | 74.64 | 1.3101 | 1.3003 | — | — | 76.1 |
| | σ ² = 0.3571 | | | σ ^{mw} ₂ = 0.3132 | | | Eσ ² = 0.0259 | | | |
| 1994 Jan | 63.29 | 1.3471 | 85.26 | 0.2041 | 85.35 | 1.3513 | 1.3513 | 17 | 17 | 84.9 |
| Feb | 51.36 | 0.9866 | 50.68 | 0.2482 | 50.63 | 0.9841 | 0.9841 | 11 | 11 | 54.9 |
| Mar | 44.88 | 1.0715 | 48.08 | 0.3178 | 47.82 | 1.0539 | 1.0539 | 24 | 24 | 47.5 |
| Apr | 24.18 | 1.3662 | 33.03 | 0.5256 | 31.55 | 1.1825 | 1.2526 | 17 | 13 | 27.4 |
| May | 25.15 | 1.1279 | 28.37 | 0.2433 | 28.26 | 1.1153 | 1.1098 | 20 | 13 | 29.8 |
| Jun | 20.76 | 1.3533 | 28.10 | 0.4129 | 28.46 | 1.4051 | 1.2918 | 17 | 11 | 39.7 |
| Jul | 38.71 | 1.4728 | 57.01 | 0.4968 | 55.85 | 1.3830 | 1.3571 | 17 | 16 | 50.6 |
| Aug | 28.95 | 1.2154 | 35.19 | 0.3944 | 34.63 | 1.1570 | 1.1570 | 22 | 22 | 34.3 |
| Sep | 26.79 | 1.3796 | 36.96 | 0.4910 | 36.67 | 1.3477 | 1.2770 | 19 | 16 | 40.5 |
| Oct | 56.53 | 1.1961 | 67.62 | 0.1154 | 67.59 | 1.1946 | 1.1946 | 15 | 15 | 67.1 |
| Nov | 21.86 | 1.3703 | 29.96 | 0.3422 | 31.08 | 1.5239 | 1.3597 | 22 | 18 | 29.5 |
| Dec | 27.50 | 1.1890 | 32.70 | 0.2899 | 32.72 | 1.1909 | 1.1709 | 20 | 19 | 32.2 |
| 1994 Means | 34.70 | 1.2531 | 43.48 | — | 43.20 | 1.2287 | 1.2083 | — | — | 44.9 |
| | σ ² = 0.3748 | | | σ ^{mw} ₂ = 0.3397 | | | Eσ ² = 0.0257 | | | |
| 1995 Jan | 14.33 | 1.4148 | 20.28 | 0.5810 | 21.63 | 1.6977 | 1.3256 | 18 | 11 | 32.6 |
| Feb | 40.00 | 1.3578 | 54.31 | 0.2106 | 53.79 | 1.3188 | 1.3188 | 12 | 12 | 45.8 |
| Mar | 34.85 | 1.3601 | 47.39 | 0.3550 | 47.38 | 1.3587 | 1.3057 | 26 | 23 | 46.3 |
| Apr | 21.94 | 1.0477 | 22.99 | 0.1774 | 23.78 | 1.1555 | 1.0831 | 17 | 10 | 21.6 |
| May | 19.00 | 1.0262 | 19.50 | 0.1095 | 19.78 | 1.0702 | 0.9971 | 18 | 13 | 19.4 |
| Jun | 20.00 | 1.2367 | 24.73 | 0.2883 | 24.32 | 1.1750 | 1.1598 | 20 | 18 | 22.5 |
| Jul | 15.61 | 1.3227 | 20.65 | 0.3836 | 20.93 | 1.3772 | 1.3037 | 18 | 13 | 20.4 |
| Aug | 13.94 | 0.9952 | 13.87 | 0.2316 | 15.21 | 1.2827 | 0.9620 | 17 | 8 | 18.2 |
| Sep | 8.31 | 1.0936 | 9.09 | 0.1462 | 10.35 | 1.5489 | 1.1203 | 16 | 7 | 15.7 |
| Oct | 27.85 | 1.1192 | 31.17 | 0.2474 | 31.47 | 1.1519 | 1.1160 | 13 | 9 | 30.6 |
| Nov | 13.67 | 1.1757 | 16.07 | 0.4866 | 15.45 | 1.0407 | 1.1429 | 18 | 13 | 14.0 |
| Dec | 11.85 | 1.3863 | 16.42 | 0.4179 | 16.31 | 1.3571 | 1.2597 | 13 | 9 | 14.9 |
| 1995 Means | 20.25 | 1.2319 | 24.95 | — | 25.29 | 1.2819 | 1.1960 | — | — | 25.1 |
| | σ ² = 0.3558 | | | σ ^{mw} ₂ = 0.3126 | | | Eσ ² = 0.0281 | | | |

CORRECTED **VERSION 2 WOLF NUMBERS** for **1973 - 2015** continued.

| | WN | k2 | R _{GD} ² | σ^2 | R _{GDm} ² | I/GDSO ₂ | I/GDSO _{k2} | n | n _k | Sn |
|------------|---------------------|--------|------------------------------|--------------------------|-------------------------------|---------------------|----------------------|----|----------------|-------|
| 1996 Jan | 10.68 | 1.1311 | 12.08 | 0.2512 | <i>12.09</i> | 1.1319 | 1.1429 | 22 | 12 | 13.3 |
| Feb | 9.75 | 0.9711 | 9.47 | 0.3854 | <i>10.19</i> | 1.1923 | 0.8590 | 8 | 4 | 7.7 |
| Mar | 10.05 | 1.1329 | 11.39 | 0.3250 | <i>11.79</i> | 1.2513 | 1.0524 | 19 | 10 | 12.6 |
| Apr | 4.28 | 1.1828 | 5.06 | 0.1682 | <i>5.37</i> | 1.4026 | 1.1719 | 18 | 5 | 6.8 |
| May | 7.06 | 1.1353 | 8.01 | 0.1290 | <i>8.03</i> | 1.1417 | 1.1417 | 18 | 8 | 7.6 |
| Jun | 11.21 | 1.0207 | 11.45 | 0.1884 | <i>12.56</i> | 1.3185 | 1.0068 | 14 | 6 | 16.5 |
| Jul | 12.92 | 1.1011 | 14.23 | 0.2531 | <i>13.49</i> | 0.9286 | 1.0827 | 13 | 7 | 11.8 |
| Aug | 20.35 | 1.0324 | 21.01 | 0.3436 | <i>20.48</i> | 0.9538 | 0.9538 | 17 | 17 | 19.7 |
| Sep | 2.85 | 0.8462 | 2.41 | — | <i>2.17</i> | 0.5946 | 0.8462 | 13 | 1 | 3.0 |
| Oct | 0.00 | — | 0.00 | — | <i>0.00</i> | ∞ | ∞ | 19 | 0 | 0.7 |
| Nov | 18.69 | 1.2814 | 23.95 | 0.1923 | <i>24.07</i> | 1.3010 | 1.3010 | 16 | 10 | 24.9 |
| Dec | 10.76 | 1.1694 | 12.59 | 0.2001 | <i>12.76</i> | 1.2186 | 1.1475 | 17 | 9 | 14.0 |
| 1996 Means | 9.78 | 1.1163 | 10.92 | — | <i>11.02</i> | 1.1475 | 1.0930 | — | — | 11.6 |
| | $\sigma^2 = 0.2630$ | | | $\sigma^{mw_2} = 0.2488$ | | | $E\sigma^2 = 0.0277$ | | | |
| 1997 Jan | 5.53 | 1.0846 | 5.99 | 0.3106 | <i>6.70</i> | 1.4667 | 1.0762 | 19 | 8 | 7.4 |
| Feb | 7.60 | 1.4688 | 11.16 | 0.4604 | <i>11.18</i> | 1.4737 | 1.3158 | 10 | 3 | 11.0 |
| Mar | 12.07 | 1.3822 | 16.69 | 0.5326 | <i>16.93</i> | 1.4438 | 1.3432 | 14 | 11 | 12.1 |
| Apr | 22.26 | 1.2455 | 27.73 | 0.3700 | <i>27.73</i> | 1.2459 | 1.1773 | 19 | 15 | 23.0 |
| May | 10.92 | 1.4956 | 16.34 | 1.0186 | <i>15.99</i> | 1.4014 | 1.4351 | 13 | 10 | 25.4 |
| Jun | 17.61 | 1.1446 | 20.16 | 0.2384 | <i>20.01</i> | 1.1199 | 1.1199 | 18 | 17 | 20.8 |
| Jul | 10.95 | 1.1763 | 12.88 | 0.6020 | <i>13.12</i> | 1.2420 | 1.0091 | 20 | 10 | 12.9 |
| Aug | 30.57 | 1.3894 | 42.48 | 0.6326 | <i>41.76</i> | 1.3193 | 1.2991 | 21 | 19 | 35.7 |
| Sep | 43.81 | 1.3696 | 60.01 | 0.3541 | <i>58.71</i> | 1.2810 | 1.2810 | 16 | 16 | 59.7 |
| Oct | 29.71 | 1.2127 | 36.03 | 0.2359 | <i>35.98</i> | 1.2079 | 1.2079 | 17 | 17 | 32.8 |
| Nov | 38.64 | 1.3059 | 50.46 | 0.3364 | <i>50.12</i> | 1.2791 | 1.2791 | 14 | 14 | 50.4 |
| Dec | 47.23 | 1.3017 | 61.48 | 0.2341 | <i>60.96</i> | 1.2687 | 1.2687 | 13 | 13 | 55.5 |
| 1997 Means | 22.96 | 1.2894 | 29.60 | — | <i>29.51</i> | 1.2773 | 1.2413 | — | — | 28.9 |
| | $\sigma^2 = 0.4683$ | | | $\sigma^{mw_2} = 0.4247$ | | | $E\sigma^2 = 0.0383$ | | | |
| 1998 Jan | 26.88 | 1.3710 | 36.85 | 0.4096 | <i>36.61</i> | 1.3442 | 1.3419 | 16 | 13 | 44.5 |
| Feb | 39.25 | 1.2842 | 50.40 | 0.3388 | <i>49.42</i> | 1.2086 | 1.2086 | 16 | 16 | 50.2 |
| Mar | 67.24 | 1.2529 | 84.24 | 0.2514 | <i>83.22</i> | 1.2073 | 1.2073 | 17 | 17 | 82.0 |
| Apr | 48.45 | 1.5404 | 74.64 | 0.6258 | <i>71.85</i> | 1.3677 | 1.3677 | 11 | 11 | 70.6 |
| May | 62.65 | 1.2877 | 80.67 | 0.2228 | <i>80.29</i> | 1.2695 | 1.2695 | 17 | 17 | 74.0 |
| Jun | 66.11 | 1.2577 | 83.15 | 0.1819 | <i>82.73</i> | 1.2387 | 1.2387 | 9 | 9 | 90.5 |
| Jul | 79.78 | 1.3829 | 110.32 | 0.2391 | <i>109.33</i> | 1.3454 | 1.3454 | 9 | 9 | 96.7 |
| Aug | 99.19 | 1.2396 | 122.95 | 0.1282 | <i>122.80</i> | 1.2350 | 1.2350 | 16 | 16 | 121.1 |
| Sep | 100.67 | 1.3621 | 137.12 | 0.3311 | <i>135.35</i> | 1.3093 | 1.3093 | 15 | 15 | 132.0 |
| Oct | 59.46 | 1.3628 | 81.03 | 0.3321 | <i>79.30</i> | 1.2755 | 1.2755 | 13 | 13 | 78.5 |
| Nov | 79.77 | 1.1786 | 94.01 | 0.1333 | <i>94.11</i> | 1.1823 | 1.1823 | 13 | 13 | 97.3 |
| Dec | 85.47 | 1.4030 | 119.91 | 0.2603 | <i>119.14</i> | 1.3760 | 1.3760 | 15 | 15 | 119.2 |
| 1998 Means | 67.67 | 1.3208 | 89.38 | — | <i>88.36</i> | 1.2755 | 1.2754 | — | — | 88.3 |
| | $\sigma^2 = 0.3105$ | | | $\sigma^{mw_2} = 0.2832$ | | | $E\sigma^2 = 0.0241$ | | | |

CORRECTED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------------------|-------------------------------|--------------------------|----------------------------------|----|----------------|-------|
| 1999 Jan | 63.55 | 1.4580 | 92.65 | 0.3131 | <i>90.64</i> | 1.3634 | 1.3634 | 11 | 11 | 86.0 |
| Feb | 69.44 | 1.2737 | 88.45 | 0.2387 | <i>89.49</i> | 1.3184 | 1.3184 | 9 | 9 | 98.0 |
| Mar | 86.93 | 1.3197 | 114.72 | 0.1416 | <i>114.12</i> | 1.2991 | 1.2991 | 14 | 14 | 103.5 |
| Apr | 71.17 | 1.3062 | 92.96 | 0.2012 | <i>93.00</i> | 1.3080 | 1.3080 | 12 | 12 | 93.6 |
| May | 117.43 | 1.3429 | 157.69 | 0.0976 | <i>157.75</i> | 1.3443 | 1.3443 | 14 | 14 | 149.6 |
| Jun | 143.75 | 1.3920 | 200.09 | 0.1763 | <i>199.21</i> | 1.3735 | 1.3735 | 16 | 16 | 207.2 |
| Jul | 139.50 | 1.3598 | 189.69 | 0.1605 | <i>188.46</i> | 1.3333 | 1.3333 | 16 | 16 | 173.5 |
| Aug | 97.41 | 1.4199 | 138.32 | 0.2184 | <i>137.41</i> | 1.3919 | 1.3919 | 17 | 17 | 142.3 |
| Sep | 78.88 | 1.3692 | 108.00 | 0.1890 | <i>107.10</i> | 1.3348 | 1.3348 | 17 | 17 | 106.3 |
| Oct | 119.73 | 1.4112 | 168.97 | 0.2174 | <i>167.87</i> | 1.3836 | 1.3836 | 15 | 15 | 168.7 |
| Nov | 153.73 | 1.3898 | 213.65 | 0.2715 | <i>212.58</i> | 1.3690 | 1.3690 | 11 | 11 | 188.3 |
| Dec | 93.00 | 1.2968 | 120.60 | 0.2153 | <i>119.51</i> | 1.2616 | 1.2616 | 12 | 12 | 116.8 |
| 1999 Means | 104.70 | 1.3653 | 142.95 | — | <i>142.30</i> | 1.3466 | 1.3466 | — | — | 136.3 |
| | σ ² = 0.2038 | | | σ ^{mw} ₂ = 0.1982 | | Eσ ² = 0.0160 | | | | |
| 2000 Jan | 113.31 | 1.2021 | 136.21 | 0.2356 | <i>135.83</i> | 1.1921 | 1.1921 | 13 | 13 | 133.1 |
| Feb | 128.38 | 1.3063 | 167.71 | 0.1817 | <i>165.86</i> | 1.2630 | 1.2630 | 13 | 13 | 165.7 |
| Mar | 182.19 | 1.2109 | 220.61 | 0.1108 | <i>219.76</i> | 1.1969 | 1.1969 | 16 | 16 | 217.7 |
| Apr | 186.33 | 1.1551 | 215.24 | 0.1058 | <i>214.31</i> | 1.1401 | 1.1401 | 9 | 9 | 191.5 |
| May | 156.80 | 1.1743 | 184.14 | 0.0998 | <i>183.06</i> | 1.1537 | 1.1537 | 10 | 10 | 165.9 |
| Jun | 159.90 | 1.1914 | 190.50 | 0.1520 | <i>190.10</i> | 1.1839 | 1.1839 | 10 | 10 | 188.0 |
| Jul | 226.23 | 1.1936 | 270.04 | 0.1493 | <i>267.74</i> | 1.1632 | 1.1632 | 13 | 13 | 244.3 |
| Aug | 157.37 | 1.2085 | 190.18 | 0.1152 | <i>189.82</i> | 1.2017 | 1.2017 | 19 | 19 | 180.5 |
| Sep | 115.54 | 1.2931 | 149.40 | 0.3863 | <i>145.81</i> | 1.1997 | 1.1997 | 13 | 13 | 156.0 |
| Oct | 120.14 | 1.2367 | 148.58 | 0.1733 | <i>147.79</i> | 1.2170 | 1.2170 | 14 | 14 | 141.6 |
| Nov | 119.50 | 1.1862 | 141.75 | 0.1829 | <i>140.67</i> | 1.1590 | 1.1590 | 10 | 10 | 158.1 |
| Dec | 113.36 | 1.1290 | 127.99 | 0.1580 | <i>127.03</i> | 1.1034 | 1.1034 | 11 | 11 | 143.3 |
| 2000 Means | 148.73 | 1.2114 | 180.17 | — | <i>178.81</i> | 1.1840 | 1.1840 | — | — | 173.9 |
| | σ ² = 0.1865 | | | σ ^{mw} ₂ = 0.1709 | | Eσ ² = 0.0152 | | | | |
| 2001 Jan | 134.71 | 1.1099 | 149.51 | 0.1321 | <i>148.81</i> | 1.0943 | 1.0943 | 17 | 17 | 142.6 |
| Feb | 107.92 | 1.1071 | 119.48 | 0.1131 | <i>118.75</i> | 1.0870 | 1.0870 | 13 | 13 | 121.5 |
| Mar | 142.75 | 1.1740 | 167.59 | 0.1456 | <i>168.17</i> | 1.1863 | 1.1863 | 20 | 20 | 165.8 |
| Apr | 130.67 | 1.2527 | 163.69 | 0.2088 | <i>162.43</i> | 1.2239 | 1.2239 | 12 | 12 | 161.7 |
| May | 103.73 | 1.3195 | 136.87 | 0.1636 | <i>135.91</i> | 1.2918 | 1.2918 | 11 | 11 | 142.1 |
| Jun | 172.38 | 1.1999 | 206.84 | 0.1366 | <i>206.27</i> | 1.1900 | 1.1900 | 16 | 16 | 202.9 |
| Jul | 92.65 | 1.2572 | 116.48 | 0.1810 | <i>116.22</i> | 1.2489 | 1.2489 | 17 | 17 | 123.0 |
| Aug | 148.40 | 1.1049 | 163.97 | 0.1019 | <i>163.51</i> | 1.0957 | 1.0957 | 15 | 15 | 161.5 |
| Sep | 203.53 | 1.2724 | 258.97 | 0.1196 | <i>258.72</i> | 1.2688 | 1.2688 | 17 | 17 | 238.2 |
| Oct | 156.83 | 1.2037 | 188.78 | 0.1283 | <i>188.35</i> | 1.1955 | 1.1955 | 12 | 12 | 194.1 |
| Nov | 139.91 | 1.2501 | 174.90 | 0.1238 | <i>174.72</i> | 1.2463 | 1.2463 | 11 | 11 | 176.6 |
| Dec | 171.00 | 1.2618 | 215.77 | 0.2178 | <i>213.60</i> | 1.2238 | 1.2238 | 11 | 11 | 213.4 |
| 2001 Means | 142.90 | 1.2043 | 172.09 | — | <i>171.62</i> | 1.1945 | 1.1945 | — | — | 170.4 |
| | σ ² = 0.1599 | | | σ ^{mw} ₂ = 0.1457 | | Eσ ² = 0.0114 | | | | |

CORRECTED **VERSION 2 WOLF NUMBERS** for **1973 - 2015** continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _{k2} | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------|-------------------------------|---------------------|--------------------------|----|----------------|-------|
| 2002 Jan | 155.21 | 1.2401 | 192.48 | 0.1276 | <i>191.81</i> | 1.2272 | 1.2272 | 19 | 19 | 184.6 |
| Feb | 153.14 | 1.1357 | 173.93 | 0.1482 | <i>172.52</i> | 1.1082 | 1.1082 | 14 | 14 | 170.2 |
| Mar | 126.69 | 1.1222 | 142.17 | 0.1233 | <i>141.96</i> | 1.1172 | 1.1172 | 13 | 13 | 147.1 |
| Apr | 160.00 | 1.1486 | 183.77 | 0.1077 | <i>183.01</i> | 1.1344 | 1.1344 | 14 | 14 | 186.9 |
| May | 166.73 | 1.0900 | 181.73 | 0.1103 | <i>181.70</i> | 1.0894 | 1.0894 | 11 | 11 | 187.5 |
| Jun | 125.08 | 1.1448 | 143.19 | 0.1225 | <i>142.46</i> | 1.1273 | 1.1273 | 13 | 13 | 128.8 |
| Jul | 158.72 | 1.1253 | 178.62 | 0.1917 | <i>176.32</i> | 1.0819 | 1.0819 | 18 | 18 | 161.0 |
| Aug | 166.22 | 1.1322 | 188.20 | 0.1233 | <i>187.04</i> | 1.1113 | 1.1113 | 18 | 18 | 175.6 |
| Sep | 172.25 | 1.1155 | 192.15 | 0.1189 | <i>191.41</i> | 1.1026 | 1.1026 | 12 | 12 | 187.9 |
| Oct | 134.06 | 1.1168 | 149.72 | 0.1337 | <i>149.37</i> | 1.1090 | 1.1090 | 18 | 18 | 151.2 |
| Nov | 119.20 | 1.1899 | 141.83 | 0.1704 | <i>140.60</i> | 1.1588 | 1.1588 | 15 | 15 | 147.2 |
| Dec | 76.91 | 1.3946 | 107.26 | 0.3197 | <i>105.51</i> | 1.3262 | 1.3262 | 11 | 11 | 135.3 |
| 2002 Means | 144.34 | 1.1609 | 167.56 | — | <i>166.20</i> | 1.1326 | 1.1326 | — | — | 163.6 |
| | σ ² = 0.1674 | | | σ ^{mw2} = 0.1477 | | | Eσ ² = 0.0118 | | | |
| 2003 Jan | 111.62 | 1.1445 | 127.74 | 0.2629 | <i>127.14</i> | 1.1282 | 1.1282 | 13 | 13 | 133.5 |
| Feb | 75.33 | 1.1653 | 87.78 | 0.3096 | <i>86.12</i> | 1.0988 | 1.0988 | 9 | 9 | 75.7 |
| Mar | 77.38 | 1.1713 | 90.63 | 0.2533 | <i>89.17</i> | 1.1147 | 1.1147 | 8 | 8 | 100.7 |
| Apr | 84.94 | 1.1057 | 93.92 | 0.1198 | <i>94.12</i> | 1.1125 | 1.1125 | 18 | 18 | 97.9 |
| May | 75.75 | 1.1520 | 87.26 | 0.1647 | <i>86.94</i> | 1.1394 | 1.1394 | 16 | 16 | 86.8 |
| Jun | 105.93 | 1.1978 | 126.89 | 0.2772 | <i>124.61</i> | 1.1334 | 1.1334 | 15 | 15 | 118.7 |
| Jul | 114.00 | 1.2653 | 144.25 | 0.2010 | <i>143.08</i> | 1.2346 | 1.2346 | 12 | 12 | 128.3 |
| Aug | 104.54 | 1.1940 | 124.82 | 0.1466 | <i>124.14</i> | 1.1744 | 1.1744 | 13 | 13 | 115.4 |
| Sep | 50.00 | 1.2074 | 60.37 | 0.2163 | <i>60.33</i> | 1.2050 | 1.2050 | 8 | 8 | 78.5 |
| Oct | 88.22 | 1.1663 | 102.89 | 0.2460 | <i>101.28</i> | 1.1115 | 1.1115 | 18 | 18 | 97.8 |
| Nov | 50.92 | 1.1500 | 58.56 | 0.4694 | <i>57.76</i> | 1.1027 | 1.0801 | 13 | 12 | 82.9 |
| Dec | 59.89 | 1.2333 | 73.86 | 0.1962 | <i>74.05</i> | 1.2430 | 1.2430 | 9 | 9 | 72.2 |
| 2003 Means | 85.49 | 1.1741 | 100.37 | — | <i>99.56</i> | 1.1457 | 1.1445 | — | — | 99.3 |
| | σ ² = 0.2426 | | | σ ^{mw2} = 0.2322 | | | Eσ ² = 0.0202 | | | |
| 2004 Jan | 57.18 | 1.1825 | 67.62 | 0.1841 | <i>67.99</i> | 1.2019 | 1.1606 | 11 | 10 | 60.6 |
| Feb | 53.60 | 1.3182 | 70.66 | 0.4173 | <i>69.37</i> | 1.2463 | 1.2463 | 5 | 5 | 74.6 |
| Mar | 58.20 | 1.2245 | 71.26 | 0.1776 | <i>71.06</i> | 1.2142 | 1.2142 | 15 | 15 | 74.8 |
| Apr | 48.91 | 1.3139 | 64.26 | 0.3266 | <i>63.21</i> | 1.2491 | 1.2491 | 11 | 11 | 59.2 |
| May | 67.50 | 1.3950 | 94.16 | 0.1345 | <i>93.54</i> | 1.3674 | 1.3674 | 10 | 10 | 72.8 |
| Jun | 50.50 | 1.1979 | 60.49 | 0.2644 | <i>60.25</i> | 1.1832 | 1.1832 | 8 | 8 | 66.5 |
| Jul | 72.56 | 1.1664 | 84.63 | 0.1531 | <i>84.07</i> | 1.1430 | 1.1430 | 16 | 16 | 83.8 |
| Aug | 53.00 | 1.3773 | 73.00 | 0.3971 | <i>70.41</i> | 1.2311 | 1.2311 | 16 | 16 | 69.7 |
| Sep | 37.78 | 1.2382 | 46.78 | 0.3807 | <i>47.48</i> | 1.2941 | 1.2941 | 9 | 9 | 48.8 |
| Oct | 73.78 | 1.1990 | 88.46 | 0.1892 | <i>89.23</i> | 1.2304 | 1.2304 | 9 | 9 | 74.2 |
| Nov | 69.00 | 1.2520 | 86.39 | 0.1881 | <i>85.68</i> | 1.2210 | 1.2210 | 8 | 8 | 70.1 |
| Dec | 19.75 | 1.3438 | 26.54 | 0.4485 | <i>25.49</i> | 1.1835 | 1.1835 | 8 | 8 | 28.9 |
| 2004 Means | 56.43 | 1.2654 | 71.40 | — | <i>70.65</i> | 1.2253 | 1.2217 | — | — | 65.3 |
| | σ ² = 0.2807 | | | σ ^{mw2} = 0.2613 | | | Eσ ² = 0.0253 | | | |

