# SOLAR RADIATION DATA FOR FEBRUARY 1948

[Solar Radiation Investigation Section, I. F. HAND in Charge]

Explanation of Tables 1 and 2 and references to descriptions of instruments, stations, and methods of observation, and to summaries of data, are given in the MONTHLY WEATHER REVIEW, vol. 72, No. 1, January 1944, p. 43. A list of pyrheliometric stations is given on page 45 of that issue. An explanation of the formula used in computing the air mass values for each station listed in Table 1 appears in vol. 75, No. 3, March 1947, p. 47.

Table 3 gives values of solar and sky radiation plus radiation reflected from the ground as received on a vertical surface facing south for the current month; this table was first included in the solar radiation data for the January 1948 issue of the REVIEW. In that issue, also, back data for the south vertical surface were published, covering the period from March 26, 1945, to January 1948.

Table 4 gives values of solar and sky radiation plus radiation reflected from the ground as received on a vertical surface facing east. This table covers the period from March 26, 1945, to September 15, 1946; on the latter date east vertical surface observations were discontinued.

TABLE 1.—*Solar radiation intensities during February 1948*

[Gram calories per minute per square centimeter of normal surface]

| Date | Sun's zenith distance | | | | | | | | | Vapor pressure | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A. M. | | | | 0.0° | P. M. | | | | | |
| | 78.7° | 75.7° | 70.7° | 60.0° | | 60.0° | 70.7° | 75.7° | 78.7° | 7:30 a. m.[1] | 1:30 p. m.[1] |
| **MADISON, WIS.** | | | | | | | | | | | |
| | Air mass | | | | | | | | | | |
| | 4.81 | 3.84 | 2.88 | 1.92 | *0.96 | 1.92 | 2.88 | 3.84 | 4.81 | | |
| *February* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *mb.* | *mb.* |
| 2 | 0.74 | 1.06 | 1.18 | 1.39 | 1.60 | ------ | ------ | ------ | ------ | 3.7 | 1.6 |
| 4 | ------ | ------ | ------ | .98 | ------ | ------ | ------ | ------ | ------ | 1.3 | 2.3 |
| 6 | .54 | .73 | .87 | ------ | ------ | ------ | ------ | ------ | ------ | 1.2 | 1.7 |
| 12 | .69 | .88 | 1.06 | ------ | ------ | ------ | ------ | ------ | ------ | 1.0 | 1.2 |
| 17 | .75 | .98 | 1.11 | 1.16 | 1.36 | ------ | ------ | ------ | ------ | 4.8 | 6.4 |
| 20 | .96 | 1.08 | 1.21 | 1.42 | 1.66 | ------ | ------ | ------ | ------ | 1.0 | 1.5 |
| 21 | ------ | ------ | ------ | 1.37 | 1.61 | 1.35 | ------ | ------ | ------ | 1.4 | 2.2 |
| 26 | .75 | .90 | 1.04 | 1.25 | 1.49 | ------ | ------ | ------ | ------ | 4.8 | 5.6 |
| Means | .74 | .94 | 1.08 | 1.26 | 1.54 | (1.35) | ------ | ------ | ------ | ------ | ------ |
| Departures | −.11 | −.06 | −.06 | −.07 | +.03 | +.03 | ------ | ------ | ------ | ------ | ------ |
| **LINCOLN, NEBR.** | | | | | | | | | | | |
| | Air mass | | | | | | | | | | |
| | 4.77 | 3.81 | 2.86 | 1.91 | *0.95 | 1.91 | 2.86 | 3.81 | 4.77 | | |
| *February* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *mb.* | *mb.* |
| 9 | ------ | 0.83 | 1.02 | 1.22 | ------ | 1.20 | ------ | ------ | ------ | 1.4 | 2.2 |
| 16 | 0.86 | 1.02 | 1.14 | 1.31 | ------ | 1.31 | 1.18 | ------ | ------ | 5.6 | 7.2 |
| 17 | .83 | .96 | 1.11 | ------ | ------ | ------ | ------ | ------ | ------ | 5.6 | 8.1 |
| 28 | .94 | 1.05 | 1.12 | 1.29 | ------ | ------ | ------ | ------ | ------ | 4.2 | 4.4 |
| Means | .88 | .96 | 1.10 | 1.27 | ------ | (1.26) | (1.18) | ------ | ------ | ------ | ------ |
| Departures | −.02 | −.05 | −.05 | −.08 | ------ | −.07 | −.03 | ------ | ------ | ------ | ------ |
| **CLIMAX, COLO.** | | | | | | | | | | | |
| | Air mass | | | | | | | | | | |
| | 3.24 | 2.59 | 1.94 | 1.29 | *0.65 | 1.29 | 1.94 | 2.59 | 3.24 | | |
| *February* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *mb.* | *mb.* |
| 2 | ------ | ------ | ------ | ------ | ------ | 1.56 | 1.44 | 1.32 | ------ | ------ | ------ |
| 4 | ------ | ------ | ------ | 1.46 | ------ | 1.59 | ------ | ------ | ------ | ------ | ------ |
| 5 | ------ | ------ | 1.45 | 1.57 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 8 | ------ | ------ | ------ | 1.58 | ------ | 1.56 | 1.39 | 1.26 | 1.18 | ------ | ------ |
| 14 | ------ | ------ | ------ | 1.53 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 15 | ------ | ------ | ------ | 1.54 | ------ | 1.53 | 1.38 | ------ | ------ | ------ | ------ |
| 16 | ------ | ------ | ------ | ------ | ------ | ------ | 1.39 | ------ | ------ | ------ | ------ |
| 17 | ------ | ------ | 1.37 | 1.55 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 26 | ------ | ------ | ------ | 1.56 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| Means | ------ | ------ | (1.41) | 1.54 | ------ | 1.56 | 1.40 | (1.29) | (1.18) | ------ | ------ |
| Departures | ------ | ------ | −.05 | −.03 | ------ | .00 | .02 | −.02 | −.04 | ------ | ------ |

