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Supplement of

Technical note: Intermittent reduction of the stratospheric ozone over northern Europe caused by a storm in the Atlantic Ocean

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Forecast for O3 column. Last analysis time: 20181101 00

O3_column, DobsonUnit, 12:0001NOV2018

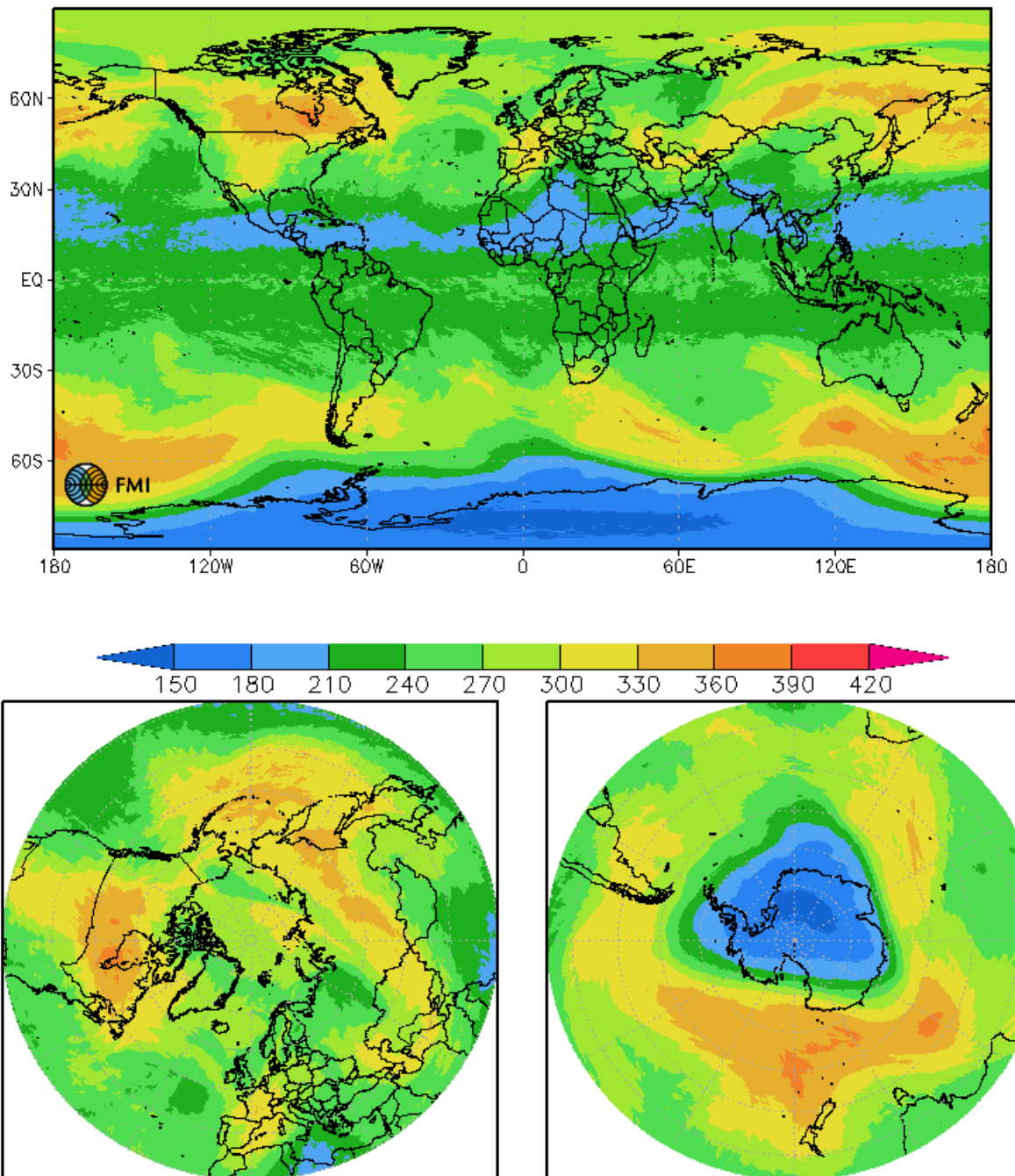


Figure S1. Global ozone column predicted by SILAM on 1.11.2018 for 1.11.2018. [Dobson units]

Forecast for O3 column. Last analysis time: 20181101 00

O3_column, DobsonUnit, 12:0002NOV2018

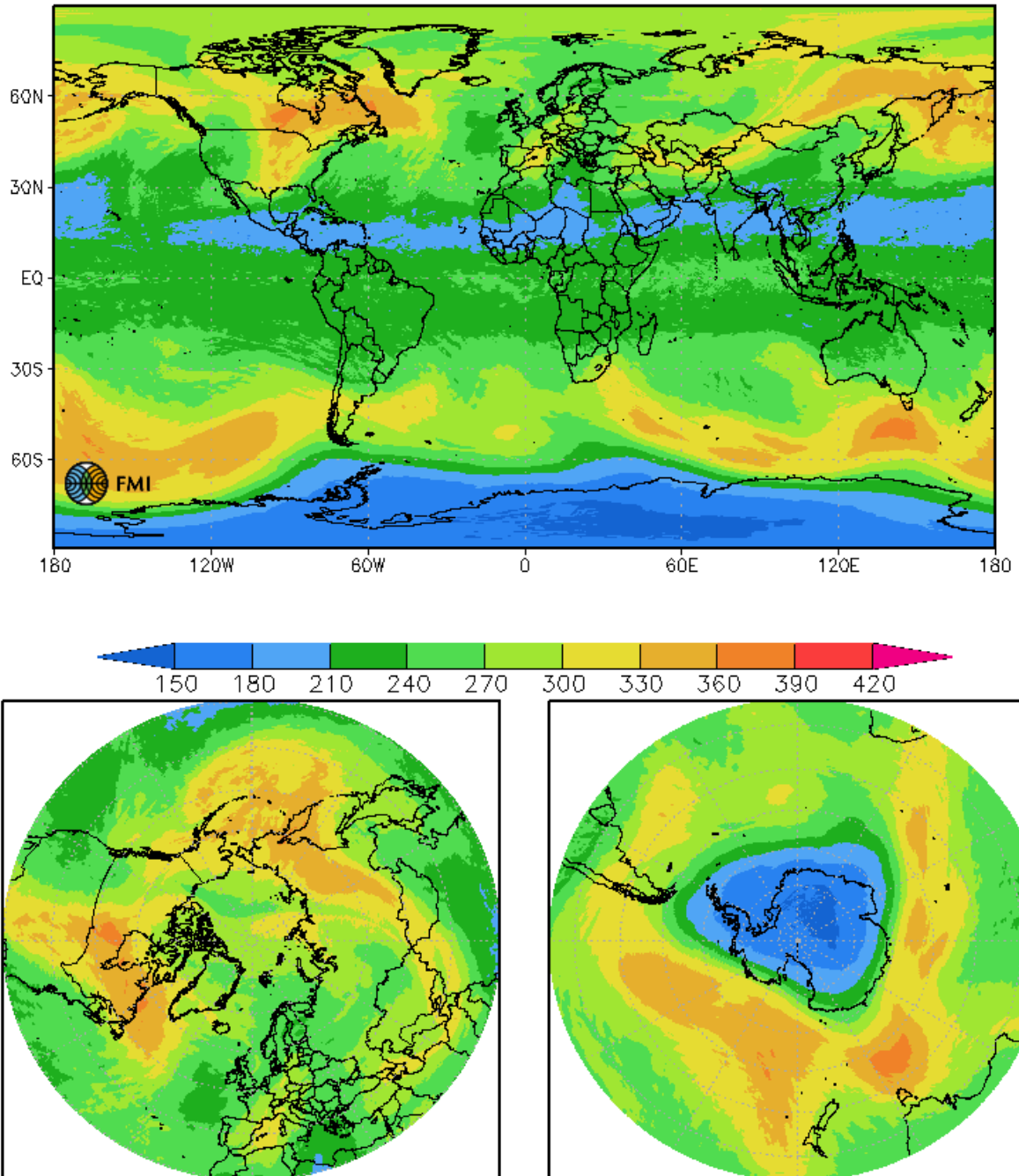


Figure S2. Global ozone column predicted by SILAM on 1.11.2018 for 2.11.2018. [Dobson units]

