Impact of COVID-19 on AOD

preliminary results

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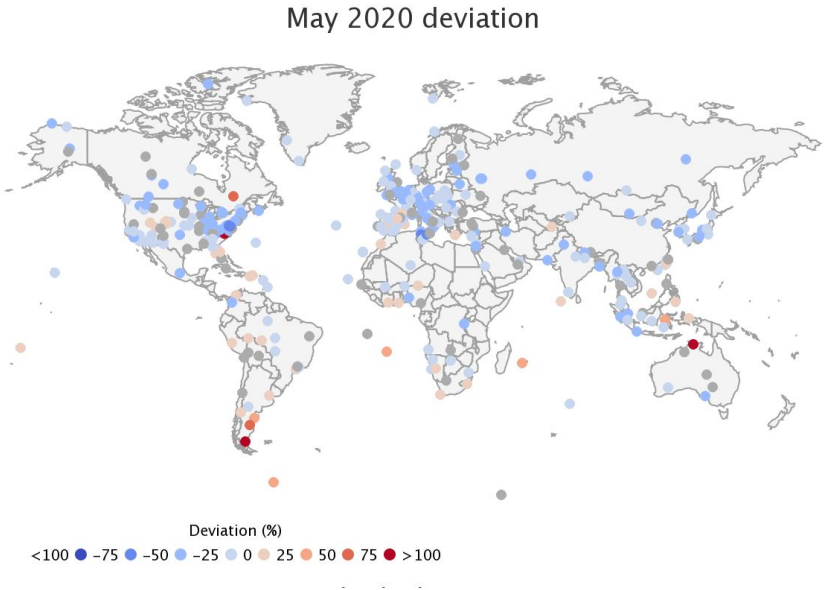
Impact of COVID-19 on AOD - Preliminary Results

AOD deviation

Hypothesis: The reduction of the anthropogenic activities might conduct to a decrease of AOD in 2020. The impact of those reduced activities is expected to be less important on AOD than on NO_2 or O_3 concentrations as it is influenced by natural particles. Also, as a columnar property we might expect less impact than for PM_{10} concentrations.

$AOD_{dev}(site, m) = AOD_{2020}(site, m)/AOD_{clim}(site, m) - 1$



Results available at:
https://aerocom-trends.met.no/covid-19.php

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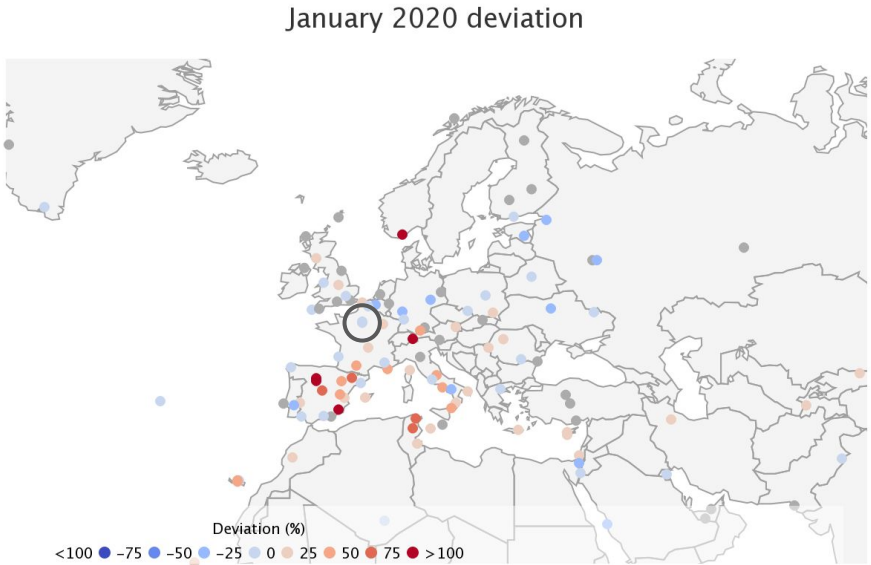
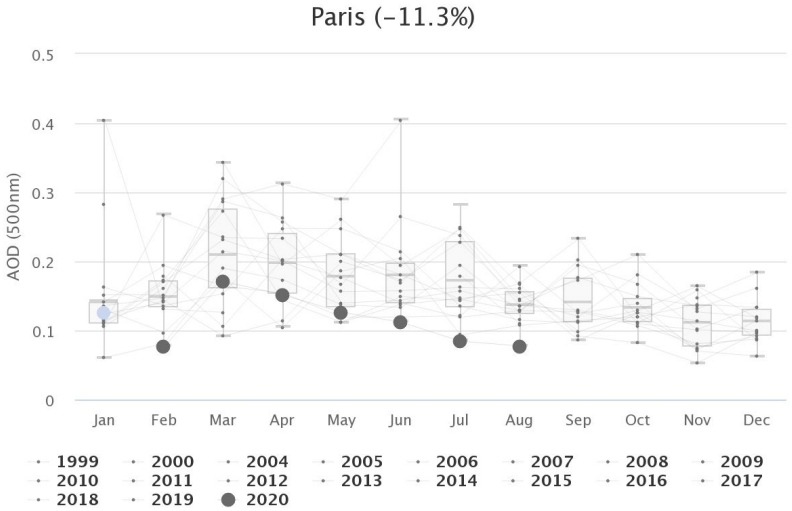
AOD deviation in Europe





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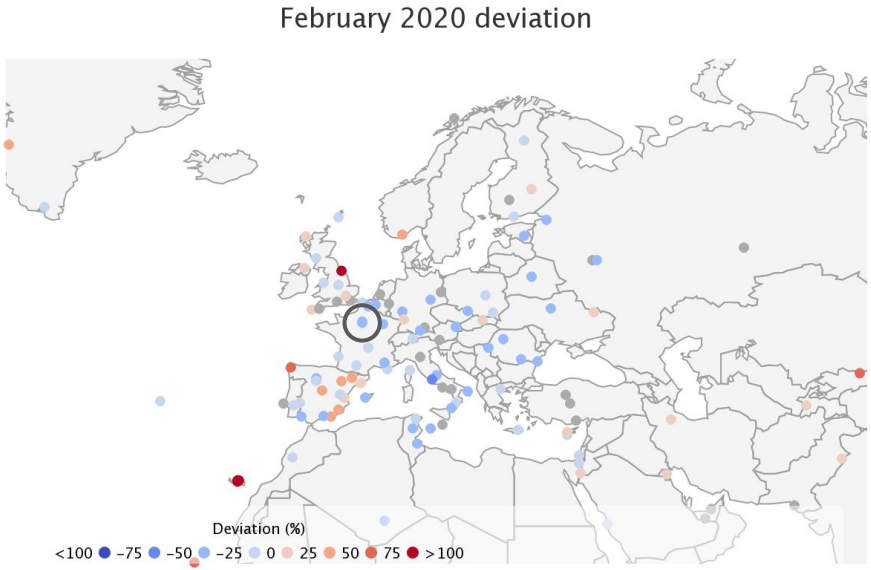

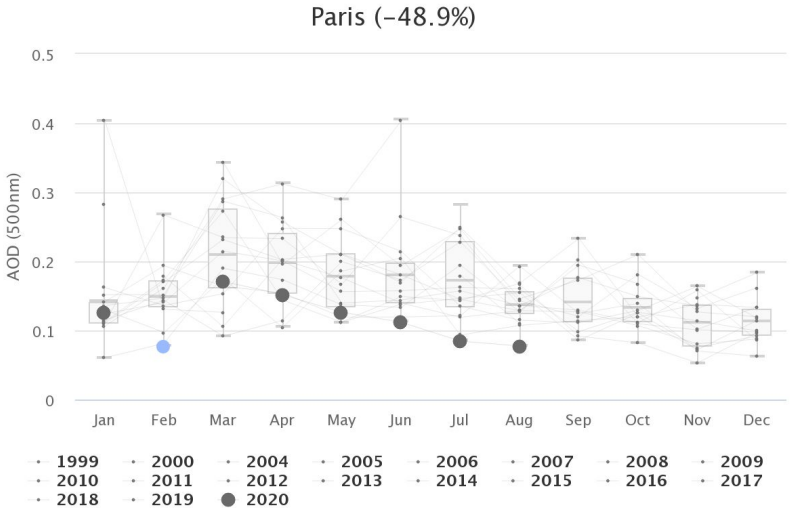

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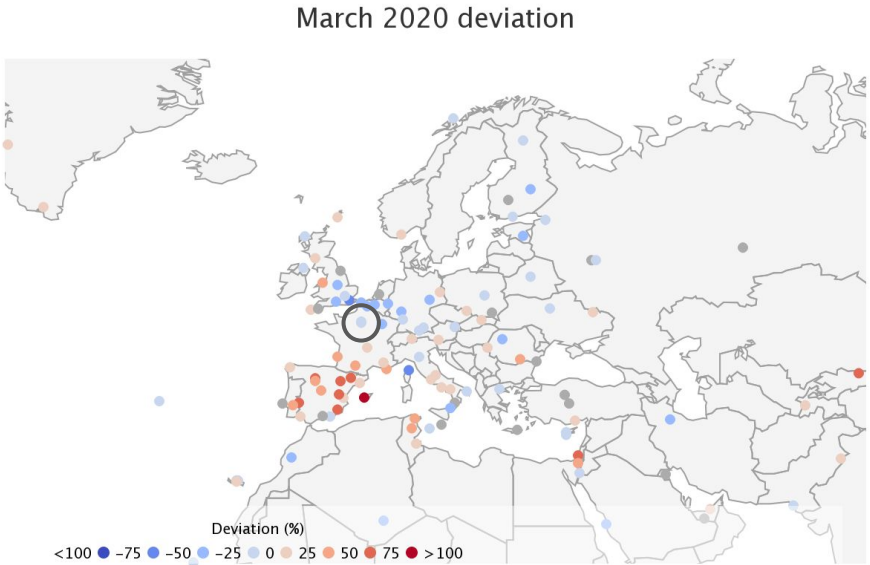

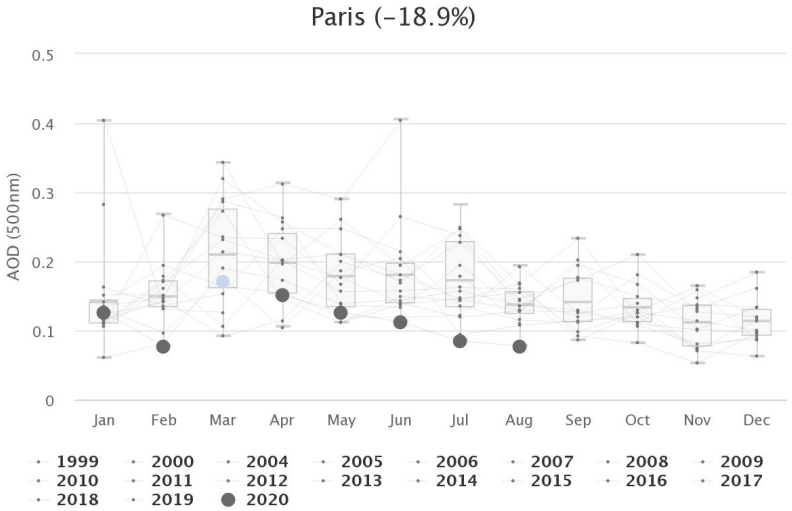

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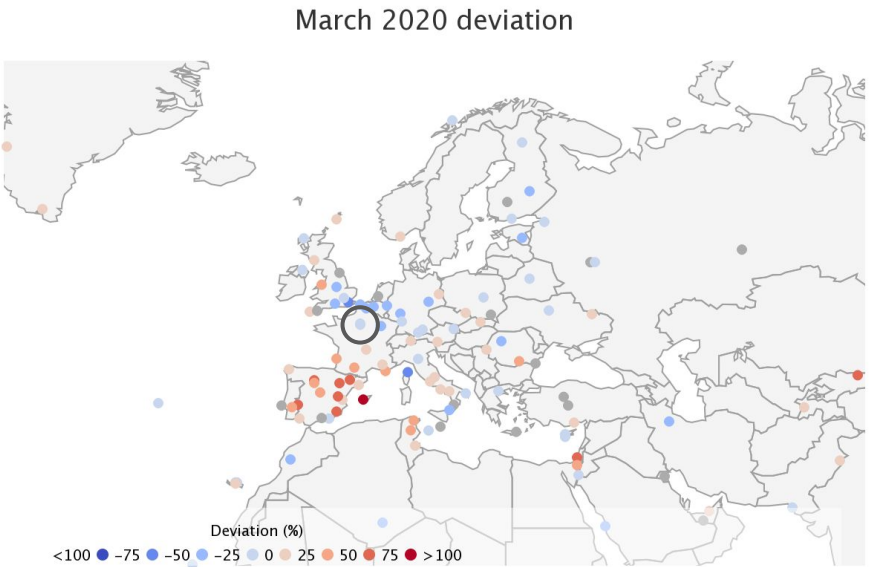

