

Publikasjoner fra
DET NORSKE INSTITUTT FOR KOSMISK FYSIKK
Nr. 50

THE AURORAL OBSERVATORY AT TROMSØ
($\varphi=69^{\circ} 39'.8$ N, $\lambda=18^{\circ}56'.9$ E. Gr.)
OBSERVATIONS 1959

1961

A.S JOHN GRIEGS BOKTRYKKERI, BERGEN

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OZONE OBSERVATIONS

The table of ozone values of Tromsø covers 9 months and that of Longyear, Svalbard (78.2° N.) only 7 months.

Sky-observations are possible at Tromsø the whole year and at Longyear say 10 months, but the evaluation of values during the polar night period it too doubtful to be trusted in.

All observations were taken with Dobson Spectrophotometers, at Tromsø by Steinar Berger and at Longyear by H. Welde.

LONGYEAR, SVALBARD.

TABLE OF OZONE VALUES 1959.

Unit 0.001 cm.

M: diurnal mean. N: number of observations. R: diurnal range.

| Day | Mar. | | | Apr. | | | May. | | | Jun. | | | Jul. | | | Aug. | | | Sep. | | |
|----------|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|
| | M. | N. | R. | M. | N. | R. | M. | N. | R. | M. | N. | R. | M. | N. | R. | M. | N. | R. | M. | N. | R. |
| 1. | — | | | — | | | — | | | — | | | 328 | 2 | 11 | 287 | 3 | 11 | — | | |
| 2. | — | | | — | | | — | | | — | | | 343 | 2 | 1 | 297 | 1 | | 283 | 1 | |
| 3. | — | | | — | | | — | | | — | | | 241 | 3 | 10 | 299 | 1 | | — | | |
| 4. | — | | | — | | | — | | | — | | | 343 | 3 | 5 | — | | | — | | |
| 5. | — | | | — | | | — | | | — | | | 330 | 2 | 0 | — | | | — | | |
| 6. | — | | | — | | | — | | | — | | | 364 | 3 | 13 | — | | | 267 | 1 | |
| 7. | — | | | — | | | — | | | — | | | 345 | 3 | 24 | — | | | 279 | 2 | 6 |
| 8. | — | | | — | | | — | | | — | | | 332 | 2 | 5 | — | | | 293 | 2 | 12 |
| 9. | — | | | — | | | — | | | — | | | 333 | 2 | 5 | 292 | 2 | 0 | 296 | 2 | 20 |
| 10. | — | | | — | | | — | | | — | | | 319 | 3 | 2 | 293 | 2 | 2 | 280 | 3 | 7 |
| 11. | — | | | — | | | — | | | — | | | 323 | 3 | 14 | 305 | 2 | 1 | 289 | 2 | 2 |
| 12. | — | | | — | | | 384 | 1 | | — | | | 333 | 2 | 3 | 300 | 2 | 15 | — | | |
| 13. | — | | | — | | | 370 | 1 | | — | | | 350 | 2 | 10 | 287 | 2 | 1 | — | | |
| 14. | — | | | — | | | — | | | — | | | 325 | 2 | 15 | 310 | 2 | 8 | — | | |
| 15. | — | | | — | | | — | | | — | | | — | | | 325 | 3 | 17 | 269 | 2 | 4 |
| 16. | — | | | — | | | — | | | — | | | — | | | 292 | 1 | | 266 | 2 | 10 |
| 17. | — | | | — | | | — | | | — | | | — | | | 289 | 3 | 3 | 261 | 3 | 4 |
| 18. | — | | | — | | | — | | | — | | | — | | | 272 | 3 | 14 | 264 | 3 | 6 |
| 19. | — | | | — | | | — | | | — | | | — | | | — | | | 250 | 3 | 7 |
| 20. | — | | | — | | | 392 | 1 | | — | | | 305 | 3 | 22 | — | | | 239 | 3 | 3 |
| 21. | — | | | — | | | — | | | 355 | 2 | 1 | — | | | — | | | 248 | 3 | 13 |
| 22. | — | | | — | | | 369 | 1 | | 342 | 3 | 4 | — | | | — | | | 257 | 3 | 15 |
| 23. | — | | | — | | | — | | | 350 | 2 | 12 | — | | | — | | | 270 | 3 | 8 |
| 24. | — | | | — | | | — | | | 356 | 3 | 18 | — | | | — | | | 281 | 3 | 6 |
| 25. | — | | | — | | | — | | | 340 | 3 | 8 | 306 | 3 | 1 | — | | | 271 | 3 | 21 |
| 26. | — | | | — | | | 393 | 1 | | 351 | 3 | 18 | 298 | 1 | | 293 | 2 | 2 | 257 | 3 | 12 |
| 27. | — | | | — | | | 333 | 1 | | 324 | 3 | 15 | 304 | 2 | 6 | 287 | 2 | 15 | 254 | 2 | 4 |
| 28. | — | | | — | | | — | | | 309 | 1 | | 304 | 2 | 5 | 279 | 1 | | 255 | 3 | 5 |
| 29. | — | | | — | | | — | | | 313 | 3 | 11 | 301 | 3 | 7 | — | | | 258 | 3 | 11 |
| 30. | — | | | — | | | — | | | 333 | 3 | 14 | 296 | 2 | 4 | — | | | 266 | 3 | 11 |
| 31. | — | | | — | | | — | | | — | | | 303 | 3 | 1 | — | | | — | | |
| Mean. | — | | | — | | | 374 | | | 337 | | | 324 | | | 294 | | | 263 | | |

TROMSØ

TABLE OF OZONE VALUES, 1959.

Unit 0.001 cm.

M: diurnal mean. N: number of observations. R: diurnal range.

| Day | Feb. | | Mar. | | Apr. | | May | | Jun. | | Jul. | | Aug. | | Sep. | | Oct. | |
|---------|------|----|------|----|------|----|-----|----|------|----|------|----|------|----|------|----|------|----|
| | M. | N. | M. | N. | M. | N. | M. | N. | M. | N. | M. | N. | M. | N. | M. | N. | M. | N. |
| 1..... | 405 | 1 | 398 | 1 | 411 | 2 | 400 | 1 | 407 | 2 | 328 | 2 | 301 | 1 | 302 | 2 | 257 | 1 |
| 2..... | 405 | 1 | 356 | 1 | 425 | 2 | 376 | 2 | 385 | 2 | 351 | 2 | 313 | 1 | 295 | 1 | 230 | 1 |
| 3..... | 367 | 1 | 417 | 2 | 401 | 2 | 363 | 1 | 359 | 2 | 332 | 2 | 320 | 1 | 295 | 1 | 230 | 1 |
| 4..... | 460 | 1 | 401 | 2 | 410 | 2 | 342 | 2 | 373 | 2 | 333 | 2 | 320 | 1 | 281 | 2 | | |
| 5..... | 374 | 2 | 418 | 2 | 404 | 1 | 343 | 1 | 365 | 2 | 341 | 1 | 317 | 1 | 280 | 1 | | |
| 6..... | 328 | 1 | 373 | 2 | 460 | 2 | 379 | 1 | 348 | 2 | 341 | 1 | 318 | 1 | | | 256 | 1 |
| 7..... | 320 | 2 | 420 | 2 | 431 | 2 | 423 | 1 | 431 | 1 | 351 | 2 | | | 283 | 1 | 241 | 1 |
| 8..... | | | | | 457 | 2 | 438 | 2 | 431 | 1 | 335 | 2 | 314 | 2 | 294 | 1 | 245 | 1 |
| 9..... | 347 | 1 | 409 | 1 | 438 | 2 | 387 | 2 | 348 | 2 | 332 | 2 | 343 | 1 | 277 | 2 | 245 | 1 |
| 10..... | 351 | 1 | 379 | 2 | 428 | 2 | 392 | 1 | 337 | 2 | 333 | 2 | 326 | 1 | 314 | 1 | 232 | 2 |
| 11..... | 337 | 1 | 380 | 2 | 449 | 2 | 382 | 1 | 344 | 2 | 341 | 1 | 326 | 1 | 288 | 2 | 203 | 1 |
| 12..... | 314 | 2 | 368 | 2 | 464 | 1 | 349 | 2 | 382 | 1 | 310 | 1 | 288 | 2 | 276 | 1 | 203 | 1 |
| 13..... | 369 | 1 | 342 | 2 | 458 | 2 | 357 | 2 | 332 | 2 | 297 | 2 | 277 | 1 | 286 | 1 | 205 | 1 |
| 14..... | 334 | 2 | 394 | 2 | 461 | 1 | 376 | 2 | 363 | 1 | 347 | 2 | 292 | 2 | 267 | 1 | 252 | 2 |
| 15..... | 354 | 1 | 404 | 1 | | | 385 | 1 | 366 | 2 | 331 | 2 | 278 | 2 | 284 | 2 | 271 | 1 |
| 16..... | 414 | 2 | 415 | 1 | 439 | 1 | 394 | 1 | 352 | 1 | 315 | 2 | 277 | 1 | 264 | 1 | 273 | 1 |
| 17..... | 479 | 1 | 422 | 2 | 480 | 1 | 408 | 1 | 388 | 2 | 292 | 2 | 269 | 2 | 252 | 2 | 256 | 1 |
| 18..... | 343 | 2 | 490 | 1 | | | 422 | 1 | 352 | 1 | 296 | 2 | 297 | 2 | 250 | 2 | | |
| 19..... | 420 | 1 | | | 480 | 1 | 438 | 1 | 406 | 2 | 280 | 1 | 303 | 1 | 245 | 2 | 295 | 1 |
| 20..... | 390 | 2 | 422 | 2 | 520 | 2 | 404 | 2 | 381 | 1 | 274 | 2 | | | 248 | 1 | 303 | 2 |
| 21..... | 388 | 1 | 422 | 2 | 526 | 2 | 414 | 2 | 362 | 1 | 285 | 2 | 283 | 1 | 261 | 2 | 291 | 2 |
| 22..... | | | 379 | 1 | 505 | 2 | 373 | 2 | 327 | 2 | 314 | 2 | | | 296 | 2 | 308 | 2 |
| 23..... | 326 | 1 | 383 | 2 | 477 | 2 | 405 | 2 | 311 | 2 | 296 | 1 | 313 | 1 | 303 | 2 | 286 | 1 |
| 24..... | 388 | 2 | 394 | 2 | 479 | 1 | 416 | 1 | 313 | 2 | 274 | 2 | 310 | 1 | 314 | 2 | 286 | 1 |
| 25..... | 336 | 2 | 425 | 2 | 423 | 1 | 393 | 1 | 333 | 2 | 284 | 2 | 291 | 2 | 306 | 2 | 286 | 1 |
| 26..... | 364 | 1 | 430 | 1 | 410 | 1 | 386 | 2 | | | 318 | 2 | 299 | 2 | 302 | 1 | 298 | 1 |
| 27..... | 445 | 2 | 423 | 1 | 380 | 2 | 386 | 1 | | | 307 | 2 | 295 | 2 | 288 | 1 | 313 | 1 |
| 28..... | 381 | 1 | 433 | 2 | 398 | 2 | 386 | 1 | | | 340 | 1 | 301 | 1 | 273 | 1 | 272 | 1 |
| 29..... | | | 422 | 1 | 349 | 2 | 369 | 1 | | | 335 | 2 | 302 | 1 | 252 | 1 | 303 | 1 |
| 30..... | | | 435 | 2 | 389 | 1 | 367 | 1 | | | 310 | 1 | 306 | 1 | 249 | 1 | | |
| 31..... | | | | | | | 370 | 1 | | | | | 288 | 1 | | | | |
| Mean: | 377 | | 405 | | 441 | | 388 | | 362 | | 313 | | 301 | | 281 | | 264 | |

EARTH MAGNETISM, 1959 TROMSØ

GENERAL REMARKS

The instrumental equipment used for the magnetic measurements and registrations is the same as that previously used, a description of which is given in No. 1 and No. 33 of the present series of publications.

The observations were made by S. Berger and the calculation work by Liv Nestvold.

SCALE-VALUES

The following scale-values were determined:

D — curves: 1'.45 or 4.73 γ per mm.

H — curves: 5.27 γ per mm.

V — curves: 7.25 γ per mm.

BASE-LINE VALUES

The determination of the base-line values resulted in the table given below.

The quiet mean Inclination value for 1959 was calculated to $77^{\circ} 35'.2$.

The temperature coefficient for the H-variometer is 8.7γ , and for the V-variometer $\div 2.3\gamma$ per degree Celcius.

OBSERVED AND ADOPTED BASE-LINE VALUES 1959

| D | | | H | | | V | | |
|----------|-----------|-----------|----------|----------------|----------------|----------|----------------|----------------|
| Date | Observ. | Adopt. | Date | Observ. | Adopt. | Date. | Observ. | Adopt. |
| I 1. | 1°32'.3 W | 1°32'.2 W | I 1. | 11216 γ | 11217 γ | I 3. | 50505 γ | 50505 γ |
| II 25. | 32.1 | 32.2 | II 24. | 17 | 17 | II 16. | 09 | 08 |
| IV 3. | 32.1 | 32.0 | IV 3. | 16 | 17 | IV 4. | 07 | 08 |
| IV 6. | 31.8 | 32.0 | V 2. | 16 | 17 | V 2. | 10 | 08 |
| V 29. | 31.6 | 31.8 | V 4. | 18 | 17 | VI 6. | 07 | 08 |
| VI 2. | 32.0 | 31.8 | V 28. | 14 | 15 | VI 12. | 08 | 08 |
| VI 13. | 31.7 | 31.8 | VI 3. | 14 | 15 | VI 14. | 08 | 08 |
| VIII 29. | 31.8 | 31.8 | VIII 29. | 17 | 17 | VIII 30. | 07 | 08 |
| IX 3. | 32.0 | 32.0 | X 29. | 17 | 17 | IX 3. | 03 | 03 |
| X 24. | 31.9 | 32.0 | X 22. | 16 | 17 | IX 8. | 02 | 03 |
| XII 23. | 32.2 | 32.2 | XI 15. | 15 | 15 | IX 11. | 03 | 03 |
| | | | XII 23. | 13 | 15 | X 3. | 03 | 03 |

EXPLANATION OF THE TABLES

For each of the components D , H and V two series of tables are given. One series gives, in the usual way, the hourly mean values centered at half hours Gr. M. T. In these tables the column headed M gives the ordinary diurnal means. R designates the range, i. e. the difference between the maximum and minimum value measured on the magnetogram. The horizontal line marked M gives the monthly means of the hourly values, and the line marked QM gives the monthly means of the *quiet* hourly values.