Forecast for O3 column. Last analysis time: 20181101 00

O3_column, DobsonUnit, 12:0003NOV2018

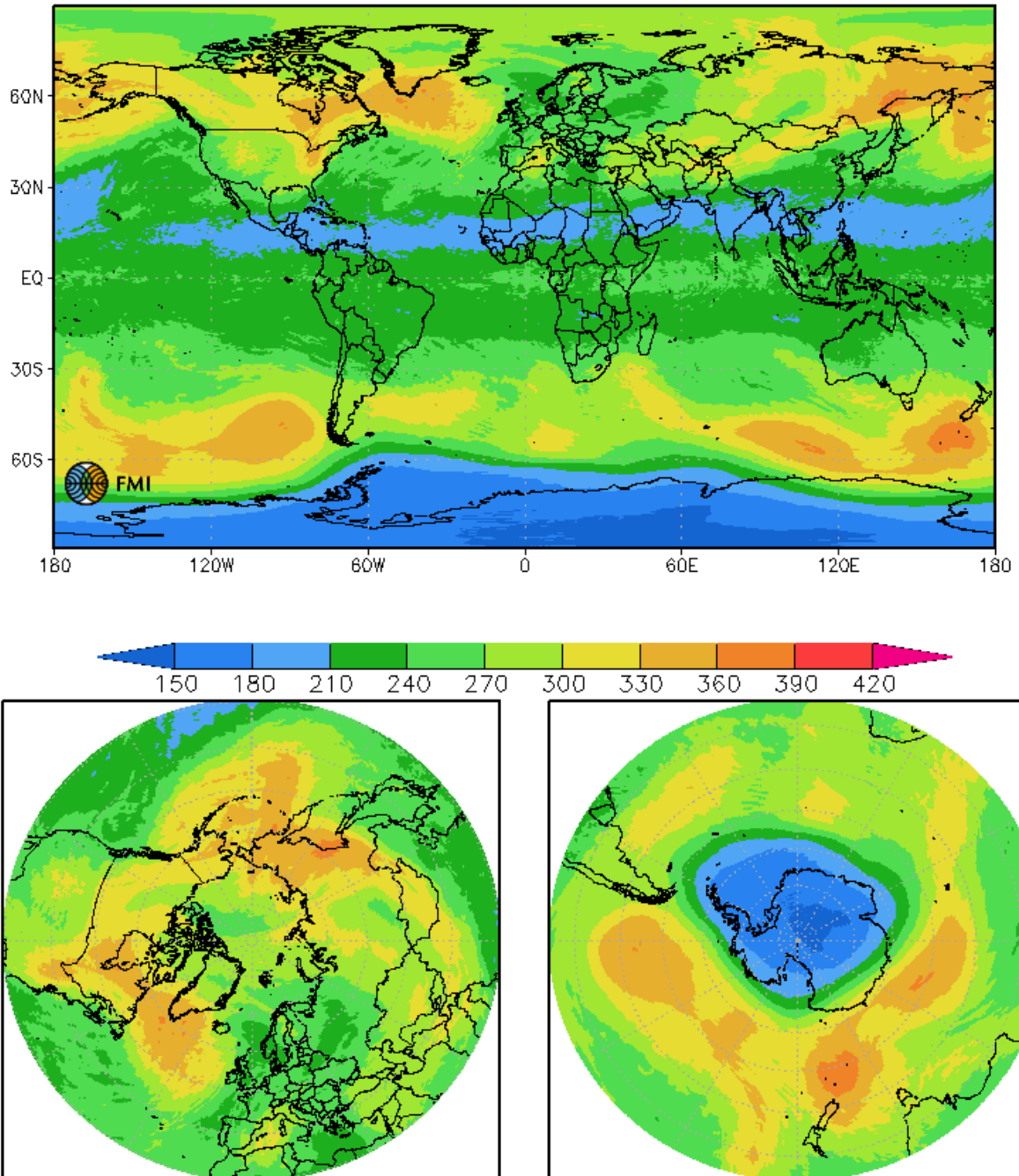


Figure S3. Global ozone column predicted by SILAM on 1.11.2018 for 3.11.2018. [Dobson units]