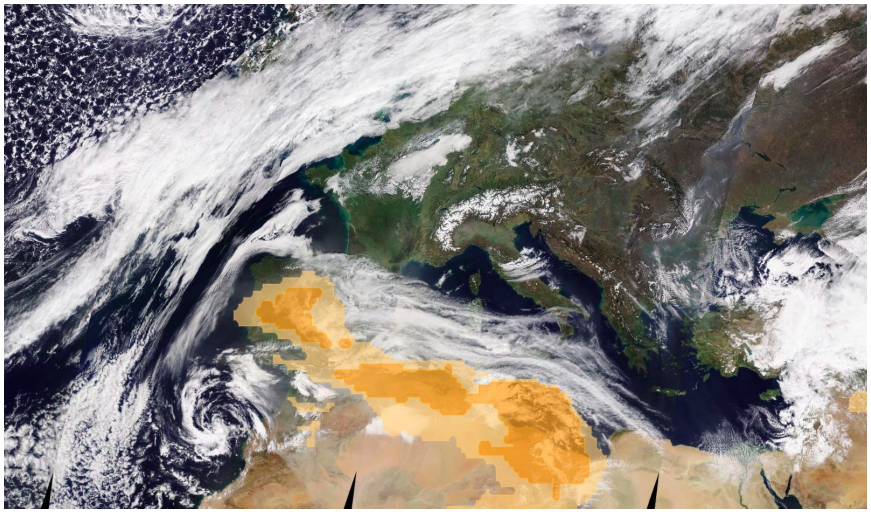

Dust outbreak, March 18th 2020 (source: https://aerocom-alerts.met.no)

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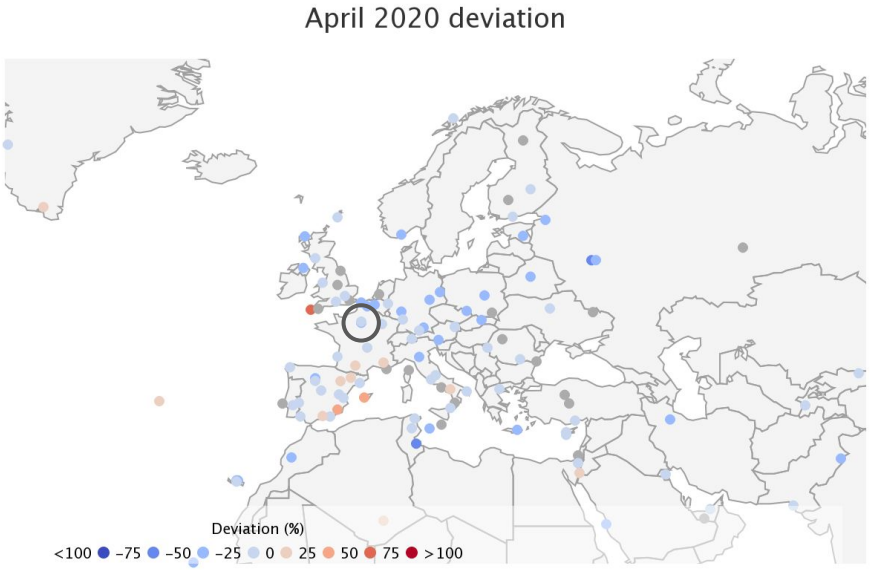

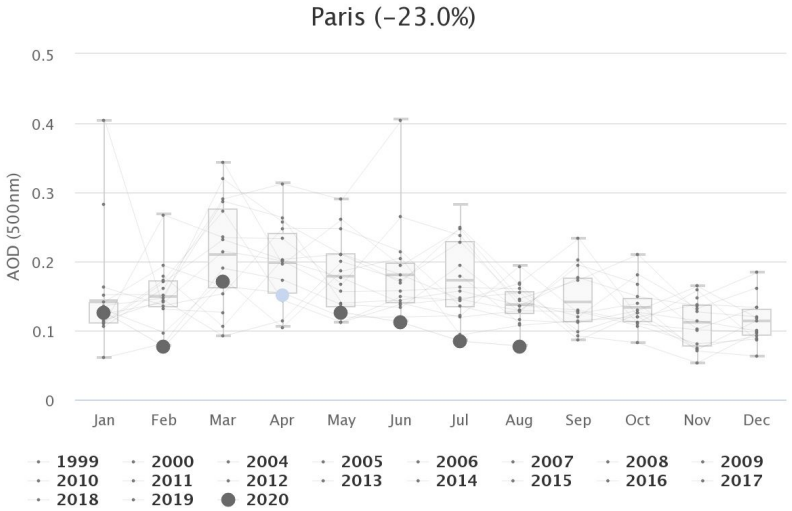

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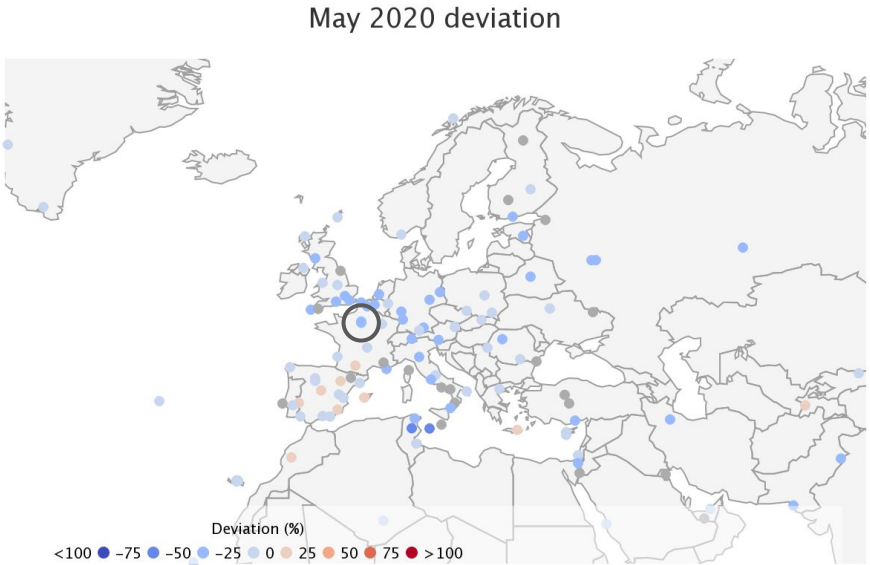

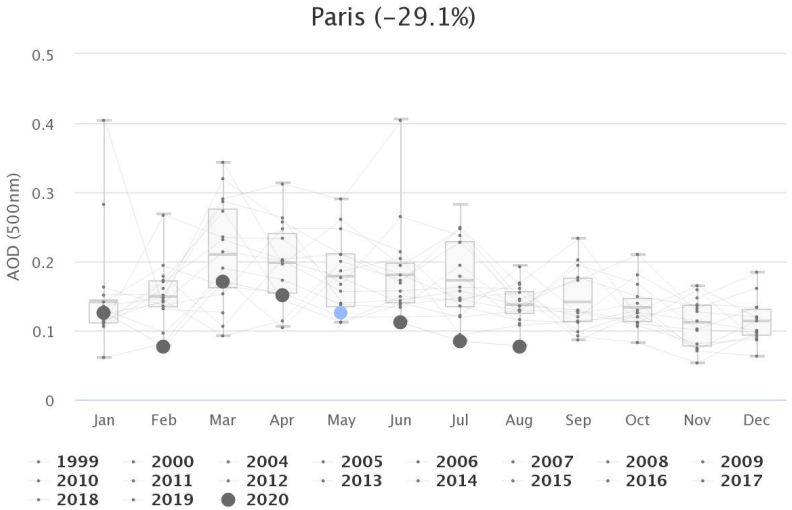

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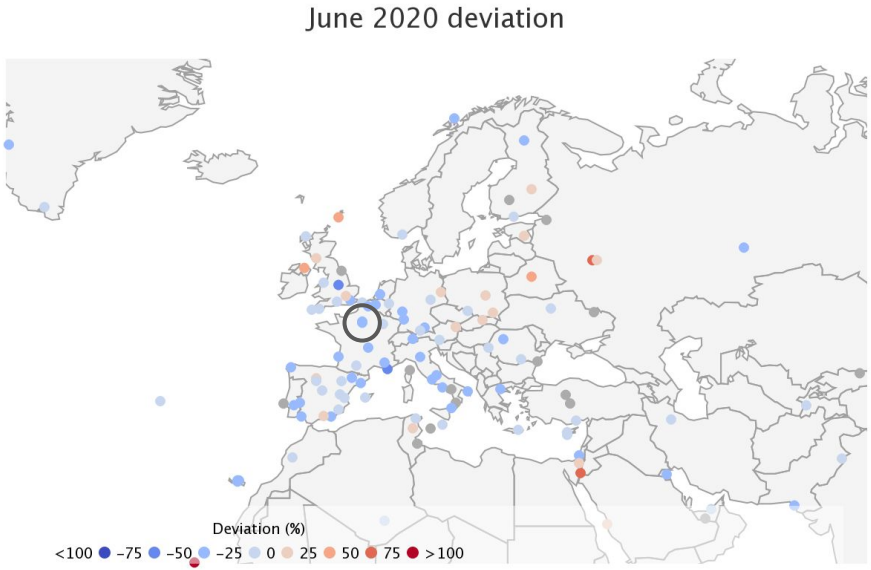

