

B U L L E T I N

pro pozorování Slunce

za rok 1929

Vydává sluneční sekce ČAS ve spolupráci
s hvězdárnou Františka Pešty v Sezimově Ústí

Hvězdárna Františka Pešty
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Vážení pozorovatelé,

již dlouho jsem se chystal zpracovat sluneční protokoly pozorovatelů Slunce za období od roku 1929 do roku 1964, kdy tuto práci převzala v rámci svého celostátního úkolu hvězdárna ve Valašském Meziříčí. S panem Schmiedem jsme o tom poměrně dlouho diskutovali a snažili jsme se zorientovat v tom, kde by bylo možno dohledat příslušné pozorovací materiály.

Hlavní motivací naší snahy byla snaha sloučit všechna pozorování do jediné pozorovací řady a ukázat, že pozorování sluneční fotosféry má na území České a Slovenské republiky dlouholetou tradici. Vždyť sluneční sekce, která tato pozorování v uvedeném období organizovala je nejstarší sekcí při České astronomické společnosti. Její činnost se datuje k roku 1919 a začínala v ní celá řada významných československých astronomů. Je, ale třeba poznamenat, že nebylo právě jednoduché získat původní pozorovací materiály. Zatím bylo čerpáno zejména z archivu umístěného na hvězdárně v Praze na Petříně, kam byly protokoly pozorovatelů sluneční sekce zasílány. Čerpal jsem také ze starších čísel časopisu Říše Hvězd, kde byly počty pozorování jednotlivých pozorovatelů rovněž publikovány. Dále byly k dispozici také kopie pozorovacích protokolů z archivu p. Schmieda a to za období, kdy sluneční protokoly od pozorovatelů zpracovával. Nejhorší situace (dle doposud získaných informací) v pokrytí celého sledovaného období je v letech 1958 až 1971.

Většinou je známo, které stanice v tomto období pozorovaly i když výsledky jejich pozorování nemám momentálně k dispozici. Budu se snažit je postupně kontaktovat s žádostí o poskytnutí potřebných informací a pozorovacích materiálů.

V roce 1929 pozorovalo sluneční fotosféru 5 pozorovatelů z 5 stanic na území ČR. Celkem bylo získáno **630** zákresů sluneční fotosféry. Kresby sluneční fotosféry byly pořízeny v 286 dnech, takže pokrývají 78,4% z celkového počtu 365 dnů. Na jeden pozorovací den připadá v průměru 2,1 zákresů. Pozorovatelé zaznamenali také 1 nulový den.

Více jak 200 pozorování získali pozorovatelé na pozorovacích stanicích Praha – Petřín (225) a p. Guth Praha – Smíchov (201). Další v pořadí jsou p. Bílek – Praha (81), p. Hýbl – Krásno nad Bečvou (81) a p. Bečvář – Brandýs nad Labem (42).

Vlastislav Feik

Vysvětlivky k pozorovacím protokolům (řazeno dle čísla pozorovací stanice):

| | | | |
|-------|-----------------------------------|-------------|------------------|
| SL 01 | Praha – Petřín Štefánikova hv. | hvězdárna | Kadavý František |
| SL 02 | Praha - Vršovice | soukr. poz. | Bílek Jaroslav |
| SL 03 | Praha - Smíchov | soukr. poz. | Guth Vladimír |
| SL 04 | Krásno nad Bečvou | soukr. poz. | Hýbl Vilém |
| SL 05 | Brandýs nad Labem | soukr. poz. | Bečvář Antonín |

NIC – pozorovací stanice tento měsíc nepozorovala

Pozorovací protokol za měsíc Leden (January) a Únor (February)

| | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 | | | | | | | | | | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 |
|----|--------------|--------------|--------------|--------------|--------------|--|--|--|--|--|--|--|--|--|--------------|--------------|--------------|--------------|--------------|
| 1 | | | 88 | | | | | | | | | | | | | nic | 43 | | |
| 2 | | | | | | | | | | | | | | | | | 62 | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | 64 | | | | | | | | | | | | | | | 67 | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | 61 | 98 | | | | | | | | | | | | | | 121 | | |
| 8 | | | 99 | | | | | | | | | | | | | | 111 | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | 151 | | |
| 11 | | | | | | | | | | | | | | | | | 106 | | |
| 12 | | | | | | | | | | | | | | | | | 102 | | |
| 13 | | | | | | | | | | | | | | | | | 103 | | |
| 14 | | | | | | | | | | | | | | | | | 98 | | |
| 15 | | | 116 | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | |
| 17 | | 102 | | | | | | | | | | | | | | | | | |
| 18 | | 91 | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | 30 | | |
| 20 | | | | | | | | | | | | | | | | | 88 | | |
| 21 | | 119 | 111 | | | | | | | | | | | | | | 71 | | |
| 22 | | | 104 | | | | | | | | | | | | | | 60 | | |
| 23 | | | | | | | | | | | | | | | | | 65 | | |
| 24 | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | | | | | | | | |
| 28 | | | 28 | | | | | | | | | | | | | | | | |
| 29 | | | 16 | | | | | | | | | | | | | | 68 | | |
| 30 | | | | | | | | | | | | | | | | | | | |
| 31 | | | 31 | | | | | | | | | | | | | | | | |

Pozorovací protokol za měsíc Březen (March) a Duben (April)

| | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 | | | | | | | | | | | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 | |
|----|--------------|--------------|--------------|--------------|--------------|--|--|--|--|--|--|--|--|--|----|--------------|--------------|--------------|--------------|--------------|--|
| 1 | | nic | 69 | | | | | | | | | | | | | | | | | | |
| 2 | | | 51 | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | 37 | | 54 | | | | |
| 4 | | | 87 | | | | | | | | | | | | 33 | 70 | 19 | | | | |
| 5 | | | 87 | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | 70 | | 91 | | | | |
| 7 | | | 58 | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | 73 | | | | |
| 9 | | | 156 | | | | | | | | | | | | 37 | | | | | | |
| 10 | | | | | | | | | | | | | | | 51 | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | 180 | | | | | | | | | | | | 69 | | 88 | | | | |
| 13 | | | 105 | | | | | | | | | | | | 77 | | 86 | | | | |
| 14 | | | 86 | | | | | | | | | | | | 71 | | | | | | |
| 15 | | | 84 | | | | | | | | | | | | 81 | 140 | 82 | | | | |
| 16 | | | 81 | | | | | | | | | | | | 79 | | 80 | | | | |
| 17 | | | 47 | | | | | | | | | | | | 66 | 125 | 66 | | | | |
| 18 | | | 37 | | | | | | | | | | | | 52 | 112 | 59 | | | | |
| 19 | | | 25 | | | | | | | | | | | | 70 | 120 | 72 | | | | |
| 20 | | | 24 | | | | | | | | | | | | 76 | 135 | 74 | | | | |
| 21 | | | 30 | | | | | | | | | | | | 72 | 135 | 74 | | | | |
| 22 | | | 25 | | | | | | | | | | | | 49 | 115 | 67 | | | | |
| 23 | | | 30 | | | | | | | | | | | | 49 | | 66 | | | | |
| 24 | | | 29 | | | | | | | | | | | | 29 | | 50 | | | | |
| 25 | | | 37 | | | | | | | | | | | | 60 | 61 | 59 | | | | |
| 26 | | | 45 | | | | | | | | | | | | 49 | | 42 | | | | |
| 27 | | | 63 | | | | | | | | | | | | 51 | 80 | 45 | | | | |
| 28 | | | 34 | | | | | | | | | | | | 47 | 80 | 53 | | | | |
| 29 | | | 28 | | | | | | | | | | | | 66 | 75 | 65 | | | | |
| 30 | | | 72 | | | | | | | | | | | | 98 | 100 | 95 | | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | |

Pozorovací protokol za měsíc Květen (May) a Červen (June)

| | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 | | | | | | | | | | | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 |
|----|--------------|--------------|--------------|--------------|--------------|--|--|--|--|--|--|--|--|--|-----|--------------|--------------|--------------|--------------|--------------|
| 1 | 109 | 120 | 96 | | | | | | | | | | | | 48 | | | | | |
| 2 | 123 | 138 | 124 | | | | | | | | | | | | 48 | 51 | | | | |
| 3 | 162 | 140 | 138 | | | | | | | | | | | | | | | | | |
| 4 | 120 | 140 | 124 | | | | | | | | | | | | 69 | | | | | |
| 5 | 128 | 135 | 125 | | | | | | | | | | | | 99 | | | | | |
| 6 | 102 | 138 | 85 | | | | | | | | | | | | 124 | | | | | |
| 7 | 126 | 160 | 100 | | | | | | | | | | | | 116 | | 75 | | | |
| 8 | 128 | 160 | 119 | | | | | | | | | | | | 104 | | | | | |
| 9 | 107 | | 97 | | | | | | | | | | | | 91 | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | 130 | | 106 | | | |
| 12 | | | 83 | | | | | | | | | | | | 154 | | | | | |
| 13 | 143 | 127 | 120 | | | | | | | | | | | | 151 | | 135 | | | |
| 14 | 94 | 110 | 93 | | | | | | | | | | | | 129 | | 116 | | | |
| 15 | | | | | | | | | | | | | | | 141 | | 114 | 95 | | |
| 16 | | | | | | | | | | | | | | | 94 | | 98 | | | |
| 17 | | | | | | | | | | | | | | | 98 | | | 63 | | |
| 18 | | | | | | | | | | | | | | | 130 | | 141 | | | |
| 19 | 64 | | | | | | | | | | | | | | 124 | 90 | | | | |
| 20 | 52 | 51 | 55 | | | | | | | | | | | | 165 | | | 73 | | |
| 21 | 44 | | | | | | | | | | | | | | | | | 65 | | |
| 22 | 49 | | | | | | | | | | | | | | 174 | | 139 | | | |
| 23 | 52 | 52 | | | | | | | | | | | | | 172 | | | | | |
| 24 | 76 | 76 | | | | | | | | | | | | | 145 | | | | | |
| 25 | 105 | | 83 | | | | | | | | | | | | 151 | | | | | |
| 26 | 97 | 104 | 96 | | | | | | | | | | | | 152 | | | 45 | | |
| 27 | 84 | 83 | 86 | | | | | | | | | | | | 120 | | | 44 | | |
| 28 | 62 | 85 | 80 | | | | | | | | | | | | 109 | | | 41 | | |
| 29 | 61 | 76 | | | | | | | | | | | | | 137 | | 114 | 53 | | |
| 30 | | | | | | | | | | | | | | | 130 | | 103 | 66 | | |
| 31 | 55 | 50 | 36 | | | | | | | | | | | | | | | | | |