Forecast for O3 column. Last analysis time: 20181101 00

O3_column, DobsonUnit, 12:0004NOV2018

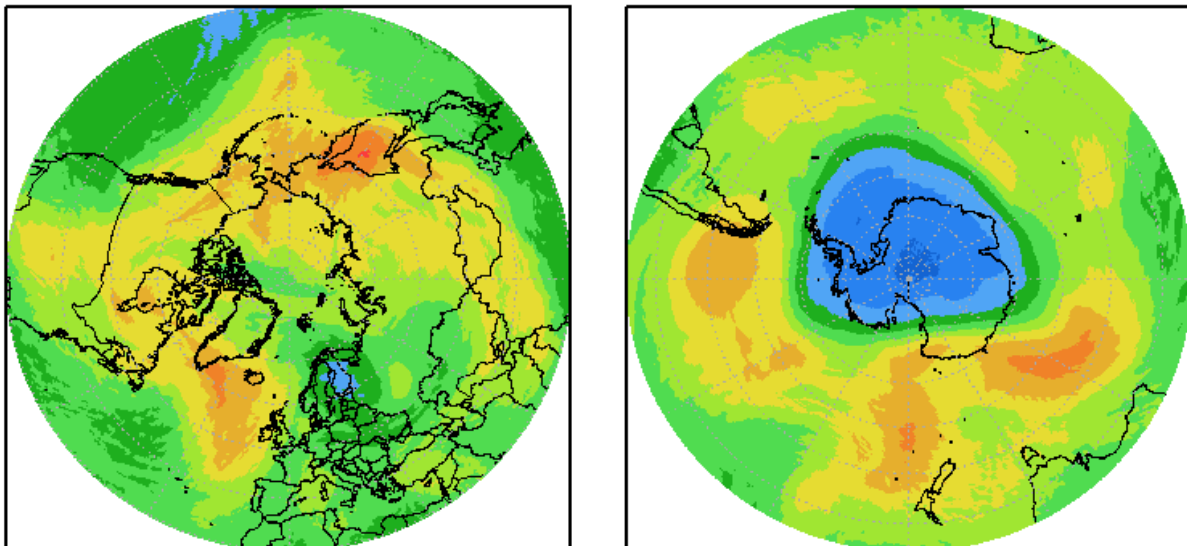
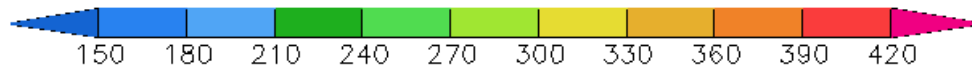
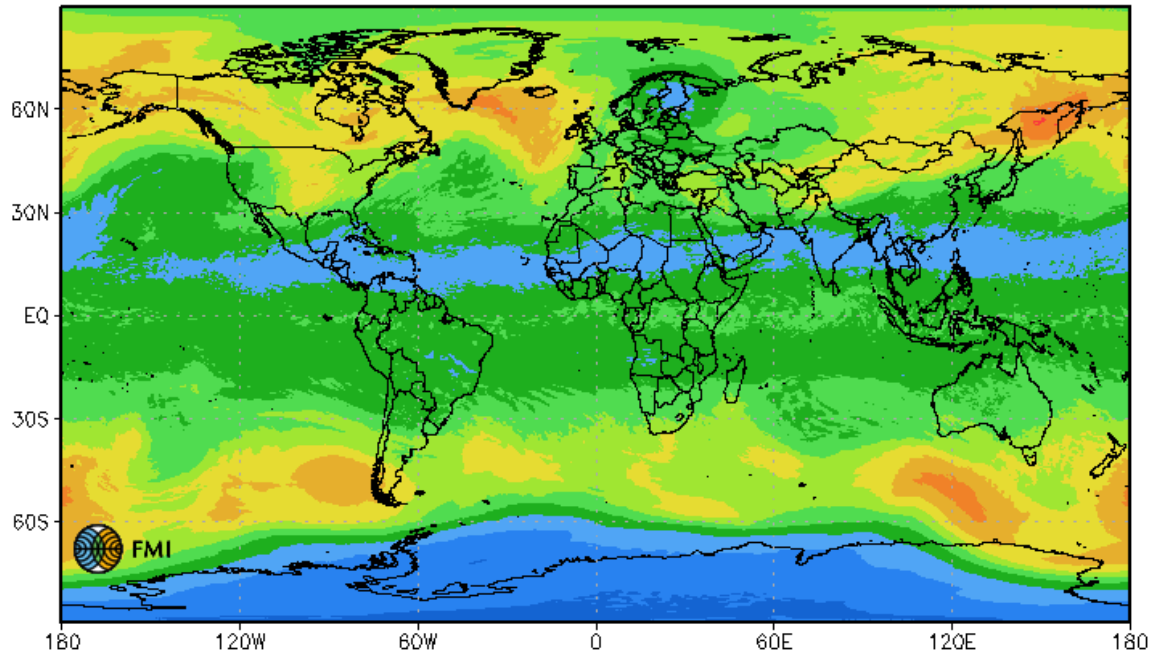


Figure S4. Global ozone column predicted by SILAM on 1.11.2018 for 4.11.2018. [Dobson units]

Forecast for O3 column. Last analysis time: 20181101 00

O3_column, DobsonUnit, 12:0005NOV2018

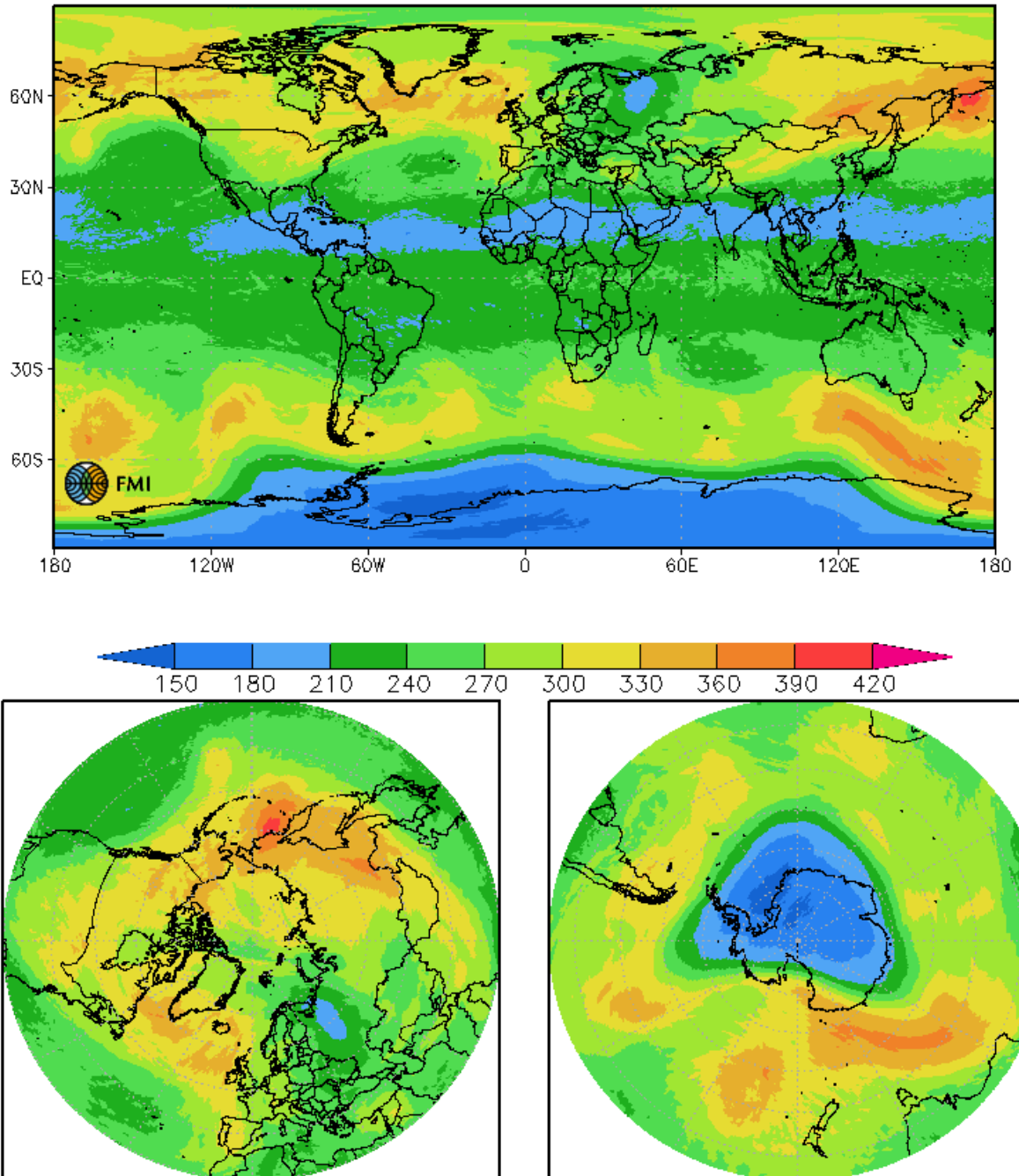


Figure S5. Global ozone column predicted by SILAM on 1.11.2018 for 5.11.2018. [Dobson units]