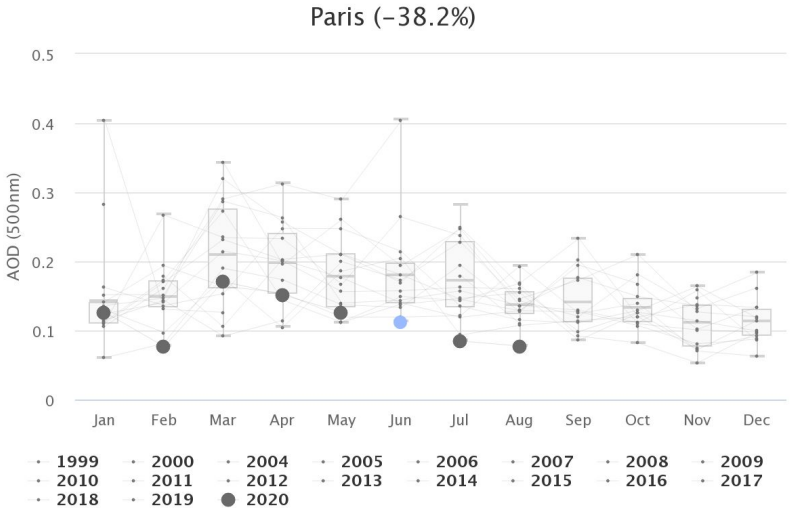

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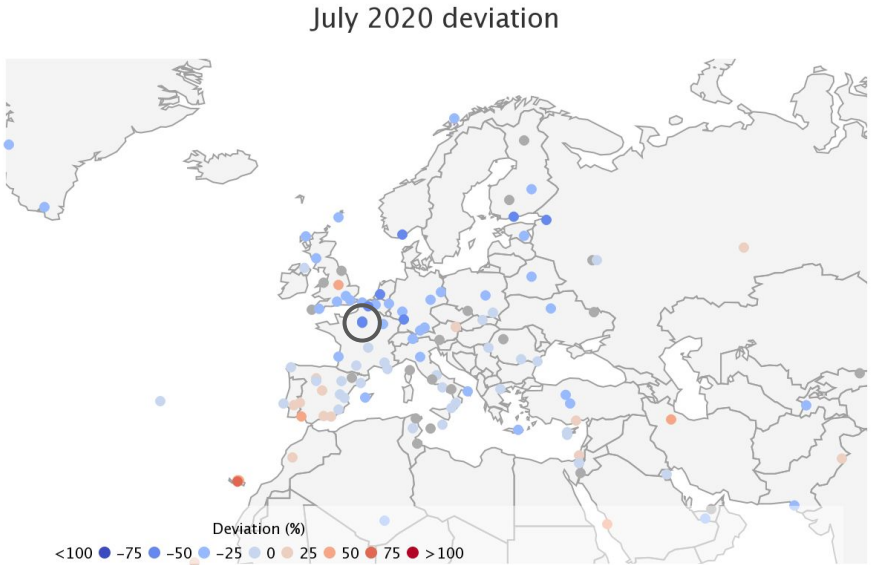

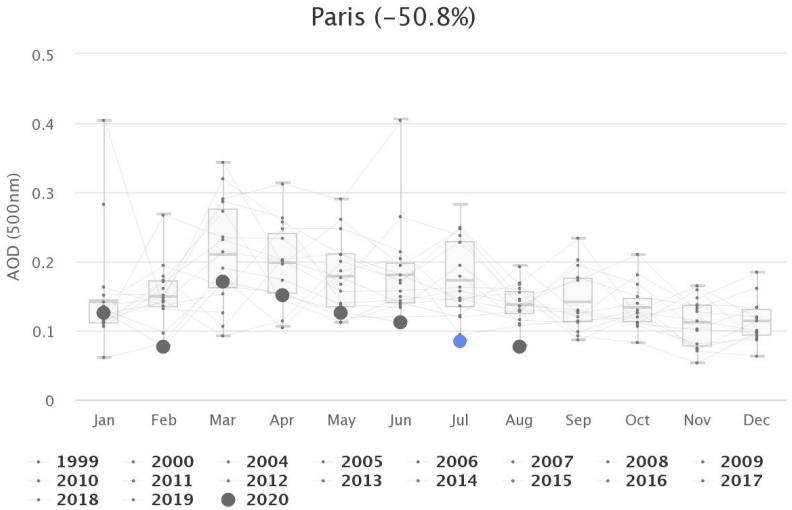

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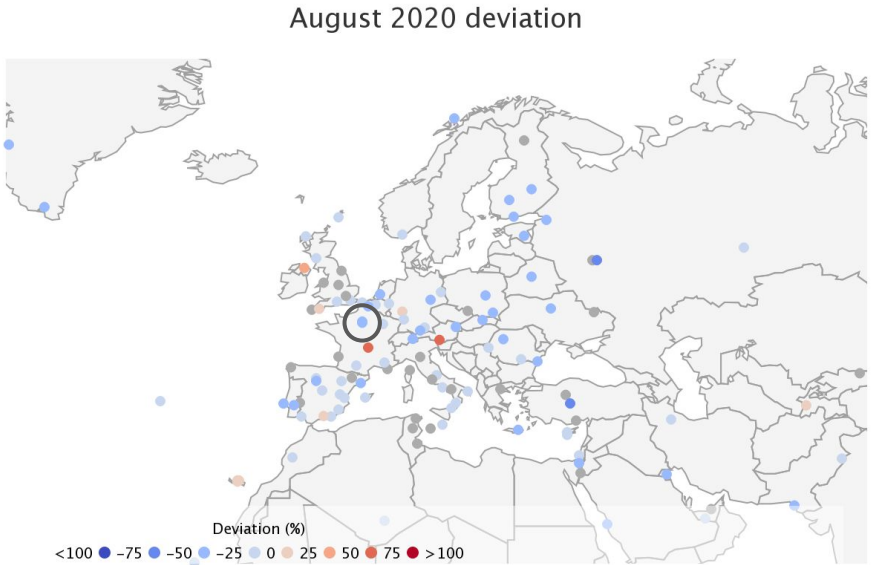

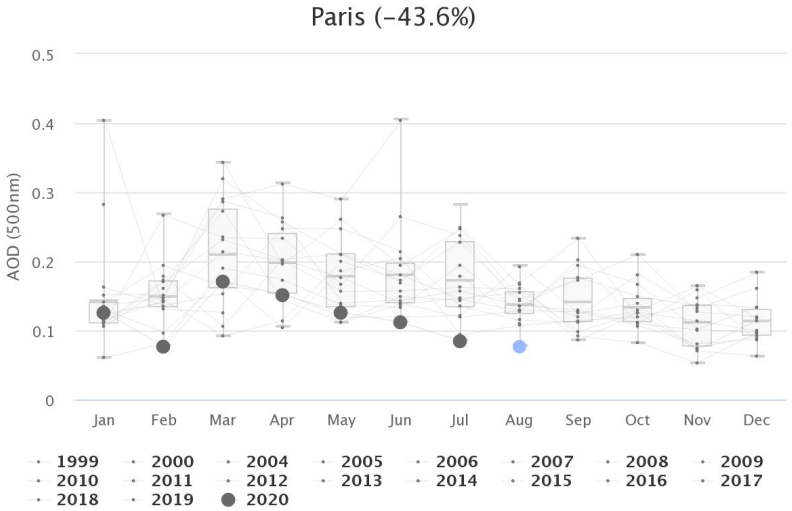

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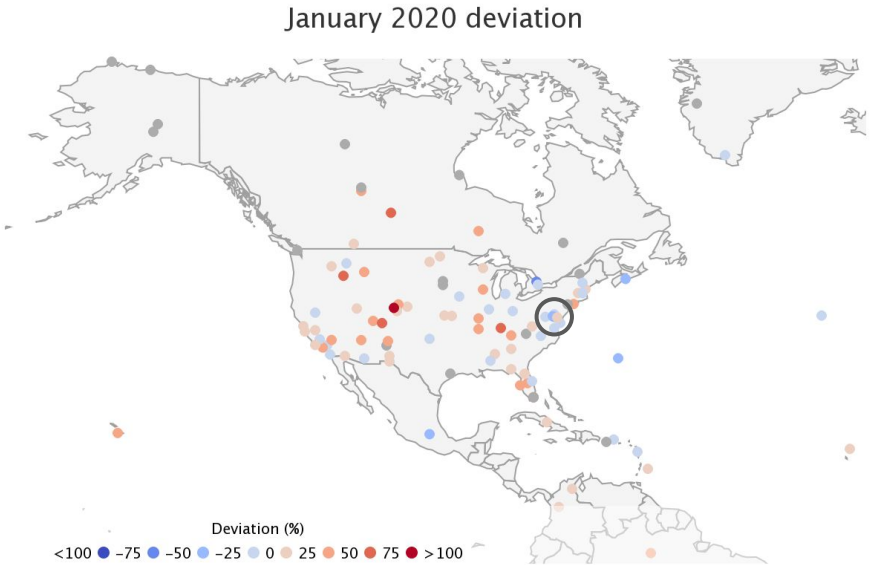
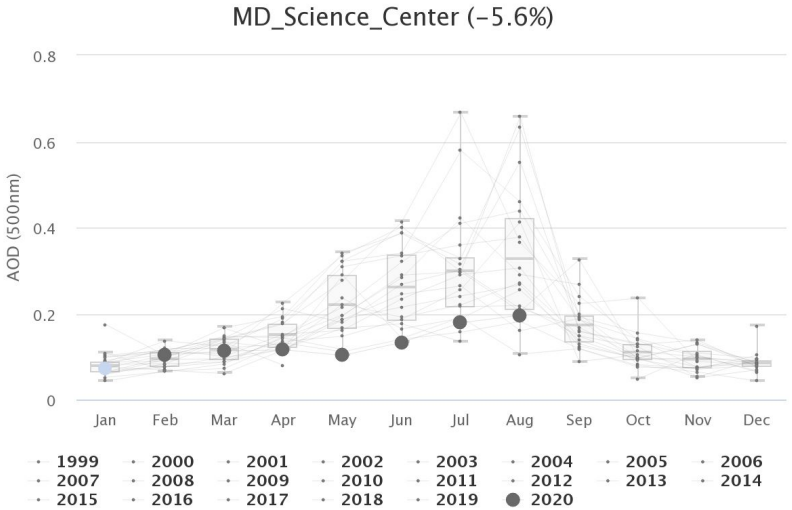
AOD deviation in North-America





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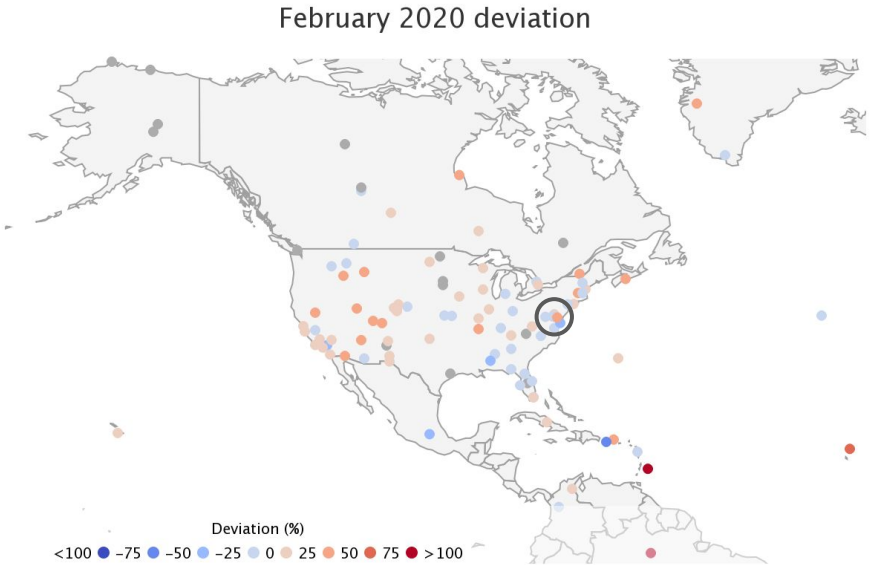