The second series of tables gives the hourly values of the Storminess ("average perturbing force" or "activity"). As to definition of the storminess and the method for separating it, we refer to No. 2 and 4 in the present series of publications. In the storminess tables the column headed M gives the diurnal means. The columns headed PS , NS and AS give the diurnal sum of the positive, negative and absolute storminess respectively. The column headed CH gives the magnetic character numbers. We consider the diurnal sum of the absolute storminess as the best expression for the magnetic activity during a day, and we will that quantity for defining the character numbers. Only the strongest perturbed component, the Horizontal Intensity, is used in characterisation. Character number 0 comprises diurnal sum of absolute storminess (AS) up to 400γ , character number 1 from 400γ to 1200γ and character number 2 greater than 1200γ . The horizontal line marked M contains the monthly means of the hourly values, and the two lines marked MPS and MNS give the monthly means of the positive and negative storminess respectively.

In D the storminess is reckoned positive towards magnetic west, in H positive towards magnetic north, and in V positive downwards.

In addition to the main tables, resuming tables, figures and vector diagrams are given at the end of the year-book.

EARTH MAGNETISM 1959, BEAR ISLAND

$$(\varphi = 74.5^\circ \text{ N.}, \lambda = 19.2^\circ \text{ E})$$

Some measurements with QHM and BMZ were taken by S. Berger during an inspection period in June 1959. According to these measurements and the registrations we may give some approximate annual values for 1959.

$$D = 2^\circ 30' \text{ E. } H = 9215\gamma. V = 52160\gamma.$$

For comparison we print the K-indices of Bear Island and Tromsø side by side.

K-INDICES FOR THREE-HOUR INTERVAL 1959.

Tromsø

Range 2000 γ for K = 9. Scale values: D = 4.73 γ . H = 5.27 γ . V = 7.25 γ .

| Date | Jan. | | Feb. | | Mar. | | Apr. | | May | | Jun. | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 0000 | 0000 | 4322 | 4343 | 5554 | 5666 | 5452 | 1110 | 3334 | 4243 | 4422 | 2234 |
| 2 | 0001 | 0000 | 2442 | 4555 | 5554 | 4575 | 0112 | 2345 | 4521 | 2224 | 4223 | 5446 |
| 3 | 2211 | 2022 | 6422 | 4546 | 5433 | 3456 | 5423 | 2225 | 2111 | 2245 | 5623 | 4433 |
| 4 | 2001 | 1443 | 6342 | 4576 | 5233 | 3464 | 5312 | 1223 | 5123 | 4434 | 6333 | 4335 |
| 5 | 1002 | 4556 | 4433 | 4566 | 4432 | 2564 | 4112 | 2120 | 7633 | 4332 | 5424 | 4343 |
| 6 | 4432 | 5456 | 6423 | 3456 | 4312 | 2230 | 3011 | 2343 | 1010 | 2100 | 2223 | 4445 |
| 7 | 5432 | 1366 | 4322 | 2343 | 0002 | 3454 | 1102 | 2364 | 1011 | 2332 | 5321 | 3332 |
| 8 | 5422 | 3565 | 2321 | 3345 | 5332 | 1323 | 4534 | 5446 | 5555 | 5343 | 2223 | 4344 |
| 9 | 6222 | 4666 | 6542 | 3335 | 3200 | 2220 | 6533 | 2354 | 3323 | 5344 | 3335 | 5443 |
| 10 | 6345 | 6576 | 4200 | 0123 | 0001 | 0000 | 4566 | 6655 | 4233 | 3442 | 5522 | 3432 |
| 11 | 6322 | 3335 | 1334 | 5535 | 0000 | 2032 | 3343 | 3257 | 5334 | 4456 | 3225 | 5543 |
| 12 | 5311 | 2234 | 4553 | 3456 | 5323 | 4453 | 4322 | 2233 | 7665 | 5765 | 2001 | 1332 |
| 13 | 3222 | 2343 | 5323 | 5466 | 3333 | 3365 | 3212 | 3343 | 3334 | 4355 | 2101 | 1111 |
| 14 | 0031 | 2335 | 5444 | 5654 | 1322 | 2344 | 4422 | 3244 | 2112 | 4312 | 1223 | 4325 |
| 15 | 3432 | 2213 | 6564 | 5763 | 3311 | 2204 | 5211 | 1242 | 4434 | 5555 | 5233 | 2212 |
| 16 | 2004 | 4455 | 7653 | 5667 | 3010 | 0103 | 3113 | 1242 | 6653 | 3226 | 4322 | 2332 |
| 17 | 4433 | 5442 | 6553 | 3233 | 2110 | 1113 | 0123 | 3334 | 4234 | 4433 | 1000 | 1345 |
| 18 | 5542 | 3456 | 3000 | 0111 | 0100 | 2102 | 5102 | 2221 | 4533 | 2445 | 3323 | 4333 |
| 19 | 3412 | 2243 | 5543 | 4431 | 0012 | 2110 | 0101 | 2224 | 4434 | 4245 | 2222 | 2223 |
| 20 | 2000 | 0133 | 0012 | 0000 | 1221 | 1120 | 2102 | 2101 | 4222 | 2353 | 4321 | 3225 |
| 21 | 0000 | 0332 | 0011 | 2243 | xxx1 | 2333 | 5423 | 3310 | 4223 | 2445 | 2111 | 4332 |
| 22 | 0121 | 1234 | 2433 | 3325 | 0011 | 1113 | 0001 | 1110 | 5433 | 5434 | 2223 | 4433 |
| 23 | 5201 | 2134 | 5434 | 3000 | 3322 | 2323 | 0004 | 4454 | 6422 | 2443 | 3222 | 2545 |
| 24 | 3220 | 0011 | 0000 | 1000 | 3212 | 2332 | 3344 | 4535 | 5444 | 4467 | 7732 | 1345 |
| 25 | 1102 | 4553 | 3454 | 6666 | 2521 | 5553 | 3433 | 3556 | 6343 | 3344 | 5113 | 2226 |
| 26 | 2313 | 4354 | 6554 | 4566 | 3135 | 6557 | 6633 | 3355 | 5102 | 2342 | 5434 | 4552 |
| 27 | 1212 | 2343 | 5542 | 4765 | 7774 | 5756 | 5434 | 4546 | 5321 | 2021 | 0123 | 6556 |
| 28 | 4320 | 2344 | 4434 | 5776 | 3434 | 5657 | 4424 | 3255 | 1102 | 1103 | 6654 | 6555 |
| 29 | 2113 | 4565 | | | 8655 | 5664 | 4434 | 5555 | 3001 | 0001 | 5555 | 5556 |
| 30 | 4332 | 2340 | | | 5544 | 3355 | 2422 | 5653 | 1001 | 3210 | 5446 | 6644 |
| 31 | 5533 | 3334 | | | 4423 | 4376 | | | 2223 | 5455 | | |
| Date | Jul. | | Aug. | | Sep. | | Oct. | | Nov. | | Dec. | |
| 1 | 3211 | 2226 | 5533 | 5463 | 5433 | 3454 | 6644 | 4456 | 4554 | 5555 | 5544 | 5554 |
| 2 | 6653 | 4422 | 5632 | 3433 | 6554 | 2354 | 4653 | 1113 | 6754 | 6766 | 5554 | 5566 |
| 3 | 3311 | 1110 | 5633 | 5533 | 3333 | 3556 | 1233 | 5566 | 6553 | 5667 | 6554 | 5756 |
| 4 | 0013 | 3444 | 2324 | 4456 | 6555 | 5666 | 6644 | 5465 | 3354 | 5675 | 5522 | 2344 |
| 5 | 5434 | 4353 | 2223 | 4444 | 5433 | 4257 | 6635 | 4566 | 6554 | 3354 | 0033 | 5767 |
| 6 | 3323 | 5434 | 3324 | 4564 | 6433 | 4222 | 6554 | 5676 | 6534 | 4466 | 3323 | 3354 |
| 7 | 4424 | 4432 | 6423 | 3453 | 2012 | 2343 | 4423 | 3146 | 2420 | 1364 | 5310 | 3324 |
| 8 | 2533 | 5443 | 4124 | 3415 | 1123 | 2325 | 4312 | 2322 | 2422 | 3343 | 2210 | 0354 |
| 9 | 3543 | 3355 | 5233 | 5653 | 4102 | 2314 | 3111 | 2342 | 0100 | 1366 | 1111 | 2323 |
| 10 | 5442 | 1122 | 5522 | 4444 | 2111 | 2226 | 3110 | 1332 | 4211 | 2336 | 3210 | 0233 |
| 11 | 6643 | 3667 | 4423 | 3503 | 3444 | 3355 | 3000 | 0244 | 4201 | 1034 | 0111 | 1224 |
| 12 | 6534 | 5435 | 2112 | 2214 | 6433 | 3343 | 2000 | 2355 | 3201 | 0245 | 3422 | 2355 |
| 13 | 4423 | 4534 | 2412 | 3323 | 4222 | 1237 | 1011 | 0013 | 2312 | 3235 | 4321 | 1336 |
| 14 | 4534 | 5443 | 2322 | 3223 | 4434 | 4365 | 3222 | 3345 | 5545 | 4555 | 6544 | 5765 |
| 15 | 6678 | 8767 | 4314 | 5446 | 2223 | 3366 | 5433 | 4356 | 4130 | 1124 | 4344 | 3556 |
| 16 | 6542 | 4356 | 6456 | 6766 | 6532 | 4365 | 2110 | 0143 | 1010 | 2554 | 5432 | 3545 |
| 17 | 5544 | 4677 | 7776 | 5766 | 3213 | 4466 | 0123 | 3355 | 4422 | 4223 | 5222 | 2243 |
| 18 | 6665 | 3446 | 3553 | 5463 | 4433 | 4346 | 6534 | 4465 | 3422 | 3373 | 4122 | 3333 |
| 19 | 6643 | 4545 | 5543 | 3353 | 6644 | 5223 | 4532 | 2246 | 2333 | 3424 | 4434 | 4534 |
| 20 | 4433 | 4446 | 4653 | 4335 | 4445 | 5677 | 6122 | 2120 | 5200 | 0023 | 3110 | 0243 |
| 21 | 6443 | 4454 | 6544 | 3465 | 6774 | 6766 | 0000 | 1124 | 1213 | 6654 | 2100 | 0024 |
| 22 | 4432 | 4427 | 5453 | 3366 | 6764 | 5574 | 4324 | 6655 | 4423 | 2354 | 3000 | 1335 |
| 23 | 5322 | 3134 | 4445 | 4554 | 4323 | 4656 | 5413 | 1920 | 6643 | 4574 | 2132 | 3655 |
| 24 | 5224 | 4356 | 5543 | 4444 | 6534 | 5454 | 0101 | 3233 | 3311 | 3334 | 5233 | 4412 |
| 25 | 5544 | 4466 | 4343 | 4435 | 6533 | 5656 | 5533 | 3436 | 4202 | 5445 | 3321 | 1244 |
| 26 | 4544 | 4565 | 5322 | 2243 | 5434 | 5365 | 5333 | 6646 | 4224 | 3124 | 4333 | 4666 |
| 27 | 5554 | 3366 | 5222 | 1001 | 6334 | 5655 | 3333 | 3333 | 5231 | 2345 | 5555 | 5577 |
| 28 | 4433 | 4334 | 0110 | 0102 | 6433 | 3354 | 2000 | 1022 | 6754 | 3465 | 6555 | 6765 |
| 29 | 3533 | 2114 | 3112 | 3434 | 5222 | 3215 | 0000 | 2122 | 4422 | 5563 | 5444 | 4334 |
| 30 | 3212 | 1112 | 3233 | 3342 | 3223 | 5554 | 6422 | 3356 | 4444 | 6755 | 4232 | 3443 |
| 31 | 2323 | 4344 | 2223 | 4244 | | | 4325 | 4557 | | | 2211 | 0143 |

K-INDICES FOR THREE-HOUR INTERVAL 1959.

Bear Island

Range 2000 γ for K = 9. Scale values: D = 5.7 γ . H = 6.0 γ . V = 21.2 γ .