Forecast for O3 column. Last analysis time: 20181101 00

O3_column, DobsonUnit, 12:0006NOV2018

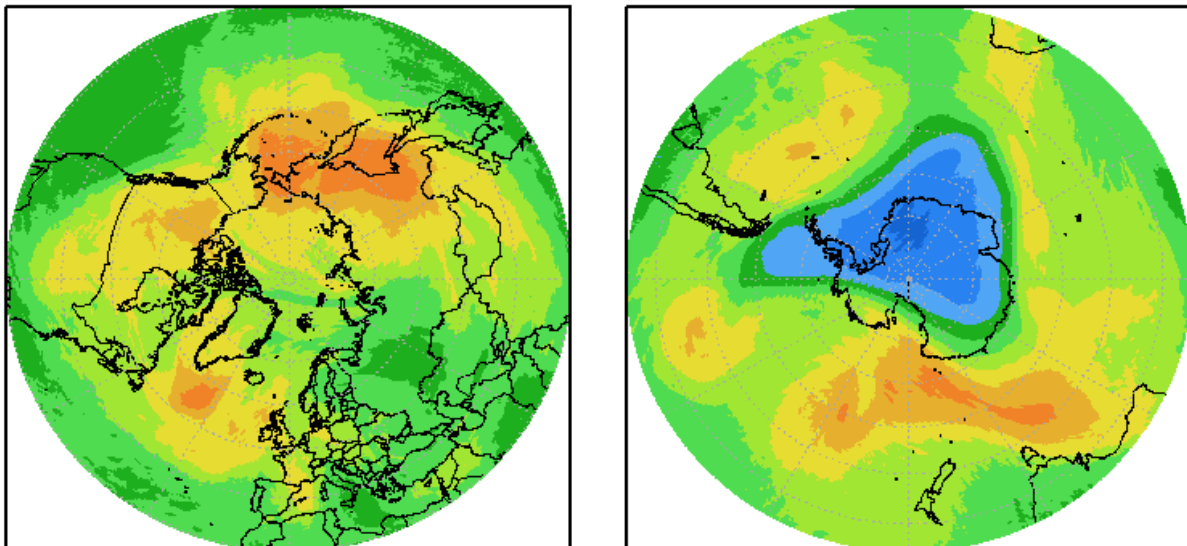
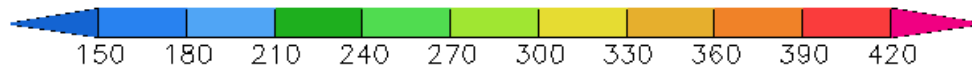
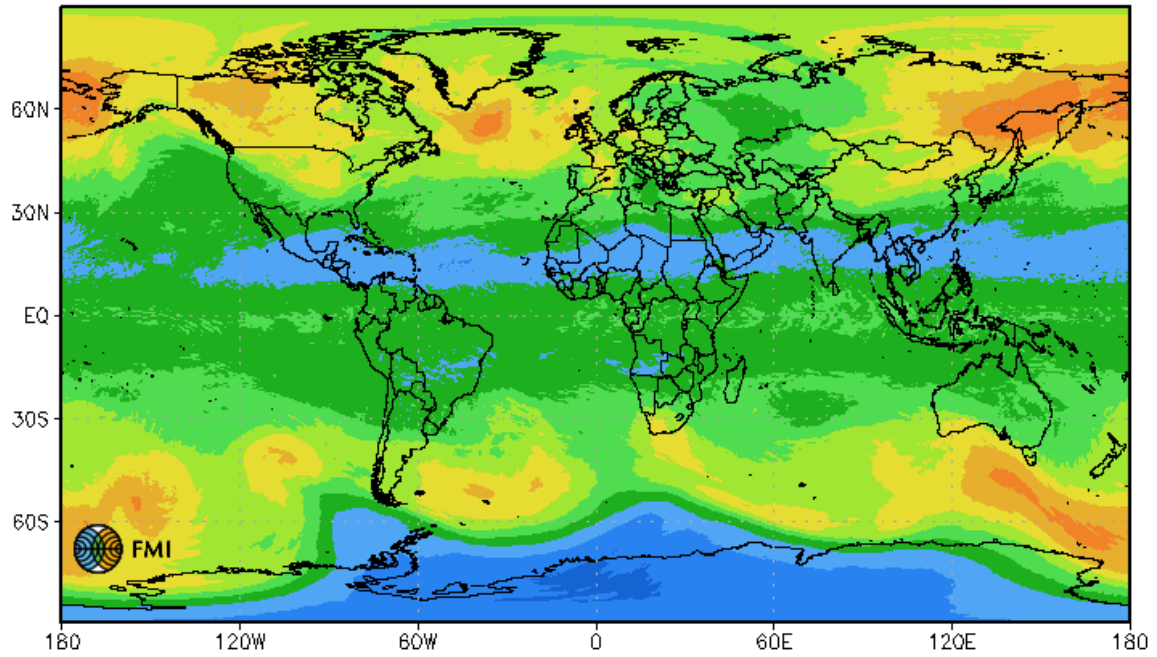


Figure S6. Global ozone column predicted by SILAM on 1.11.2018 for 6.11.2018. [Dobson units]

Forecast for O3 column. Last analysis time: 20181101 00

O3_column, DobsonUnit, 12:0007NOV2018

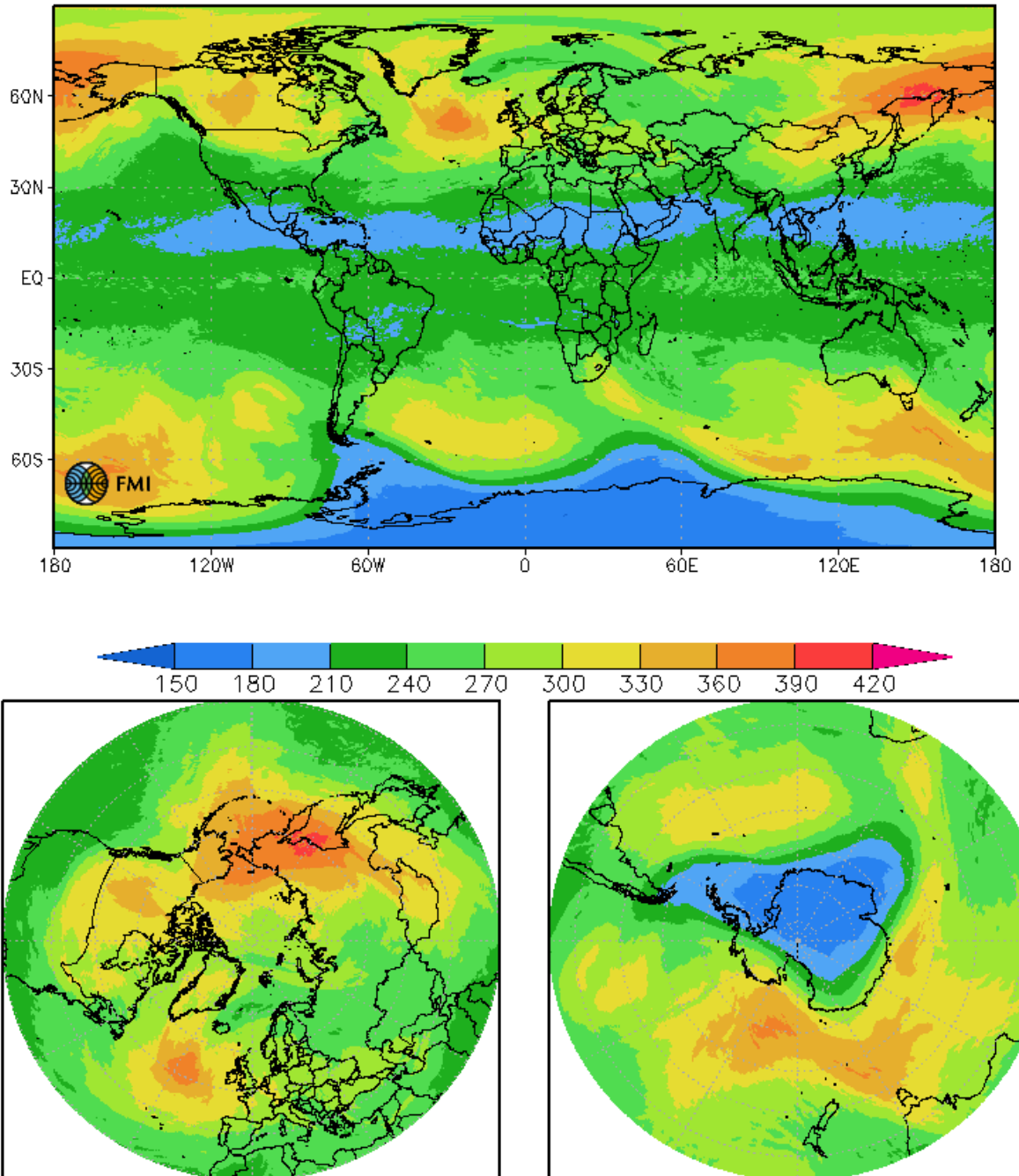


Figure S7. Global ozone column predicted by SILAM on 1.11.2018 for 7.11.2018. [Dobson units]