CORRECTED **VERSION 2 WOLF NUMBERS** for 1973 - 2015 continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------------------|-------------------------------|---------------------|----------------------------------|----|----------------|------|
| 2005 Jan | 46.92 | 1.1946 | 56.05 | 0.2060 | 55.14 | 1.1361 | 1.1361 | 13 | 13 | 48.1 |
| Feb | 33.70 | 1.3336 | 44.94 | 0.2240 | 44.00 | 1.2493 | 1.2196 | 10 | 9 | 43.5 |
| Mar | 29.63 | 1.3209 | 39.13 | 0.2882 | 39.28 | 1.3354 | 1.3038 | 16 | 14 | 39.6 |
| Apr | 36.94 | 1.0726 | 39.62 | 0.2476 | 39.57 | 1.0685 | 1.0685 | 17 | 17 | 38.7 |
| May | 50.14 | 1.2577 | 63.07 | 0.2411 | 62.71 | 1.2365 | 1.2365 | 7 | 7 | 61.9 |
| Jun | 59.50 | 1.0547 | 62.75 | 0.1927 | 63.44 | 1.0891 | 1.0605 | 10 | 8 | 56.8 |
| Jul | 43.78 | 0.9874 | 43.23 | 0.2386 | 43.85 | 1.0305 | 0.9949 | 9 | 6 | 62.4 |
| Aug | 49.86 | 1.2635 | 63.00 | 0.2506 | 62.90 | 1.2579 | 1.2579 | 14 | 14 | 60.5 |
| Sep | 23.25 | 1.7075 | 39.70 | 0.4447 | 38.30 | 1.5269 | 1.5269 | 8 | 8 | 37.2 |
| Oct | 8.55 | 1.2447 | 10.64 | 0.3003 | 10.94 | 1.3511 | 1.2234 | 11 | 7 | 13.2 |
| Nov | 22.08 | 1.2518 | 27.64 | 0.4424 | 27.46 | 1.2264 | 1.1358 | 12 | 9 | 27.5 |
| Dec | 52.22 | 1.1206 | 58.52 | 0.1749 | 58.35 | 1.1106 | 1.1106 | 9 | 9 | 59.3 |
| 2005 Means | 37.51 | 1.2301 | 46.15 | — | 45.57 | 1.1842 | 1.1662 | — | — | 45.8 |
| | σ ² = 0.3112 | | | σ ^{mw} ₂ = 0.2671 | | | Eσ ² = 0.0253 | | | |
| 2006 Jan | 17.62 | 1.1060 | 19.48 | 0.2971 | 19.50 | 1.1092 | 1.0611 | 13 | 12 | 20.9 |
| Feb | 5.20 | 0.7202 | 3.74 | 0.2288 | 4.23 | 1.0000 | 0.6795 | 15 | 5 | 5.7 |
| Mar | 15.50 | 1.2382 | 19.19 | 0.5311 | 19.29 | 1.2581 | 1.1183 | 12 | 9 | 17.3 |
| Apr | 40.42 | 1.2997 | 52.53 | 0.3879 | 51.91 | 1.2536 | 1.2062 | 12 | 11 | 50.3 |
| May | 22.00 | 1.8365 | 40.40 | 1.5066 | 36.46 | 1.2987 | 1.2987 | 7 | 4 | 37.2 |
| Jun | 14.92 | 1.2569 | 18.75 | 0.1330 | 19.72 | 1.4525 | 1.2737 | 12 | 8 | 24.5 |
| Jul | 15.86 | 1.2812 | 20.32 | 0.2926 | 20.31 | 1.2793 | 1.2793 | 14 | 12 | 22.2 |
| Aug | 20.85 | 1.2481 | 26.02 | 0.3820 | 25.73 | 1.2066 | 1.2066 | 13 | 13 | 20.8 |
| Sep | 14.57 | 1.1306 | 16.47 | 0.0422 | 17.13 | 1.2647 | 1.1373 | 7 | 5 | 23.7 |
| Oct | 18.00 | 1.3325 | 23.98 | 0.5815 | 23.38 | 1.2315 | 1.2315 | 6 | 5 | 14.9 |
| Nov | 29.67 | 1.1682 | 34.66 | 0.2421 | 34.63 | 1.1657 | 1.1657 | 12 | 11 | 35.7 |
| Dec | 22.90 | 1.2380 | 28.35 | 0.3615 | 27.93 | 1.1834 | 1.1834 | 10 | 8 | 22.3 |
| 2006 Means | 19.54 | 1.2270 | 23.98 | — | 23.99 | 1.2285 | 1.1785 | — | — | 24.7 |
| | σ ² = 0.4497 | | | σ ^{mw} ₂ = 0.3689 | | | Eσ ² = 0.0445 | | | |
| 2007 Jan | 28.82 | 1.1795 | 33.99 | 0.1381 | 33.81 | 1.1609 | 1.1609 | 11 | 11 | 29.3 |
| Feb | 14.86 | 1.2428 | 18.47 | 0.0873 | 18.07 | 1.1635 | 1.2284 | 14 | 10 | 18.4 |
| Mar | 7.64 | 0.9644 | 7.36 | 0.2831 | 7.61 | 1.0595 | 0.9048 | 11 | 5 | 7.2 |
| Apr | 2.38 | 0.9444 | 2.25 | 0.0786 | 2.25 | 0.9355 | 0.9355 | 13 | 2 | 5.4 |
| May | 11.83 | 1.2424 | 14.70 | 0.1888 | 15.38 | 1.4155 | 1.2672 | 12 | 8 | 19.5 |
| Jun | 18.30 | 1.4822 | 27.12 | 0.6897 | 26.68 | 1.4098 | 1.4098 | 10 | 6 | 21.3 |
| Jul | 11.93 | 1.1470 | 13.68 | 0.3787 | 13.05 | 0.9880 | 1.0577 | 14 | 9 | 15.1 |
| Aug | 9.60 | 1.0377 | 9.96 | 0.2545 | 10.11 | 1.0833 | 0.9479 | 10 | 7 | 9.8 |
| Sep | 4.45 | 1.0524 | 4.69 | 0.1830 | 4.25 | 0.7551 | 1.0000 | 11 | 2 | 4.0 |
| Oct | 1.85 | 1.4583 | 2.69 | 0.1768 | 2.69 | 1.4583 | 1.4583 | 13 | 2 | 1.5 |
| Nov | 2.60 | 1.2381 | 3.22 | 0.1347 | 3.65 | 1.7308 | 1.2308 | 10 | 2 | 2.8 |
| Dec | 5.89 | 1.3690 | 8.06 | 0.1852 | 8.67 | 1.6792 | 1.3962 | 9 | 2 | 17.3 |
| 2007 Means | 10.00 | 1.1935 | 11.93 | — | 11.97 | 1.2043 | 1.1783 | — | — | 12.6 |
| | σ ² = 0.3097 | | | σ ^{mw} ₂ = 0.2449 | | | Eσ ² = 0.0365 | | | |

CORRECTED **VERSION 2 WOLF NUMBERS** for **1973 - 2015** continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _{k2} | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------|-------------------------------|---------------------|--------------------------|----|----------------|------|
| 2008 Jan | 3.14 | 0.8788 | 2.76 | 0.0525 | 2.53 | 0.6591 | 0.8788 | 14 | 3 | 4.1 |
| Feb | 2.17 | 0.9940 | 2.15 | 0.1094 | 2.46 | 1.4231 | 1.0000 | 12 | 2 | 2.9 |
| Mar | 9.18 | 1.0290 | 9.45 | 0.1648 | 9.45 | 1.0297 | 1.0297 | 11 | 3 | 15.5 |
| Apr | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 6 | 0 | 3.6 |
| May | 2.75 | 1.4242 | 3.92 | 0.4665 | 3.92 | 1.4242 | 1.4242 | 12 | 3 | 4.6 |
| Jun | 4.89 | 1.0303 | 5.04 | 0.0525 | 4.62 | 0.7727 | 1.0303 | 9 | 3 | 5.2 |
| Jul | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 8 | 0 | 0.6 |
| Aug | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 10 | 0 | 0.3 |
| Sep | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 13 | 0 | 1.2 |
| Oct | 2.18 | 1.0833 | 2.36 | 0.0000 | 2.36 | 1.0833 | 1.0833 | 11 | 2 | 4.2 |
| Nov | 4.54 | 1.3125 | 5.96 | 0.1208 | 5.77 | 1.1864 | 1.3111 | 13 | 4 | 6.6 |
| Dec | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 11 | 0 | 1.0 |
| 2008 Means | 2.55 | 1.1246 | 2.86 | — | 2.88 | 1.1480 | 1.1017 | — | — | 4.2 |
| | σ ² = 0.2555 | | | σ ^{mw2} = 0.1456 | | | Eσ ² = 0.0456 | | | |
| 2009 Jan | 0.80 | 0.8333 | 0.67 | — | 0.67 | 0.8333 | 0.8333 | 15 | 1 | 1.3 |
| Feb | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 11 | 0 | 1.2 |
| Mar | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 15 | 0 | 0.6 |
| Apr | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 8 | 0 | 1.2 |
| May | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 13 | 0 | 2.9 |
| Jun | 5.64 | 1.3932 | 7.86 | 0.0281 | 8.57 | 1.7722 | 1.3924 | 14 | 5 | 6.3 |
| Jul | 4.00 | 1.2867 | 5.15 | 0.0636 | 5.49 | 1.5417 | 1.2917 | 12 | 3 | 5.5 |
| Aug | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 7 | 0 | 0.0 |
| Sep | 1.56 | 1.2143 | 1.89 | — | 1.89 | 1.2143 | 1.2143 | 9 | 1 | 7.1 |
| Oct | 5.82 | 1.4597 | 8.49 | 0.1167 | 8.51 | 1.4688 | 1.4688 | 11 | 4 | 7.7 |
| Nov | 2.56 | 1.1326 | 2.89 | 0.0696 | 5.19 | 3.8261 | 1.1304 | 9 | 2 | 6.9 |
| Dec | 10.07 | 1.2724 | 12.81 | 0.2371 | 14.26 | 1.7021 | 1.2979 | 14 | 6 | 16.3 |
| 2009 Means | 2.76 | 1.3005 | 3.59 | — | 4.22 | 1.9843 | 1.3176 | — | — | 4.8 |
| | σ ² = 0.1915 | | | σ ^{mw2} = 0.1073 | | | Eσ ² = 0.0294 | | | |
| 2010 Jan | 13.50 | 1.1969 | 16.16 | 0.3009 | 16.69 | 1.3148 | 1.1728 | 12 | 9 | 19.5 |
| Feb | 23.30 | 1.2924 | 30.11 | 0.4682 | 29.58 | 1.2232 | 1.2232 | 10 | 10 | 28.5 |
| Mar | 15.60 | 1.5714 | 24.51 | 0.3812 | 23.54 | 1.3846 | 1.4897 | 10 | 7 | 24.0 |
| Apr | 6.36 | 1.3805 | 8.79 | 0.8057 | 10.19 | 2.0429 | 1.2857 | 11 | 5 | 10.4 |
| May | 4.00 | 1.4545 | 5.82 | 0.6364 | 7.43 | 2.6667 | 1.4167 | 9 | 3 | 13.9 |
| Jun | 9.00 | 1.2342 | 11.11 | 0.3606 | 12.07 | 1.5556 | 1.2323 | 11 | 7 | 18.8 |
| Jul | 11.85 | 1.7117 | 20.28 | 0.5497 | 21.16 | 1.9351 | 1.7403 | 13 | 11 | 25.2 |
| Aug | 20.36 | 1.2172 | 24.79 | 0.4726 | 25.49 | 1.3214 | 1.2188 | 11 | 8 | 29.6 |
| Sep | 19.40 | 1.5293 | 29.67 | 0.3749 | 30.18 | 1.6082 | 1.6082 | 5 | 4 | 36.4 |
| Oct | 27.38 | 1.2087 | 33.09 | 0.1161 | 33.81 | 1.2877 | 1.2100 | 16 | 13 | 33.6 |
| Nov | 25.67 | 1.5002 | 38.50 | 0.5179 | 37.00 | 1.3247 | 1.3247 | 6 | 6 | 34.4 |
| Dec | 18.18 | 1.6413 | 29.84 | 0.5935 | 29.38 | 1.5650 | 1.4800 | 11 | 9 | 24.5 |
| 2010 Means | 16.18 | 1.3997 | 22.65 | — | 22.94 | 1.4523 | 1.3325 | — | — | 24.9 |
| | σ ² = 0.4740 | | | σ ^{mw2} = 0.4327 | | | Eσ ² = 0.0486 | | | |

CORRECTED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| | WN | k2 | R _{GD} ² | σ ² | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k | Sn |
|------------|-------------------------|--------|------------------------------|---------------------------------------|-------------------------------|---------------------|----------------------------------|----|----------------|-------|
| 2011 Jan | 21.18 | 1.4396 | 30.49 | 0.5651 | <i>29.63</i> | 1.3176 | 1.3176 | 11 | 10 | 27.3 |
| Feb | 38.36 | 1.5833 | 60.74 | 0.3688 | <i>59.95</i> | 1.5213 | 1.4905 | 11 | 10 | 48.3 |
| Mar | 52.00 | 1.7842 | 92.78 | 0.2356 | <i>91.72</i> | 1.7231 | 1.7231 | 15 | 15 | 78.6 |
| Apr | 35.38 | 2.0544 | 72.67 | 0.7778 | <i>70.87</i> | 1.9011 | 1.9011 | 8 | 8 | 76.1 |
| May | 31.00 | 2.2736 | 70.48 | 1.2670 | <i>65.73</i> | 1.8136 | 1.8136 | 9 | 9 | 58.2 |
| Jun | 30.67 | 1.7067 | 52.34 | 0.5527 | <i>53.23</i> | 1.7935 | 1.6467 | 6 | 5 | 56.1 |
| Jul | 40.91 | 1.5879 | 64.96 | 0.3132 | <i>65.12</i> | 1.6000 | 1.5044 | 11 | 10 | 64.5 |
| Aug | 40.36 | 1.4888 | 60.09 | 0.3607 | <i>60.40</i> | 1.5113 | 1.4459 | 11 | 10 | 65.8 |
| Sep | 56.50 | 1.7539 | 99.09 | 0.4290 | <i>98.70</i> | 1.7327 | 1.7327 | 10 | 10 | 120.1 |
| Oct | 81.29 | 1.6141 | 131.21 | 0.2144 | <i>130.04</i> | 1.5712 | 1.5712 | 7 | 7 | 125.7 |
| Nov | 93.25 | 1.6080 | 149.94 | 0.2723 | <i>148.63</i> | 1.5657 | 1.5657 | 4 | 4 | 139.1 |
| Dec | 80.00 | 1.4482 | 115.85 | 0.2363 | <i>115.95</i> | 1.4518 | 1.4518 | 7 | 7 | 109.3 |
| 2011 Means | 46.75 | 1.7009 | 79.51 | — | <i>78.24</i> | 1.6196 | 1.5978 | — | — | 80.8 |
| | σ ² = 0.5695 | | | σ ^{mw} ₂ = 0.4622 | | | Eσ ² = 0.0533 | | | |
| 2012 Jan | 70.00 | 1.5434 | 108.04 | 0.2375 | <i>108.23</i> | 1.5518 | 1.5518 | 8 | 8 | 94.4 |
| Feb | 29.50 | 1.5648 | 46.16 | 0.4691 | <i>45.69</i> | 1.5169 | 1.5169 | 12 | 12 | 47.8 |
| Mar | 65.00 | 1.5344 | 99.74 | 0.4441 | <i>97.75</i> | 1.4426 | 1.4426 | 13 | 13 | 86.6 |
| Apr | 62.20 | 1.8035 | 112.18 | 0.6905 | <i>105.79</i> | 1.4952 | 1.4952 | 10 | 10 | 85.9 |
| May | 59.75 | 1.6239 | 97.03 | 0.3022 | <i>96.05</i> | 1.5746 | 1.5746 | 12 | 12 | 96.5 |
| Jun | 69.33 | 1.3233 | 91.75 | 0.1650 | <i>92.35</i> | 1.3494 | 1.3494 | 9 | 9 | 92.0 |
| Jul | 77.78 | 1.3952 | 108.51 | 0.1456 | <i>108.71</i> | 1.4029 | 1.4029 | 9 | 9 | 100.1 |
| Aug | 64.00 | 1.4396 | 92.14 | 0.2679 | <i>92.45</i> | 1.4544 | 1.4544 | 12 | 12 | 94.8 |
| Sep | 54.29 | 1.5910 | 86.37 | 0.3603 | <i>84.67</i> | 1.4974 | 1.4974 | 7 | 7 | 93.7 |
| Oct | 53.44 | 1.4630 | 78.19 | 0.2037 | <i>78.05</i> | 1.4553 | 1.4553 | 9 | 9 | 76.5 |
| Nov | 62.50 | 1.4321 | 89.51 | 0.3037 | <i>87.84</i> | 1.3520 | 1.3520 | 6 | 6 | 87.6 |
| Dec | 48.63 | 1.2672 | 61.62 | 0.2398 | <i>60.50</i> | 1.1979 | 1.1979 | 8 | 8 | 56.8 |
| 2012 Means | 59.26 | 1.5076 | 89.34 | — | <i>88.16</i> | 1.4478 | 1.4478 | — | — | 84.5 |
| | σ ² = 0.3718 | | | σ ^{mw} ₂ = 0.3299 | | | Eσ ² = 0.0338 | | | |
| 2013 Jan | 71.13 | 1.4258 | 101.41 | 0.4751 | <i>98.57</i> | 1.3058 | 1.3058 | 8 | 8 | 96.1 |
| Feb | 49.10 | 1.2911 | 63.39 | 0.3549 | <i>62.60</i> | 1.2424 | 1.2424 | 10 | 10 | 60.9 |
| Mar | 44.67 | 1.6009 | 71.51 | 0.5604 | <i>70.00</i> | 1.5000 | 1.5000 | 15 | 15 | 78.3 |
| Apr | 100.57 | 1.2408 | 124.78 | 0.1825 | <i>124.57</i> | 1.2344 | 1.2344 | 7 | 7 | 107.3 |
| May | 87.67 | 1.5268 | 133.85 | 0.2625 | <i>131.75</i> | 1.4550 | 1.4550 | 9 | 9 | 120.2 |
| Jun | 53.36 | 1.4698 | 78.43 | 0.3295 | <i>76.23</i> | 1.3458 | 1.3458 | 11 | 11 | 76.7 |
| Jul | 63.57 | 1.4072 | 89.46 | 0.2574 | <i>89.02</i> | 1.3865 | 1.3865 | 7 | 7 | 86.2 |
| Aug | 57.44 | 1.4307 | 82.18 | 0.2205 | <i>81.57</i> | 1.3985 | 1.3985 | 9 | 9 | 91.8 |
| Sep | 42.50 | 1.4207 | 60.38 | 0.3782 | <i>58.96</i> | 1.3206 | 1.3206 | 8 | 8 | 54.5 |
| Oct | 80.78 | 1.4716 | 118.88 | 0.1406 | <i>118.84</i> | 1.4704 | 1.4704 | 9 | 9 | 114.4 |
| Nov | 90.13 | 1.3970 | 125.90 | 0.2354 | <i>124.52</i> | 1.3509 | 1.3509 | 8 | 8 | 113.9 |
| Dec | 81.30 | 1.5712 | 127.74 | 0.1989 | <i>127.16</i> | 1.5498 | 1.5498 | 10 | 10 | 124.2 |
| 2013 Means | 66.42 | 1.4518 | 96.43 | — | <i>95.09</i> | 1.3912 | 1.3912 | — | — | 94.0 |
| | σ ² = 0.3411 | | | σ ^{mw} ₂ = 0.3151 | | | Eσ ² = 0.0323 | | | |

