

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.030        | -0.052        | -0.043        | -0.029        |
| Std Deviation (1 reading)     | 0.293         | 0.218         | 0.294         | 0.356         |
| Std Error (10 readings)       | 0.093         | 0.069         | 0.093         | 0.113         |
| St Error (100 readings)       | 0.029         | 0.022         | 0.029         | 0.036         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.042        | -0.051        | -0.028        | -0.019        |
| St Deviation (1 reading)      | 0.324         | 0.294         | 0.316         | 0.370         |
| St Error (10 readings)        | 0.102         | 0.093         | 0.100         | 0.117         |
| St Error (100 readings)       | 0.032         | 0.029         | 0.032         | 0.037         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.013        | -0.017        | -0.014        | -0.045        |
| Std Deviation (1 reading)     | 0.188         | 0.185         | 0.221         | 0.237         |
| Std Error (10 readings)       | 0.059         | 0.058         | 0.070         | 0.075         |
| Std Error (100 readings)      | 0.019         | 0.018         | 0.022         | 0.024         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.024        | -0.039        | -0.012        | -0.059        |
| Std Deviation (1 reading)     | 0.202         | 0.175         | 0.203         | 0.246         |
| Std Error (10 readings)       | 0.064         | 0.055         | 0.064         | 0.078         |
| Std Error (100 readings)      | 0.020         | 0.017         | 0.020         | 0.025         |

Table 2a      Lindenberg 1999 – 2008. Mean rate of change in temperature between launches at 01:00 and 07:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.020         | 0.045         | 0.022         | 0.003         |
| Std Deviation (1 reading)     | 0.295         | 0.207         | 0.329         | 0.379         |
| Std Error (10 readings)       | 0.093         | 0.066         | 0.104         | 0.120         |
| St Error (100 readings)       | 0.030         | 0.021         | 0.033         | 0.038         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.037         | 0.017         | 0.011         | 0.004         |
| St Deviation (1 reading)      | 0.325         | 0.300         | 0.312         | 0.368         |
| St Error (10 readings)        | 0.103         | 0.095         | 0.099         | 0.116         |
| St Error (100 readings)       | 0.033         | 0.030         | 0.031         | 0.037         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.006         | 0.016         | -0.005        | 0.030         |
| Std Deviation (1 reading)     | 0.184         | 0.182         | 0.221         | 0.241         |
| Std Error (10 readings)       | 0.058         | 0.058         | 0.070         | 0.076         |
| Std Error (100 readings)      | 0.018         | 0.018         | 0.022         | 0.024         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.025         | 0.074         | -0.003        | 0.035         |
| Std Deviation (1 reading)     | 0.207         | 0.179         | 0.213         | 0.275         |
| Std Error (10 readings)       | 0.065         | 0.057         | 0.067         | 0.087         |
| Std Error (100 readings)      | 0.021         | 0.018         | 0.021         | 0.027         |

Table 2b      Lindenberg 1999 – 2008. Mean rate of change in temperature between launches at 07:00 and 13:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.036         | 0.040         | 0.010         | 0.013         |
| Std Deviation (1 reading)     | 0.265         | 0.219         | 0.304         | 0.372         |
| Std Error (10 readings)       | 0.084         | 0.069         | 0.096         | 0.118         |
| St Error (100 readings)       | 0.026         | 0.022         | 0.030         | 0.037         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.011         | 0.027         | 0.023         | 0.000         |
| Std Deviation (1 reading)     | 0.305         | 0.280         | 0.337         | 0.368         |
| Std Error (10 readings)       | 0.097         | 0.088         | 0.107         | 0.116         |
| St Error (100 readings)       | 0.031         | 0.028         | 0.034         | 0.037         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.006         | -0.005        | 0.004         | -0.003        |
| Std Deviation (1 reading)     | 0.182         | 0.191         | 0.215         | 0.235         |
| Std Error (10 readings)       | 0.058         | 0.060         | 0.068         | 0.074         |
| Std Error (100 readings)      | 0.018         | 0.019         | 0.021         | 0.023         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.031         | -0.033        | 0.032         | 0.024         |
| Std Deviation (1 reading)     | 0.199         | 0.175         | 0.202         | 0.270         |
| Std Error (10 readings)       | 0.063         | 0.055         | 0.064         | 0.085         |
| Std Error (100 readings)      | 0.020         | 0.017         | 0.020         | 0.027         |