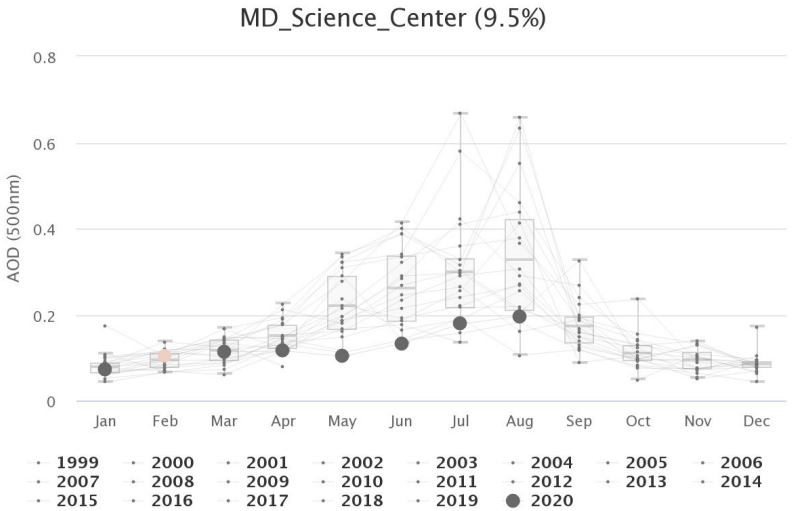

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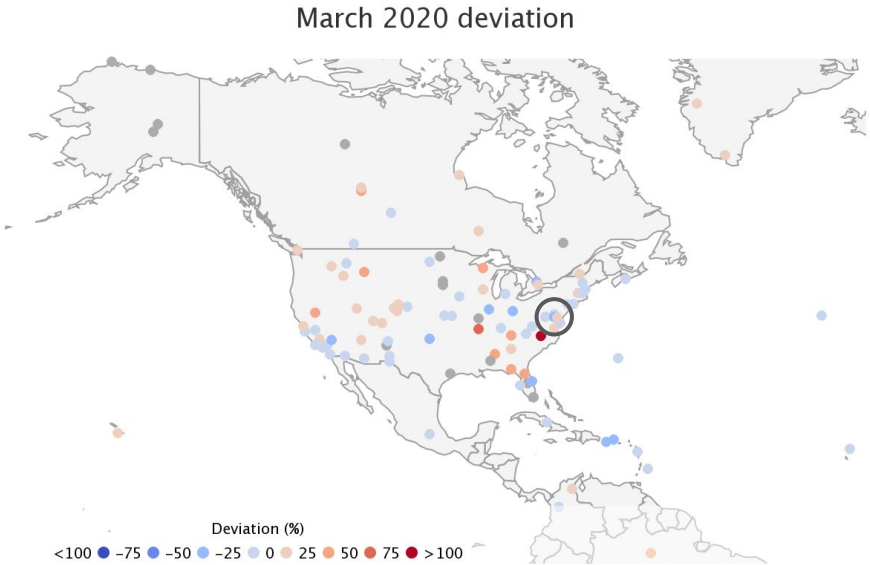

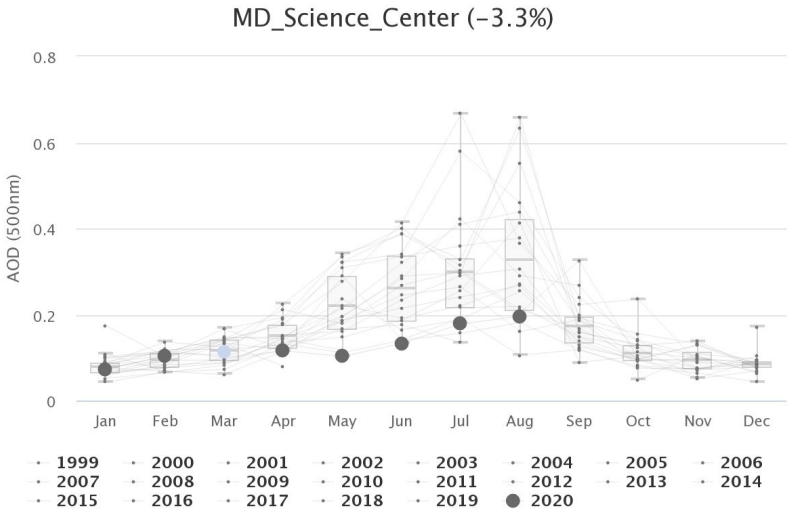

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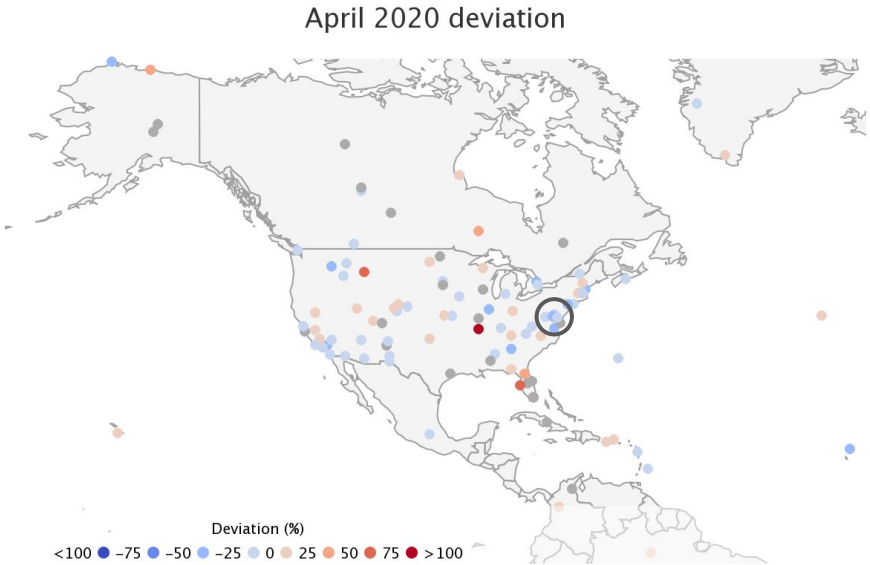

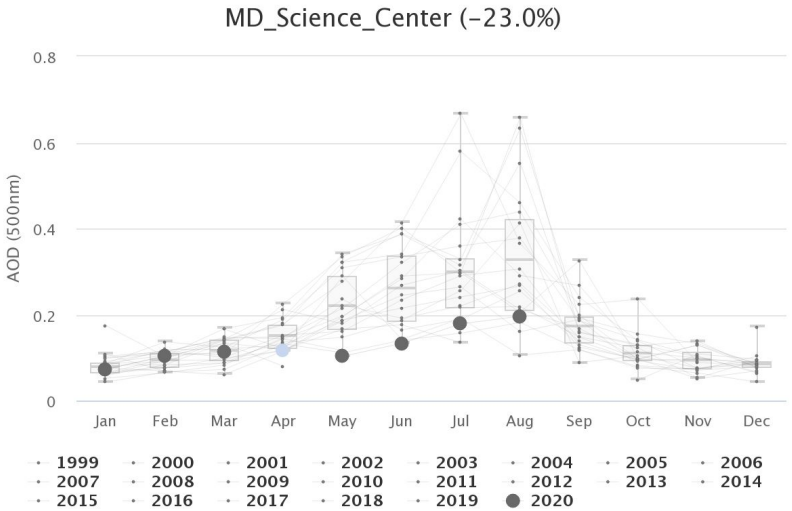

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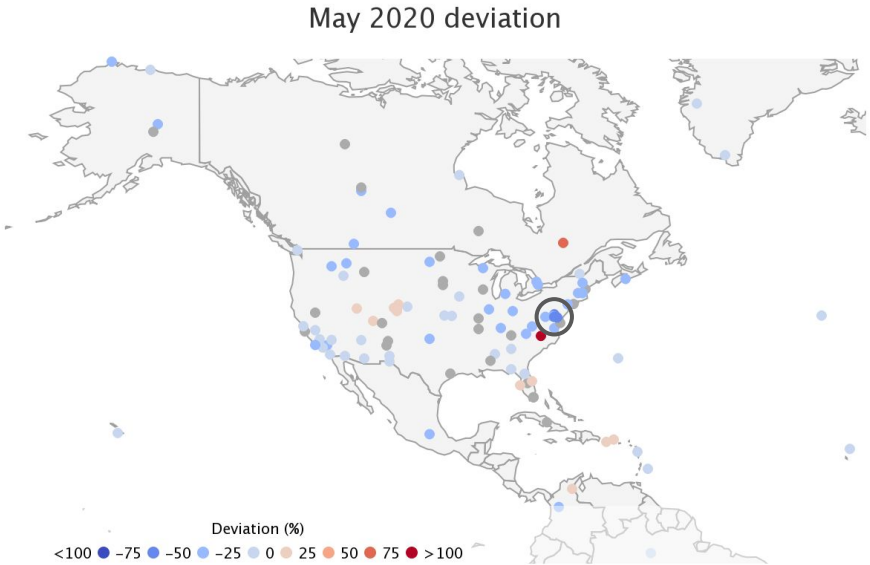

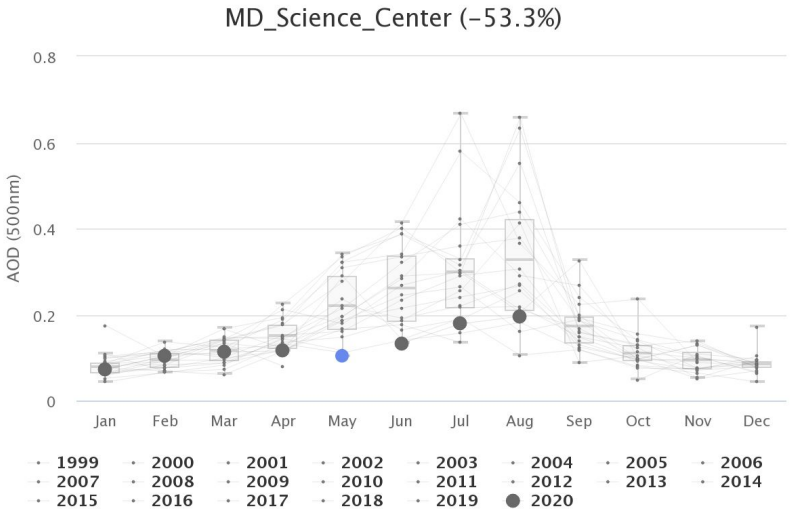

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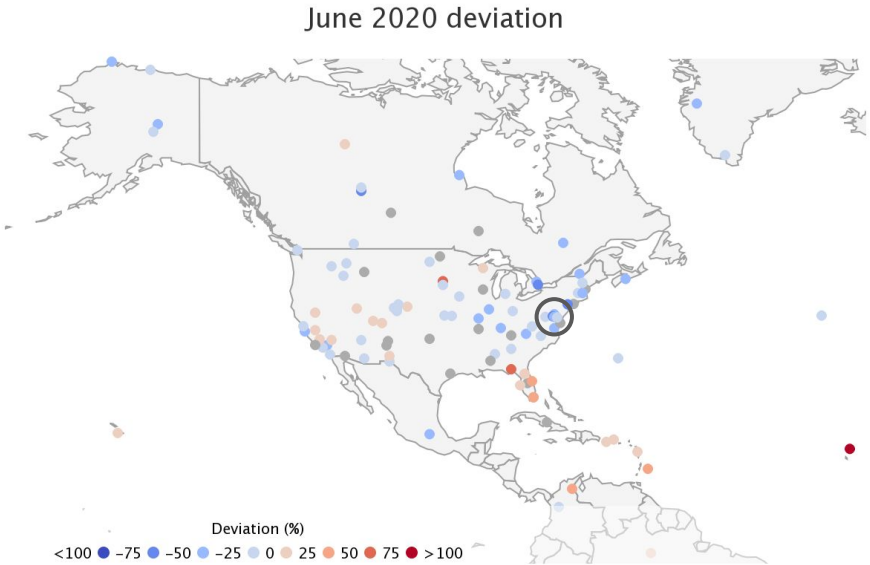