Pozorovací protokol za měsíc Červenec (July) a Srpen (August)

| | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 | | | | | | | | | | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 |
|----|--------------|--------------|--------------|--------------|--------------|--|--|--|--|--|--|--|--|--|--------------|--------------|--------------|--------------|--------------|
| 1 | 115 | | 112 | | | | | | | | | | | | 186 | nic | | 52 | |
| 2 | 124 | | 125 | 62 | | | | | | | | | | | 129 | | | | |
| 3 | 126 | | 130 | 69 | | | | | | | | | | | 61 | | 68 | | |
| 4 | 112 | | 97 | 55 | | | | | | | | | | | 73 | | 56 | | |
| 5 | 116 | | 87 | 47 | | | | | | | | | | | 84 | | 77 | 31 | |
| 6 | 157 | | 114 | 54 | | | | | | | | | | | 103 | | 71 | | |
| 7 | 139 | | 157 | | | | | | | | | | | | 101 | | 76 | 42 | |
| 8 | 121 | | 91 | | | | | | | | | | | | 80 | | 78 | 53 | |
| 9 | 105 | | 100 | | | | | | | | | | | | 103 | | | 65 | |
| 10 | 104 | | 100 | 57 | | | | | | | | | | | | | | 54 | |
| 11 | 126 | | 124 | 67 | | | | | | | | | | | 119 | | 104 | | |
| 12 | 89 | | 113 | 63 | | | | | | | | | | | | | 88 | 54 | |
| 13 | 151 | | | | | | | | | | | | | | 112 | | 77 | | |
| 14 | 136 | 95 | 109 | 52 | | | | | | | | | | | 167 | | 140 | 75 | |
| 15 | 175 | 140 | 137 | 61 | | | | | | | | | | | 277 | | | 77 | |
| 16 | 114 | 120 | 118 | 83 | | | | | | | | | | | 232 | | 201 | 88 | |
| 17 | 124 | | 89 | 66 | | | | | | | | | | | 230 | | 221 | 101 | |
| 18 | 114 | | | 55 | | | | | | | | | | | 203 | | 168 | 96 | |
| 19 | 105 | | 82 | 53 | | | | | | | | | | | | | | | |
| 20 | 148 | 101 | 114 | 55 | | | | | | | | | | | | | | | |
| 21 | 189 | 140 | | 67 | | | | | | | | | | | | | | | |
| 22 | 196 | 120 | 127 | 77 | | | | | | | | | | | 111 | | 98 | 44 | |
| 23 | 109 | 106 | 113 | 49 | | | | | | | | | | | 136 | | 100 | | |
| 24 | 108 | 71 | 56 | 25 | | | | | | | | | | | 109 | | 89 | 41 | |
| 25 | 65 | 51 | 53 | 39 | | | | | | | | | | | 89 | | 82 | 39 | |
| 26 | | | | | | | | | | | | | | | 75 | | 69 | | |
| 27 | 128 | | | | | | | | | | | | | | 64 | | 54 | 35 | |
| 28 | 121 | | 84 | | | | | | | | | | | | 47 | | 65 | 23 | |
| 29 | 98 | | 69 | 40 | | | | | | | | | | | 50 | | 63 | 11 | |
| 30 | 105 | | 63 | 41 | | | | | | | | | | | 55 | | 31 | 12 | |
| 31 | 117 | | 85 | 52 | | | | | | | | | | | 15 | | 14 | 0 | |

Pozorovací protokol za měsíc Zář (September) a Říjen (October)

| | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 | | | | | | | | | | | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 |
|----|--------------|--------------|--------------|--------------|--------------|--|--|--|--|--|--|--|--|--|-----|--------------|--------------|--------------|--------------|--------------|
| 1 | 17 | 0 | 16 | 0 | | | | | | | | | | | 77 | 62 | | | | 52 |
| 2 | 33 | | | 0 | | | | | | | | | | | 106 | | 89 | | | 83 |
| 3 | 38 | 36 | | 0 | | | | | | | | | | | 153 | 95 | 90 | | | 86 |
| 4 | 28 | | 24 | 0 | | | | | | | | | | | 120 | 90 | | | | 79 |
| 5 | 92 | 70 | 52 | 27 | | | | | | | | | | | 115 | 79 | 97 | | | 94 |
| 6 | 77 | | 49 | 29 | | | | | | | | | | | 141 | 101 | 123 | | | |
| 7 | 124 | 65 | 84 | 40 | | | | | | | | | | | 134 | | 114 | | | 94 |
| 8 | 117 | 66 | 76 | 55 | | | | | | | | | | | 147 | | 132 | | | 96 |
| 9 | 128 | 80 | 86 | 51 | | | | | | | | | | | 162 | | 152 | | | 110 |
| 10 | 79 | 51 | 68 | 27 | | | | | | | | | | | 119 | | | | | 120 |
| 11 | 85 | 37 | 43 | 26 | | | | | | | | | | | 137 | | | | | |
| 12 | 92 | 76 | 88 | 13 | | | | | | | | | | | 184 | | | | | 82 |
| 13 | 100 | | 62 | 0 | | | | | | | | | | | | | | | | |
| 14 | | | | 0 | | | | | | | | | | | | | | 123 | | |
| 15 | | | 58 | 12 | | | | | | | | | | | 99 | | | | | 66 |
| 16 | 90 | 48 | 70 | 12 | | | | | | | | | | | 90 | 60 | 56 | | | 51 |
| 17 | 98 | 42 | 54 | 25 | | | | | | | | | | | 84 | 40 | | | | 24 |
| 18 | 42 | 31 | 28 | 25 | | | | | | | | | | | 48 | | 30 | | | |
| 19 | 43 | 29 | 31 | 25 | | | | | | | | | | | | | | | | |
| 20 | 82 | | | 41 | | | | | | | | | | | 32 | | | | | 52 |
| 21 | 98 | | | | | | | | | | | | | | 75 | 48 | 40 | | | 23 |
| 22 | 90 | 52 | 65 | 17 | | | | | | | | | | | 27 | | | | | 13 |
| 23 | 40 | | 34 | 17 | | | | | | | | | | | 38 | | | | | 24 |
| 24 | 23 | | 22 | 16 | | | | | | | | | | | 29 | | 16 | | | 27 |
| 25 | 17 | 58 | 18 | 15 | | | | | | | | | | | 48 | | 36 | | | |
| 26 | 27 | | 39 | 14 | | | | | | | | | | | | | | | | |
| 27 | 20 | 32 | 33 | 12 | | | | | | | | | | | 116 | | | | | |
| 28 | 41 | | 36 | 14 | | | | | | | | | | | 161 | 93 | 61 | | | 109 |
| 29 | 64 | 56 | | 18 | | | | | | | | | | | | | | | | |
| 30 | 78 | | | 38 | | | | | | | | | | | 169 | | | | | 96 |
| 31 | | | | | | | | | | | | | | | | | | | | |

Pozorovací protokol za měsíc Listopad (November) a Prosinec (December)

| | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 | | | | | | | | | | | SL 0 1 | SL 0 2 | SL 0 3 | SL 0 4 | SL 0 5 |
|----|--------------|--------------|--------------|--------------|--------------|--|--|--|--|--|--|--|--|--|--|--------------|--------------|--------------|--------------|--------------|
| 1 | | | | | | | | | | | | | | | | 146 | | | | |
| 2 | | | | | | | | | | | | | | | | 243 | | | | 231 |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | 170 | | 82 | | 88 | | | | | | | | | | | 199 | | 142 | | 260 |
| 5 | 173 | | 111 | | 120 | | | | | | | | | | | 152 | | | | 210 |
| 6 | | | | | | | | | | | | | | | | | | | | |
| 7 | 111 | | 107 | | | | | | | | | | | | | 143 | | | | 99 |
| 8 | 140 | | 123 | | 118 | | | | | | | | | | | 75 | 90 | 74 | | 69 |
| 9 | | | | | | | | | | | | | | | | 110 | 90 | 90 | | 91 |
| 10 | 125 | 93 | | | | | | | | | | | | | | 115 | | | | |
| 11 | | | | | | | | | | | | | | | | 236 | | | | |
| 12 | 129 | 136 | | | 107 | | | | | | | | | | | 210 | | 179 | | 197 |
| 13 | 116 | | | | | | | | | | | | | | | 249 | | | | 255 |
| 14 | | | | | | | | | | | | | | | | 152 | | | | |
| 15 | 135 | | | | 127 | | | | | | | | | | | 220 | | | | |
| 16 | 157 | 125 | 147 | | 141 | | | | | | | | | | | | | | | |
| 17 | 131 | 114 | | | 112 | | | | | | | | | | | 334 | | | | 218 |
| 18 | 109 | 120 | | | | | | | | | | | | | | 262 | | | | |
| 19 | 71 | | | | 69 | | | | | | | | | | | 137 | | | | |
| 20 | 130 | 100 | 81 | | 92 | | | | | | | | | | | 341 | | 204 | | 231 |
| 21 | 85 | | | | | | | | | | | | | | | 275 | | 212 | | 177 |
| 22 | 67 | | | | | | | | | | | | | | | 242 | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | |
| 25 | 100 | | | | | | | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | | | | | | | | | |
| 27 | 188 | | | | | | | | | | | | | | | 95 | | | | |
| 28 | 212 | | | | 274 | | | | | | | | | | | 74 | | | | |
| 29 | 206 | | 176 | | 286 | | | | | | | | | | | 102 | | 81 | | |
| 30 | 298 | | 164 | | | | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | | | | | | | |

Počet pozorování z archivu na hvězdárně Petřín pro jednotlivé měsíce roku 1929.

| Číslo | Název stanice | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Σ |
|---------------|--------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| SL 01 | Praha – Petřín Štefánikova hvězdárna | | | | 24 | 23 | 27 | 30 | 26 | 28 | 25 | 20 | 22 | 225 |
| SL 02 | Bílek Jaroslav - Praha - Vršovice | 5 | | | 13 | 18 | 2 | 9 | | 17 | 9 | 6 | 2 | 81 |
| SL 03 | Guth Vladimír - Praha - Smíchov | 9 | 16 | 25 | 22 | 18 | 10 | 26 | 23 | 23 | 14 | 8 | 7 | 201 |
| SL 04 | Hýbl Vilém - Krásno nad Bečvou | | | | | | 9 | 23 | 20 | 29 | | | | 81 |
| SL 05 | Bečvář Antonín - Brandýs nad Labem | | | | | | | | | | 20 | 11 | 11 | 42 |
| součet | | 14 | 16 | 25 | 59 | 59 | 48 | 88 | 69 | 97 | 68 | 45 | 42 | 630 |

Počty pozorování, které nebyly v archivu, ale byly publikovány v časopise Říše Hvězd, proto byly započítány do celkové statistiky.

| Pozorovatel | 1919 - 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | Suma |
|----------------------------|-------------|------|------|------|------|------|------|------|
| Bosonohy – Kilián | | 48 | 68 | | | | | 116 |
| Brno – Link | | 89 | 72 | | | | | 161 |
| Hradec Králové – Zeman | | | | | | 158 | 76 | 234 |
| Krásno nad Bečvou – Hýbl | | | | | 73 | 134 | 81 | 288 |
| Krásno nad Bečvou – Zvonek | | | | | | | 30 | 30 |
| Praha Pankrác – Janovský | | 44 | 33 | | | | | 77 |
| Praha Smíchov – Guth | 948 | 100 | 112 | 98 | 102 | 113 | 201 | 1644 |
| Praha Smíchov – Chudoba | | 18 | 79 | 142 | 10 | | | 249 |
| Praha Trója - Šupík | 426 | 74 | 96 | | 164 | 41 | 156 | 957 |
| Praha Vršovice – Bílek | | | | 87 | 112 | 123 | 81 | 403 |
| Prostějov – Limberk | | 49 | 43 | | | | | 92 |
| neurčeno - referent | 720 | | | | 58 | | | 778 |

Vizuální pozorování sluneční fotosféry

| | do 1928 | 1929 | do 1929 |
|--|---------|------|---------|
| Počet pozorovacích stanic | 10 | 2 | 12 |
| Počet pozorování celkem | 4404 | 892 | 5296 |
| Statistické výsledky redukce | | | |
| Počet roků | | 1 | 1 |
| Počet zpracovaných pozorovacích řad | | 5 | 5 |
| Roční průměrný počet zpracovaných pozor. řad | | 5 | 5 |
| Počet redukovaných pozorování | | 630 | 630 |
| Počet pozorovaných dní | | 286 | 286 |
| Počet kalendářních dní | | 365 | 365 |
| Průměrný počet pozorovacích na 1 pozor. den | | 2,20 | 2,20 |
| Průměrný roční počet pozorovacích dnů | | 286 | 286 |
| Krytí celkového počtu kalendářních dnů | | 78,4 | 78,4 |

Výsledky redukce vizuálních pozorování za rok 1929

Výsledná řada „Česlopol“

| měsíc | n | Σ_n | n/den | R_w | R_p čSP | k | σ | σ/k | % n |
|-------------|-----|------------|-------|-------|--------------|-------|----------|------------|-------|
| I. | 12 | 14 | 1,2 | 68,9 | 77,8 | 0,873 | 0,215 | 0,246 | 38,7 |
| II. | 16 | 16 | 1,0 | 60,3 | 84,1 | 0,77 | 0,121 | 0,158 | 55,2 |
| III. | 25 | 25 | 1,0 | 50,2 | 62,8 | 0,716 | 0,174 | 0,243 | 80,6 |
| IV. | 25 | 59 | 2,4 | 52,8 | 69,8 | 0,807 | 0,286 | 0,354 | 83,3 |
| V. | 24 | 59 | 2,5 | 58,2 | 93,2 | 0,632 | 0,089 | 0,141 | 77,4 |
| VI. | 28 | 48 | 1,7 | 71,9 | 107,9 | 0,706 | 0,198 | 0,281 | 93,3 |
| VII. | 30 | 88 | 2,9 | 70,2 | 100,7 | 0,717 | 0,112 | 0,156 | 96,8 |
| VIII. | 28 | 69 | 2,5 | 65,8 | 89,6 | 0,732 | 0,156 | 0,213 | 90,3 |
| IX. | 30 | 97 | 3,2 | 34,4 | 44,5 | 0,811 | 0,264 | 0,325 | 100,0 |
| X. | 26 | 68 | 2,6 | 54,0 | 87,2 | 0,663 | 0,155 | 0,234 | 83,9 |
| XI. | 20 | 45 | 2,3 | 81,1 | 132,5 | 0,639 | 0,118 | 0,185 | 66,7 |
| XII. | 22 | 42 | 1,9 | 108,0 | 181,1 | 0,652 | 0,207 | 0,318 | 71,0 |
| Σ | 286 | 630 | | 775,8 | 1131,2 | 8,718 | 2,096 | 2,855 | |
| \emptyset | | | 2,1 | 64,7 | 94,3 | 0,727 | 0,175 | 0,238 | 78,4 |

Leden

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 77 | 1 | 88 | 0,875 |
| 2 | 71 | * | * | * |
| 3 | 69 | * | * | * |
| 4 | 71 | 1 | 64 | 1,109 |
| 5 | 48 | * | * | * |
| 6 | 42 | * | * | * |
| 7 | 61 | 2 | 80 | 0,763 |
| 8 | 78 | 1 | 99 | 0,788 |
| 9 | 85 | * | * | * |
| 10 | 79 | * | * | * |
| 11 | 44 | * | * | * |
| 12 | 82 | * | * | * |
| 13 | 82 | * | * | * |
| 14 | 96 | * | * | * |
| 15 | 77 | 1 | 116 | 0,664 |
| 16 | 113 | * | * | * |
| 17 | 90 | 1 | 102 | 0,882 |
| 18 | 89 | 1 | 91 | 0,978 |
| 19 | 77 | * | * | * |
| 20 | 92 | * | * | * |
| 21 | 77 | 2 | 115 | 0,670 |
| 22 | 69 | 1 | 104 | 0,663 |
| 23 | 102 | * | * | * |
| 24 | 74 | * | * | * |
| 25 | 69 | * | * | * |
| 26 | 65 | * | * | * |
| 27 | 55 | * | * | * |
| 28 | 20 | 1 | 28 | 0,714 |
| 29 | 22 | 1 | 16 | 1,375 |
| 30 | 29 | * | * | * |
| 31 | 31 | 1 | 31 | 1,000 |
| Σ | | 14 | 934 | |
| n | 31 | 12 | | |
| Ø | 68,9 | 1,2 | 77,8 | |
| % | 100 | 38,7 | | |
| k | | | | 0,873 |
| σ | | | | 0,215 |

Únor

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 31 | 1 | 43 | 0,721 |
| 2 | 37 | 1 | 62 | 0,597 |
| 3 | 32 | * | * | * |
| 4 | 44 | 1 | 67 | 0,657 |
| 5 | 46 | * | * | * |
| 6 | 47 | * | * | * |
| 7 | 81 | 1 | 121 | 0,669 |
| 8 | 91 | 1 | 111 | 0,820 |
| 9 | 117 | * | * | * |
| 10 | 121 | 1 | 151 | 0,801 |
| 11 | 87 | 1 | 106 | 0,821 |
| 12 | 83 | 1 | 102 | 0,814 |
| 13 | 70 | 1 | 103 | 0,680 |
| 14 | 75 | 1 | 98 | 0,765 |
| 15 | 68 | * | * | * |
| 16 | 51 | * | * | * |
| 17 | 46 | * | * | * |
| 18 | 54 | * | * | * |
| 19 | 32 | 1 | 30 | 1,067 |
| 20 | 56 | 1 | 88 | 0,636 |
| 21 | 58 | 1 | 71 | 0,817 |
| 22 | 58 | 1 | 60 | 0,967 |
| 23 | 47 | 1 | 65 | 0,723 |
| 24 | 65 | * | * | * |
| 25 | 60 | * | * | * |
| 26 | 70 | * | * | * |
| 27 | 69 | * | * | * |
| 28 | 52 | 1 | 68 | 0,765 |
| 29 | 0 | * | * | * |
| 30 | | | | |
| 31 | | | | |
| Σ | | 16 | 1346 | |
| n | 29 | 16 | | |
| Ø | 60,3 | 1 | 84,1 | |
| % | 100 | 55,2 | | |
| k | | | | 0,770 |
| σ | | | | 0,121 |