TABLE 1.—*Solar radiation intensities during February 1948*—Con.

[Gram calories per minute per square centimeter of normal surface]

| Date | Sun's zenith distance | | | | | | | | | Vapor pressure | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A. M. | | | | 0.0° | P. M. | | | | | |
| | 78.7° | 75.7° | 70.7° | 60.0° | | 60.0° | 70.7° | 75.7° | 78.7° | 7:30 a. m.[1] | 1:30 p. m.[1] |
| **TABLE MOUNTAIN, CALIF** | | | | | | | | | | | |
| | Air mass | | | | | | | | | | |
| | 3.76 | 3.01 | 2.26 | 1.51 | *0.75 | 1.51 | 2.26 | 3.01 | 3.76 | | |
| *February* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *mb.* | *mb.* |
| 1 | ------ | ------ | ------ | 1.52 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 3 | ------ | ------ | ------ | 1.53 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 4 | ------ | ------ | ------ | 1.46 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 8 | ------ | ------ | ------ | 1.50 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 11 | ------ | ------ | ------ | 1.55 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 12 | 1.21 | 1.30 | 1.41 | 1.56 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 15 | ------ | ------ | ------ | 1.52 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 20 | ------ | ------ | ------ | 1.52 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 26 | 1.16 | 1.25 | 1.35 | 1.48 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| 27 | 1.25 | 1.34 | 1.44 | 1.55 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| Means | 1.21 | 1.30 | 1.40 | 1.52 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| Departures | +.02 | +.02 | +.02 | +.02 | ------ | ------ | ------ | ------ | ------ | ------ | ------ |
| **BOSTON, MASS.** | | | | | | | | | | | |
| | Air Mass | | | | | | | | | | |
| | 4.96 | 3.96 | 2.97 | 1.98 | *0.99 | 1.98 | 2.97 | 3.96 | 4.96 | | |
| *February* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *mb.* | *mb.* |
| 3 | ------ | 0.81 | 0.65 | 1.29 | ------ | 1.22 | ------ | ------ | ------ | 2.3 | 1.9 |
| 5 | ------ | ------ | ------ | .76 | ------ | 1.18 | ------ | 0.26 | 0.22 | 2.1 | 2.6 |
| 6 | ------ | ------ | .47 | .41 | ------ | ------ | ------ | ------ | ------ | 2.5 | 2.2 |
| 9 | ------ | .97 | .97 | 1.16 | ------ | 1.15 | 0.81 | .85 | .81 | 1.3 | 1.1 |
| 16 | ------ | ------ | .74 | ------ | ------ | ------ | ------ | ------ | ------ | 2.6 | 3.5 |
| 18 | 0.65 | .83 | .98 | ------ | ------ | ------ | ------ | ------ | ------ | 3.8 | 3.7 |
| Means | (0.65) | .87 | .76 | .90 | ------ | 1.18 | (0.81) | (0.56) | (0.52) | ------ | ------ |
| Departures | +.01 | +.10 | −.11 | −.19 | ------ | +.04 | −.20 | −.19 | −.10 | ------ | ------ |
| **BLUE HILL, MASS.** | | | | | | | | | | | |
| | Air mass | | | | | | | | | | |
| | 4.86 | 3.89 | 2.92 | 1.94 | *0.97 | 1.94 | 2.92 | 3.89 | 4.86 | | |
| *February* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *mb.* | *mb.* |
| 1 | 1.05 | ------ | ------ | ------ | ------ | ------ | ------ | ------ | 1.00 | 1.3 | 2.6 |
| 2 | ------ | 1.13 | ------ | ------ | ------ | ------ | ------ | ------ | ------ | 2.7 | 3.0 |
| 3 | ------ | 1.14 | 1.23 | ------ | ------ | 1.38 | ------ | ------ | ------ | 1.9 | 1.7 |
| 7 | .88 | .99 | ------ | ------ | ------ | ------ | ------ | ------ | ------ | 1.4 | 2.3 |
| 8 | ------ | .56 | .56 | ------ | ------ | 1.30 | 1.01 | 0.80 | .72 | 3.6 | 2.1 |
| 9 | ------ | ------ | 1.26 | 1.41 | ------ | 1.39 | 1.26 | 1.11 | 1.02 | .8 | .9 |
| 14 | ------ | ------ | ------ | ------ | ------ | ------ | ------ | .95 | .85 | 11.8 | 8.9 |
| 15 | 1.05 | 1.16 | 1.27 | 1.47 | ------ | 1.41 | 1.26 | 1.13 | 1.01 | 1.3 | 1.9 |
| 18 | ------ | ------ | ------ | ------ | ------ | ------ | 1.11 | .98 | .82 | 3.5 | 3.5 |
| 21 | .99 | 1.07 | 1.18 | ------ | ------ | 1.18 | ------ | .83 | .73 | 1.8 | 1.8 |
| 23 | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | .89 | 1.6 | 1.8 |
| 27 | ------ | ------ | ------ | .97 | ------ | ------ | ------ | ------ | ------ | 4.2 | 4.4 |
| Means | .99 | 1.01 | 1.10 | 1.28 | ------ | 1.33 | 1.16 | .97 | .88 | ------ | ------ |
| Departures | +.08 | −.01 | .00 | −.01 | ------ | +.04 | +.02 | −.03 | −.02 | ------ | ------ |
| **RATIO, BOSTON/BLUE HILL ON COMPARABLE DATES** | | | | | | | | | | | |
| | | (0.71) | (0.65) | (0.82) | ------ | (0.88) | ------ | ------ | ------ | ------ | ------ |