| Date | Jan. | Feb. | Mar. | Apr. | May | Jun. |
|------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 | 0001 0001 | 3433 5353 | 6655 5757 | 4452 2111 | 1443 3333 | 5433 xxxx |
| 2 | 1001 1201 | 2443 3355 | 5554 xxxx | 1213 2333 | 4522 3324 | xxxx 4544 |
| 3 | 3313 2133 | 5333 5446 | xxxx 3655 | 4324 3324 | 3123 3225 | 5534 3444 |
| 4 | 3122 2542 | 6353 4565 | 4343 4662 | 4233 2343 | 4234 3334 | 5444 5335 |
| 5 | 2112 4555 | 4553 4545 | 4433 3543 | 3213 2252 | 6534 4322 | 5545 5343 |
| 6 | xxxx 6555 | 5423 4463 | 4433 2442 | 2221 3543 | 2112 3212 | 3335 5355 |
| 7 | 4543 1365 | 5333 3363 | 1214 3443 | 1213 3364 | 2122 2323 | 4443 4443 |
| 8 | 5433 2344 | 2433 4235 | 5333 2322 | 3434 4445 | 4555 4333 | 3223 4445 |
| 9 | 6333 4555 | xxxx 4343 | 2321 3321 | 5555 3263 | 3335 3334 | 3346 5443 |
| 10 | 6335 5353 | 4211 2215 | 1112 1111 | 3555 6564 | 3455 3443 | 6543 4443 |
| 11 | 4333 3254 | 2345 5435 | 1112 2132 | 2344 3236 | 5444 4546 | 4437 6533 |
| 12 | 5223 3242 | 5453 3346 | 4334 4332 | 3333 3225 | 7667 6654 | 3212 2342 |
| 13 | 1333 3332 | 6333 4665 | 2344 3326 | 2333 4324 | 4454 5456 | 3321 2223 |
| 14 | 2143 3325 | 3454 564x | 2343 3341 | 3332 3323 | 4324 5432 | 2324 4425 |
| 15 | 3543 3311 | xxxx xxxx | 2323 3213 | 4232 3333 | 4434 5556 | 4454 3332 |
| 16 | 1123 4434 | xxxx 4655 | 3121 1211 | 3324 2344 | 5544 3225 | 4433 3233 |
| 17 | 3544 5453 | 5543 3342 | 3222 2223 | 2223 4223 | 3345 6433 | 2111 xxxx |
| 18 | 3443 4655 | 3111 1122 | 1211 3123 | 4323 3222 | 4453 3545 | xxxx xxxx |
| 19 | 3533 3363 | 4443 3321 | 1112 2321 | 1222 3324 | 4533 3344 | xxxx xxxx |
| 20 | 2111 1355 | 1112 1110 | 2222 2222 | 3223 3322 | 3333 3453 | xxxx xxxx |
| 21 | 1112 1332 | 1123 3322 | 2113 3333 | 2334 3321 | 4444 4344 | xxxx 5443 |
| 22 | 1333 2353 | 3443 2332 | 1112 2123 | 1121 1222 | 5544 5343 | 3434 4434 |
| 23 | 5322 3353 | 4544 1111 | 3333 3324 | 1125 4443 | 4423 3333 | 4xxx 2544 |
| 24 | 4242 1133 | 1111 2211 | 3323 2333 | 3334 4324 | 5566 5436 | 6542 4453 |
| 25 | 3213 3353 | 3455 6554 | 3633 3453 | 3544 3533 | 5554 3444 | 2322 xxxx |
| 26 | 2423 4353 | 6554 5666 | 3235 5327 | 6634 3445 | 3213 3353 | xxxx 4532 |
| 27 | 3333 3433 | 4534 4542 | 6665 xxxx | 5433 4534 | 3222 2233 | 2234 6445 |
| 28 | 5331 3444 | 3444 5664 | xxxx 5565 | 4335 3334 | 2213 3211 | 6664 5545 |
| 29 | 2333 4444 | | 6665 4665 | 3453 4334 | 3112 xxxx | xxx6 5445 |
| 30 | 4443 3361 | | 3445 4345 | 2433 5452 | xxxx 3311 | 5547 5454 |
| 31 | 3343 2322 | | 5544 3456 | | 3434 4365 | |
| Date | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| 1 | 3222 3342 | 4455 5553 | 4434 5544 | 4344 3355 | 3554 4545 | 4454 6453 |
| 2 | 6553 4323 | 4443 3433 | 5465 3353 | 2443 3223 | 5455 5755 | 5443 4553 |
| 3 | 4421 2322 | 4454 4444 | 3343 4546 | 2344 5555 | 5454 4465 | 3433 4655 |
| 4 | 2635 4454 | 3435 5444 | 4455 5555 | 5443 5435 | 3334 3665 | 4565 3235 |
| 5 | 6555 5353 | 3334 4534 | 4544 4466 | 6534 4443 | 5555 5464 | 1144 5556 |
| 6 | 3445 5435 | 4345 5544 | 5443 4432 | 4545 5566 | 6544 4566 | 2333 3354 |
| 7 | 4444 xxxx | 5434 4544 | 2122 3342 | 3434 3235 | 3542 2464 | 4432 3214 |
| 8 | xxxx 5543 | 3334 4414 | 2334 4443 | 3433 3443 | 3542 xxxx | 2332 1333 |
| 9 | 3454 6335 | 5335 5444 | 3213 3324 | 3323 3353 | xxxx 2344 | 2223 3334 |
| 10 | 5654 3343 | 3433 4333 | 3332 3223 | 3221 2532 | 5333 3324 | 3332 1245 |
| 11 | 5553 5656 | 4433 4412 | 3444 4444 | 2211 2244 | 3312 2144 | 2233 3224 |
| 12 | 6432 5434 | 3223 3324 | 3333 3232 | 3112 3354 | 432x 1234 | 3643 3255 |
| 13 | 4544 4434 | 3323 3323 | 6433 3346 | 2122 1122 | 4233 3234 | 3433 2225 |
| 14 | 44xx xxxx | 3433 3224 | 3545 3324 | 2333 4344 | 4544 4555 | 5444 5554 |
| 15 | xxxx 4343 | 3334 4444 | 3344 4455 | 4543 3445 | 4232 2233 | 3443 4536 |
| 16 | 5446 3555 | 4566 5556 | 5543 3343 | 4331 2354 | 2241 3654 | 4444 4545 |
| 17 | 4555 4666 | 7654 5555 | 3334 3365 | 1224 3345 | 3633 4123 | 5343 3244 |
| 18 | 6656 3444 | 3553 4363 | 4444 3355 | 5434 4544 | 4423 3451 | 4333 3334 |
| 19 | 4344 5644 | 5554 4354 | 6543 4223 | 3533 2354 | 3333 4414 | 3343 3322 |
| 20 | 4545 4446 | 4564 4434 | 4555 6576 | 6233 3232 | 5321 1033 | 2232 2333 |
| 21 | 6564 x365 | 6553 3654 | 5654 5545 | 1112 3234 | 2333 4344 | 2322 1124 |
| 22 | 4554 4435 | 4553 4335 | 4555 5453 | 3344 5545 | 3434 3352 | 4212 2335 |
| 23 | 5534 5355 | 4555 4544 | 3333 4555 | 5423 3231 | 5444 5453 | 3343 3646 |
| 24 | 5445 3456 | 4454 3345 | 4444 5444 | 2212 3233 | 1322 3552 | 4344 3322 |
| 25 | 6564 4455 | 3454 4435 | 4444 5746 | 3533 2435 | 3323 3433 | 3442 2233 |
| 26 | 5655 4555 | 4443 2253 | 5534 4455 | 3443 6736 | 2233 4214 | 3443 5454 |
| 27 | 3455 4343 | 4332 2113 | 5434 5544 | 3443 4343 | 4333 3454 | 4454 5455 |
| 28 | 4535 4434 | 1221 1213 | 4344 3444 | 2212 2211 | 6644 3255 | 6455 6564 |
| 29 | 3534 3223 | 3224 4435 | 3223 4355 | 1222 3233 | 5643 3344 | 4554 4534 |
| 30 | 2232 2221 | 5344 4333 | 2323 4355 | 6333 3255 | 5444 3554 | 4344 3353 |
| 31 | 2434 5344 | 5234 5343 | | 4333 4555 | | 3423 1353 |

DAYLY SUM OF K-INDICES 1959.

Tr. means Tromsø. B.I. means Bear Island.

| Date | Jan. | | Feb. | | Mar. | | Apr. | | May | | Jun. | | Jul. | | Aug. | | Sep. | | Oct. | | Nov. | | Dec. | |
|----------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. | Tr. | B.I. |
| 1. | 0 | 2 | 25 | 29 | 42 | 46 | 19 | 20 | 26 | 24 | 23 | — | 19 | 21 | 34 | 36 | 31 | 33 | 39 | 31 | 38 | 35 | 37 | 35 |
| 2. | 1 | 6 | 32 | 29 | 40 | — | 18 | 18 | 22 | 25 | 30 | — | 32 | 31 | 29 | 28 | 34 | 34 | 24 | 23 | 47 | 41 | 41 | 33 |
| 3. | 12 | 19 | 33 | 33 | 33 | — | 25 | 25 | 18 | 22 | 30 | 32 | 11 | 20 | 33 | 33 | 31 | 32 | 31 | 33 | 43 | 37 | 43 | 33 |
| 4. | 15 | 20 | 37 | 37 | 30 | 32 | 19 | 24 | 26 | 30 | 33 | 33 | 19 | 33 | 30 | 32 | 44 | 38 | 40 | 33 | 38 | 33 | 27 | 33 |
| 5. | 23 | 25 | 35 | 35 | 30 | 29 | 13 | 20 | 31 | 29 | 34 | 34 | 31 | 37 | 25 | 29 | 33 | 37 | 41 | 33 | 35 | 39 | 31 | 31 |
| 6. | 33 | — | 33 | 31 | 17 | 26 | 17 | 22 | 5 | 14 | 26 | 32 | 27 | 33 | 31 | 34 | 25 | 29 | 44 | 40 | 38 | 40 | 26 | 36 |
| 7. | 30 | 31 | 23 | 29 | 18 | 22 | 19 | 23 | 13 | 17 | 22 | 30 | 27 | — | 30 | 33 | 17 | 19 | 27 | 27 | 22 | 30 | 21 | 23 |
| 8. | 32 | 28 | 23 | 26 | 22 | 23 | 35 | 31 | 35 | 32 | 24 | 27 | 29 | — | 24 | 26 | 20 | 27 | 19 | 27 | 23 | — | 17 | 20 |
| 9. | 34 | 34 | 31 | — | 11 | 17 | 31 | 34 | 27 | 27 | 30 | 32 | 31 | 33 | 32 | 33 | 17 | 21 | 17 | 25 | 17 | — | 14 | 22 |
| 10. | 42 | 33 | 12 | 18 | 1 | 9 | 43 | 39 | 25 | 31 | 26 | 33 | 21 | 33 | 30 | 26 | 16 | 21 | 14 | 20 | 22 | 26 | 17 | 23 |
| 11. | 27 | 27 | 29 | 31 | 7 | 13 | 30 | 27 | 34 | 36 | 29 | 35 | 41 | 40 | 24 | 25 | 31 | 31 | 13 | 18 | 15 | 20 | 12 | 21 |
| 12. | 21 | 23 | 35 | 33 | 29 | 26 | 21 | 23 | 47 | 47 | 12 | 19 | 35 | 31 | 15 | 22 | 29 | 22 | 17 | 22 | 17 | 19 | 26 | 31 |
| 13. | 21 | 21 | 34 | 36 | 29 | 27 | 21 | 24 | 30 | 37 | 8 | 18 | 29 | 32 | 20 | 22 | 23 | 30 | 7 | 13 | 21 | 24 | 23 | 24 |
| 14. | 17 | 23 | 37 | 31 | 21 | 23 | 25 | 22 | 46 | 27 | 22 | 26 | 32 | — | 19 | 24 | 33 | 29 | 24 | 26 | 38 | 36 | 42 | 36 |
| 15. | 20 | 23 | 42 | — | 14 | 19 | 18 | 23 | 35 | 36 | 20 | 28 | 55 | — | 31 | 29 | 27 | 32 | 33 | 32 | 16 | 21 | 34 | 32 |
| 16. | 24 | 22 | 45 | — | 8 | 12 | 17 | 25 | 33 | 30 | 21 | 25 | 35 | 37 | 46 | 42 | 34 | 30 | 12 | 25 | 18 | 27 | 31 | 34 |
| 17. | 30 | 33 | 30 | 29 | 10 | 18 | 19 | 30 | 27 | 31 | 14 | — | 42 | 41 | 52 | 42 | 39 | 30 | 22 | 24 | 32 | 25 | 22 | 28 |
| 18. | 34 | 34 | 6 | 12 | 6 | 14 | 14 | 21 | 31 | 33 | 24 | — | 40 | 39 | 34 | 32 | 31 | 32 | 37 | 33 | 27 | 26 | 21 | 26 |
| 19. | 21 | 29 | 29 | 24 | 7 | 13 | 12 | 19 | 29 | 29 | 17 | — | 37 | 34 | 31 | 35 | 32 | 29 | 28 | 24 | 24 | 25 | 31 | 23 |
| 20. | 9 | 19 | 3 | 8 | 10 | 16 | 9 | 20 | 23 | 27 | 22 | — | 32 | 36 | 33 | 34 | 42 | 43 | 16 | 24 | 12 | 18 | 14 | 20 |
| 21. | 8 | 14 | 13 | 17 | — | 19 | 21 | 21 | 33 | 31 | 17 | — | 34 | — | 37 | 37 | 49 | 39 | 8 | 17 | 28 | 26 | 9 | 17 |
| 22. | 14 | 23 | 25 | 24 | 8 | 13 | 4 | 12 | 31 | 33 | 23 | 29 | 30 | 34 | 35 | 32 | 44 | 36 | 35 | 33 | 27 | 27 | 15 | 22 |
| 23. | 18 | 26 | 19 | 21 | 20 | 24 | 21 | 24 | 27 | 25 | 25 | — | 23 | 35 | 35 | 36 | 33 | 31 | 16 | 23 | 39 | 34 | 28 | 21 |
| 24. | 9 | 20 | 1 | 10 | 18 | 22 | 31 | 26 | 38 | 40 | 32 | 33 | 31 | 36 | 33 | 32 | 36 | 33 | 13 | 18 | 21 | 23 | 24 | 25 |
| 25. | 21 | 23 | 40 | 37 | 38 | 30 | 32 | 30 | 30 | 34 | 22 | — | 38 | 39 | 30 | 32 | 39 | 38 | 32 | 28 | 26 | 24 | 20 | 22 |
| 26. | 25 | 26 | 41 | 43 | 35 | 30 | 34 | 35 | 19 | 23 | 32 | — | 37 | 40 | 23 | 27 | 35 | 35 | 36 | 36 | 22 | 21 | 35 | 32 |
| 27. | 18 | 25 | 38 | 31 | 49 | — | 35 | 31 | 16 | 19 | 28 | 30 | 37 | 31 | 13 | 19 | 37 | 34 | 24 | 28 | 25 | 29 | 44 | 36 |
| 28. | 22 | 27 | 40 | 36 | 37 | — | 29 | 28 | 9 | 15 | 42 | 41 | 28 | 32 | 5 | 13 | 31 | 30 | 7 | 13 | 40 | 35 | 45 | 41 |
| 29. | 27 | 27 | — | — | 45 | 44 | 35 | 29 | 5 | — | 41 | — | 22 | 25 | 21 | 27 | 22 | 27 | 7 | 18 | 31 | 32 | 31 | 34 |
| 30. | 21 | 28 | — | — | 34 | 32 | 30 | 28 | 8 | — | 39 | 39 | 13 | 16 | 23 | 29 | 29 | 27 | 31 | 30 | 39 | 32 | 26 | 29 |
| 31. | 28 | 22 | — | — | 33 | 36 | — | — | 28 | 32 | — | 25 | 29 | 29 | 23 | 27 | 27 | 27 | 35 | 32 | — | — | 14 | 24 |

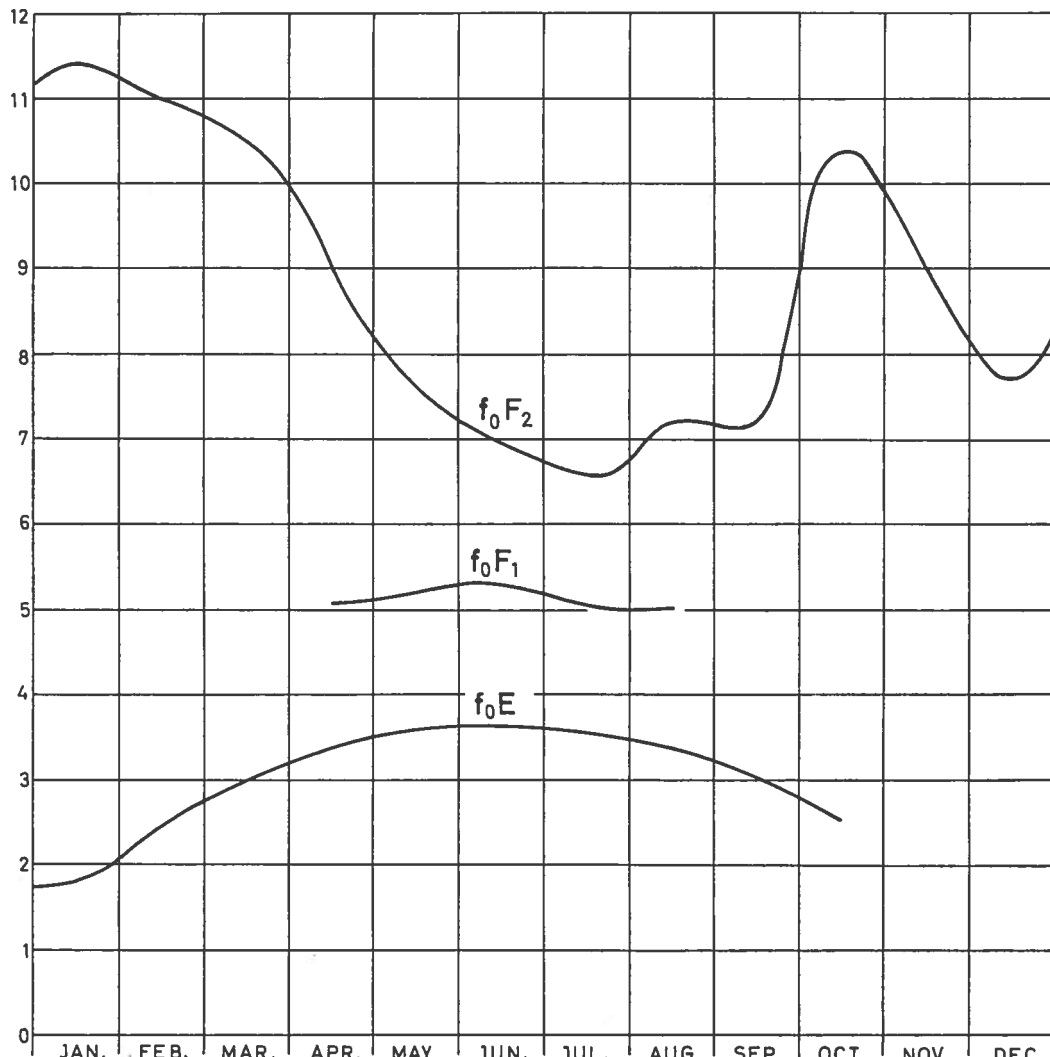
MONTHLY AND ANNUAL MEAN OF THE MAGNETIC ELEMENTS 1959.

