

Reply to Referee 1 Comments - Figures

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**Comparison of ECHAM5/MESSy Atmospheric Chemistry (EMAC)
Simulations of the Arctic winter 2009/2010 and 2010/2011 with
Envisat/MIPAS and Aura/MLS Observations**

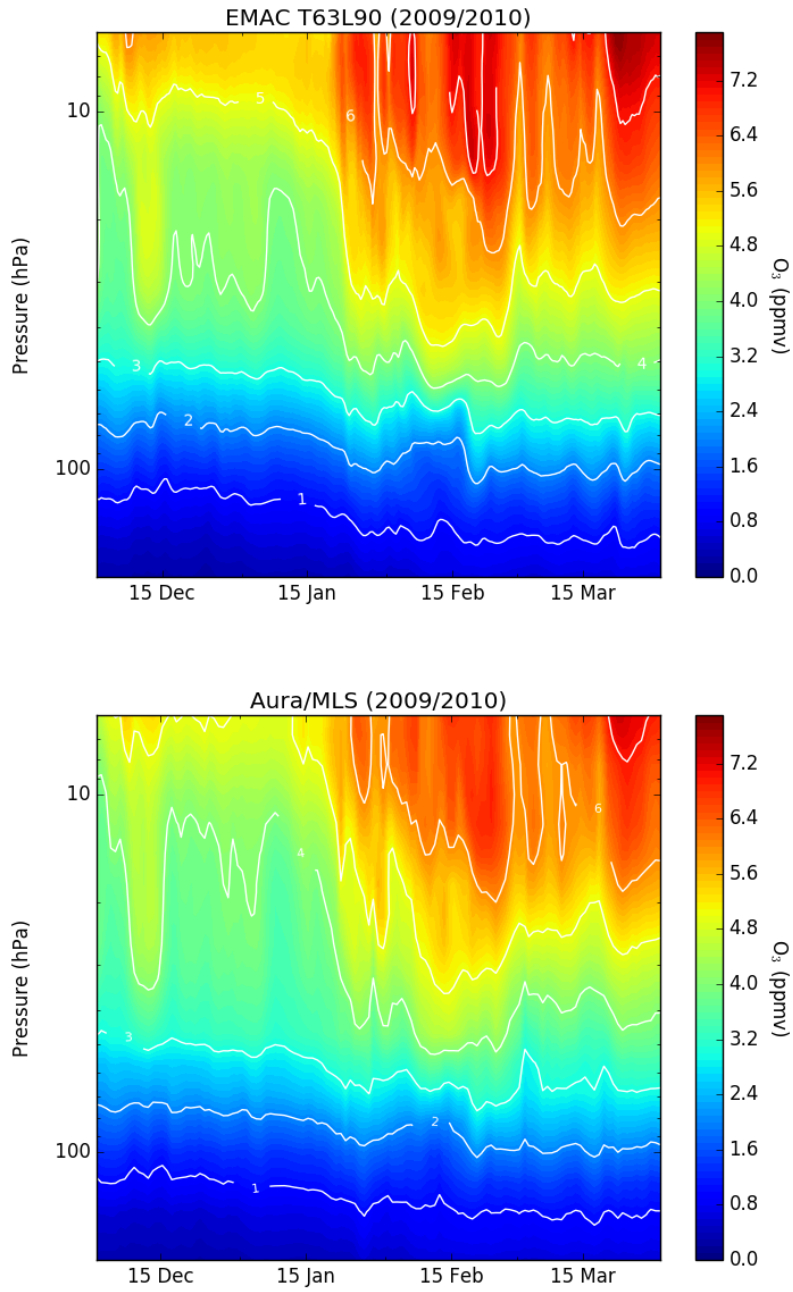


Figure 1: Temporal evolution of daily mean O_3 at northern high latitudes (averaged over $70-90^\circ N$) as function of pressure as simulated by EMAC T63L90 and observed by Aura/MLS for the Arctic winter 2009/2010.

