



Historical experiment

- Simulations of regional trends 1850-2015
- CMIP6 CEDS emissions are used
- Simulations can either be performed with fixed sea-surface temperature (SSTs), historically evolving SSTs or fixed meteorology for one year

- MIROC-SPRINTARS_AerChemMIP_histSST
- GEOS-i33p2-v2_HIST
- EMEPrv4.33-met2010
- NorESM2-LM-fsst_AP3-HIST
- ECHAM6.3-HAM2.3-fsst_HIST
- BCC-CUACE_HIST
- GFDL-AM4-amip_HIST
- CAM5-ATRAS_AP3-HIST
- OsloCTM3v1.01-met2010_AP3-HIST

G. Myhre, M. Schulz, R. Skeie, M. Lund, T. Takemura, H. Bian, M. Chin, S. Tsyro, P. Ginoux, D. Olivie, H. Zhang, B. Xie, H. Matsui, D. Neubauer,



Historical experiment

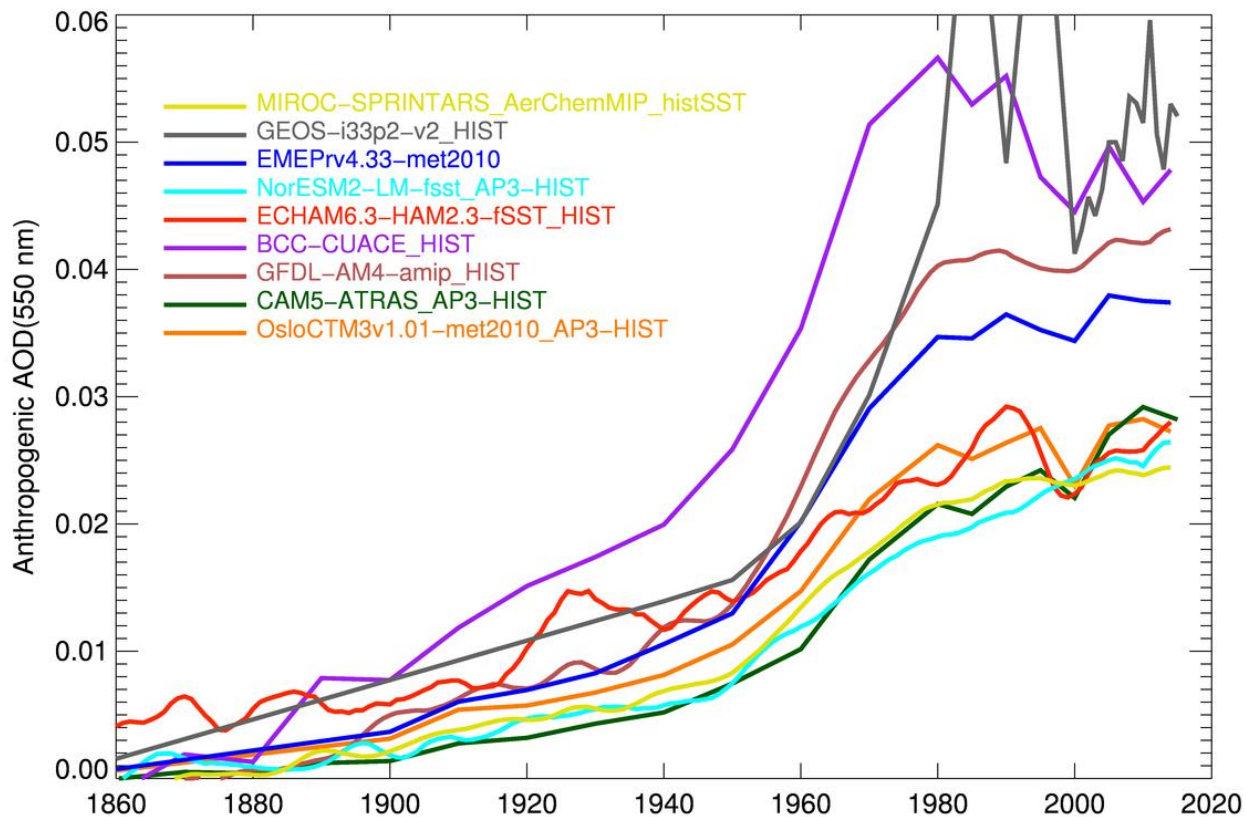
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- CMIP6 CEDS emissions are used
- **Simulations can either be performed with fixed sea-surface temperature (SSTs), historically evolving SSTs or fixed meteorology for one year**
- Radiative forcing calculations
- **9 models so far**
- Large differences in regional and temporal change of AOD 🙄
- **All models show a reduction in AOD over Europe and a reduction in single scattering albedo since 1970** 👍
- Still possible with submissions

