# CVRMSE calculation for Excel and Python

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|  | **Urban(2.6 m)** | **VCWG-(2.6m)** | **Bias^2(excel)** | **Bias^2(python)** |
| **2002-06-11 12:50:00** | 18.94 | 18.77141169 | 0.02842202 | 0.028422 |
| **2002-06-11 13:00:00** | 18.97 | 18.6063464 | 0.132243943 | 0.132244 |
| **2002-06-11 13:10:00** |  | 18.69153291 | 349.3734026 | 0 |
| **2002-06-11 13:20:00** |  | 18.97927692 | 360.2129525 | 0 |
| **2002-06-11 13:30:00** |  | 19.17769674 | 367.7840523 | 0 |
| **2002-06-11 13:40:00** | 16.94 | 19.30482757 | 5.592409429 | 5.592409 |
| **2002-06-11 13:50:00** | 18.67 | 19.40568351 | 0.541230223 | 0.54123 |

# Sensor Height = 2.6 meters

Maximum Daily UHI effect: 5.2 K

VCWGv2.0.0 (Monthly) MeanBiasError: -0.53(K), RMSE: 0.56(K), R2: 0.98(-)

UWG Monthly MBE: -0.6(K), RMSE: 0.9(K)

NMBE(%), CV-RMSE(%), R2(-)

('VCWG-Potential Temperature error', 6.82, 10.26, 0.82)

('VCWG-Real Temperature error', 6.6, 9.98, 0.83)

('VCWG(idf-Refining)-Potential Temperature error', 5.67, 8.09, 0.89)

('VCWG(idf-Refining)-Real Temperature error', 5.54, 7.9, 0.89)

Chart

Description automatically generated

# Sensor Height = 14.7 meters

Maximum Daily UHI effect: 5.2 K

VCWGv2.0.0 (Monthly) MeanBiasError: -0.53(K), RMSE: 0.56(K), R2: 0.98(-)

UWG Monthly MBE: -0.6(K), RMSE: 0.9(K)

NMBE(%), CV-RMSE(%), R2(-)

('VCWG-Potential Temperature error', 5.82, 11.77, 0.77)

('VCWG-Real Temperature error', 5.8, 11.62, 0.77)

('VCWG(idf-Refining)-Potential Temperature error', 4.81, 8.14, 0.89)

('VCWG(idf-Refining)-Real Temperature error', 4.96, 8.15, 0.89)

Chart

Description automatically generated with medium confidence