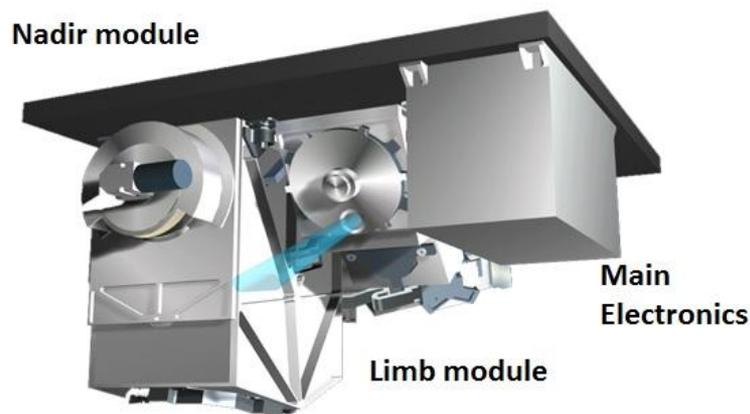




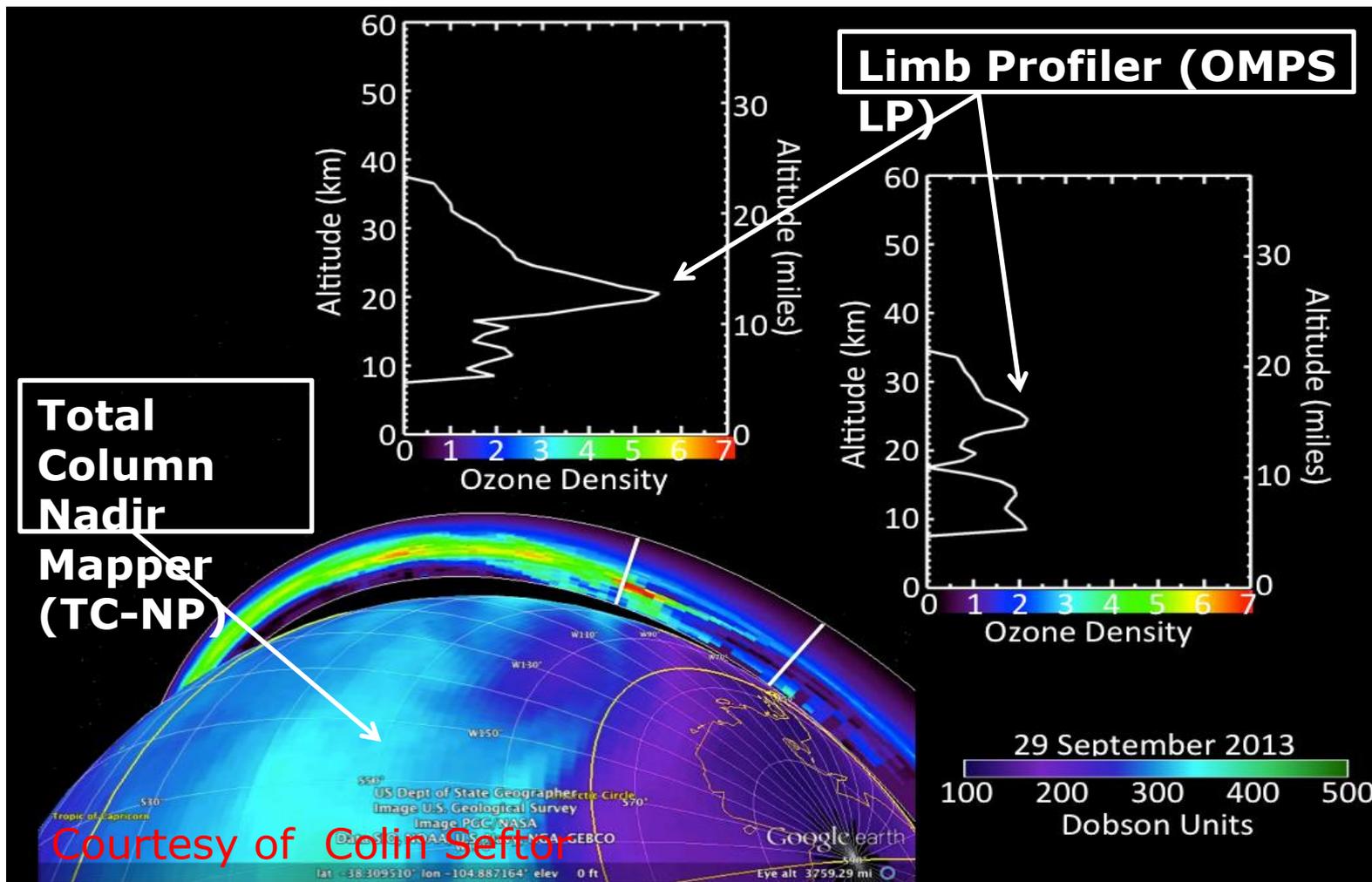
Continuation of GOMOS, MIPAS and SCIAMACHY- limb Ozone Record using OMPS Limb Profiler