Tromsø

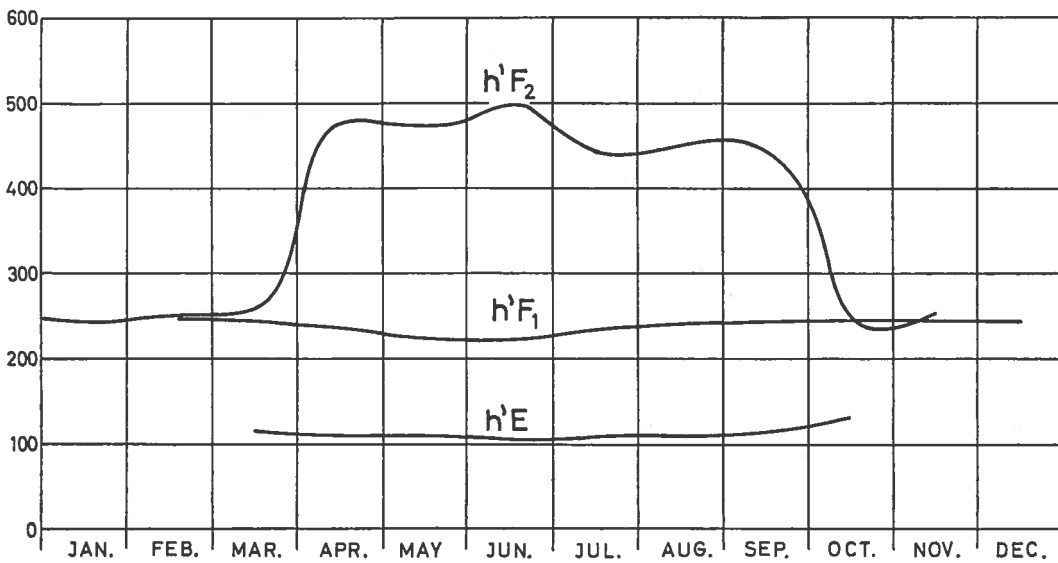
| Month | All days | | | Five Quiet | | | Five Disturbed | | |
|-------|----------|---------|---------|------------|---------|---------|----------------|---------|---------|
| | D | H | V | D | H | V | D | H | V |
| | 0°W+ | 11100 + | 50800 + | 0°W+ | 11100 + | 50800 + | 0°W+ | 11100 + | 50800 + |
| Jan. | 11.3 | 96 | 106 | 11.8 | 113 | 106 | 7.5 | 58 | 101 |
| Feb. | 9.2 | 84 | 106 | 10.2 | 105 | 112 | 8.4 | 38 | 99 |
| Mar. | 9.5 | 88 | 120 | 10.8 | 107 | 113 | 3.2 | 8 | 149 |
| Apr. | 9.2 | 99 | 129 | 8.5 | 107 | 120 | 12.1 | 123 | 126 |
| May | 9.2 | 105 | 146 | 8.1 | 64 | 124 | 8.6 | 82 | 191 |
| Jun. | 9.8 | 122 | 125 | 8.2 | 112 | 118 | 8.6 | 134 | 122 |
| Jul. | 7.4 | 104 | 149 | 7.0 | 97 | 131 | 7.0 | 95 | 156 |
| Aug. | 7.7 | 99 | 148 | 8.1 | 107 | 133 | 4.0 | 48 | 134 |
| Sep. | 6.1 | 84 | 162 | 7.8 | 105 | 144 | 3.7 | 63 | 181 |
| Oct. | 6.1 | 92 | 146 | 7.7 | 110 | 137 | 5.9 | 69 | 159 |
| Nov. | 5.8 | 90 | 142 | 7.5 | 105 | 143 | 2.3 | 37 | 160 |
| Dec. | 6.1 | 93 | 140 | 6.8 | 108 | 144 | 5.5 | 55 | 117 |
| Year | 8.1 | 96 | 135 | 8.5 | 113 | 127 | 6.4 | 68 | 141 |

ANNUAL MEANS OF THE MAGNETIC ELEMENTS
1930—1959.

| Year | D | H | V |
|------|---------|--------|--------|
| 1930 | 4°7.7 W | 115 67 | — |
| 31 | 3°59.6 | 49 | 501 98 |
| 32 | 49.0 | 114 99 | 95 |
| 33 | 37.3 | 72 | 502 03 |
| 34 | 25.9 | 41 | 23 |
| 35 | 14.3 | 07 | 47 |
| 36 | 4.8 | 113 79 | 76 |
| 37 | 2°53.7 | 50 | 503 08 |
| 38 | 44.1 | 25 | 40 |
| 39 | 35.0 | 112 97 | 62 |
| 40 | 26.6 | 78 | 81 |
| 41 | 16.6 | 56 | 504 17 |
| 42 | 10.6 | 44 | 24 |
| 43 | 2.5 | 22 | 49 |
| 44 | 1°54.3 | 13 | 67 |
| 45 | 45.7 | 111 99 | 505 03 |
| 46 | 34.6 | 79 | 54 |
| 47 | 26.5 | 74 | 85 |
| 48 | 18.4 | 56 | 94 |
| 49 | 10.5 | 53 | 506 12 |
| 50 | 3.6 | 52 | 47 |
| 51 | 0°54.1 | 43 | 93 |
| 52 | 43.9 | 44 | 507 11 |
| 53 | 36.0 | 53 | 24 |
| 54 | 29.1 | 65 | 44 |
| 55 | 24.0 | 72 | 76 |
| 56 | 18.1 | 73 | 508 25 |
| 57 | 15.9 | 82 | 68 |
| 58 | 12.7 | 94 | 509 02 |
| 1959 | 8.1 | 96 | 35 |



MONTHLY MEDIAN NOON-VALUES (12^h MET) FOR THE CRITICAL FREQUENCIES AND THE VIRTUAL HEIGHTS FOR THE E-LAYER, F_1 -LAYER AND F_2 -LAYER.



RADIO ECHO OBSERVATIONS.

RESULTS OF MAGNETIC OBSERVATIONS, FOR THE YEAR 1959.

Tromsø.

Declination, D = 0° W + Tabular Quantities expressed in Tenths of Minutes.

Gr. M. T.

HOURLY MEAN VALUES

JANUARY 1959

Table with columns for DAY (1-31), 1-23, M, R. Contains magnetic observation data for January 1959.

FEBRUARY 1959

Table with columns for DAY (1-28), 1-23, M, R. Contains magnetic observation data for February 1959.

MARCH 1959

Table with columns for DAY (1-31), 1-23, M, R. Contains magnetic observation data for March 1959.

Tromsø.

Declination, D = 0° W + Tabular Quantities expressed in Tenths of Minutes.

Gr. M. T.

HOURLY MEAN VALUES

Table for APRIL 1959 showing hourly mean values for days 1-30. Columns include Day, 24 hourly values, M, and R.

Table for MAY 1959 showing hourly mean values for days 1-31. Columns include Day, 24 hourly values, M, and R.

Table for JUNE 1959 showing hourly mean values for days 1-30. Columns include Day, 24 hourly values, M, and R.

Tromsø.

Declination. Storminess (+ W). Unit Gamma.

Gr. M. T.

HOURLY MEAN VALUES

APRIL 1959

Table for April 1959 showing hourly mean values for declination, storminess, and unit gamma. Columns include Day (1-30), M, PS, NS, AS, and MPS/MNS.

MAY 1959

Table for May 1959 showing hourly mean values for declination, storminess, and unit gamma. Columns include Day (1-31), M, PS, NS, AS, and MPS/MNS.

JUNE 1959

Table for June 1959 showing hourly mean values for declination, storminess, and unit gamma. Columns include Day (1-30), M, PS, NS, AS, and MPS/MNS.

Tromsø. Declination. D = 0° W + Tabular Quantities expressed in Tenths of Minutes. Gr. M. T.

Table for JULY 1959 showing hourly mean values (DAY 1-31) with columns for magnetic quantities (1-23) and monthly totals (M, R). Includes a summary row 'QM'.

Table for AUGUST 1959 showing hourly mean values (DAY 1-31) with columns for magnetic quantities (1-23) and monthly totals (M, R). Includes a summary row 'QM'.

Table for SEPTEMBER 1959 showing hourly mean values (DAY 1-30) with columns for magnetic quantities (1-23) and monthly totals (M, R). Includes a summary row 'QM'.

Tromsø.

Declination. Storminess (+ W). Unit Gamma.

Gr. M. T.

HOURLY MEAN VALUES

JULY 1959

Table for July 1959 showing hourly mean values for declination and storminess. Columns include Day (1-31), M, PS, NS, AS, and summary rows for MPS and MNS.

AUGUST 1959

Table for August 1959 showing hourly mean values for declination and storminess. Columns include Day (1-31), M, PS, NS, AS, and summary rows for MPS and MNS.

SEPTEMBER 1959

Table for September 1959 showing hourly mean values for declination and storminess. Columns include Day (1-30), M, PS, NS, AS, and summary rows for MPS and MNS.

Tromsø.

Declination. Storminess (+ W). Unit Gamma.

Gr. M. T.

HOURLY MEAN VALUES

OCTOBER 1959

Table for October 1959 showing hourly mean values for declination and storminess. Columns include Day (1-31), M, PS, NS, AS, and summary rows for MPS and MNS.

NOVEMBER 1959

Table for November 1959 showing hourly mean values for declination and storminess. Columns include Day (1-30), M, PS, NS, AS, and summary rows for MPS and MNS.

DECEMBER 1959

Table for December 1959 showing hourly mean values for declination and storminess. Columns include Day (1-31), M, PS, NS, AS, and summary rows for MPS and MNS.

Tromsø.

Horizontal Intensity. $H = 11100 +$ Tabular Quantities expressed in Gamma.

Gr. M. T.

HOURLY MEAN VALUES

JANUARY 1959

Table with columns DAY, 1-23, M, R for January 1959. Data values range from approximately -380 to 310.

FEBRUARY 1959

Table with columns DAY, 1-23, M, R for February 1959. Data values range from approximately -100 to 310.

MARCH 1959

Table with columns DAY, 1-23, M, R for March 1959. Data values range from approximately -240 to 310.

Tromsø.

Horizontal Intensity. Storminess (+ N). Unit Gamma.

Gr. M. T.

HOURLY MEAN VALUES

JANUARY 1959

Table for January 1959 showing hourly magnetic intensity and storminess values. Columns include Day (1-31), hours (1-24), M, PS, NS, AS, and CH.

FEBRUARY 1959

Table for February 1959 showing hourly magnetic intensity and storminess values. Columns include Day (1-28), hours (1-24), M, PS, NS, AS, and CH.

MARCH 1959

Table for March 1959 showing hourly magnetic intensity and storminess values. Columns include Day (1-31), hours (1-24), M, PS, NS, AS, and CH.

Tromsø.

Horizontal Intensity. Storminess (+ N). Unit Gamma.

Gr. M. T.

APRIL 1959

HOURLY MEAN VALUES

Table for April 1959 showing hourly mean values for magnetic observations. Columns include Day (1-30), hours (1-24), and summary statistics (M, PS, NS, AS, CH). Values range from -185 to 107.

MAY 1959

Table for May 1959 showing hourly mean values for magnetic observations. Columns include Day (1-31), hours (1-24), and summary statistics (M, PS, NS, AS, CH). Values range from -116 to 119.

JUNE 1959

Table for June 1959 showing hourly mean values for magnetic observations. Columns include Day (1-30), hours (1-24), and summary statistics (M, PS, NS, AS, CH). Values range from -185 to 119.

Tromsø.

Horizontal Intensity. H = 11100 + Tabular Quantities expressed in Gamma.

Gr. M. T.

HOURLY MEAN VALUES

JULY 1959

Table for July 1959 showing hourly magnetic intensity values (M and R) for days 1 through 31. The table includes columns for Day, hours 1-23, M, and R.

AUGUST 1959

Table for August 1959 showing hourly magnetic intensity values (M and R) for days 1 through 31. The table includes columns for Day, hours 1-23, M, and R.

SEPTEMBER 1959

Table for September 1959 showing hourly magnetic intensity values (M and R) for days 1 through 30. The table includes columns for Day, hours 1-23, M, and R.

Tromsø.

Horizontal Intensity. Storminess (+ N). Unit Gamma.

Gr. M. T.

OCTOBER 1959

HOURLY MEAN VALUES

Table for October 1959 showing hourly mean values for magnetic intensity and storminess. Columns include Day (1-23), M, PS, NS, AS, CH, and summary rows for M, MPS, and MNS.

NOVEMBER 1959

Table for November 1959 showing hourly mean values for magnetic intensity and storminess. Columns include Day (1-23), M, PS, NS, AS, CH, and summary rows for M, MPS, and MNS.

DECEMBER 1959

Table for December 1959 showing hourly mean values for magnetic intensity and storminess. Columns include Day (1-31), M, PS, NS, AS, CH, and summary rows for M, MPS, and MNS.

Tromsø.

Vertical Intensity. $V = 50800 + \dots$ Tabular Quantities expressed in Gamma.

Gr. M. T.

JANUARY 1959

HOURLY MEAN VALUES

Table with 25 columns (DAY 1-25) and 2 columns (M, R). Contains magnetic intensity data for January 1959.

FEBRUARY 1959

Table with 25 columns (DAY 1-25) and 2 columns (M, R). Contains magnetic intensity data for February 1959.

MARCH 1959

Table with 25 columns (DAY 1-25) and 2 columns (M, R). Contains magnetic intensity data for March 1959.

Tromsø.

Vertical Intensity. Storminess (+ Down). Unit Gamma.

Gr. M. T.

