## Sheet1
| Station | MLT | Mag. lat. | IGRF Decl. | Solar angle | N | E | Z |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ABK | 23.59 | 69.42 | 17.22 | 103.06 | 19.0 | -3.7 | 30.5 |
| AMD | 0.20 | 77.04 | 6.55 | 95.73 | 9.2 | 7.7 | -6.1 |
| AND | 1.01 | 82.93 | -26.79 | 89.37 | -14.5 | 16.4 | -22.7 |
| ARS | 1.38 | 73.61 | -3.59 | 98.74 | 17.8 | 0.7 | 15.2 |
| ATU | 23.91 | 61.85 | 14.87 | 110.70 | 19.9 | 1.8 | 6.4 |
| BDV | 22.19 | 59.89 | 19.66 | 108.19 | 4.5 | -3.0 | 4.9 |
| BEL | 5.49 | 52.60 | -18.66 | 91.78 | 12.7 | 0.6 | -0.4 |
| BFE | 0.80 | 48.51 | 8.60 | 123.07 | 12.3 | -0.4 | 0.2 |
| BJN | 23.73 | 42.65 | 13.21 | 128.65 | 11.4 | -5.1 | 0.3 |
| BLC | 23.25 | 53.62 | 16.58 | 117.37 | 7.7 | -4.8 | 1.7 |
| BOU | 23.73 | 54.65 | 14.98 | 117.34 | 7.0 | -1.0 | 1.3 |
| BRW | 8.78 | 58.20 | -2.60 | 61.83 | 15.6 | 1.8 | -4.2 |
| BSL | 8.08 | 49.13 | -4.88 | 64.45 | 11.4 | 4.6 | -0.9 |
| CBB | 8.37 | 47.37 | -2.42 | 60.73 | 26.2 | 3.4 | -2.5 |
| CLF | 8.53 | 52.74 | -2.64 | 61.20 | 17.2 | 2.7 | -3.9 |
| CMO | 8.91 | 45.98 | 1.14 | 54.42 | 12.8 | 9.9 | -8.8 |
| DED | 8.84 | 45.76 | 0.82 | 54.98 | 21.4 | 13.5 | -10.0 |
| DIK | 9.35 | 52.27 | 3.04 | 53.71 | 6.1 | 2.2 | 0.1 |
| DMH | 8.68 | 43.11 | 0.22 | 55.69 | 20.4 | 15.7 | -3.8 |
| DOB | 3.55 | 54.98 | -13.65 | 106.23 | 15.2 | 4.9 | 0.0 |
| DON | 9.17 | 50.15 | 2.13 | 54.05 | 14.1 | 5.6 | -8.7 |
| DOU | 9.53 | 41.72 | 4.10 | 45.91 | 13.4 | 11.0 | -3.1 |
| ESK | 9.80 | 47.71 | 5.43 | 47.12 | 11.5 | 10.7 | -6.2 |
| FCC | 9.34 | 48.03 | 3.24 | 51.32 | 14.8 | 4.5 | -2.5 |
| FHB | 9.36 | 44.35 | 3.46 | 49.05 | 6.6 | 8.7 | -4.6 |
| FRD | 3.34 | 48.05 | -10.56 | 111.97 | 15.3 | 6.3 | 1.4 |
| FRN | 20.77 | 70.87 | 20.05 | 93.79 | 19.8 | -4.5 | -11.4 |
| FSP | 9.17 | 51.86 | 1.94 | 55.00 | 9.3 | 4.5 | -3.8 |
| FYU | 5.33 | 84.72 | -49.35 | 83.33 | -6.1 | 34.1 | -43.2 |
| GDH | 6.18 | 80.69 | -40.72 | 82.37 | -23.4 | 35.2 | -39.8 |
| GHB | 6.06 | 78.93 | -38.25 | 82.89 | 0.9 | 21.5 | -13.2 |
| GHC | 6.22 | 76.38 | -34.41 | 82.57 | -23.3 | 7.4 | 25.7 |
| GIM | 6.01 | 75.25 | -33.50 | 83.56 | -14.6 | 11.3 | 13.0 |
| HAD | 5.93 | 73.99 | -32.19 | 84.09 | 2.7 | 100.0 | 74.9 |
| HLP | 6.11 | 72.64 | -30.37 | 83.42 | 8.6 | 18.3 | -0.4 |
| HOP | 5.86 | 71.43 | -29.61 | 84.84 | 24.6 | 22.2 | 3.3 |