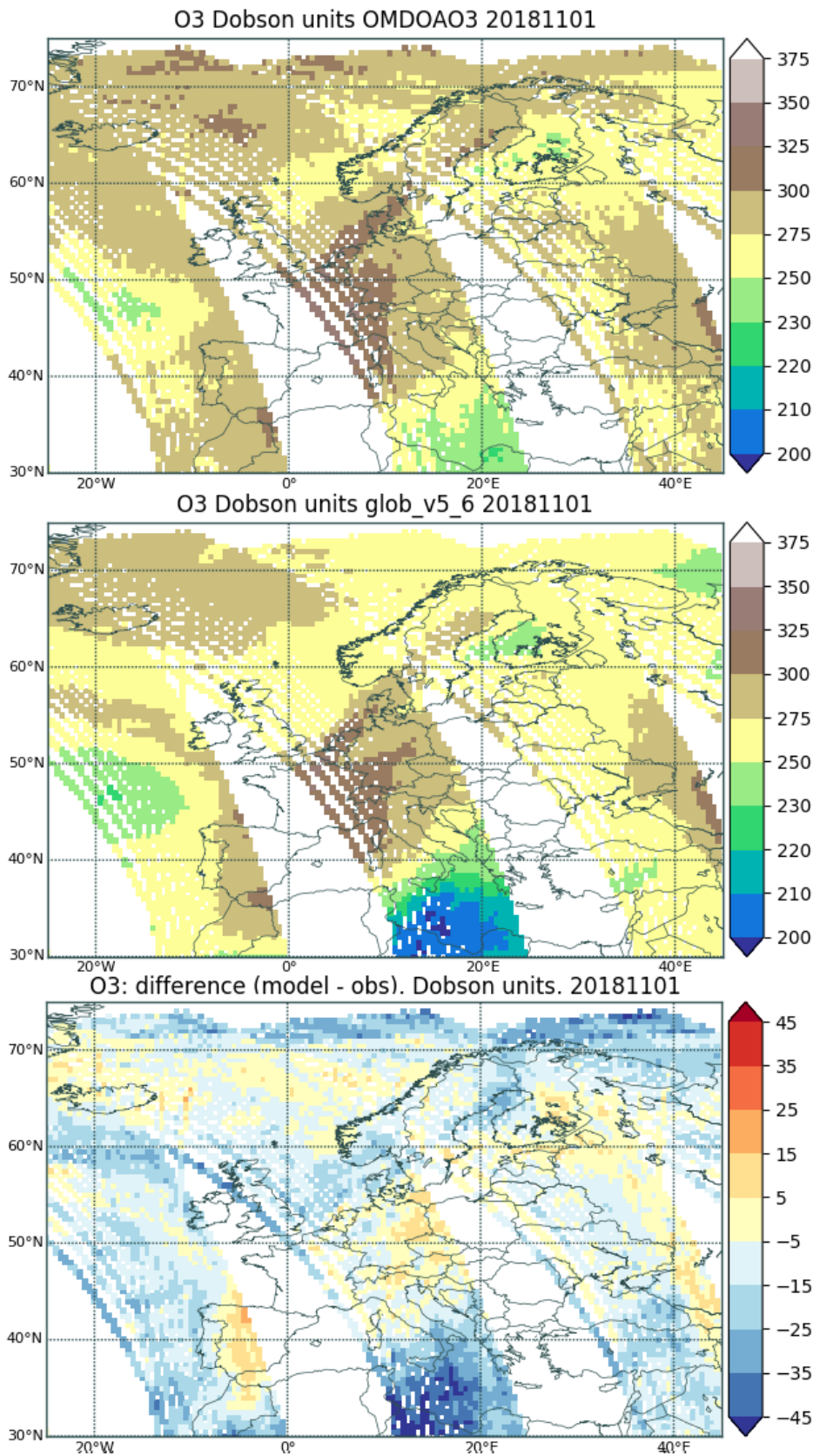


Figure S8. Observed by OMI DOAS (upper panel), predicted by SILAM (middle panel) daily-composite ozone column for 1.11.2018. The lower panel shows the model bias. Only grid cells corresponding to valid OMI observations were retained in the SILAM forecast. [Dobson units]