Natalya Kramarova, P.K. Bhartia, Zhong Chen, Philippe Xu,
and Matt DeLand



Ozone Mapping and Profiler Suite

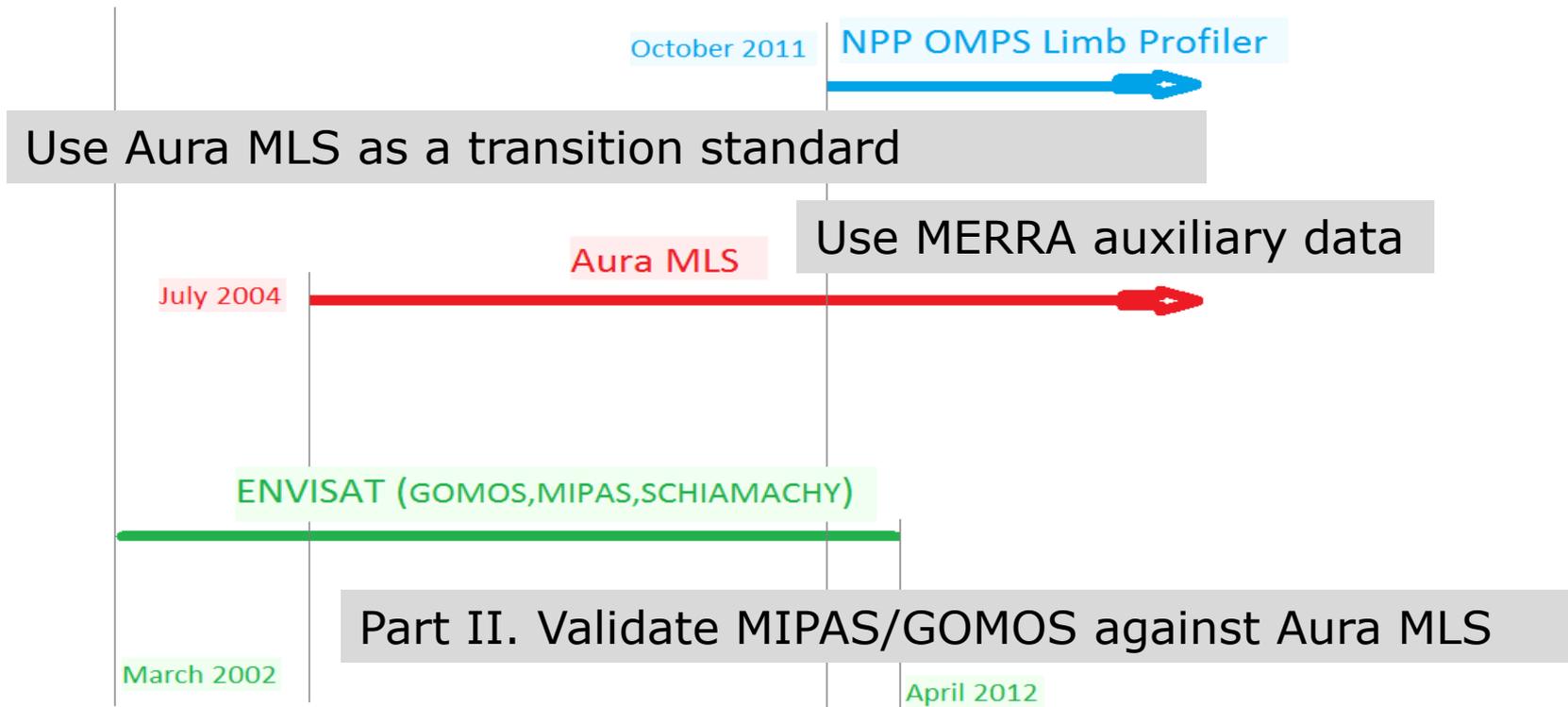




SUOMI NPP and ENVISAT



Part I. Validate OMPS LP against Aura MLS



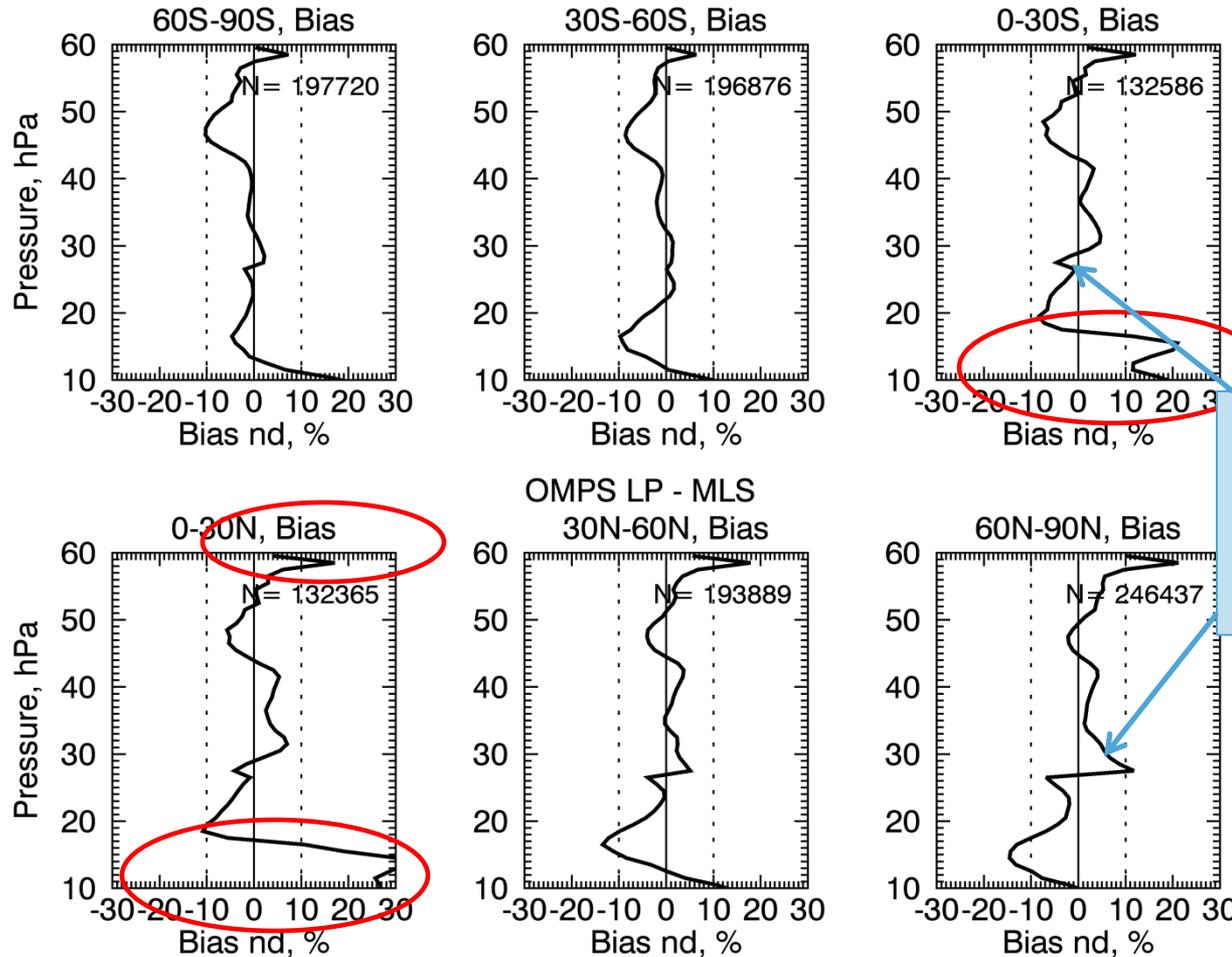


Part I. OMPS LP against Aura MLS



Biases are mostly less than 10%

Except for UTLS region, particularly in the tropics, and upper altitudes (>56 km)



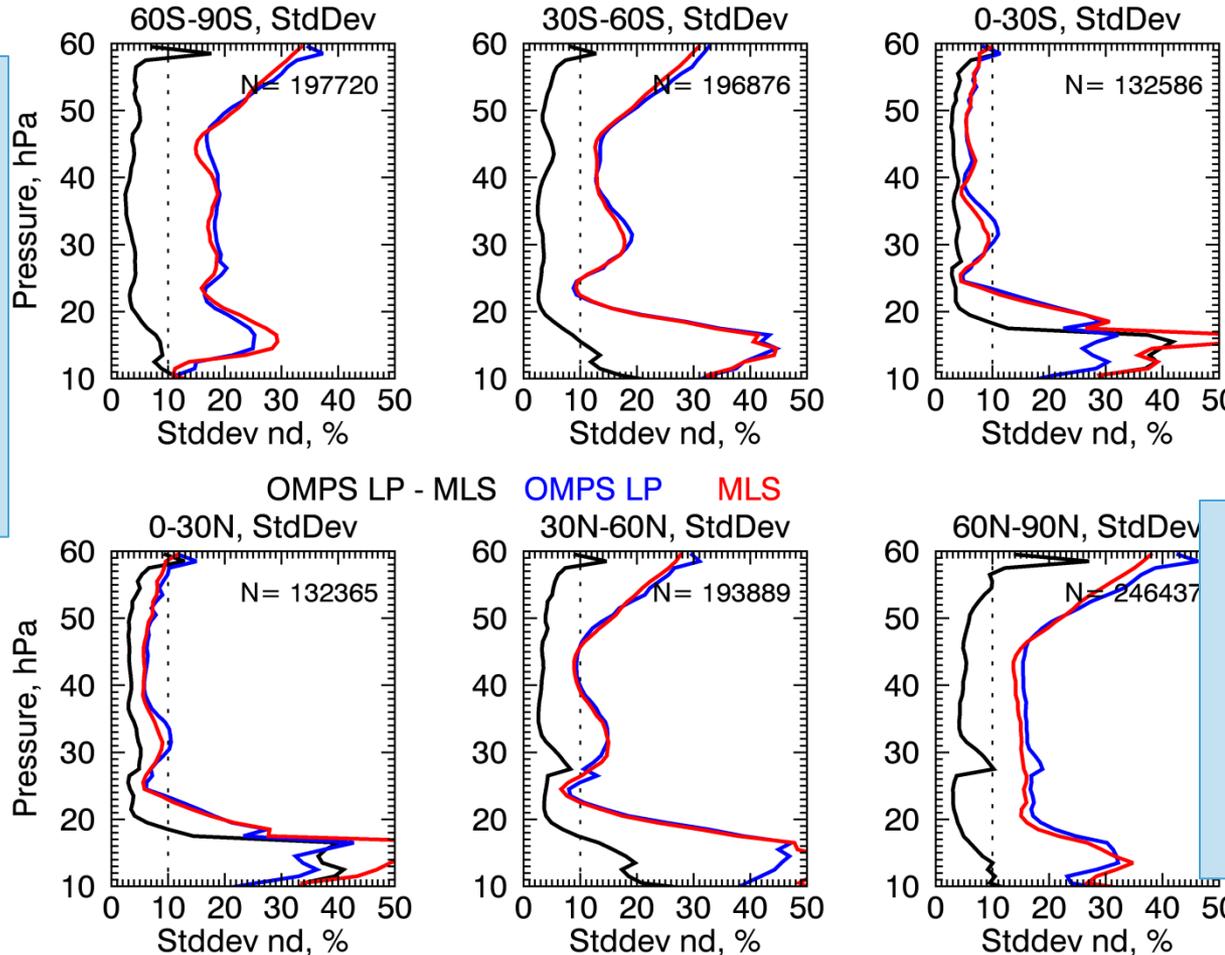
Discontinuity between UV and VIS retrievals at ~ 27.5 km



Part I. OMPS LP against Aura MLS



Std dev for LP-MLS differences are mostly less than 10% except for UTLS region in the tropics



LP and MLS agree well in estimating ozone variability

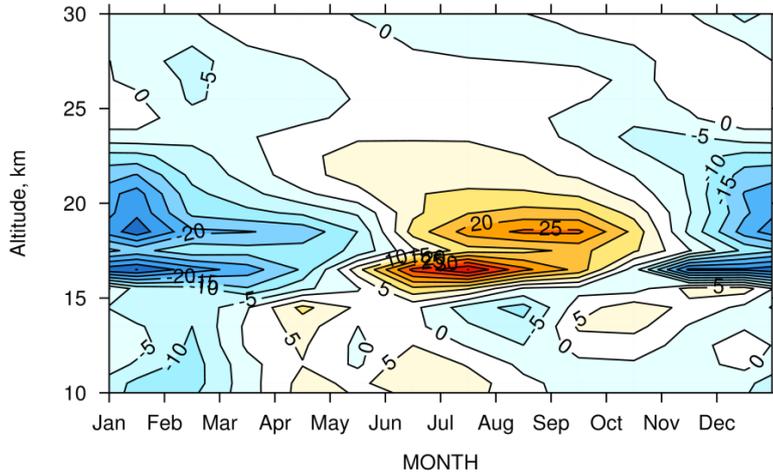
MLS shows larger variability in the tropical UTLS



