

Monthly Preliminary Geomagnetic Bulletin - MAY 2018

Coimbra Magnetic Observatory (COI, IAGA code)

$\phi = 40.222^\circ$; $\lambda = 351.578^\circ$

Observatório Geofísico e Astronómico da Universidade de Coimbra (OGAUC)

Absolute monthly means

| H (nT) | D (°) | Z (nT) | X (nT) | Y (nT) | I (°) | F (nT) |
|--------|--------|--------|--------|--------|--------|--------|
| 25748 | -2,167 | 36262 | 25729 | -973 | 54,623 | 44474 |

Monthly daily amplitudes*

| | H (nT) | D (°) | Z (nT) | X (nT) | Y (nT) | I (°) | F (nT) |
|------|--------|-------|--------|--------|--------|-------|--------|
| mean | 27 | 7,6 | 40 | 27 | 57 | 2,9 | 32 |
| min | 8 | 5,1 | 27 | 8 | 39 | 1,3 | 20 |
| max | 94 | 11,7 | 65 | 94 | 88 | 8,7 | 51 |

Monthly maximum amplitudes*

| H (nT) | D (°) | Z (nT) | X (nT) | Y (nT) | I (°) | F (nT) |
|--------|-------|--------|--------|--------|-------|--------|
| 94 | 12,4 | 73 | 94 | 93 | 8,7 | 53 |

(*) - Based on hourly values

Geomagnetic Activity - K indices

| Day | K indices | | | | | | | | ak indices (nT) | | | | | | | | Ak |
|-----|-------------------|---|---|---|----|----|----|----|-------------------|----|----|----|----|----|----|----|------|
| | Tri-hourly values | | | | | | | | Tri-hourly values | | | | | | | | |
| | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | |
| 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 3,2 |
| 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 10 | 10 | 10 | 4 | 10 | 10 | 4 | 4 | 7,7 |
| 3 | 1 | 1 | 0 | 1 | 2 | 2 | 2 | 2 | 4 | 4 | 0 | 4 | 10 | 10 | 10 | 10 | 6,5 |
| 4 | 0 | 0 | 1 | 0 | 2 | 1 | 2 | 2 | 0 | 0 | 4 | 0 | 10 | 4 | 10 | 10 | 4,7 |
| 5 | 1 | 1 | 1 | 3 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 21 | 38 | 67 | 67 | 67 | 34,1 |
| 6 | 5 | 3 | 3 | 3 | 3 | 3 | 4 | 5 | 67 | 21 | 21 | 21 | 21 | 21 | 38 | 67 | 34,7 |
| 7 | 4 | 3 | 3 | 2 | 4 | 3 | 3 | 4 | 38 | 21 | 21 | 10 | 38 | 21 | 21 | 38 | 25,9 |
| 8 | 2 | 2 | 3 | 2 | 3 | 4 | 4 | 2 | 10 | 10 | 21 | 10 | 21 | 38 | 38 | 10 | 19,6 |
| 9 | 3 | 2 | 2 | 1 | 2 | 3 | 4 | 3 | 21 | 10 | 10 | 4 | 10 | 21 | 38 | 21 | 16,8 |
| 10 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 21 | 10 | 10 | 21 | 10 | 21 | 10 | 21 | 15,4 |
| 11 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 10 | 21 | 21 | 10 | 21 | 10 | 21 | 21 | 16,8 |
| 12 | 3 | 3 | 1 | 1 | 1 | 2 | 2 | 3 | 21 | 21 | 4 | 4 | 4 | 10 | 10 | 21 | 11,9 |
| 13 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 10 | 10 | 10 | 21 | 21 | 21 | 12,6 |
| 14 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 4 | 4 | 4 | 4 | 10 | 4 | 10 | 10 | 6,3 |
| 15 | 0 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 0 | 4 | 10 | 4 | 10 | 10 | 4 | 10 | 6,5 |
| 16 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 2 | 0 | 0 | 4 | 4 | 10 | 4 | 10 | 10 | 5,3 |
| 17 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 21 | 10 | 10 | 21 | 10 | 10 | 10 | 10 | 12,6 |
| 18 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 10 | 10 | 4 | 4 | 10 | 10 | 4 | 4 | 7,0 |
| 19 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 4 | 4 | 4 | 10 | 4 | 4 | 3,9 |
| 20 | 1 | 1 | 2 | 1 | 2 | 2 | 0 | 0 | 4 | 4 | 10 | 4 | 10 | 10 | 0 | 0 | 5,3 |
| 21 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 0 | 4 | 4 | 4 | 10 | 4 | 4 | 10 | 5,1 |
| 22 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 4 | 4 | 10 | 4 | 10 | 10 | 10 | 10 | 7,7 |
| 23 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 10 | 10 | 21 | 10 | 10 | 4 | 4 | 4 | 9,1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 4 | 4 | 4 | 4 | 4 | 10 | 4 | 4 | 4,9 |
| 25 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 4 | 4 | 4 | 4 | 10 | 4 | 4 | 4 | 4,9 |
| 26 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 4 | 4 | 4 | 4 | 10 | 4 | 10 | 10 | 6,3 |
| 27 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 10 | 4 | 4 | 4 | 4 | 4 | 4 | 4,9 |
| 28 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 4 | 4 | 4 | 4 | 10 | 4 | 4 | 4,4 |
| 29 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 4 | 10 | 4 | 4 | 4 | 10 | 4 | 4 | 5,6 |
| 30 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 0 | 4 | 4 | 4 | 10 | 10 | 10 | 10 | 6,5 |
| 31 | 2 | 1 | 1 | 2 | 2 | 4 | 4 | 3 | 10 | 4 | 4 | 10 | 10 | 38 | 38 | 21 | 16,8 |

Monthly mean of the daily equivalent amplitude Ak: 10,7

| K values: | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------------|------|-------|-------|-------|------|------|------|------|------|------|
| Freq. (N): | 16 | 100 | 83 | 34 | 10 | 5 | 0 | 0 | 0 | 0 |
| Freq. (%): | 6,45 | 40,32 | 33,47 | 13,71 | 4,03 | 2,02 | 0,00 | 0,00 | 0,00 | 0,00 |

| Classification of days | Quiet | | | | | Disturbed | | | | |
|------------------------|-------|----|----|----|----|-----------|----|----|-----|-----|
| | Q1 | Q2 | Q3 | Q4 | Q5 | D1 | D2 | D3 | D4 | D5 |
| Coimbra (local K): | 1 | 19 | 28 | 24 | 25 | 6 | 5 | 7 | 8* | 11* |
| International (Kp): | 1 | 21 | 19 | 20 | 26 | 6 | 5 | 7* | 11* | 9* |

Principal Magnetic Storms

| Storminess period | | | | | Commencement | | | Maximum activity | | | Range | | | |
|-------------------|------|-----|-----|------|--------------|-----------|-------|------------------|-----|---|--------|-------|--------|--------|
| Begin | | | End | | Type | Amplitude | | Day | 3hp | K | H (nT) | D (°) | Z (nT) | |
| Day | hour | min | day | hour | | H (nT) | D (°) | | | | | | | Z (nT) |
| 5 | 10 | 25 | 7 | 6 | SSC | 9 | 0,4 | - | 5 | 5 | 5 | 111 | 14,6 | 72 |

SSC: storm sudden commencement;
3hp: daily 3-hour period of maximum activity; K: maximum local index

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