CORRECTED **VERSION 2 WOLF NUMBERS** for **1973 - 2015** continued.

| | WN | k2 | R _{GD} ² | σ^2 | R _{GDm} ² | I/GDSO ₂ | I/GDSO _{k2} | n | n _k | Sn |
|------------|---------------------|--------|------------------------------|--------------------------|-------------------------------|----------------------|----------------------|----|----------------|-------|
| 2014 Jan | 81.57 | 1.5504 | 126.47 | 0.5215 | <i>123.14</i> | 1.4282 | 1.4282 | 14 | 14 | 117.0 |
| Feb | 112.13 | 1.2233 | 137.17 | 0.1499 | <i>137.28</i> | 1.2263 | 1.2263 | 8 | 8 | 146.1 |
| Mar | 86.50 | 1.5814 | 136.79 | 0.4269 | <i>134.58</i> | 1.5048 | 1.5048 | 12 | 12 | 128.7 |
| Apr | 82.67 | 1.2726 | 105.20 | 0.2830 | <i>105.84</i> | 1.2957 | 1.2957 | 9 | 9 | 112.5 |
| May | 76.36 | 1.4685 | 112.14 | 0.2554 | <i>110.73</i> | 1.4131 | 1.4131 | 11 | 11 | 112.5 |
| Jun | 74.33 | 1.6468 | 122.41 | 0.3291 | <i>118.89</i> | 1.5045 | 1.5045 | 6 | 6 | 102.9 |
| Jul | 45.90 | 1.8712 | 85.89 | 1.5678 | <i>76.99</i> | 1.2898 | 1.3020 | 10 | 8 | 100.2 |
| Aug | 79.00 | 1.5996 | 126.37 | 0.3471 | <i>124.54</i> | 1.5301 | 1.5301 | 8 | 8 | 106.9 |
| Sep | 104.25 | 1.4503 | 151.20 | 0.2560 | <i>151.46</i> | 1.4580 | 1.4580 | 4 | 4 | 130.0 |
| Oct | 63.40 | 1.4253 | 90.37 | 0.2034 | <i>88.44</i> | 1.3344 | 1.3344 | 5 | 5 | 90.0 |
| Nov | 66.80 | 1.6697 | 111.54 | 0.2233 | <i>110.46</i> | 1.6213 | 1.6213 | 10 | 10 | 103.6 |
| Dec | 101.00 | 1.2604 | 127.30 | 0.1478 | <i>126.09</i> | 1.2244 | 1.2244 | 6 | 6 | 112.9 |
| 2014 Means | 79.67 | 1.5140 | 120.62 | — | <i>117.73</i> | 1.4051 | 1.4059 | — | — | 113.3 |
| | $\sigma^2 = 0.5447$ | | | $\sigma^{mw_2} = 0.4102$ | | $E\sigma^2 = 0.0542$ | | | | |
| 2015 Jan | 72.71 | 1.3854 | 100.74 | 0.3625 | <i>97.99</i> | 1.2721 | 1.2721 | 14 | 14 | 93.0 |
| Feb | 40.55 | 1.6695 | 67.69 | 0.7049 | <i>64.46</i> | 1.4305 | 1.4305 | 11 | 11 | 66.7 |
| Mar | 33.77 | 1.4409 | 48.66 | 0.5975 | <i>47.39</i> | 1.3280 | 1.3280 | 13 | 13 | 54.5 |
| Apr | 53.75 | 1.5539 | 83.52 | 0.4614 | <i>82.65</i> | 1.5054 | 1.5054 | 12 | 12 | 75.3 |
| May | 43.50 | 1.7019 | 74.03 | 0.6297 | <i>71.40</i> | 1.5201 | 1.5201 | 8 | 8 | 88.8 |
| Jun | 60.36 | 1.0472 | 63.21 | 0.1989 | <i>63.90</i> | 1.0813 | 1.0813 | 11 | 11 | 66.5 |
| Jul | 58.60 | 1.3075 | 76.62 | 0.3024 | <i>75.48</i> | 1.2491 | 1.2491 | 10 | 10 | 65.8 |
| Aug | 51.00 | 1.4791 | 75.44 | 0.2947 | <i>74.33</i> | 1.4142 | 1.4142 | 8 | 8 | 64.4 |
| Sep | 62.56 | 1.6905 | 105.75 | 0.1769 | <i>106.09</i> | 1.7069 | 1.7069 | 9 | 9 | 78.6 |
| Oct | 27.67 | 2.0578 | 56.93 | 1.1388 | <i>52.62</i> | 1.5904 | 1.5904 | 3 | 3 | 63.6 |
| Nov | — | — | — | — | — | — | — | 0 | 0 | 62.2 |
| Dec | 37.83 | 1.7246 | 65.25 | 0.3650 | <i>64.22</i> | 1.6432 | 1.6432 | 6 | 6 | 58.0 |
| 2015 Means | 51.69 | 1.4945 | 77.24 | — | <i>75.33</i> | 1.3836 | 1.3836 | — | — | 69.8 |
| | $\sigma^2 = 0.5049$ | | | $\sigma^{mw_2} = 0.4375$ | | $E\sigma^2 = 0.0473$ | | | | |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171.

As a k value is attributed to each spotted observation, the k value for any specific rotation is the mean of all the co-efficient values (k2) for the rotation concerned.

The corrected values are labelled R_{GD2} .

$$R_{GD2} = WN \times k2.$$

σ_2 = sample standard deviation of k2 values.

$I/GDSO_2$ = International mean (of days observed by the GDSO) divided by the GDSO's rotation mean.

$I/GDSO_{k2}$ = International mean (of days observed by the GDSO) divided by the GDSO's observed mean for the *same* days.

n = number of GDSO observations.

n_k = number of k values.

| ROTA-TION | START DATE, UT | WN | k2 | R_{GD2} | σ_2 | R_{GDm2} | $I/GDSO_2$ | $I/GDSO_{k2}$ | n | n_k |
|-----------|----------------|-------|--------|-----------|------------|------------|------------|---------------|----|-------|
| 1599 | 1973/03/11.96 | 37.40 | 2.8186 | 105.42 | 0.3429 | 105.54 | 2.8289 | 2.8289 | 5 | 5 |
| 1600 | 1973/04/08.26 | 23.00 | 3.7919 | 87.21 | 1.5445 | 86.53 | 3.7029 | 3.7029 | 6 | 6 |
| 1601 | 1973/05/05.51 | 7.29 | 5.5689 | 40.57 | 1.4562 | 45.19 | 7.4706 | 5.5294 | 7 | 4 |
| 1602 | 1973/06/01.73 | 6.36 | 4.5533 | 28.98 | 0.6523 | 36.26 | 7.9857 | 4.3857 | 11 | 4 |
| 1603 | 1973/06/28.92 | 8.42 | 3.7802 | 31.82 | 0.3668 | 36.04 | 5.2871 | 3.7030 | 12 | 7 |
| 1604 | 1973/07/26.13 | 8.45 | 2.4118 | 20.39 | 1.0703 | 20.72 | 2.5269 | 2.4086 | 11 | 7 |
| 1605 | 1973/08/22.36 | 31.63 | 2.7945 | 88.38 | 0.9231 | 84.25 | 2.4032 | 2.4032 | 16 | 14 |
| 1606 | 1973/09/18.61 | 18.79 | 2.4578 | 46.17 | 1.1720 | 45.83 | 2.4030 | 2.1407 | 14 | 9 |
| 1607 | 1973/10/15.90 | 10.27 | 2.9040 | 29.83 | 0.9082 | 30.65 | 3.1416 | 2.6903 | 11 | 4 |
| 1608 | 1973/11/12.20 | 12.47 | 3.2254 | 40.21 | 1.6783 | 40.16 | 3.2139 | 3.0267 | 15 | 10 |
| 1609 | 1973/12/09.51 | 11.67 | 3.0362 | 35.42 | 1.3070 | 35.46 | 3.0457 | 2.8743 | 15 | 10 |
| 1610 | 1974/01/05.84 | 18.67 | 2.2363 | 41.74 | 0.5352 | 42.08 | 2.2902 | 2.1518 | 12 | 7 |
| 1611 | 1974/02/02.18 | 15.10 | 2.4579 | 37.11 | 0.7085 | 38.04 | 2.6424 | 2.2980 | 10 | 8 |
| 1612 | 1974/03/01.52 | 9.25 | 2.6424 | 24.44 | 1.0715 | 26.41 | 3.2793 | 2.6577 | 12 | 10 |
| 1613 | 1974/03/28.83 | 18.31 | 2.9526 | 54.07 | 0.9404 | 56.67 | 3.3788 | 2.7611 | 16 | 11 |
| 1614 | 1974/04/25.10 | 20.00 | 2.3530 | 47.06 | 0.4047 | 48.80 | 2.6143 | 2.3714 | 7 | 4 |
| 1615 | 1974/05/22.33 | 20.50 | 2.4013 | 49.23 | 1.4267 | 48.32 | 2.2683 | 2.1789 | 6 | 4 |
| 1616 | 1974/06/18.53 | 20.11 | 2.5823 | 51.93 | 1.1506 | 50.62 | 2.3867 | 2.3867 | 9 | 9 |
| 1617 | 1974/07/15.73 | 32.20 | 1.7728 | 57.08 | 0.7290 | 56.46 | 1.7143 | 1.7143 | 10 | 10 |
| 1618 | 1974/08/11.95 | 28.63 | 1.9682 | 56.34 | 0.5851 | 55.52 | 1.8821 | 1.8297 | 8 | 7 |
| 1619 | 1974/09/08.20 | 24.60 | 2.9552 | 72.70 | 0.6668 | 71.80 | 2.8455 | 2.7236 | 10 | 8 |
| 1620 | 1974/10/05.47 | 14.43 | 2.9414 | 42.44 | 0.7748 | 43.63 | 3.1881 | 2.9406 | 7 | 5 |
| 1621 | 1974/11/01.76 | 13.22 | 2.6326 | 34.81 | 0.7955 | 36.80 | 3.0840 | 2.5546 | 9 | 7 |
| 1622 | 1974/11/29.07 | 11.11 | 2.8857 | 32.06 | 1.3303 | 33.82 | 3.3600 | 2.7000 | 9 | 6 |
| 1623 | 1974/12/26.40 | 11.50 | 2.4816 | 28.54 | 0.8931 | 28.58 | 2.4928 | 2.4928 | 6 | 6 |
| 1624 | 1975/01/22.73 | 10.50 | 1.9167 | 20.13 | 0.9694 | 21.50 | 2.3095 | 1.7262 | 8 | 4 |

Starting dates stated above and on the following pages, are those stated in the *Astronomical Almanac* or the earlier *Astronomical Ephemeris*, they might differ from other publications.

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|-------|--------|-------------------|------------|--------------------|----------|-----------------------|----|----------------|
| 1625 | 1975/02/19.07 | 7.67 | 1.5606 | 11.96 | 0.1500 | 15.37 | 2.8913 | 1.5652 | 6 | 2 |
| 1626 | 1975/03/18.40 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 12 | 0 |
| 1627 | 1975/04/14.69 | 1.71 | 4.0000 | 6.86 | ∞ | 10.86 | 11.0000 | 4.0000 | 7 | 1 |
| 1628 | 1975/05/11.93 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 8 | 0 |
| 1629 | 1975/06/08.14 | 9.60 | 2.8712 | 27.56 | 1.2985 | 27.24 | 2.7708 | 2.7708 | 5 | 4 |
| 1630 | 1975/07/05.34 | 28.83 | 1.6602 | 47.87 | 0.2410 | 47.52 | 1.6243 | 1.6243 | 6 | 6 |
| 1631 | 1975/08/01.55 | 10.38 | 3.1317 | 32.49 | 0.9713 | 37.29 | 4.5181 | 3.2169 | 8 | 4 |
| 1632 | 1975/08/28.78 | 4.71 | 2.4848 | 11.71 | 0.4484 | 18.43 | 6.7576 | 2.4848 | 7 | 3 |
| 1633 | 1975/09/25.05 | 9.20 | 1.7475 | 16.08 | 0.3798 | 16.52 | 1.8913 | 1.7717 | 10 | 7 |
| 1634 | 1975/10/22.33 | 11.44 | 2.0379 | 23.32 | 0.5985 | 23.10 | 1.9806 | 1.8738 | 9 | 5 |
| 1635 | 1975/11/18.64 | 6.00 | 2.4515 | 14.71 | 0.3570 | 15.18 | 2.6852 | 2.4630 | 9 | 4 |
| 1636 | 1975/12/15.95 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 13 | 0 |
| 1637 | 1976/01/12.29 | 5.75 | 1.8634 | 10.71 | 0.1195 | 11.31 | 2.1739 | 1.8478 | 8 | 3 |
| 1638 | 1976/02/08.63 | 4.11 | 1.4149 | 5.82 | 0.3889 | 6.25 | 1.7297 | 1.4324 | 9 | 3 |
| 1639 | 1976/03/06.96 | 12.13 | 2.5301 | 30.68 | 0.6066 | 32.12 | 2.8866 | 2.5258 | 8 | 6 |
| 1640 | 1976/04/03.27 | 22.43 | 1.3664 | 30.65 | 0.4527 | 30.48 | 1.3439 | 1.3439 | 7 | 7 |
| 1641 | 1976/04/30.53 | 9.71 | 2.0807 | 20.21 | 1.1014 | 21.24 | 2.3971 | 2.0588 | 7 | 5 |
| 1642 | 1976/05/27.75 | 7.00 | 2.0325 | 14.23 | 0.7899 | 14.49 | 2.1429 | 1.9286 | 8 | 3 |
| 1643 | 1976/06/23.95 | 4.60 | 1.9091 | 8.78 | 0.9360 | 9.55 | 2.4130 | 1.9130 | 10 | 4 |
| 1644 | 1976/07/21.15 | 7.00 | 2.3338 | 16.34 | 0.9540 | 16.72 | 2.5000 | 2.2321 | 8 | 4 |
| 1645 | 1976/08/17.37 | 12.43 | 1.6602 | 20.63 | 0.4495 | 20.90 | 1.7241 | 1.5977 | 7 | 6 |
| 1646 | 1976/09/13.63 | 8.18 | 1.4848 | 12.15 | 0.3945 | 14.55 | 2.3667 | 1.4889 | 11 | 4 |
| 1647 | 1976/10/10.90 | 11.71 | 2.2442 | 26.29 | 0.5842 | 25.91 | 2.1463 | 2.1463 | 7 | 5 |
| 1648 | 1976/11/07.20 | 5.62 | 1.2803 | 7.19 | 0.2131 | 7.49 | 1.4384 | 1.2877 | 13 | 6 |
| 1649 | 1976/12/04.51 | 16.33 | 1.5101 | 24.67 | 0.3820 | 24.49 | 1.4776 | 1.4776 | 15 | 14 |
| 1650 | 1976/12/31.84 | 11.44 | 2.5293 | 28.95 | 0.7762 | 30.41 | 2.9126 | 2.3883 | 9 | 7 |
| 1651 | 1977/01/28.18 | 12.93 | 1.7292 | 22.36 | 0.6041 | 24.79 | 2.2928 | 1.6961 | 14 | 8 |
| 1652 | 1977/02/24.52 | 6.80 | 1.5536 | 10.56 | 0.6578 | 11.38 | 1.9118 | 1.5735 | 10 | 6 |
| 1653 | 1977/03/23.84 | 2.33 | 1.9305 | 4.50 | 0.9302 | 7.23 | 5.4286 | 2.0714 | 12 | 2 |
| 1654 | 1977/04/20.12 | 13.11 | 1.9206 | 25.18 | 0.3532 | 25.23 | 1.9322 | 1.9322 | 9 | 8 |
| 1655 | 1977/05/17.35 | 19.44 | 1.8189 | 35.37 | 0.3981 | 36.99 | 2.0686 | 1.7943 | 9 | 6 |
| 1656 | 1977/06/13.56 | 17.50 | 2.7185 | 47.57 | 1.4032 | 47.35 | 2.6800 | 2.6800 | 10 | 10 |
| 1657 | 1977/07/10.75 | 11.50 | 2.0890 | 24.02 | 1.1121 | 23.85 | 2.0435 | 1.9130 | 8 | 6 |
| 1658 | 1977/08/06.97 | 21.22 | 2.4835 | 52.71 | 0.9321 | 50.32 | 2.1466 | 2.1466 | 9 | 9 |
| 1659 | 1977/09/03.21 | 28.86 | 2.2619 | 65.27 | 0.4187 | 65.04 | 2.2376 | 2.2376 | 7 | 7 |
| 1660 | 1977/09/30.48 | 33.75 | 2.1718 | 73.30 | 0.7441 | 70.95 | 1.9630 | 1.9630 | 8 | 8 |
| 1661 | 1977/10/27.77 | 22.10 | 2.2699 | 50.17 | 0.7592 | 49.11 | 2.1267 | 2.1267 | 10 | 10 |
| 1662 | 1977/11/24.08 | 19.08 | 2.5241 | 48.17 | 0.7527 | 48.28 | 2.5415 | 2.4803 | 12 | 11 |
| 1663 | 1977/12/21.40 | 40.57 | 1.8546 | 75.24 | 0.6768 | 74.08 | 1.7688 | 1.7089 | 21 | 20 |
| 1664 | 1978/01/17.73 | 51.20 | 2.1373 | 109.43 | 0.5459 | 110.29 | 2.1875 | 2.1563 | 15 | 13 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA-TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|-----------|----------------|--------|--------|-------------------|------------|--------------------|---------|-----------------------|----|----------------|
| 1665 | 1978/02/14.07 | 72.75 | 1.6090 | 117.06 | 0.3715 | 114.83 | 1.5172 | 1.5172 | 8 | 8 |
| 1666 | 1978/03/13.40 | 59.50 | 2.5624 | 152.46 | 1.8564 | 140.14 | 1.9412 | 1.9412 | 6 | 6 |
| 1667 | 1978/04/09.70 | 82.44 | 1.7376 | 143.26 | 0.3769 | 141.02 | 1.6563 | 1.6563 | 9 | 9 |
| 1668 | 1978/05/06.95 | 63.14 | 2.1230 | 134.05 | 0.5051 | 132.18 | 2.0339 | 2.0339 | 7 | 7 |
| 1669 | 1978/06/03.16 | 81.75 | 2.0442 | 167.12 | 0.9233 | 157.66 | 1.6972 | 1.6972 | 4 | 4 |
| 1670 | 1978/06/30.36 | 51.75 | 2.6964 | 139.54 | 1.0651 | 134.69 | 2.4155 | 2.4155 | 8 | 8 |
| 1671 | 1978/07/27.57 | 39.25 | 2.0391 | 80.04 | 0.6111 | 78.90 | 1.9522 | 1.9522 | 8 | 8 |
| 1672 | 1978/08/23.80 | 70.17 | 3.1749 | 222.77 | 1.5200 | 210.79 | 2.6627 | 2.6627 | 6 | 6 |
| 1673 | 1978/09/20.06 | 83.44 | 2.2616 | 188.72 | 0.5174 | 186.52 | 2.1824 | 2.1824 | 9 | 9 |
| 1674 | 1978/10/17.34 | 81.11 | 2.2123 | 179.44 | 0.3959 | 177.63 | 2.1452 | 2.1452 | 9 | 9 |
| 1675 | 1978/11/13.64 | 67.45 | 2.7047 | 182.44 | 1.2172 | 172.69 | 2.2709 | 2.2709 | 11 | 11 |
| 1676 | 1978/12/10.95 | 77.21 | 2.0621 | 159.23 | 0.3388 | 160.48 | 2.1110 | 2.1110 | 14 | 14 |
| 1677 | 1979/01/07.28 | 114.18 | 2.0056 | 229.00 | 0.2644 | 227.82 | 1.9745 | 1.9745 | 11 | 11 |
| 1678 | 1979/02/03.62 | 93.00 | 2.3186 | 215.63 | 0.3881 | 213.70 | 2.2563 | 2.2563 | 6 | 6 |
| 1679 | 1979/03/02.96 | 75.50 | 2.4748 | 186.85 | 0.5855 | 185.40 | 2.4172 | 2.4172 | 4 | 4 |
| 1680 | 1979/03/30.27 | 71.38 | 1.9900 | 142.04 | 0.6241 | 139.78 | 1.8949 | 1.8949 | 8 | 8 |
| 1681 | 1979/04/26.54 | 103.57 | 1.9265 | 199.53 | 0.4961 | 196.50 | 1.8386 | 1.8386 | 7 | 7 |
| 1682 | 1979/05/23.77 | 109.75 | 2.1091 | 231.47 | 0.4937 | 226.94 | 1.9852 | 1.9852 | 8 | 8 |
| 1683 | 1979/06/19.97 | 96.86 | 2.2940 | 222.19 | 0.6432 | 222.55 | 2.3053 | 2.3053 | 7 | 7 |
| 1684 | 1979/07/17.17 | 73.57 | 2.5707 | 189.13 | 1.0867 | 180.33 | 2.2117 | 2.2117 | 7 | 7 |
| 1685 | 1979/08/13.39 | 112.83 | 2.3043 | 260.00 | 0.4434 | 255.56 | 2.1861 | 2.1861 | 6 | 6 |
| 1686 | 1979/09/09.64 | 116.80 | 2.2057 | 257.63 | 0.5144 | 254.42 | 2.1233 | 2.1233 | 5 | 5 |
| 1687 | 1979/10/06.91 | 86.71 | 2.6815 | 232.52 | 0.3380 | 232.30 | 2.6738 | 2.6738 | 7 | 7 |
| 1688 | 1979/11/03.21 | 113.78 | 2.3439 | 266.68 | 0.6166 | 263.60 | 2.2627 | 2.2627 | 9 | 9 |
| 1689 | 1979/11/30.51 | 97.60 | 2.4176 | 235.95 | 0.5275 | 235.57 | 2.4057 | 2.4057 | 10 | 10 |
| 1690 | 1979/12/27.84 | 109.25 | 2.3171 | 253.15 | 0.3510 | 251.22 | 2.2643 | 2.2643 | 8 | 8 |
| 1691 | 1980/01/24.18 | 87.29 | 2.5261 | 220.49 | 0.2755 | 219.47 | 2.4910 | 2.4910 | 7 | 7 |
| 1692 | 1980/02/20.52 | 64.00 | 2.4921 | 159.50 | 0.6111 | 158.33 | 2.4375 | 2.4375 | 4 | 4 |
| 1693 | 1980/03/18.84 | 96.44 | 2.8558 | 275.42 | 0.6964 | 271.02 | 2.7189 | 2.7189 | 9 | 9 |
| 1694 | 1980/04/15.13 | 97.00 | 2.1166 | 205.31 | 0.3295 | 203.46 | 2.0593 | 2.0593 | 8 | 8 |
| 1695 | 1980/05/12.37 | 130.20 | 2.0936 | 272.59 | 0.4170 | 273.13 | 2.1060 | 2.1060 | 5 | 5 |
| 1696 | 1980/06/08.58 | 101.00 | 2.1090 | 213.01 | 0.3783 | 213.27 | 2.1168 | 2.1168 | 5 | 5 |
| 1697 | 1980/07/05.78 | 96.20 | 1.9954 | 191.96 | 0.2455 | 191.37 | 1.9771 | 1.9771 | 5 | 5 |
| 1698 | 1980/08/01.99 | 73.00 | 1.4841 | 108.34 | 0.0344 | 108.23 | 1.4795 | 1.4795 | 2 | 2 |
| 1699 | 1980/08/29.22 | 91.00 | 2.3807 | 216.64 | 0.4441 | 215.01 | 2.3269 | 2.3269 | 4 | 4 |
| 1700 | 1980/09/25.49 | 139.00 | 2.6059 | 362.21 | 0.7562 | 355.70 | 2.4652 | 2.4652 | 3 | 3 |
| 1701 | 1980/10/22.77 | 115.91 | 2.0299 | 235.28 | 0.3444 | 232.85 | 1.9671 | 1.9671 | 11 | 11 |
| 1702 | 1980/11/19.08 | 89.45 | 2.2456 | 200.88 | 0.3112 | 200.13 | 2.2205 | 2.2205 | 11 | 11 |
| 1703 | 1980/12/16.40 | 121.42 | 1.8888 | 229.33 | 0.3511 | 226.39 | 1.8161 | 1.8161 | 12 | 12 |
| 1704 | 1981/01/12.73 | 89.56 | 1.9449 | 174.18 | 0.3666 | 173.01 | 1.9057 | 1.9057 | 9 | 9 |