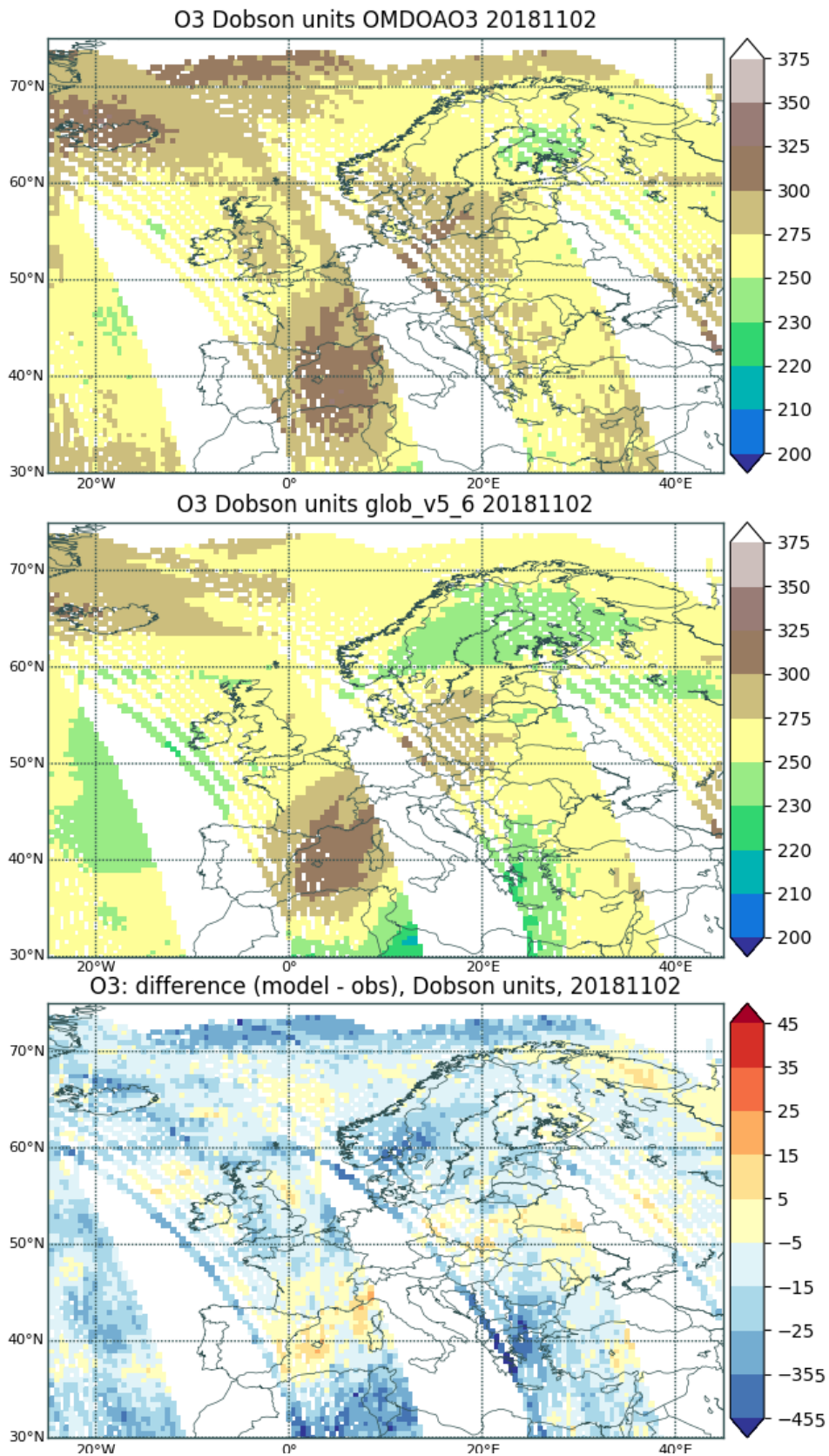


Figure S9. Observed by OMI DOAS (upper panel), predicted by SILAM (middle panel) daily-composite ozone column for 2.11.2018. The lower panel shows the model bias. Only grid cells corresponding to valid OMI observations were retained in the SILAM forecast. [Dobson units]

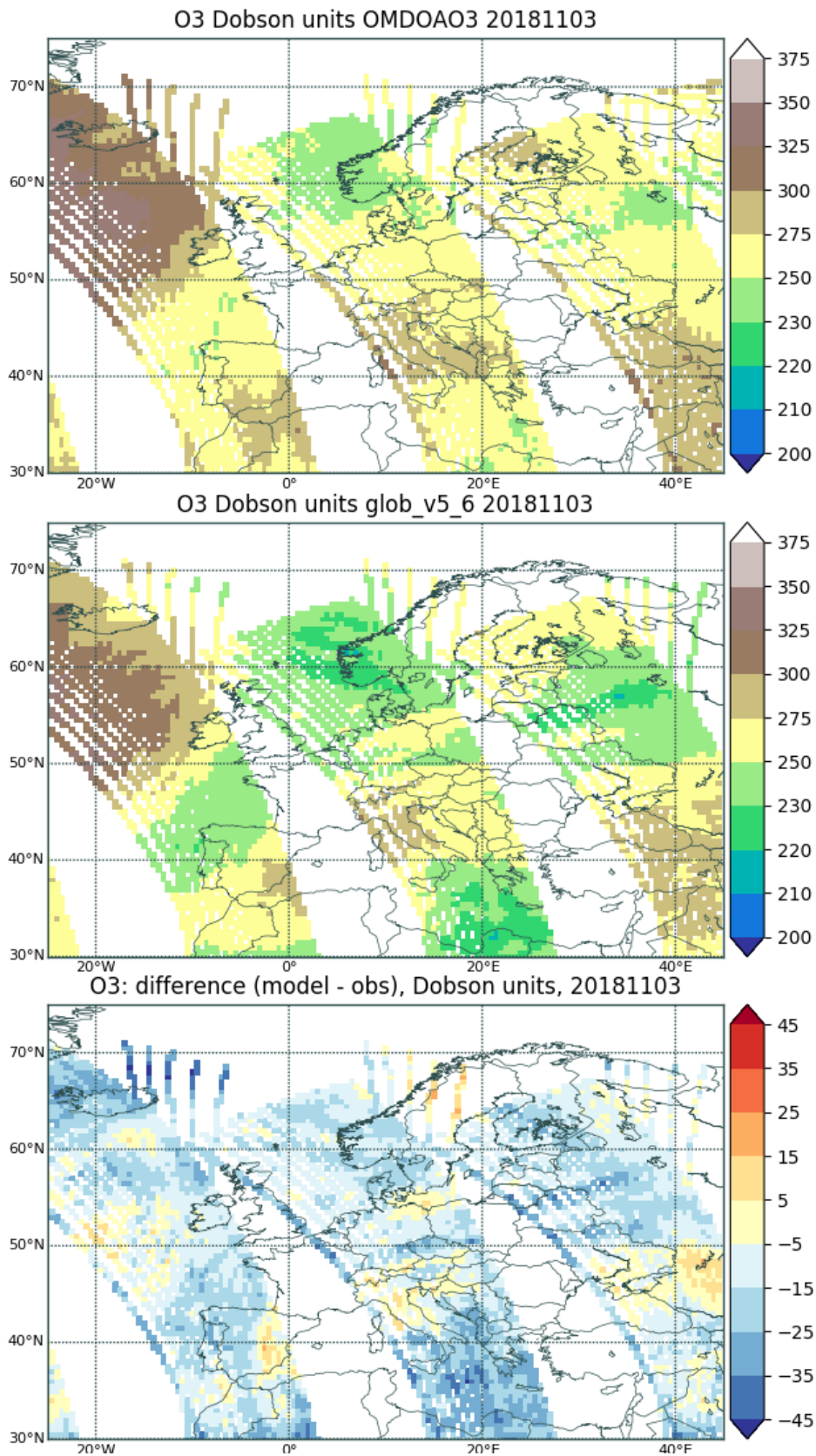


Figure S10. Observed by OMI DOAS (upper panel), predicted by SILAM (middle panel) daily-composite ozone column for 3.11.2018. The lower panel shows the model bias. Only grid cells corresponding to valid OMI observations were retained in the SILAM forecast. [Dobson units]

