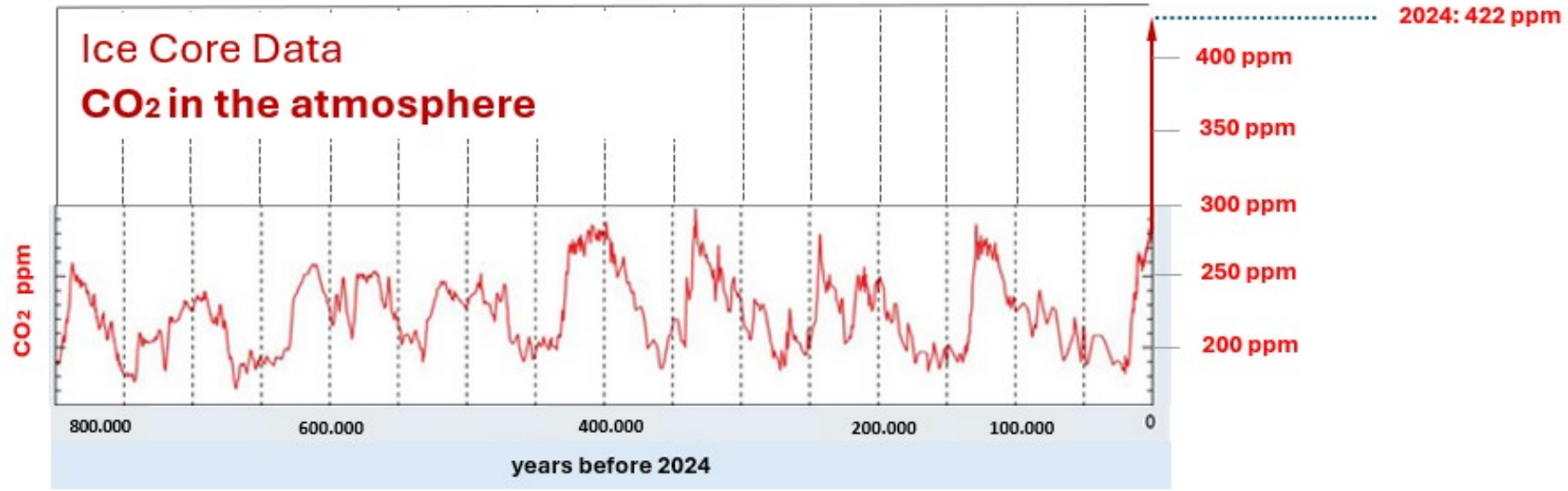


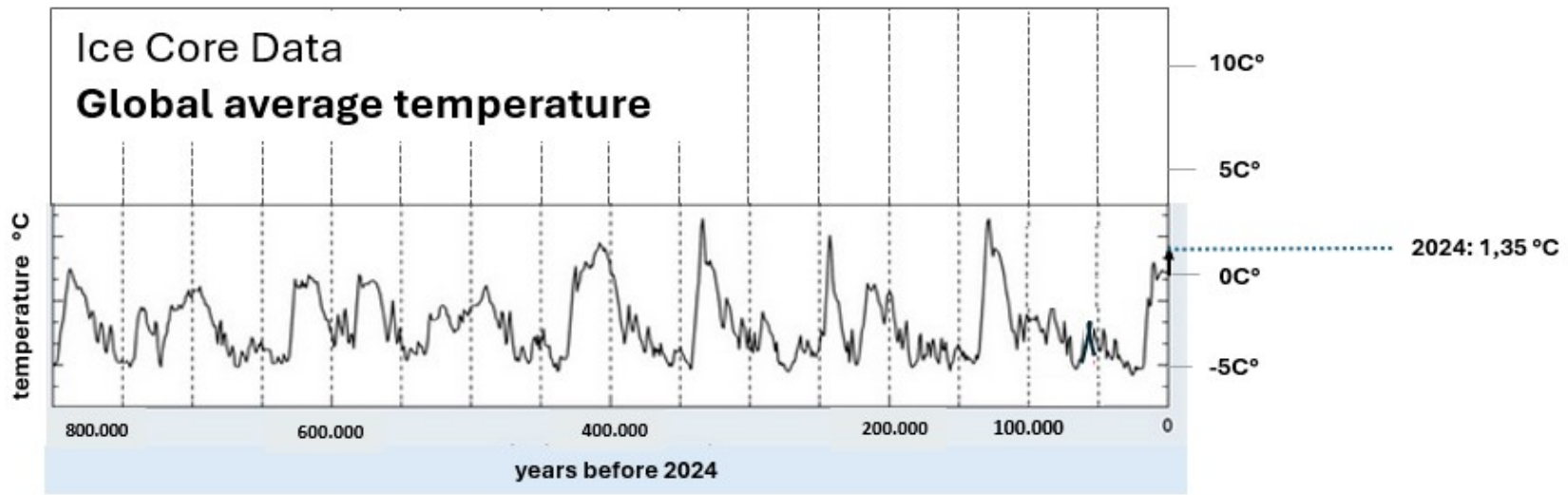