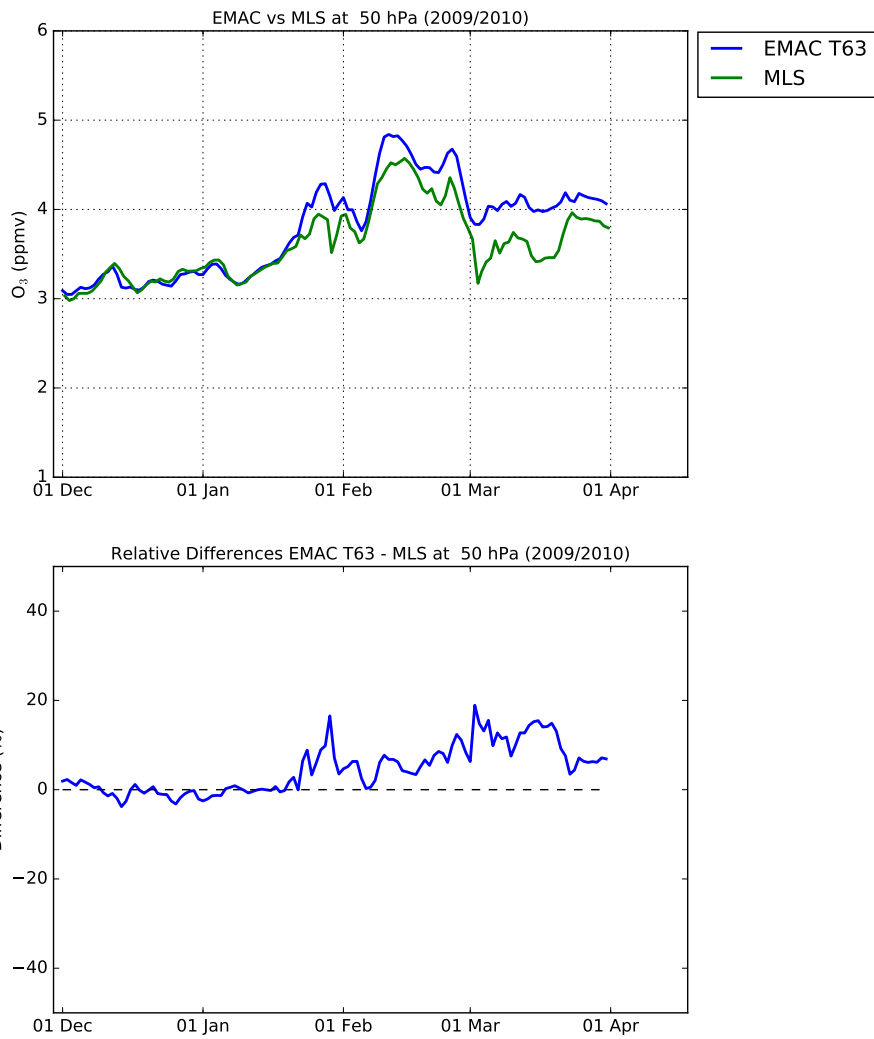


Figure 2: Time series of O₃ from Aura/MLS measurements (green) and from the EMAC T63L90 (blue) simulation at ~50 hPa averaged over 70-90°N for the Arctic winter 2009/2010.