CORRECTED VERSION 2 WOLF NUMBERS for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k ₂ | R _{GD} ² | σ ₂ | R _{GDm} ² | I/GDSO ₂ | I/GDSO _k ² | n | n _k |
|---------------|-------------------|--------|----------------|------------------------------|----------------|-------------------------------|---------------------|----------------------------------|----|----------------|
| 1705 | 1981/02/09.07 | 99.25 | 1.8708 | 185.68 | 0.2007 | <i>184.95</i> | 1.8489 | 1.8489 | 4 | 4 |
| 1706 | 1981/03/08.40 | 114.40 | 1.7737 | 202.91 | 0.1297 | <i>203.01</i> | 1.7762 | 1.7762 | 5 | 5 |
| 1707 | 1981/04/04.71 | 129.90 | 1.7516 | 227.54 | 0.4351 | <i>227.53</i> | 1.7513 | 1.7513 | 10 | 10 |
| 1708 | 1981/05/01.97 | 112.60 | 1.7467 | 196.68 | 0.2370 | <i>196.39</i> | 1.7389 | 1.7389 | 5 | 5 |
| 1709 | 1981/05/29.18 | 63.00 | 2.0937 | 131.90 | 0.8857 | <i>127.14</i> | 1.8667 | 1.8667 | 5 | 5 |
| 1710 | 1981/06/25.38 | 119.57 | 1.6696 | 199.63 | 0.5416 | <i>194.47</i> | 1.5400 | 1.5400 | 7 | 7 |
| 1711 | 1981/07/22.59 | 126.50 | 1.7957 | 227.16 | 0.5139 | <i>222.88</i> | 1.6943 | 1.6943 | 6 | 6 |
| 1712 | 1981/08/18.81 | 136.33 | 1.9915 | 271.51 | 0.2307 | <i>271.67</i> | 1.9951 | 1.9951 | 3 | 3 |
| 1713 | 1981/09/15.07 | 132.67 | 1.8587 | 246.59 | 0.1388 | <i>246.06</i> | 1.8467 | 1.8467 | 3 | 3 |
| 1714 | 1981/10/12.35 | 93.67 | 1.5514 | 145.31 | 0.0551 | <i>145.43</i> | 1.5552 | 1.5552 | 3 | 3 |
| 1715 | 1981/11/08.64 | 42.50 | 2.2466 | 95.48 | 0.1627 | <i>95.65</i> | 2.2588 | 2.2588 | 2 | 2 |
| 1716 | 1981/12/05.96 | 104.71 | 1.5237 | 159.56 | 0.3743 | <i>160.51</i> | 1.5512 | 1.5512 | 7 | 7 |
| 1717 | 1982/01/02.28 | 71.56 | 1.8177 | 130.08 | 0.4872 | <i>128.53</i> | 1.7528 | 1.7528 | 16 | 16 |
| 1718 | 1982/01/29.62 | 170.91 | 1.6385 | 280.03 | 0.2092 | <i>277.17</i> | 1.5883 | 1.5883 | 11 | 11 |
| 1719 | 1982/02/25.96 | 139.57 | 1.5292 | 213.44 | 0.1203 | <i>213.05</i> | 1.5210 | 1.5210 | 7 | 7 |
| 1720 | 1982/03/25.28 | 123.14 | 1.6370 | 201.58 | 0.1671 | <i>201.53</i> | 1.6357 | 1.6357 | 7 | 7 |
| 1721 | 1982/04/21.56 | 70.67 | 2.0214 | 142.85 | 0.2059 | <i>141.23</i> | 1.9528 | 1.9528 | 3 | 3 |
| 1722 | 1982/05/18.79 | — | — | — | — | — | — | — | 0 | 0 |
| 1723 | 1982/06/14.99 | 87.67 | 1.1406 | 99.99 | 0.3861 | <i>96.33</i> | 1.0152 | 1.0152 | 3 | 3 |
| 1724 | 1982/07/12.19 | 112.00 | 2.4441 | 273.74 | 2.8194 | <i>239.73</i> | 1.5332 | 1.5332 | 7 | 7 |
| 1725 | 1982/08/08.41 | 110.00 | 1.5096 | 166.06 | 0.2718 | <i>163.29</i> | 1.4341 | 1.4341 | 4 | 4 |
| 1726 | 1982/09/04.65 | 97.00 | 1.6546 | 160.50 | 0.2439 | <i>160.17</i> | 1.6443 | 1.6443 | 4 | 4 |
| 1727 | 1982/10/01.92 | 82.00 | 1.9105 | 156.66 | 0.2319 | <i>157.44</i> | 1.9390 | 1.9390 | 6 | 6 |
| 1728 | 1982/10/29.21 | 61.75 | 2.2657 | 139.91 | 0.7150 | <i>136.19</i> | 2.0850 | 2.0850 | 8 | 8 |
| 1729 | 1982/11/25.52 | 93.09 | 1.6722 | 155.67 | 0.2000 | <i>155.44</i> | 1.6650 | 1.6650 | 11 | 11 |
| 1730 | 1982/12/22.84 | 68.29 | 1.8738 | 127.97 | 0.3188 | <i>127.20</i> | 1.8398 | 1.8398 | 17 | 17 |
| 1731 | 1983/01/19.17 | 65.13 | 1.6918 | 110.18 | 0.2367 | <i>108.66</i> | 1.6219 | 1.6219 | 8 | 8 |
| 1732 | 1983/02/15.52 | 45.67 | 2.1324 | 97.38 | 0.8031 | <i>93.40</i> | 1.8710 | 1.8710 | 9 | 9 |
| 1733 | 1983/03/14.84 | 47.75 | 1.8487 | 88.27 | 0.6083 | <i>85.27</i> | 1.6597 | 1.6597 | 8 | 8 |
| 1734 | 1983/04/11.14 | 77.00 | 2.0019 | 154.15 | 0.4568 | <i>152.03</i> | 1.9195 | 1.9195 | 5 | 5 |
| 1735 | 1983/05/08.39 | 76.80 | 1.7175 | 131.91 | 0.2142 | <i>131.87</i> | 1.7161 | 1.7161 | 5 | 5 |
| 1736 | 1983/06/04.60 | 71.00 | 1.7790 | 126.31 | 0.2551 | <i>126.70</i> | 1.7958 | 1.7958 | 4 | 4 |
| 1737 | 1983/07/01.80 | 76.64 | 1.5952 | 122.25 | 0.1403 | <i>121.98</i> | 1.5848 | 1.5848 | 11 | 11 |
| 1738 | 1983/07/29.00 | 54.33 | 2.3343 | 126.83 | 0.4686 | <i>124.89</i> | 2.2270 | 2.2270 | 3 | 3 |
| 1739 | 1983/08/25.24 | 38.20 | 1.8979 | 72.50 | 0.6523 | <i>70.33</i> | 1.7277 | 1.7277 | 5 | 5 |
| 1740 | 1983/09/21.50 | 49.80 | 1.8108 | 90.18 | 0.0992 | <i>90.18</i> | 1.8112 | 1.8112 | 5 | 5 |
| 1741 | 1983/10/18.78 | 15.86 | 2.1851 | 34.65 | 0.7416 | <i>36.91</i> | 2.6126 | 2.2523 | 7 | 5 |
| 1742 | 1983/11/15.08 | 17.22 | 1.8311 | 31.54 | 0.4419 | <i>32.12</i> | 1.9323 | 1.7032 | 18 | 11 |
| 1743 | 1983/12/12.40 | 17.44 | 1.8126 | 31.61 | 0.5949 | <i>31.65</i> | 1.8208 | 1.7240 | 16 | 14 |
| 1744 | 1984/01/08.73 | 49.86 | 1.8814 | 93.80 | 0.4733 | <i>91.68</i> | 1.7536 | 1.7536 | 14 | 14 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA-TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|-----------|----------------|-------|--------|-------------------|------------|--------------------|---------|-----------------------|----|----------------|
| 1745 | 1984/02/05.07 | 52.63 | 2.1506 | 113.18 | 0.7492 | 108.70 | 1.8955 | 1.8955 | 8 | 8 |
| 1746 | 1984/03/03.40 | 62.67 | 1.8664 | 116.96 | 0.3187 | 115.75 | 1.8085 | 1.8085 | 3 | 3 |
| 1747 | 1984/03/30.71 | 50.70 | 1.7799 | 90.24 | 0.2899 | 89.89 | 1.7594 | 1.7594 | 10 | 10 |
| 1748 | 1984/04/26.98 | 66.50 | 1.7867 | 118.81 | 0.2527 | 117.29 | 1.7180 | 1.7180 | 8 | 8 |
| 1749 | 1984/05/24.21 | 41.67 | 1.6869 | 70.29 | 0.2492 | 69.75 | 1.6480 | 1.6480 | 6 | 6 |
| 1750 | 1984/06/20.41 | 37.00 | 2.1554 | 79.75 | 0.7210 | 76.33 | 1.8784 | 1.8784 | 6 | 6 |
| 1751 | 1984/07/17.61 | 13.38 | 2.0464 | 27.37 | 0.8457 | 27.25 | 2.0187 | 2.0187 | 8 | 8 |
| 1752 | 1984/08/13.83 | 23.83 | 1.4703 | 35.04 | 0.6875 | 37.53 | 1.7832 | 1.3706 | 6 | 4 |
| 1753 | 1984/09/10.08 | 2.20 | 1.1818 | 2.60 | ∞ | 4.20 | 3.3636 | 1.1818 | 5 | 1 |
| 1754 | 1984/10/07.35 | 3.50 | 1.3692 | 4.79 | 0.2393 | 7.49 | 3.6786 | 1.3571 | 8 | 2 |
| 1755 | 1984/11/03.65 | 16.88 | 1.3613 | 22.97 | 0.2802 | 23.61 | 1.4741 | 1.3704 | 8 | 7 |
| 1756 | 1984/11/30.96 | 12.00 | 1.3938 | 16.73 | 0.4557 | 18.31 | 1.7889 | 1.3056 | 15 | 10 |
| 1757 | 1984/12/28.28 | 10.38 | 1.3213 | 13.71 | 0.1800 | 14.45 | 1.5361 | 1.3133 | 16 | 7 |
| 1758 | 1985/01/24.62 | 7.00 | 1.3443 | 9.41 | 0.2482 | 11.98 | 2.4444 | 1.3492 | 9 | 4 |
| 1759 | 1985/02/20.96 | 6.14 | 1.5077 | 9.26 | 0.3910 | 11.17 | 2.4419 | 1.5581 | 7 | 3 |
| 1760 | 1985/03/20.28 | 16.71 | 1.4127 | 23.61 | 0.5383 | 23.12 | 1.3248 | 1.2137 | 7 | 6 |
| 1761 | 1985/04/16.57 | 25.00 | 1.4999 | 37.50 | 0.6883 | 36.55 | 1.3867 | 1.3867 | 6 | 6 |
| 1762 | 1985/05/13.81 | 16.88 | 1.6305 | 27.51 | 0.3368 | 27.76 | 1.6741 | 1.5407 | 8 | 5 |
| 1763 | 1985/06/10.02 | 28.17 | 1.3081 | 36.85 | 0.4501 | 38.06 | 1.4379 | 1.3669 | 6 | 5 |
| 1764 | 1985/07/07.21 | 14.50 | 1.3145 | 19.06 | 0.3848 | 20.26 | 1.5632 | 1.4138 | 6 | 5 |
| 1765 | 1985/08/03.42 | 7.67 | 1.0139 | 7.77 | 0.0241 | 9.13 | 1.5435 | 1.0217 | 6 | 3 |
| 1766 | 1985/08/30.66 | 5.75 | 0.8087 | 4.65 | 0.1544 | 5.02 | 1.0000 | 0.8043 | 8 | 4 |
| 1767 | 1985/09/26.93 | 16.40 | 1.6866 | 27.66 | 0.5924 | 27.91 | 1.7317 | 1.7317 | 10 | 5 |
| 1768 | 1985/10/24.22 | 13.79 | 1.6584 | 22.86 | 0.6683 | 22.91 | 1.6684 | 1.6010 | 14 | 10 |
| 1769 | 1985/11/20.52 | 8.67 | 1.3239 | 11.47 | 0.1454 | 12.39 | 1.6410 | 1.3718 | 9 | 4 |
| 1770 | 1985/12/17.84 | 0.92 | 2.0000 | 1.83 | ∞ | 2.67 | 4.7273 | 2.0000 | 12 | 1 |
| 1771 | 1986/01/14.17 | 24.67 | 1.2130 | 29.92 | 0.1939 | 30.65 | 1.3018 | 1.2658 | 9 | 6 |
| 1772 | 1986/02/10.51 | 21.75 | 1.2535 | 27.26 | 0.3153 | 26.88 | 1.2011 | 1.2011 | 8 | 7 |
| 1773 | 1986/03/09.85 | 4.18 | 1.0035 | 4.20 | 0.1011 | 5.40 | 1.8696 | 1.0000 | 11 | 4 |
| 1774 | 1986/04/06.15 | 23.43 | 1.3722 | 32.15 | 0.2260 | 32.29 | 1.3902 | 1.3902 | 7 | 7 |
| 1775 | 1986/05/03.40 | 6.86 | 1.1470 | 7.86 | 0.5770 | 9.72 | 1.9583 | 1.0000 | 7 | 3 |
| 1776 | 1986/05/30.62 | 2.75 | 1.3182 | 3.63 | 0.0643 | 3.79 | 1.5000 | 1.3182 | 8 | 2 |
| 1777 | 1986/06/26.82 | 16.43 | 1.1032 | 18.12 | 0.2701 | 18.89 | 1.2435 | 1.1217 | 7 | 5 |
| 1778 | 1986/07/24.02 | 8.33 | 1.1786 | 9.82 | 0.1073 | 10.21 | 1.3200 | 1.1733 | 9 | 6 |
| 1779 | 1986/08/20.25 | 3.67 | 1.0909 | 4.00 | 0.0000 | 4.89 | 1.8182 | 1.0909 | 6 | 2 |
| 1780 | 1986/09/16.51 | 10.80 | 1.0583 | 11.43 | 0.0354 | 11.42 | 1.0556 | 1.0556 | 5 | 2 |
| 1781 | 1986/10/13.79 | 28.00 | 1.3635 | 38.18 | 0.3098 | 38.70 | 1.4188 | 1.3864 | 11 | 9 |
| 1782 | 1986/11/10.08 | 4.36 | 1.0000 | 4.36 | 0.0000 | 4.94 | 1.3958 | 1.0000 | 11 | 4 |
| 1783 | 1986/12/07.40 | 4.13 | 1.2575 | 5.19 | 0.4840 | 6.08 | 1.9091 | 1.2121 | 16 | 5 |
| 1784 | 1987/01/03.73 | 7.31 | 1.0649 | 7.78 | 0.2302 | 8.14 | 1.2105 | 1.0737 | 13 | 8 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|--------|--------|-------------------|----------|--------------------|---------|-----------------------|----|----------------|
| 1785 | 1987/01/31.07 | 1.67 | 0.7333 | 1.22 | ∞ | 1.96 | 2.0667 | 0.7333 | 9 | 1 |
| 1786 | 1987/02/27.40 | 12.29 | 1.3089 | 16.08 | 0.1973 | 16.91 | 1.5116 | 1.3023 | 7 | 5 |
| 1787 | 1987/03/26.72 | 21.83 | 1.4572 | 31.82 | 0.4345 | 32.99 | 1.6183 | 1.6183 | 6 | 6 |
| 1788 | 1987/04/23.00 | 34.29 | 1.4163 | 48.56 | 0.2867 | 47.51 | 1.3250 | 1.3250 | 7 | 7 |
| 1789 | 1987/05/20.23 | 12.90 | 0.9738 | 12.56 | 0.3192 | 13.57 | 1.2093 | 0.9457 | 10 | 4 |
| 1790 | 1987/06/16.43 | 9.80 | 1.5118 | 14.82 | 0.4639 | 14.74 | 1.4898 | 1.4898 | 5 | 3 |
| 1791 | 1987/07/13.63 | 39.29 | 1.2352 | 48.53 | 0.2138 | 47.68 | 1.1709 | 1.1709 | 7 | 7 |
| 1792 | 1987/08/09.85 | 34.43 | 1.5040 | 51.78 | 0.5217 | 49.81 | 1.3320 | 1.3320 | 7 | 7 |
| 1793 | 1987/09/06.09 | 24.33 | 1.6294 | 39.65 | 0.6589 | 39.06 | 1.5571 | 1.5571 | 9 | 9 |
| 1794 | 1987/10/03.36 | 40.83 | 1.5417 | 62.95 | 0.4506 | 62.63 | 1.5184 | 1.4245 | 6 | 5 |
| 1795 | 1987/10/30.65 | 35.83 | 1.4209 | 50.92 | 0.2699 | 50.72 | 1.4047 | 1.4047 | 6 | 6 |
| 1796 | 1987/11/26.96 | 17.40 | 1.5240 | 26.52 | 0.5390 | 26.45 | 1.5115 | 1.3736 | 10 | 9 |
| 1797 | 1987/12/24.28 | 43.67 | 1.2576 | 54.91 | 0.2570 | 54.39 | 1.2214 | 1.2214 | 12 | 12 |
| 1798 | 1988/01/20.62 | 49.88 | 1.2986 | 64.77 | 0.2324 | 64.89 | 1.3058 | 1.3058 | 8 | 8 |
| 1799 | 1988/02/16.96 | 36.33 | 1.6665 | 60.55 | 0.3676 | 59.37 | 1.5688 | 1.5688 | 9 | 9 |
| 1800 | 1988/03/15.29 | 85.00 | 1.3410 | 113.99 | 0.2030 | 113.56 | 1.3259 | 1.3259 | 10 | 10 |
| 1801 | 1988/04/11.58 | 82.86 | 1.3362 | 110.71 | 0.3732 | 107.95 | 1.2362 | 1.2362 | 7 | 7 |
| 1802 | 1988/05/08.83 | 59.50 | 1.3769 | 81.93 | 0.4027 | 81.20 | 1.3403 | 1.3403 | 4 | 4 |
| 1803 | 1988/06/05.04 | 103.80 | 1.4895 | 154.61 | 0.3411 | 152.08 | 1.4162 | 1.4162 | 5 | 5 |
| 1804 | 1988/07/02.24 | 75.25 | 1.5716 | 118.26 | 0.3111 | 117.26 | 1.5316 | 1.5316 | 4 | 4 |
| 1805 | 1988/07/29.44 | 111.86 | 1.4349 | 160.50 | 0.5437 | 153.71 | 1.2529 | 1.2529 | 7 | 7 |
| 1806 | 1988/08/25.68 | 106.17 | 1.1951 | 126.88 | 0.1966 | 126.97 | 1.1978 | 1.1978 | 6 | 6 |
| 1807 | 1988/09/21.94 | 125.36 | 1.3517 | 169.46 | 0.0774 | 169.46 | 1.3517 | 1.3517 | 11 | 11 |
| 1808 | 1988/10/19.22 | 119.75 | 1.3119 | 157.10 | 0.1665 | 156.52 | 1.2975 | 1.2975 | 8 | 8 |
| 1809 | 1988/11/15.52 | 113.57 | 1.4632 | 166.18 | 0.1569 | 166.22 | 1.4642 | 1.4642 | 7 | 7 |
| 1810 | 1988/12/12.84 | 213.83 | 1.3337 | 285.19 | 0.1592 | 284.18 | 1.3196 | 1.3196 | 6 | 6 |
| 1811 | 1989/01/09.17 | 172.20 | 1.3929 | 239.85 | 0.2316 | 237.60 | 1.3537 | 1.3537 | 10 | 10 |
| 1812 | 1989/02/05.51 | 159.40 | 1.3516 | 215.45 | 0.0965 | 214.70 | 1.3375 | 1.3375 | 10 | 10 |
| 1813 | 1989/03/04.85 | 124.56 | 1.3344 | 166.21 | 0.2249 | 166.03 | 1.3301 | 1.3301 | 9 | 9 |
| 1814 | 1989/04/01.16 | 136.00 | 1.2517 | 170.23 | 0.1608 | 170.98 | 1.2684 | 1.2684 | 2 | 2 |
| 1815 | 1989/04/28.42 | 186.00 | 1.1722 | 218.03 | 0.1144 | 217.78 | 1.1682 | 1.1682 | 7 | 7 |
| 1816 | 1989/05/25.64 | 193.43 | 1.3525 | 261.61 | 0.2072 | 258.38 | 1.3024 | 1.3024 | 14 | 14 |
| 1817 | 1989/06/21.85 | 159.69 | 1.3530 | 216.06 | 0.2099 | 214.63 | 1.3260 | 1.3260 | 16 | 16 |
| 1818 | 1989/07/19.05 | 169.58 | 1.3157 | 223.12 | 0.2806 | 219.61 | 1.2536 | 1.2536 | 12 | 12 |
| 1819 | 1989/08/15.27 | 167.92 | 1.4518 | 243.79 | 0.3254 | 239.83 | 1.3811 | 1.3811 | 13 | 13 |
| 1820 | 1989/09/11.52 | 168.25 | 1.3057 | 219.69 | 0.1264 | 220.04 | 1.3120 | 1.3120 | 8 | 8 |
| 1821 | 1989/10/08.79 | 179.07 | 1.2430 | 222.58 | 0.1457 | 222.37 | 1.2393 | 1.2393 | 14 | 14 |
| 1822 | 1989/11/05.09 | 205.25 | 1.2962 | 266.04 | 0.1834 | 262.98 | 1.2515 | 1.2515 | 8 | 8 |
| 1823 | 1989/12/02.40 | 160.91 | 1.3449 | 216.40 | 0.2364 | 214.02 | 1.3006 | 1.3006 | 11 | 11 |
| 1824 | 1989/12/29.73 | 164.78 | 1.2799 | 210.90 | 0.1818 | 210.34 | 1.2697 | 1.2697 | 9 | 9 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA-TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ_2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|-----------|----------------|--------|--------|-------------------|------------|--------------------|---------|-----------------------|----|----------------|
| 1825 | 1990/01/26.06 | 114.08 | 1.3168 | 150.22 | 0.2207 | 149.40 | 1.2953 | 1.2953 | 13 | 13 |
| 1826 | 1990/02/22.40 | 192.90 | 1.1732 | 226.31 | 0.1004 | 225.38 | 1.1586 | 1.1586 | 10 | 10 |
| 1827 | 1990/03/21.72 | 160.31 | 1.2634 | 202.54 | 0.1452 | 202.42 | 1.2612 | 1.2612 | 16 | 16 |
| 1828 | 1990/04/18.01 | 153.13 | 1.1686 | 178.95 | 0.1970 | 177.50 | 1.1402 | 1.1402 | 15 | 15 |
| 1829 | 1990/05/15.25 | 145.75 | 1.2082 | 176.09 | 0.0953 | 175.20 | 1.1898 | 1.1898 | 12 | 12 |
| 1830 | 1990/06/11.45 | 155.82 | 1.2177 | 189.73 | 0.1032 | 189.19 | 1.2071 | 1.2071 | 11 | 11 |
| 1831 | 1990/07/08.65 | 137.07 | 1.2026 | 164.84 | 0.1569 | 164.27 | 1.1902 | 1.1902 | 15 | 15 |
| 1832 | 1990/08/04.86 | 203.75 | 1.2853 | 261.88 | 0.1143 | 261.48 | 1.2793 | 1.2793 | 12 | 12 |
| 1833 | 1990/09/01.10 | 121.93 | 1.3768 | 167.87 | 0.1857 | 167.56 | 1.3691 | 1.3691 | 15 | 15 |
| 1834 | 1990/09/28.37 | 167.20 | 1.2519 | 209.31 | 0.1428 | 209.34 | 1.2524 | 1.2524 | 10 | 10 |
| 1835 | 1990/10/25.66 | 129.00 | 1.3132 | 169.41 | 0.1559 | 169.03 | 1.3044 | 1.3044 | 11 | 11 |
| 1836 | 1990/11/21.96 | 144.17 | 1.3318 | 192.00 | 0.1983 | 191.94 | 1.3306 | 1.3306 | 12 | 12 |
| 1837 | 1990/12/19.28 | 120.50 | 1.2836 | 154.68 | 0.2038 | 153.79 | 1.2614 | 1.2614 | 8 | 8 |
| 1838 | 1991/01/15.62 | 179.07 | 1.3308 | 238.31 | 0.1926 | 236.71 | 1.3039 | 1.3039 | 14 | 14 |
| 1839 | 1991/02/11.96 | 196.42 | 1.2222 | 240.06 | 0.2028 | 237.58 | 1.1844 | 1.1844 | 19 | 19 |
| 1840 | 1991/03/11.29 | 190.82 | 1.2120 | 231.27 | 0.1443 | 230.09 | 1.1934 | 1.1934 | 11 | 11 |
| 1841 | 1991/04/07.59 | 164.42 | 1.2740 | 209.46 | 0.2949 | 210.00 | 1.2838 | 1.2838 | 12 | 12 |
| 1842 | 1991/05/04.84 | 146.13 | 1.2173 | 177.89 | 0.1618 | 176.99 | 1.1989 | 1.1989 | 15 | 15 |
| 1843 | 1991/06/01.06 | 179.07 | 1.2953 | 231.95 | 0.1490 | 231.20 | 1.2828 | 1.2828 | 14 | 14 |
| 1844 | 1991/06/28.26 | 214.73 | 1.1840 | 254.24 | 0.1774 | 251.80 | 1.1499 | 1.1499 | 11 | 11 |
| 1845 | 1991/07/25.46 | 192.80 | 1.1628 | 224.18 | 0.1136 | 223.48 | 1.1518 | 1.1518 | 15 | 15 |
| 1846 | 1991/08/21.69 | 171.25 | 1.3630 | 233.41 | 0.1476 | 230.83 | 1.3178 | 1.3178 | 12 | 12 |
| 1847 | 1991/09/17.95 | 145.00 | 1.3142 | 190.56 | 0.2194 | 189.71 | 1.2966 | 1.2966 | 14 | 14 |
| 1848 | 1991/10/15.23 | 138.55 | 1.4060 | 194.80 | 0.4780 | 188.50 | 1.2697 | 1.2697 | 11 | 11 |
| 1849 | 1991/11/11.53 | 116.42 | 1.3347 | 155.38 | 0.2249 | 153.67 | 1.2906 | 1.2906 | 12 | 12 |
| 1850 | 1991/12/08.84 | 182.00 | 1.2714 | 231.39 | 0.1939 | 229.29 | 1.2367 | 1.2367 | 12 | 12 |
| 1851 | 1992/01/05.17 | 164.27 | 1.2544 | 206.06 | 0.0943 | 206.44 | 1.2612 | 1.2612 | 11 | 11 |
| 1852 | 1992/02/01.51 | 155.00 | 1.4789 | 229.23 | 0.2808 | 229.21 | 1.4785 | 1.4785 | 6 | 6 |
| 1853 | 1992/02/28.85 | 113.67 | 1.4345 | 163.05 | 0.3791 | 159.70 | 1.3460 | 1.3460 | 3 | 3 |
| 1854 | 1992/03/27.16 | 108.13 | 1.3146 | 142.15 | 0.0818 | 141.90 | 1.3076 | 1.3076 | 15 | 15 |
| 1855 | 1992/04/23.43 | 101.38 | 1.1926 | 120.90 | 0.2698 | 121.93 | 1.2232 | 1.2232 | 8 | 8 |
| 1856 | 1992/05/20.67 | 58.73 | 1.7804 | 104.56 | 1.1617 | 97.31 | 1.4102 | 1.4102 | 11 | 11 |
| 1857 | 1992/06/16.87 | 77.00 | 1.2447 | 95.84 | 0.2346 | 94.87 | 1.2066 | 1.2066 | 11 | 11 |
| 1858 | 1992/07/14.07 | 89.00 | 1.3518 | 120.31 | 0.1931 | 119.68 | 1.3305 | 1.3305 | 12 | 12 |
| 1859 | 1992/08/10.28 | 47.08 | 1.5172 | 71.44 | 0.4207 | 70.21 | 1.4389 | 1.4389 | 12 | 12 |
| 1860 | 1992/09/06.53 | 72.53 | 1.3887 | 100.72 | 0.2307 | 100.37 | 1.3741 | 1.3741 | 15 | 15 |
| 1861 | 1992/10/03.80 | 107.29 | 1.3403 | 143.80 | 0.2769 | 141.70 | 1.2816 | 1.2816 | 14 | 14 |
| 1862 | 1992/10/31.09 | 101.33 | 1.3255 | 134.31 | 0.1490 | 133.51 | 1.3015 | 1.3015 | 9 | 9 |
| 1863 | 1992/11/27.40 | 98.80 | 1.2987 | 128.31 | 0.3107 | 125.87 | 1.2247 | 1.2247 | 10 | 10 |
| 1864 | 1992/12/24.72 | 79.25 | 1.3435 | 106.47 | 0.1918 | 106.17 | 1.3323 | 1.3323 | 12 | 12 |