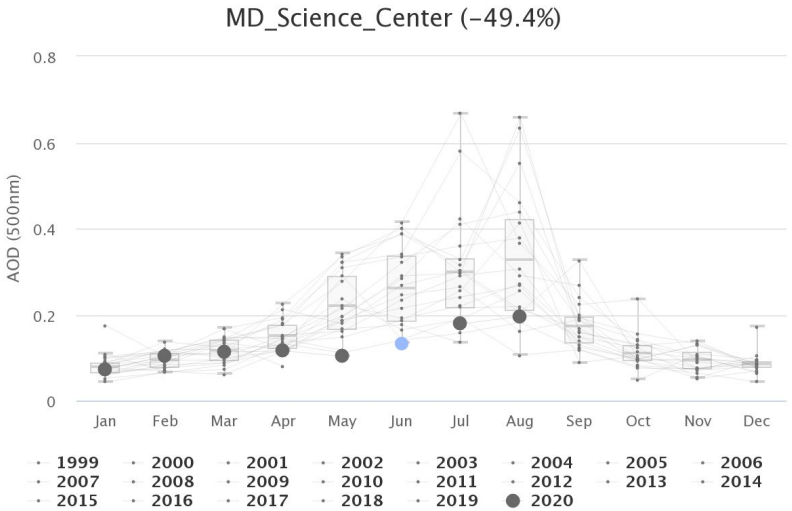

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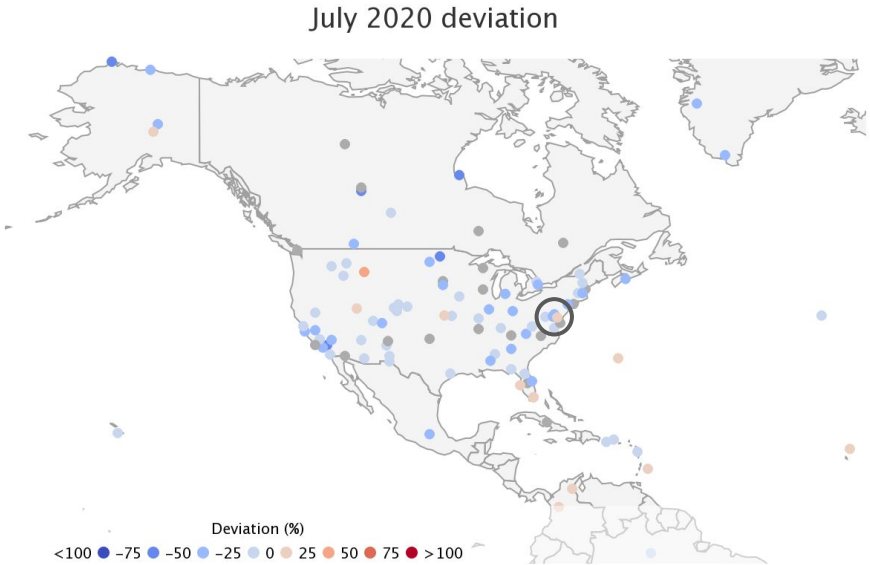

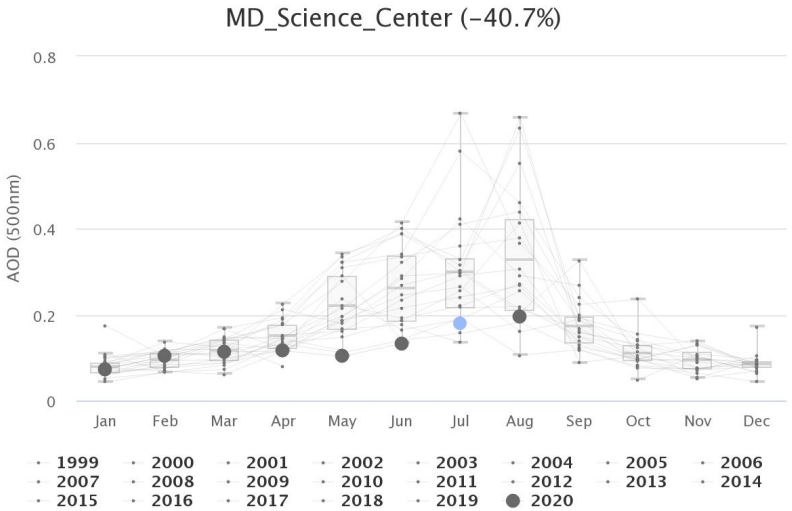

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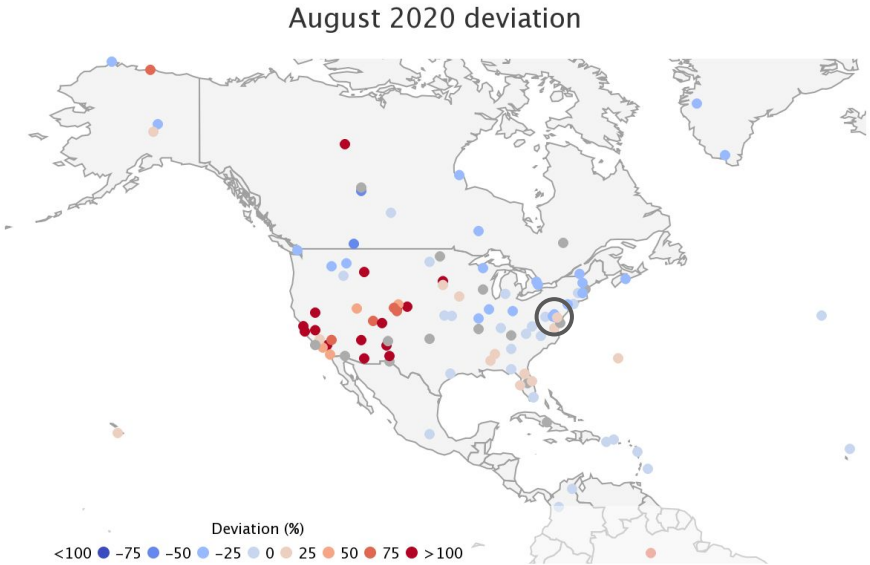

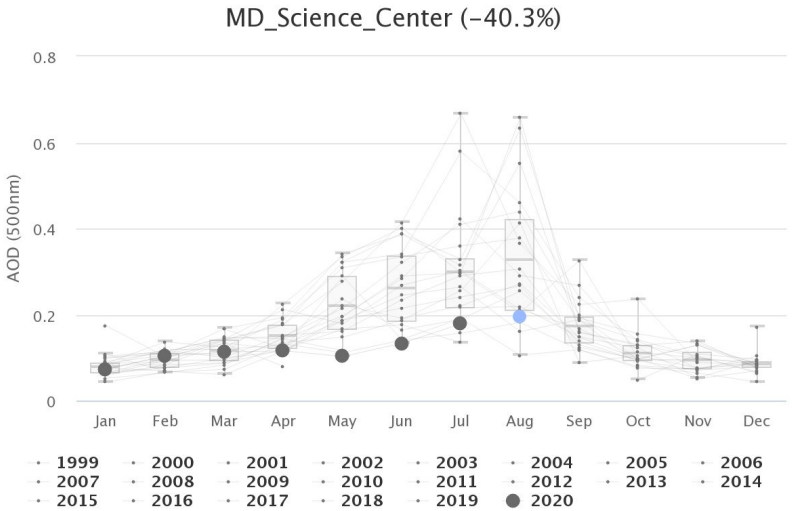

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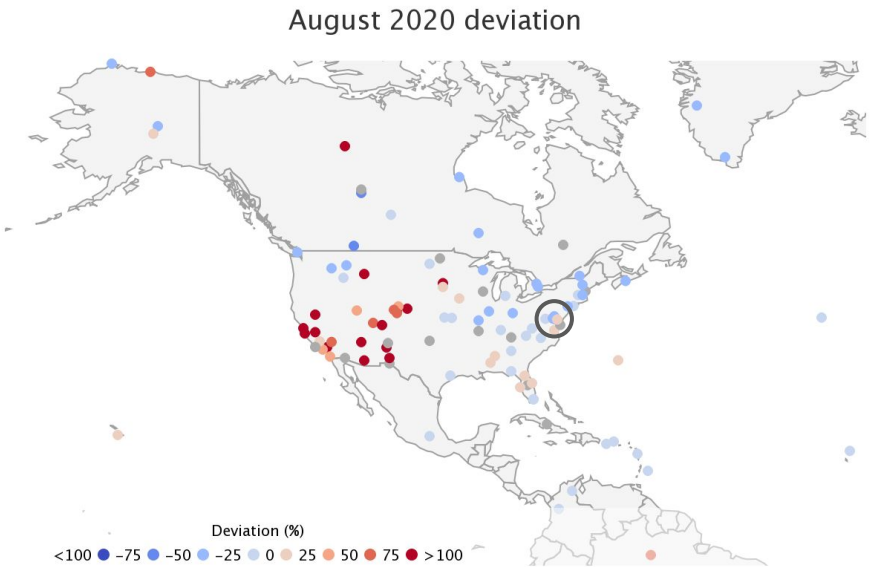

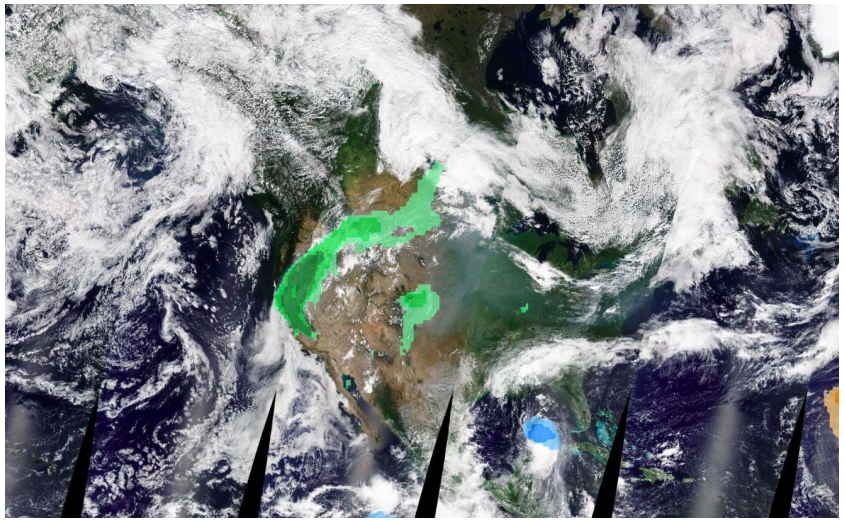

Biomass burning, August 10th 2020 (source: https://aerocom-alerts.met.no)

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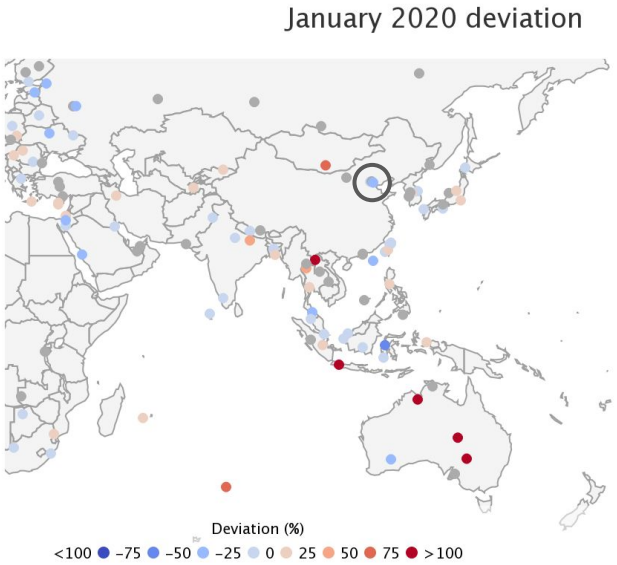
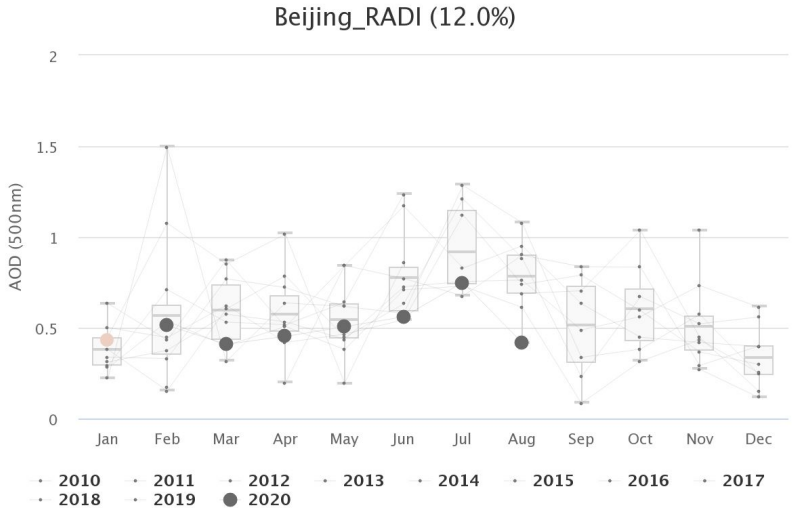
AOD deviation in Asia-Australia