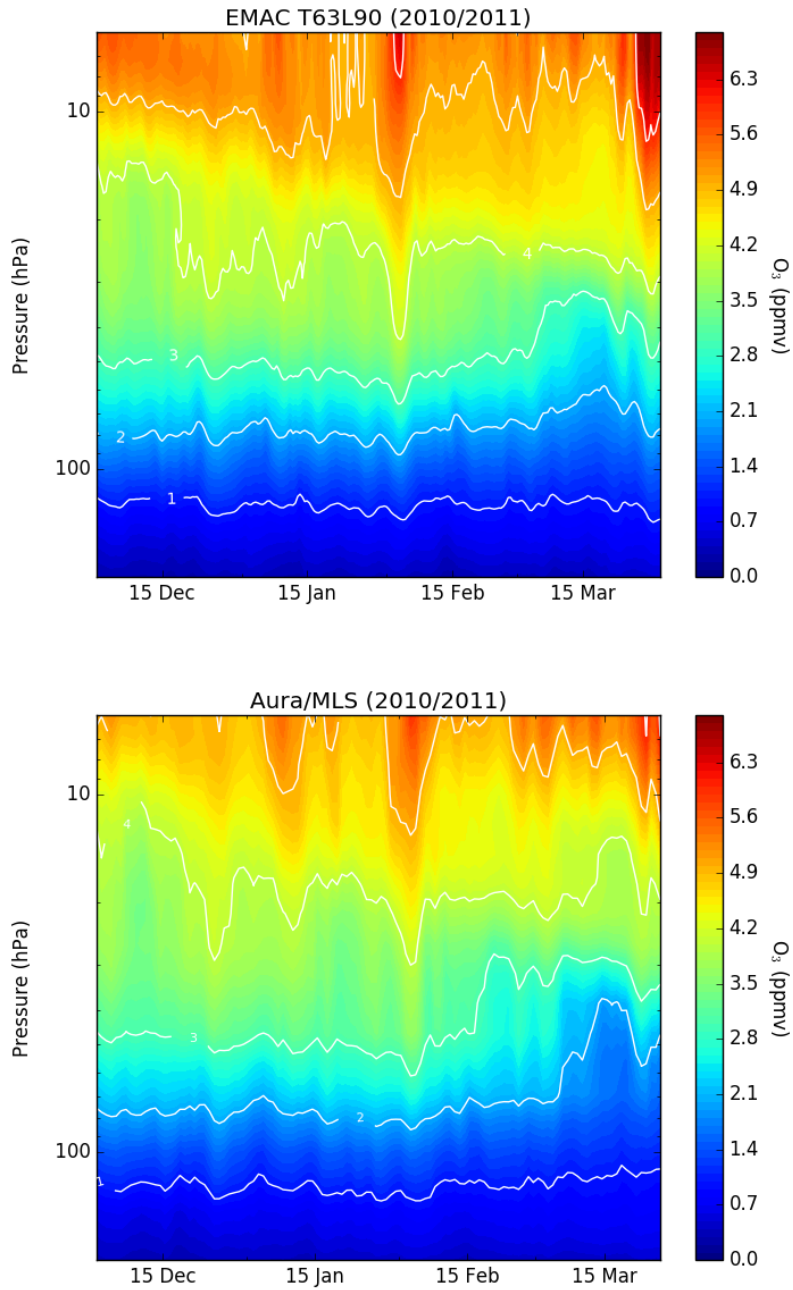


Figure 3: Temporal evolution of daily mean O_3 at northern high latitudes (averaged over $70-90^\circ N$) as function of pressure as simulated by EMAC T63L90 and observed by Aura/MLS for the Arctic winter 2010/2011.