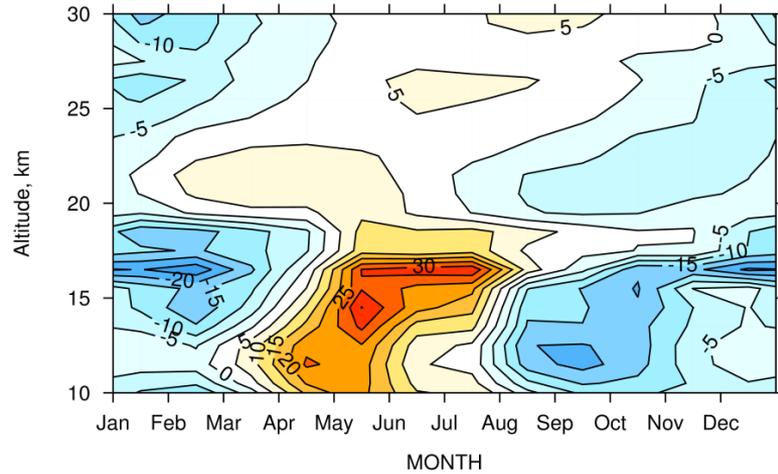
Part I. OMPS LP against Aura MLS



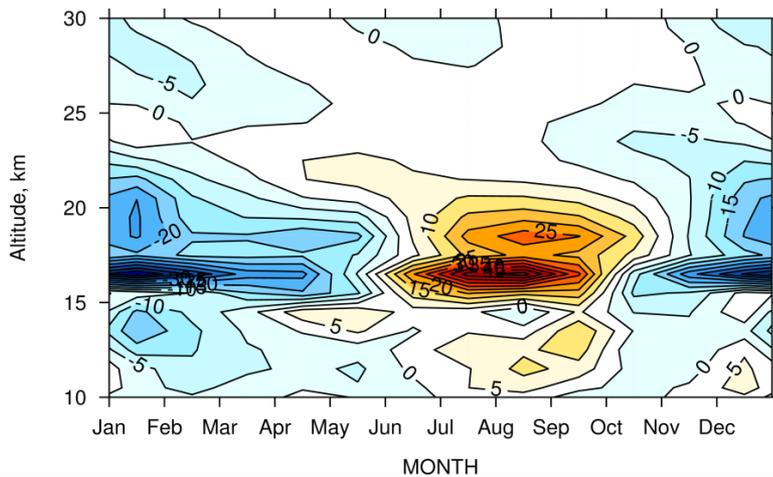
Seasonal cycle LP, nd(%) 2.5N



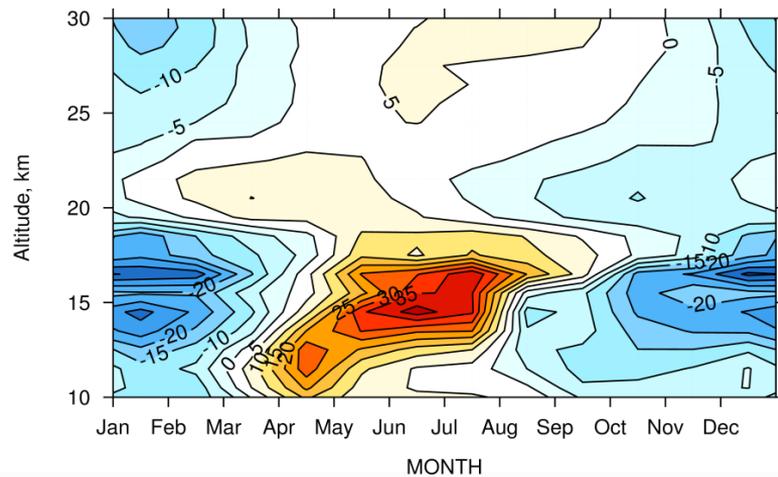
Seasonal cycle LP, nd(%)22.5N



Seasonal cycle MLS, nd(%) 2.5N



Seasonal cycle MLS, nd(%)22.5N

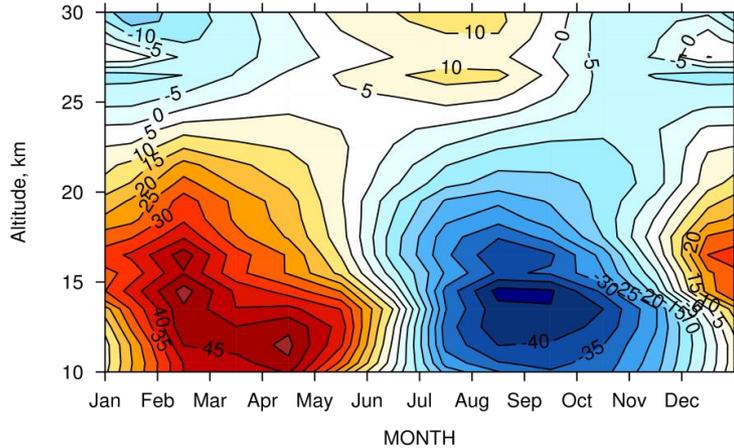




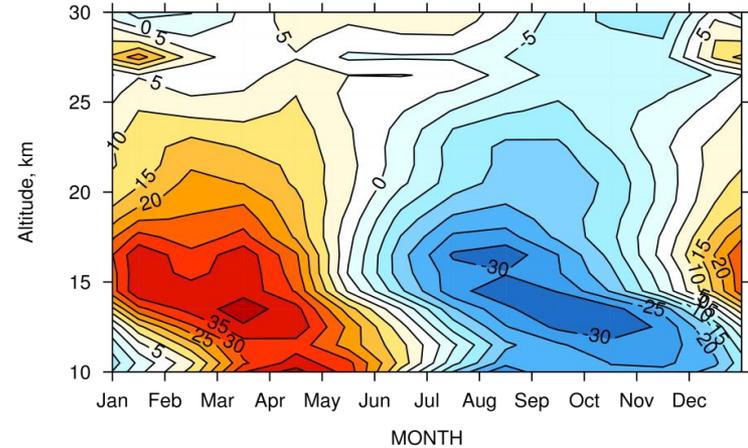
Part I. OMPS LP against Aura MLS



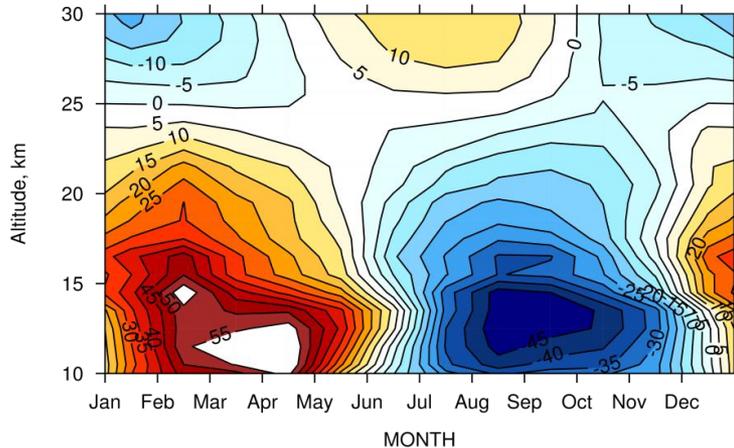
Seasonal cycle LP, nd(%)42.5N



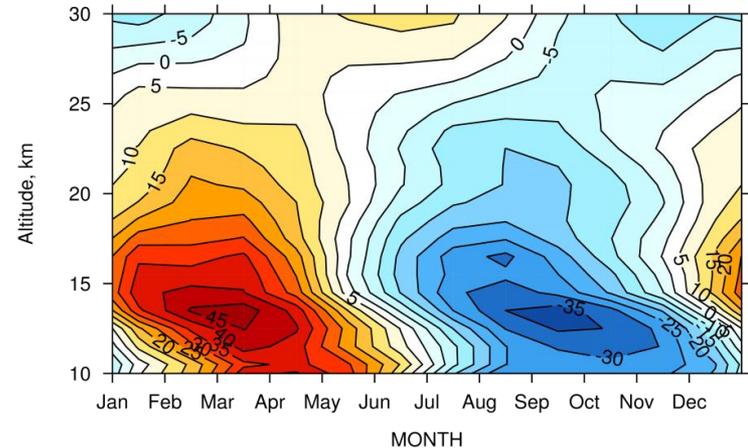
Seasonal cycle LP, nd(%)62.5N



Seasonal cycle MLS, nd(%)42.5N