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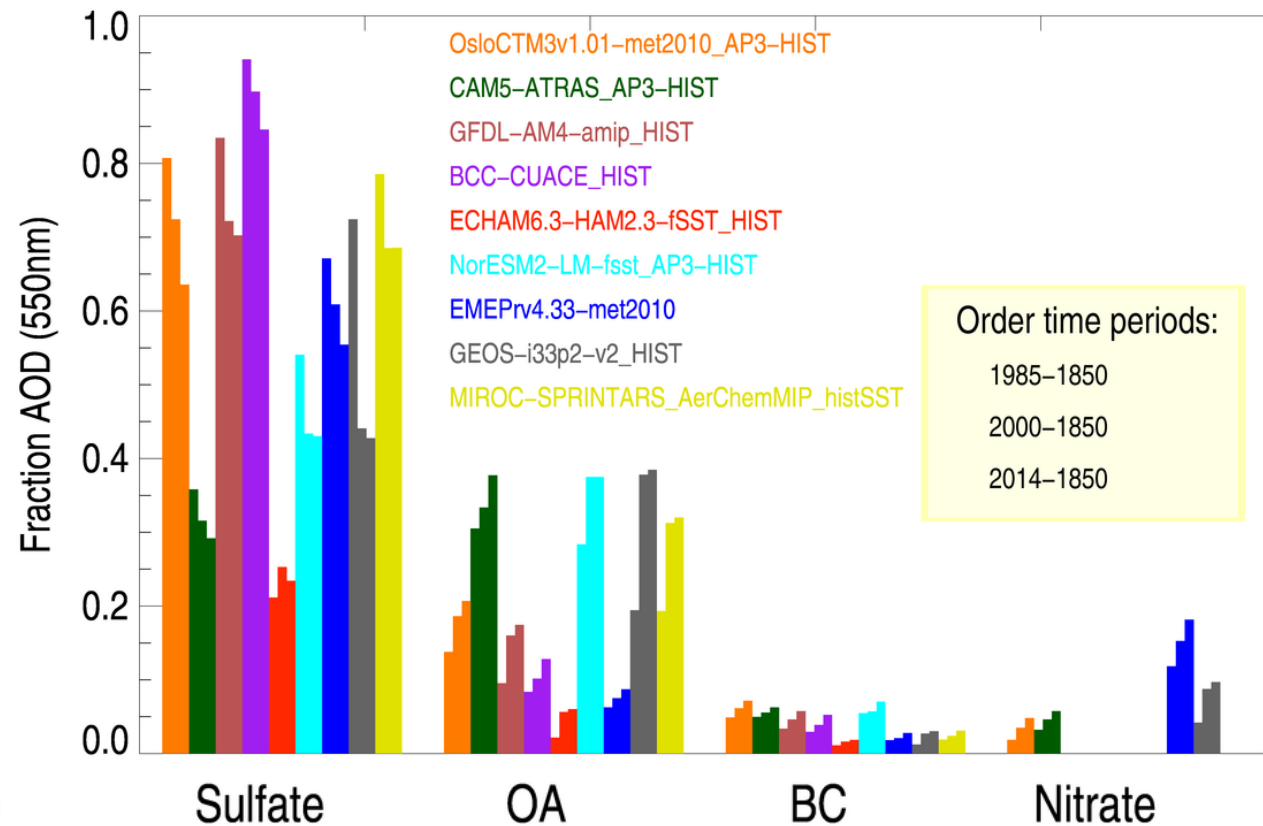
Total AOD