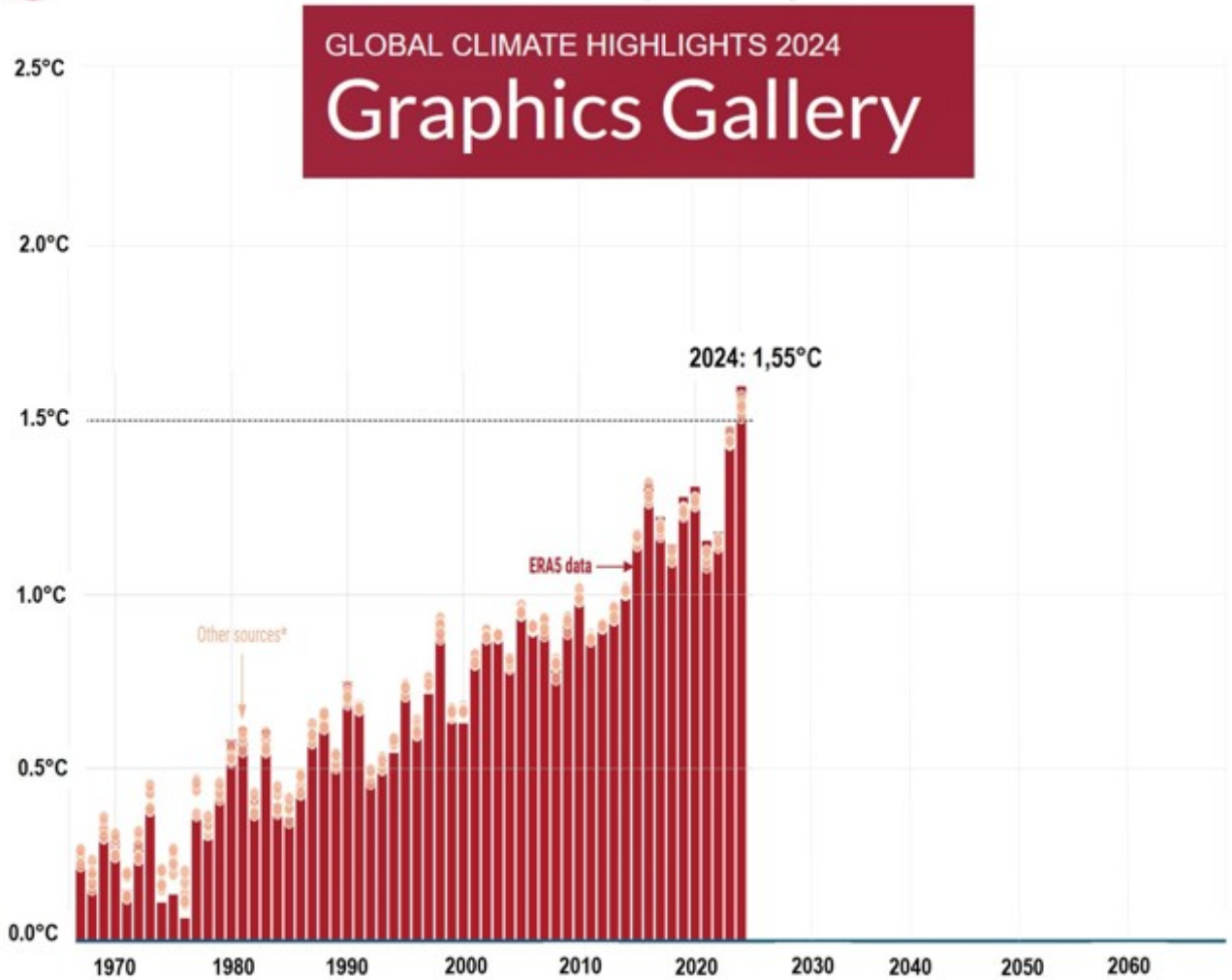