Seasonal cycle MLS, nd(%)62.5N

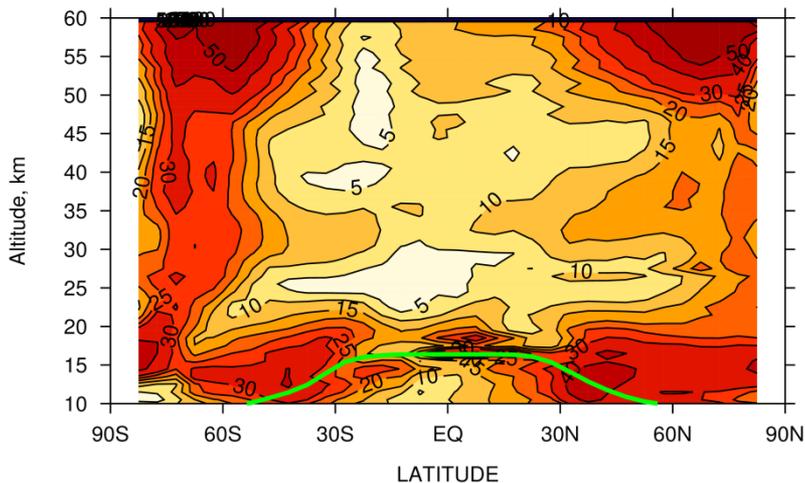




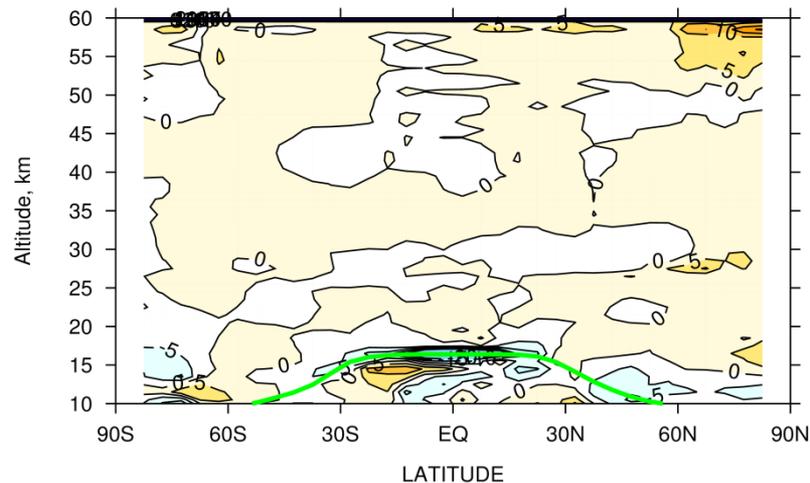
Part I. OMPS LP against Aura MLS



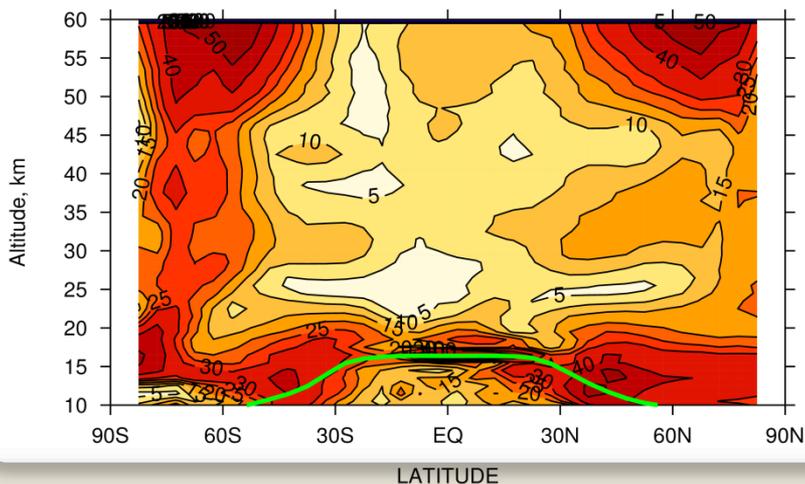
Amplitude of the Seasonal cycle LP, nd(%)



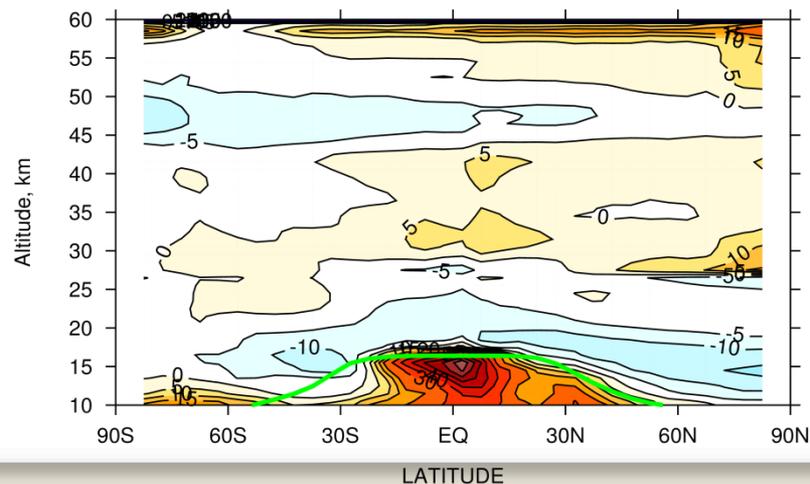
Differences in amplitude of SC, LP-MLS, (%)



Amplitude of the Seasonal cycle MLS, nd(%)



Mean Differences, LP-MLS(%)

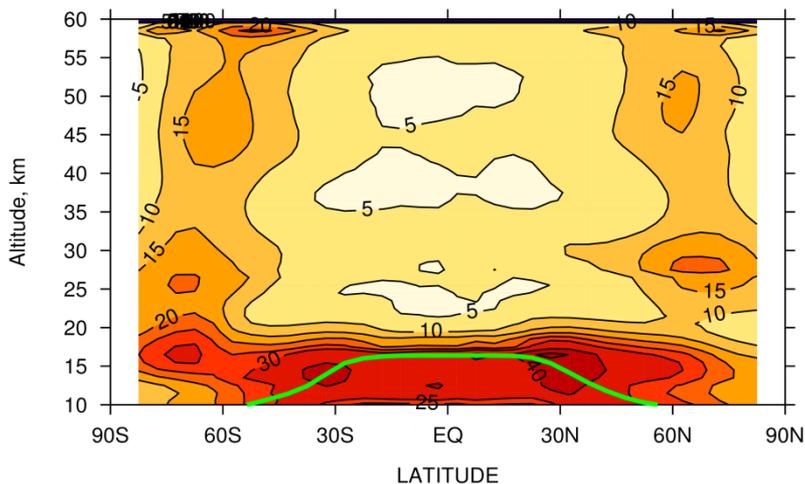




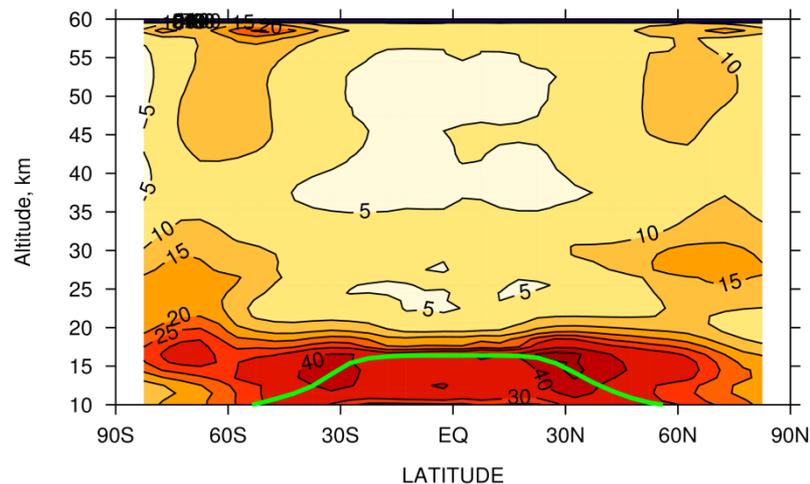
Part I. OMPS LP against Aura MLS



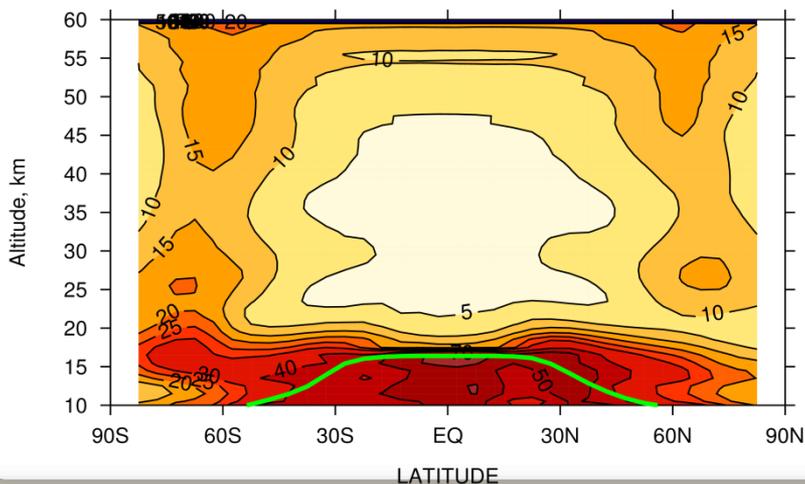
Std dev for zm LP data, nd(%)