*Extrapolated.
[1] 75th meridian time.

TABLE 2.—*Daily totals and weekly means of solar radiation (direct+diffuse) received on a horizontal surface during February*

[Gram calories per square centimeter]

| Date | Washington, D. C | Madison, Wis. | Lincoln, Nebr. | New York, N. Y. | Fresno, Calif. | Fairbanks, Alaska | Columbia, Mo. | Boston, Mass. | Nashville, Tenn. | Twin Falls, Idaho | La Jolla, Calif. | Riverside, Calif. | Blue Hill, Mass. | Newport, R. I. | Salt Lake City, Utah | Put-in-Bay, Ohio | St. College, Pa. | Davis, Calif. | Toronto, Canada | Ithaca, N. Y. | Boulder, Colo. | East Wareham, Mass. | Honolulu, Hawaii | Pearl Harbor, Hawaii | East Lansing, Mich. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *1948* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* | *cal.* |
| Jan. 29 | 224 | 235 | 298 | 230 | 303 | 39 | 328 | 99 | 112 | 256 | 310 | 298 | 174 | 281 | 229 | 275 | 244 | 273 | 103 | 118 | 299 | 232 | 280 | 463 | 207 |
| Jan. 30 | 147 | 201 | 106 | 252 | 300 | 47 | 62 | 265 | 68 | 187 | 275 | 305 | 296 | 323 | 198 | 234 | 246 | 291 | 231 | 152 | 293 | 307 | 292 | 435 | 297 |
| Jan. 31 | 253 | 201 | 188 | 284 | 306 | 29 | 300 | 243 | 49 | 256 | 306 | 342 | 311 | 316 | 254 | 298 | 257 | 269 | 240 | 233 | 216 | 291 | 499 | 482 | 242 |
| Feb. 1 | 248 | 192 | 308 | 179 | 303 | 10 | 286 | 215 | 109 | 221 | 281 | 303 | 232 | 264 | 176 | 130 | 282 | 317 | 114 | 247 | 268 | 173 | 448 | 460 | 204 |
| Feb. 2 | 291 | 297 | 120 | 188 | 351 | 28 | 296 | 216 | 277 | 85 | 226 | 354 | 239 | 282 | 191 | 261 | 161 | 194 | 100 | 189 | 106 | 269 | 390 | 416 | 235 |
| Feb. 3 | 247 | 91 | 60 | 265 | 352 | 50 | 31 | 257 | 100 | 254 | 316 | 401 | 314 | 331 | 124 | 258 | 269 | 328 | 239 | 205 | 211 | 300 | 465 | 400 | 198 |
| Feb. 4 | 12 | 250 | 259 | 28 | 294 | 9 | 54 | 59 | 40 | 278 | 318 | 367 | 64 | 73 | 282 | 88 | 51 | 77 | 64 | 90 | 290 | 82 | 379 | 456 | 223 |
| Means | 203 | 210 | 191 | 204 | 316 | 30 | 194 | 193 | 108 | 220 | 290 | 339 | 233 | 267 | 208 | 221 | 216 | 250 | 156 | 176 | 240 | 236 | 393 | 444 | 229 |
| Departures | −1 | +25 | −22 | +28 | +119 | −7 | −18 | +11 | −75 | +31 | +10 | +88 | +17 | +50 | +1 | +60 | +64 | +60 | +13 | +15 | −2 | +14 | ---- | ---- | +82 |
| Feb. 5 | 186 | 179 | 152 | 199 | 205 | 24 | 41 | 225 | 35 | 69 | 99 | 104 | 285 | 292 | 104 | 264 | 248 | 102 | 193 | 256 | 292 | 173 | 509 | 482 | 263 |
| Feb. 6 | 205 | 273 | 47 | 71 | 273 | 47 | 340 | 158 | 141 | 107 | 284 | 197 | 205 | 237 | 82 | 279 | 190 | 140 | 212 | 228 | 206 | 221 | 379 | 334 | 230 |
| Feb. 7 | 52 | 115 | 278 | 198 | 271 | 72 | 60 | 229 | 48 | 299 | 365 | 425 | 290 | 303 | 308 | 110 | 137 | 350 | 82 | 162 | 201 | 312 | 137 | 121 | 136 |
| Feb. 8 | 194 | 319 | 333 | 280 | 374 | 74 | 392 | 230 | 49 | 82 | 383 | 421 | 281 | 292 | ---- | 357 | 340 | 174 | 280 | 208 | 361 | 280 | 453 | 425 | 326 |
| Feb. 9 | 175 | 291 | 309 | 241 | 299 | 60 | 375 | 277 | 58 | 119 | 375 | 386 | 337 | 353 | 183 | 320 | 342 | 59 | 208 | 277 | 338 | 335 | 435 | 387 | 321 |
| Feb. 10 | 356 | 216 | 78 | 238 | 414 | 12 | 199 | 246 | 328 | 260 | 228 | 205 | 278 | 290 | 285 | 308 | 305 | 375 | 263 | 286 | 154 | 224 | 488 | 360 | 262 |
| Feb. 11 | 87 | 118 | 246 | 81 | 376 | 10 | 26 | 163 | 72 | 340 | 395 | 451 | 250 | 264 | 282 | 69 | 42 | 387 | 61 | 96 | 168 | 253 | 540 | 459 | 99 |