CORRECTED VERSION 2 WOLF NUMBERS for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|-------|--------|-------------------|------------|--------------------|---------|-----------------------|----|----------------|
| 1865 | 1993/01/21.06 | 70.83 | 1.3225 | 93.68 | 0.2668 | <i>91.92</i> | 1.2482 | 1.2482 | 12 | 12 |
| 1866 | 1993/02/17.40 | 97.75 | 1.2894 | 126.04 | 0.1551 | <i>125.11</i> | 1.2609 | 1.2609 | 12 | 12 |
| 1867 | 1993/03/16.73 | 79.60 | 1.2767 | 101.63 | 0.1657 | <i>101.33</i> | 1.2655 | 1.2655 | 15 | 15 |
| 1868 | 1993/04/13.02 | 57.12 | 1.4308 | 81.74 | 0.3557 | <i>80.57</i> | 1.3698 | 1.3698 | 16 | 16 |
| 1869 | 1993/05/10.27 | 45.50 | 1.3378 | 60.87 | 0.4730 | <i>60.21</i> | 1.2945 | 1.2945 | 10 | 10 |
| 1870 | 1993/06/06.48 | 47.67 | 1.3696 | 65.29 | 0.2274 | <i>65.81</i> | 1.4028 | 1.3720 | 15 | 14 |
| 1871 | 1993/07/03.67 | 50.80 | 1.4627 | 74.31 | 0.1759 | <i>74.00</i> | 1.4449 | 1.4449 | 10 | 10 |
| 1872 | 1993/07/30.88 | 46.39 | 1.3398 | 62.15 | 0.2313 | <i>61.92</i> | 1.3246 | 1.3246 | 18 | 18 |
| 1873 | 1993/08/27.12 | 19.80 | 1.3252 | 26.24 | 0.5547 | <i>26.49</i> | 1.3636 | 1.2088 | 15 | 12 |
| 1874 | 1993/09/23.38 | 54.17 | 1.2956 | 70.18 | 0.4589 | <i>69.73</i> | 1.2708 | 1.2708 | 12 | 12 |
| 1875 | 1993/10/20.66 | 32.75 | 1.5975 | 52.32 | 0.6037 | <i>50.86</i> | 1.4637 | 1.4637 | 16 | 16 |
| 1876 | 1993/11/16.97 | 57.82 | 1.2567 | 72.67 | 0.2940 | <i>72.05</i> | 1.2248 | 1.1923 | 17 | 16 |
| 1877 | 1993/12/14.28 | 74.62 | 1.3947 | 104.07 | 0.3345 | <i>103.68</i> | 1.3794 | 1.3794 | 13 | 13 |
| 1878 | 1994/01/10.61 | 48.40 | 1.2703 | 61.48 | 0.2004 | <i>61.17</i> | 1.2507 | 1.2507 | 15 | 15 |
| 1879 | 1994/02/06.96 | 59.67 | 1.0089 | 60.20 | 0.2535 | <i>60.52</i> | 1.0251 | 1.0251 | 12 | 12 |
| 1880 | 1994/03/06.29 | 39.55 | 1.0508 | 41.56 | 0.3413 | <i>41.07</i> | 1.0139 | 1.0139 | 20 | 20 |
| 1881 | 1994/04/02.60 | 24.33 | 1.4763 | 35.92 | 0.4925 | <i>33.97</i> | 1.2356 | 1.3187 | 15 | 11 |
| 1882 | 1994/04/29.86 | 31.65 | 1.0790 | 34.15 | 0.2629 | <i>34.45</i> | 1.1078 | 1.0799 | 17 | 15 |
| 1883 | 1994/05/27.08 | 16.35 | 1.2974 | 21.22 | 0.4666 | <i>20.79</i> | 1.2194 | 1.2697 | 17 | 7 |
| 1884 | 1994/06/23.28 | 40.50 | 1.4288 | 57.87 | 0.4252 | <i>57.56</i> | 1.4059 | 1.3441 | 16 | 15 |
| 1885 | 1994/07/20.48 | 22.41 | 1.2857 | 28.81 | 0.4594 | <i>28.50</i> | 1.2441 | 1.1995 | 17 | 16 |
| 1886 | 1994/08/16.71 | 36.06 | 1.3671 | 49.29 | 0.4584 | <i>48.25</i> | 1.2804 | 1.2804 | 18 | 18 |
| 1887 | 1994/09/12.96 | 24.38 | 1.2566 | 30.63 | 0.4317 | <i>30.59</i> | 1.2513 | 1.1590 | 16 | 13 |
| 1888 | 1994/10/10.24 | 54.44 | 1.2984 | 70.68 | 0.2334 | <i>70.14</i> | 1.2687 | 1.2687 | 16 | 16 |
| 1889 | 1994/11/06.53 | 16.47 | 1.3130 | 21.63 | 0.3533 | <i>22.79</i> | 1.5250 | 1.2429 | 17 | 13 |
| 1890 | 1994/12/03.84 | 28.95 | 1.1890 | 34.42 | 0.2899 | <i>34.24</i> | 1.1709 | 1.1709 | 19 | 19 |
| 1891 | 1994/12/31.17 | 11.27 | 1.2348 | 13.91 | 0.3570 | <i>16.34</i> | 1.8817 | 1.2485 | 15 | 7 |
| 1892 | 1995/01/27.51 | 32.64 | 1.5153 | 49.45 | 0.4962 | <i>48.09</i> | 1.3900 | 1.3900 | 11 | 11 |
| 1893 | 1995/02/23.85 | 33.78 | 1.4251 | 48.14 | 0.3684 | <i>48.04</i> | 1.4157 | 1.3539 | 23 | 20 |
| 1894 | 1995/03/23.17 | 34.05 | 1.0908 | 37.14 | 0.1620 | <i>37.69</i> | 1.1395 | 1.1175 | 20 | 17 |
| 1895 | 1995/04/19.45 | 12.77 | 0.9985 | 12.75 | 0.1515 | <i>13.24</i> | 1.1145 | 0.9699 | 13 | 7 |
| 1896 | 1995/05/16.69 | 23.17 | 1.1059 | 25.62 | 0.1508 | <i>25.58</i> | 1.1007 | 1.0695 | 18 | 15 |
| 1897 | 1995/06/12.89 | 19.22 | 1.3176 | 25.33 | 0.2657 | <i>25.11</i> | 1.2832 | 1.2695 | 18 | 16 |
| 1898 | 1995/07/10.09 | 12.29 | 1.2422 | 15.26 | 0.5075 | <i>15.53</i> | 1.3081 | 1.1801 | 14 | 9 |
| 1899 | 1995/08/06.30 | 12.67 | 1.0296 | 13.04 | 0.2216 | <i>14.58</i> | 1.3947 | 0.9947 | 15 | 6 |
| 1900 | 1995/09/02.54 | 8.87 | 1.0936 | 9.70 | 0.1462 | <i>10.80</i> | 1.4662 | 1.1203 | 15 | 7 |
| 1901 | 1995/09/29.81 | 30.17 | 1.1192 | 33.76 | 0.2474 | <i>34.04</i> | 1.1464 | 1.1160 | 12 | 9 |
| 1902 | 1995/10/27.10 | 14.36 | 1.1963 | 17.18 | 0.5582 | <i>16.66</i> | 1.0896 | 1.1508 | 14 | 10 |
| 1903 | 1995/11/23.40 | 9.21 | 1.3821 | 12.74 | 0.3823 | <i>12.63</i> | 1.3488 | 1.3488 | 14 | 9 |
| 1904 | 1995/12/20.72 | 15.69 | 1.1850 | 18.60 | 0.2475 | <i>18.65</i> | 1.1961 | 1.1225 | 13 | 7 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|--------|--------|-------------------|------------|--------------------|----------|-----------------------|----|----------------|
| 1905 | 1996/01/17.06 | 6.31 | 1.0795 | 6.81 | 0.2810 | 6.77 | 1.0594 | 1.0778 | 16 | 8 |
| 1906 | 1996/02/13.40 | 6.43 | 1.0936 | 7.03 | 0.4317 | 7.92 | 1.5111 | 0.9556 | 14 | 5 |
| 1907 | 1996/03/11.73 | 11.94 | 1.1229 | 13.41 | 0.2840 | 13.33 | 1.1023 | 1.0495 | 18 | 11 |
| 1908 | 1996/04/08.03 | 2.93 | 1.1026 | 3.23 | 0.1776 | 3.75 | 1.6341 | 1.0976 | 14 | 3 |
| 1909 | 1996/05/05.28 | 8.47 | 1.1353 | 9.61 | 0.1290 | 9.63 | 1.1417 | 1.1417 | 15 | 8 |
| 1910 | 1996/06/01.50 | 10.23 | 1.0165 | 10.40 | 0.2104 | 11.60 | 1.3684 | 1.0000 | 13 | 5 |
| 1911 | 1996/06/28.70 | 13.80 | 1.0728 | 14.81 | 0.2977 | 13.44 | 0.7754 | 1.0388 | 10 | 5 |
| 1912 | 1996/07/25.90 | 20.25 | 0.9912 | 20.07 | 0.2783 | 20.05 | 0.9877 | 0.9506 | 16 | 15 |
| 1913 | 1996/08/22.13 | 9.42 | 1.1524 | 10.85 | 0.3956 | 10.18 | 0.9381 | 1.0392 | 12 | 6 |
| 1914 | 1996/09/18.39 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 14 | 0 |
| 1915 | 1996/10/15.67 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 17 | 0 |
| 1916 | 1996/11/11.97 | 20.44 | 1.2909 | 26.38 | 0.2078 | 26.48 | 1.3058 | 1.3058 | 16 | 12 |
| 1917 | 1996/12/09.28 | 13.08 | 1.0976 | 14.35 | 0.1418 | 14.67 | 1.1706 | 1.0941 | 13 | 8 |
| 1918 | 1997/01/05.61 | 5.29 | 1.1062 | 5.86 | 0.3289 | 6.65 | 1.5556 | 1.1000 | 17 | 7 |
| 1919 | 1997/02/01.95 | 7.60 | 1.4688 | 11.16 | 0.4604 | 11.18 | 1.4737 | 1.3158 | 10 | 3 |
| 1920 | 1997/03/01.29 | 10.09 | 1.4440 | 14.57 | 0.6190 | 14.96 | 1.5586 | 1.4054 | 11 | 8 |
| 1921 | 1997/03/28.60 | 22.85 | 1.2525 | 28.62 | 0.3462 | 28.41 | 1.2254 | 1.1904 | 20 | 17 |
| 1922 | 1997/04/24.87 | 9.75 | 1.1710 | 11.42 | 0.1588 | 11.69 | 1.2564 | 1.1604 | 12 | 8 |
| 1923 | 1997/05/22.10 | 19.38 | 1.4300 | 27.72 | 0.8915 | 26.97 | 1.3135 | 1.3135 | 13 | 13 |
| 1924 | 1997/06/18.31 | 9.50 | 1.0302 | 9.79 | 0.2727 | 10.30 | 1.1930 | 0.9766 | 18 | 11 |
| 1925 | 1997/07/15.50 | 19.60 | 1.5153 | 29.70 | 0.8551 | 28.60 | 1.3469 | 1.2993 | 15 | 11 |
| 1926 | 1997/08/11.72 | 34.78 | 1.2266 | 42.66 | 0.4130 | 42.27 | 1.1933 | 1.1725 | 18 | 16 |
| 1927 | 1997/09/07.97 | 40.60 | 1.4299 | 58.05 | 0.3321 | 56.93 | 1.3465 | 1.3465 | 15 | 15 |
| 1928 | 1997/10/05.24 | 30.06 | 1.1948 | 35.92 | 0.2313 | 35.90 | 1.1933 | 1.1933 | 16 | 16 |
| 1929 | 1997/11/01.54 | 38.64 | 1.3059 | 50.46 | 0.3364 | 50.12 | 1.2791 | 1.2791 | 14 | 14 |
| 1930 | 1997/11/28.84 | 48.20 | 1.3186 | 63.56 | 0.2613 | 62.94 | 1.2801 | 1.2801 | 10 | 10 |
| 1931 | 1997/12/26.17 | 28.00 | 1.2635 | 35.38 | 0.3612 | 34.98 | 1.2210 | 1.2188 | 16 | 13 |
| 1932 | 1998/01/22.50 | 35.64 | 1.3758 | 49.04 | 0.3283 | 48.93 | 1.3667 | 1.3667 | 14 | 14 |
| 1933 | 1988/02/18.85 | 58.54 | 1.2087 | 70.75 | 0.3151 | 68.84 | 1.1104 | 1.1104 | 13 | 13 |
| 1934 | 1998/03/18.17 | 70.27 | 1.3074 | 91.87 | 0.2514 | 91.16 | 1.2770 | 1.2770 | 15 | 15 |
| 1935 | 1998/04/14.46 | 51.58 | 1.4950 | 77.12 | 0.5962 | 73.80 | 1.3021 | 1.3021 | 12 | 12 |
| 1936 | 1998/05/11.70 | 55.25 | 1.3228 | 73.09 | 0.2519 | 73.08 | 1.3228 | 1.3228 | 12 | 12 |
| 1937 | 1998/06/07.91 | 77.78 | 1.2549 | 97.60 | 0.1651 | 97.29 | 1.2429 | 1.2429 | 9 | 9 |
| 1938 | 1998/07/05.11 | 71.43 | 1.4125 | 100.89 | 0.2570 | 100.12 | 1.3800 | 1.3800 | 7 | 7 |
| 1939 | 1998/08/01.32 | 95.62 | 1.2407 | 118.63 | 0.1413 | 118.50 | 1.2365 | 1.2365 | 13 | 13 |
| 1940 | 1998/08/28.56 | 107.59 | 1.2833 | 138.07 | 0.1883 | 137.97 | 1.2805 | 1.2805 | 17 | 17 |
| 1941 | 1998/09/24.82 | 61.78 | 1.4312 | 88.42 | 0.4254 | 85.76 | 1.3022 | 1.3022 | 9 | 9 |
| 1942 | 1998/10/22.10 | 71.79 | 1.2991 | 93.26 | 0.2751 | 91.89 | 1.2418 | 1.2418 | 14 | 14 |
| 1943 | 1998/11/18.41 | 87.80 | 1.2502 | 109.77 | 0.2018 | 110.71 | 1.2825 | 1.2825 | 10 | 10 |
| 1944 | 1998/12/15.72 | 68.69 | 1.4875 | 102.18 | 0.3473 | 100.74 | 1.4244 | 1.4244 | 13 | 13 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|--------|--------|-------------------|------------|--------------------|---------|-----------------------|----|----------------|
| 1945 | 1999/01/12.06 | 58.40 | 1.2968 | 75.73 | 0.2145 | 74.79 | 1.2483 | 1.2483 | 10 | 10 |
| 1946 | 1999/02/08.40 | 91.86 | 1.3318 | 122.34 | 0.2383 | 122.75 | 1.3453 | 1.3453 | 7 | 7 |
| 1947 | 1999/03/07.73 | 83.43 | 1.3006 | 108.51 | 0.1616 | 108.03 | 1.2834 | 1.2834 | 14 | 14 |
| 1948 | 1999/04/04.04 | 71.36 | 1.3314 | 95.01 | 0.1901 | 95.04 | 1.3325 | 1.3325 | 11 | 11 |
| 1949 | 1999/05/01.30 | 117.43 | 1.3429 | 157.69 | 0.0976 | 157.75 | 1.3443 | 1.3443 | 14 | 14 |
| 1950 | 1999/05/28.52 | 140.54 | 1.3625 | 191.48 | 0.1767 | 190.24 | 1.3361 | 1.3361 | 13 | 13 |
| 1951 | 1999/06/24.72 | 133.86 | 1.4323 | 191.73 | 0.1511 | 190.89 | 1.4136 | 1.4136 | 14 | 14 |
| 1952 | 1999/07/21.92 | 108.86 | 1.4400 | 156.75 | 0.2149 | 154.88 | 1.3885 | 1.3885 | 14 | 14 |
| 1953 | 1999/08/18.15 | 107.57 | 1.3059 | 140.47 | 0.1940 | 139.96 | 1.2915 | 1.2915 | 14 | 14 |
| 1954 | 1999/09/14.40 | 75.87 | 1.4110 | 107.05 | 0.2103 | 106.23 | 1.3787 | 1.3787 | 15 | 15 |
| 1955 | 1999/10/11.68 | 129.08 | 1.3900 | 179.43 | 0.1758 | 178.76 | 1.3744 | 1.3744 | 12 | 12 |
| 1956 | 1999/11/07.97 | 150.27 | 1.3894 | 208.78 | 0.2714 | 207.67 | 1.3672 | 1.3672 | 11 | 11 |
| 1957 | 1999/12/05.28 | 96.45 | 1.2841 | 123.85 | 0.2211 | 122.84 | 1.2526 | 1.2526 | 11 | 11 |
| 1958 | 2000/01/01.61 | 115.42 | 1.2313 | 142.11 | 0.2202 | 141.44 | 1.2137 | 1.2137 | 12 | 12 |
| 1959 | 2000/01/28.95 | 113.75 | 1.3018 | 148.08 | 0.2165 | 147.33 | 1.2821 | 1.2821 | 12 | 12 |
| 1960 | 2000/02/25.29 | 163.25 | 1.2103 | 197.57 | 0.1236 | 196.69 | 1.1940 | 1.1940 | 12 | 12 |
| 1961 | 2000/03/23.61 | 202.78 | 1.2040 | 244.15 | 0.0798 | 243.62 | 1.1962 | 1.1962 | 9 | 9 |
| 1962 | 2000/04/19.89 | 171.45 | 1.1744 | 201.36 | 0.1155 | 199.72 | 1.1458 | 1.1458 | 11 | 11 |
| 1963 | 2000/05/17.12 | 160.90 | 1.1083 | 178.33 | 0.0759 | 177.95 | 1.1013 | 1.1013 | 10 | 10 |
| 1964 | 2000/06/13.33 | 189.25 | 1.2406 | 234.79 | 0.1813 | 232.61 | 1.2061 | 1.2061 | 8 | 8 |
| 1965 | 2000/07/10.53 | 208.23 | 1.1762 | 244.92 | 0.1211 | 243.79 | 1.1600 | 1.1600 | 13 | 13 |
| 1966 | 2000/08/06.74 | 161.38 | 1.2277 | 198.12 | 0.1154 | 197.54 | 1.2169 | 1.2169 | 16 | 16 |
| 1967 | 2000/09/02.98 | 115.54 | 1.2931 | 149.40 | 0.3863 | 145.81 | 1.1997 | 1.1997 | 13 | 13 |
| 1968 | 2000/09/30.25 | 121.58 | 1.2425 | 151.07 | 0.1877 | 150.13 | 1.2193 | 1.2193 | 12 | 12 |
| 1969 | 2000/10/27.54 | 116.00 | 1.1888 | 137.90 | 0.1673 | 137.38 | 1.1753 | 1.1753 | 9 | 9 |
| 1970 | 2000/11/23.85 | 111.18 | 1.1496 | 127.82 | 0.1528 | 126.94 | 1.1259 | 1.1259 | 11 | 11 |
| 1971 | 2000/12/21.17 | 140.62 | 1.0995 | 154.61 | 0.1419 | 153.74 | 1.0810 | 1.0810 | 13 | 13 |
| 1972 | 2001/01/17.50 | 132.36 | 1.1108 | 147.03 | 0.1278 | 146.42 | 1.0968 | 1.0968 | 11 | 11 |
| 1973 | 2001/02/13.84 | 94.50 | 1.1334 | 107.10 | 0.1556 | 106.57 | 1.1164 | 1.1164 | 16 | 16 |
| 1974 | 2001/03/13.17 | 161.56 | 1.2015 | 194.11 | 0.1093 | 194.67 | 1.2118 | 1.2118 | 18 | 18 |
| 1975 | 2001/04/09.47 | 118.25 | 1.2647 | 149.55 | 0.2522 | 147.66 | 1.2167 | 1.2167 | 8 | 8 |
| 1976 | 2001/05/06.72 | 104.36 | 1.2986 | 135.52 | 0.1829 | 134.29 | 1.2631 | 1.2631 | 11 | 11 |
| 1977 | 2001/06/02.94 | 179.93 | 1.2235 | 220.15 | 0.1293 | 219.00 | 1.2044 | 1.2044 | 14 | 14 |
| 1978 | 2001/06/30.13 | 97.93 | 1.2553 | 122.94 | 0.1971 | 122.58 | 1.2444 | 1.2444 | 15 | 15 |
| 1979 | 2001/07/27.34 | 131.86 | 1.1208 | 147.78 | 0.1136 | 146.90 | 1.1008 | 1.1008 | 14 | 14 |
| 1980 | 2001/08/23.57 | 165.64 | 1.2220 | 202.41 | 0.1464 | 202.66 | 1.2267 | 1.2267 | 11 | 11 |
| 1981 | 2001/09/19.83 | 193.12 | 1.2431 | 240.08 | 0.1340 | 240.03 | 1.2424 | 1.2424 | 16 | 16 |
| 1982 | 2001/10/17.11 | 166.70 | 1.2194 | 203.28 | 0.0771 | 202.95 | 1.2136 | 1.2136 | 10 | 10 |
| 1983 | 2001/11/13.41 | 150.70 | 1.2137 | 182.91 | 0.1530 | 181.97 | 1.1951 | 1.1951 | 10 | 10 |
| 1984 | 2001/12/10.73 | 158.85 | 1.3126 | 208.50 | 0.1870 | 207.02 | 1.2847 | 1.2847 | 13 | 13 |