Table 2c      Lindenberg 1999 – 2008. Mean rate of change in temperature between launches at 13:00 and 19:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.001        | -0.024        | -0.006        | 0.001         |
| Std Deviation (1 reading)     | 0.264         | 0.201         | 0.293         | 0.375         |
| Std Error (10 readings)       | 0.084         | 0.064         | 0.093         | 0.119         |
| St Error (100 readings)       | 0.026         | 0.020         | 0.029         | 0.037         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.001         | 0.002         | -0.014        | 0.009         |
| St Deviation (1 reading)      | 0.303         | 0.274         | 0.309         | 0.363         |
| St Error (10 readings)        | 0.096         | 0.087         | 0.098         | 0.115         |
| St Error (100 readings)       | 0.030         | 0.027         | 0.031         | 0.036         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.012         | 0.005         | 0.011         | 0.018         |
| Std Deviation (1 reading)     | 0.173         | 0.190         | 0.214         | 0.241         |
| Std Error (10 readings)       | 0.055         | 0.060         | 0.068         | 0.076         |
| Std Error (100 readings)      | 0.017         | 0.019         | 0.021         | 0.024         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.021        | -0.002        | -0.036        | 0.009         |
| Std Deviation (1 reading)     | 0.188         | 0.178         | 0.200         | 0.243         |
| Std Error (10 readings)       | 0.060         | 0.056         | 0.063         | 0.077         |
| Std Error (100 readings)      | 0.019         | 0.018         | 0.020         | 0.024         |

Table 2d      Lindenberg 1999 – 2008. Mean rate of change in temperature between launches at 19:00 and 01:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.050        | -0.060        | -0.030        | 0.004         |
| Std Deviation (1 reading)     | 0.215         | 0.216         | 0.261         | 0.362         |
| Std Error (10 readings)       | 0.068         | 0.068         | 0.083         | 0.114         |
| St Error (100 readings)       | 0.022         | 0.022         | 0.026         | 0.036         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.017        | -0.046        | -0.068        | -0.018        |
| St Deviation (1 reading)      | 0.287         | 0.274         | 0.286         | 0.359         |
| St Error (10 readings)        | 0.091         | 0.087         | 0.090         | 0.113         |
| St Error (100 readings)       | 0.029         | 0.027         | 0.029         | 0.036         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.014        | -0.022        | -0.034        | -0.009        |
| Std Deviation (1 reading)     | 0.178         | 0.201         | 0.208         | 0.231         |
| Std Error (10 readings)       | 0.056         | 0.064         | 0.066         | 0.073         |
| Std Error (100 readings)      | 0.018         | 0.020         | 0.021         | 0.023         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.009        | -0.009        | -0.009        | -0.048        |
| Std Deviation (1 reading)     | 0.187         | 0.176         | 0.202         | 0.239         |
| Std Error (10 readings)       | 0.059         | 0.056         | 0.064         | 0.076         |
| Std Error (100 readings)      | 0.019         | 0.018         | 0.020         | 0.024         |

Table 2e      Lindenberg 2009 – 2012. Mean rate of change in temperature between launches at 01:00 and 07:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.046         | 0.032         | 0.013         | 0.046         |
| Std Deviation (1 reading)     | 0.253         | 0.219         | 0.270         | 0.253         |
| Std Error (10 readings)       | 0.080         | 0.069         | 0.086         | 0.080         |
| St Error (100 readings)       | 0.025         | 0.022         | 0.027         | 0.025         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.014         | -0.007        | 0.041         | -0.008        |
| St Deviation (1 reading)      | 0.269         | 0.249         | 0.285         | 0.350         |
| St Error (10 readings)        | 0.085         | 0.079         | 0.090         | 0.111         |
| St Error (100 readings)       | 0.027         | 0.025         | 0.028         | 0.035         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.027         | -0.010        | 0.027         | 0.027         |
| Std Deviation (1 reading)     | 0.169         | 0.199         | 0.199         | 0.169         |
| Std Error (10 readings)       | 0.054         | 0.063         | 0.063         | 0.054         |
| Std Error (100 readings)      | 0.017         | 0.020         | 0.020         | 0.017         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.032         | 0.033         | 0.011         | 0.076         |
| Std Deviation (1 reading)     | 0.184         | 0.167         | 0.186         | 0.255         |
| Std Error (10 readings)       | 0.058         | 0.053         | 0.059         | 0.081         |
| Std Error (100 readings)      | 0.018         | 0.017         | 0.019         | 0.026         |