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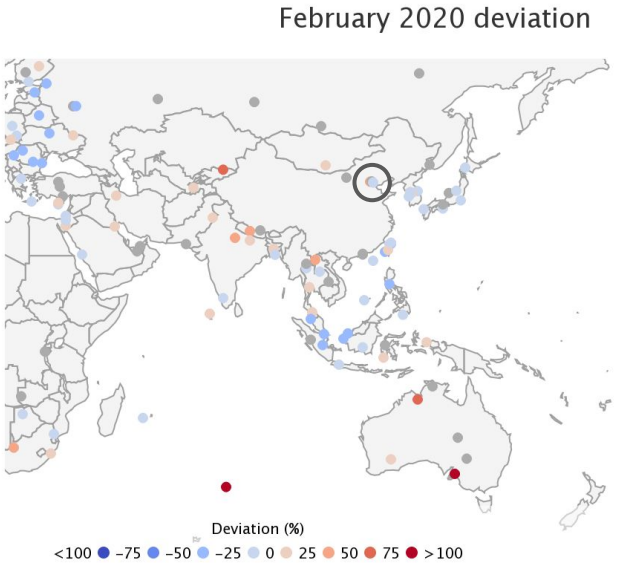

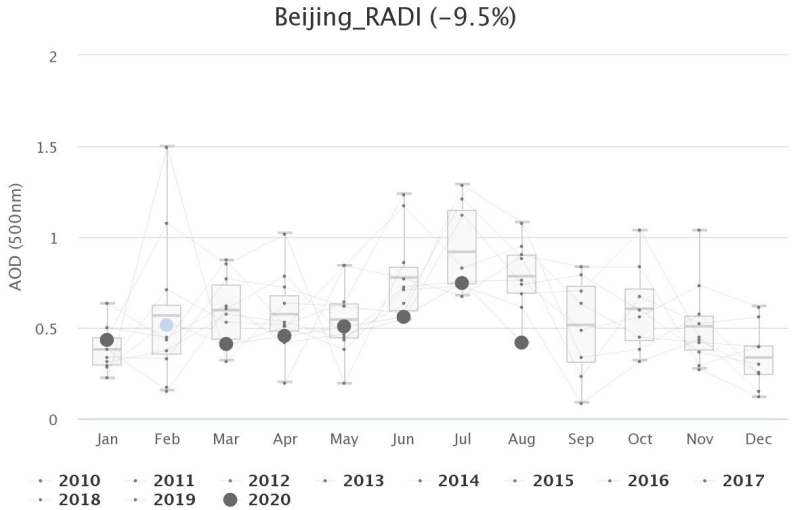

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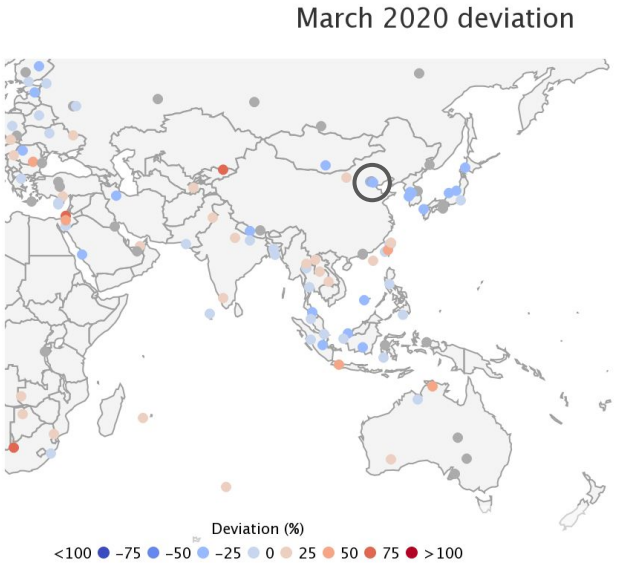

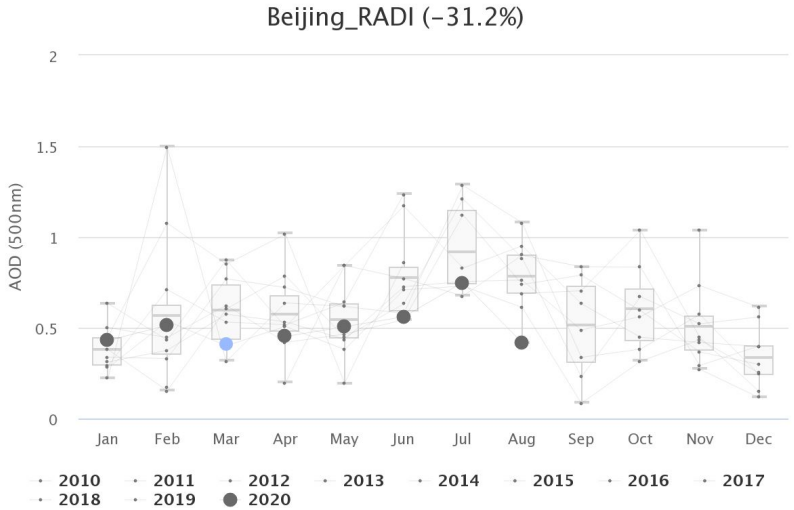

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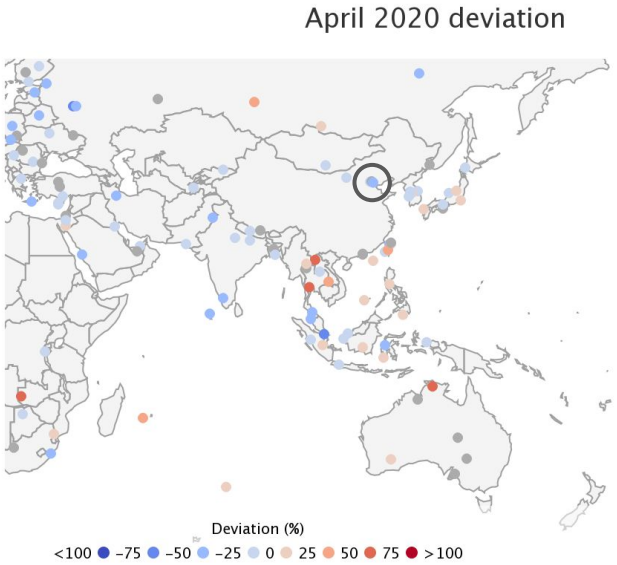

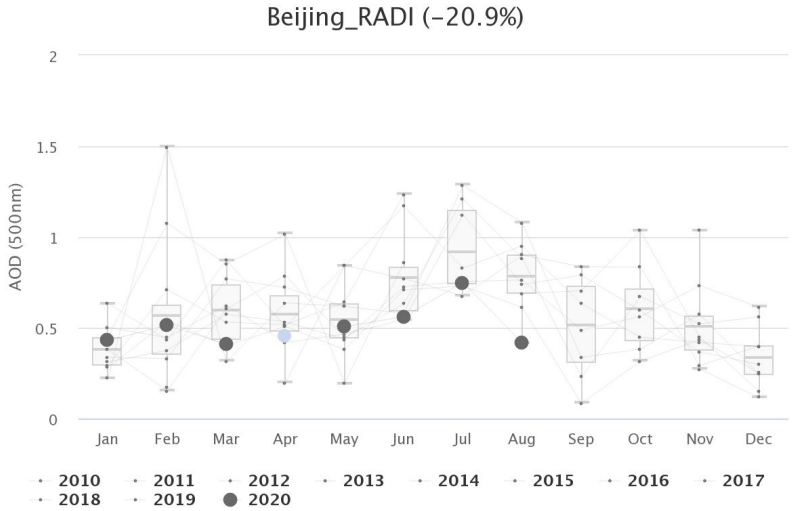

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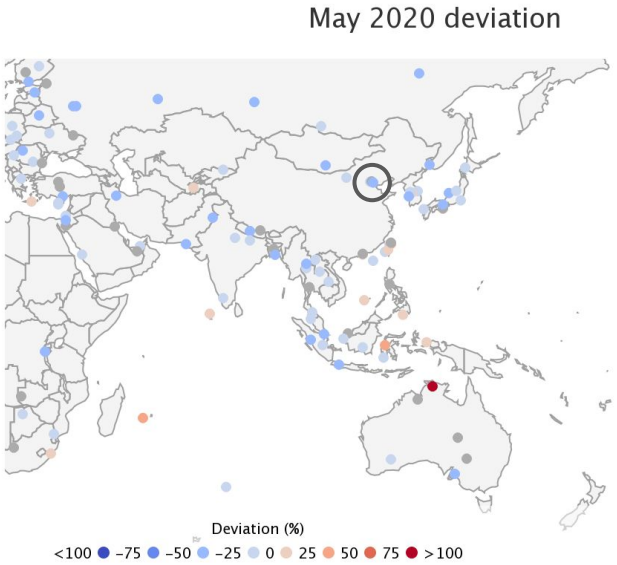

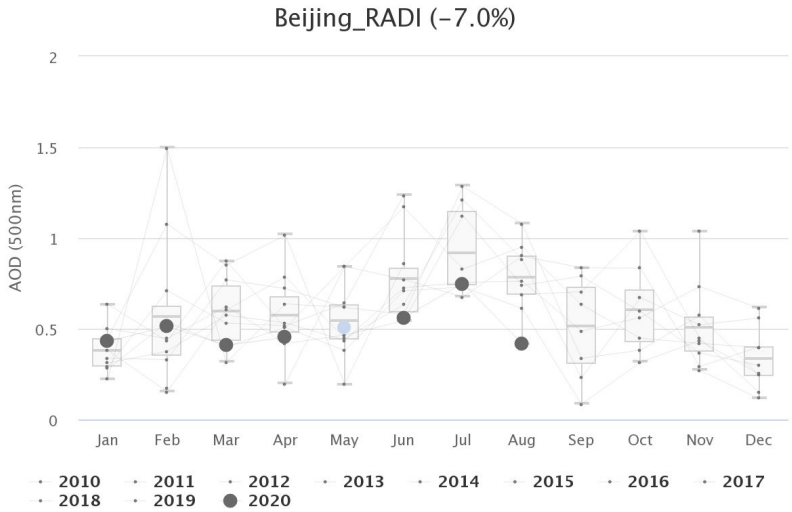

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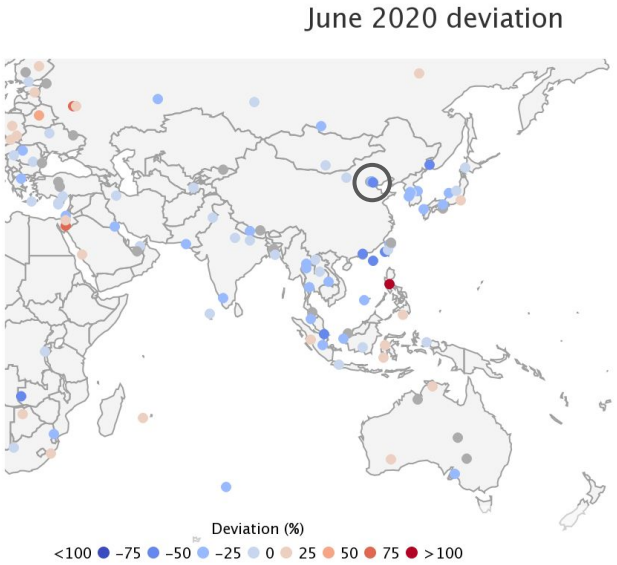