| HRB | 5.91 | 69.98 | -28.17 | 84.86 | 34.6 | 26.4 | -1.4 |
| HRN | 5.99 | 67.41 | -25.84 | 84.78 | 21.6 | 11.9 | 7.8 |
| IGC | 6.26 | 65.75 | -23.86 | 83.14 | 25.3 | 14.5 | 3.3 |
| IQA | 9.01 | 77.34 | -17.82 | 72.81 | 25.3 | -2.8 | 11.7 |
| IRT | 1.64 | 66.16 | -0.95 | 105.41 | 33.3 | 8.2 | -2.5 |
| JCK | 1.68 | 68.50 | -2.60 | 103.19 | -2.3 | 2.7 | 9.4 |
| JCO | 23.06 | 67.47 | 20.04 | 104.11 | -3.0 | -16.0 | 4.2 |
| KAR | 23.90 | 67.47 | 15.13 | 105.26 | 12.3 | -23.8 | 4.3 |
| KHB | 1.55 | 59.96 | 1.94 | 111.21 | 10.5 | 14.3 | 14.6 |
| KUV | 1.84 | 72.45 | -7.92 | 99.20 | 46.1 | 5.5 | 24.9 |
| LER | 10.67 | 68.19 | 12.57 | 59.88 | -6.8 | 16.2 | -4.3 |
| LET | 10.71 | 76.57 | 5.11 | 68.11 | 14.2 | 15.7 | 30.2 |
| LVV | 10.79 | 75.64 | 7.90 | 67.06 | 9.2 | 13.5 | 36.0 |
| LYC | 11.02 | 73.53 | 14.04 | 64.49 | -13.6 | 43.8 | -3.2 |
| LYR | 10.56 | 71.89 | 9.45 | 63.77 | -8.8 | 28.8 | 6.1 |
| M01 | 10.45 | 67.80 | 10.28 | 60.14 | 7.7 | 9.0 | -10.6 |
| MAB | 10.23 | 67.07 | 8.12 | 60.20 | 1.9 | 19.5 | -3.7 |
| MEA | 10.06 | 66.86 | 6.34 | 60.65 | 6.0 | 15.6 | -4.3 |
| MGD | 9.98 | 63.82 | 6.37 | 58.37 | 9.8 | 5.3 | 0.4 |
| NAL | 9.73 | 63.75 | 3.95 | 59.53 | 12.8 | -0.5 | 0.4 |
| NAQ | 9.60 | 62.61 | 3.08 | 59.31 | 8.7 | -0.6 | -2.4 |
| NCK | 9.40 | 59.64 | 2.08 | 58.34 | 14.2 | 1.4 | 4.2 |
| NEW | 9.13 | 58.82 | 0.12 | 59.57 | 4.9 | 3.2 | 19.5 |
| NGK | 9.10 | 56.70 | 0.44 | 58.51 | 8.7 | 2.7 | 0.2 |
| NOR | 10.63 | 74.52 | 7.49 | 66.22 | -17.1 | 28.8 | 5.3 |
| NUR | 10.16 | 65.74 | 7.76 | 59.27 | 4.1 | 9.4 | -2.3 |
| NVS | 10.54 | 64.41 | 11.66 | 56.65 | -10.8 | 2.5 | 0.4 |
| OTT | 10.01 | 61.87 | 6.94 | 56.60 | 4.4 | 2.9 | -1.8 |
| PAG | 10.21 | 57.32 | 8.51 | 51.73 | 4.5 | 0.4 | -0.7 |
| PBK | 9.78 | 56.88 | 5.52 | 53.85 | 7.3 | 17.2 | -1.1 |
| PET | 20.28 | 70.60 | 16.69 | 91.73 | 28.5 | 11.7 | 8.5 |
| PGC | 21.19 | 67.65 | 20.35 | 97.78 | 8.2 | 0.3 | -1.5 |
| PIN | 21.13 | 65.45 | 19.05 | 98.95 | 7.2 | -0.6 | 5.3 |
| PKR | 21.15 | 65.78 | 19.30 | 98.86 | 6.4 | -2.3 | 3.8 |
| RAN | 13.83 | 69.36 | 31.07 | 61.07 | -27.4 | -12.4 | 4.9 |
| RED | 2.19 | 40.69 | -1.00 | 124.67 | 15.2 | 2.2 | 3.0 |
| RES | 9.74 | 50.93 | 5.29 | 49.81 | 6.9 | 6.6 | -0.3 |
| ROE | 9.59 | 42.92 | 4.33 | 46.07 | 13.1 | 10.9 | -0.7 |
| RPB | 4.42 | 72.21 | -28.93 | 91.46 | -5.9 | 13.4 | 43.7 |