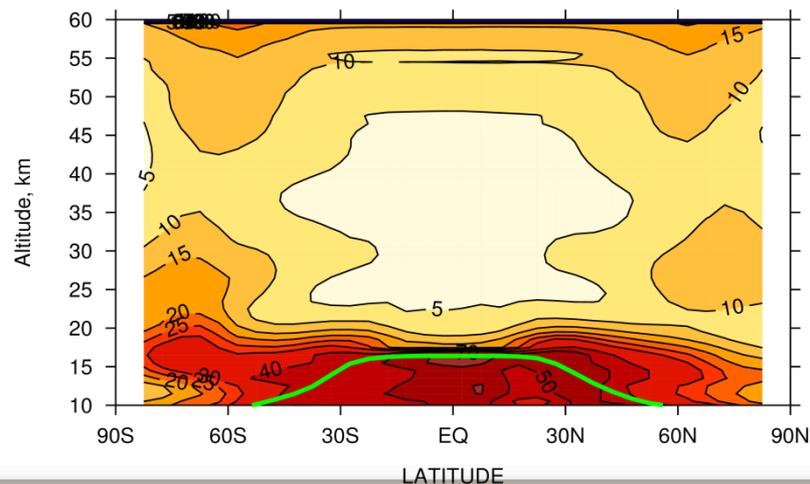
Std dev for zm LP data, vmr(%)



Std dev for zm MLS data, nd(%)



Std dev for zm MLS data, vmr(%)

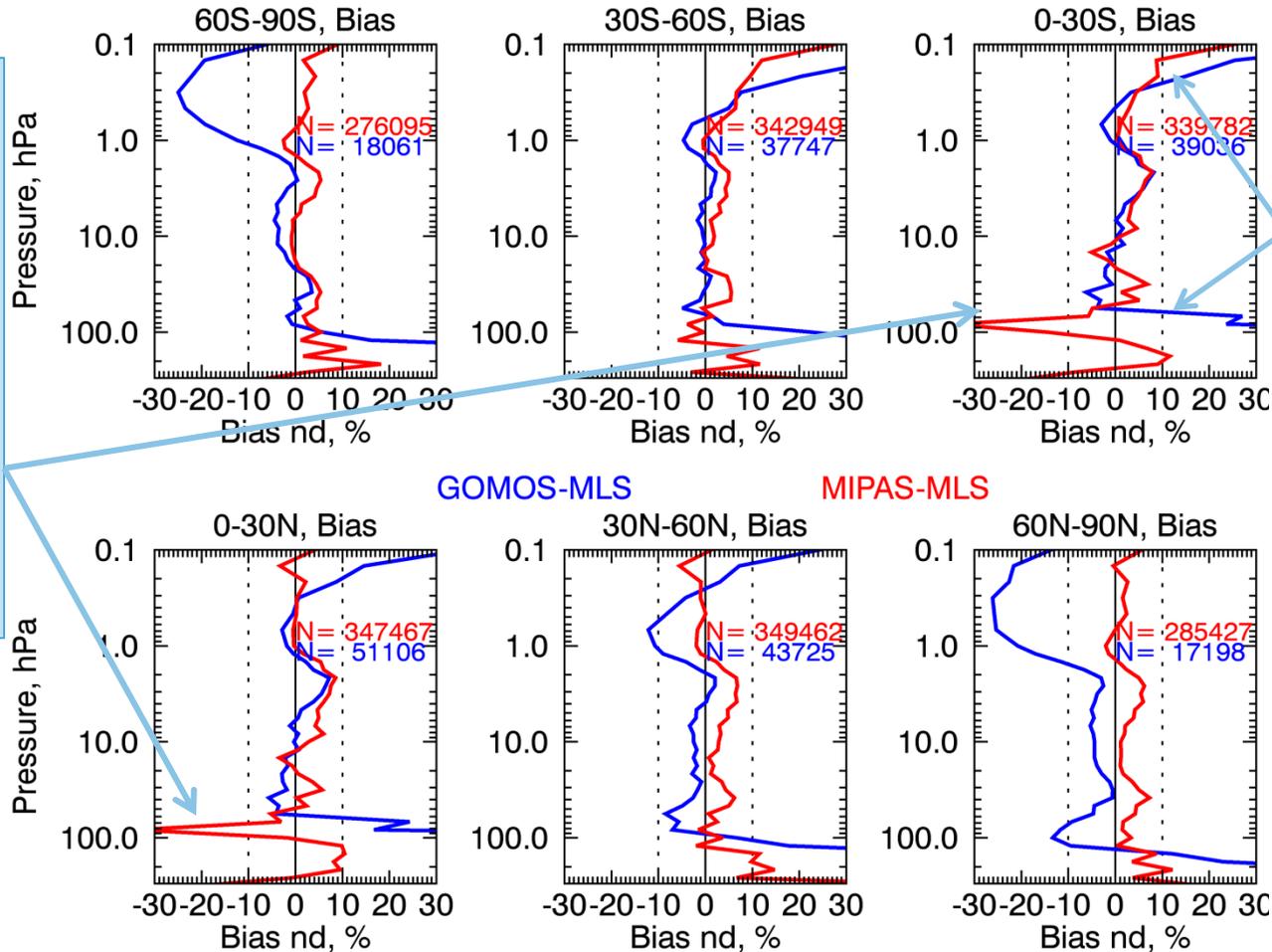




Part II. MIPAS against Aura MLS



Biases with MIPAS are mostly less than 10% except for the tropical UTLS



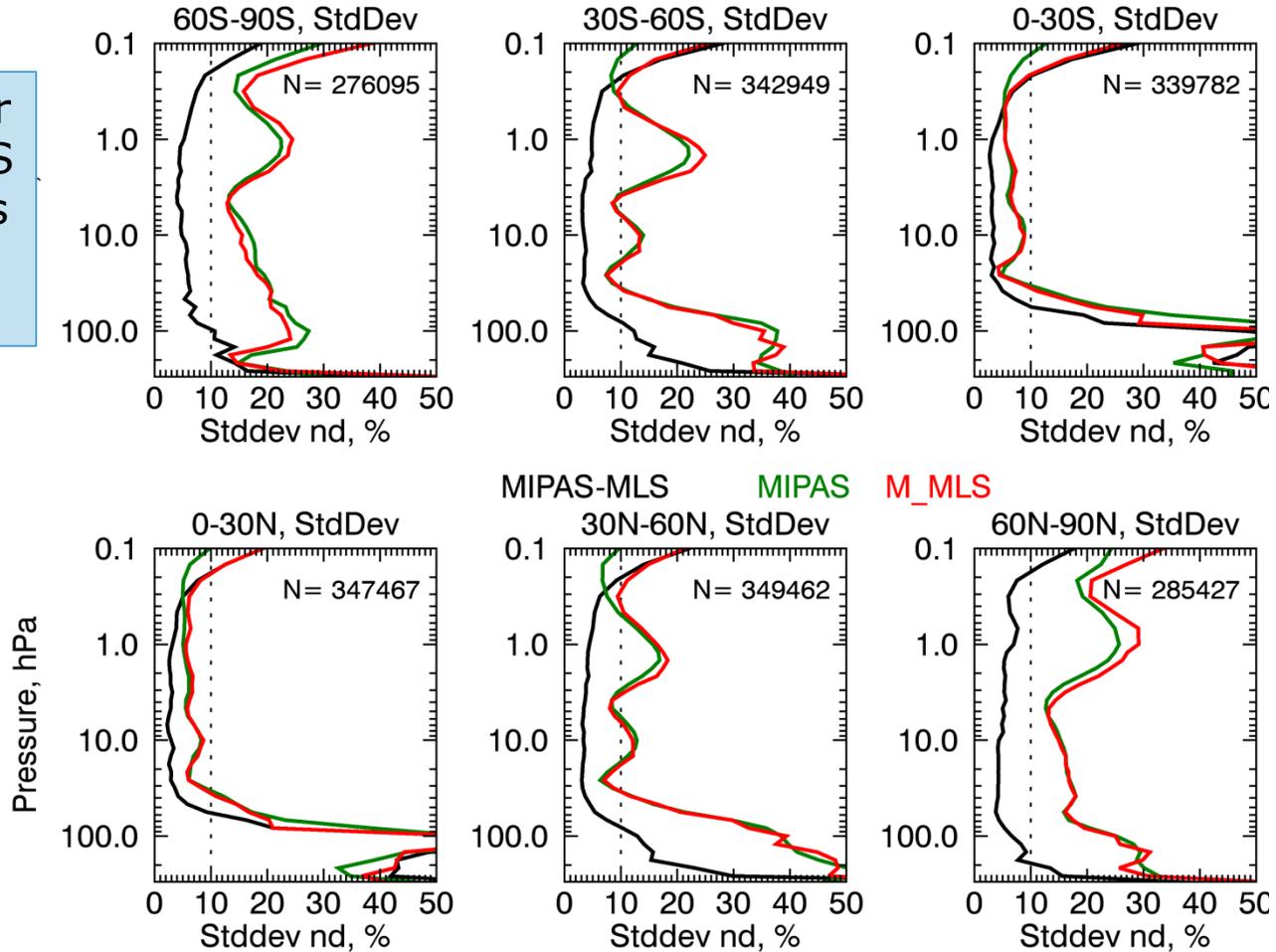
For GOMOS biases are <10% between 70 and 1 hPa and increase above and below