HOURLY MEAN VALUES

APRIL 1959

Table for April 1959 showing hourly mean values for vertical intensity and storminess. Columns include Day (1-30), hours (1-23), and summary statistics (M, PS, NS, AS).

MAY 1959

Table for May 1959 showing hourly mean values for vertical intensity and storminess. Columns include Day (1-31), hours (1-23), and summary statistics (M, PS, NS, AS).

JUNE 1959

Table for June 1959 showing hourly mean values for vertical intensity and storminess. Columns include Day (1-30), hours (1-23), and summary statistics (M, PS, NS, AS).

Tromsø.

Vertical Intensity. Storminess (+ Down). Unit Gamma.

Gr. M. T.

HOURLY MEAN VALUES

Table for July 1959 showing hourly mean values for vertical intensity and storminess. Columns include Day (1-23), M, PS, NS, AS, and MNS. Data points range from -12 to 79.

Table for August 1959 showing hourly mean values for vertical intensity and storminess. Columns include Day (1-23), M, PS, NS, AS, and MNS. Data points range from -23 to 74.

Table for September 1959 showing hourly mean values for vertical intensity and storminess. Columns include Day (1-23), M, PS, NS, AS, and MNS. Data points range from -54 to 92.

Tromsø.

Vertical Intensity. $V = 50800 +$ Tabular Quantities expressed in Gamma.

G. M. T.

OCTOBER 1959

HOURLY MEAN VALUES

Table for October 1959 showing hourly mean values for vertical intensity. Columns include Day (1-31), hours (1-23), and monthly totals (M, R). Values range from approximately 125 to 350 Gamma.

NOVEMBER 1959

Table for November 1959 showing hourly mean values for vertical intensity. Columns include Day (1-30), hours (1-23), and monthly totals (M, R). Values range from approximately 110 to 350 Gamma.

DECEMBER 1959

Table for December 1959 showing hourly mean values for vertical intensity. Columns include Day (1-31), hours (1-23), and monthly totals (M, R). Values range from approximately 110 to 350 Gamma.

Tromsø.

Vertical Intensity. Storminess (+ Down). Unit Gamma.

Gr. M. T.

OCTOBER 1959

HOURLY MEAN VALUES

Table for October 1959 showing hourly mean values for vertical intensity, storminess, and unit gamma. Columns include Day (1-31), M, PS, NS, AS, and MPS/MNS.

NOVEMBER 1959

Table for November 1959 showing hourly mean values for vertical intensity, storminess, and unit gamma. Columns include Day (1-30), M, PS, NS, AS, and MPS/MNS.

DECEMBER 1959

Table for December 1959 showing hourly mean values for vertical intensity, storminess, and unit gamma. Columns include Day (1-31), M, PS, NS, AS, and MPS/MNS.

Resuming Tables.

Diurnal Variation.
QUIET VALUES.

Tromsø.

Declination. Unit Gamma. + West.

| 1959 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| JANUARY | -6 | -5 | -4 | -5 | -7 | -8 | -7 | -5 | -2 | 1 | 4 | 7 | 8 | 9 | 9 | 8 | 7 | 6 | 4 | 2 | -1 | -3 | -5 | -6 |
| FEBRUARY | -2 | -2 | -4 | -6 | -8 | -10 | -10 | -8 | -5 | 0 | 5 | 9 | 11 | 10 | 9 | 7 | 5 | 3 | 1 | 0 | -1 | -2 | -3 | -3 |
| MARCH | -4 | -5 | -7 | -10 | -14 | -18 | -19 | -17 | -11 | -4 | 3 | 10 | 13 | 13 | 11 | 10 | 9 | 9 | 10 | 9 | 5 | 1 | -2 | -3 |
| APRIL | -4 | -9 | -14 | -19 | -24 | -27 | -27 | -21 | -11 | 1 | 12 | 19 | 22 | 20 | 14 | 10 | 8 | 9 | 10 | 10 | 9 | 7 | 4 | 0 |
| MAY | -10 | -20 | -27 | -30 | -32 | -30 | -25 | -17 | -5 | 12 | 23 | 27 | 25 | 21 | 18 | 17 | 16 | 17 | 19 | 20 | 15 | 8 | 0 | |
| JUNE | -11 | -18 | -24 | -29 | -31 | -30 | -26 | -20 | -12 | 1 | 9 | 18 | 23 | 24 | 22 | 20 | 20 | 22 | 21 | 16 | 11 | 6 | 1 | -6 |
| JULY | -10 | -18 | -27 | -33 | -35 | -35 | -32 | -27 | -18 | -5 | 10 | 25 | 32 | 32 | 28 | 22 | 16 | 15 | 18 | 20 | 16 | 11 | 5 | -2 |
| AUGUST | -6 | -13 | -19 | -26 | -31 | -32 | -28 | -19 | -6 | 4 | 14 | 23 | 26 | 21 | 11 | 7 | 7 | 12 | 17 | 16 | 12 | 8 | 4 | -1 |
| SEPTEMBER | -11 | -19 | -26 | -31 | -34 | -34 | -29 | -16 | 1 | 16 | 24 | 28 | 28 | 24 | 16 | 9 | 8 | 9 | 11 | 11 | 9 | 6 | 1 | -4 |
| OCTOBER | -5 | -8 | -11 | -13 | -14 | -14 | -13 | -10 | -5 | 0 | 7 | 14 | 16 | 14 | 10 | 8 | 8 | 12 | 14 | 12 | 9 | 5 | 2 | -1 |
| NOVEMBER | -7 | -6 | -5 | -6 | -7 | -6 | -4 | -2 | 0 | 3 | 5 | 7 | 9 | 10 | 10 | 9 | 6 | 3 | 0 | -3 | -5 | -7 | -8 | -8 |
| DECEMBER | -5 | -6 | -7 | -7 | -6 | -4 | -2 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 8 | 7 | 4 | 1 | -1 | -3 | -4 | -4 | -4 |
| MEAN | -7 | -11 | -15 | -18 | -20 | -21 | -19 | -14 | -7 | 1 | 9 | 16 | 18 | 17 | 14 | 11 | 10 | 10 | 10 | 9 | 7 | 4 | 0 | -3 |

Horizontal Intensity. Unit Gamma.

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|
| JANUARY | 0 | 0 | 1 | 2 | 2 | 1 | 0 | -2 | -5 | -8 | -9 | -8 | -6 | -4 | -2 | -1 | 0 | 2 | 4 | 6 | 7 | 6 | 3 | 1 |
| FEBRUARY | 6 | 7 | 8 | 8 | 7 | 5 | 1 | -3 | -8 | -13 | -15 | -14 | -11 | -7 | -4 | -1 | 2 | 4 | 6 | 7 | 7 | 6 | 5 | 5 |
| MARCH | 8 | 9 | 10 | 10 | 9 | 7 | 3 | -2 | -9 | -16 | -21 | -22 | -19 | -14 | -9 | -2 | 3 | 8 | 12 | 13 | 10 | 6 | 6 | 7 |
| APRIL | 8 | 9 | 10 | 11 | 11 | 9 | 2 | -8 | -18 | -28 | -34 | -36 | -31 | -21 | -11 | -1 | 9 | 19 | 24 | 24 | 19 | 14 | 10 | 8 |
| MAY | 4 | 5 | 6 | 5 | 1 | -6 | -15 | -24 | -31 | -36 | -35 | -28 | -18 | -6 | 6 | 16 | 23 | 27 | 29 | 27 | 21 | 11 | 4 | 2 |
| JUNE | 6 | 9 | 11 | 11 | 6 | -1 | -11 | -21 | -31 | -39 | -37 | -26 | -14 | -1 | 9 | 19 | 26 | 31 | 31 | 23 | 11 | -6 | -7 | -6 |
| JULY | 3 | 5 | 7 | 8 | 6 | 0 | -12 | -30 | -37 | -38 | -34 | -25 | -15 | -4 | 9 | 18 | 28 | 31 | 28 | 21 | 13 | 5 | 1 | 1 |
| AUGUST | 11 | 12 | 12 | 10 | 5 | -1 | -11 | -19 | -26 | -29 | -28 | -21 | -12 | -3 | 5 | 10 | 13 | 14 | 13 | 9 | 6 | 6 | 6 | 9 |
| SEPTEMBER | 9 | 11 | 12 | 12 | 8 | -5 | -15 | -21 | -25 | -25 | -24 | -20 | -13 | -7 | 0 | 7 | 13 | 15 | 15 | 13 | 11 | 9 | 8 | 8 |
| OCTOBER | 2 | 3 | 5 | 6 | 7 | 7 | 3 | -3 | -10 | -16 | -18 | -16 | -12 | -6 | 0 | 5 | 3 | 1 | 2 | 6 | 7 | 5 | 2 | 1 |
| NOVEMBER | 0 | 2 | 4 | 6 | 8 | 9 | 7 | 2 | -3 | -8 | -10 | -10 | -8 | -5 | -3 | -1 | 0 | 0 | 1 | 5 | 7 | 6 | 2 | 0 |
| DECEMBER | -3 | -4 | -5 | -5 | -4 | -2 | 0 | 2 | 2 | 0 | +2 | -4 | -4 | -3 | -2 | 0 | 2 | 4 | 6 | 7 | 7 | 5 | 2 | -1 |
| MEAN | 5 | 6 | 7 | 7 | 6 | 2 | -4 | -11 | -17 | -21 | -22 | -19 | -13 | -6 | 0 | 5 | 10 | 13 | 14 | 13 | 11 | 6 | 4 | 3 |

Vertical Intensity. Unit Gamma.

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|----|----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| JANUARY | -2 | -1 | 0 | 1 | 0 | -2 | -2 | -1 | 1 | 3 | 5 | 6 | 6 | 5 | 4 | 2 | 0 | -2 | -2 | -1 | -1 | -2 | -3 | -3 |
| FEBRUARY | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 1 | 2 | 3 | 4 | 5 | 5 | 4 | 3 | 2 | 1 | 0 | -1 | -2 | -3 | -4 | -3 |
| MARCH | -6 | -5 | -4 | -3 | -4 | -4 | -3 | -1 | 1 | 3 | 4 | 5 | 6 | 7 | 7 | 6 | 4 | 2 | 0 | -2 | -4 | -6 | -7 | -7 |
| APRIL | 2 | 3 | 2 | 0 | -1 | -2 | -3 | -3 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 4 | 3 | 1 | -1 | -3 | -3 | -2 | 0 |
| MAY | -1 | 1 | 3 | 3 | 1 | -1 | -3 | -3 | -2 | 0 | 2 | 4 | 6 | 5 | 2 | -1 | -3 | -4 | -4 | -3 | -1 | -1 | -2 | -2 |
| JUNE | 9 | 9 | 7 | 3 | -1 | -4 | -6 | -7 | -6 | -5 | -4 | -3 | -1 | 0 | 0 | -2 | -3 | -4 | -4 | -1 | 2 | 4 | 6 | 8 |
| JULY | 8 | 8 | 6 | 4 | 1 | -1 | -1 | 1 | 3 | 3 | 1 | -2 | -6 | -8 | -9 | -8 | -6 | -4 | -2 | 0 | 2 | 4 | 6 | 7 |
| AUGUST | 1 | 3 | 5 | 7 | 8 | 7 | 3 | 0 | -4 | -7 | -8 | -8 | -6 | -4 | -2 | 0 | 2 | 2 | 1 | -1 | -3 | -4 | -3 | -1 |
| SEPTEMBER | -1 | 0 | 1 | 2 | 3 | 3 | 2 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 4 | 2 | 0 | -2 | -3 | -3 |
| OCTOBER | -6 | -8 | -10 | -11 | -11 | -10 | -9 | -8 | -6 | -4 | -2 | 0 | 2 | 4 | 6 | 9 | 11 | 12 | 12 | 11 | 9 | 6 | 2 | -3 |
| NOVEMBER | 1 | -1 | -3 | -5 | -7 | -7 | -5 | -3 | 0 | 2 | 3 | 3 | 1 | 0 | -1 | -2 | -2 | -1 | 1 | 3 | 5 | 6 | 5 | 3 |
| DECEMBER | 4 | 2 | 0 | -2 | -3 | -4 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | -3 | -3 | -1 | 2 | 4 | 5 | 6 | 5 |
| MEAN | 1 | 1 | 1 | 0 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |

Monthly Means.

| DECLINATION | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN |
|---------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| DIRECT VALUES D = 0°W + | 11'.3 | 9.2 | 9.5 | 9.2 | 9.2 | 9.8 | 7.4 | 7.7 | 6.1 | 6.1 | 5.8 | 6.1 | 8:1 |
| QUIET VALUES D = 0°W + | 11'.6 | 10.7 | 11.3 | 9.5 | 9.2 | 8.9 | 9.2 | 8.0 | 7.4 | 8.6 | 7.7 | 2.4 | 8:7 |
| RANGE (UNIT MINUTES) | 83 | 122 | 92 | 98 | 94 | 96 | 126 | 104 | 155 | 104 | 109 | 100 | 107 |
| QUIET RANGE (UNIT °) | 17 | 21 | 30 | 49 | 59 | 55 | 67 | 58 | 62 | 30 | 18 | 15 | 40 |
| STORMINESS. MEAN (UNIT °) | -1 | -5 | -6 | -1 | 0 | 3 | -5 | -2 | -4 | -10 | -5 | -4 | -3 |
| DIURNAL SUM PS (UNIT °) | 167 | 236 | 196 | 267 | 260 | 353 | 333 | 289 | 272 | 138 | 188 | 164 | 234 |
| NS | 191 | 359 | 330 | 288 | 265 | 284 | 465 | 330 | 379 | 373 | 316 | 267 | 321 |
| AS | 358 | 595 | 526 | 550 | 525 | 637 | 798 | 619 | 651 | 511 | 504 | 431 | 569 |
| HORIZONTAL INTENSITY | | | | | | | | | | | | | |
| DIRECT VALUES H = 11100r+ | 96 | 84 | 88 | 99 | 105 | 122 | 104 | 99 | 84 | 92 | 90 | 93 | 96 |
| QUIET VALUES H = 11100r+ | 112 | 107 | 112 | 106 | 116 | 109 | 117 | 106 | 95 | 115 | 113 | 116 | 110 |
| RANGE (UNIT °) | 455 | 640 | 569 | 543 | 568 | 616 | 856 | 656 | 794 | 597 | 663 | 574 | 628 |
| QUIET RANGE (UNIT °) | 16 | 23 | 35 | 60 | 65 | 70 | 68 | 53 | 40 | 25 | 19 | 12 | 41 |
| STORMINESS. MEAN (UNIT °) | -15 | -23 | -23 | -7 | -10 | 14 | -12 | -7 | -12 | -22 | -24 | -22 | -14 |
| DIURNAL SUM PS (UNIT °) | 472 | 676 | 493 | 702 | 688 | 1072 | 1014 | 894 | 994 | 537 | 563 | 486 | 716 |
| NS | 929 | 1235 | 1049 | 871 | 937 | 742 | 1306 | 1066 | 1273 | 1073 | 1128 | 1014 | 1052 |
| AS | 1401 | 1911 | 1542 | 1573 | 1625 | 1814 | 2320 | 2960 | 2267 | 1610 | 1691 | 1500 | 1868 |
| VERTICAL INTENSITY | | | | | | | | | | | | | |
| DIRECT VALUES V = 50800r+ | 106 | 106 | 120 | 129 | 146 | 125 | 149 | 148 | 162 | 146 | 142 | 140 | 135 |
| QUIET VALUES V = 50800r+ | 106 | 112 | 112 | 121 | 119 | 116 | 124 | 137 | 138 | 146 | 147 | 148 | 127 |
| RANGE (UNIT °) | 358 | 598 | 425 | 393 | 397 | 381 | 587 | 448 | 615 | 504 | 536 | 466 | 476 |
| QUIET RANGE (UNIT °) | 9 | 9 | 14 | 7 | 10 | 16 | 17 | 16 | 7 | 23 | 13 | 10 | 126 |
| STORMINESS. MEAN (UNIT °) | 0 | -5 | 9 | 8 | 27 | 9 | 25 | 12 | 23 | 1 | -4 | -8 | 8 |
| DIURNAL SUM PS (UNIT °) | 354 | 490 | 593 | 527 | 854 | 559 | 975 | 719 | 933 | 488 | 457 | 339 | 607 |
| NS | 355 | 619 | 377 | 325 | 199 | 348 | 373 | 426 | 383 | 469 | 550 | 521 | 412 |
| AS | 709 | 1109 | 970 | 852 | 1053 | 907 | 1348 | 1145 | 1316 | 957 | 1007 | 860 | 1019 |

Resuming Tables.