| Means | 179 | 216 | 206 | 187 | 316 | 43 | 205 | 218 | 104 | 182 | 304 | 313 | 275 | 290 | 207 | 244 | 229 | 227 | 186 | 216 | 246 | 257 | 420 | 367 | 234 |
| Departures | −33 | +12 | −42 | +13 | +59 | −13 | −29 | +38 | −68 | −16 | −16 | +12 | +51 | +70 | −17 | +70 | +71 | −24 | +25 | +42 | −21 | +40 | ---- | ---- | +65 |
| Feb. 12 | 97 | 260 | 129 | 149 | 405 | 72 | 52 | 221 | 19 | 332 | 375 | 459 | 234 | 203 | 310 | 298 | 52 | 382 | 214 | 163 | 266 | 198 | 262 | 332 | 272 |
| Feb. 13 | 31 | 125 | 259 | 44 | 365 | 96 | 52 | 121 | 41 | 210 | 375 | 343 | 176 | 146 | 237 | 34 | 17 | 283 | 23 | 44 | 347 | 190 | 440 | 498 | 70 |
| Feb. 14 | 283 | 315 | 188 | 115 | 255 | 105 | 418 | 88 | 246 | 265 | 326 | 391 | 107 | 63 | 174 | 229 | 159 | 311 | 213 | 79 | 386 | 62 | 298 | 492 | 211 |
| Feb. 15 | 364 | 239 | 342 | 361 | 388 | 96 | 369 | 328 | 338 | 160 | 297 | 374 | 367 | 380 | 121 | 296 | 295 | 122 | 226 | ---- | ---- | 362 | 553 | 529 | 244 |
| Feb. 16 | 135 | 279 | 361 | 166 | 364 | 132 | 376 | 179 | 240 | 289 | 293 | 350 | 253 | 307 | 296 | 252 | 276 | 369 | 162 | 143 | 368 | 295 | 472 | 503 | 259 |
| Feb. 17 | 316 | 298 | 353 | 216 | 167 | 97 | 391 | 172 | 304 | 272 | 254 | 280 | 192 | 109 | 195 | 322 | 345 | 233 | 318 | 270 | 332 | 119 | 550 | 514 | 251 |
| Feb. 18 | 381 | 250 | 268 | 306 | 243 | 136 | 262 | 294 | 264 | 52 | 248 | 397 | 350 | 351 | 88 | 304 | 308 | 130 | 218 | 225 | 377 | 321 | 491 | 412 | 250 |
| Means | 230 | 252 | 271 | 194 | 312 | 105 | 274 | 200 | 207 | 226 | 310 | 370 | 240 | 222 | 203 | 248 | 207 | 261 | 196 | 154 | 346 | 221 | 438 | 469 | 222 |
| Departures | 0 | +24 | +14 | −2 | +22 | +33 | +18 | +6 | −14 | −29 | −11 | +50 | +1 | −26 | −35 | +12 | +24 | −19 | +13 | −36 | +72 | −13 | ---- | ---- | +3 |
| Feb. 19 | 281 | 304 | 297 | 219 | 88 | ---- | 266 | 159 | 157 | 242 | 324 | 261 | 236 | 309 | 286 | 184 | 275 | 309 | 97 | 167 | 33 | 280 | 475 | 449 | 143 |
| Feb. 20 | 200 | 353 | 183 | 196 | 388 | 131 | 341 | 176 | 329 | 301 | 309 | 265 | 222 | 166 | 302 | 368 | 284 | 374 | 322 | 221 | 87 | 178 | 569 | 379 | 250 |
| Feb. 21 | 367 | 348 | 352 | 288 | 356 | 107 | 246 | 308 | 24 | 115 | 252 | 385 | 349 | 352 | 170 | 207 | 302 | 290 | 156 | 257 | 175 | 362 | 441 | 455 | 248 |
| Feb. 22 | 156 | 168 | 224 | 124 | 258 | 118 | 407 | 83 | 98 | 207 | 203 | 365 | 54 | 106 | 44 | 378 | 376 | 265 | 339 | 319 | 258 | 93 | 528 | 461 | 349 |
| Feb. 23 | 419 | 162 | 53 | 312 | 466 | 124 | 353 | 353 | 120 | 225 | 419 | 412 | 350 | 381 | 267 | 398 | 429 | 428 | 333 | 297 | 172 | 340 | 468 | 492 | 282 |
| Feb. 24 | 246 | 41 | 50 | 320 | 437 | 116 | 53 | 295 | 97 | 386 | 396 | 421 | 365 | 386 | 390 | 310 | 392 | 429 | 207 | 276 | 301 | 328 | 543 | 440 | 279 |
| Feb. 25 | 267 | 207 | 315 | 91 | 456 | 47 | 69 | 92 | 44 | 345 | 394 | 364 | 113 | 92 | 344 | 40 | 62 | 410 | 206 | 49 | 349 | 81 | 192 | 154 | 121 |
| Means | 277 | 226 | 211 | 221 | 350 | 107 | 248 | 210 | 124 | 260 | 328 | 353 | 241 | 256 | 358 | 269 | 303 | 358 | 237 | 226 | 196 | 237 | 459 | 404 | 239 |
| Departures | +11 | −25 | −69 | −5 | +74 | +15 | −18 | −19 | −99 | −2 | −9 | +30 | −30 | −10 | +5 | +20 | +80 | +47 | +43 | +3 | −87 | −39 | ---- | ---- | +24 |
| ACCUMULATED DEPARTURES ON FEB. 25, 1948 | −567 | +854 | −273 | +210 | +3,822 | +42 | +623 | −441 | −966 | −49 | −1,043 | +2,071 | −476 | −28 | −917 | +1,918 | +1,673 | +1,309 | +1,092 | −518 | −1,253 | −896 | ---- | ---- | +2,030 |