— GEOS-i33p2-v2_HIST

With eruptive volcanic emissions. New simulations

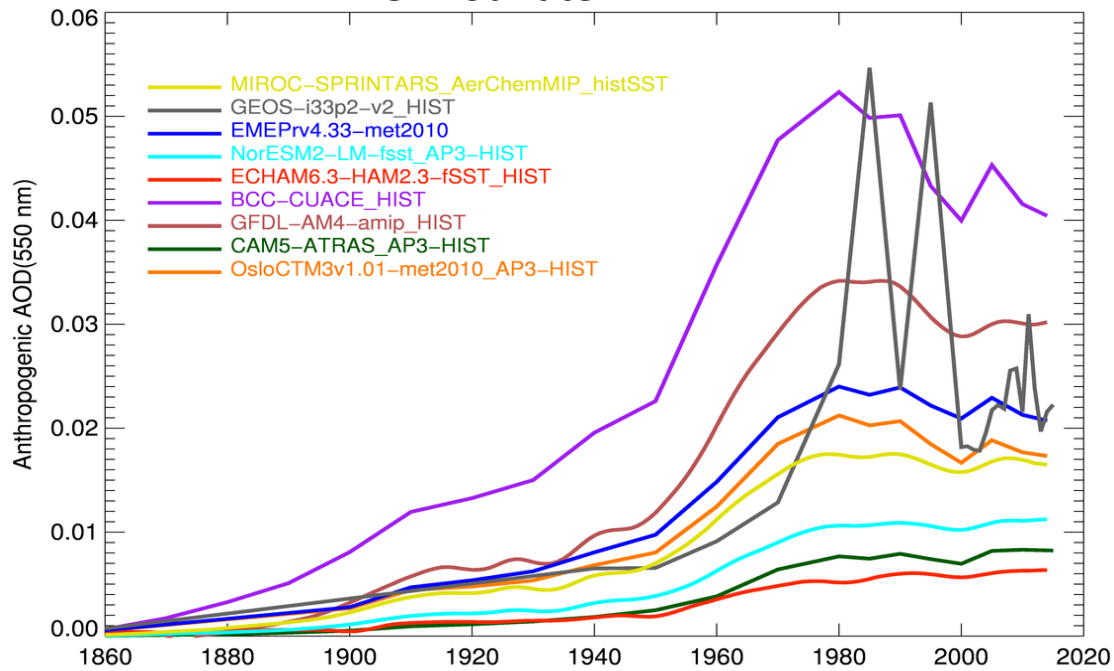
AOD by aerosol species for time periods