Part II. MIPAS against Aura MLS

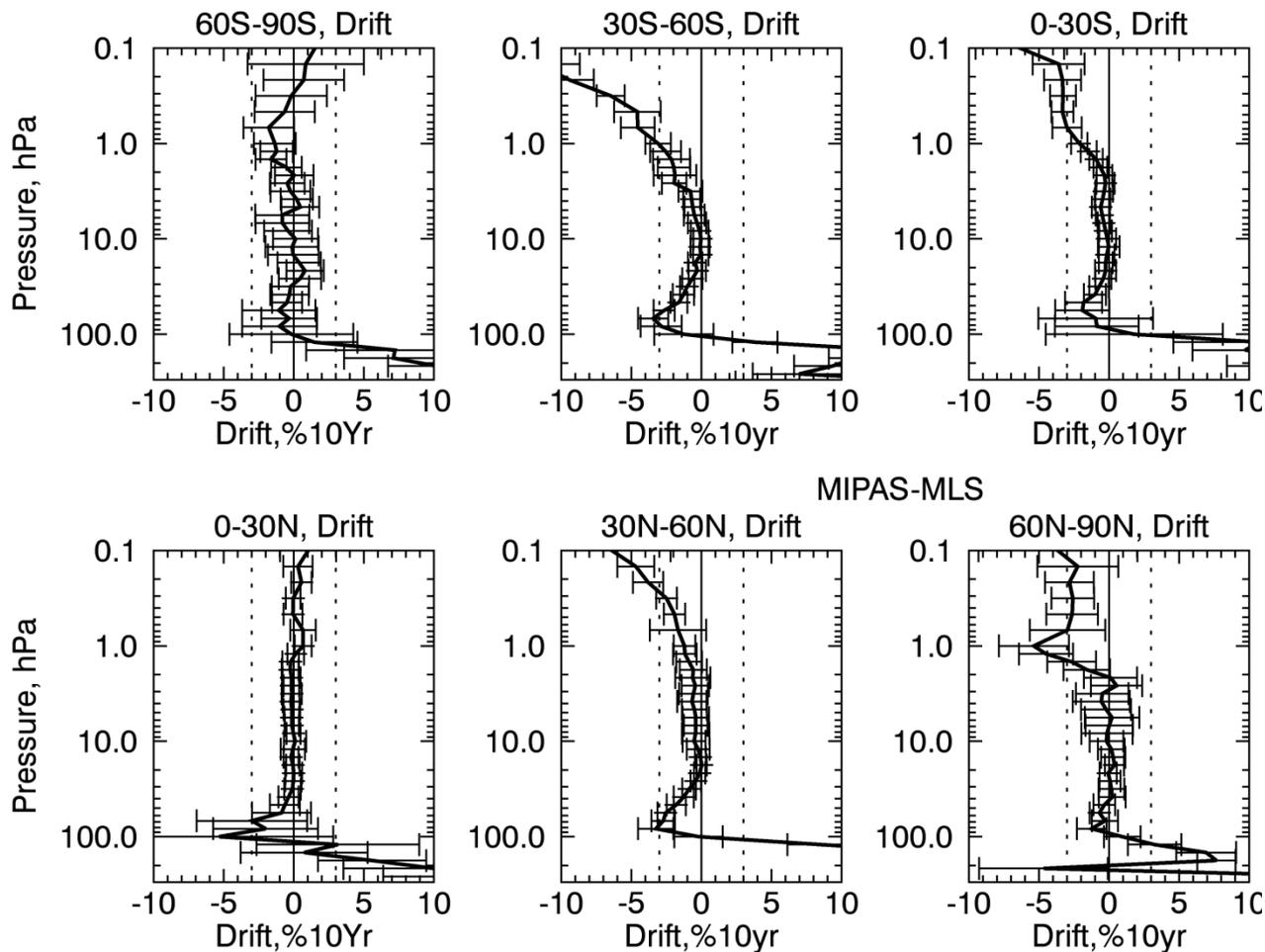


Std dev for MIPAS-MLS differences increases in UTLS





Part II. MIPAS against Aura MLS

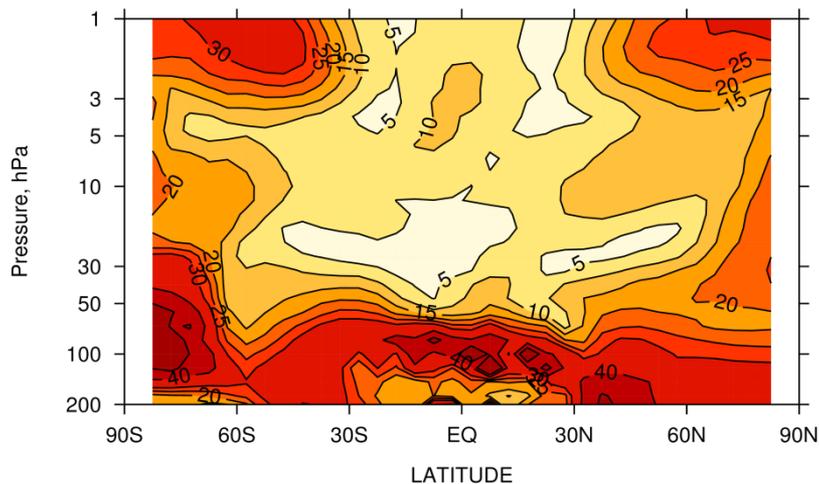




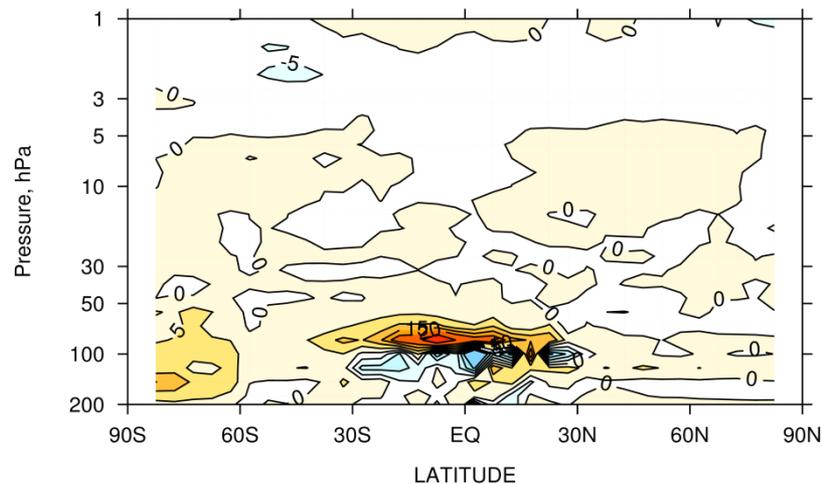
Part II. MIPAS against Aura MLS



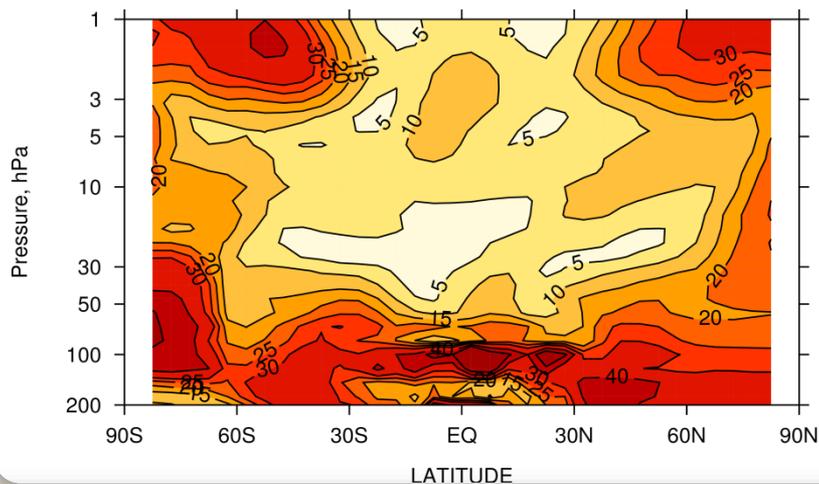
Amplitude of the Seasonal cycle MIPAS, nd(%)