TABLE 3.—*Daily totals and weekly means of solar and sky radiation plus the radiation reflected from the ground, as received on a vertical surface facing south at Blue Hill, Mass., during February 1948*

| Date | 29 | 30 | 31 | 1 | 2 | 3 | 4 | Mean | 5 | 6 | 7 | 8 | 9 | 10 | 11 | Mean | 12 | 13 | 14 | 15 | 16 | 17 | 18 | Mean | 19 | 20 | 21 | 22 | 23 | 24 | 25 | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gm. cal/cm² | 205 | 620 | 626 | 496 | 437 | 562 | 51 | 428 | 450 | 274 | 544 | 485 | 646 | 387 | 265 | 436 | 326 | 134 | 101 | 614 | 307 | 219 | 530 | 319 | 246 | 191 | 535 | 60 | 592 | 497 | 70 | 313 |

**TABLE 4.**—*Daily totals and weekly means of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing east at Blue Hill, Mass., for the period from March 26, 1945, to Sept. 15, 1946*

[Gram calories per square centimeter]

| 1945 | March | | April | | May | | June | | July | | August | | September | | October | | November | | December | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* |
| First week | -- | --- | 2 | 63 | 30 | 50 | 4 | 154 | 2 | 186 | 30 | 240 | 3 | 355 | Oct. 1 | 93 | 29 | 123 | 3 | 46 |
| | -- | --- | 3 | 207 | May 1 | 143 | 5 | 93 | 3 | 306 | 31 | 204 | 4 | 215 | 2 | 27 | 30 | 95 | 4 | 30 |
| | -- | --- | 4 | 60 | 2 | 268 | 6 | 200 | 4 | 340 | Aug. 1 | 120 | 5 | 298 | 3 | 294 | 31 | 117 | 5 | 84 |
| | -- | --- | 5 | 58 | 3 | 362 | 7 | 456 | 5 | 300 | 2 | 374 | 6 | 255 | 4 | 305 | Nov. 1 | 236 | 6 | 11 |
| | -- | --- | 6 | 438 | 4 | 61 | 8 | 304 | 6 | 101 | 3 | 222 | 7 | 267 | 5 | 268 | 2 | 119 | 7 | 8 |
| | -- | --- | 7 | 366 | 5 | 173 | 9 | 336 | 7 | 377 | 4 | 384 | 8 | 299 | 6 | 88 | 3 | 83 | 8 | 133 |
| | -- | --- | 8 | 360 | 6 | 284 | 10 | 246 | 8 | 319 | 5 | 412 | 9 | 181 | 7 | 40 | 4 | 1 | 9 | 146 |
| Mean | -- | --- | -- | 222 | -- | 192 | -- | 256 | -- | 275 | -- | 279 | -- | 267 | -- | 160 | -- | 110 | -- | 66 |
| Second week | -- | --- | 9 | 369 | 7 | 250 | 11 | 173 | 9 | 180 | 6 | 101 | 10 | 95 | 8 | 163 | 5 | 75 | 10 | 28 |
| | -- | --- | 10 | 165 | 8 | 313 | 12 | 358 | 10 | 101 | 7 | 39 | 11 | 98 | 9 | 66 | 6 | 198 | 11 | 184 |
| | -- | --- | 11 | 220 | 9 | 390 | 13 | 407 | 11 | 320 | 8 | 361 | 12 | 110 | 10 | 275 | 7 | 63 | 12 | 190 |
| | -- | --- | 12 | 266 | 10 | 53 | 14 | 386 | 12 | 390 | 9 | 362 | 13 | 260 | 11 | 137 | 8 | 132 | 13 | 135 |
| | -- | --- | 13 | 328 | 11 | 118 | 15 | 386 | 13 | 389 | 10 | 469 | 14 | 171 | 12 | 54 | 9 | 81 | 14 | 39 |
| | -- | --- | 14 | 350 | 12 | 358 | 16 | 311 | 14 | 84 | 11 | 445 | 15 | 148 | 13 | 262 | 10 | 12 | 15 | 103 |
| | -- | --- | 15 | 391 | 13 | 58 | 17 | 189 | 15 | 101 | 12 | 444 | 16 | 222 | 14 | 232 | 11 | 18 | 16 | 89 |
| Mean | -- | --- | -- | 298 | -- | 220 | -- | 316 | -- | 209 | -- | 318 | -- | 158 | -- | 170 | -- | 83 | -- | 110 |