Chart: HTL Vöcklabruck
Data: CO_2 and deuterium (temperature proxy) European Project for Ice Coring in Antarctica (EPICA)
www.antarctica.ac.uk
Ice cores and climate change
https://bas.ac.uk/wp-content/uploads/2015/04/ice_cores_and_climate_change_briefing-sep10.pdf 12.05.2025

- The chart shows the level of CO_2 and the average temperature on our planet lasts 800.000 years .
- The global average temperature and the amount of CO_2 can be determined from the air bubbles in the ice of the antartica.
- 25 000 years before now, big parts of our continents were covered in ice. The global average temperature was about 6°C lower than today.
- To reach 300ppm, about 960 billion tons of CO_2 must be removed out of the air.
- 1ppm ~ 7,8 billion tons CO_2.

Global surface temperature: increase above pre-industrial



*Other sources comprise JRA-3Q, GISTEMPv4, NOAAGlobalTempv6, Berkeley Earth, HadCRUT5.

PROGRAMME OF THE EUROPEAN UNION

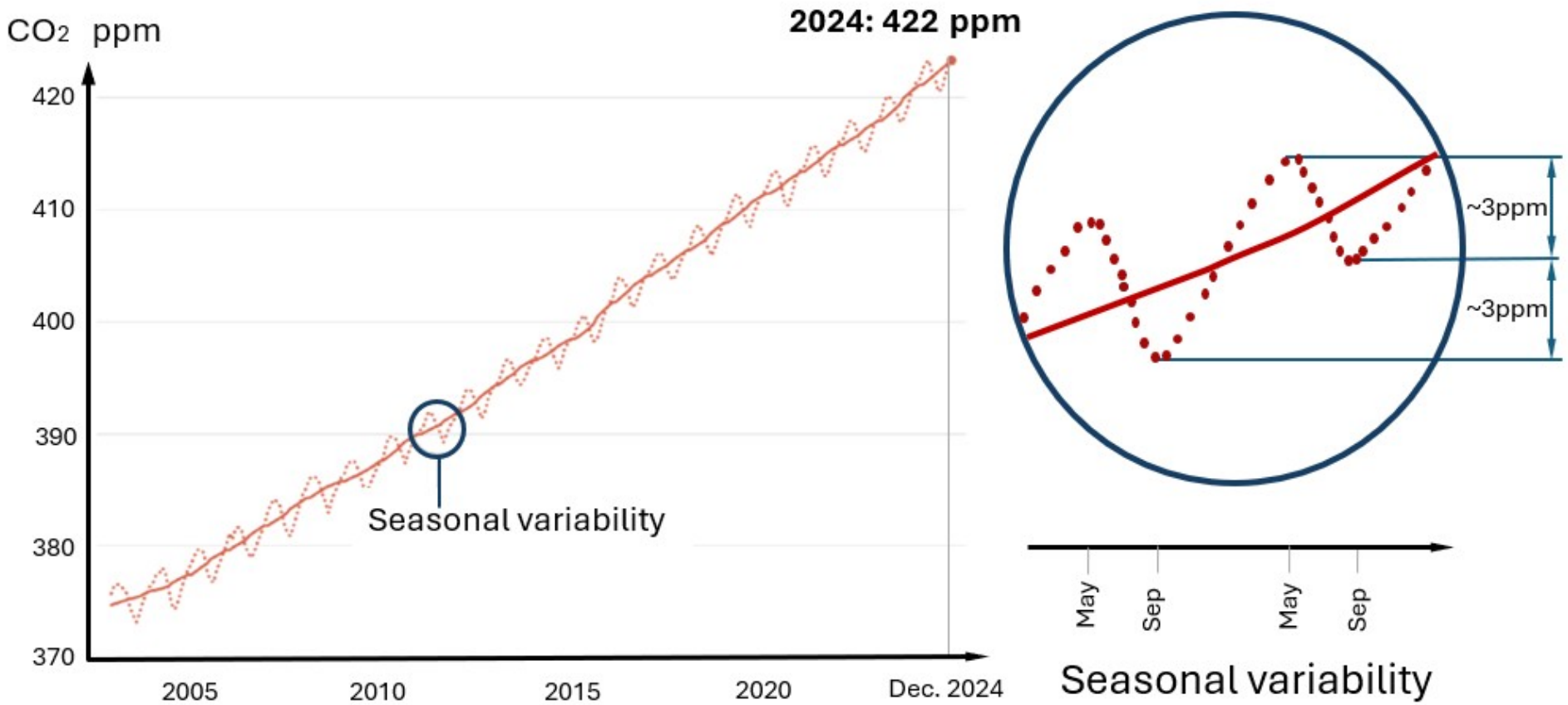
https://climate.copernicus.eu/global-climate-highlights-2024 10.04.2025

- In the year 2024 the increase of the global temperature was ~1.55°C.

