

HNO₃, N₂O and NO₂: Full and reduced resolution L2 compared

Joanne Walker and Anu Dudhia

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Summary

- Comparison of zonally averaged profiles from January 2003, 2004 and 2006 for HNO₃, N₂O and NO₂.
- Comparison of FR, RR nominal and RR UTLS-1 modes.
- Comparison of daytime and nighttime NO₂.
- Correlations between nighttime NO₂ and N₂O.

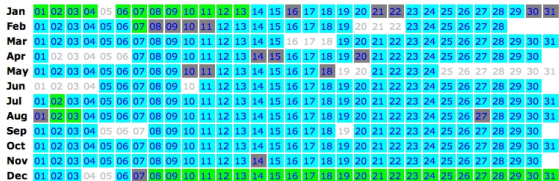
HNO₃, N₂O
and NO₂: Full
and reduced
resolution L2
compared

Available data

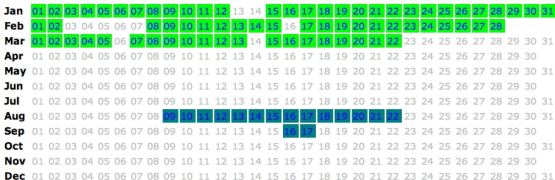
2002



2003

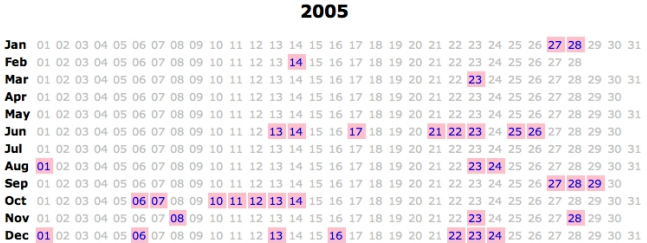
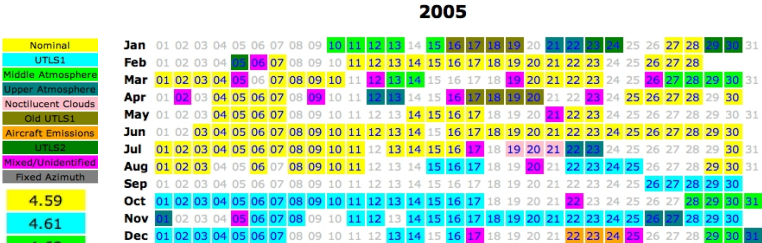


2004



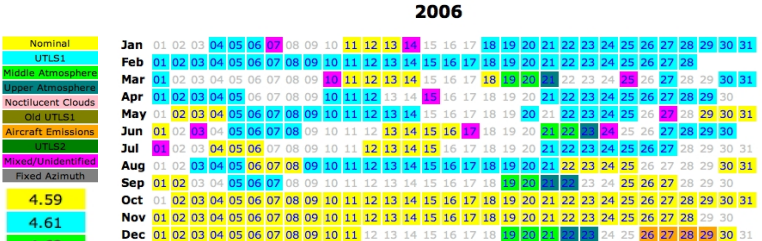
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Available data

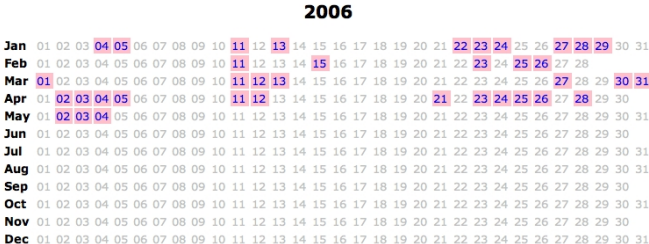


HNO_3 , N_2O
and NO_2 : Full
and reduced
resolution L2
compared

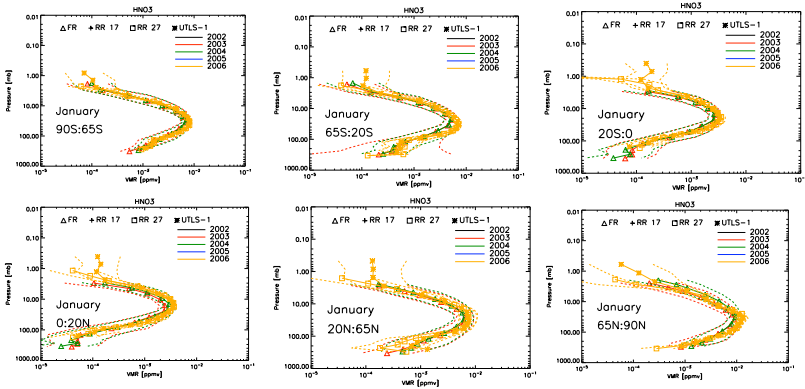
Available data



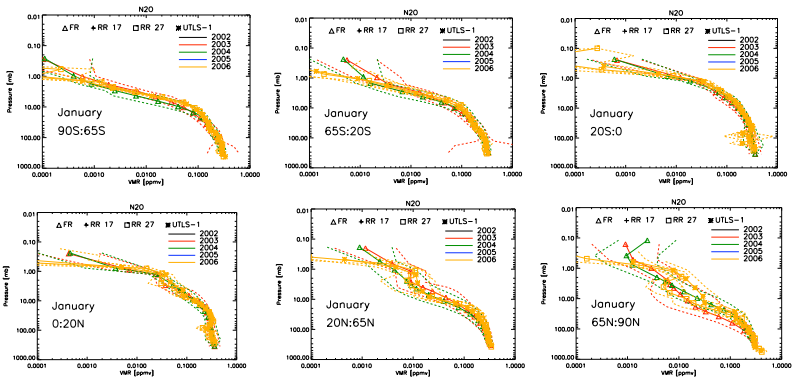
- 4.59
- 4.61
- 4.62
- 4.65
- 4.0
- Mixed