Březen

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 44 | 1 | 69 | 0,638 |
| 2 | 47 | 1 | 51 | 0,922 |
| 3 | 59 | * | * | * |
| 4 | 66 | 1 | 87 | 0,759 |
| 5 | 52 | 1 | 87 | 0,598 |
| 6 | 73 | * | * | * |
| 7 | 73 | 1 | 58 | 1,259 |
| 8 | 88 | * | * | * |
| 9 | 103 | 1 | 156 | 0,660 |
| 10 | 91 | * | * | * |
| 11 | 92 | * | * | * |
| 12 | 94 | 1 | 180 | 0,522 |
| 13 | 77 | 1 | 105 | 0,733 |
| 14 | 66 | 1 | 86 | 0,767 |
| 15 | 65 | 1 | 84 | 0,774 |
| 16 | 58 | 1 | 81 | 0,716 |
| 17 | 40 | 1 | 47 | 0,851 |
| 18 | 24 | 1 | 37 | 0,649 |
| 19 | 19 | 1 | 25 | 0,760 |
| 20 | 15 | 1 | 24 | 0,625 |
| 21 | 11 | 1 | 30 | 0,367 |
| 22 | 18 | 1 | 25 | 0,720 |
| 23 | 25 | 1 | 30 | 0,833 |
| 24 | 28 | 1 | 29 | 0,966 |
| 25 | 22 | 1 | 37 | 0,595 |
| 26 | 35 | 1 | 45 | 0,778 |
| 27 | 39 | 1 | 63 | 0,619 |
| 28 | 18 | 1 | 34 | 0,529 |
| 29 | 20 | 1 | 28 | 0,714 |
| 30 | 40 | 1 | 72 | 0,556 |
| 31 | 55 | * | * | * |
| Σ | | 25 | 1570 | |
| n | 31 | 25 | | |
| Ø | 50,2 | 1 | 62,8 | |
| % | 100 | 80,6 | | |
| k | | | | 0,716 |
| σ | | | | 0,174 |

Duben

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 47 | * | * | * |
| 2 | 51 | * | * | * |
| 3 | 46 | 2 | 46 | 1,000 |
| 4 | 32 | 3 | 41 | 0,780 |
| 5 | 37 | * | * | * |
| 6 | 63 | 2 | 81 | 0,778 |
| 7 | 54 | * | * | * |
| 8 | 61 | 1 | 73 | 0,836 |
| 9 | 65 | 1 | 37 | 1,757 |
| 10 | 76 | 1 | 51 | 1,490 |
| 11 | 69 | * | * | * |
| 12 | 73 | 2 | 79 | 0,924 |
| 13 | 59 | 2 | 82 | 0,720 |
| 14 | 71 | 1 | 71 | 1,000 |
| 15 | 59 | 3 | 101 | 0,584 |
| 16 | 62 | 2 | 80 | 0,775 |
| 17 | 47 | 3 | 86 | 0,547 |
| 18 | 50 | 3 | 74 | 0,676 |
| 19 | 58 | 3 | 87 | 0,667 |
| 20 | 62 | 3 | 95 | 0,653 |
| 21 | 57 | 3 | 94 | 0,606 |
| 22 | 47 | 3 | 77 | 0,610 |
| 23 | 48 | 2 | 58 | 0,828 |
| 24 | 36 | 2 | 40 | 0,900 |
| 25 | 40 | 3 | 60 | 0,667 |
| 26 | 44 | 2 | 46 | 0,957 |
| 27 | 43 | 3 | 59 | 0,729 |
| 28 | 36 | 3 | 60 | 0,600 |
| 29 | 38 | 3 | 69 | 0,551 |
| 30 | 53 | 3 | 98 | 0,541 |
| 31 | | | | |
| Σ | | 59 | 1745 | |
| n | 30 | 25 | | |
| Ø | 52,8 | 2,4 | 69,8 | |
| % | 100 | 83,3 | | |
| k | | | | 0,807 |
| σ | | | | 0,286 |

Květen

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 65 | 3 | 108 | 0,602 |
| 2 | 94 | 3 | 128 | 0,734 |
| 3 | 94 | 3 | 147 | 0,639 |
| 4 | 74 | 3 | 128 | 0,578 |
| 5 | 74 | 3 | 129 | 0,574 |
| 6 | 83 | 3 | 108 | 0,769 |
| 7 | 68 | 3 | 129 | 0,527 |
| 8 | 79 | 3 | 136 | 0,581 |
| 9 | 77 | 2 | 102 | 0,755 |
| 10 | 62 | * | * | * |
| 11 | 52 | * | * | * |
| 12 | 46 | 1 | 83 | 0,554 |
| 13 | 76 | 3 | 130 | 0,585 |
| 14 | 71 | 3 | 99 | 0,717 |
| 15 | 73 | * | * | * |
| 16 | 73 | * | * | * |
| 17 | 53 | * | * | * |
| 18 | 47 | * | * | * |
| 19 | 27 | 1 | 64 | 0,422 |
| 20 | 32 | 3 | 53 | 0,604 |
| 21 | 30 | 1 | 44 | 0,682 |
| 22 | 34 | 1 | 49 | 0,694 |
| 23 | 30 | 2 | 52 | 0,577 |
| 24 | 49 | 2 | 76 | 0,645 |
| 25 | 61 | 2 | 94 | 0,649 |
| 26 | 59 | 3 | 99 | 0,596 |
| 27 | 59 | 3 | 84 | 0,702 |
| 28 | 59 | 3 | 76 | 0,776 |
| 29 | 35 | 2 | 69 | 0,507 |
| 30 | 35 | * | * | * |
| 31 | 34 | 3 | 49 | 0,694 |
| Σ | | 59 | 2236 | |
| n | 31 | 24 | | |
| Ø | 58,2 | 2,5 | 93,2 | |
| % | 100 | 77,4 | | |
| k | | | | 0,632 |
| σ | | | | 0,089 |

Červen

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 27 | 1 | 48 | 0,563 |
| 2 | 30 | 2 | 50 | 0,600 |
| 3 | 26 | * | * | * |
| 4 | 47 | 1 | 69 | 0,681 |
| 5 | 54 | 1 | 99 | 0,545 |
| 6 | 60 | 1 | 124 | 0,484 |
| 7 | 81 | 2 | 96 | 0,844 |
| 8 | 68 | 1 | 104 | 0,654 |
| 9 | 58 | 1 | 91 | 0,637 |
| 10 | 68 | * | * | * |
| 11 | 82 | 2 | 118 | 0,695 |
| 12 | 88 | 1 | 154 | 0,571 |
| 13 | 84 | 2 | 143 | 0,587 |
| 14 | 79 | 2 | 123 | 0,642 |
| 15 | 80 | 3 | 117 | 0,684 |
| 16 | 76 | 2 | 96 | 0,792 |
| 17 | 64 | 2 | 81 | 0,790 |
| 18 | 76 | 2 | 136 | 0,559 |
| 19 | 70 | 2 | 107 | 0,654 |
| 20 | 86 | 2 | 119 | 0,723 |
| 21 | 101 | 1 | 65 | 1,554 |
| 22 | 110 | 2 | 157 | 0,701 |
| 23 | 104 | 1 | 172 | 0,605 |
| 24 | 84 | 1 | 145 | 0,579 |
| 25 | 80 | 1 | 151 | 0,530 |
| 26 | 85 | 2 | 99 | 0,859 |
| 27 | 62 | 2 | 82 | 0,756 |
| 28 | 65 | 2 | 75 | 0,867 |
| 29 | 79 | 3 | 101 | 0,782 |
| 30 | 84 | 3 | 100 | 0,840 |
| 31 | | | | |
| Σ | | 48 | 3022 | |
| n | 30 | 28 | | |
| Ø | 71,9 | 1,7 | 107,9 | |
| % | 100 | 93,3 | | |
| k | | | | 0,706 |
| σ | | | | 0,198 |

Červenec

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 71 | 2 | 114 | 0,623 |
| 2 | 82 | 3 | 104 | 0,788 |
| 3 | 86 | 3 | 108 | 0,796 |
| 4 | 59 | 3 | 88 | 0,670 |
| 5 | 67 | 3 | 83 | 0,807 |
| 6 | 68 | 3 | 108 | 0,630 |
| 7 | 79 | 2 | 148 | 0,534 |
| 8 | 73 | 2 | 106 | 0,689 |
| 9 | 57 | 2 | 103 | 0,553 |
| 10 | 73 | 3 | 87 | 0,839 |
| 11 | 95 | 3 | 106 | 0,896 |
| 12 | 79 | 3 | 88 | 0,898 |
| 13 | 86 | 1 | 151 | 0,570 |
| 14 | 76 | 4 | 98 | 0,776 |
| 15 | 92 | 4 | 128 | 0,719 |
| 16 | 88 | 4 | 109 | 0,807 |
| 17 | 70 | 3 | 93 | 0,753 |
| 18 | 70 | 2 | 85 | 0,824 |
| 19 | 73 | 3 | 80 | 0,913 |
| 20 | 82 | 4 | 105 | 0,781 |
| 21 | 100 | 3 | 132 | 0,758 |
| 22 | 78 | 4 | 130 | 0,600 |
| 23 | 63 | 4 | 94 | 0,670 |
| 24 | 50 | 4 | 65 | 0,769 |
| 25 | 40 | 4 | 52 | 0,769 |
| 26 | 46 | * | * | * |
| 27 | 67 | 1 | 128 | 0,523 |
| 28 | 58 | 2 | 103 | 0,563 |
| 29 | 45 | 3 | 69 | 0,652 |
| 30 | 44 | 3 | 70 | 0,629 |
| 31 | 60 | 3 | 85 | 0,706 |
| Σ | | 88 | 3020 | |
| n | 31 | 30 | | |
| Ø | 70,2 | 2,9 | 100,7 | |
| % | 100 | 96,8 | | |
| k | | | | 0,717 |
| σ | | | | 0,112 |