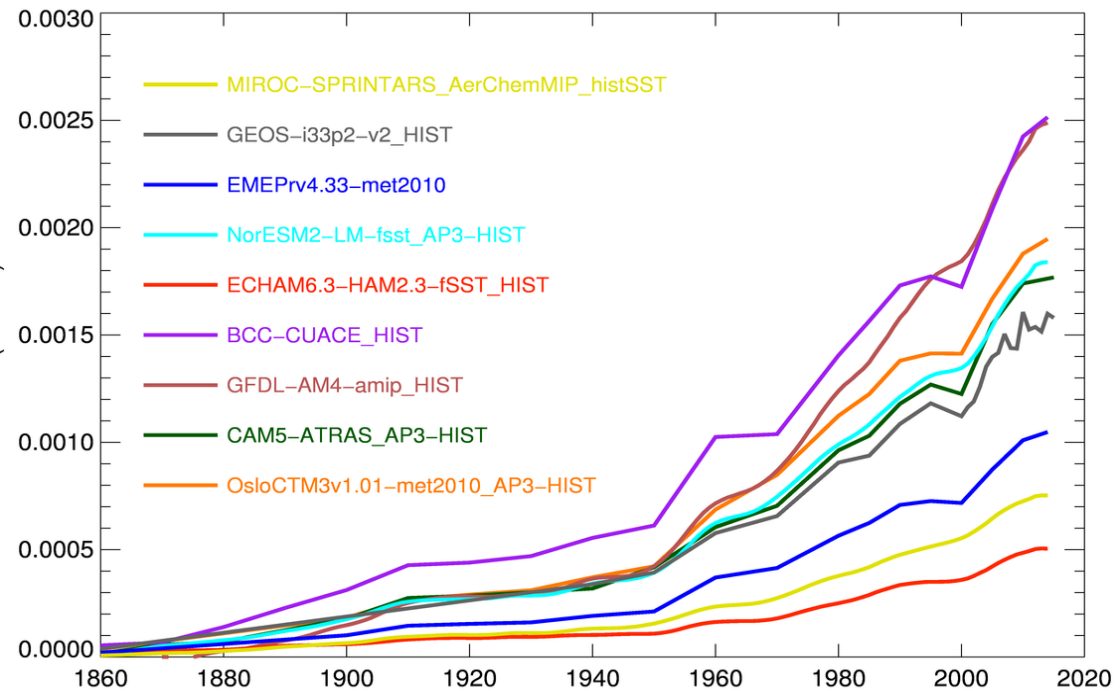
— ECHAM6.3-HAM2.3-fSST_HIST

Only water uptake for total AOD

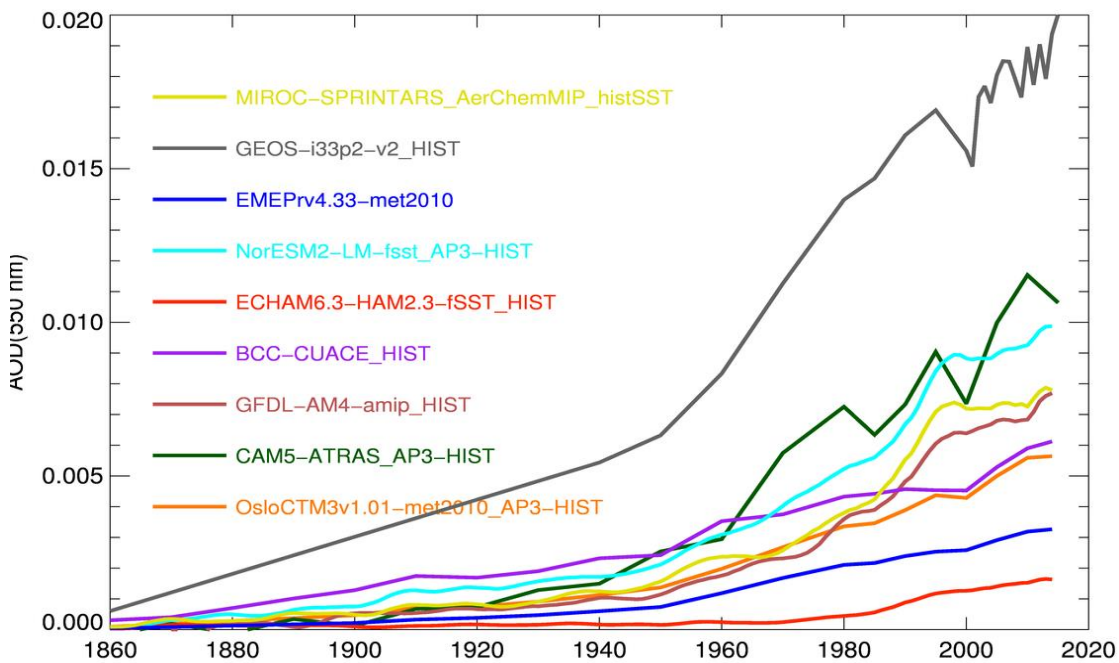