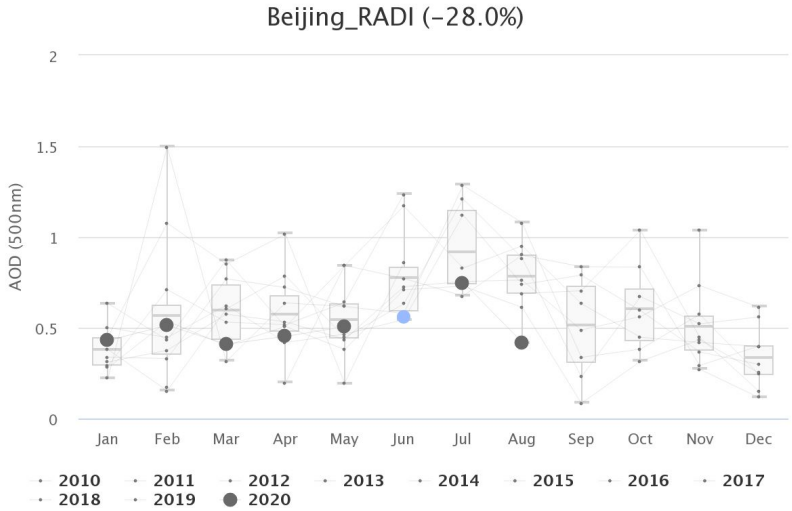

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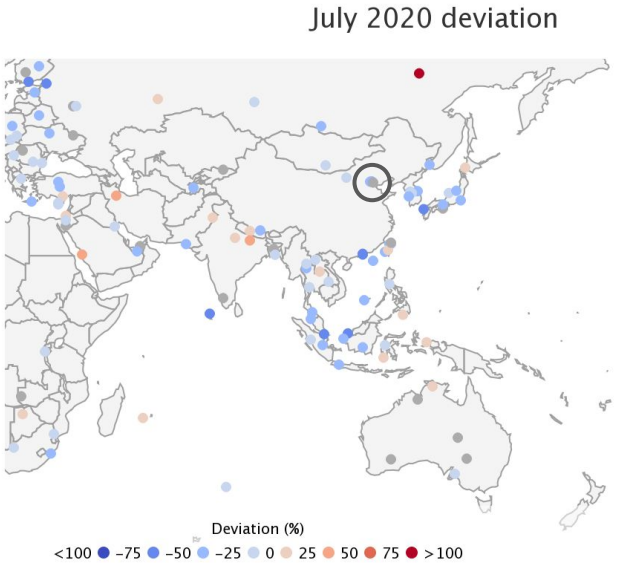

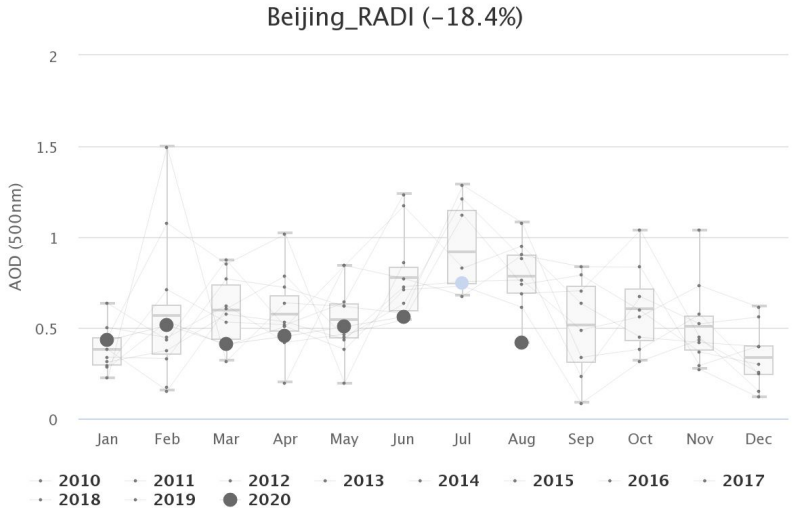

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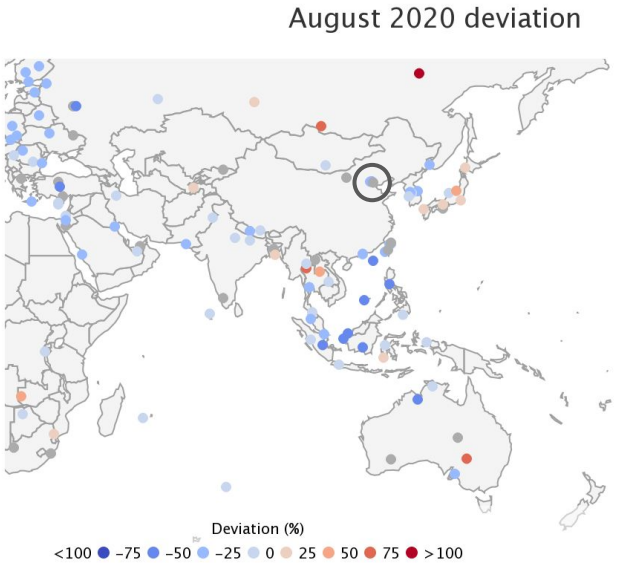

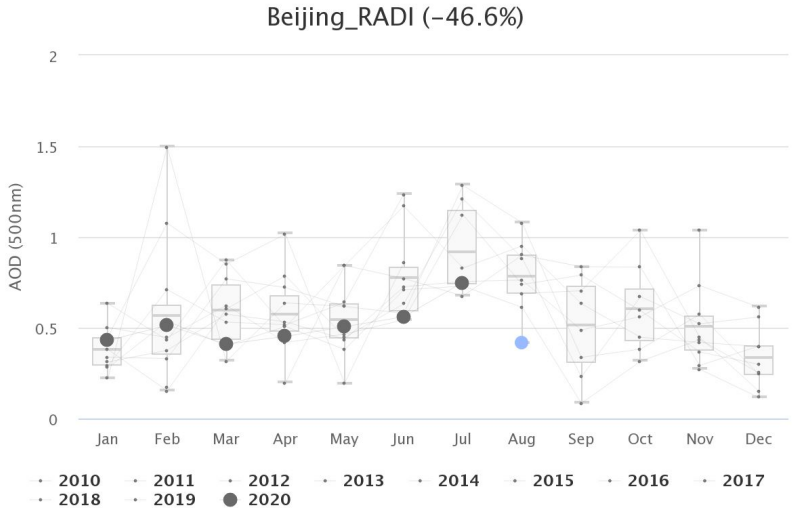

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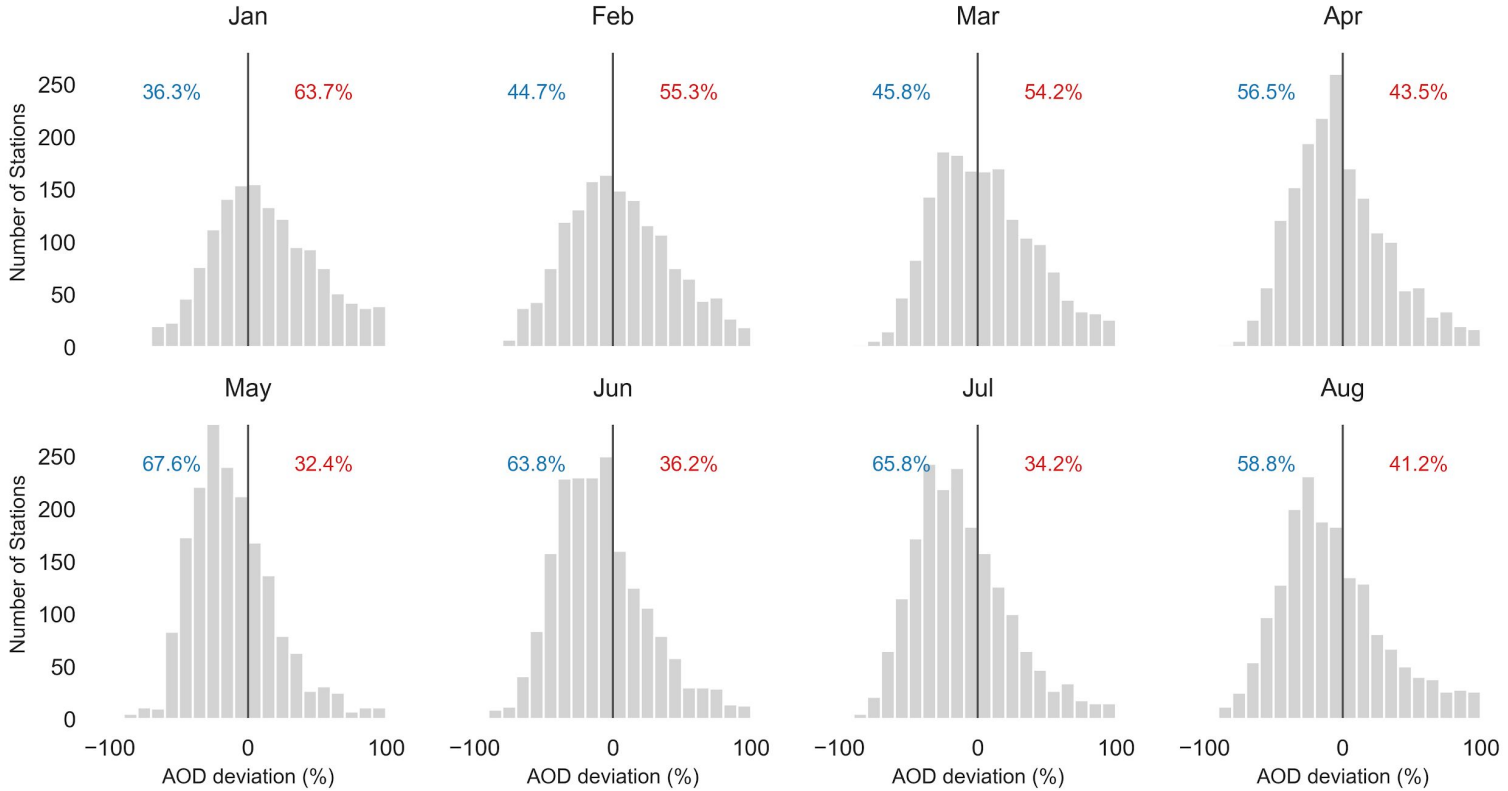
AOD deviation - Some global statistics