| Third week | -- | --- | 16 | 166 | 14 | 386 | 18 | 266 | 16 | 84 | 13 | 336 | 17 | 99 | 15 | 216 | 12 | 23 | 17 | 172 |
| | -- | --- | 17 | 111 | 15 | 384 | 19 | 336 | 17 | 67 | 14 | 199 | 18 | 51 | 16 | 123 | 13 | 25 | 18 | 148 |
| | -- | --- | 18 | 302 | 16 | 107 | 20 | 82 | 18 | 162 | 15 | 142 | 19 | 94 | 17 | 273 | 14 | 8 | 19 | 10 |
| | -- | --- | 19 | 351 | 17 | 64 | 21 | 363 | 19 | 138 | 16 | 555 | 20 | 60 | 18 | 239 | 15 | 53 | 20 | 135 |
| | -- | --- | 20 | 264 | 18 | 30 | 22 | 158 | 20 | 156 | 17 | 495 | 21 | 216 | 19 | 211 | 16 | 62 | 21 | 179 |
| | -- | --- | 21 | 383 | 19 | 58 | 23 | 396 | 21 | 274 | 18 | 484 | 22 | 318 | 20 | 199 | 17 | 76 | 22 | 102 |
| | -- | --- | 22 | 380 | 20 | 450 | 24 | 374 | 22 | 290 | 19 | 386 | 23 | 171 | 21 | 256 | 18 | 17 | 23 | 206 |
| Mean | -- | --- | -- | 280 | -- | 211 | -- | 282 | -- | 159 | -- | 371 | -- | 144 | -- | 217 | -- | 38 | -- | 136 |
| Fourth week | -- | --- | 23 | 433 | 21 | 154 | 25 | 341 | 23 | 96 | 20 | 458 | 24 | 59 | 22 | 81 | 19 | 182 | 24 | 206 |
| | -- | --- | 24 | 228 | 22 | 359 | 26 | 47 | 24 | 199 | 21 | 282 | 25 | 114 | 23 | 64 | 20 | 26 | 25 | 68 |
| | -- | --- | 25 | 87 | 23 | 486 | 27 | 94 | 25 | 354 | 22 | 217 | 26 | 92 | 24 | 21 | 21 | 186 | 26 | 28 |
| | -- | --- | 26 | 74 | 24 | 449 | 28 | 129 | 26 | 119 | 23 | 136 | 27 | 257 | 25 | 16 | 22 | 4 | 27 | 42 |
| | -- | --- | 27 | 69 | 25 | 388 | 29 | 373 | 27 | 207 | 24 | 35 | 28 | 41 | 26 | 16 | 23 | 153 | 28 | 126 |
| | -- | --- | 28 | 201 | 26 | 386 | 30 | 223 | 28 | 193 | 25 | 45 | 29 | 212 | 27 | 220 | 24 | 131 | 29 | 7 |
| | -- | --- | 29 | 172 | 27 | 224 | July 1 | 384 | 29 | 57 | 26 | 178 | 30 | 298 | 28 | 256 | 25 | 87 | 30 | 128 |
| | | | | | | | | | | | | | | | | | | | 31 | 14 |
| Mean | -- | --- | -- | 181 | -- | 350 | -- | 227 | -- | 175 | -- | 193 | -- | 153 | -- | 96 | -- | 110 | -- | 78 |
| Fifth week | [1] 26 | 335 | -- | --- | 28 | 133 | -- | --- | -- | -- | 27 | 298 | -- | --- | -- | --- | 26 | 122 | -- | --- |
| | 27 | 311 | -- | -- | 29 | 236 | -- | --- | -- | --- | 28 | 289 | -- | --- | -- | --- | 27 | 178 | -- | --- |
| | 28 | 296 | -- | --- | 30 | 206 | -- | --- | -- | --- | 29 | 364 | -- | --- | -- | --- | 28 | 36 | -- | --- |
| | 29 | 283 | -- | --- | 31 | 387 | -- | --- | -- | --- | 30 | 132 | -- | --- | -- | --- | 29 | 5 | -- | --- |
| | 30 | 178 | -- | --- | June 1 | 407 | -- | --- | -- | --- | 31 | 178 | -- | --- | --- | --- | 30 | 19 | -- | --- |
| | 31 | 58 | -- | --- | 2 | 194 | -- | -- | -- | --- | Sep. 1 | 134 | -- | --- | -- | --- | Dec. 1 | 38 | -- | --- |
| | Apr. 1 | 362 | -- | --- | 3 | 128 | -- | --- | -- | --- | 2 | 63 | -- | --- | -- | --- | 2 | 71 | -- | --- |
| Mean | -- | 261 | -- | --- | -- | 242 | -- | --- | -- | --- | -- | 194 | -- | --- | -- | --- | -- | 67 | -- | --- |

