



# Evaluation of Version 3 total and tropospheric ozone columns from EPIC on DSCOVR for studying regional scale ozone variations



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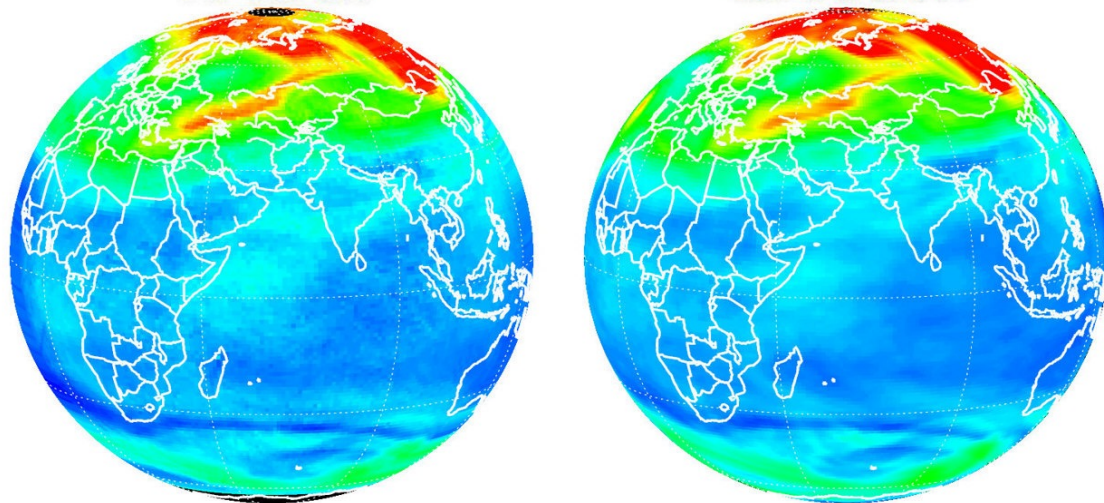
# EPIC VERSION 3 OZONE PRODUCTS

Synoptic Total Ozone Maps

April 11, 2017

EPIC v3

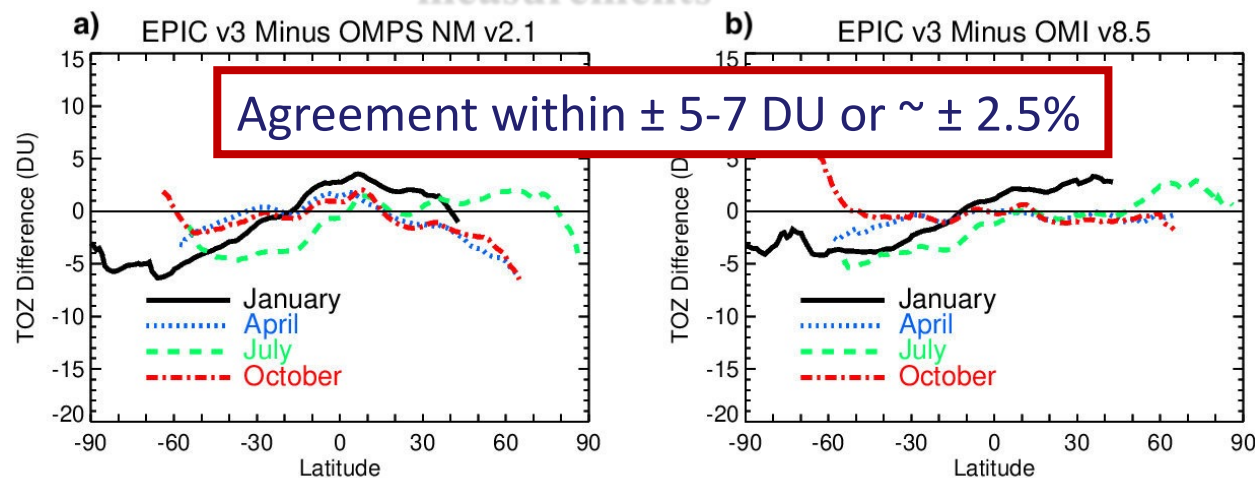
MERRA-2



Dobson Units



Comparisons with polar orbiting satellite measurements



*\*EPIC measurements are limited to retrievals from 317.5 nm triplet and SZA/SLA < 70°*

From [Kramarova et. al, 2021],  
doi [10.3389/frsen.2021.734071](https://doi.org/10.3389/frsen.2021.734071)



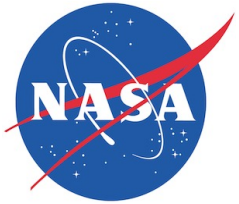
EPIC V3 total and tropospheric ozone data are available at:

[https://asdc.larc.nasa.gov/project/DSCOVR/DSCOVR\\_EPIC\\_L2\\_TO3\\_03](https://asdc.larc.nasa.gov/project/DSCOVR/DSCOVR_EPIC_L2_TO3_03)