CORRECTED VERSION 2 WOLF NUMBERS for Rotations 1599 - 2171 continued.

| ROTA-TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|-----------|----------------|--------|--------|-------------------|--------|--------------------|---------|-----------------------|----|----------------|
| 1985 | 2002/01/07.06 | 155.87 | 1.2053 | 187.86 | 0.1213 | <i>187.15</i> | 1.1916 | 1.1916 | 15 | 15 |
| 1986 | 2002/02/03.40 | 149.85 | 1.1391 | 170.69 | 0.1537 | <i>169.23</i> | 1.1099 | 1.1099 | 13 | 13 |
| 1987 | 2002/03/02.73 | 126.69 | 1.1222 | 142.17 | 0.1233 | <i>141.96</i> | 1.1172 | 1.1172 | 13 | 13 |
| 1988 | 2002/03/30.04 | 174.18 | 1.1374 | 198.12 | 0.0929 | <i>197.65</i> | 1.1294 | 1.1294 | 11 | 11 |
| 1989 | 2002/04/26.31 | 136.67 | 1.0852 | 148.31 | 0.1606 | <i>147.04</i> | 1.0573 | 1.0573 | 6 | 6 |
| 1990 | 2002/05/23.54 | 163.33 | 1.1330 | 185.05 | 0.1009 | <i>184.50</i> | 1.1229 | 1.1229 | 15 | 15 |
| 1991 | 2002/06/19.74 | 94.33 | 1.1934 | 112.58 | 0.1799 | <i>111.54</i> | 1.1604 | 1.1604 | 15 | 15 |
| 1992 | 2002/07/16.94 | 188.77 | 1.0769 | 203.29 | 0.1647 | <i>202.50</i> | 1.0644 | 1.0644 | 13 | 13 |
| 1993 | 2002/08/13.16 | 180.24 | 1.1261 | 202.96 | 0.0939 | <i>202.21</i> | 1.1136 | 1.1136 | 17 | 17 |
| 1994 | 2002/09/09.41 | 145.31 | 1.1062 | 160.74 | 0.1606 | <i>159.55</i> | 1.0815 | 1.0815 | 13 | 13 |
| 1995 | 2002/10/06.68 | 148.00 | 1.1108 | 164.40 | 0.1005 | <i>164.19</i> | 1.1064 | 1.1064 | 16 | 16 |
| 1996 | 2002/11/02.98 | 114.08 | 1.2004 | 136.94 | 0.1746 | <i>136.02</i> | 1.1760 | 1.1760 | 12 | 12 |
| 1997 | 2002/11/30.29 | 95.25 | 1.3794 | 131.39 | 0.2127 | <i>129.88</i> | 1.3320 | 1.3320 | 8 | 8 |
| 1998 | 2002/12/27.61 | 88.54 | 1.2478 | 110.48 | 0.3557 | <i>108.32</i> | 1.1746 | 1.1746 | 13 | 13 |
| 1999 | 2003/01/23.95 | 89.92 | 1.1448 | 102.94 | 0.2867 | <i>101.26</i> | 1.0890 | 1.0890 | 12 | 12 |
| 2000 | 2003/02/20.29 | 72.00 | 1.1590 | 83.45 | 0.1925 | <i>83.63</i> | 1.1667 | 1.1667 | 3 | 3 |
| 2001 | 2003/03/19.61 | 74.00 | 1.1487 | 85.00 | 0.1746 | <i>84.29</i> | 1.1199 | 1.1199 | 16 | 16 |
| 2002 | 2003/04/15.90 | 90.73 | 1.1433 | 103.73 | 0.1692 | <i>103.44</i> | 1.1337 | 1.1337 | 15 | 15 |
| 2003 | 2003/05/13.14 | 81.93 | 1.1193 | 91.70 | 0.1666 | <i>91.28</i> | 1.1037 | 1.1037 | 14 | 14 |
| 2004 | 2003/06/09.35 | 106.00 | 1.2240 | 129.74 | 0.3035 | <i>127.66</i> | 1.1651 | 1.1651 | 12 | 12 |
| 2005 | 2003/07/06.55 | 119.20 | 1.2511 | 149.13 | 0.2060 | <i>147.72</i> | 1.2156 | 1.2156 | 10 | 10 |
| 2006 | 2003/08/02.76 | 104.83 | 1.1970 | 125.48 | 0.1527 | <i>124.74</i> | 1.1757 | 1.1757 | 12 | 12 |
| 2007 | 2003/08/29.99 | 55.67 | 1.2020 | 66.91 | 0.2030 | <i>66.79</i> | 1.1956 | 1.1956 | 9 | 9 |
| 2008 | 2003/09/26.26 | 52.38 | 1.1934 | 62.51 | 0.2824 | <i>61.27</i> | 1.1219 | 1.1219 | 13 | 13 |
| 2009 | 2003/10/23.55 | 80.87 | 1.1475 | 92.79 | 0.4343 | <i>91.93</i> | 1.1154 | 1.1031 | 15 | 14 |
| 2010 | 2003/11/19.85 | 85.00 | 1.1898 | 101.14 | 0.2214 | <i>99.85</i> | 1.1445 | 1.1445 | 7 | 7 |
| 2011 | 2003/12/17.17 | 58.09 | 1.1827 | 68.70 | 0.1118 | <i>68.83</i> | 1.1894 | 1.1894 | 11 | 11 |
| 2012 | 2004/01/13.50 | 58.00 | 1.1998 | 69.59 | 0.2933 | <i>70.59</i> | 1.2517 | 1.1621 | 5 | 4 |
| 2013 | 2004/02/09.84 | 47.27 | 1.2636 | 59.73 | 0.2950 | <i>59.31</i> | 1.2365 | 1.2365 | 11 | 11 |
| 2014 | 2004/03/08.18 | 67.50 | 1.2484 | 84.27 | 0.1914 | <i>83.78</i> | 1.2267 | 1.2267 | 10 | 10 |
| 2015 | 2004/04/04.48 | 48.40 | 1.3027 | 63.05 | 0.3420 | <i>61.87</i> | 1.2293 | 1.2293 | 10 | 10 |
| 2016 | 2004/05/01.74 | 67.50 | 1.3950 | 94.16 | 0.1345 | <i>93.54</i> | 1.3674 | 1.3674 | 10 | 10 |
| 2017 | 2004/05/28.96 | 50.50 | 1.1979 | 60.49 | 0.2644 | <i>60.25</i> | 1.1832 | 1.1832 | 8 | 8 |
| 2018 | 2004/06/25.16 | 75.64 | 1.1279 | 85.31 | 0.1474 | <i>84.81</i> | 1.1082 | 1.1082 | 11 | 11 |
| 2019 | 2004/07/22.36 | 75.00 | 1.1948 | 89.61 | 0.1665 | <i>88.54</i> | 1.1520 | 1.1520 | 10 | 10 |
| 2020 | 2004/08/18.58 | 39.73 | 1.4467 | 57.48 | 0.4077 | <i>56.32</i> | 1.3591 | 1.3591 | 15 | 15 |
| 2021 | 2004/09/14.84 | 31.43 | 1.1601 | 36.46 | 0.3398 | <i>37.26</i> | 1.2364 | 1.2364 | 7 | 7 |
| 2022 | 2004/10/12.12 | 87.08 | 1.2041 | 104.85 | 0.1508 | <i>105.26</i> | 1.2182 | 1.2182 | 12 | 12 |
| 2023 | 2004/11/08.42 | 40.67 | 1.3415 | 54.55 | 0.3063 | <i>54.26</i> | 1.3197 | 1.3197 | 3 | 3 |
| 2024 | 2004/12/05.73 | 19.75 | 1.3438 | 26.54 | 0.4485 | <i>25.49</i> | 1.1835 | 1.1835 | 8 | 8 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|-------|--------|-------------------|------------|--------------------|----------|-----------------------|----|----------------|
| 2025 | 2005/01/02.05 | 50.27 | 1.1753 | 59.09 | 0.2121 | 58.15 | 1.1193 | 1.1193 | 11 | 11 |
| 2026 | 2005/01/29.39 | 38.30 | 1.2967 | 49.66 | 0.1918 | 48.68 | 1.2193 | 1.2193 | 10 | 10 |
| 2027 | 2005/02/25.73 | 30.87 | 1.3037 | 40.24 | 0.1661 | 40.40 | 1.3197 | 1.2981 | 15 | 13 |
| 2028 | 2005/03/25.05 | 32.38 | 1.2023 | 38.92 | 0.3314 | 38.59 | 1.1718 | 1.1429 | 16 | 15 |
| 2029 | 2005/04/21.33 | 47.11 | 1.0778 | 50.77 | 0.3288 | 51.52 | 1.1250 | 1.1250 | 9 | 9 |
| 2030 | 2005/05/18.56 | 66.29 | 1.1550 | 76.56 | 0.1549 | 75.95 | 1.1272 | 1.1272 | 7 | 7 |
| 2031 | 2005/06/14.77 | 58.86 | 0.9798 | 57.67 | 0.2333 | 58.35 | 1.0146 | 0.9733 | 7 | 5 |
| 2032 | 2005/07/11.96 | 36.20 | 1.1340 | 41.05 | 0.3239 | 42.20 | 1.2293 | 1.1906 | 10 | 7 |
| 2033 | 2005/08/08.18 | 40.92 | 1.3871 | 56.76 | 0.4417 | 55.02 | 1.2594 | 1.2594 | 13 | 13 |
| 2034 | 2005/09/04.42 | 27.00 | 1.5405 | 41.59 | 0.3546 | 40.56 | 1.4259 | 1.4259 | 6 | 6 |
| 2035 | 2005/10/01.69 | 7.33 | 1.2872 | 9.44 | 0.3543 | 9.81 | 1.4394 | 1.2576 | 9 | 5 |
| 2036 | 2005/10/28.98 | 20.36 | 1.0728 | 21.85 | 0.1225 | 22.53 | 1.1741 | 1.0670 | 11 | 8 |
| 2037 | 2005/11/25.29 | 36.00 | 1.3270 | 47.77 | 0.4597 | 45.97 | 1.1771 | 1.1771 | 8 | 8 |
| 2038 | 2005/12/22.61 | 31.54 | 1.0720 | 33.81 | 0.2562 | 33.95 | 1.0854 | 1.0585 | 13 | 12 |
| 2039 | 2006/01/18.95 | 9.50 | 0.9899 | 9.40 | 0.3822 | 9.66 | 1.0702 | 0.9912 | 12 | 7 |
| 2040 | 2006/02/15.29 | 6.38 | 0.8974 | 5.73 | 0.2269 | 6.74 | 1.3735 | 0.8675 | 13 | 5 |
| 2041 | 2006/03/14.62 | 31.38 | 1.3126 | 41.18 | 0.5222 | 39.75 | 1.1753 | 1.1753 | 8 | 8 |
| 2042 | 2006/04/10.91 | 39.08 | 1.2763 | 49.88 | 0.4020 | 49.28 | 1.2303 | 1.1812 | 12 | 11 |
| 2043 | 2006/05/08.16 | 9.33 | 2.6343 | 24.59 | 2.0599 | 22.61 | 2.0000 | 1.7500 | 6 | 2 |
| 2044 | 2006/06/04.37 | 16.27 | 1.2569 | 20.45 | 0.1330 | 21.09 | 1.3743 | 1.2737 | 11 | 8 |
| 2045 | 2006/07/01.57 | 16.08 | 1.2858 | 20.67 | 0.3064 | 20.65 | 1.2823 | 1.2823 | 13 | 11 |
| 2046 | 2006/07/28.78 | 19.20 | 1.2440 | 23.89 | 0.4325 | 23.49 | 1.1823 | 1.1823 | 10 | 10 |
| 2047 | 2006/08/25.01 | 20.22 | 1.1982 | 24.23 | 0.1178 | 24.26 | 1.2033 | 1.2033 | 9 | 8 |
| 2048 | 2006/09/21.27 | 15.29 | 1.0876 | 16.63 | 0.2025 | 17.23 | 1.2056 | 1.0841 | 7 | 5 |
| 2049 | 2006/10/18.55 | 32.57 | 1.3127 | 42.76 | 0.5327 | 41.55 | 1.2018 | 1.2018 | 7 | 7 |
| 2050 | 2006/11/14.85 | 28.45 | 1.1840 | 33.69 | 0.2489 | 33.70 | 1.1853 | 1.1853 | 11 | 10 |
| 2051 | 2006/12/12.17 | 22.78 | 1.2262 | 27.93 | 0.2722 | 27.47 | 1.1659 | 1.1659 | 9 | 7 |
| 2052 | 2007/01/08.50 | 25.56 | 1.2164 | 31.08 | 0.1375 | 30.98 | 1.2043 | 1.2043 | 9 | 9 |
| 2053 | 2007/02/04.84 | 12.15 | 1.2118 | 14.73 | 0.1211 | 14.33 | 1.1139 | 1.1973 | 13 | 9 |
| 2054 | 2007/03/04.18 | 7.30 | 0.9555 | 6.98 | 0.3261 | 7.25 | 1.0685 | 0.8904 | 10 | 4 |
| 2055 | 2007/03/31.49 | 2.38 | 0.9444 | 2.25 | 0.0786 | 2.25 | 0.9355 | 0.9355 | 13 | 2 |
| 2056 | 2007/04/27.75 | 15.00 | 1.2641 | 18.96 | 0.1929 | 20.02 | 1.4750 | 1.2833 | 8 | 7 |
| 2057 | 2007/05/24.98 | 18.30 | 1.5241 | 27.89 | 0.7625 | 27.13 | 1.3989 | 1.4186 | 10 | 5 |
| 2058 | 2007/06/21.18 | 13.30 | 1.2143 | 16.15 | 0.3425 | 15.80 | 1.1353 | 1.1353 | 10 | 8 |
| 2059 | 2007/07/18.38 | 7.92 | 1.0559 | 8.37 | 0.2151 | 8.27 | 1.0194 | 1.0000 | 13 | 7 |
| 2060 | 2007/08/14.60 | 12.29 | 0.9900 | 12.16 | 0.3056 | 11.73 | 0.8837 | 0.8837 | 7 | 5 |
| 2061 | 2007/09/10.85 | 2.57 | 1.4583 | 3.75 | 0.1768 | 3.33 | 0.9722 | 1.4583 | 14 | 2 |
| 2062 | 2007/10/08.12 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 8 | 0 |
| 2063 | 2007/11/04.42 | 2.60 | 1.2381 | 3.22 | 0.1347 | 3.65 | 1.7308 | 1.2308 | 10 | 2 |
| 2064 | 2007/12/01.73 | 7.57 | 1.3690 | 10.37 | 0.1852 | 11.15 | 1.6792 | 1.3962 | 7 | 2 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|-------|--------|-------------------|------------|--------------------|----------|-----------------------|----|----------------|
| 2065 | 2007/12/29.05 | 2.75 | 0.8788 | 2.42 | 0.0525 | 2.42 | 0.8788 | 0.8788 | 12 | 3 |
| 2066 | 2008/01/25.39 | 2.08 | 1.0714 | 2.23 | — | 1.90 | 0.6000 | 1.0714 | 12 | 1 |
| 2067 | 2008/02/21.73 | 2.09 | 1.0038 | 2.10 | 0.1232 | 2.43 | 1.4783 | 1.0000 | 11 | 2 |
| 2068 | 2008/03/20.06 | 11.25 | 0.9980 | 11.23 | 0.2204 | 11.69 | 1.1222 | 1.0222 | 8 | 2 |
| 2069 | 2008/04/16.34 | 1.57 | 0.9091 | 1.43 | — | 1.43 | 0.9091 | 0.9091 | 7 | 1 |
| 2070 | 2008/05/13.58 | 2.20 | 1.6818 | 3.70 | 0.1928 | 3.70 | 1.6818 | 1.6818 | 10 | 2 |
| 2071 | 2008/06/09.79 | 6.29 | 1.0303 | 6.48 | 0.0525 | 5.94 | 0.7727 | 1.0303 | 7 | 3 |
| 2072 | 2008/07/06.99 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 7 | 0 |
| 2073 | 2008/08/03.20 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 9 | 0 |
| 2074 | 2008/08/30.43 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 13 | 0 |
| 2075 | 2008/09/26.70 | 2.67 | 1.0833 | 2.89 | 0.0000 | 2.89 | 1.0833 | 1.0833 | 9 | 2 |
| 2076 | 2008/10/23.99 | 4.92 | 1.3125 | 6.45 | 0.1208 | 6.25 | 1.1864 | 1.3111 | 12 | 4 |
| 2077 | 2008/11/20.29 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 8 | 0 |
| 2078 | 2008/12/17.61 | 0.86 | 0.8333 | 0.71 | — | 0.71 | 0.8333 | 0.8333 | 14 | 1 |
| 2079 | 2009/01/13.94 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 12 | 0 |
| 2080 | 2009/02/10.28 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 9 | 0 |
| 2081 | 2009/03/09.62 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 16 | 0 |
| 2082 | 2009/04/05.92 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 6 | 0 |
| 2083 | 2009/05/03.18 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 10 | 0 |
| 2084 | 2009/05/30.40 | 5.27 | 1.3932 | 7.34 | 0.0281 | 8.22 | 1.8987 | 1.3924 | 15 | 5 |
| 2085 | 2009/06/26.59 | 5.33 | 1.2867 | 6.86 | 0.0636 | 6.87 | 1.2917 | 1.2917 | 9 | 3 |
| 2086 | 2009/07/23.80 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 8 | 0 |
| 2087 | 2009/08/20.02 | 0.00 | — | 0.00 | — | 0.00 | ∞ | ∞ | 11 | 0 |
| 2088 | 2009/09/16.28 | 7.00 | 1.2143 | 8.50 | — | 8.50 | 1.2143 | 1.2143 | 2 | 1 |
| 2089 | 2009/10/13.56 | 6.25 | 1.4042 | 8.78 | 0.1602 | 9.16 | 1.5867 | 1.4267 | 12 | 5 |
| 2090 | 2009/11/09.86 | 1.33 | 1.0833 | 1.44 | — | 3.30 | 5.2500 | 1.0833 | 9 | 1 |
| 2091 | 2009/12/07.17 | 11.75 | 1.2724 | 14.95 | 0.2371 | 16.63 | 1.7021 | 1.2979 | 12 | 6 |
| 2092 | 2010/01/03.49 | 13.50 | 1.1969 | 16.16 | 0.3009 | 16.69 | 1.3148 | 1.1728 | 12 | 9 |
| 2093 | 2010/01/30.83 | 24.67 | 1.2946 | 31.93 | 0.4966 | 31.33 | 1.2207 | 1.2207 | 9 | 9 |
| 2094 | 2010/02/27.17 | 12.11 | 1.6601 | 20.11 | 0.3369 | 19.44 | 1.4954 | 1.6633 | 9 | 6 |
| 2095 | 2010/03/26.49 | 13.00 | 1.3994 | 18.19 | 0.6899 | 19.20 | 1.6325 | 1.2650 | 9 | 6 |
| 2096 | 2010/04/22.76 | 1.38 | 0.8182 | 1.13 | — | 2.08 | 2.9091 | 0.8182 | 8 | 1 |
| 2097 | 2010/05/20.00 | 7.91 | 1.3611 | 10.76 | 0.5228 | 12.60 | 2.0575 | 1.3218 | 11 | 6 |
| 2098 | 2010/06/16.20 | 10.00 | 1.3766 | 13.77 | 0.4728 | 14.75 | 1.6727 | 1.4000 | 11 | 8 |
| 2099 | 2010/07/13.40 | 19.50 | 1.7033 | 33.21 | 0.5628 | 32.44 | 1.5846 | 1.5846 | 10 | 10 |
| 2100 | 2010/08/09.61 | 16.44 | 1.1953 | 19.66 | 0.4282 | 20.81 | 1.4054 | 1.2500 | 9 | 6 |
| 2101 | 2010/09/05.86 | 18.80 | 1.3569 | 25.51 | 0.3580 | 25.94 | 1.4255 | 1.4255 | 5 | 4 |
| 2102 | 2010/10/03.13 | 27.85 | 1.2012 | 33.45 | 0.1251 | 34.35 | 1.2983 | 1.2044 | 13 | 10 |
| 2103 | 2010/10/30.42 | 25.75 | 1.4472 | 37.27 | 0.4487 | 36.14 | 1.3155 | 1.3155 | 8 | 8 |
| 2104 | 2010/11/26.73 | 16.88 | 1.5484 | 26.13 | 0.4521 | 26.38 | 1.5926 | 1.4667 | 8 | 6 |