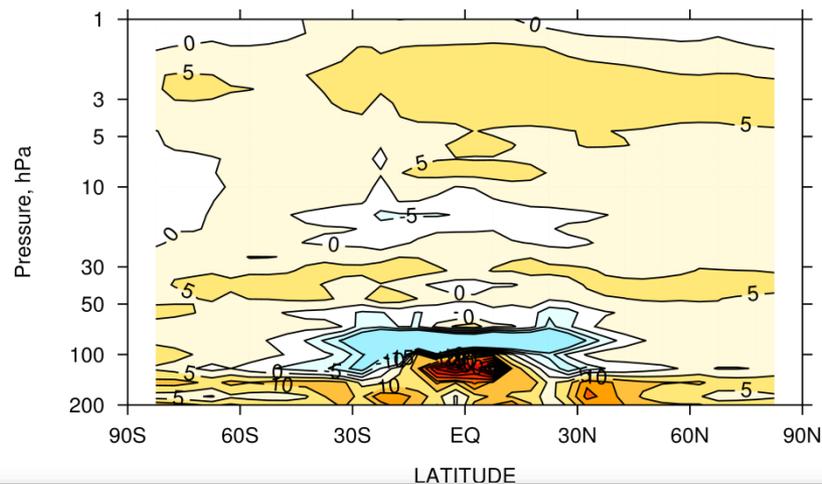
Differences in amplitude of SC, MIPAS-MLS, (%)



Amplitude of the Seasonal cycle MLS, nd(%)



Mean Differences, MIPAS-MLS(%)

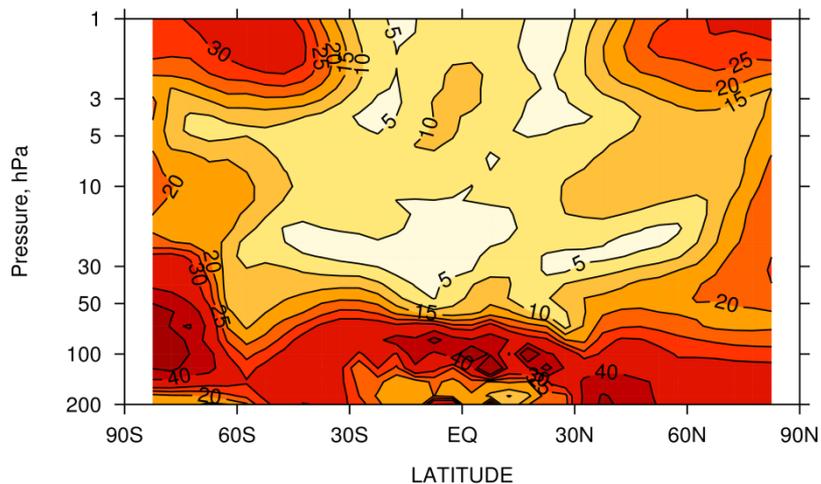




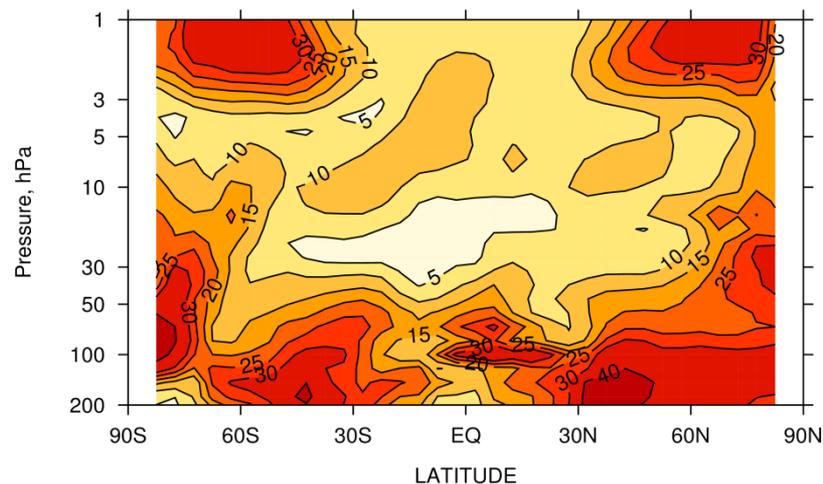
Part II. MIPAS against Aura MLS



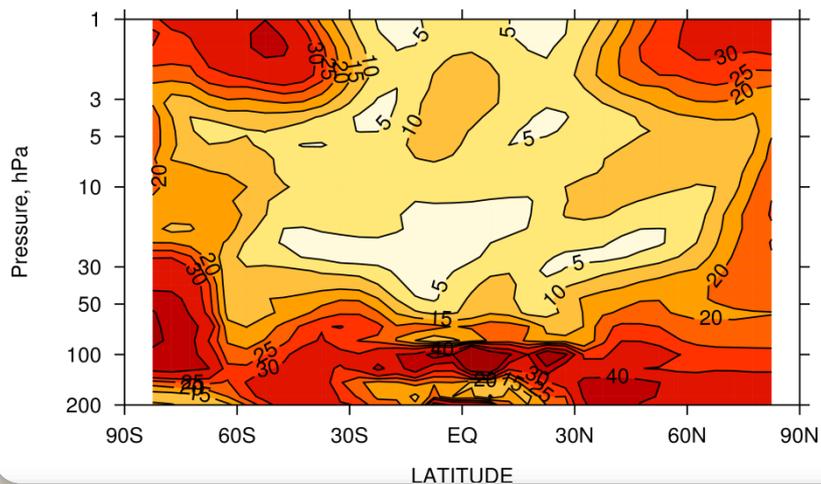
Amplitude of the Seasonal cycle MIPAS, nd(%)



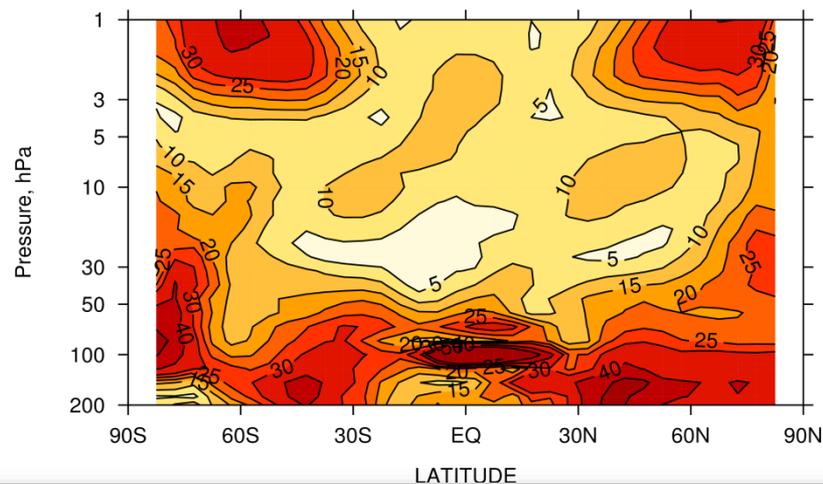
Amplitude of the Seasonal cycle LP, nd(%)



Amplitude of the Seasonal cycle MLS, nd(%)