Srpen

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 66 | 2 | 119 | 0,555 |
| 2 | 70 | 1 | 129 | 0,543 |
| 3 | 47 | 2 | 65 | 0,723 |
| 4 | 37 | 2 | 65 | 0,569 |
| 5 | 41 | 3 | 64 | 0,641 |
| 6 | 56 | 2 | 87 | 0,644 |
| 7 | 61 | 3 | 73 | 0,836 |
| 8 | 48 | 3 | 70 | 0,686 |
| 9 | 56 | 2 | 84 | 0,667 |
| 10 | 64 | 1 | 54 | 1,185 |
| 11 | 62 | 2 | 112 | 0,554 |
| 12 | 76 | 2 | 71 | 1,070 |
| 13 | 76 | 2 | 95 | 0,800 |
| 14 | 101 | 3 | 127 | 0,795 |
| 15 | 132 | 2 | 177 | 0,746 |
| 16 | 125 | 3 | 174 | 0,718 |
| 17 | 115 | 3 | 184 | 0,625 |
| 18 | 107 | 3 | 156 | 0,686 |
| 19 | 110 | * | * | * |
| 20 | 93 | * | * | * |
| 21 | 69 | * | * | * |
| 22 | 74 | 3 | 84 | 0,881 |
| 23 | 67 | 2 | 118 | 0,568 |
| 24 | 54 | 3 | 80 | 0,675 |
| 25 | 54 | 3 | 70 | 0,771 |
| 26 | 47 | 2 | 72 | 0,653 |
| 27 | 32 | 3 | 51 | 0,627 |
| 28 | 33 | 3 | 45 | 0,733 |
| 29 | 28 | 3 | 41 | 0,683 |
| 30 | 28 | 3 | 33 | 0,848 |
| 31 | 10 | 3 | 10 | 1,000 |
| Σ | | 69 | 2510 | |
| n | 31 | 28 | | |
| Ø | 65,8 | 2,5 | 89,6 | |
| % | 100 | 90,3 | | |
| k | | | | 0,732 |
| σ | | | | 0,156 |

Září

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 9 | 4 | 8 | 1,125 |
| 2 | 17 | 2 | 17 | 1,000 |
| 3 | 30 | 3 | 25 | 1,200 |
| 4 | 27 | 3 | 17 | 1,588 |
| 5 | 47 | 4 | 60 | 0,783 |
| 6 | 47 | 3 | 52 | 0,904 |
| 7 | 60 | 4 | 78 | 0,769 |
| 8 | 53 | 4 | 79 | 0,671 |
| 9 | 57 | 4 | 86 | 0,663 |
| 10 | 56 | 4 | 56 | 1,000 |
| 11 | 39 | 4 | 48 | 0,813 |
| 12 | 31 | 4 | 67 | 0,463 |
| 13 | 53 | 3 | 54 | 0,981 |
| 14 | 25 | 1 | 0 | |
| 15 | 32 | 2 | 35 | 0,914 |
| 16 | 26 | 4 | 55 | 0,473 |
| 17 | 38 | 4 | 55 | 0,691 |
| 18 | 17 | 4 | 32 | 0,531 |
| 19 | 20 | 4 | 32 | 0,625 |
| 20 | 43 | 2 | 62 | 0,694 |
| 21 | 55 | 1 | 98 | 0,561 |
| 22 | 44 | 4 | 56 | 0,786 |
| 23 | 35 | 3 | 30 | 1,167 |
| 24 | 13 | 3 | 20 | 0,650 |
| 25 | 10 | 4 | 27 | 0,370 |
| 26 | 23 | 3 | 27 | 0,852 |
| 27 | 25 | 4 | 24 | 1,042 |
| 28 | 17 | 3 | 30 | 0,567 |
| 29 | 43 | 3 | 46 | 0,935 |
| 30 | 40 | 2 | 58 | 0,690 |
| 31 | | | | |
| Σ | | 97 | 1334 | |
| n | 30 | 30 | | |
| Ø | 34,4 | 3,2 | 44,5 | |
| % | 100 | 100 | | |
| k | | | | 0,811 |
| σ | | | | 0,264 |

Říjen

| Den | Ri | počet pozorování | R _p | k |
|-----|-----|------------------|----------------|-------|
| 1 | 47 | 3 | 64 | 0,734 |
| 2 | 53 | 3 | 93 | 0,570 |
| 3 | 64 | 4 | 106 | 0,604 |
| 4 | 55 | 3 | 96 | 0,573 |
| 5 | 55 | 4 | 96 | 0,573 |
| 6 | 64 | 3 | 122 | 0,525 |
| 7 | 71 | 3 | 114 | 0,623 |
| 8 | 68 | 3 | 125 | 0,544 |
| 9 | 76 | 3 | 141 | 0,539 |
| 10 | 84 | 2 | 120 | 0,700 |
| 11 | 77 | 1 | 137 | 0,562 |
| 12 | 79 | 2 | 133 | 0,594 |
| 13 | 78 | * | * | * |
| 14 | 70 | 1 | 123 | 0,569 |
| 15 | 56 | 2 | 83 | 0,675 |
| 16 | 40 | 4 | 64 | 0,625 |
| 17 | 37 | 3 | 49 | 0,755 |
| 18 | 26 | 2 | 39 | 0,667 |
| 19 | 18 | * | * | * |
| 20 | 19 | 2 | 42 | 0,452 |
| 21 | 32 | 4 | 47 | 0,681 |
| 22 | 22 | 2 | 20 | 1,100 |
| 23 | 33 | 2 | 31 | 1,065 |
| 24 | 17 | 3 | 24 | 0,708 |
| 25 | 31 | 2 | 42 | 0,738 |
| 26 | 36 | * | * | * |
| 27 | 68 | 1 | 116 | 0,586 |
| 28 | 97 | 4 | 106 | 0,915 |
| 29 | 57 | * | * | * |
| 30 | 76 | 2 | 133 | 0,571 |
| 31 | 69 | * | * | * |
| Σ | | 68 | 2266 | |
| n | 31 | 26 | | |
| Ø | 54 | 2,6 | 87,2 | |
| % | 100 | 83,9 | | |
| k | | | | 0,663 |
| σ | | | | 0,155 |

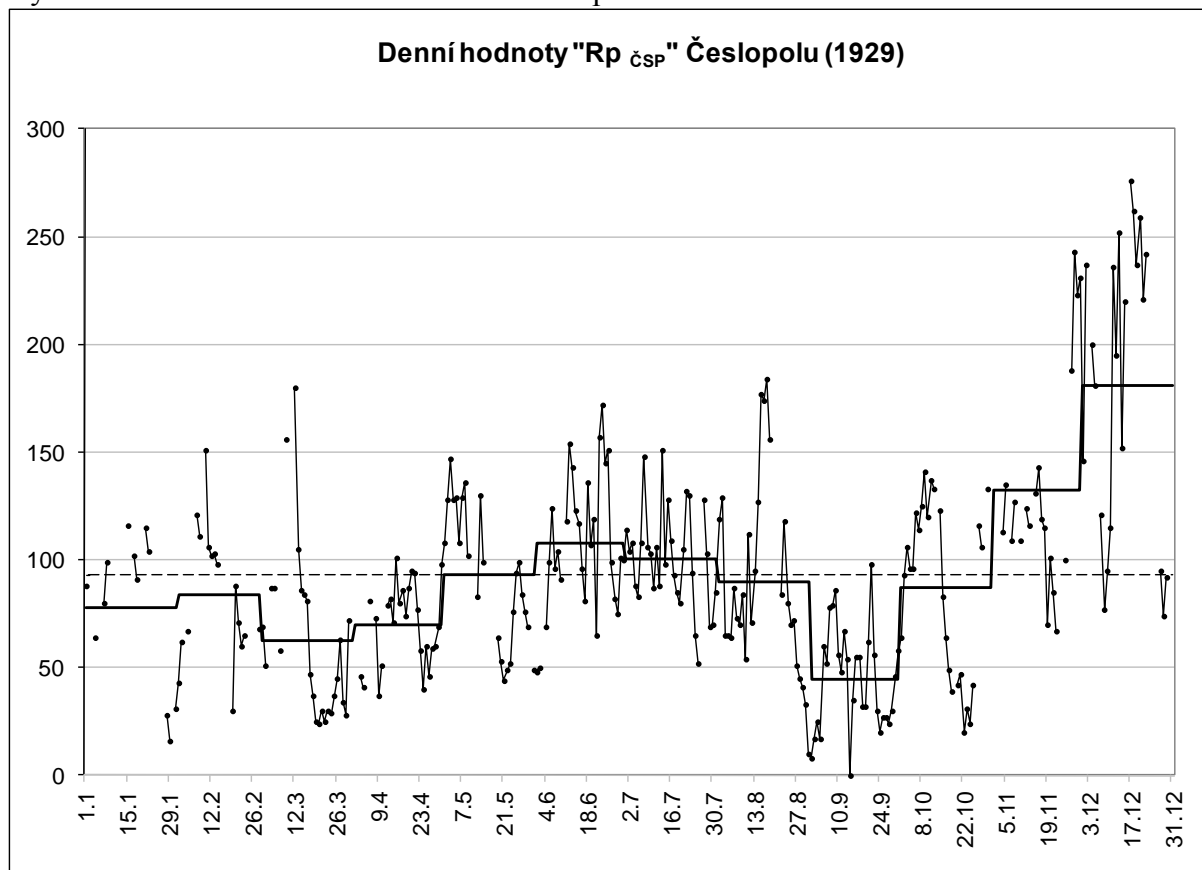
Listopad

| Den | Ri | počet pozorování | R _p | k |
|-----|------|------------------|----------------|-------|
| 1 | 66 | * | * | * |
| 2 | 80 | * | * | * |
| 3 | 75 | * | * | * |
| 4 | 92 | 3 | 113 | 0,814 |
| 5 | 86 | 3 | 135 | 0,637 |
| 6 | 100 | * | * | * |
| 7 | 80 | 2 | 109 | 0,734 |
| 8 | 91 | 3 | 127 | 0,717 |
| 9 | 79 | * | * | * |
| 10 | 94 | 2 | 109 | 0,862 |
| 11 | 71 | * | * | * |
| 12 | 68 | 3 | 124 | 0,548 |
| 13 | 82 | 1 | 116 | 0,707 |
| 14 | 96 | * | * | * |
| 15 | 93 | 2 | 131 | 0,710 |
| 16 | 65 | 4 | 143 | 0,455 |
| 17 | 67 | 3 | 119 | 0,563 |
| 18 | 67 | 2 | 115 | 0,583 |
| 19 | 49 | 2 | 70 | 0,700 |
| 20 | 44 | 4 | 101 | 0,436 |
| 21 | 44 | 1 | 85 | 0,518 |
| 22 | 41 | 1 | 67 | 0,612 |
| 23 | 51 | * | * | * |
| 24 | 60 | * | * | * |
| 25 | 81 | 1 | 100 | 0,810 |
| 26 | 90 | * | * | * |
| 27 | 119 | 1 | 188 | 0,633 |
| 28 | 127 | 2 | 243 | 0,523 |
| 29 | 146 | 3 | 223 | 0,655 |
| 30 | 129 | 2 | 231 | 0,558 |
| 31 | | | | |
| Σ | | 45 | 2649 | |
| n | 30 | 20 | | |
| Ø | 81,1 | 2,3 | 132,5 | |
| % | 100 | 66,7 | | |
| k | | | | 0,639 |
| σ | | | | 0,118 |