Source: Climate Change Service

climate.copernicus.eu 10.04.2025

Increase of CO_2 in the atmosphere



- Each year humans emit about 40 billion tons of CO_2.
- 20 billion tons (~3ppm) are absorbed by plants (photosynthesis).
- The rest of CO_2 remains in the air.

CO_2 concentration 12-month average

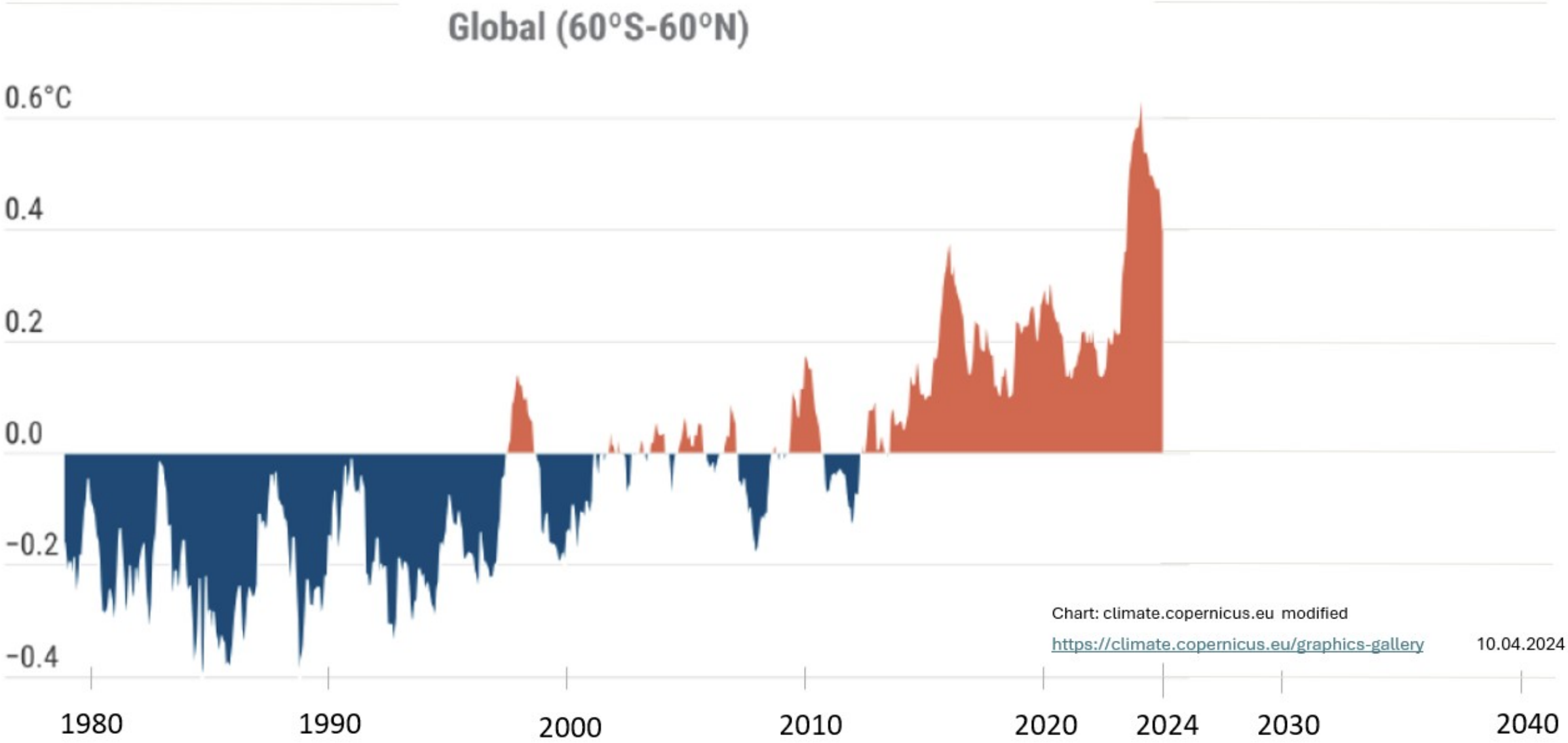
CO_2 concentration monthly average

Chart: climate.copernicus.eu modified Data: copernicus.eu