Table 2f      Lindenberg 2009 – 2012. Mean rate of change in temperature between launches at 07:00 and 13:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.047         | -0.038        | 0.017         | 0.004         |
| Std Deviation (1 reading)     | 0.271         | 0.237         | 0.294         | 0.303         |
| Std Error (10 readings)       | 0.086         | 0.075         | 0.093         | 0.096         |
| St Error (100 readings)       | 0.027         | 0.024         | 0.029         | 0.030         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.010         | 0.073         | -0.017        | -0.011        |
| Std Deviation (1 reading)     | 0.286         | 0.268         | 0.295         | 0.293         |
| Std Error (10 readings)       | 0.091         | 0.085         | 0.093         | 0.093         |
| St Error (100 readings)       | 0.029         | 0.027         | 0.030         | 0.029         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.020         | 0.035         | 0.011         | -0.038        |
| Std Deviation (1 reading)     | 0.167         | 0.190         | 0.192         | 0.210         |
| Std Error (10 readings)       | 0.053         | 0.060         | 0.061         | 0.066         |
| Std Error (100 readings)      | 0.017         | 0.019         | 0.019         | 0.021         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.020         | 0.023         | 0.009         | -0.024        |
| Std Deviation (1 reading)     | 0.183         | 0.176         | 0.209         | 0.243         |
| Std Error (10 readings)       | 0.058         | 0.056         | 0.066         | 0.077         |
| Std Error (100 readings)      | 0.018         | 0.018         | 0.021         | 0.024         |

Table 2g      Lindenberg 2009 – 2012. Mean rate of change in temperature between launches at 13:00 and 19:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.034        | -0.038        | -0.033        | -0.014        |
| Std Deviation (1 reading)     | 0.231         | 0.247         | 0.269         | 0.406         |
| Std Error (10 readings)       | 0.073         | 0.078         | 0.085         | 0.128         |
| St Error (100 readings)       | 0.023         | 0.025         | 0.027         | 0.041         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.004        | -0.055        | -0.006        | 0.060         |
| St Deviation (1 reading)      | 0.272         | 0.285         | 0.273         | 0.378         |
| St Error (10 readings)        | 0.086         | 0.090         | 0.086         | 0.119         |
| St Error (100 readings)       | 0.027         | 0.028         | 0.027         | 0.038         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.027        | -0.028        | 0.005         | -0.009        |
| Std Deviation (1 reading)     | 0.168         | 0.193         | 0.202         | 0.226         |
| Std Error (10 readings)       | 0.053         | 0.061         | 0.064         | 0.071         |
| Std Error (100 readings)      | 0.017         | 0.019         | 0.020         | 0.023         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.023        | -0.062        | -0.032        | 0.001         |
| Std Deviation (1 reading)     | 0.176         | 0.185         | 0.200         | 0.248         |
| Std Error (10 readings)       | 0.056         | 0.059         | 0.063         | 0.078         |
| Std Error (100 readings)      | 0.018         | 0.019         | 0.020         | 0.025         |

Table 2h      Lindenberg 2009 – 2012. Mean rate of change in temperature between launches at 19:00 and 01:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.



| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
|-------------------------------|---------------|---------------|---------------|---------------|
| Mean rate of change, K / hour | -0.060        | -0.088        | -0.019        | -0.003        |
| Std Deviation (1 reading)     | 0.294         | 0.180         | 0.289         | 0.386         |
| Std Error (10 readings)       | 0.093         | 0.057         | 0.091         | 0.122         |
| St Error (100 readings)       | 0.029         | 0.018         | 0.029         | 0.039         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.070        | -0.068        | -0.048        | -0.068        |
| St Deviation (1 reading)      | 0.305         | 0.161         | 0.253         | 0.353         |
| St Error (10 readings)        | 0.096         | 0.051         | 0.080         | 0.112         |
| St Error (100 readings)       | 0.030         | 0.016         | 0.025         | 0.035         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.003        | 0.019         | -0.004        | -0.014        |
| Std Deviation (1 reading)     | 0.281         | 0.254         | 0.269         | 0.310         |
| Std Error (10 readings)       | 0.089         | 0.080         | 0.085         | 0.098         |
| Std Error (100 readings)      | 0.028         | 0.025         | 0.027         | 0.031         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.003         | 0.038         | 0.022         | -0.020        |
| Std Deviation (1 reading)     | 0.309         | 0.279         | 0.247         | 0.270         |
| Std Error (10 readings)       | 0.098         | 0.088         | 0.078         | 0.085         |
| Std Error (100 readings)      | 0.031         | 0.028         | 0.025         | 0.027         |