Storminess.

Tromsø.

Declination. Unit Gamma. + West.

| 1959 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|----|----|----|----|----|----|-----|-----|-----|-----|
| JAN MPS | 3 | 1 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 4 | 6 | 8 | 6 | 10 | 18 | 19 | 22 | 21 | 18 | 9 | 5 | 3 | 0 |
| FEB MPS | 1 | 2 | 1 | 0 | 1 | 3 | 2 | 1 | 1 | 2 | 3 | 6 | 15 | 17 | 20 | 24 | 36 | 29 | 35 | 17 | 11 | 5 | 2 | 2 |
| MAR MPS | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 3 | 4 | 6 | 9 | 9 | 16 | 12 | 15 | 26 | 30 | 21 | 16 | 13 | 2 | 2 | 1 |
| APR MPS | 1 | 1 | 1 | 0 | 1 | 2 | 4 | 4 | 2 | 4 | 4 | 8 | 10 | 15 | 25 | 30 | 35 | 32 | 28 | 26 | 22 | 8 | 1 | 2 |
| MAY MPS | 2 | 2 | 2 | 2 | 1 | 3 | 5 | 9 | 9 | 12 | 11 | 8 | 10 | 12 | 13 | 9 | 23 | 28 | 31 | 25 | 19 | 10 | 7 | 7 |
| JUN MPS | 3 | 0 | 1 | 1 | 2 | 3 | 4 | 4 | 5 | 7 | 9 | 11 | 16 | 16 | 22 | 34 | 36 | 39 | 35 | 35 | 39 | 23 | 7 | 3 |
| JUL MPS | 6 | 0 | 1 | 0 | 1 | 1 | 3 | 4 | 5 | 3 | 3 | 3 | 2 | 5 | 6 | 24 | 40 | 54 | 52 | 43 | 37 | 26 | 11 | 6 |
| AUG MPS | 3 | 0 | 4 | 1 | 1 | 2 | 4 | 4 | 6 | 4 | 5 | 6 | 8 | 15 | 22 | 25 | 37 | 39 | 31 | 29 | 23 | 11 | 5 | 4 |
| SEP MPS | 0 | 2 | 2 | 3 | 7 | 14 | 15 | 10 | 3 | 1 | 2 | 5 | 4 | 10 | 22 | 27 | 29 | 33 | 28 | 25 | 18 | 6 | 3 | 2 |
| OCT MPS | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 3 | 4 | 4 | 4 | 6 | 7 | 9 | 14 | 20 | 26 | 16 | 7 | 7 | 2 | 1 | 0 | 0 |
| NOV MPS | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 2 | 1 | 3 | 3 | 8 | 7 | 12 | 16 | 24 | 19 | 20 | 23 | 18 | 12 | 6 | 2 | 3 |
| DEC MPS | 0 | 1 | 1 | 2 | 4 | 3 | 6 | 4 | 4 | 2 | 3 | 6 | 9 | 10 | 10 | 13 | 10 | 23 | 16 | 12 | 13 | 7 | 2 | 1 |
| MEAN | 2 | 1 | 1 | 1 | 2 | 3 | 5 | 4 | 4 | 4 | 5 | 7 | 9 | 12 | 16 | 22 | 28 | 30 | 27 | 23 | 18 | 9 | 4 | 3 |
| JAN MNS | 33 | 33 | 25 | 12 | 9 | 7 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 0 | 3 | 3 | 4 | 4 | 5 | 13 | 23 |
| FEB MNS | 46 | 45 | 39 | 36 | 32 | 11 | 9 | 11 | 9 | 7 | 7 | 3 | 2 | 2 | 6 | 2 | 3 | 1 | 2 | 10 | 9 | 17 | 22 | 28 |
| MAR MNS | 35 | 45 | 41 | 30 | 24 | 23 | 18 | 11 | 9 | 4 | 2 | 2 | 2 | 1 | 2 | 5 | 1 | 1 | 1 | 1 | 5 | 14 | 24 | 29 |
| APR MNS | 37 | 40 | 45 | 42 | 22 | 12 | 10 | 6 | 7 | 2 | 2 | 0 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 7 | 19 | 23 |
| MAY MNS | 29 | 42 | 35 | 30 | 21 | 13 | 11 | 5 | 5 | 4 | 6 | 5 | 5 | 2 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 6 | 12 | 21 |
| JUN MNS | 32 | 37 | 41 | 35 | 21 | 11 | 11 | 13 | 14 | 16 | 12 | 8 | 8 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 19 |
| JUL MNS | 37 | 58 | 62 | 55 | 39 | 28 | 17 | 16 | 28 | 22 | 11 | 15 | 14 | 8 | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 4 | 14 | 30 |
| AUG MNS | 26 | 44 | 38 | 37 | 28 | 17 | 17 | 17 | 12 | 11 | 11 | 11 | 4 | 4 | 3 | 1 | 0 | 1 | 0 | 0 | 1 | 6 | 19 | 22 |
| SEP MNS | 47 | 40 | 53 | 44 | 25 | 8 | 5 | 7 | 10 | 11 | 6 | 6 | 4 | 1 | 1 | 1 | 1 | 0 | 2 | 5 | 10 | 21 | 34 | 39 |
| OCT MNS | 42 | 42 | 42 | 31 | 19 | 8 | 4 | 3 | 3 | 1 | 3 | 2 | 2 | 4 | 2 | 2 | 2 | 5 | 7 | 8 | 22 | 30 | 42 | 45 |
| NOV MNS | 38 | 31 | 49 | 28 | 24 | 12 | 6 | 7 | 6 | 5 | 5 | 2 | 1 | 2 | 6 | 5 | 2 | 2 | 3 | 6 | 13 | 12 | 20 | 30 |
| DEC MNS | 42 | 28 | 30 | 20 | 5 | 3 | 3 | 3 | 3 | 4 | 2 | 1 | 3 | 2 | 3 | 5 | 7 | 1 | 4 | 4 | 5 | 17 | 31 | 41 |
| MEAN | 37 | 40 | 42 | 33 | 22 | 13 | 10 | 8 | 9 | 7 | 6 | 5 | 3 | 3 | 3 | 2 | 2 | 1 | 2 | 3 | 6 | 12 | 21 | 29 |
| JAN MPS + MNS | -30 | -32 | -25 | -11 | -7 | -5 | -1 | 0 | 0 | 0 | 2 | 4 | 8 | 4 | 9 | 17 | 19 | 18 | 18 | 14 | 5 | 0 | -10 | -22 |
| FEB MPS + MNS | -46 | -43 | -38 | -35 | -31 | -8 | -6 | -10 | -8 | -5 | -4 | 3 | 13 | 15 | 14 | 23 | 32 | 28 | 32 | 7 | 1 | -12 | -19 | -26 |
| MAR MPS + MNS | -34 | -44 | -40 | -30 | -23 | -21 | -15 | -9 | -6 | 0 | 4 | 7 | 8 | 15 | 10 | 9 | 25 | 30 | 20 | 15 | 8 | -11 | -23 | -28 |
| APR MPS + MNS | -36 | -39 | -44 | -42 | -21 | -11 | -6 | -2 | -5 | 2 | 3 | 8 | 7 | 12 | 25 | 27 | 34 | 31 | 28 | 25 | 19 | 1 | -18 | -21 |
| MAY MPS + MNS | -28 | -41 | -33 | -28 | -19 | -10 | -5 | 4 | 9 | 6 | 2 | 5 | 10 | 9 | 6 | 21 | 26 | 30 | 24 | 17 | 3 | -5 | -14 | |
| JUN MPS + MNS | -29 | -36 | -40 | -35 | -20 | -8 | -7 | -9 | -8 | -3 | 3 | 9 | 14 | 22 | 33 | 35 | 38 | 35 | 34 | 39 | 22 | 4 | -15 | |
| JUL MPS + MNS | -32 | -58 | -61 | -55 | -38 | -27 | -14 | -13 | -23 | -19 | -8 | -12 | -12 | -3 | 2 | 22 | 40 | 53 | 52 | 43 | 37 | 22 | -3 | -24 |
| AUG MPS + MNS | -23 | -43 | -34 | -36 | -27 | -14 | -13 | -13 | -7 | -7 | -6 | -5 | 3 | 11 | 20 | 24 | 37 | 38 | 31 | 29 | 21 | 5 | -13 | -18 |
| SEP MPS + MNS | -46 | -37 | -51 | -41 | -18 | 6 | 9 | 3 | -7 | -10 | -4 | -1 | 0 | 9 | 20 | 26 | 29 | 33 | 26 | 21 | 8 | -16 | -31 | -37 |
| OCT MPS + MNS | -42 | -42 | -42 | -30 | -18 | -5 | 0 | -1 | 0 | 3 | 0 | 4 | 5 | 4 | 12 | 19 | 24 | 11 | 0 | -1 | -21 | -29 | -41 | -45 |
| NOV MPS + MNS | -38 | -31 | -49 | -27 | -23 | -10 | -4 | -6 | -5 | -2 | -2 | 6 | 6 | 11 | 9 | 20 | 17 | 18 | 20 | 12 | -1 | -6 | -19 | -27 |
| DEC MPS + MNS | -42 | -28 | -29 | -18 | -1 | 0 | 4 | 1 | 0 | -2 | 1 | 6 | 6 | 9 | 7 | 8 | 4 | 23 | 12 | 8 | 8 | -10 | -30 | -41 |
| MEAN | -36 | -40 | -41 | -32 | -21 | -9 | -5 | -4 | -6 | -3 | 0 | 2 | 5 | 9 | 13 | 20 | 26 | 29 | 25 | 19 | 12 | -3 | -17 | -27 |

Horizontal Intensity. Unit Gamma.