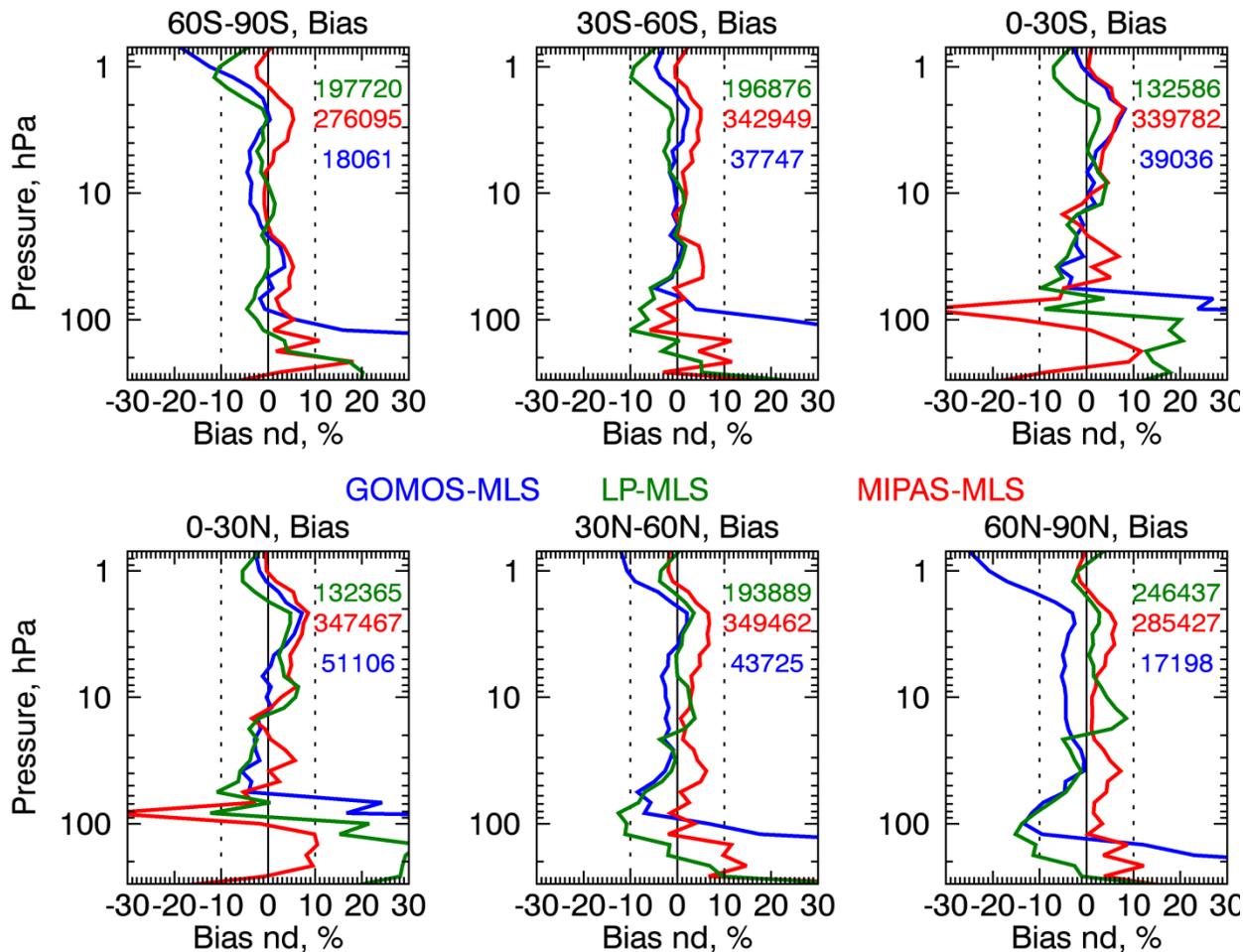


Amplitude of the Seasonal cycle MLS, nd(%)





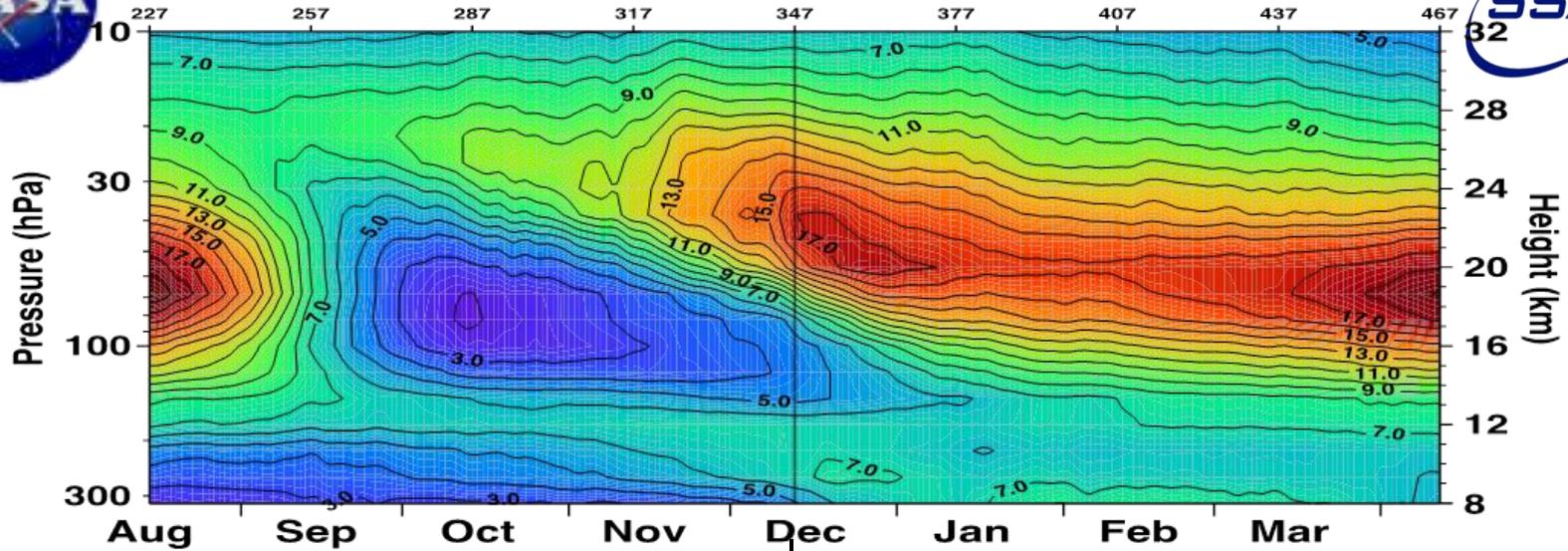
Part II. MIPAS against Aura MLS



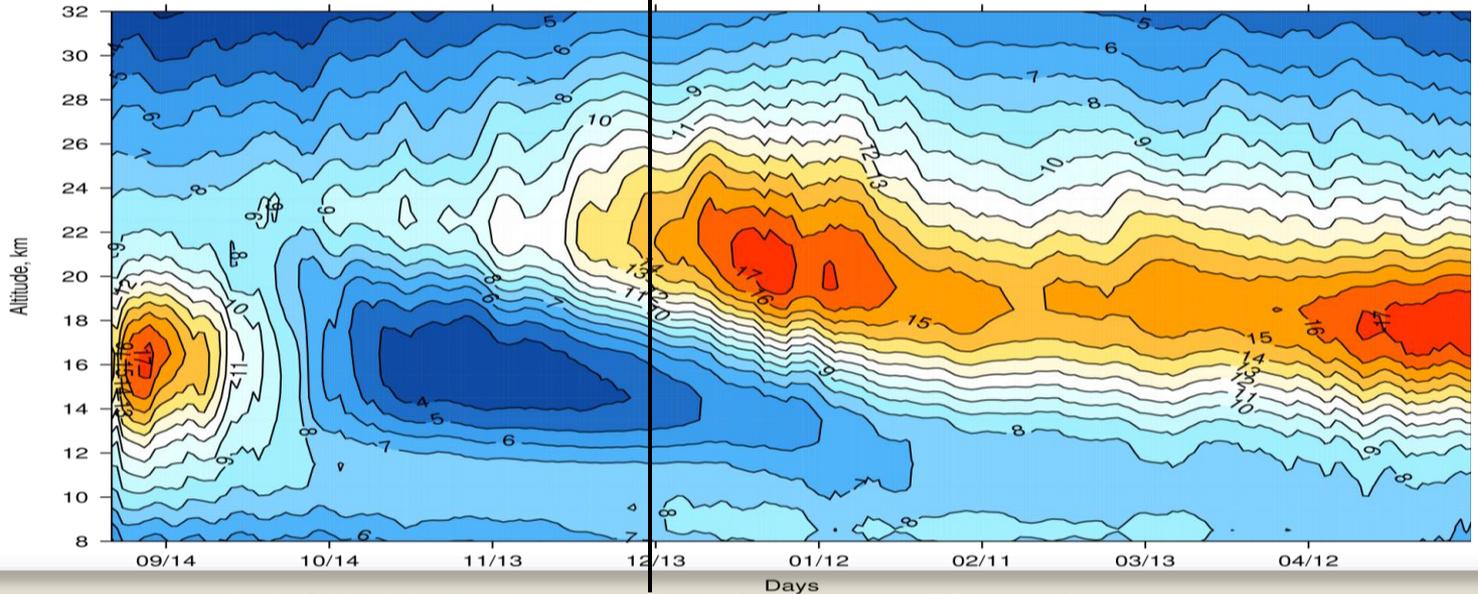
Antarctic Ozone Hole



O_3 DU/km 85°-75°S



OMPS LP du/km, EL 75-85S



ATMOS-2015, June 8-12, 2015, Heraklion, Greece



CONCLUSIONS