https://climate.copernicus.eu/global-climate-highlights-2024 10.04.2025

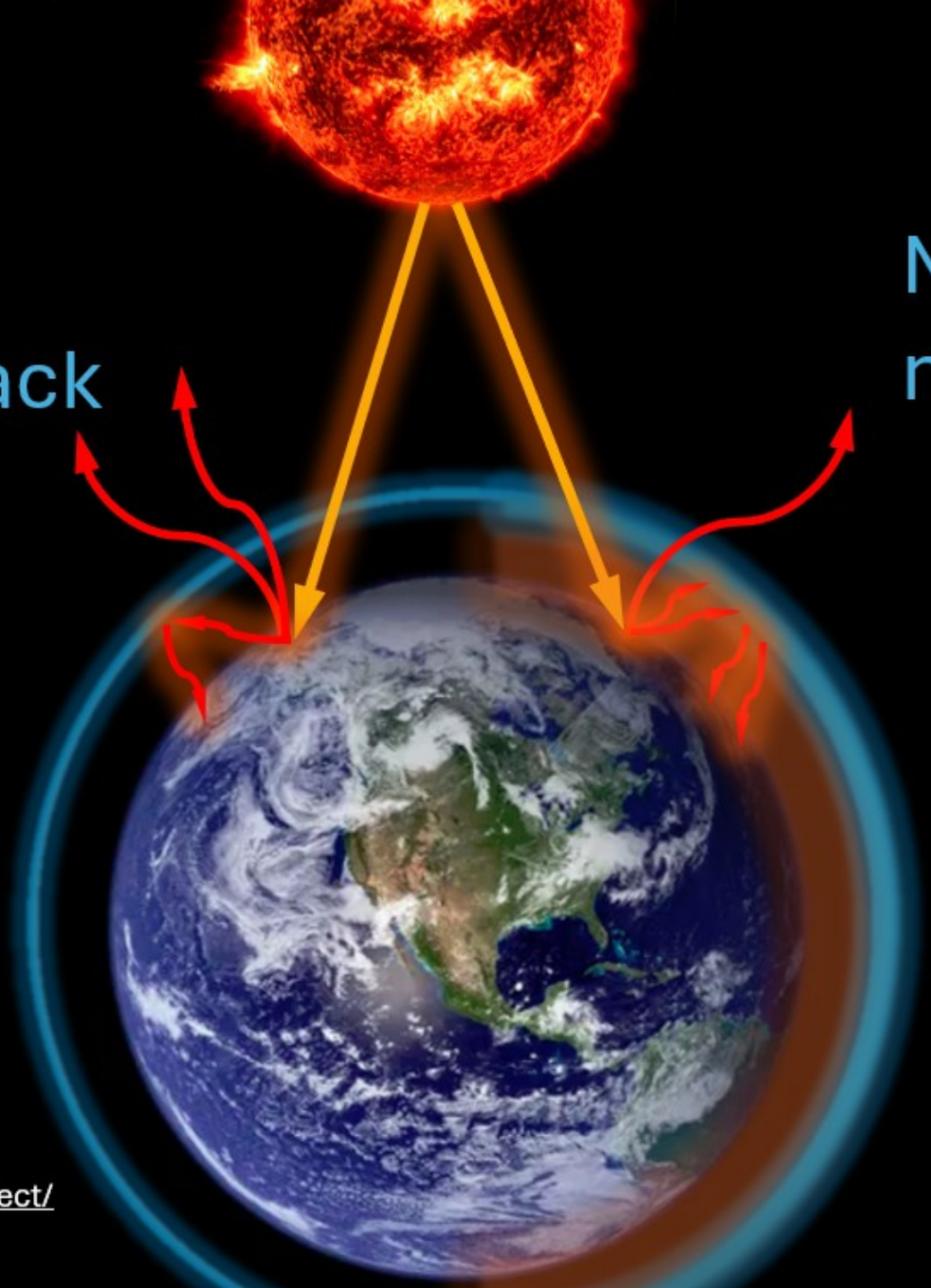
Sea surface temperature anomalies

Data source: ERA5 • Reference period: 1991–2020 • Credit: C3S/ECMWF



CO_2 in the atmosphere reflects heat back to the earth.

More **CO_2** causes more reflection.



https://climatekids.nasa.gov/greenhouse-effect/
12.05.2025

Graphic: HTL Vöcklabruck

Picture earth, sun: Nasa