Table 2i Southern Great Plains 2006 – 2012. Mean rate of change in temperature between launches at 00:00 and 06:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.038         | 0.060         | 0.012         | 0.025         |
| Std Deviation (1 reading)     | 0.279         | 0.173         | 0.255         | 0.405         |
| Std Error (10 readings)       | 0.088         | 0.055         | 0.081         | 0.128         |
| St Error (100 readings)       | 0.028         | 0.017         | 0.025         | 0.041         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.024         | 0.008         | -0.005        | 0.015         |
| St Deviation (1 reading)      | 0.266         | 0.167         | 0.232         | 0.344         |
| St Error (10 readings)        | 0.084         | 0.053         | 0.073         | 0.109         |
| St Error (100 readings)       | 0.027         | 0.017         | 0.023         | 0.034         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.003        | 0.008         | 0.011         | 0.027         |
| Std Deviation (1 reading)     | 0.290         | 0.247         | 0.255         | 0.280         |
| Std Error (10 readings)       | 0.092         | 0.078         | 0.080         | 0.089         |
| Std Error (100 readings)      | 0.029         | 0.025         | 0.025         | 0.028         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.034         | 0.032         | -0.004        | 0.028         |
| Std Deviation (1 reading)     | 0.274         | 0.265         | 0.247         | 0.275         |
| Std Error (10 readings)       | 0.087         | 0.084         | 0.078         | 0.087         |
| Std Error (100 readings)      | 0.027         | 0.026         | 0.025         | 0.027         |

Table 2j Southern Great Plains 2006 – 2012. Mean rate of change in temperature between launches at 06:00 and 12:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.081         | 0.093         | 0.036         | 0.052         |
| Std Deviation (1 reading)     | 0.316         | 0.326         | 0.285         | 0.425         |
| Std Error (10 readings)       | 0.100         | 0.103         | 0.090         | 0.134         |
| St Error (100 readings)       | 0.032         | 0.033         | 0.028         | 0.043         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.044         | 0.073         | 0.033         | 0.010         |
| St Deviation (1 reading)      | 0.297         | 0.319         | 0.254         | 0.369         |
| St Error (10 readings)        | 0.094         | 0.101         | 0.080         | 0.117         |
| St Error (100 readings)       | 0.030         | 0.032         | 0.025         | 0.037         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.046        | 0.001         | -0.024        | -0.038        |
| Std Deviation (1 reading)     | 0.261         | 0.326         | 0.257         | 0.290         |
| Std Error (10 readings)       | 0.082         | 0.103         | 0.081         | 0.092         |
| Std Error (100 readings)      | 0.026         | 0.033         | 0.026         | 0.029         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.025        | -0.047        | -0.019        | -0.015        |
| Std Deviation (1 reading)     | 0.260         | 0.284         | 0.245         | 0.281         |
| Std Error (10 readings)       | 0.082         | 0.090         | 0.077         | 0.089         |
| Std Error (100 readings)      | 0.026         | 0.028         | 0.024         | 0.028         |

Table 2k Southern Great Plains 2006 – 2012. Mean rate of change in temperature between launches at 12:00 and 18:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.

|                               |               |               |               |               |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Altitude = 5km</b>         | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.025        | -0.058        | -0.049        | -0.047        |
| Std Deviation (1 reading)     | 0.288         | 0.340         | 0.286         | 0.420         |
| Std Error (10 readings)       | 0.091         | 0.108         | 0.090         | 0.133         |
| St Error (100 readings)       | 0.029         | 0.034         | 0.029         | 0.042         |
| <b>Altitude = 10km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.001        | -0.004        | -0.005        | 0.009         |
| St Deviation (1 reading)      | 0.302         | 0.326         | 0.259         | 0.396         |
| St Error (10 readings)        | 0.095         | 0.103         | 0.082         | 0.125         |
| St Error (100 readings)       | 0.030         | 0.033         | 0.026         | 0.040         |
| <b>Altitude = 15km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | 0.020         | -0.041        | 0.020         | 0.020         |
| Std Deviation (1 reading)     | 0.286         | 0.332         | 0.253         | 0.310         |
| Std Error (10 readings)       | 0.090         | 0.105         | 0.080         | 0.098         |
| Std Error (100 readings)      | 0.029         | 0.033         | 0.025         | 0.031         |
| <b>Altitude = 20km</b>        | <b>Spring</b> | <b>Summer</b> | <b>Autumn</b> | <b>Winter</b> |
| Mean rate of change, K / hour | -0.006        | -0.029        | -0.003        | 0.005         |
| Std Deviation (1 reading)     | 0.272         | 0.309         | 0.245         | 0.270         |
| Std Error (10 readings)       | 0.086         | 0.098         | 0.078         | 0.085         |
| Std Error (100 readings)      | 0.027         | 0.031         | 0.025         | 0.027         |

Table 21 Southern Great Plains 2006 – 2012. Mean rate of change in temperature between launches at 18:00 and 00:00 hours, along with standard deviation of a single measurement and standard error with increased number of measurements for 4 seasons.