AOD Sulfate



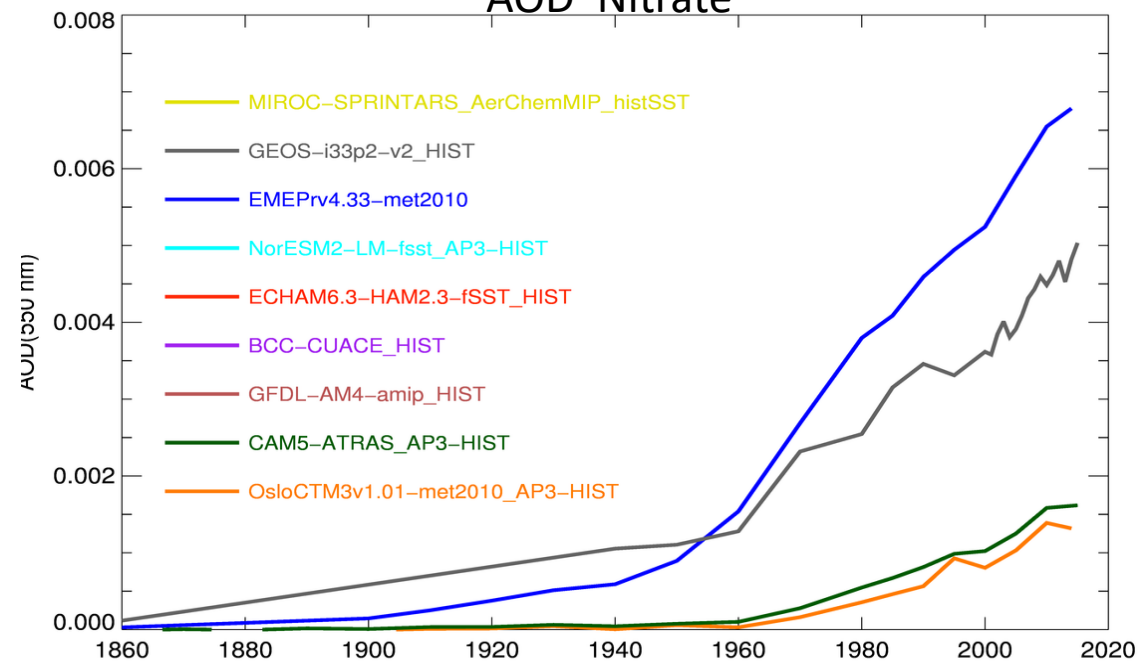
AOD BC



AOD OA

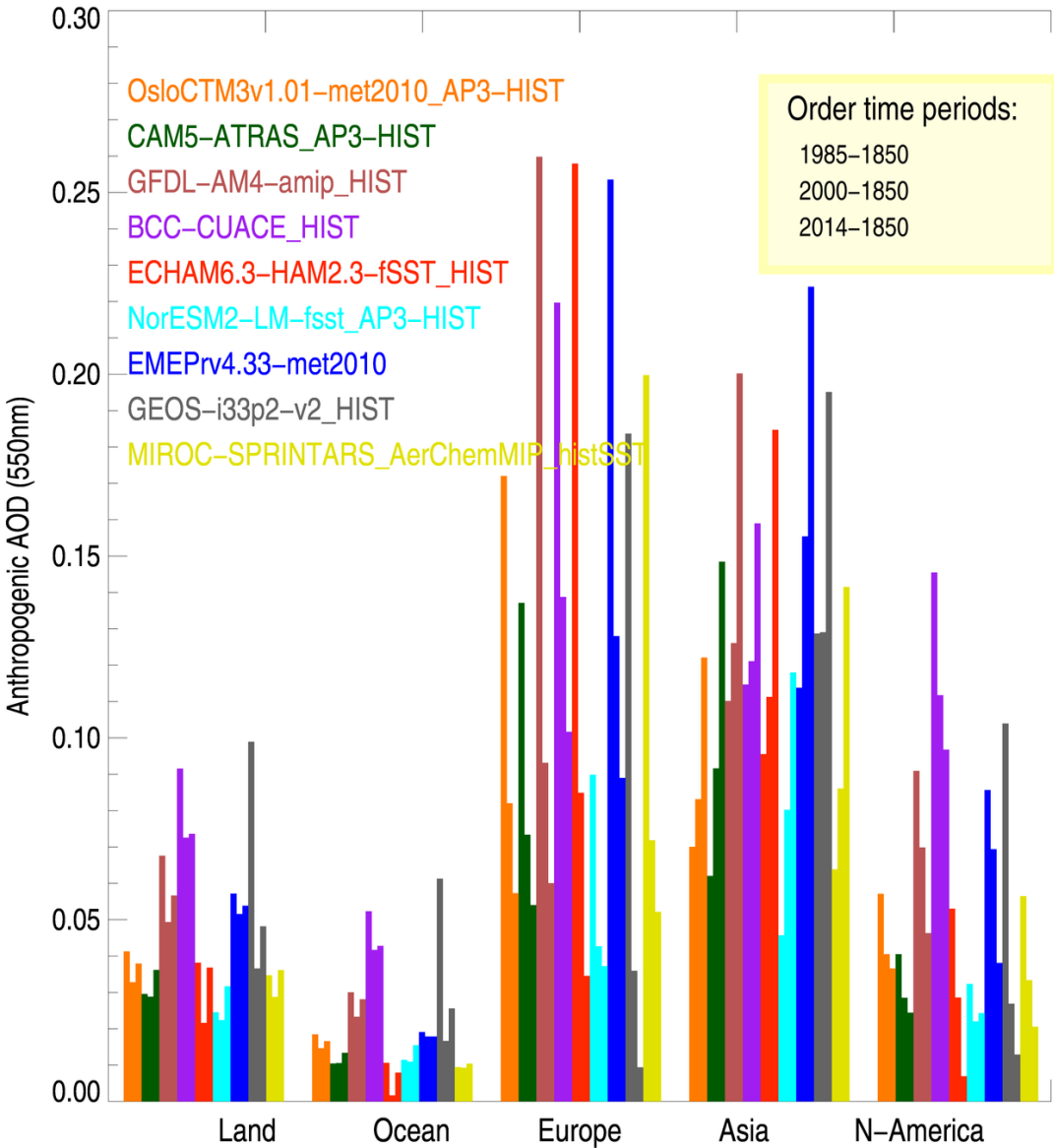


AOD Nitrate