| 1959 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
|---------|-----|-----|-----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|----|----|----|----|----|-----|-----|
| JAN MPS | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 5 | 4 | 6 | 9 | 18 | 32 | 36 | 50 | 44 | 48 | 40 | 28 | 15 | 8 | 3 | 1 | 1 |
| FEB MPS | 4 | 1 | 2 | 5 | 3 | 6 | 8 | 7 | 14 | 26 | 35 | 45 | 67 | 97 | 112 | 96 | 63 | 41 | 22 | 9 | 8 | 4 | 1 | 0 |
| MAR MPS | 1 | 4 | 0 | 1 | 1 | 1 | 1 | 3 | 5 | 13 | 28 | 44 | 56 | 66 | 59 | 59 | 66 | 53 | 13 | 7 | 4 | 2 | 3 | 0 |
| APR MPS | 1 | 1 | 0 | 2 | 2 | 2 | 4 | 7 | 10 | 19 | 35 | 63 | 88 | 96 | 98 | 95 | 77 | 57 | 27 | 10 | 4 | 2 | 0 | 0 |
| MAY MPS | 1 | 3 | 3 | 11 | 5 | 5 | 4 | 5 | 13 | 27 | 46 | 64 | 73 | 83 | 71 | 71 | 75 | 64 | 40 | 18 | 4 | 1 | 1 | 1 |
| JUN MPS | 3 | 2 | 4 | 5 | 9 | 8 | 12 | 15 | 28 | 49 | 65 | 84 | 110 | 119 | 127 | 126 | 100 | 81 | 55 | 36 | 16 | 7 | 6 | 5 |
| JUL MPS | 6 | 6 | 3 | 1 | 5 | 6 | 11 | 21 | 35 | 44 | 50 | 82 | 110 | 129 | 129 | 96 | 81 | 79 | 51 | 26 | 14 | 15 | 6 | 6 |
| AUG MPS | 2 | 1 | 0 | 4 | 4 | 3 | 4 | 10 | 20 | 31 | 45 | 59 | 65 | 108 | 133 | 132 | 117 | 75 | 44 | 21 | 11 | 3 | 1 | 0 |
| SEP MPS | 1 | 3 | 2 | 4 | 10 | 17 | 23 | 26 | 38 | 57 | 58 | 85 | 104 | 121 | 138 | 111 | 82 | 58 | 29 | 12 | 8 | 4 | 2 | 2 |
| OCT MPS | 1 | 1 | 1 | 1 | 3 | 5 | 4 | 2 | 5 | 21 | 34 | 53 | 65 | 78 | 83 | 71 | 42 | 33 | 20 | 8 | 2 | 2 | 1 | 2 |
| NOV MPS | 1 | 1 | 2 | 1 | 6 | 3 | 5 | 8 | 11 | 20 | 33 | 54 | 63 | 67 | 76 | 67 | 56 | 40 | 22 | 12 | 8 | 1 | 0 | 3 |
| DEC MPS | 1 | 2 | 3 | 4 | 6 | 4 | 7 | 4 | 8 | 14 | 24 | 47 | 62 | 70 | 72 | 51 | 39 | 28 | 17 | 13 | 6 | 2 | 2 | 2 |
| MEAN | 2 | 2 | 2 | 4 | 5 | 5 | 7 | 9 | 16 | 27 | 38 | 58 | 74 | 89 | 96 | 85 | 71 | 54 | 31 | 16 | 8 | 4 | 2 | 2 |
| JAN MNS | 94 | 69 | 48 | 34 | 23 | 14 | 8 | 7 | 3 | 3 | 2 | 1 | 1 | 0 | 0 | 6 | 6 | 19 | 22 | 36 | 55 | 89 | 90 | 91 |
| FEB MNS | 157 | 131 | 95 | 74 | 75 | 61 | 40 | 27 | 10 | 1 | 0 | 0 | 0 | 1 | 3 | 4 | 3 | 21 | 26 | 71 | 83 | 94 | 121 | 136 |
| MAR MNS | 104 | 103 | 78 | 93 | 60 | 38 | 25 | 25 | 12 | 4 | 3 | 1 | 1 | 0 | 2 | 4 | 17 | 2 | 26 | 55 | 90 | 99 | 116 | 93 |
| APR MNS | 104 | 114 | 103 | 76 | 37 | 26 | 17 | 7 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 13 | 15 | 43 | 73 | 121 | 107 |
| MAY MNS | 116 | 141 | 97 | 61 | 47 | 29 | 13 | 15 | 7 | 4 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 0 | 4 | 17 | 47 | 97 | 116 | 119 |
| JUN MNS | 107 | 113 | 111 | 71 | 50 | 27 | 11 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 4 | 16 | 12 | 53 | 69 | 90 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|------|------|------|------|-----|-----|-----|-----|----|----|----|----|-----|-----|-----|-----|-----|----|-----|-----|------|------|------|------|
| JUL MNS | 146 | 175 | 165 | 143 | 98 | 50 | 20 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 6 | 7 | 7 | 11 | 34 | 57 | 92 | 126 | 163 |
| AUG MNS | 108 | 132 | 128 | 108 | 80 | 33 | 21 | 17 | 11 | 0 | 2 | 2 | 6 | 2 | 3 | 5 | 13 | 8 | 19 | 20 | 53 | 71 | 114 | 111 |
| SEP MNS | 131 | 115 | 132 | 81 | 52 | 15 | 17 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 14 | 40 | 69 | 111 | 125 | 188 | 168 |
| OCT MNS | 94 | 78 | 100 | 74 | 55 | 34 | 14 | 7 | 3 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 5 | 1 | 14 | 42 | 98 | 166 | 156 | 127 |
| NOV MNS | 101 | 109 | 116 | 69 | 49 | 32 | 14 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 7 | 20 | 47 | 85 | 130 | 122 | 105 | 113 | |
| DEC MNS | 114 | 77 | 62 | 44 | 27 | 21 | 6 | 4 | 4 | 3 | 2 | 1 | 0 | 2 | 0 | 23 | 16 | 27 | 67 | 53 | 65 | 120 | 142 | 133 |
| MEAN | 115 | 113 | 103 | 77 | 54 | 32 | 18 | 11 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 4 | 7 | 10 | 24 | 43 | 70 | 101 | 122 | 121 |
| JAN MPS + MNS | -92 | -65 | -47 | -31 | -19 | -11 | -4 | -1 | 1 | 3 | 6 | 17 | 31 | 36 | 50 | 38 | 42 | 21 | 6 | -21 | -47 | -86 | -89 | -90 |
| FEB MPS + MNS | -152 | -130 | -93 | -69 | -73 | -55 | -32 | -20 | 4 | 25 | 35 | 45 | 66 | 96 | 109 | 92 | 60 | 20 | -4 | -61 | -76 | -90 | -121 | -136 |
| MAR MPS + MNS | -103 | -99 | -78 | -93 | -58 | -36 | -24 | -22 | -7 | 8 | 26 | 44 | 56 | 66 | 57 | 55 | 49 | 51 | -13 | -47 | -86 | -96 | -113 | -92 |
| APR MPS + MNS | -103 | -113 | -103 | -74 | -36 | -24 | -14 | 0 | 6 | 16 | 34 | 63 | 88 | 96 | 98 | 95 | 74 | 57 | 14 | -8 | -39 | -71 | -119 | -167 |
| MAY MPS + MNS | -116 | -137 | -94 | -50 | -41 | -24 | -9 | -10 | 6 | 23 | 44 | 63 | 73 | 83 | 70 | 69 | 73 | 63 | 36 | 1 | -43 | -96 | -116 | -118 |
| JUN MPS + MNS | -105 | -110 | -107 | -66 | -41 | -19 | 1 | 10 | 27 | 49 | 65 | 84 | 110 | 118 | 127 | 126 | 100 | 79 | 51 | 20 | 4 | -46 | -63 | -85 |
| JUL MPS + MNS | -140 | -168 | -162 | -143 | -93 | -43 | -9 | 19 | 35 | 43 | 50 | 81 | 110 | 129 | 126 | 91 | 74 | 72 | 40 | -7 | -43 | -77 | -120 | -157 |
| AUG MPS + MNS | -106 | -131 | -128 | -103 | -76 | -30 | -17 | -7 | 9 | 31 | 43 | 57 | 59 | 105 | 129 | 127 | 104 | 67 | 25 | 0 | -42 | -68 | -113 | -111 |
| SEP MPS + MNS | -130 | -112 | -131 | -77 | -42 | 2 | 6 | 16 | 37 | 57 | 58 | 85 | 104 | 121 | 137 | 111 | 77 | 44 | -11 | -57 | -103 | -121 | -185 | -166 |
| OCT MPS + MNS | -93 | -77 | -100 | -73 | -53 | -29 | -10 | -4 | 2 | 20 | 33 | 52 | 65 | 76 | 82 | 71 | 38 | 32 | 6 | -34 | -96 | -165 | -155 | -125 |
| NOV MPS + MNS | -101 | -107 | -115 | -68 | -42 | -29 | -9 | 3 | 12 | 19 | 32 | 54 | 63 | 67 | 76 | 66 | 49 | 21 | -25 | -73 | -123 | -121 | -104 | -110 |
| DEC MPS + MNS | -112 | -76 | -59 | -40 | -21 | -17 | 0 | 0 | 3 | 11 | 22 | 46 | 62 | 68 | 71 | 28 | 24 | 1 | -50 | -41 | -59 | -118 | -140 | -131 |
| MEAN | -113 | -111 | -101 | -74 | -50 | -24 | -10 | -1 | 11 | 25 | 37 | 58 | 74 | 88 | 94 | 81 | 62 | 44 | 6 | -33 | -63 | -96 | -120 | -124 |

Vertical Intensity. Unit Gamma.

| 1959 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
|---------------|----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|
| JAN MPS | 35 | 9 | 7 | 4 | 3 | 3 | 4 | 6 | 7 | 10 | 7 | 7 | 10 | 14 | 14 | 14 | 10 | 9 | 10 | 12 | 23 | 34 | 45 | 56 |
| FEB MPS | 54 | 39 | 33 | 9 | 10 | 5 | 2 | 2 | 4 | 6 | 12 | 12 | 7 | 9 | 8 | 10 | 8 | 10 | 10 | 18 | 31 | 48 | 65 | 78 |
| MAR MPS | 56 | 51 | 29 | 19 | 15 | 11 | 16 | 6 | 4 | 4 | 5 | 8 | 14 | 15 | 15 | 14 | 14 | 9 | 15 | 28 | 51 | 72 | 69 | 55 |
| APR MPS | 49 | 35 | 22 | 9 | 2 | 2 | 2 | 5 | 12 | 14 | 14 | 21 | 21 | 26 | 25 | 20 | 14 | 9 | 11 | 14 | 27 | 54 | 66 | 55 |
| MAY MPS | 80 | 54 | 41 | 30 | 32 | 26 | 18 | 26 | 23 | 26 | 26 | 27 | 29 | 32 | 32 | 36 | 25 | 14 | 9 | 10 | 24 | 52 | 94 | 89 |
| JUN MPS | 43 | 48 | 12 | 9 | 5 | 5 | 8 | 8 | -15 | 24 | 20 | 26 | 30 | 38 | 33 | 25 | 16 | 13 | 12 | 9 | 15 | 46 | 48 | 48 |
| JUL MPS | 85 | 87 | 55 | 42 | 28 | 22 | 18 | 22 | 22 | 30 | 27 | 26 | 39 | 50 | 37 | 27 | 21 | 12 | 7 | 18 | 39 | 64 | 79 | 117 |
| AUG MPS | 74 | 51 | 38 | 28 | 22 | 10 | 14 | 8 | 14 | 16 | 22 | 29 | 39 | 29 | 29 | 25 | 10 | 6 | 5 | 11 | 45 | 49 | 71 | 74 |
| SEP MPS | 92 | 82 | 51 | 32 | 13 | 13 | 13 | 14 | 23 | 19 | 20 | 24 | 28 | 23 | 22 | 18 | 11 | 6 | 17 | 37 | 61 | 88 | 111 | 118 |
| OCT MPS | 38 | 40 | 25 | 5 | 5 | 1 | 3 | 5 | 9 | 10 | 13 | 10 | 9 | 13 | 11 | 8 | 1 | 0 | 5 | 24 | 52 | 84 | 58 | 57 |
| NOV MPS | 58 | 31 | 25 | 9 | 12 | 2 | 4 | 4 | 8 | 9 | 8 | 7 | 18 | 9 | 15 | 16 | 7 | 13 | 11 | 24 | 41 | 34 | 43 | 47 |
| DEC MPS | 26 | 12 | 15 | 5 | 3 | 4 | 4 | 9 | 14 | 12 | 9 | 5 | 9 | 10 | 8 | 7 | 6 | 4 | 9 | 10 | 17 | 61 | 42 | 38 |
| MEAN | 58 | 45 | 29 | 17 | 13 | 9 | 9 | 10 | 13 | 15 | 15 | 17 | 21 | 22 | 21 | 18 | 12 | 9 | 10 | 18 | 36 | 57 | 66 | 69 |
| JAN MNS | 8 | 13 | 15 | 16 | 20 | 13 | 11 | 5 | 2 | 2 | 3 | 6 | 4 | 15 | 24 | 38 | 33 | 33 | 36 | 21 | 17 | 6 | 9 | 6 |
| FEB MNS | 11 | 18 | 16 | 20 | 23 | 44 | 39 | 17 | 15 | 9 | 6 | 1 | 10 | 33 | 49 | 73 | 92 | 56 | 35 | 22 | 13 | 4 | 9 | 4 |
| MAR MNS | 7 | 6 | 10 | 16 | 15 | 14 | 12 | 7 | 10 | 6 | 7 | 16 | 22 | 38 | 40 | 39 | 45 | 28 | 14 | 6 | 2 | 4 | 8 | 8 |
| APR MNS | 7 | 6 | 14 | 27 | 35 | 23 | 13 | 7 | 3 | 2 | 3 | 6 | 9 | 19 | 33 | 29 | 32 | 25 | 11 | 9 | 3 | 4 | 4 | 6 |
| MAY MNS | 5 | 5 | 14 | 22 | 19 | 16 | 10 | 4 | 1 | 1 | 2 | 4 | 8 | 5 | 15 | 10 | 21 | 16 | 6 | 5 | 5 | 4 | 2 | 2 |
| JUN MNS | 13 | 16 | 22 | 33 | 31 | 26 | 13 | 7 | 6 | 4 | 6 | 4 | 3 | 19 | 30 | 33 | 23 | 15 | 11 | 11 | 9 | 5 | 4 | 0 |
| JUL MNS | 6 | 7 | 19 | 34 | 28 | 21 | 10 | 6 | 2 | 1 | 11 | 15 | 31 | 42 | 30 | 18 | 27 | 18 | 20 | 10 | 7 | 8 | 4 | 1 |
| AUG MNS | 7 | 10 | 16 | 19 | 25 | 37 | 23 | 10 | 13 | 11 | 11 | 12 | 26 | 31 | 33 | 33 | 28 | 27 | 19 | 7 | 7 | 11 | 4 | 4 |
| SEP MNS | 7 | 9 | 15 | 28 | 30 | 26 | 11 | 4 | 3 | 5 | 2 | 4 | 3 | 22 | 31 | 42 | 44 | 24 | 18 | 15 | 9 | 10 | 19 | 3 |
| OCT MNS | 18 | 10 | 18 | 23 | 28 | 22 | 10 | 2 | 1 | 3 | 2 | 3 | 14 | 19 | 32 | 62 | 54 | 34 | 24 | 24 | 19 | 24 | 9 | 14 |
| NOV MNS | 9 | 17 | 16 | 35 | 23 | 23 | 17 | 7 | 5 | 3 | 5 | 8 | 20 | 43 | 61 | 59 | 48 | 31 | 32 | 25 | 27 | 16 | 10 | 11 |
| DEC MNS | 22 | 23 | 20 | 24 | 31 | 21 | 13 | 5 | 2 | 3 | 7 | 12 | 23 | 20 | 37 | 50 | 55 | 39 | 23 | 31 | 22 | 13 | 7 | 18 |
| MEAN | 10 | 12 | 16 | 25 | 26 | 24 | 15 | 7 | 5 | 4 | 5 | 7 | 14 | 26 | 34 | 41 | 41 | 29 | 22 | 16 | 12 | 9 | 8 | 6 |
| JAN MPS + MNS | 27 | -4 | -9 | -11 | -17 | -10 | -7 | 1 | 5 | 8 | 5 | 1 | 6 | -2 | -10 | -23 | -23 | -24 | -26 | -9 | 6 | 27 | 36 | 51 |
| FEB MPS + MNS | 43 | 22 | 18 | -12 | -13 | -39 | -36 | -15 | -11 | -3 | 6 | 11 | -3 | -24 | -41 | -62 | -84 | -46 | -26 | -4 | 18 | 45 | 53 | 73 |
| MAR MPS + MNS | 50 | 46 | 19 | 3 | 0 | -3 | 3 | -1 | -6 | -1 | -1 | -8 | -8 | -23 | -26 | -25 | -30 | -19 | 2 | 22 | 50 | 67 | 61 | 47 |
| APR MPS + MNS | 42 | 29 | 8 | -19 | -33 | -20 | -10 | -2 | 9 | 12 | 11 | 14 | 10 | 7 | -8 | -9 | -18 | -17 | 0 | 5 | 25 | 50 | 62 | 49 |
| MAY MPS + MNS | 75 | 49 | 27 | 8 | 13 | 10 | 8 | 22 | 22 | 25 | 25 | 25 | 25 | 24 | 27 | 20 | 15 | -7 | -7 | 4 | 20 | 48 | 90 | 90 |
| JUN MPS + MNS | 30 | 32 | -10 | -24 | -25 | -21 | -5 | 1 | 9 | 20 | 14 | 22 | 27 | 19 | 4 | -8 | -7 | -2 | 1 | -2 | 7 | 41 | 44 | 42 |
| JUL MPS + MNS | 79 | 70 | 37 | 8 | 0 | 1 | 7 | 17 | 20 | 29 | 17 | 11 | 9 | 8 | 8 | 9 | -6 | -6 | -13 | 8 | 32 | 56 | 75 | 116 |
| AUG MPS + MNS | 66 | 41 | 21 | 9 | -3 | -27 | -8 | -3 | 1 | 5 | 10 | 17 | 13 | -3 | -4 | -8 | -19 | -21 | -14 | 3 | 39 | 39 | 66 | 71 |
| SEP MPS + MNS | 85 | 73 | 36 | 4 | -18 | -13 | 3 | 10 | 20 | 14 | 18 | 20 | 25 | 1 | -9 | -24 | -33 | -18 | -1 | 22 | 53 | 78 | 92 | 114 |
| OCT MPS + MNS | 20 | 29 | 7 | -18 | -23 | -21 | -7 | 3 | 8 | 7 | 11 | 7 | -4 | -6 | -21 | -54 | -53 | -34 | -19 | 1 | 33 | 60 | 48 | 43 |
| NOV MPS + MNS | 49 | 14 | 9 | -26 | -11 | -21 | -13 | -3 | 3 | 6 | 3 | -1 | -2 | -33 | -47 | -43 | -41 | -17 | -21 | -1 | 15 | 18 | 33 | 36 |
| DEC MPS + MNS | 4 | -11 | -5 | -19 | -28 | -17 | -9 | 4 | 12 | 9 | 2 | -7 | -14 | -9 | -30 | -43 | -49 | -35 | -14 | -21 | -5 | 47 | 35 | 20 |
| MEAN | 48 | 33 | 13 | -8 | -13 | -15 | -6 | 3 | 8 | 11 | 10 | 9 | 7 | -3 | -13 | -23 | -29 | -21 | -12 | 2 | 24 | 48 | 58 | 63 |