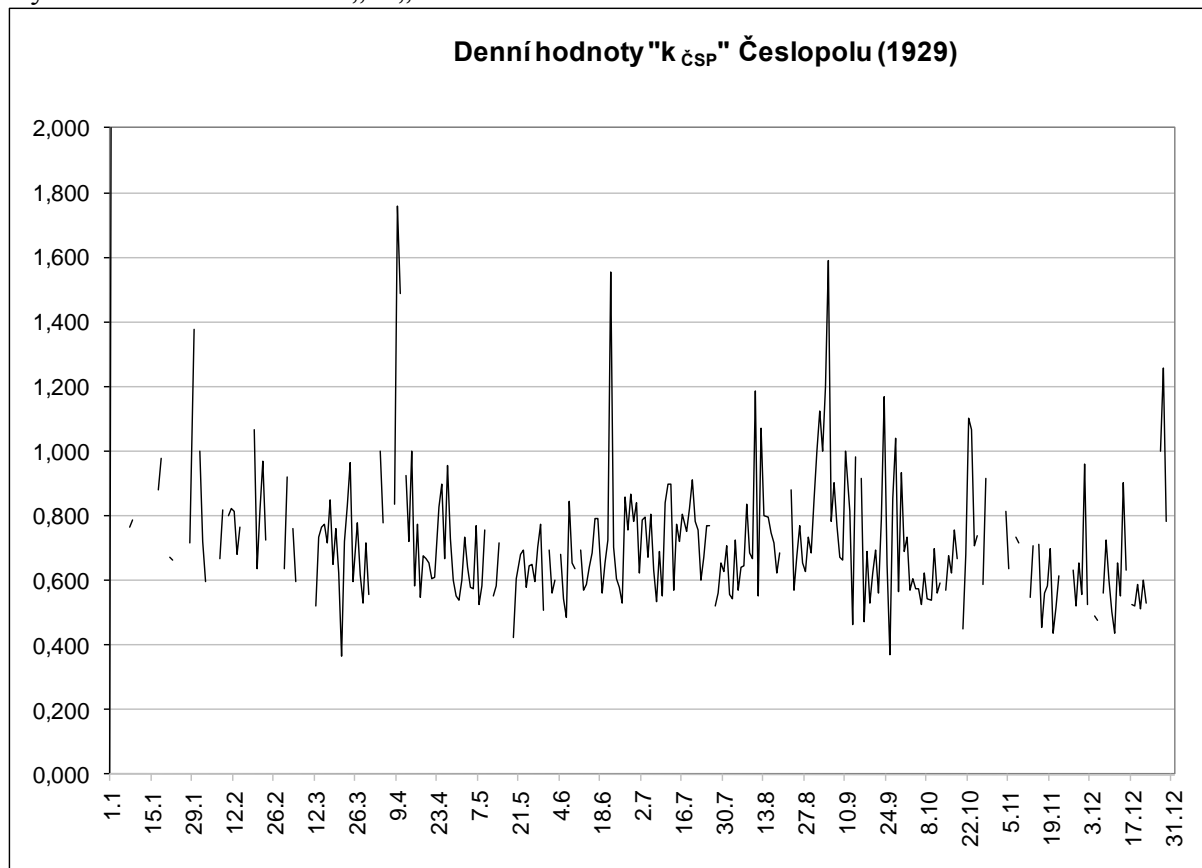
Prosinec

| Den | Ri | počet pozorování | R _p | k |
|-----|-----|------------------|----------------|-------|
| 1 | 140 | 1 | 146 | 0,959 |
| 2 | 125 | 2 | 237 | 0,527 |
| 3 | 122 | * | * | * |
| 4 | 98 | 3 | 200 | 0,490 |
| 5 | 86 | 2 | 181 | 0,475 |
| 6 | 91 | * | * | * |
| 7 | 68 | 2 | 121 | 0,562 |
| 8 | 56 | 4 | 77 | 0,727 |
| 9 | 57 | 4 | 95 | 0,600 |
| 10 | 58 | 1 | 115 | 0,504 |
| 11 | 103 | 1 | 236 | 0,436 |
| 12 | 128 | 3 | 195 | 0,656 |
| 13 | 139 | 2 | 252 | 0,552 |
| 14 | 137 | 1 | 152 | 0,901 |
| 15 | 139 | 1 | 220 | 0,632 |
| 16 | 139 | * | * | * |
| 17 | 145 | 2 | 276 | 0,525 |
| 18 | 137 | 1 | 262 | 0,523 |
| 19 | 139 | 1 | 237 | 0,586 |
| 20 | 133 | 3 | 259 | 0,514 |
| 21 | 133 | 3 | 221 | 0,602 |
| 22 | 128 | 1 | 242 | 0,529 |
| 23 | 126 | * | * | * |
| 24 | 118 | * | * | * |
| 25 | 133 | * | * | * |
| 26 | 107 | * | * | * |
| 27 | 95 | 1 | 95 | 1,000 |
| 28 | 93 | 1 | 74 | 1,257 |
| 29 | 72 | 2 | 92 | 0,783 |
| 30 | 65 | * | * | * |
| 31 | 37 | * | * | * |
| Σ | | 42 | 3985 | |
| n | 31 | 22 | | |
| Ø | 108 | 1,9 | 181,1 | |
| % | 100 | 71 | | |
| k | | | | 0,652 |
| σ | | | | 0,207 |

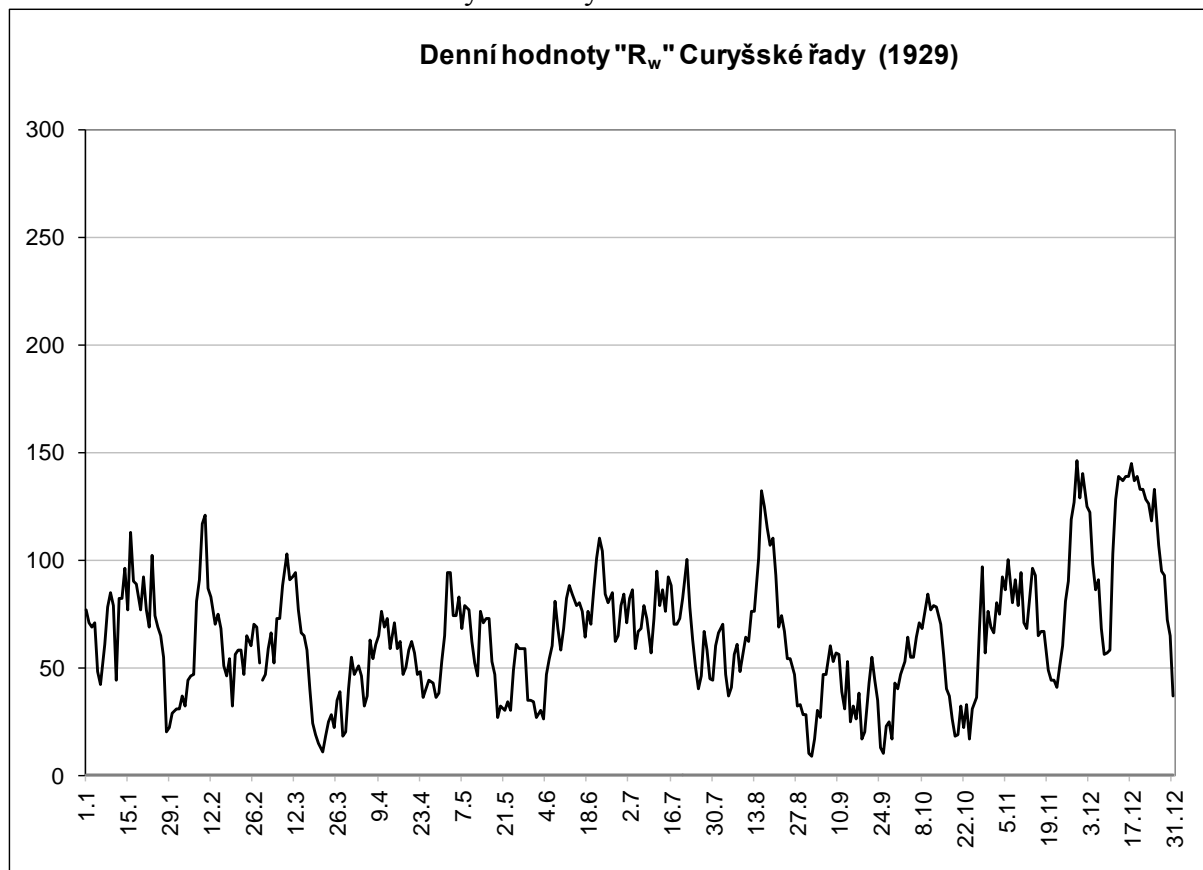
Výsledná řada denních relativních čísel Česlopolu za rok 1929