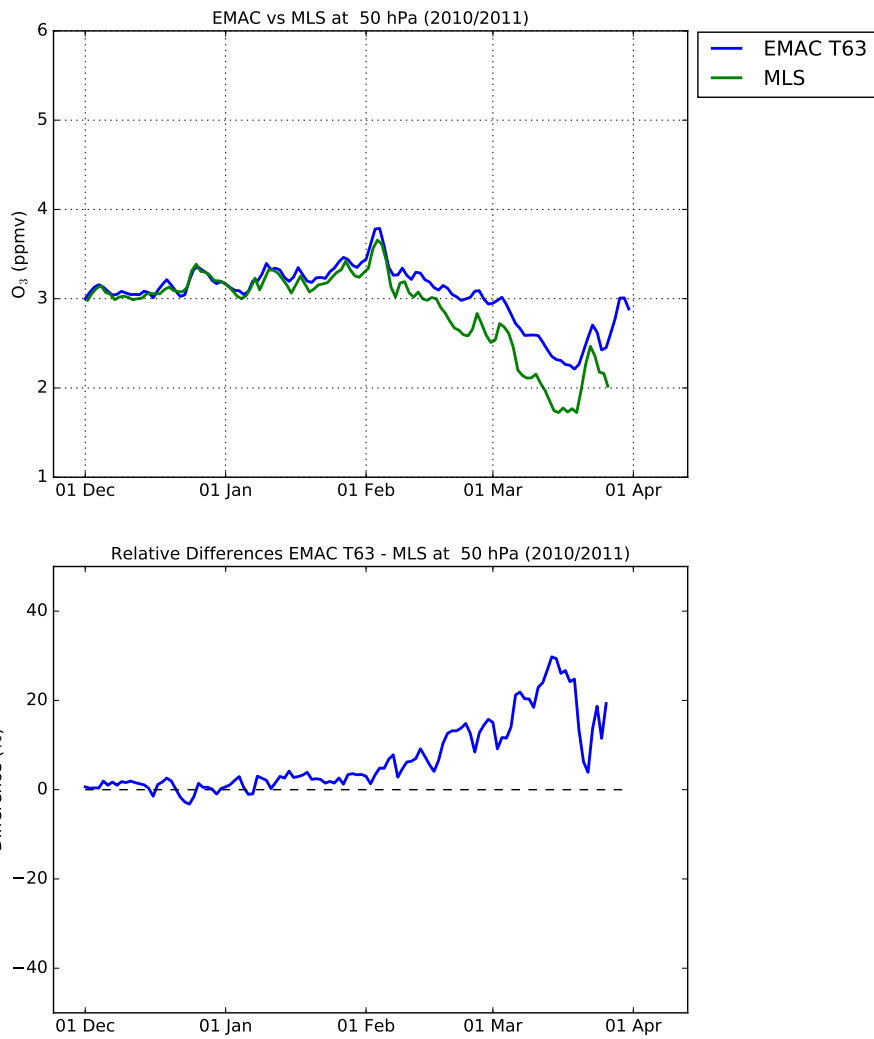


Figure 4: Time series of O₃ from Aura/MLS measurements (green) and from the EMAC T63L90 (blue) simulation at ~50 hPa averaged over 70-90°N for the Arctic winter 2010/2011.

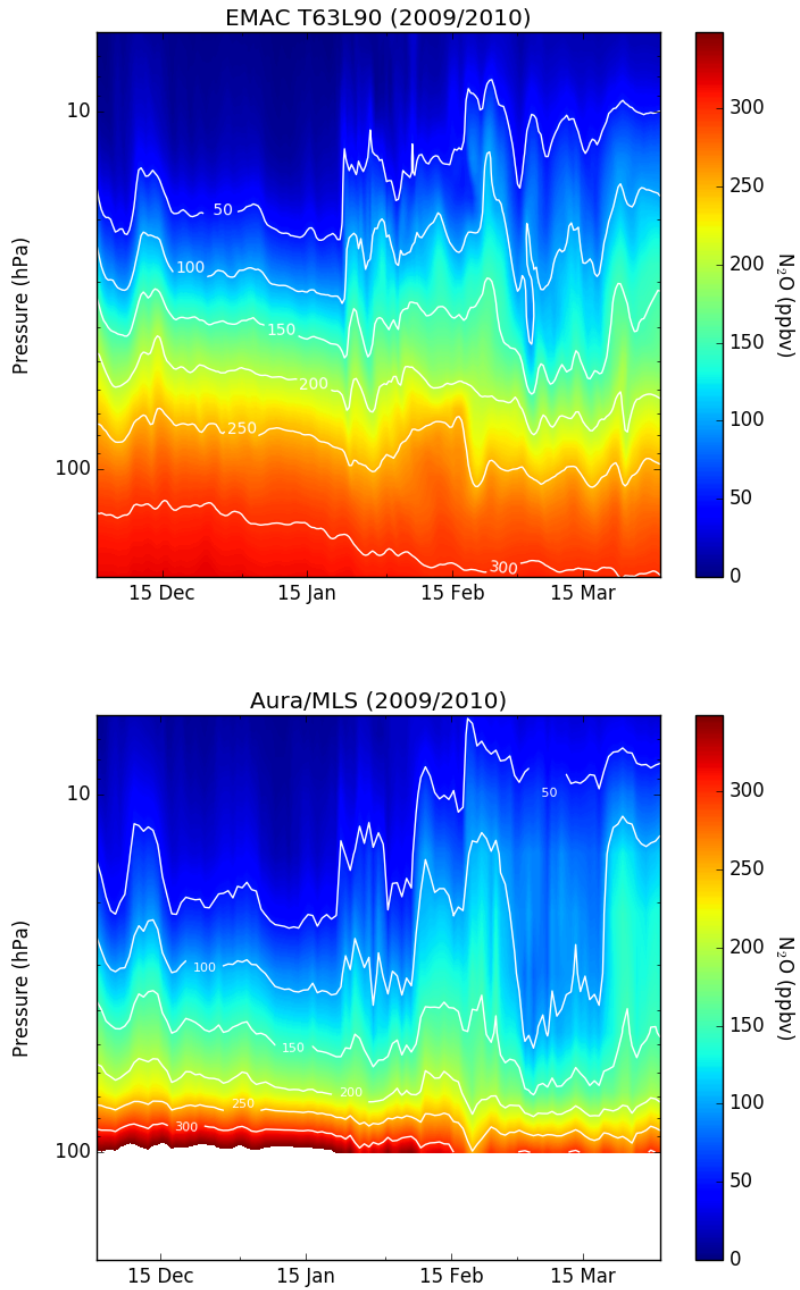


Figure 5: Temporal evolution of daily mean N_2O at northern high latitudes (averaged over $70\text{-}90^\circ\text{N}$) as function of pressure as simulated by EMAC T63L90 and observed by Aura/MLS for the Arctic winter 2009/2010.