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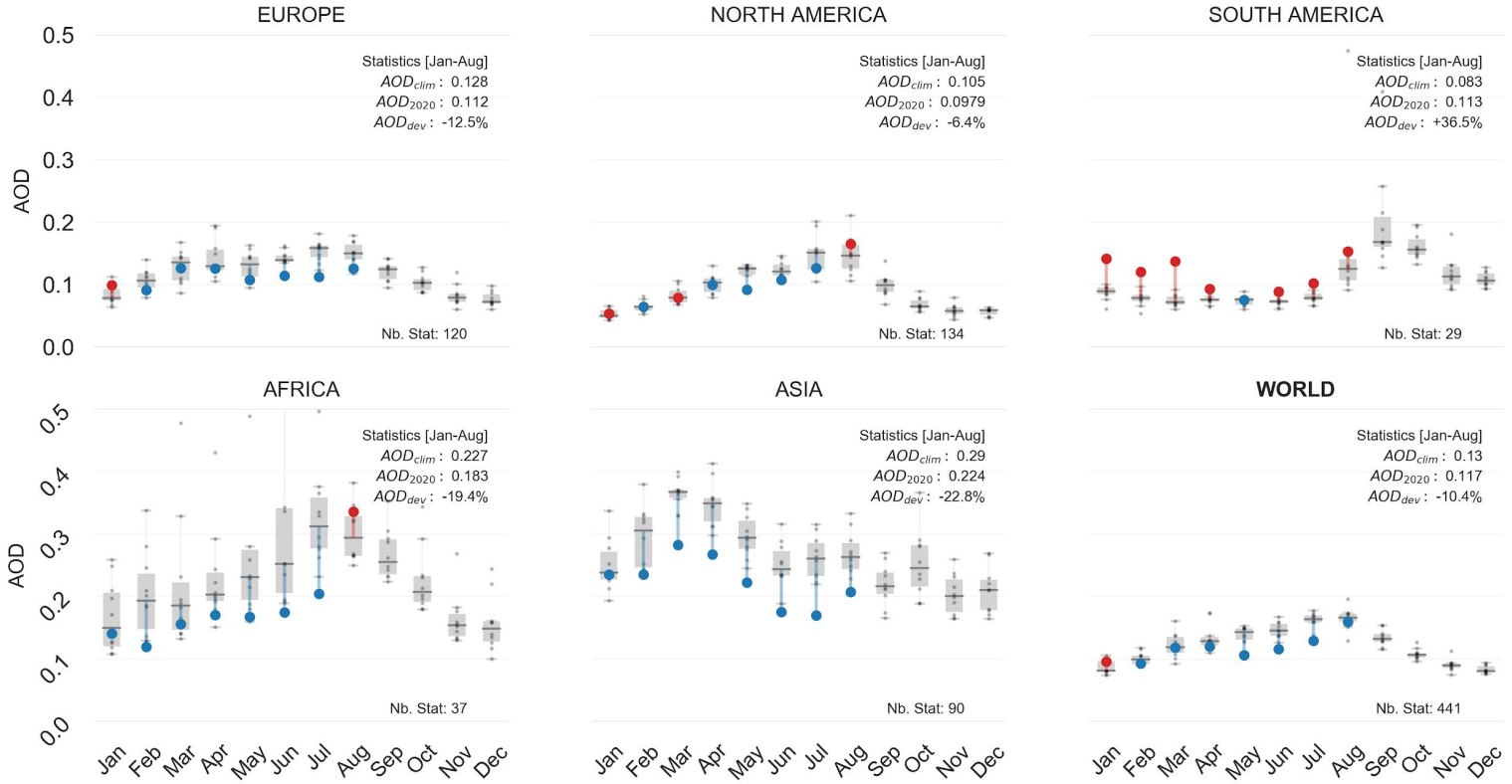
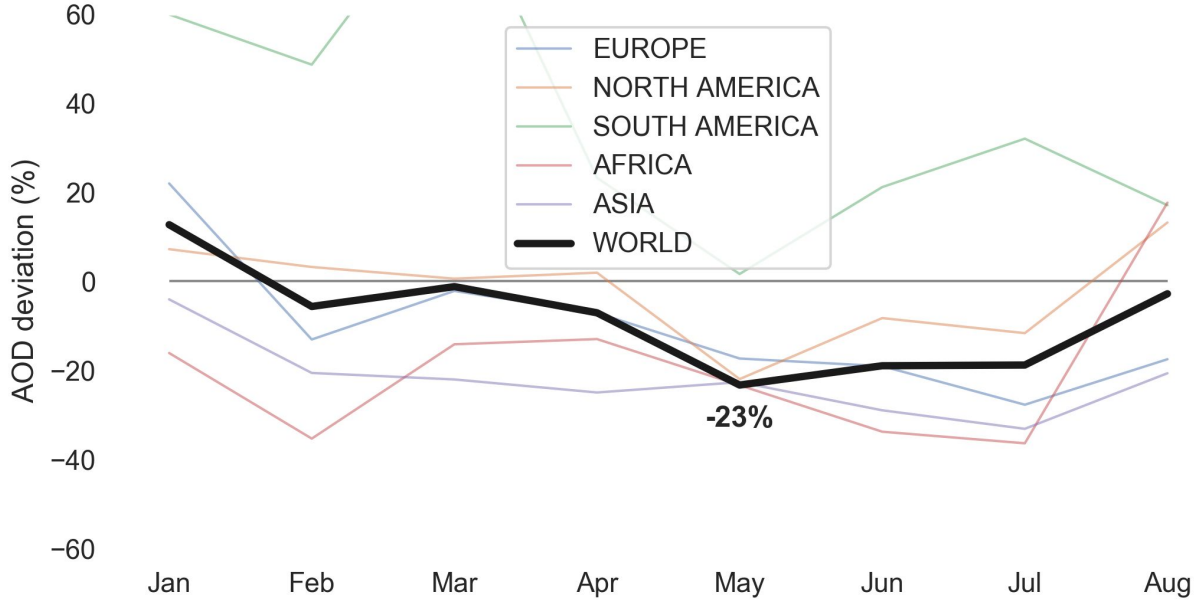
AOD deviation - Regional analysis



Impact of COVID-19 on AOD - Preliminary Results

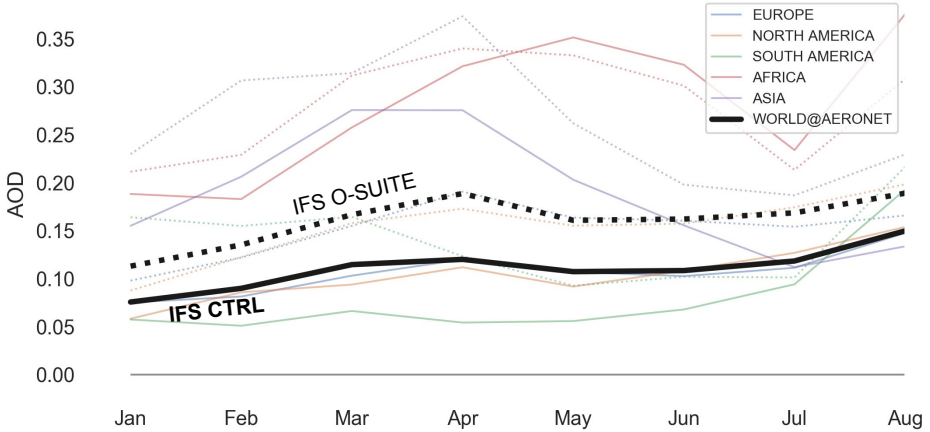
AOD deviation - Regional analysis

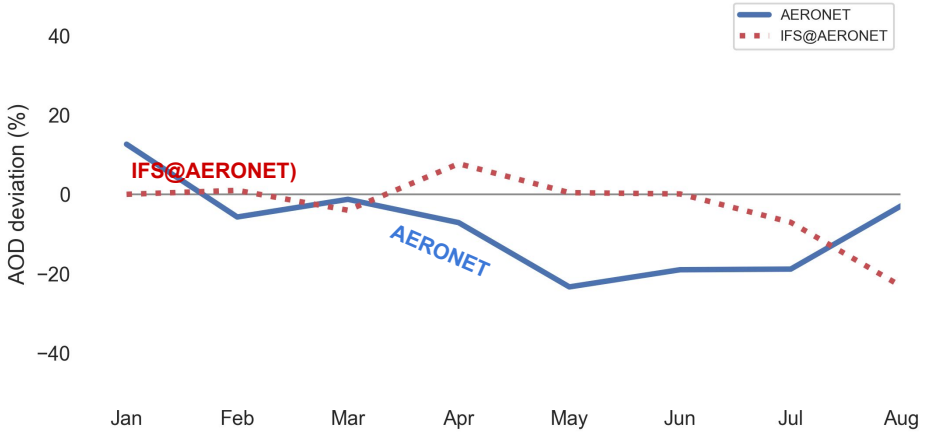


Impact of COVID-19 on AOD - Preliminary Results

AOD deviation in ECMWF-IFS (CTRL/O-SUITE)

IFS CTRL: no assimilation / IFS O-SUITE: satellite AOD assimilation (MODIS)





** IFS: relative bias between O-SUITE and CTRL normalised to the relative bias in January.*

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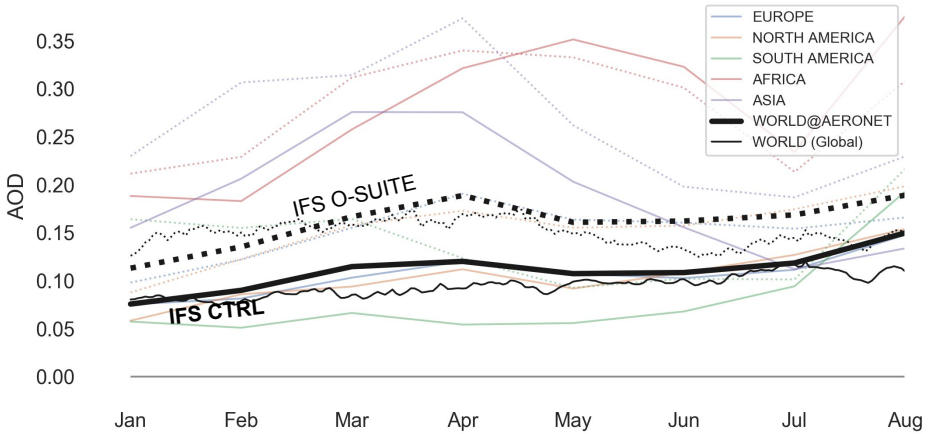
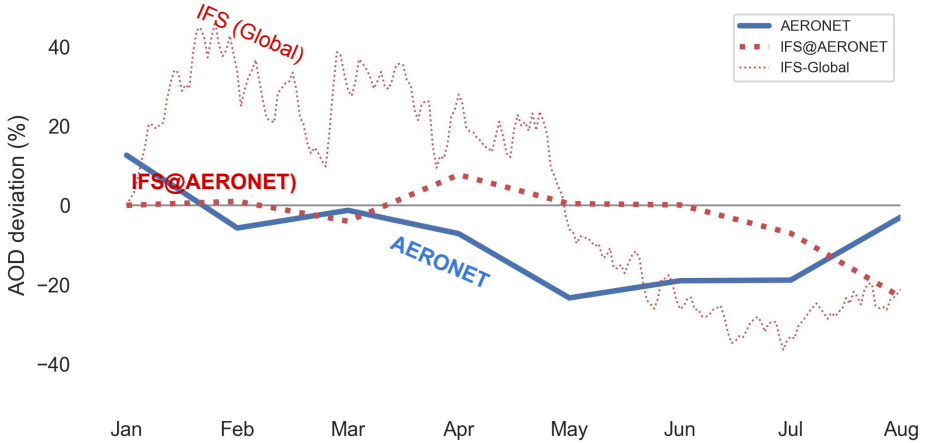
IFS CTRL: no assimilation / IFS O-SUITE: satellite AOD assimilation (MODIS)





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