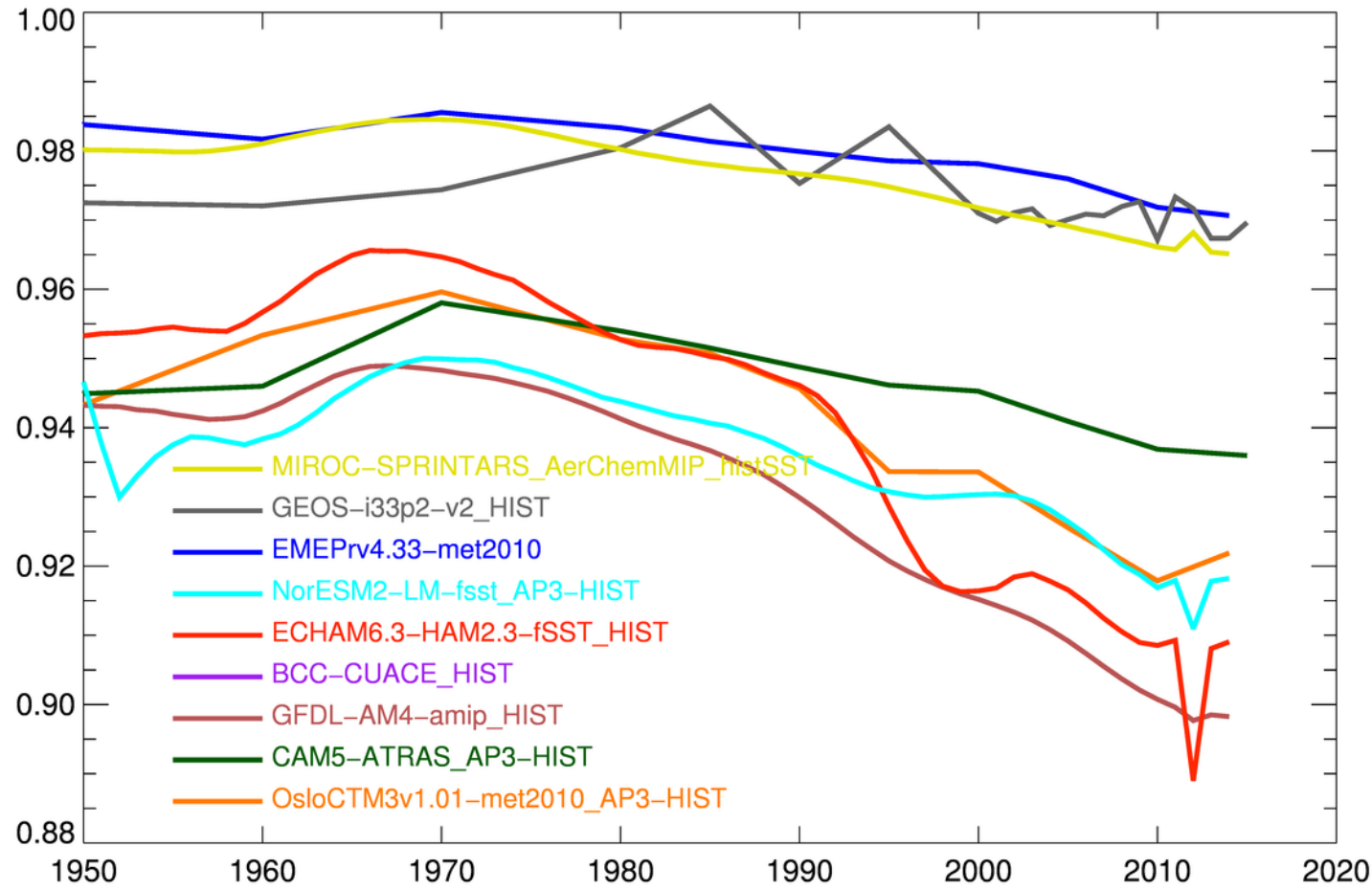




AOD by regions



Anthropogenic single scattering albedo (550 nm)





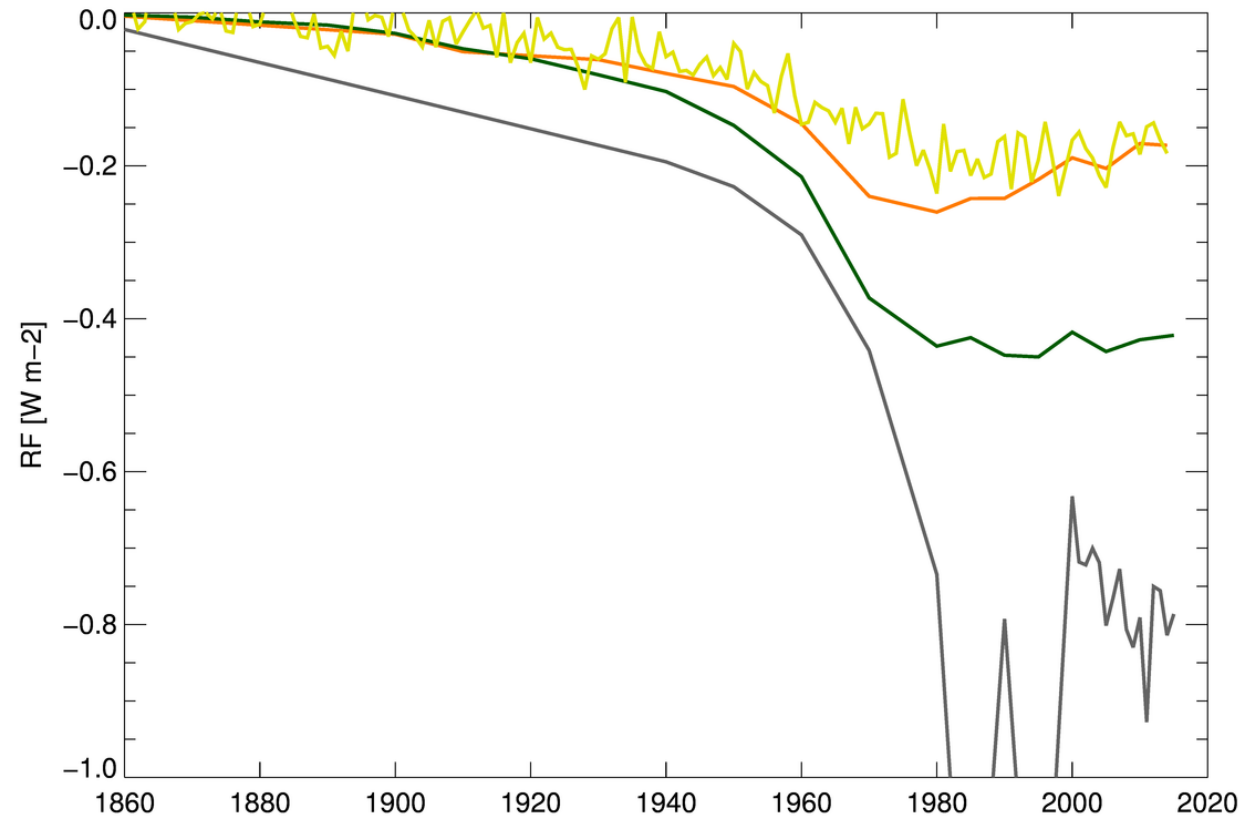
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Radiative forcing direct aerosol effect



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