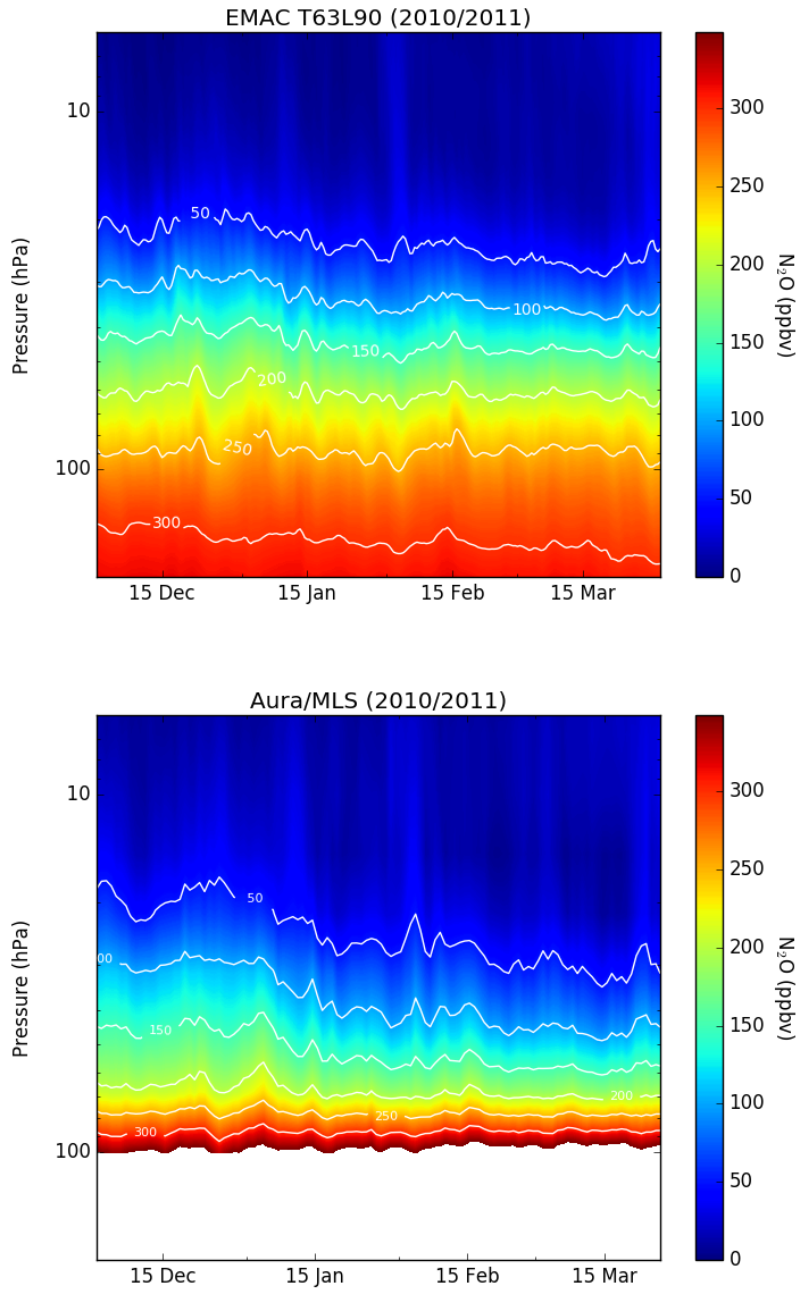


Figure 6: Temporal evolution of daily mean N₂O at northern high latitudes (averaged over 70-90°N) as function of pressure as simulated by EMAC T63L90 and observed by Aura/MLS for the Arctic winter 2010/2011.