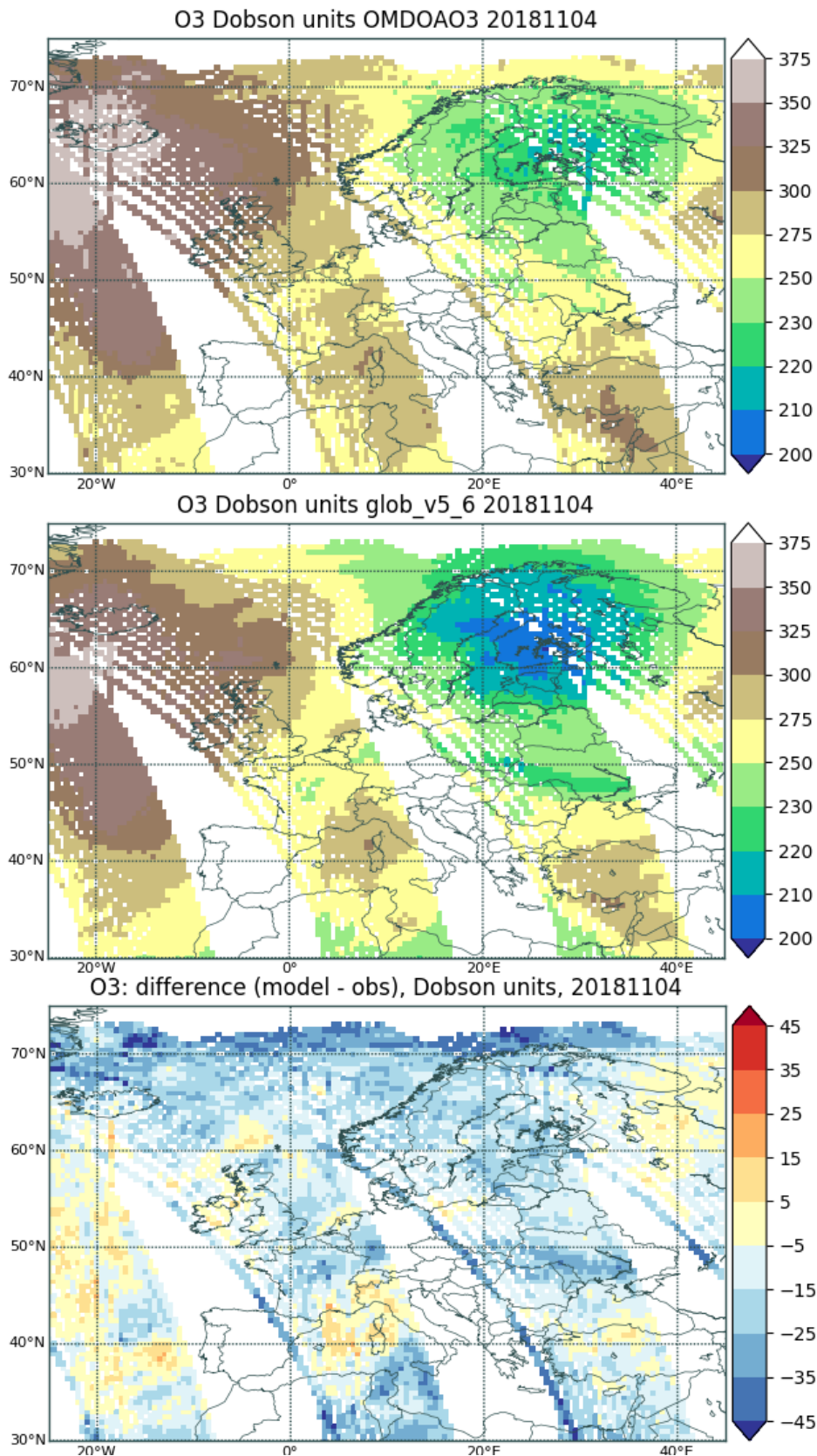


Figure S11. Observed by OMI DOAS (upper panel), predicted by SILAM (middle panel) daily-composite ozone column for 4.11.2018. The lower panel shows the model bias. Only grid cells corresponding to valid OMI observations were retained in the SILAM forecast. [Dobson units]

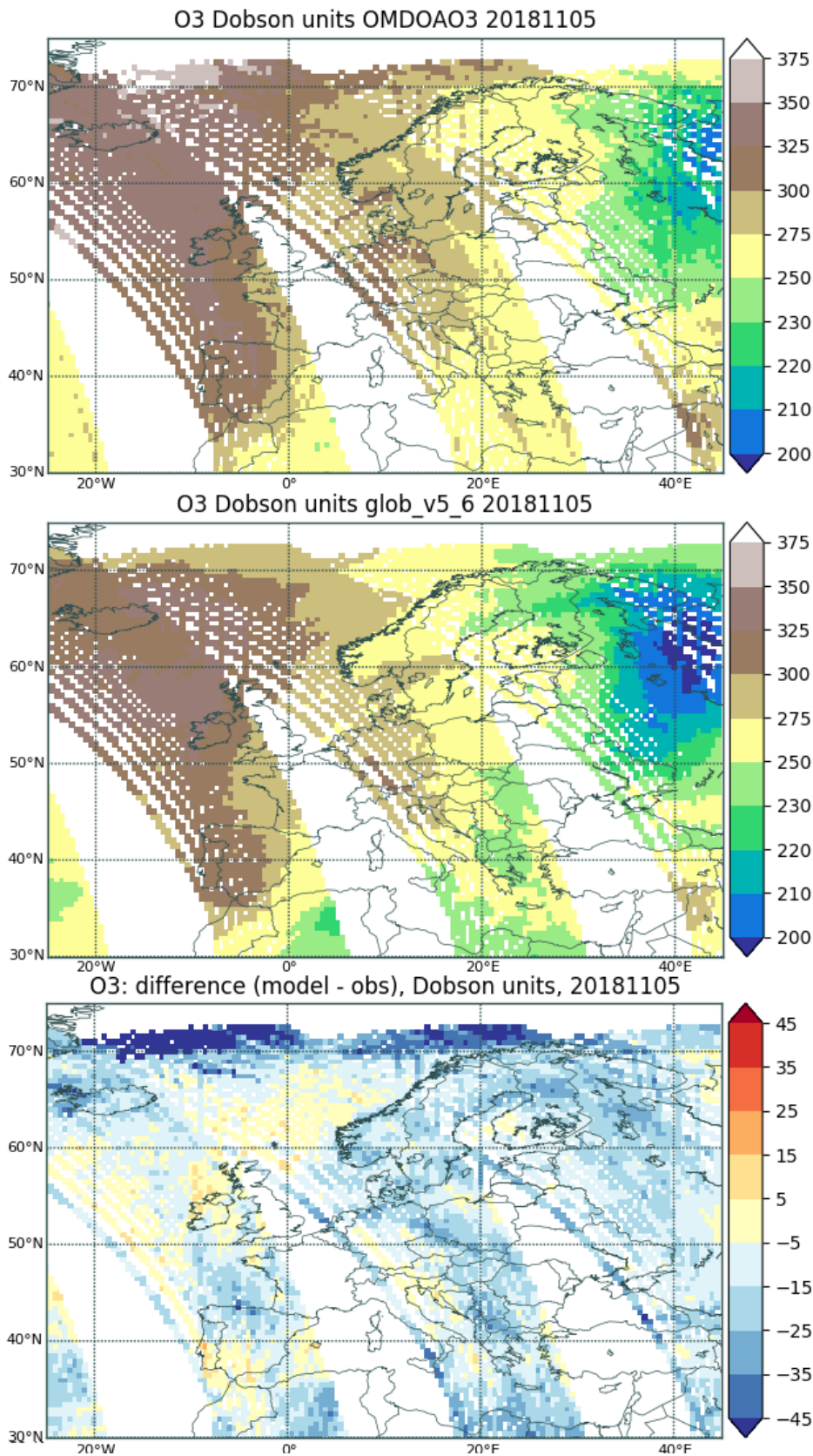


Figure S12. Observed by OMI DOAS (upper panel), predicted by SILAM (middle panel) daily-composite ozone column for 5.11.2018. The lower panel shows the model bias. Only grid cells corresponding to valid OMI observations were retained in the SILAM forecast. [Dobson units]