| RVK | 15.28 | 47.79 | -3.69 | 53.98 | -0.2 | 2.0 | -0.9 |
| SBL | 9.50 | 42.60 | 3.99 | 46.77 | 17.1 | 15.8 | 2.1 |
| SHU | 10.04 | 40.18 | 5.51 | 40.14 | 8.1 | 15.0 | -9.4 |
| SIT | 13.82 | 51.26 | 8.74 | 45.89 | 4.8 | 1.0 | -1.3 |
| SKT | 9.95 | 45.49 | 5.82 | 44.45 | 10.0 | 9.5 | -2.4 |
| SMI | 16.89 | 54.88 | -15.23 | 69.63 | -2.2 | 1.0 | 1.0 |
| SOD | 18.09 | 54.30 | -10.90 | 80.15 | -3.3 | 6.5 | 0.7 |
| SOL | 12.60 | 65.85 | 26.70 | 55.49 | -44.4 | -0.5 | -7.9 |
| SOR | 18.80 | 65.94 | -1.58 | 84.78 | 9.0 | -0.1 | -0.4 |
| STF | 4.75 | 74.09 | -32.03 | 89.15 | -28.8 | 8.0 | 39.0 |
| STJ | 1.27 | 77.51 | -8.85 | 94.92 | -7.6 | 7.4 | -15.0 |
| SUA | 3.02 | 78.43 | -30.29 | 91.52 | -16.0 | 14.3 | 6.6 |
| T15 | 2.49 | 75.97 | -20.51 | 94.74 | -3.6 | 46.6 | 22.4 |
| T19 | 0.05 | 56.88 | 13.64 | 115.53 | 21.2 | 0.2 | 19.8 |
| T20 | 23.92 | 59.25 | 14.58 | 113.19 | 10.1 | -4.2 | 16.5 |
| T22 | 20.73 | 53.29 | 12.55 | 103.99 | 3.1 | -4.8 | 6.6 |
| T36 | 1.54 | 56.59 | 2.69 | 114.25 | 11.3 | -2.3 | 34.8 |
| T42 | 20.77 | 70.86 | 20.05 | 93.79 | 17.7 | -4.2 | -12.1 |
| T43 | 4.90 | 50.53 | -17.91 | 97.98 | 10.7 | 4.8 | 1.8 |
| T44 | 2.71 | 56.45 | -7.66 | 109.97 | 10.9 | 6.5 | 5.8 |
| T45 | 23.93 | 54.45 | 13.98 | 117.74 | -10.5 | 8.9 | -2.6 |
| T46 | 3.26 | 50.10 | -10.40 | 111.24 | 8.0 | 8.7 | 0.4 |
| T47 | 22.35 | 60.09 | 19.72 | 108.64 | 5.4 | -5.1 | 7.0 |
| T48 | 23.91 | 61.95 | 14.87 | 110.60 | 18.5 | -1.4 | 6.8 |
| T49 | 0.63 | 63.76 | 9.59 | 108.96 | 38.4 | -5.2 | 0.9 |
| T52 | 23.90 | 57.90 | 14.52 | 114.46 | 20.3 | -3.8 | 27.1 |
| T53 | 9.94 | 42.66 | 5.50 | 42.64 | 14.1 | 17.0 | -5.9 |
| THL | 12.21 | 52.90 | 14.45 | 42.37 | -7.7 | -0.4 | -7.3 |
| THY | 17.26 | 41.44 | -11.54 | 71.95 | -6.0 | 2.7 | -0.6 |
| TRO | 18.58 | 46.73 | -6.53 | 85.87 | 0.8 | 6.3 | -1.3 |
| UMQ | 3.38 | 68.14 | -19.11 | 98.39 | 44.8 | 6.6 | 2.4 |
| UPN | 3.39 | 65.01 | -16.95 | 100.53 | 36.2 | 7.3 | 5.0 |
| UPS | 3.47 | 69.60 | -21.06 | 96.99 | 28.5 | 2.2 | -12.0 |
| VAL | 3.67 | 71.51 | -24.32 | 94.93 | -8.4 | -2.6 | 43.1 |
| VIC | 4.43 | 63.16 | -21.73 | 96.03 | -34.9 | 10.3 | 42.7 |
| WNG | 4.43 | 58.42 | -19.39 | 98.36 | 7.2 | 8.4 | 6.5 |
| YAK | 3.40 | 63.54 | -16.12 | 101.52 | 28.9 | 10.7 | 4.8 |
| YKC | 3.39 | 70.39 | -21.20 | 96.74 | -4.1 | 1.6 | 24.4 |