Výsledná řada koeficientu „ k „ za rok 1929



Definitivní denní relativní čísla Curyšské řady



Definitivní napozorovaná relativní čísla Česlopolu za rok 1929

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. |
|----------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|------------------------------|-------------|-------------|--------------|--------------|
| 1. | 88 | 43 | 69 | * | 108 | 48 | 114 | 119 | 8 | 64 | * | 146 |
| 2. | * | 62 | 51 | * | 128 | 50 | 104 | 129 | 17 | 93 | * | 237 |
| 3. | * | * | * | 46 | 147 | * | 108 | 65 | 25 | 106 | * | * |
| 4. | 64 | 67 | 87 | 41 | 128 | 69 | 88 | 65 | 17 | 96 | 113 | 200 |
| 5. | * | * | 87 | * | 129 | 99 | 83 | 64 | 60 | 96 | 135 | 181 |
| 6. | * | * | * | 81 | 108 | 124 | 108 | 87 | 52 | 122 | * | * |
| 7. | 80 | 121 | 58 | * | 129 | 96 | 148 | 73 | 78 | 114 | 109 | 121 |
| 8. | 99 | 111 | * | 73 | 136 | 104 | 106 | 70 | 79 | 125 | 127 | 77 |
| 9. | * | * | 156 | 37 | 102 | 91 | 103 | 84 | 86 | 141 | * | 95 |
| 10. | * | 151 | * | 51 | * | * | 87 | 54 | 56 | 120 | 109 | 115 |
| 11. | * | 106 | * | * | * | 118 | 106 | 112 | 48 | 137 | * | 236 |
| 12. | * | 102 | 180 | 79 | 83 | 154 | 88 | 71 | 67 | 133 | 124 | 195 |
| 13. | * | 103 | 105 | 82 | 130 | 143 | 151 | 95 | 54 | * | 116 | 252 |
| 14. | * | 98 | 86 | 71 | 99 | 123 | 98 | 127 | 0 | 123 | * | 152 |
| 15. | 116 | * | 84 | 101 | * | 117 | 128 | 177 | 35 | 83 | 131 | 220 |
| 16. | * | * | 81 | 80 | * | 96 | 109 | 174 | 55 | 64 | 143 | * |
| 17. | 102 | * | 47 | 86 | * | 81 | 93 | 184 | 55 | 49 | 119 | 276 |
| 18. | 91 | * | 37 | 74 | * | 136 | 85 | 156 | 32 | 39 | 115 | 262 |
| 19. | * | 30 | 25 | 87 | 64 | 107 | 80 | * | 32 | * | 70 | 237 |
| 20. | * | 88 | 24 | 95 | 53 | 119 | 105 | * | 62 | 42 | 101 | 259 |
| 21. | 115 | 71 | 30 | 94 | 44 | 65 | 132 | * | 98 | 47 | 85 | 221 |
| 22. | 104 | 60 | 25 | 77 | 49 | 157 | 130 | 84 | 56 | 20 | 67 | 242 |
| 23. | * | 65 | 30 | 58 | 52 | 172 | 94 | 118 | 30 | 31 | * | * |
| 24. | * | * | 29 | 40 | 76 | 145 | 65 | 80 | 20 | 24 | * | * |
| 25. | * | * | 37 | 60 | 94 | 151 | 52 | 70 | 27 | 42 | 100 | * |
| 26. | * | * | 45 | 46 | 99 | 99 | * | 72 | 27 | * | * | * |
| 27. | * | * | 63 | 59 | 84 | 82 | 128 | 51 | 24 | 116 | 188 | 95 |
| 28. | 28 | 68 | 34 | 60 | 76 | 75 | 103 | 45 | 30 | 106 | 243 | 74 |
| 29. | 16 | * | 28 | 69 | 69 | 101 | 69 | 41 | 46 | * | 223 | 92 |
| 30. | * | | 72 | 98 | * | 100 | 70 | 33 | 58 | 133 | 231 | * |
| 31. | 31 | | * | | 49 | | 85 | 10 | | * | | * |
| Ø | 77,8 | 84,1 | 62,8 | 69,8 | 93,2 | 107,9 | 100,7 | 89,6 | 44,5 | 87,2 | 132,5 | 181,1 |
| průměr za rok | | | 93,1 | | | | | pozorování dní v roce | 286 | | | 78,4% |
| | | | | | | | | počet nulových dní | 1 | | | |

Definitivní relativní čísla Curyšské řady

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 1. | 77 | 31 | 44 | 47 | 65 | 27 | 71 | 66 | 9 | 47 | 66 | 140 |
| 2. | 71 | 37 | 47 | 51 | 94 | 30 | 82 | 70 | 17 | 53 | 80 | 125 |
| 3. | 69 | 32 | 59 | 46 | 94 | 26 | 86 | 47 | 30 | 64 | 75 | 122 |
| 4. | 71 | 44 | 66 | 32 | 74 | 47 | 59 | 37 | 27 | 55 | 92 | 98 |
| 5. | 48 | 46 | 52 | 37 | 74 | 54 | 67 | 41 | 47 | 55 | 86 | 86 |
| 6. | 42 | 47 | 73 | 63 | 83 | 60 | 68 | 56 | 47 | 64 | 100 | 91 |
| 7. | 61 | 81 | 73 | 54 | 68 | 81 | 79 | 61 | 60 | 71 | 80 | 68 |
| 8. | 78 | 91 | 88 | 61 | 79 | 68 | 73 | 48 | 53 | 68 | 91 | 56 |
| 9. | 85 | 117 | 103 | 65 | 77 | 58 | 57 | 56 | 57 | 76 | 79 | 57 |
| 10. | 79 | 121 | 91 | 76 | 62 | 68 | 73 | 64 | 56 | 84 | 94 | 58 |
| 11. | 44 | 87 | 92 | 69 | 52 | 82 | 95 | 62 | 39 | 77 | 71 | 103 |
| 12. | 82 | 83 | 94 | 73 | 46 | 88 | 79 | 76 | 31 | 79 | 68 | 128 |
| 13. | 82 | 70 | 77 | 59 | 76 | 84 | 86 | 76 | 53 | 78 | 82 | 139 |
| 14. | 96 | 75 | 66 | 71 | 71 | 79 | 76 | 101 | 25 | 70 | 96 | 137 |
| 15. | 77 | 68 | 65 | 59 | 73 | 80 | 92 | 132 | 32 | 56 | 93 | 139 |
| 16. | 113 | 51 | 58 | 62 | 73 | 76 | 88 | 125 | 26 | 40 | 65 | 139 |
| 17. | 90 | 46 | 40 | 47 | 53 | 64 | 70 | 115 | 38 | 37 | 67 | 145 |
| 18. | 89 | 54 | 24 | 50 | 47 | 76 | 70 | 107 | 17 | 26 | 67 | 137 |
| 19. | 77 | 32 | 19 | 58 | 27 | 70 | 73 | 110 | 20 | 18 | 49 | 139 |
| 20. | 92 | 56 | 15 | 62 | 32 | 86 | 82 | 93 | 43 | 19 | 44 | 133 |
| 21. | 77 | 58 | 11 | 57 | 30 | 101 | 100 | 69 | 55 | 32 | 44 | 133 |
| 22. | 69 | 58 | 18 | 47 | 34 | 110 | 78 | 74 | 44 | 22 | 41 | 128 |
| 23. | 102 | 47 | 25 | 48 | 30 | 104 | 63 | 67 | 35 | 33 | 51 | 126 |
| 24. | 74 | 65 | 28 | 36 | 49 | 84 | 50 | 54 | 13 | 17 | 60 | 118 |
| 25. | 69 | 60 | 22 | 40 | 61 | 80 | 40 | 54 | 10 | 31 | 81 | 133 |
| 26. | 65 | 70 | 35 | 44 | 59 | 85 | 46 | 47 | 23 | 36 | 90 | 107 |
| 27. | 55 | 69 | 39 | 43 | 59 | 62 | 67 | 32 | 25 | 68 | 119 | 95 |
| 28. | 20 | 52 | 18 | 36 | 59 | 65 | 58 | 33 | 17 | 97 | 127 | 93 |
| 29. | 22 | 0 | 20 | 38 | 35 | 79 | 45 | 28 | 43 | 57 | 146 | 72 |
| 30. | 29 | | 40 | 53 | 35 | 84 | 44 | 28 | 40 | 76 | 129 | 65 |
| 31. | 31 | | 55 | | 34 | | 60 | 10 | | 69 | | 37 |
| Ø | 68,9 | 60,3 | 50,2 | 52,8 | 58,2 | 71,9 | 70,2 | 65,8 | 34,4 | 54,0 | 81,1 | 108,0 |
| průměr za rok | | | 64,7 | | | | | | | | | |

Souhrnná tabulka pozorovacích stanic Česlopolu

| Stanice | n | R_w | R_p ČSP | R_p | $k R_w$ | k ČSP | σ | σ/k | % n |
|---------------------------------------|-----|-------|--------------|--------|---------|---------|----------|------------|-------|
| Praha - Petřín | 225 | 64,83 | 94,27 | 113,46 | 0,629 | 0,889 | 0,147 | 0,229 | 35,71 |
| Bílek Jaroslav - Praha - Vršovice | 81 | 64,83 | 94,27 | 89,17 | 0,677 | 1,130 | 0,126 | 0,183 | 12,86 |
| Guth Vladimír - Praha - Smíchov | 201 | 64,83 | 94,27 | 90,84 | 0,737 | 1,022 | 0,169 | 0,227 | 31,90 |
| Hýbl Vilém - Krásno nad Bečvou | 81 | 64,83 | 94,27 | 46,48 | 1,409 | 1,913 | 0,401 | 0,279 | 12,86 |
| Bečvář Antonín - Brandýs nad Labem | 42 | 64,83 | 94,27 | 131,30 | 0,712 | 1,063 | 0,218 | 0,294 | 6,67 |

Vysvětlivky: n - celkový počet pozorování
 R_w - definitivní relativní číslo Curyšské řady Švýcarsko
 R_p ČSP - definitivní relativní číslo Česlopolu
 R_p - napozorované relativní číslo stanice
 $k R_w$ - koeficient přepočtu „k“ Curyšské řady Švýcarsko
 k ČSP - koeficient přepočtu „k“ Česlopolu
 σ - středně kvadratická odchylka průměrných měsíčních koeficientů „k“ -
hodnota σ umožňuje posoudit stabilitu koeficientů k v průběhu roku

