

# RMSE の波数解像度依存性

|                                | planetary radiation        |                            |                             |                           | solar radiation            |                            |                             |                           |
|--------------------------------|----------------------------|----------------------------|-----------------------------|---------------------------|----------------------------|----------------------------|-----------------------------|---------------------------|
| $\Delta k$<br>$\text{cm}^{-1}$ | upflx<br>$\text{W m}^{-2}$ | dnflx<br>$\text{W m}^{-2}$ | flxcnv<br>$\text{W m}^{-3}$ | tend<br>$\text{K s}^{-1}$ | upflx<br>$\text{W m}^{-2}$ | dnflx<br>$\text{W m}^{-2}$ | flxcnv<br>$\text{W m}^{-3}$ | tend<br>$\text{K s}^{-1}$ |
| 50                             | 3.75                       | 2.84                       | 3.74e-4                     | 4.56e-5                   | 6.80e-1                    | 6.93e-1                    | 4.60e-5                     | 1.70e-4                   |
| 20                             | 6.29e-1                    | 1.16                       | 1.88e-4                     | 6.68e-5                   | 9.38e-1                    | 7.42e-1                    | 4.45e-5                     | 2.52e-4                   |
| 10                             | 7.37e-1                    | 6.70e-1                    | 1.45e-4                     | 8.95e-4                   | 3.10e-1                    | 4.60e-1                    | 3.68e-5                     | 7.28e-5                   |
| 5                              | 7.34e-1                    | 4.42e-1                    | 1.09e-4                     | 2.07e-4                   | 2.69e-1                    | 1.74e-1                    | 2.12e-5                     | 3.66e-5                   |
| 2                              | 2.81e-1                    | 2.68e-1                    | 5.25e-5                     | 7.64e-5                   | 9.52e-2                    | 1.59e-1                    | 1.64e-5                     | 3.12e-5                   |
| 1                              | 1.62e-1                    | 1.99e-1                    | 3.25e-5                     | 2.45e-5                   | 2.63e-2                    | 6.24e-2                    | 4.94e-6                     | 1.28e-5                   |
| 0.5                            | 4.04e-2                    | 8.69e-2                    | 1.93e-5                     | 3.06e-5                   | 9.02e-2                    | 9.83e-2                    | 4.30e-6                     | 5.02e-5                   |
| 0.2                            | 4.96e-2                    | 6.91e-2                    | 1.04e-5                     | 2.44e-5                   | 1.36e-2                    | 2.97e-2                    | 2.58e-6                     | 9.66e-6                   |
| 0.1                            | 2.69e-2                    | 2.81e-2                    | 4.59e-6                     | 1.44e-5                   | 3.44e-3                    | 2.61e-2                    | 2.09e-6                     | 1.24e-5                   |
| 2+20*                          | 2.80e-1                    | 2.68e-1                    | 5.25e-5                     | 7.64e-5                   | 3.87e-1                    | 4.19e-1                    | 1.75e-5                     | 3.21e-5                   |
| 1+10*                          | 1.63e-1                    | 1.98e-1                    | 3.25e-5                     | 2.45e-5                   | 2.36e-1                    | 2.19e-1                    | 8.64e-6                     | 1.00e-5                   |
| 0.5+5*                         | 4.05e-2                    | 8.68e-2                    | 1.93e-5                     | 3.06e-5                   | 7.05e-2                    | 7.31e-2                    | 5.07e-6                     | 4.57e-5                   |

\*解像度  
切り替え  
は  $7700 \text{ cm}^{-1}$ .

# RMSE の波数解像度依存性 (雲なし)

|                                | planetary radiation        |                            |                             |                           | solar radiation            |                            |                             |                           |
|--------------------------------|----------------------------|----------------------------|-----------------------------|---------------------------|----------------------------|----------------------------|-----------------------------|---------------------------|
| $\Delta k$<br>$\text{cm}^{-1}$ | upflx<br>$\text{W m}^{-2}$ | dnflx<br>$\text{W m}^{-2}$ | flxcnv<br>$\text{W m}^{-3}$ | tend<br>$\text{K s}^{-1}$ | upflx<br>$\text{W m}^{-2}$ | dnflx<br>$\text{W m}^{-2}$ | flxcnv<br>$\text{W m}^{-3}$ | tend<br>$\text{K s}^{-1}$ |
| 50                             | 1.44e1                     | 6.05                       | 9.80e-4                     | 4.56e-5                   | 3.01e-1                    | 1.36                       | 1.18e-4                     | 1.70e-4                   |
| 20                             | 7.25                       | 3.68                       | 6.82e-4                     | 6.68e-5                   | 8.19e-1                    | 1.08                       | 6.98e-5                     | 2.52e-4                   |
| 10                             | 5.70                       | 3.88                       | 4.86e-4                     | 8.95e-4                   | 2.98e-1                    | 1.12                       | 5.48e-5                     | 7.28e-5                   |
| 5                              | 2.77                       | 2.43                       | 4.14e-4                     | 2.07e-4                   | 3.22e-2                    | 6.65e-1                    | 5.36e-5                     | 3.67e-5                   |
| 2                              | 3.63                       | 1.27                       | 1.83e-4                     | 7.64e-5                   | 8.08e-2                    | 4.88e-1                    | 4.04e-5                     | 3.12e-5                   |
| 1                              | 2.81                       | 1.37                       | 1.65e-4                     | 2.45e-5                   | 1.19e-2                    | 7.16e-2                    | 9.62e-6                     | 1.28e-5                   |
| 0.5                            | 2.94e-1                    | 2.82e-1                    | 6.18e-5                     | 3.05e-5                   | 2.41e-2                    | 1.56e-1                    | 8.62e-6                     | 5.02e-5                   |
| 0.2                            | 3.36e-1                    | 2.05e-1                    | 3.09e-5                     | 2.44e-5                   | 1.55e-3                    | 3.29e-2                    | 3.17e-6                     | 9.66e-6                   |
| 0.1                            | 2.79e-2                    | 3.12e-2                    | 4.94e-6                     | 1.44e-5                   | 1.05e-3                    | 2.86e-2                    | 2.91e-6                     | 1.24e-5                   |
| 2+20*                          | 3.63                       | 1.27                       | 1.83e-4                     | 7.64e-5                   | 7.98e-1                    | 5.12e-1                    | 3.22e-5                     | 3.20e-5                   |
| 1+10*                          | 2.81                       | 1.37                       | 1.65e-4                     | 2.45e-5                   | 3.02e-1                    | 4.88e-1                    | 1.76e-5                     | 1.00e-5                   |
| 0.5+5*                         | 2.94e-1                    | 2.82e-1                    | 6.18e-5                     | 3.05e-5                   | 3.18e-2                    | 1.92e-1                    | 1.59e-5                     | 4.57e-5                   |

\*解像度  
切り替え  
は  $7700 \text{ cm}^{-1}$ .