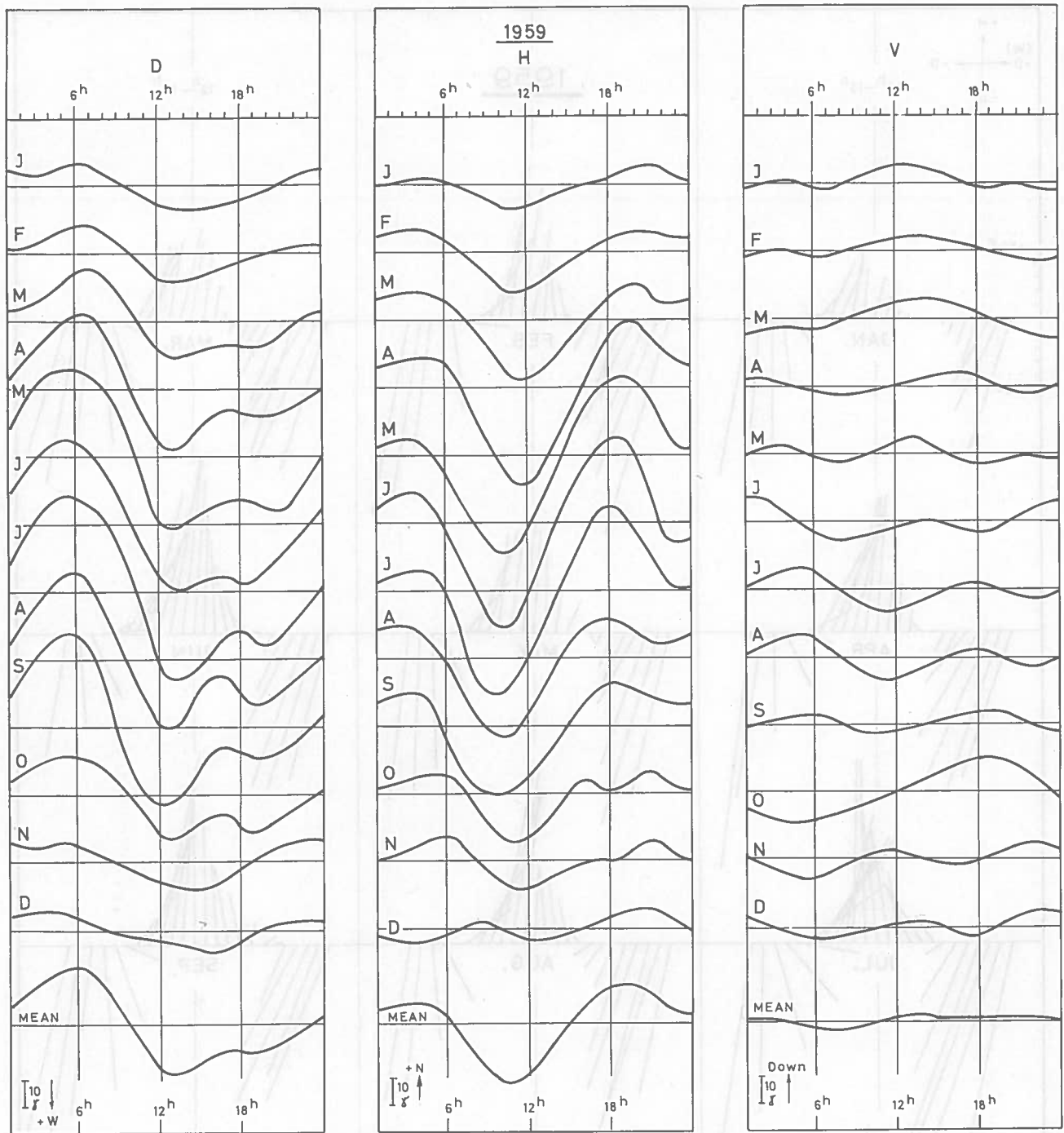


Fig. 1. The Quiet Diurnal Variation, smoothed Values.

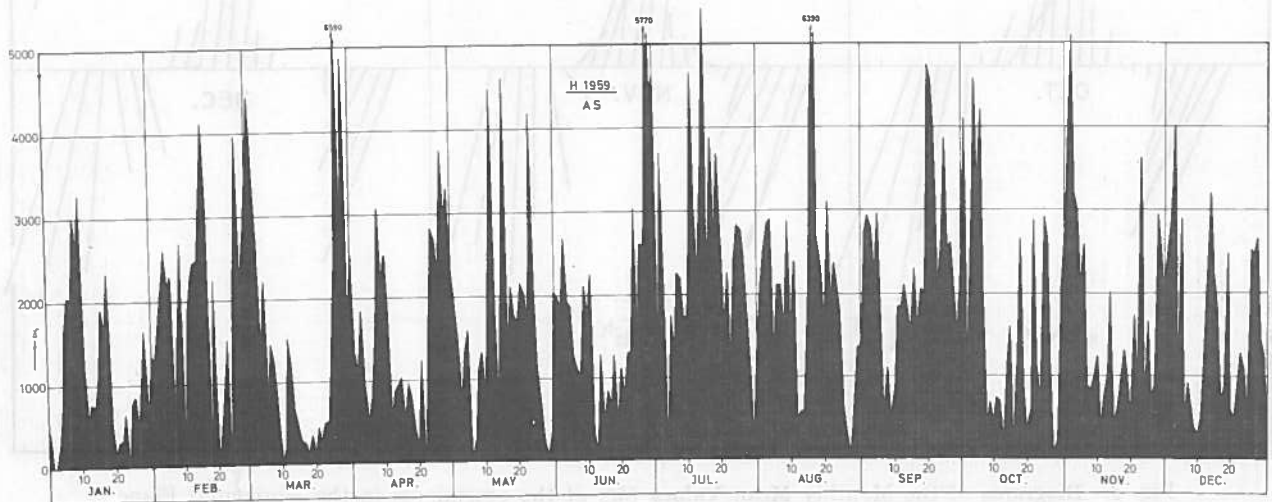


FIG. 2. THE DIURNAL SUM OF THE ABSOLUTE STORMINESS OF H.

Fig. 2. The Diurnal Sum of the Absolute Storminess of H.

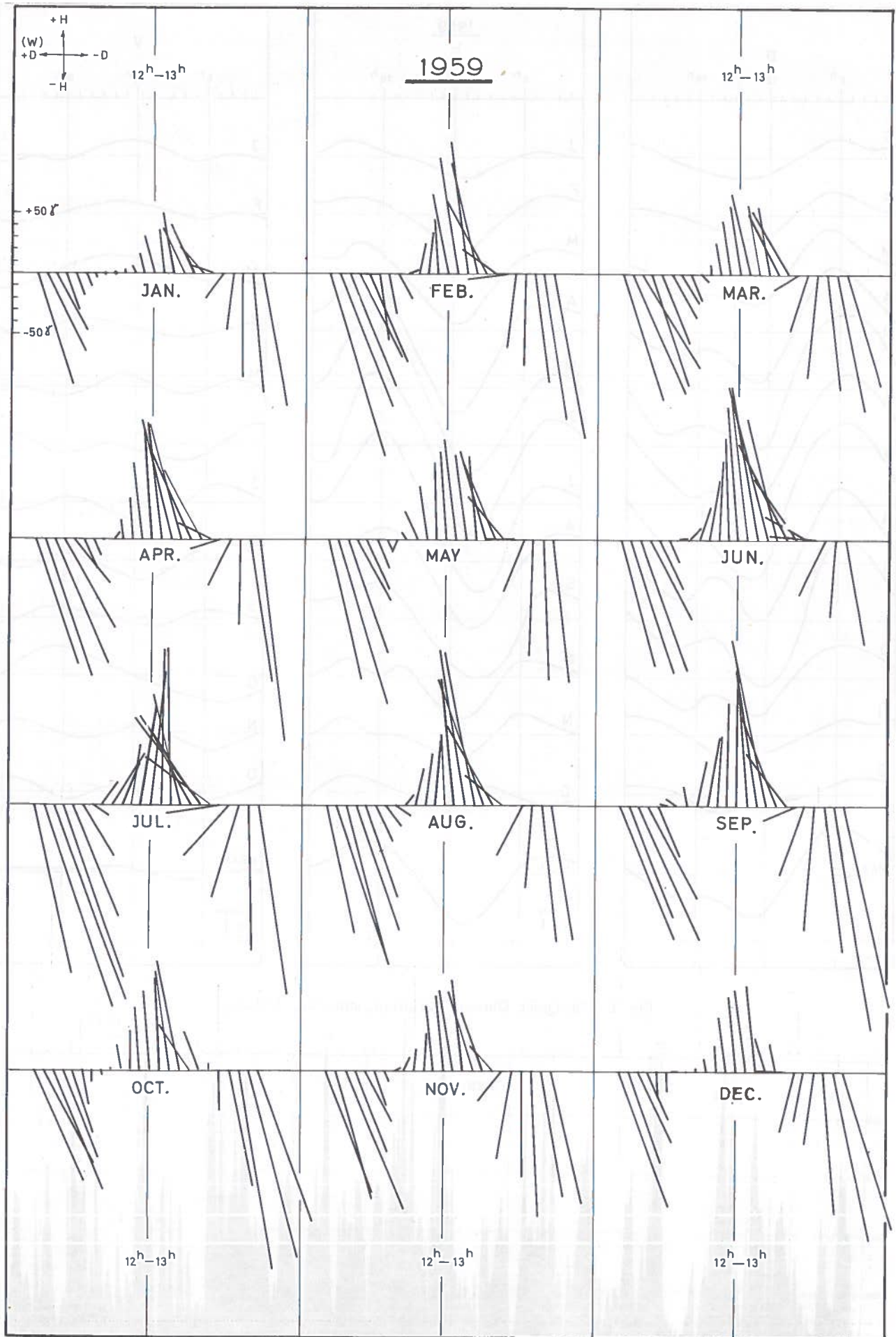


Fig. 3. Diagrams of the Monthly Mean Values (M) of the Storminess in the Horizontal Plane.

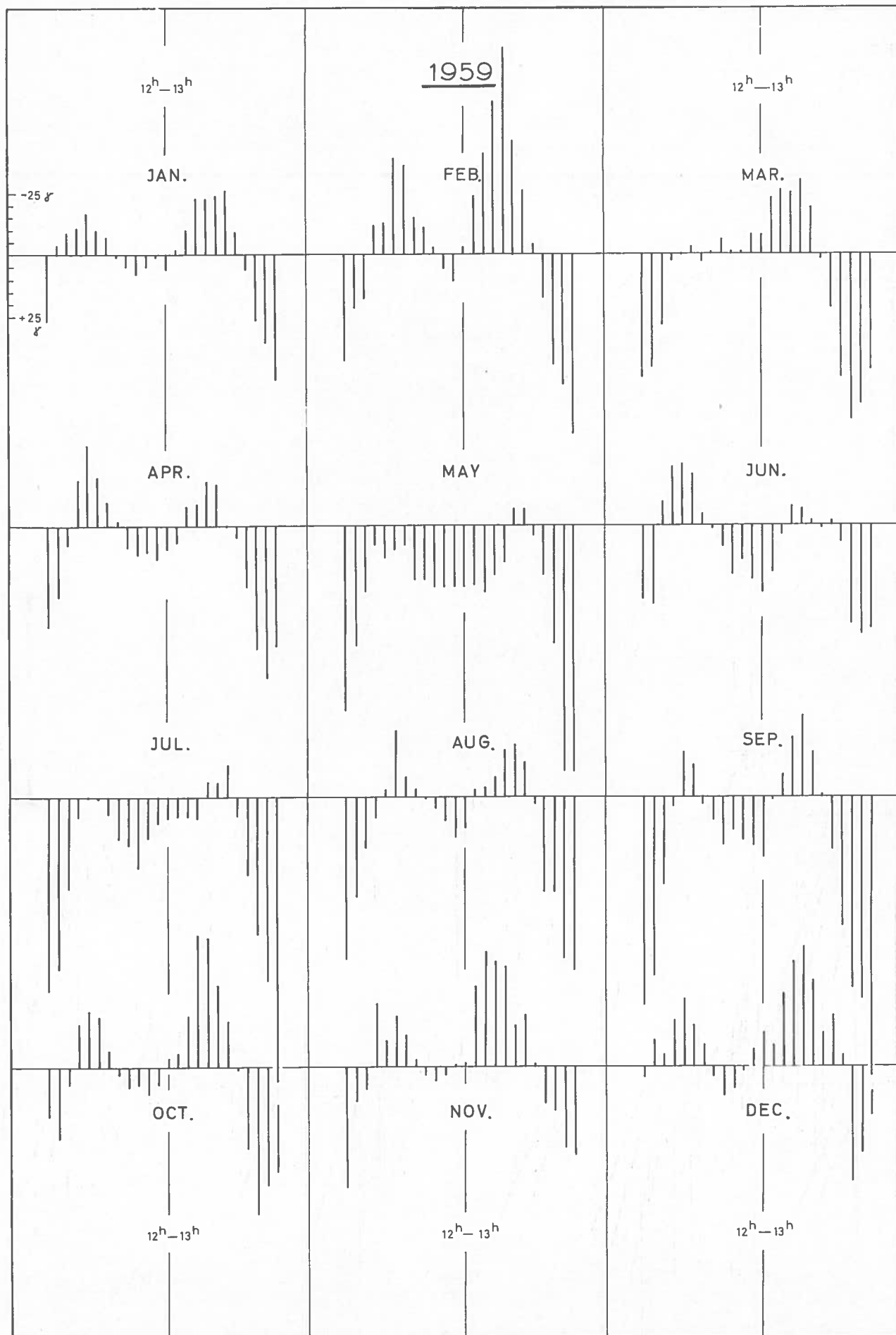


Fig. 4. Diagrams of the Monthly Mean Values (M) of the Storminess of the Vertical Intensity.