| 1946 | January | | February | | March | | April | | May | | June | | July | | August | | September | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* | *date* | *cal.* |
| First week | 1 | 165 | 29 | 235 | 26 | 186 | 2 | 99 | 30 | 140 | 4 | 156 | 2 | 112 | 30 | 281 | 3 | 226 |
| | 2 | 206 | 30 | 18 | 27 | 37 | 3 | 88 | May 1 | 344 | 5 | 166 | 3 | 355 | 31 | 282 | 4 | 348 |
| | 3 | 187 | 31 | 10 | 28 | 140 | 4 | 92 | 2 | 398 | 6 | 432 | 4 | 393 | Aug. 1 | 20 | 5 | 173 |
| | 4 | 154 | Feb. 1 | 149 | Mar. 1 | 320 | 5 | 150 | 3 | 424 | 7 | 350 | 5 | 406 | 2 | 59 | 6 | 318 |
| | 5 | 150 | 2 | 101 | 2 | 107 | 6 | 311 | 4 | 338 | 8 | 236 | 6 | 169 | 3 | 386 | 7 | 194 |
| | 6 | 50 | 3 | 216 | 3 | 292 | 7 | 393 | 5 | 79 | 9 | --- | 7 | 337 | 4 | 235 | 8 | 75 |
| | 7 | 6 | 4 | 260 | 4 | 249 | 8 | 412 | 6 | 359 | 10 | --- | 8 | 411 | 5 | 139 | 6 | 75 |
| Mean | -- | 131 | -- | 141 | -- | 190 | -- | 221 | -- | 297 | -- | 268 | -- | 312 | -- | 200 | -- | 199 |
| Second week | 8 | 93 | 5 | 237 | 5 | 165 | 9 | 64 | 7 | 246 | 11 | 235 | 9 | 92 | 6 | 253 | 10 | 79 |
| | 9 | 18 | 6 | 33 | 6 | 189 | 10 | 335 | 8 | 96 | 12 | 107 | 10 | 130 | 7 | 21 | 11 | 150 |
| | 10 | 126 | 7 | 179 | 7 | 126 | 11 | 343 | 9 | 401 | 13 | 89 | 11 | 136 | 8 | 132 | 12 | 86 |
| | 11 | 178 | 8 | 259 | 8 | 224 | 12 | 280 | 10 | 405 | 14 | 422 | 12 | 200 | 9 | 330 | 13 | 195 |
| | 12 | 13 | 9 | 38 | 9 | 105 | 13 | 106 | 11 | 60 | 15 | 244 | 13 | 392 | 10 | 188 | 14 | 186 |
| | 13 | 184 | 10 | 172 | 10 | 314 | 14 | 345 | 12 | 73 | 16 | 324 | 14 | 374 | 11 | 372 | [2] 15 | 247 |
| | 14 | 177 | 11 | 205 | 11 | 176 | 15 | 122 | 13 | 288 | 17 | 363 | 15 | 135 | 12 | 183 | -- | --- |
| Mean | -- | 113 | -- | 160 | -- | 186 | -- | 228 | -- | 224 | -- | 255 | -- | 208 | -- | 211 | -- | 157 |
| Third week | 15 | 33 | 12 | 248 | 12 | 324 | 16 | 392 | 14 | 230 | 18 | 82 | 16 | 421 | 13 | 172 | -- | --- |
| | 16 | 220 | 13 | 70 | 13 | 260 | 17 | 403 | 15 | 50 | 19 | 429 | 17 | 404 | 14 | 36 | -- | --- |
| | 17 | 53 | 14 | 18 | 14 | 218 | 18 | 368 | 16 | 148 | 20 | 415 | 18 | 377 | 15 | 375 | -- | --- |
| | 18 | 46 | 15 | 199 | 15 | 54 | 19 | 364 | 17 | 109 | 21 | 156 | 19 | 343 | 16 | 174 | -- | --- |