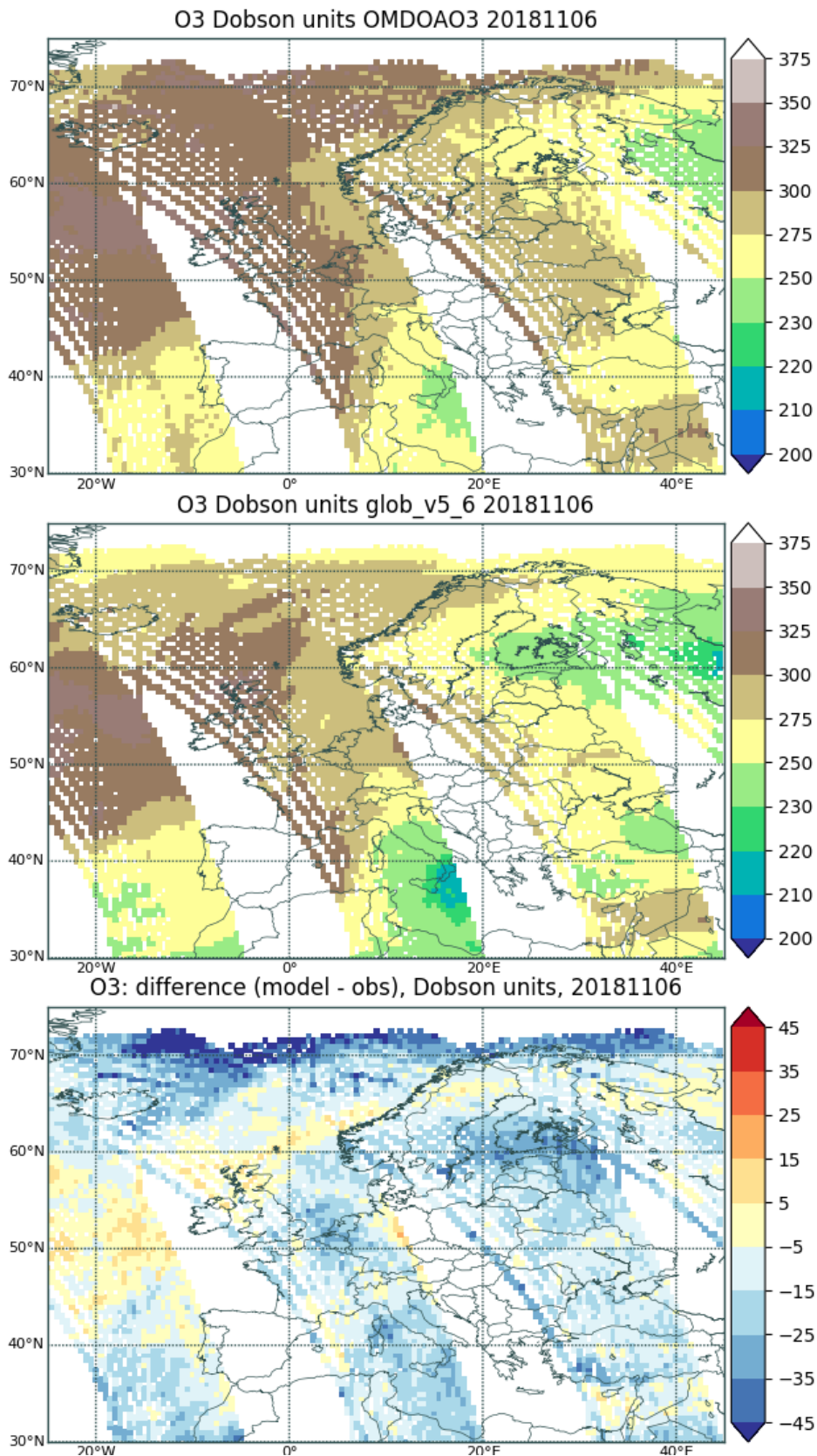


Figure S13. Observed by OMI DOAS (upper panel), predicted by SILAM (middle panel) daily-composite ozone column for 6.11.2018. The lower panel shows the model bias. Only grid cells corresponding to valid OMI observations were retained in the SILAM forecast. [Dobson units]

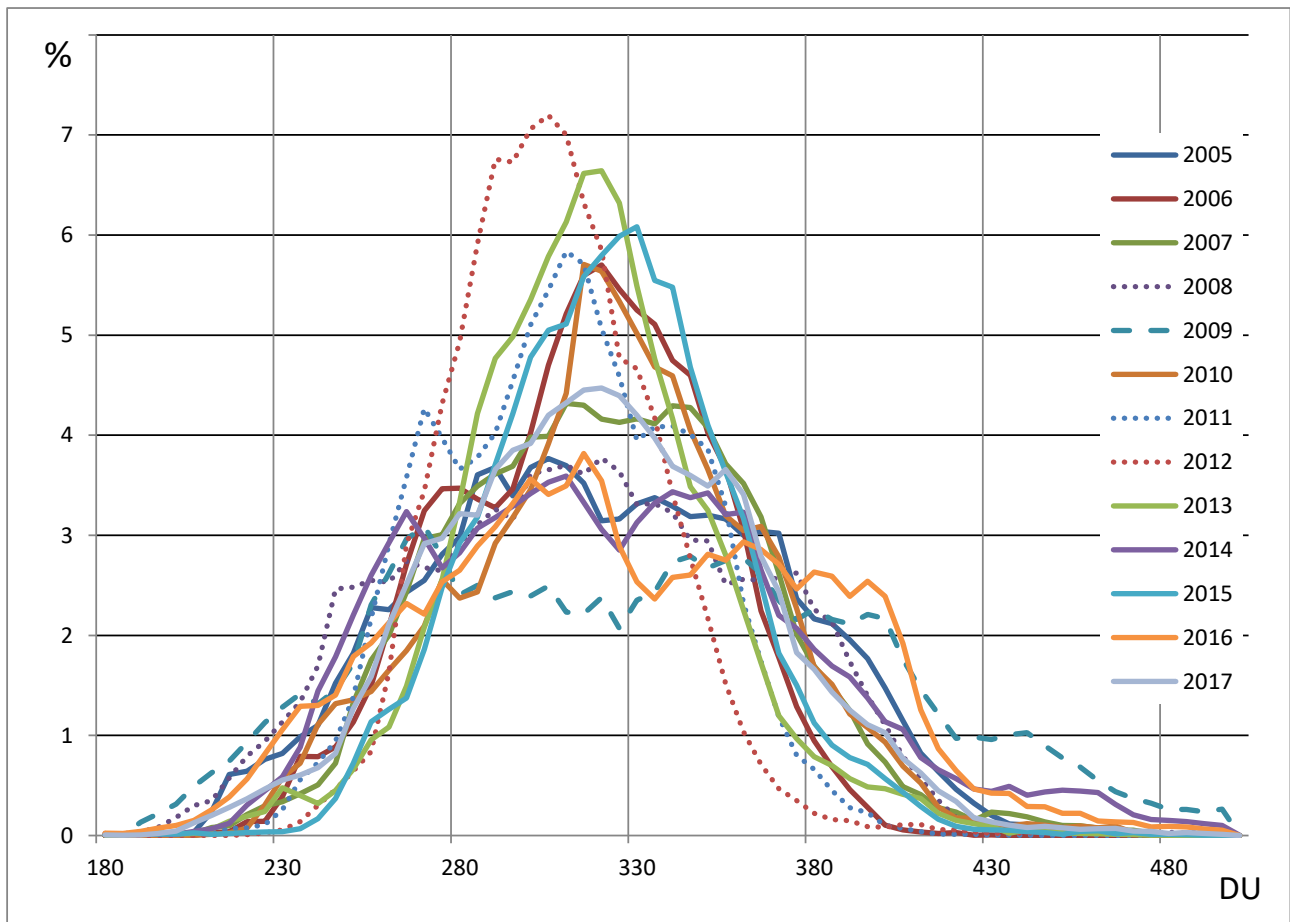


Figure S14. Frequency distribution of ozone total column as observed by OMI for November 2005-2017, latitude belt 60N – 90N. Extreme years are additionally highlighted by the specific line shapes. [Dobson units]