CORRECTED VERSION 2 WOLF NUMBERS for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|--------|--------|-------------------|------------|--------------------|---------|-----------------------|----|----------------|
| 2105 | 2010/12/24.05 | 21.36 | 1.6413 | 35.06 | 0.6920 | 33.44 | 1.4128 | 1.4128 | 11 | 10 |
| 2106 | 2011/01/20.39 | 31.29 | 1.4849 | 46.46 | 0.4902 | 46.16 | 1.4566 | 1.4566 | 7 | 7 |
| 2107 | 2011/02/16.73 | 48.35 | 1.6896 | 81.70 | 0.2804 | 81.31 | 1.6655 | 1.6496 | 17 | 16 |
| 2108 | 2011/03/16.06 | 38.09 | 2.0142 | 76.72 | 0.6493 | 74.97 | 1.8759 | 1.8759 | 11 | 11 |
| 2109 | 2011/04/12.35 | 38.67 | 1.5423 | 59.63 | 0.0655 | 59.53 | 1.5345 | 1.5345 | 3 | 3 |
| 2110 | 2011/05/09.60 | 33.89 | 2.3316 | 79.02 | 1.2444 | 74.01 | 1.8885 | 1.8885 | 9 | 9 |
| 2111 | 2011/06/05.81 | 26.17 | 1.6067 | 42.04 | 0.4998 | 42.42 | 1.6497 | 1.4777 | 6 | 5 |
| 2112 | 2011/07/03.01 | 42.30 | 1.5832 | 66.97 | 0.3319 | 67.18 | 1.5981 | 1.4965 | 10 | 9 |
| 2113 | 2011/07/30.21 | 36.22 | 1.5159 | 54.91 | 0.4028 | 55.42 | 1.5583 | 1.4693 | 9 | 8 |
| 2114 | 2011/08/26.44 | 59.14 | 1.4007 | 82.84 | 0.1854 | 82.85 | 1.4010 | 1.4010 | 7 | 7 |
| 2115 | 2011/09/22.71 | 71.22 | 1.8614 | 132.57 | 0.3746 | 130.05 | 1.7551 | 1.7551 | 9 | 9 |
| 2116 | 2011/10/19.99 | 80.67 | 1.6699 | 134.71 | 0.2108 | 133.69 | 1.6322 | 1.6322 | 6 | 6 |
| 2117 | 2011/11/16.29 | 88.50 | 1.5443 | 136.67 | 0.2649 | 136.36 | 1.5339 | 1.5339 | 4 | 4 |
| 2118 | 2011/12/13.61 | 70.40 | 1.4293 | 100.63 | 0.2044 | 100.35 | 1.4176 | 1.4176 | 5 | 5 |
| 2119 | 2012/01/09.94 | 71.43 | 1.5162 | 108.30 | 0.2427 | 108.63 | 1.5300 | 1.5300 | 7 | 7 |
| 2120 | 2012/02/06.28 | 31.38 | 1.5342 | 48.15 | 0.4625 | 47.48 | 1.4706 | 1.4706 | 13 | 13 |
| 2121 | 2012/03/04.62 | 65.92 | 1.5651 | 103.16 | 0.4492 | 100.89 | 1.4614 | 1.4614 | 12 | 12 |
| 2122 | 2012/03/31.92 | 62.20 | 1.8035 | 112.18 | 0.6905 | 105.79 | 1.4952 | 1.4952 | 10 | 10 |
| 2123 | 2012/04/28.19 | 61.22 | 1.5820 | 96.86 | 0.2351 | 96.35 | 1.5572 | 1.5572 | 9 | 9 |
| 2124 | 2012/05/25.41 | 75.13 | 1.5446 | 116.04 | 0.3372 | 114.44 | 1.4809 | 1.4809 | 8 | 8 |
| 2125 | 2012/06/21.61 | 69.91 | 1.3614 | 95.17 | 0.1545 | 95.63 | 1.3810 | 1.3810 | 11 | 11 |
| 2126 | 2012/07/18.82 | 78.17 | 1.4779 | 115.52 | 0.3515 | 115.35 | 1.4712 | 1.4712 | 6 | 6 |
| 2127 | 2012/08/15.04 | 52.89 | 1.3724 | 72.58 | 0.1804 | 72.80 | 1.3845 | 1.3845 | 9 | 9 |
| 2128 | 2012/09/11.29 | 49.63 | 1.5428 | 76.56 | 0.3573 | 75.33 | 1.4685 | 1.4685 | 8 | 8 |
| 2129 | 2012/10/08.56 | 58.14 | 1.4857 | 86.38 | 0.2112 | 86.02 | 1.4668 | 1.4668 | 7 | 7 |
| 2130 | 2012/11/04.86 | 62.50 | 1.4321 | 89.51 | 0.3037 | 87.84 | 1.3520 | 1.3520 | 6 | 6 |
| 2131 | 2012/12/02.17 | 44.67 | 1.2608 | 56.32 | 0.2444 | 55.38 | 1.1978 | 1.1978 | 6 | 6 |
| 2132 | 2012/12/29.49 | 80.29 | 1.2669 | 101.71 | 0.1753 | 100.62 | 1.2260 | 1.2260 | 7 | 7 |
| 2133 | 2013/01/25.83 | 50.36 | 1.3304 | 67.01 | 0.4440 | 66.12 | 1.2780 | 1.2780 | 11 | 11 |
| 2134 | 2013/02/22.17 | 48.27 | 1.7930 | 86.55 | 0.6079 | 83.40 | 1.5970 | 1.5970 | 11 | 11 |
| 2135 | 2013/03/21.49 | 61.30 | 1.2681 | 77.73 | 0.1401 | 77.42 | 1.2529 | 1.2529 | 10 | 10 |
| 2136 | 2013/04/17.78 | 95.63 | 1.3509 | 129.18 | 0.2352 | 128.66 | 1.3346 | 1.3346 | 8 | 8 |
| 2137 | 2013/05/15.02 | 54.78 | 1.5933 | 87.28 | 0.3691 | 85.37 | 1.4888 | 1.4888 | 9 | 9 |
| 2138 | 2013/06/11.22 | 70.86 | 1.3941 | 98.78 | 0.2153 | 96.85 | 1.3125 | 1.3125 | 7 | 7 |
| 2139 | 2013/07/08.42 | 60.33 | 1.4228 | 85.84 | 0.2783 | 85.45 | 1.4033 | 1.4033 | 6 | 6 |
| 2140 | 2013/08/04.63 | 58.38 | 1.4245 | 83.16 | 0.2348 | 82.48 | 1.3897 | 1.3897 | 8 | 8 |
| 2141 | 2013/08/31.87 | 43.88 | 1.4358 | 62.99 | 0.3778 | 61.58 | 1.3390 | 1.3390 | 8 | 8 |
| 2142 | 2013/09/28.14 | 73.13 | 1.4496 | 106.01 | 0.1262 | 106.25 | 1.4598 | 1.4598 | 8 | 8 |
| 2143 | 2013/10/25.43 | 104.00 | 1.3869 | 144.24 | 0.2197 | 143.63 | 1.3695 | 1.3695 | 7 | 7 |
| 2144 | 2013/11/21.73 | 76.00 | 1.5554 | 118.21 | 0.2183 | 117.62 | 1.5322 | 1.5322 | 9 | 9 |

CORRECTED **VERSION 2 WOLF NUMBERS** for Rotations 1599 - 2171 continued.

| ROTA- TION | START DATE, UT | WN | k2 | R _{GD} 2 | σ 2 | R _{GDm} 2 | I/GDSO2 | I/GDSO _k 2 | n | n _k |
|---------------|-------------------|--------|--------|-------------------|------------|--------------------|---------|-----------------------|----|----------------|
| 2145 | 2013/12/19.05 | 90.30 | 1.4574 | 131.60 | 0.2382 | <i>130.00</i> | 1.4042 | 1.4042 | 10 | 10 |
| 2146 | 2014/01/15.38 | 76.36 | 1.5383 | 117.47 | 0.5939 | <i>114.04</i> | 1.4036 | 1.4036 | 11 | 11 |
| 2147 | 2014/02/11.73 | 106.50 | 1.3575 | 144.58 | 0.2102 | <i>143.59</i> | 1.3298 | 1.3298 | 8 | 8 |
| 2148 | 2014/03/11.06 | 90.83 | 1.5327 | 139.22 | 0.4350 | <i>136.81</i> | 1.4532 | 1.4532 | 12 | 12 |
| 2149 | 2014/04/07.36 | 76.88 | 1.2585 | 96.75 | 0.2981 | <i>97.33</i> | 1.2813 | 1.2813 | 8 | 8 |
| 2150 | 2014/05/04.61 | 77.00 | 1.5325 | 118.01 | 0.2689 | <i>115.84</i> | 1.4481 | 1.4481 | 8 | 8 |
| 2151 | 2151/05/31.83 | 76.17 | 1.5249 | 116.15 | 0.3433 | <i>113.93</i> | 1.4376 | 1.4376 | 6 | 6 |
| 2152 | 2014/06/28.03 | 34.50 | 2.0873 | 72.01 | 1.7724 | <i>64.01</i> | 1.3913 | 1.4167 | 8 | 6 |
| 2153 | 2014/07/25.23 | 74.43 | 1.5518 | 115.50 | 0.3846 | <i>113.62</i> | 1.4760 | 1.4760 | 7 | 7 |
| 2154 | 2014/08/21.46 | 86.00 | 1.5467 | 133.02 | 0.4236 | <i>129.95</i> | 1.4395 | 1.4395 | 5 | 5 |
| 2155 | 2014/09/17.72 | 71.83 | 1.5147 | 108.80 | 0.2085 | <i>108.31</i> | 1.4942 | 1.4942 | 6 | 6 |
| 2156 | 2014/10/15.00 | 75.40 | 1.4961 | 112.81 | 0.2874 | <i>111.07</i> | 1.4271 | 1.4271 | 5 | 5 |
| 2157 | 2014/11/11.30 | 77.89 | 1.5802 | 123.08 | 0.2776 | <i>121.16</i> | 1.5064 | 1.5064 | 9 | 9 |
| 2158 | 2014/12/08.61 | 94.33 | 1.2451 | 117.45 | 0.1607 | <i>116.19</i> | 1.2049 | 1.2049 | 6 | 6 |
| 2159 | 2015/01/04.94 | 71.00 | 1.4074 | 99.92 | 0.3852 | <i>96.87</i> | 1.2782 | 1.2782 | 12 | 12 |
| 2160 | 2015/02/01.28 | 38.30 | 1.7412 | 66.69 | 0.6995 | <i>63.73</i> | 1.5091 | 1.5091 | 10 | 10 |
| 2161 | 2015/02/28.62 | 37.08 | 1.3814 | 51.23 | 0.6333 | <i>49.54</i> | 1.2449 | 1.2449 | 12 | 12 |
| 2162 | 2015/03/27.93 | 52.50 | 1.6410 | 86.15 | 0.3589 | <i>84.55</i> | 1.5492 | 1.5492 | 12 | 12 |
| 2163 | 2015/04/24.21 | 62.33 | 1.3472 | 83.98 | 0.3815 | <i>85.15</i> | 1.4037 | 1.4037 | 6 | 6 |
| 2164 | 2015/05/21.43 | 47.11 | 1.4922 | 70.30 | 0.6835 | <i>66.75</i> | 1.2665 | 1.2665 | 9 | 9 |
| 2165 | 2015/06/17.64 | 61.91 | 1.1459 | 70.94 | 0.3497 | <i>70.57</i> | 1.1278 | 1.1278 | 11 | 11 |
| 2166 | 2015/07/14.84 | 45.86 | 1.2362 | 56.69 | 0.1573 | <i>56.65</i> | 1.2336 | 1.2336 | 7 | 7 |
| 2167 | 2015/08/11.05 | 43.29 | 1.5793 | 68.36 | 0.2849 | <i>67.33</i> | 1.5083 | 1.5083 | 7 | 7 |
| 2168 | 2015/09/07.30 | 67.25 | 1.6868 | 113.44 | 0.1887 | <i>113.87</i> | 1.7063 | 1.7063 | 8 | 8 |
| 2169 | 2015/10/04.57 | 27.67 | 2.0578 | 56.93 | 1.1388 | <i>52.62</i> | 1.5904 | 1.5904 | 3 | 3 |
| 2170 | 2015/10/31.86 | — | — | — | — | — | — | — | 0 | 0 |
| 2171 | 2015/11/28.17 | 41.50 | 1.5512 | 64.37 | 0.3519 | <i>64.25</i> | 1.5422 | 1.5422 | 2 | 2 |

SMOOTHED VERSION 2 WOLF NUMBERS for 1973 - 2015.

The following are smoothed corrected Version 2 Wolf Numbers in two different systems. See page S4 for all smoothing formulæ.

| MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} |
|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|
| 1973 Jan | — | — | — | 1976 Jan | 7.79 | 17.76 | 16.03 | 1979 Jan | 230.54 | 181.92 | 185.67 |
| Feb | — | — | — | Feb | 5.82 | 15.58 | 15.56 | Feb | 215.63 | 191.75 | 191.62 |
| Mar | 84.00 | — | — | Mar | 23.65 | 15.43 | 16.03 | Mar | 191.23 | 199.24 | 195.75 |
| Apr | 92.23 | — | — | Apr | 33.03 | 16.18 | 16.56 | Apr | 145.90 | 203.91 | 200.26 |
| May | 50.96 | — | — | May | 13.58 | 15.99 | 16.55 | May | 205.11 | 210.25 | 207.14 |
| Jun | 28.02 | — | — | Jun | 19.10 | 15.84 | 16.46 | Jun | 216.05 | 217.85 | 214.96 |
| Jul | 28.46 | — | — | Jul | 1.20 | 17.06 | 16.78 | Jul | 228.32 | 221.93 | 221.53 |
| Aug | 41.15 | — | — | Aug | 21.02 | 18.51 | 17.35 | Aug | 224.17 | 222.78 | 227.12 |
| Sep | 81.74 | 46.56 | 45.75 | Sep | 13.20 | 18.72 | 17.67 | Sep | 265.37 | 223.40 | 231.92 |
| Oct | 40.72 | 42.46 | 42.93 | Oct | 30.16 | 17.08 | 17.44 | Oct | 239.25 | 227.85 | 235.70 |
| Nov | 41.22 | 40.52 | 41.08 | Nov | 7.19 | 16.34 | 17.38 | Nov | 263.83 | 234.16 | 237.96 |
| Dec | 26.90 | 41.17 | 40.48 | Dec | 21.76 | 17.80 | 18.09 | Dec | 232.06 | 236.89 | 238.09 |
| 1974 Jan | 40.46 | 44.19 | 40.93 | 1977 Jan | 22.32 | 20.34 | 19.36 | 1980 Jan | 241.83 | 235.47 | 236.27 |
| Feb | 32.96 | 46.52 | 41.72 | Feb | 26.08 | 22.87 | 20.74 | Feb | 224.83 | 228.59 | 231.58 |
| Mar | 23.76 | 46.18 | 42.74 | Mar | 8.29 | 26.12 | 22.75 | Mar | 196.93 | 222.63 | 226.08 |
| Apr | 54.04 | 46.06 | 44.91 | Apr | 9.19 | 29.97 | 26.07 | Apr | 247.05 | 221.97 | 222.42 |
| May | 42.64 | 46.18 | 47.45 | May | 19.54 | 33.21 | 30.48 | May | 255.31 | 220.65 | 218.98 |
| Jun | 52.07 | 46.00 | 49.49 | Jun | 48.12 | 36.57 | 35.43 | Jun | 231.37 | 219.67 | 215.44 |
| Jul | 76.67 | 45.49 | 50.43 | Jul | 33.20 | 40.58 | 40.67 | Jul | 178.94 | 217.33 | 211.91 |
| Aug | 48.86 | 44.35 | 49.83 | Aug | 49.72 | 47.62 | 47.30 | Aug | 108.34 | 212.23 | 209.29 |
| Sep | 65.95 | 43.21 | 47.80 | Sep | 62.46 | 58.46 | 55.95 | Sep | 238.19 | 210.51 | 209.31 |
| Oct | 53.56 | 40.24 | 43.76 | Oct | 73.30 | 70.26 | 65.63 | Oct | 250.71 | 210.05 | 209.68 |
| Nov | 31.33 | 36.50 | 38.37 | Nov | 41.94 | 80.80 | 75.65 | Nov | 220.53 | 206.84 | 208.78 |
| Dec | 32.43 | 33.52 | 32.79 | Dec | 67.70 | 90.16 | 86.52 | Dec | 252.03 | 200.89 | 206.51 |
| 1975 Jan | 22.87 | 30.74 | 27.61 | 1978 Jan | 72.48 | 98.35 | 98.25 | 1981 Jan | 165.59 | 199.06 | 204.37 |
| Feb | 23.00 | 28.62 | 23.58 | Feb | 144.86 | 103.91 | 109.03 | Feb | 178.78 | 205.98 | 204.38 |
| Mar | 6.53 | 25.42 | 20.34 | Mar | 149.77 | 112.15 | 118.89 | Mar | 201.54 | 209.76 | 204.00 |
| Apr | 0.00 | 21.49 | 18.09 | Apr | 150.86 | 122.86 | 128.13 | Apr | 231.37 | 205.63 | 201.82 |
| May | 6.86 | 19.69 | 17.64 | May | 130.72 | 132.67 | 136.26 | May | 194.09 | 197.86 | 198.31 |
| Jun | 16.39 | 18.40 | 18.17 | Jun | 161.63 | 141.17 | 142.71 | Jun | 149.77 | 189.06 | 194.29 |
| Jul | 45.60 | 16.71 | 18.58 | Jul | 116.34 | 150.99 | 148.44 | Jul | 216.60 | 185.07 | 191.75 |
| Aug | 28.88 | 15.36 | 18.33 | Aug | 100.10 | 160.53 | 155.10 | Aug | 236.75 | 188.26 | 190.30 |
| Sep | 9.11 | 15.36 | 17.86 | Sep | 209.76 | 165.21 | 162.17 | Sep | 200.45 | 192.49 | 188.31 |
| Oct | 16.08 | 17.45 | 17.89 | Oct | 182.91 | 166.73 | 168.11 | Oct | 189.30 | 191.44 | 185.26 |
| Nov | 25.81 | 19.10 | 17.72 | Nov | 167.97 | 169.62 | 173.26 | Nov | 95.48 | 186.15 | 182.27 |
| Dec | 6.87 | 19.50 | 17.03 | Dec | 145.50 | 174.99 | 179.12 | Dec | 165.91 | 183.21 | 181.16 |