Přehled pozorování jednotlivých stanic

Pozorovací stanice: Praha - Petřín

číslo: SL 01

| měsíc | n | R _w | R _p ČSP | R _p | k Ri | k ČSP | σ | σ/k | % n |
|-------|------|----------------|--------------------|----------------|-------|-------|-------|-------|------|
| I. | | 68,9 | 77,8 | | | | | | |
| II. | | 62,4 | 84,1 | | | | | | |
| III. | | 50,2 | 62,8 | | | | | | |
| IV. | 24 | 52,8 | 69,8 | 60,0 | 0,928 | 1,163 | 0,278 | 0,300 | 80,0 |
| V. | 23 | 58,2 | 93,2 | 93,2 | 0,643 | 1,000 | 0,110 | 0,171 | 74,2 |
| VI. | 27 | 71,9 | 107,9 | 122,4 | 0,600 | 0,882 | 0,067 | 0,111 | 90,0 |
| VII. | 30 | 70,2 | 100,7 | 124,6 | 0,580 | 0,808 | 0,110 | 0,189 | 96,8 |
| VIII. | 26 | 65,8 | 89,6 | 115,8 | 0,563 | 0,774 | 0,088 | 0,156 | 83,9 |
| IX. | 28 | 34,4 | 44,5 | 66,5 | 0,578 | 0,669 | 0,208 | 0,360 | 93,3 |
| X. | 25 | 54,0 | 87,2 | 104,4 | 0,546 | 0,835 | 0,118 | 0,217 | 80,6 |
| XI. | 20 | 81,1 | 132,5 | 142,7 | 0,598 | 0,929 | 0,124 | 0,207 | 66,7 |
| XII. | 22 | 108,0 | 181,1 | 191,5 | 0,628 | 0,946 | 0,219 | 0,348 | 71,0 |
| Σ | 225 | 777,9 | 1131,2 | 1021,1 | 5,664 | 8,005 | 1,321 | 2,058 | |
| Ø | 25,0 | 64,8 | 94,3 | 113,5 | 0,629 | 0,889 | 0,147 | 0,229 | 61,6 |

Pozorovací stanice: Bílek Jaroslav - Praha - Vršovice

číslo: SL 02

| měsíc | n | R _w | R _p ČSP | R _p | k Ri | k ČSP | σ | σ/k | % n |
|-------|-----|----------------|--------------------|----------------|-------|--------|-------|-------|------|
| I. | 5 | 68,9 | 77,8 | 87,4 | 0,923 | 0,890 | 0,174 | 0,189 | 16,1 |
| II. | | 62,4 | 84,1 | | | | | | |
| III. | | 50,2 | 62,8 | | | | | | |
| IV. | 13 | 52,8 | 69,8 | 103,7 | 0,473 | 0,673 | 0,072 | 0,153 | 43,3 |
| V. | 18 | 58,2 | 93,2 | 108,3 | 0,591 | 0,861 | 0,081 | 0,136 | 58,1 |
| VI. | 2 | 71,9 | 107,9 | 70,5 | 0,683 | 1,530 | 0,134 | 0,197 | 6,7 |
| VII. | 9 | 70,2 | 100,7 | 104,9 | 0,716 | 0,960 | 0,074 | 0,104 | 29,0 |
| VIII. | | 65,8 | 89,6 | | | | | | |
| IX. | 17 | 34,4 | 44,5 | 48,8 | 0,735 | 0,912 | 0,235 | 0,320 | 56,7 |
| X. | 9 | 54,0 | 87,2 | 74,2 | 0,742 | 1,175 | 0,146 | 0,197 | 29,0 |
| XI. | 6 | 81,1 | 132,5 | 114,7 | 0,603 | 1,155 | 0,206 | 0,342 | 20,0 |
| XII. | 2 | 108,0 | 181,1 | 90,0 | 0,628 | 2,012 | 0,008 | 0,012 | 6,5 |
| Σ | 81 | 777,9 | 1131,2 | 802,5 | 6,094 | 10,169 | 1,131 | 1,650 | |
| Ø | 9,0 | 64,8 | 94,3 | 89,2 | 0,677 | 1,130 | 0,126 | 0,183 | 22,2 |

Pozorovací stanice: Guth Vladimír - Praha - Smíchov

číslo: SL 03

| měsíc | n | R _w | R _p ČSP | R _p | k Ri | k ČSP | σ | σ/k | % n |
|-------|------|----------------|--------------------|----------------|-------|--------|-------|-------|------|
| I. | 9 | 68,9 | 77,8 | 76,8 | 0,822 | 1,013 | 0,240 | 0,292 | 29,0 |
| II. | 16 | 62,4 | 84,1 | 84,1 | 0,770 | 1,000 | 0,121 | 0,158 | 57,1 |
| III. | 25 | 50,2 | 62,8 | 62,8 | 0,716 | 1,000 | 0,174 | 0,243 | 80,6 |
| IV. | 22 | 52,8 | 69,8 | 66,4 | 0,805 | 1,051 | 0,226 | 0,281 | 73,3 |
| V. | 18 | 58,2 | 93,2 | 96,7 | 0,704 | 0,964 | 0,115 | 0,164 | 58,1 |
| VI. | 10 | 71,9 | 107,9 | 114,1 | 0,747 | 0,946 | 0,144 | 0,193 | 33,3 |
| VII. | 26 | 70,2 | 100,7 | 101,9 | 0,695 | 0,988 | 0,094 | 0,135 | 83,9 |
| VIII. | 23 | 65,8 | 89,6 | 90,9 | 0,677 | 0,986 | 0,131 | 0,193 | 74,2 |
| IX. | 23 | 34,4 | 44,5 | 49,4 | 0,701 | 0,901 | 0,198 | 0,283 | 76,7 |
| X. | 14 | 54,0 | 87,2 | 82,8 | 0,750 | 1,053 | 0,292 | 0,390 | 45,2 |
| XI. | 8 | 81,1 | 132,5 | 123,9 | 0,748 | 1,069 | 0,202 | 0,270 | 26,7 |
| XII. | 7 | 108,0 | 181,1 | 140,3 | 0,709 | 1,291 | 0,092 | 0,130 | 22,6 |
| Σ | 201 | 777,9 | 1131,2 | 1090,1 | 8,844 | 12,262 | 2,029 | 2,730 | |
| Ø | 16,8 | 64,8 | 94,3 | 90,8 | 0,737 | 1,022 | 0,169 | 0,227 | 55,1 |

Pozorovací stanice: Hýbl Vilém - Krásno nad Bečvou

číslo: SL 04

| měsíc | n | R _w | R _p ČSP | R _p | k Ri | k ČSP | σ | σ/k | % n |
|-------|------|----------------|--------------------|----------------|-------|-------|-------|-------|------|
| I. | | 68,9 | 77,8 | | | | | | |
| II. | | 62,4 | 84,1 | | | | | | |
| III. | | 50,2 | 62,8 | | | | | | |
| IV. | | 52,8 | 69,8 | | | | | | |
| V. | | 58,2 | 93,2 | | | | | | |
| VI. | 9 | 71,9 | 107,9 | 60,6 | 1,360 | 1,781 | 0,319 | 0,235 | 30,0 |
| VII. | 23 | 70,2 | 100,7 | 56,0 | 1,291 | 1,798 | 0,224 | 0,173 | 74,2 |
| VIII. | 20 | 65,8 | 89,6 | 49,7 | 1,408 | 1,803 | 0,432 | 0,307 | 64,5 |
| IX. | 29 | 34,4 | 44,5 | 19,6 | 1,578 | 2,270 | 0,631 | 0,400 | 96,7 |
| X. | | 54,0 | 87,2 | | | | | | |
| XI. | | 81,1 | 132,5 | | | | | | |
| XII. | | 108,0 | 181,1 | | | | | | |
| Σ | 81 | 777,9 | 1131,2 | 185,9 | 5,637 | 7,652 | 1,606 | 1,115 | |
| Ø | 20,3 | 64,8 | 94,3 | 46,5 | 1,409 | 1,913 | 0,401 | 0,279 | 22,2 |

Pozorovací stanice: Bečvář Antonín - Brandýs nad Labem

číslo: SL 05

| měsíc | n | R _w | R _p ČSP | R _p | k Ri | k ČSP | σ | σ/k | % n |
|-------|------|----------------|--------------------|----------------|-------|-------|-------|-------|------|
| I. | | 68,9 | 77,8 | | | | | | |
| II. | | 62,4 | 84,1 | | | | | | |
| III. | | 50,2 | 62,8 | | | | | | |
| IV. | | 52,8 | 69,8 | | | | | | |
| V. | | 58,2 | 93,2 | | | | | | |
| VI. | | 71,9 | 107,9 | | | | | | |
| VII. | | 70,2 | 100,7 | | | | | | |
| VIII. | | 65,8 | 89,6 | | | | | | |
| IX. | | 34,4 | 44,5 | | | | | | |
| X. | 20 | 54,0 | 87,2 | 69,1 | 0,885 | 1,262 | 0,345 | 0,390 | 64,5 |
| XI. | 11 | 81,1 | 132,5 | 139,5 | 0,647 | 0,950 | 0,175 | 0,271 | 36,7 |
| XII. | 11 | 108,0 | 181,1 | 185,3 | 0,604 | 0,977 | 0,132 | 0,219 | 35,5 |
| Σ | 42 | 777,9 | 1131,2 | 393,9 | 2,136 | 3,189 | 0,653 | 0,881 | |
| Ø | 14,0 | 64,8 | 94,3 | 131,3 | 0,712 | 1,063 | 0,218 | 0,294 | 11,5 |

Bulletin pro pozorovatele Slunce 1929

nepravidelně dle potřeb vizuálního sledování Slunce

HFP 503

Vydala: Vydává sluneční sekce ČAS ve spolupráci s hvězdárnou Františka Pešty
v Sezimově Ústí
Sestavil: Feik Vlastislav
Odborný dohled: RNDr. Hejna Ladislav CSc, Ing. Neliba Vlastimil
Počet stran: 23
Roku: 2012
Formát: A4