HNO_3 monthly means

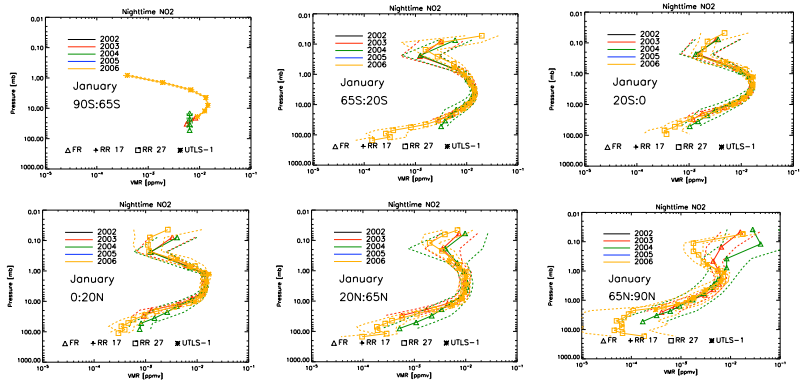


N₂O monthly means



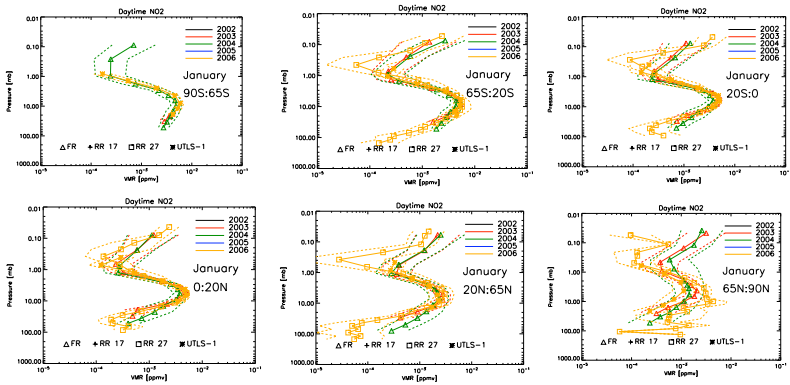
HNO_3 , N_2O
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Nighttime NO_2 monthly means



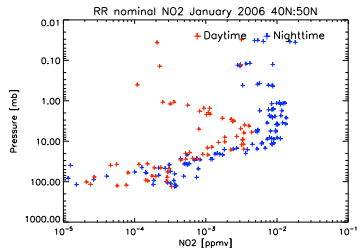
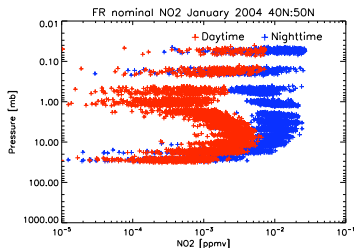
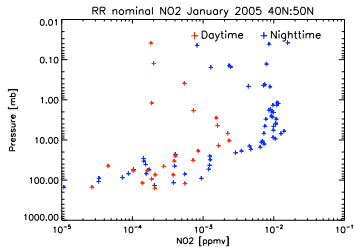
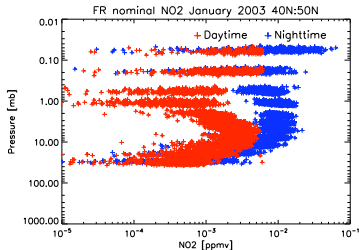
HNO_3 , N_2O
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Daytime NO_2 monthly means



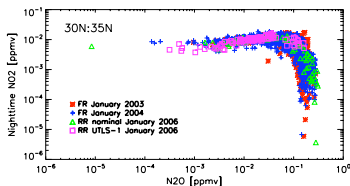
HNO_3 , N_2O
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Daytime NO_2 is lower than nighttime NO_2

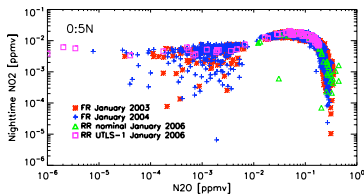


Correlations between N₂O and nighttime NO₂

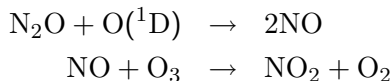
Correlations between N₂O and nighttime NO₂



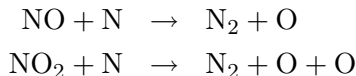
Correlations between N₂O and nighttime NO₂



Throughout stratosphere:



At high altitudes:



Conclusions

- HNO₃ and N₂O have good agreement between FR, RR nominal and UTLS-1 modes.
- Daytime and nighttime RR nominal NO₂ agrees less well with FR data perhaps due to poor data availability.
- Expected correlations between N₂O and NO₂ for modes examined.