SMOOTHED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} |
|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|
| 1982 Jan | 155.95 | 184.34 | 182.17 | 1985 Jan | 12.19 | 21.27 | 18.28 | 1988 Jan | 69.50 | 71.73 | 66.70 |
| Feb | 264.99 | 181.78 | 182.88 | Feb | 17.26 | 19.46 | 18.45 | Feb | 49.18 | 80.93 | 76.09 |
| Mar | 217.00 | 176.71 | 181.87 | Mar | 13.40 | 17.78 | 19.04 | Mar | 102.87 | 89.42 | 86.51 |
| Apr | 190.70 | 173.38 | 179.60 | Apr | 22.64 | 18.67 | 20.17 | Apr | 114.65 | 97.79 | 97.27 |
| May | 107.81 | 173.38 | 177.41 | May | 32.93 | 19.66 | 21.02 | May | 63.07 | 106.80 | 108.42 |
| Jun | *165.49 | 174.61 | 175.42 | Jun | 24.80 | 19.30 | 21.08 | Jun | 143.31 | 120.87 | 121.55 |
| Jul | 227.92 | 173.11 | 171.84 | Jul | 33.28 | 18.68 | 20.42 | Jul | 150.92 | 136.82 | 135.46 |
| Aug | 164.01 | 164.37 | 164.72 | Aug | 9.37 | 19.30 | 19.61 | Aug | 147.40 | 151.54 | 149.01 |
| Sep | 151.39 | 152.17 | 156.17 | Sep | 3.34 | 20.29 | 19.14 | Sep | 153.21 | 161.61 | 161.08 |
| Oct | 158.54 | 144.43 | 148.99 | Oct | 32.09 | 20.28 | 18.74 | Oct | 152.91 | 166.44 | 171.23 |
| Nov | 126.13 | 142.79 | 143.32 | Nov | 17.42 | 19.38 | 18.08 | Nov | 167.52 | 174.98 | 181.57 |
| Dec | 164.82 | 142.18 | 137.60 | Dec | 9.99 | 17.46 | 17.18 | Dec | 241.24 | 187.70 | 192.01 |
| | | | | | | | | | | | |
| 1983 Jan | 121.01 | 136.02 | 130.57 | 1986 Jan | 3.09 | 15.79 | 16.69 | 1989 Jan | 241.50 | 195.77 | 199.82 |
| Feb | 90.14 | 129.10 | 124.72 | Feb | 41.27 | 15.20 | 16.63 | Feb | 230.46 | 201.11 | 204.86 |
| Mar | 99.22 | 122.91 | 120.62 | Mar | 13.18 | 15.09 | 16.15 | Mar | 163.32 | 208.74 | 209.30 |
| Apr | 122.68 | 115.06 | 116.57 | Apr | 22.56 | 15.30 | 15.33 | Apr | 170.23 | 215.11 | 213.93 |
| May | 136.45 | 106.71 | 111.56 | May | 11.51 | 15.44 | 14.69 | May | 212.41 | 221.89 | 219.37 |
| Jun | 122.19 | 97.62 | 104.78 | Jun | 0.00 | 14.95 | 14.17 | Jun | 299.24 | 225.26 | 223.50 |
| Jul | 123.45 | 90.61 | 97.27 | Jul | 18.12 | 14.89 | 13.81 | Jul | 188.57 | 223.11 | 225.28 |
| Aug | 102.31 | 89.33 | 90.42 | Aug | 10.20 | 13.47 | 13.04 | Aug | 238.09 | 219.99 | 226.58 |
| Sep | 64.68 | 91.29 | 84.54 | Sep | 0.00 | 11.89 | 12.48 | Sep | 245.49 | 220.02 | 227.82 |
| Oct | 56.80 | 91.44 | 79.75 | Oct | 40.33 | 12.83 | 12.88 | Oct | 213.54 | 222.87 | 227.89 |
| Nov | 27.32 | 89.06 | 76.93 | Nov | 12.70 | 15.05 | 13.75 | Nov | 269.71 | 222.35 | 225.04 |
| Dec | 45.51 | 85.42 | 76.79 | Dec | 2.86 | 16.79 | 14.76 | Dec | 219.77 | 215.35 | 218.81 |
| | | | | | | | | | | | |
| 1984 Jan | 72.14 | 79.71 | 78.24 | 1987 Jan | 8.90 | 17.33 | 15.78 | 1990 Jan | 211.55 | 208.87 | 211.86 |
| Feb | 108.31 | 73.90 | 80.03 | Feb | 1.22 | 19.38 | 17.75 | Feb | 185.55 | 208.81 | 206.58 |
| Mar | 128.04 | 69.15 | 80.51 | Mar | 15.36 | 22.99 | 20.95 | Mar | 208.92 | 206.47 | 201.67 |
| Apr | 97.43 | 64.67 | 78.10 | Apr | 42.94 | 25.70 | 24.45 | Apr | 193.06 | 202.64 | 197.14 |
| May | 104.53 | 62.25 | 73.03 | May | 44.41 | 27.83 | 27.87 | May | 176.90 | 197.95 | 193.11 |
| Jun | 66.93 | 60.71 | 65.43 | Jun | 8.95 | 30.14 | 31.14 | Jun | 166.85 | 192.95 | 190.48 |
| Jul | 41.69 | 56.97 | 55.69 | Jul | 22.14 | 33.82 | 34.91 | Jul | 165.46 | 191.95 | 190.65 |
| Aug | 44.50 | 50.68 | 45.13 | Aug | 55.28 | 38.35 | 39.01 | Aug | 259.63 | 194.53 | 192.66 |
| Sep | 8.51 | 42.11 | 35.04 | Sep | 41.56 | 43.99 | 43.13 | Sep | 167.87 | 197.30 | 194.75 |
| Oct | 5.48 | 34.22 | 27.17 | Oct | 63.77 | 50.62 | 47.70 | Oct | 199.29 | 198.48 | 196.95 |
| Nov | 20.42 | 28.12 | 22.04 | Nov | 40.39 | 54.39 | 52.19 | Nov | 171.48 | 199.45 | 199.72 |
| Dec | 15.68 | 23.38 | 19.13 | Dec | 30.64 | 60.77 | 58.24 | Dec | 197.96 | 202.09 | 203.09 |

* interpolated value

SMOOTHED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} |
|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|
| 1991 Jan | 209.19 | 208.83 | 207.60 | 1994 Jan | 85.26 | 53.76 | 57.35 | 1997 Jan | 5.99 | 14.30 | 13.63 |
| Feb | 250.02 | 211.86 | 211.27 | Feb | 50.68 | 51.91 | 54.03 | Feb | 11.16 | 15.14 | 14.79 |
| Mar | 210.96 | 211.34 | 213.67 | Mar | 48.08 | 51.12 | 50.57 | Mar | 16.69 | 18.43 | 17.22 |
| Apr | 219.32 | 212.02 | 215.38 | Apr | 33.03 | 50.86 | 47.35 | Apr | 27.73 | 22.33 | 20.22 |
| May | 173.92 | 211.32 | 215.85 | May | 28.37 | 49.27 | 44.64 | May | 16.34 | 24.94 | 23.06 |
| Jun | 233.02 | 211.90 | 216.00 | Jun | 28.10 | 46.32 | 42.60 | Jun | 20.16 | 28.08 | 26.55 |
| Jul | 261.18 | 213.40 | 215.35 | Jul | 57.01 | 41.71 | 40.82 | Jul | 12.88 | 31.40 | 30.73 |
| Aug | 236.48 | 212.53 | 212.87 | Aug | 35.19 | 39.15 | 39.94 | Aug | 42.48 | 34.32 | 35.05 |
| Sep | 178.75 | 209.54 | 209.46 | Sep | 36.96 | 39.27 | 40.15 | Sep | 60.01 | 38.77 | 39.50 |
| Oct | 204.64 | 204.37 | 205.44 | Oct | 67.62 | 38.83 | 40.22 | Oct | 36.03 | 43.54 | 43.86 |
| Nov | 149.30 | 198.35 | 200.71 | Nov | 29.96 | 38.04 | 39.42 | Nov | 50.46 | 48.18 | 48.39 |
| Dec | 234.12 | 189.82 | 194.19 | Dec | 32.70 | 37.53 | 38.09 | Dec | 61.48 | 53.48 | 53.10 |
| 1992 Jan | 209.10 | 178.18 | 185.15 | 1995 Jan | 20.28 | 35.87 | 36.47 | 1998 Jan | 36.85 | 60.17 | 58.18 |
| Feb | 229.23 | 165.79 | 174.07 | Feb | 54.31 | 33.47 | 34.67 | Feb | 50.40 | 67.58 | 64.20 |
| Mar | 159.88 | 155.93 | 161.73 | Mar | 47.39 | 31.42 | 32.29 | Mar | 84.24 | 74.15 | 71.08 |
| Apr | 146.26 | 149.86 | 149.42 | Apr | 22.99 | 28.74 | 29.20 | Apr | 74.64 | 79.23 | 78.07 |
| May | 102.63 | 146.70 | 138.58 | May | 19.50 | 26.64 | 26.59 | May | 80.67 | 82.92 | 84.43 |
| Jun | 99.60 | 141.44 | 129.15 | Jun | 24.73 | 25.38 | 24.54 | Jun | 83.15 | 87.17 | 90.66 |
| Jul | 115.22 | 131.76 | 121.01 | Jul | 20.65 | 24.36 | 22.53 | Jul | 110.32 | 91.93 | 96.62 |
| Aug | 85.06 | 122.15 | 115.33 | Aug | 13.87 | 22.15 | 20.32 | Aug | 122.95 | 95.84 | 100.94 |
| Sep | 93.55 | 115.32 | 112.97 | Sep | 9.09 | 18.79 | 18.36 | Sep | 137.12 | 98.70 | 103.01 |
| Oct | 144.17 | 111.04 | 112.76 | Oct | 31.17 | 16.54 | 17.11 | Oct | 81.03 | 100.73 | 103.56 |
| Nov | 133.92 | 107.32 | 112.10 | Nov | 16.07 | 15.31 | 15.95 | Nov | 94.01 | 104.70 | 104.53 |
| Dec | 123.10 | 104.35 | 109.92 | Dec | 16.42 | 14.28 | 14.62 | Dec | 119.91 | 112.79 | 107.30 |
| 1993 Jan | 87.82 | 101.43 | 106.49 | 1996 Jan | 12.08 | 13.46 | 13.42 | 1999 Jan | 92.65 | 120.97 | 111.41 |
| Feb | 120.05 | 98.77 | 102.38 | Feb | 9.47 | 13.49 | 12.64 | Feb | 88.45 | 124.91 | 116.32 |
| Mar | 105.10 | 95.13 | 96.68 | Mar | 11.39 | 13.51 | 12.02 | Mar | 114.72 | 124.34 | 121.66 |
| Apr | 98.27 | 89.84 | 89.32 | Apr | 5.06 | 11.93 | 11.08 | Apr | 92.96 | 126.79 | 128.69 |
| May | 61.29 | 83.92 | 81.99 | May | 8.01 | 10.96 | 10.57 | May | 157.69 | 135.44 | 137.98 |
| Jun | 69.71 | 78.76 | 76.02 | Jun | 11.45 | 11.13 | 10.74 | Jun | 200.09 | 140.45 | 145.78 |
| Jul | 75.00 | 76.80 | 71.95 | Jul | 14.23 | 10.72 | 10.90 | Jul | 189.69 | 142.30 | 150.30 |
| Aug | 61.52 | 73.80 | 68.45 | Aug | 21.01 | 10.53 | 10.93 | Aug | 138.32 | 147.42 | 153.14 |
| Sep | 29.65 | 68.53 | 65.48 | Sep | 2.41 | 10.83 | 10.92 | Sep | 108.00 | 155.13 | 156.24 |
| Oct | 81.16 | 63.44 | 63.62 | Oct | 0.00 | 11.99 | 11.43 | Oct | 168.97 | 164.64 | 160.78 |
| Nov | 54.71 | 59.35 | 62.07 | Nov | 23.95 | 13.28 | 12.32 | Nov | 213.65 | 170.83 | 164.36 |
| Dec | 78.57 | 56.24 | 60.09 | Dec | 12.59 | 13.99 | 13.02 | Dec | 120.60 | 171.54 | 166.30 |

SMOOTHED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} |
|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|
| 2000 Jan | 136.21 | 174.48 | 170.88 | 2003 Jan | 127.74 | 129.57 | 121.83 | 2006 Jan | 19.48 | 32.11 | 29.97 |
| Feb | 167.71 | 179.99 | 178.80 | Feb | 87.78 | 125.50 | 115.43 | Feb | 3.74 | 29.62 | 28.31 |
| Mar | 220.61 | 183.88 | 186.25 | Mar | 90.63 | 117.36 | 110.16 | Mar | 19.19 | 27.11 | 27.71 |
| Apr | 215.24 | 184.75 | 190.42 | Apr | 93.92 | 109.92 | 106.86 | Apr | 52.53 | 26.70 | 27.88 |
| May | 184.14 | 180.91 | 191.21 | May | 87.26 | 104.50 | 105.25 | May | 40.40 | 27.55 | 27.63 |
| Jun | 190.50 | 178.22 | 190.87 | Jun | 126.89 | 99.64 | 104.00 | Jun | 18.75 | 26.58 | 26.63 |
| Jul | 270.04 | 179.08 | 188.65 | Jul | 144.25 | 95.74 | 101.89 | Jul | 20.32 | 25.93 | 26.19 |
| Aug | 190.18 | 177.63 | 182.02 | Aug | 124.82 | 92.52 | 98.12 | Aug | 26.02 | 27.15 | 26.45 |
| Sep | 149.40 | 173.41 | 172.88 | Sep | 60.37 | 91.00 | 93.56 | Sep | 16.47 | 27.27 | 26.15 |
| Oct | 148.58 | 169.05 | 164.57 | Oct | 102.89 | 88.96 | 88.57 | Oct | 23.98 | 24.68 | 25.00 |
| Nov | 141.75 | 164.93 | 157.83 | Nov | 58.56 | 88.01 | 83.91 | Nov | 34.66 | 21.51 | 23.66 |
| Dec | 127.99 | 163.65 | 153.36 | Dec | 73.86 | 85.53 | 79.50 | Dec | 28.35 | 20.79 | 22.77 |
| 2001 Jan | 149.51 | 157.93 | 149.90 | 2004 Jan | 67.62 | 80.28 | 75.63 | 2007 Jan | 33.99 | 20.86 | 21.71 |
| Feb | 119.48 | 150.44 | 148.24 | Feb | 70.66 | 75.64 | 73.39 | Feb | 18.47 | 19.92 | 19.98 |
| Mar | 167.59 | 153.91 | 151.37 | Mar | 71.26 | 72.91 | 72.52 | Mar | 7.36 | 18.76 | 18.05 |
| Apr | 163.69 | 160.15 | 156.60 | Apr | 64.26 | 71.75 | 72.29 | Apr | 2.25 | 17.38 | 16.23 |
| May | 136.87 | 163.21 | 161.74 | May | 94.16 | 72.30 | 72.73 | May | 14.70 | 15.18 | 14.53 |
| Jun | 206.84 | 168.25 | 167.51 | Jun | 60.49 | 71.49 | 72.61 | Jun | 27.12 | 13.03 | 12.94 |
| Jul | 116.48 | 173.69 | 173.45 | Jul | 84.63 | 69.04 | 71.39 | Jul | 13.68 | 10.88 | 11.26 |
| Aug | 163.97 | 177.75 | 179.63 | Aug | 73.00 | 67.49 | 69.66 | Aug | 9.96 | 8.90 | 9.63 |
| Sep | 258.97 | 178.96 | 184.22 | Sep | 46.78 | 65.07 | 67.25 | Sep | 4.69 | 8.31 | 8.45 |
| Oct | 188.78 | 178.74 | 185.95 | Oct | 88.46 | 62.71 | 64.48 | Oct | 2.69 | 8.30 | 7.47 |
| Nov | 174.90 | 181.45 | 186.86 | Nov | 86.39 | 60.39 | 60.98 | Nov | 3.22 | 7.76 | 6.43 |
| Dec | 215.77 | 180.66 | 185.98 | Dec | 26.54 | 59.19 | 57.57 | Dec | 8.06 | 6.39 | 5.38 |
| 2002 Jan | 192.48 | 180.60 | 183.80 | 2005 Jan | 56.05 | 57.56 | 54.79 | 2008 Jan | 2.76 | 4.90 | 4.57 |
| Feb | 173.93 | 184.20 | 181.21 | Feb | 44.94 | 55.41 | 52.66 | Feb | 2.15 | 3.91 | 4.09 |
| Mar | 142.17 | 182.43 | 177.71 | Mar | 39.13 | 54.70 | 51.48 | Mar | 9.45 | 3.30 | 3.72 |
| Apr | 183.77 | 178.01 | 175.16 | Apr | 39.62 | 51.16 | 50.03 | Apr | 0.00 | 3.09 | 3.37 |
| May | 181.73 | 175.01 | 173.29 | May | 63.07 | 45.47 | 48.23 | May | 3.92 | 3.19 | 3.07 |
| Jun | 143.19 | 169.11 | 170.25 | Jun | 62.75 | 44.36 | 47.33 | Jun | 5.04 | 2.97 | 2.73 |
| Jul | 178.62 | 161.89 | 166.82 | Jul | 43.23 | 44.17 | 46.13 | Jul | 0.00 | 2.55 | 2.34 |
| Aug | 188.20 | 155.60 | 162.83 | Aug | 63.00 | 40.93 | 43.44 | Aug | 0.00 | 2.37 | 2.05 |
| Sep | 192.15 | 149.87 | 156.81 | Sep | 39.70 | 38.38 | 39.95 | Sep | 0.00 | 1.89 | 1.77 |
| Oct | 149.72 | 143.97 | 148.45 | Oct | 10.64 | 38.09 | 36.77 | Oct | 2.36 | 1.50 | 1.60 |
| Nov | 141.83 | 136.29 | 138.56 | Nov | 27.64 | 37.68 | 34.44 | Nov | 5.96 | 1.33 | 1.44 |
| Dec | 107.26 | 131.68 | 129.46 | Dec | 58.52 | 34.90 | 32.20 | Dec | 0.00 | 1.29 | 1.28 |

SMOOTHED VERSION 2 WOLF NUMBERS for 1973 - 2015 continued.

| MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} | MONTH | R _{GD2} | S ^W | S ^{B13} |
|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|----------|------------------|----------------|------------------|
| 2009 Jan | 0.67 | 1.62 | 1.32 | 2012 Jan | 108.04 | 99.82 | 102.47 | 2015 Jan | 100.74 | 93.82 | 93.71 |
| Feb | 0.00 | 1.83 | 1.43 | Feb | 46.16 | 102.97 | 101.52 | Feb | 67.69 | 91.32 | 87.51 |
| Mar | 0.00 | 1.91 | 1.55 | Mar | 99.74 | 103.77 | 100.32 | Mar | 48.66 | 87.30 | 82.26 |
| Apr | 0.00 | 2.25 | 1.80 | Apr | 112.18 | 101.03 | 98.32 | Apr | 83.52 | 84.01 | 79.09 |
| May | 0.00 | 2.37 | 2.17 | May | 97.03 | 96.31 | 95.83 | May | 74.03 | | |
| Jun | 7.86 | 2.78 | 2.74 | Jun | 91.75 | 91.53 | 93.69 | Jun | 63.21 | | |
| Jul | 5.15 | 3.96 | 3.56 | Jul | 108.51 | 88.99 | 92.24 | Jul | 76.62 | | |
| Aug | 0.00 | 5.86 | 4.77 | Aug | 92.14 | 89.44 | 91.04 | Aug | 75.44 | | |
| Sep | 1.89 | 8.13 | 6.52 | Sep | 86.37 | 88.98 | 88.79 | Sep | 105.75 | | |
| Oct | 8.49 | 9.52 | 8.39 | Oct | 78.19 | 88.33 | 86.50 | Oct | 56.93 | | |
| Nov | 2.89 | 10.13 | 10.08 | Nov | 89.51 | 90.39 | 86.00 | Nov | * 55.71 | | |
| Dec | 12.81 | 10.51 | 11.64 | Dec | 61.62 | 91.36 | 86.43 | Dec | 65.25 | | |
| 2010 Jan | 16.16 | 11.27 | 13.19 | 2013 Jan | 101.41 | 90.02 | 87.01 | | | | |
| Feb | 30.11 | 12.94 | 14.67 | Feb | 63.39 | 88.81 | 88.07 | | | | |
| Mar | 24.51 | 15.13 | 15.79 | Mar | 71.51 | 87.31 | 89.54 | | | | |
| Apr | 8.79 | 17.31 | 16.67 | Apr | 124.78 | 87.92 | 91.56 | | | | |
| May | 5.82 | 19.82 | 17.94 | May | 133.85 | 91.13 | 93.42 | | | | |
| Jun | 11.11 | 22.01 | 19.67 | Jun | 78.43 | 95.40 | 94.91 | | | | |
| Jul | 20.28 | 23.32 | 21.59 | Jul | 89.46 | 99.20 | 96.59 | | | | |
| Aug | 24.79 | 25.19 | 24.02 | Aug | 82.18 | 103.32 | 99.22 | | | | |
| Sep | 29.67 | 29.31 | 27.79 | Sep | 60.38 | 109.12 | 103.36 | | | | |
| Oct | 33.09 | 34.82 | 32.80 | Oct | 118.88 | 111.02 | 107.59 | | | | |
| Nov | 38.50 | 40.18 | 38.22 | Nov | 125.90 | 109.30 | 111.25 | | | | |
| Dec | 29.84 | 44.59 | 43.51 | Dec | 127.74 | 110.23 | 115.20 | | | | |
| 2011 Jan | 30.49 | 48.17 | 48.74 | 2014 Jan | 126.47 | 111.91 | 118.32 | | | | |
| Feb | 60.74 | 51.50 | 54.00 | Feb | 137.17 | 113.60 | 120.02 | | | | |
| Mar | 92.78 | 55.86 | 58.97 | Mar | 136.79 | 119.23 | 121.28 | | | | |
| Apr | 72.67 | 62.84 | 63.90 | Apr | 105.20 | 121.83 | 120.80 | | | | |
| May | 70.48 | 71.58 | 69.42 | May | 112.14 | 120.04 | 118.95 | | | | |
| Jun | 52.34 | 79.80 | 75.63 | Jun | 122.41 | 119.42 | 117.57 | | | | |
| Jul | 64.96 | 86.62 | 82.20 | Jul | 85.89 | 118.33 | 116.55 | | | | |
| Aug | 60.09 | 89.24 | 87.95 | Aug | 126.37 | 114.37 | 115.18 | | | | |
| Sep | 99.09 | 88.92 | 92.85 | Sep | 151.20 | 107.80 | 112.35 | | | | |
| Oct | 131.21 | 90.86 | 97.78 | Oct | 90.37 | 103.22 | 108.59 | | | | |
| Nov | 149.94 | 93.61 | 101.38 | Nov | 111.54 | 100.73 | 104.63 | | | | |
| Dec | 115.85 | 96.36 | 102.75 | Dec | 127.30 | 96.68 | 99.57 | | | | |

* provisionally interpolated