| | 19 | 196 | 16 | --- | 16 | 325 | 20 | 144 | 18 | 58 | 22 | 302 | 20 | 266 | 17 | 201 | -- | --- |
| | 20 | 92 | 17 | 236 | 17 | 124 | 21 | 413 | 19 | 144 | 23 | 347 | 21 | 72 | 18 | 296 | -- | --- |
| | 21 | 33 | 18 | 204 | 18 | 232 | 22 | 235 | 20 | 360 | 24 | 382 | 22 | 108 | 19 | 30 | -- | --- |
| Mean | -- | 96 | -- | 162 | -- | 220 | -- | 331 | -- | 157 | -- | 302 | -- | 284 | -- | 184 | -- | --- |
| Fourth week | 22 | 62 | 19 | 185 | 19 | 231 | 23 | 344 | 21 | 88 | 25 | 345 | 23 | 145 | 20 | 254 | -- | --- |
| | 23 | 240 | 20 | 70 | 20 | 319 | 24 | 78 | 22 | 364 | 26 | 374 | 24 | 319 | 21 | 250 | -- | --- |
| | 24 | 152 | 21 | 337 | 21 | 334 | 25 | 230 | 23 | 432 | 27 | 340 | 25 | 133 | 22 | 164 | -- | --- |
| | 25 | 74 | 22 | --- | 22 | 346 | 26 | 44 | 24 | 437 | 28 | 284 | 26 | 151 | 23 | 37 | -- | --- |
| | 26 | 67 | 23 | 273 | 23 | 368 | 27 | 39 | 25 | 397 | 29 | 374 | 27 | 353 | 24 | 347 | -- | --- |
| | 27 | 135 | 24 | 55 | 24 | 346 | 28 | 221 | 26 | 187 | 30 | 218 | 28 | 403 | 25 | 387 | -- | --- |
| | 28 | 154 | 25 | 273 | 25 | 46 | 29 | 77 | 27 | 71 | July 1 | 144 | 29 | 366 | 26 | 197 | -- | --- |
| Mean | | 126 | | 199 | | 284 | | 148 | | 282 | | 283 | | 267 | | 234 | -- | --- |
| Fifth week | -- | --- | -- | --- | 26 | 271 | -- | --- | 28 | 48 | -- | --- | -- | --- | 27 | 12 | -- | --- |
| | -- | --- | -- | --- | 27 | 345 | -- | --- | 29 | 136 | -- | --- | -- | --- | 28 | 350 | -- | --- |
| | -- | --- | -- | --- | 28 | 320 | -- | --- | 30 | 407 | -- | --- | -- | --- | 29 | 134 | -- | --- |
| | -- | --- | -- | --- | 29 | 323 | -- | --- | 31 | 221 | -- | --- | -- | --- | 30 | 139 | -- | --- |
| | -- | --- | -- | --- | 30 | 148 | -- | --- | June 1 | 92 | -- | --- | -- | --- | 31 | 229 | -- | --- |
| | -- | --- | -- | --- | 31 | 368 | -- | --- | 2 | 38 | -- | --- | -- | --- | Sep. 1 | 320 | -- | --- |
| | -- | --- | -- | --- | Apr. 1 | 341 | -- | --- | 3 | 454 | -- | --- | -- | --- | 2 | 162 | -- | --- |
| Mean | -- | --- | -- | --- | -- | 302 | -- | --- | -- | 199 | -- | --- | -- | --- | -- | 192 | -- | --- |

[1] Date of first measurements taken at Blue Hill.

[2] Date of last measurements taken at Blue Hill.

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