[https://asdc.larc.nasa.gov/data/DSCOVR/EPIC/L4\\_TrO3\\_01/](https://asdc.larc.nasa.gov/data/DSCOVR/EPIC/L4_TrO3_01/)

SCIENCE  
is SOCIETY

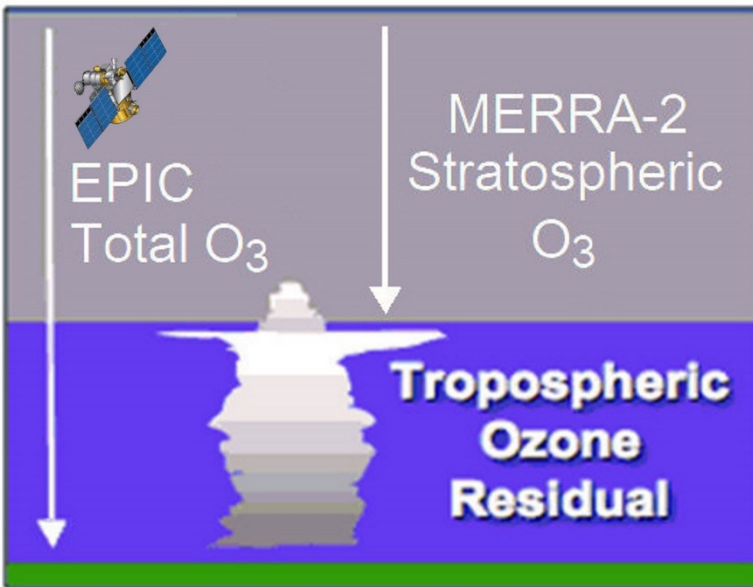




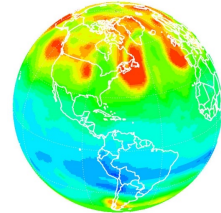
## EPIC TROPOSPHERIC OZONE



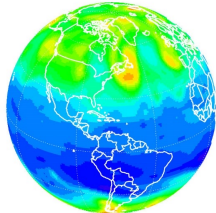
### RESIDUAL METHOD



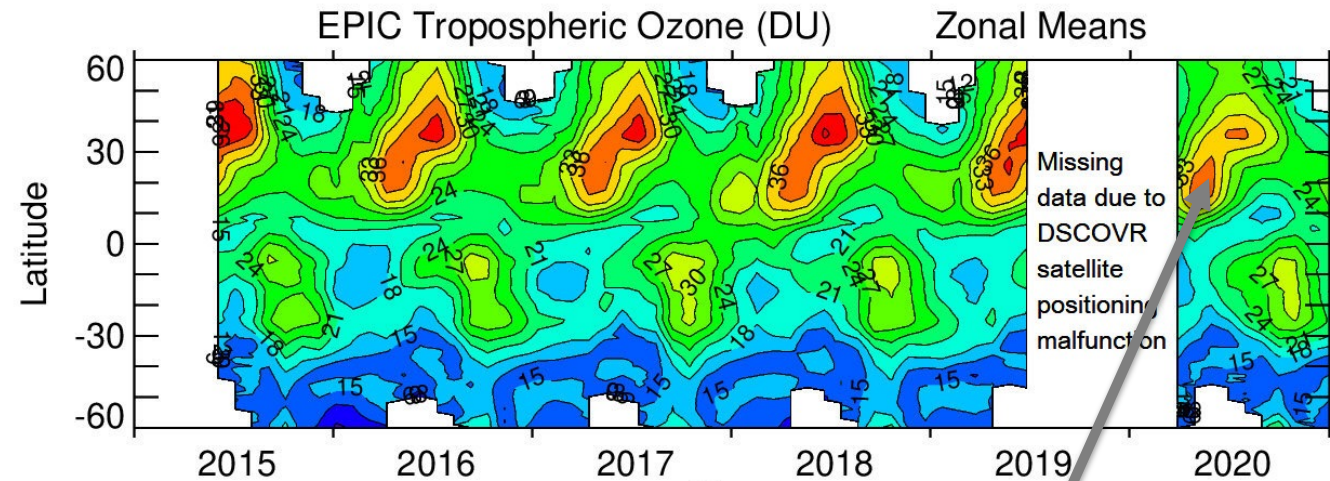
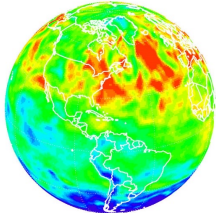
EPIC Total O<sub>3</sub>



MERRA-2 SOC



EPIC TCO



Drop of 2-4 DU in EPIC TCO in NH in spring-summer 2020 is partially related to the unprecedented 2019/2020 Arctic ozone depletion and reductions in ozone precursor pollutants due to the COVID-19 pandemic.

Tropopause pressure is derived from MERRA-2 potential vorticity (2.5 PVU) and potential temperature (380 K)