

A photograph taken from space, showing a curved horizon of the Earth. The sky is a deep, dark blue, transitioning to a lighter blue at the horizon. Below the horizon, the Earth's surface is visible, covered in a dense layer of white clouds. The clouds are textured and vary in density, with some appearing as large, billowing masses and others as thinner, wispy layers. The overall scene is a high-contrast, high-angle view of the planet from orbit.

Globale Erhitzung

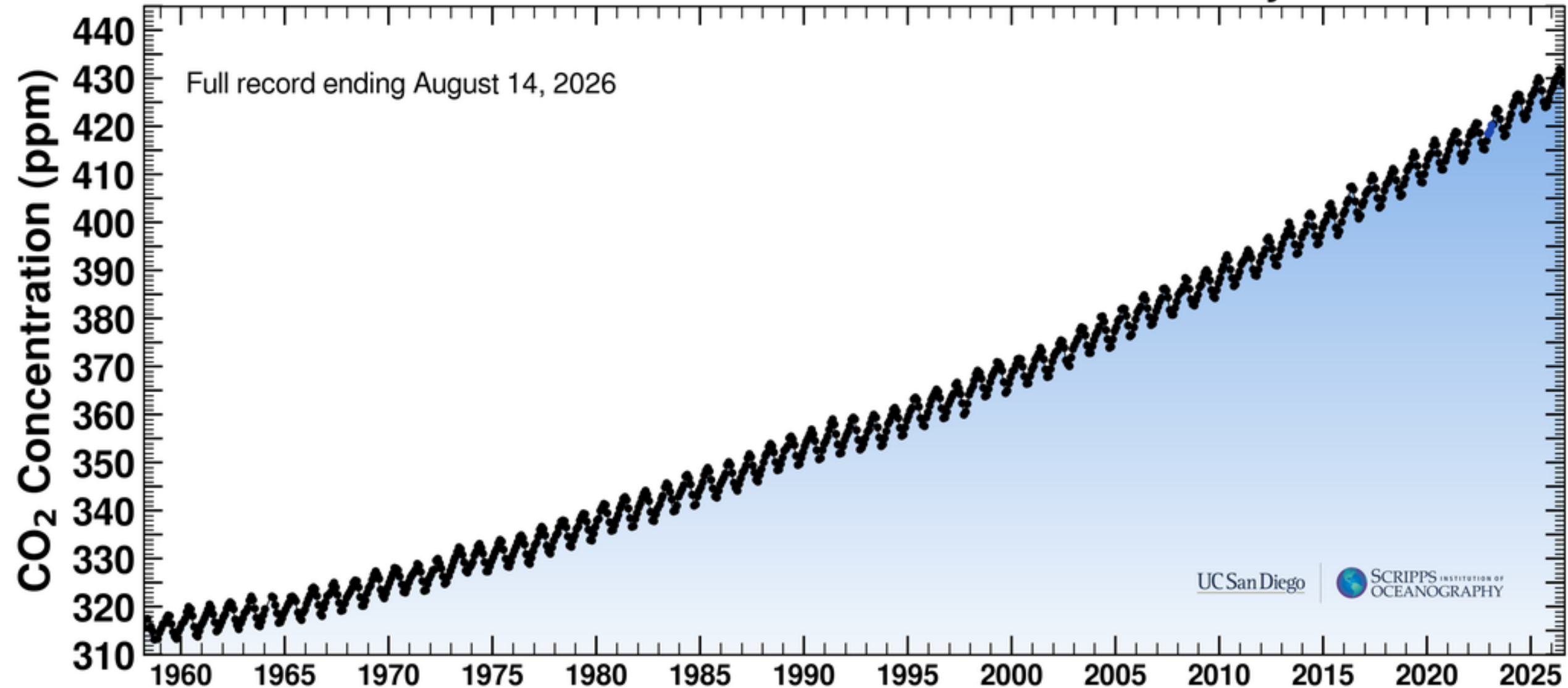
Vortrag Osnabrück

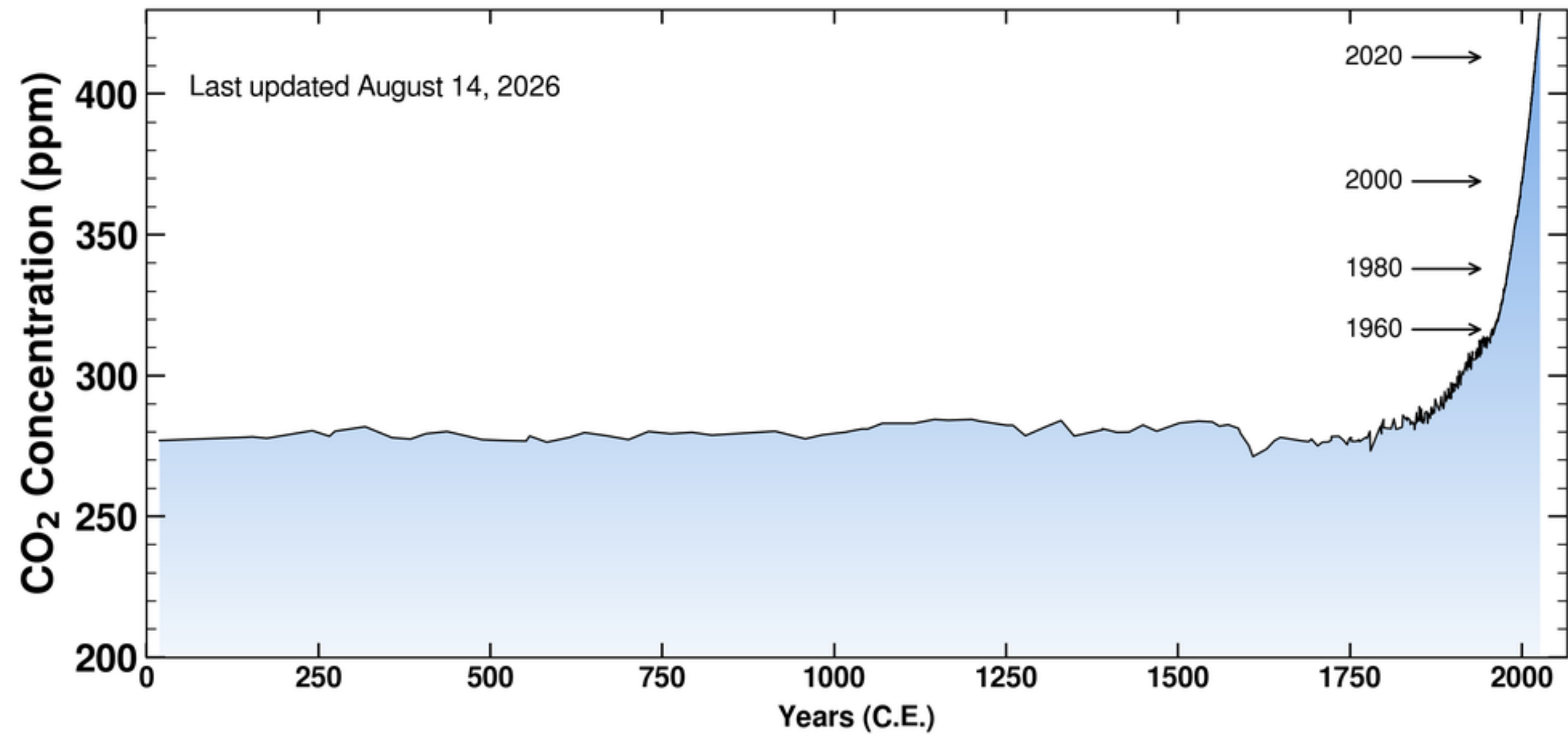


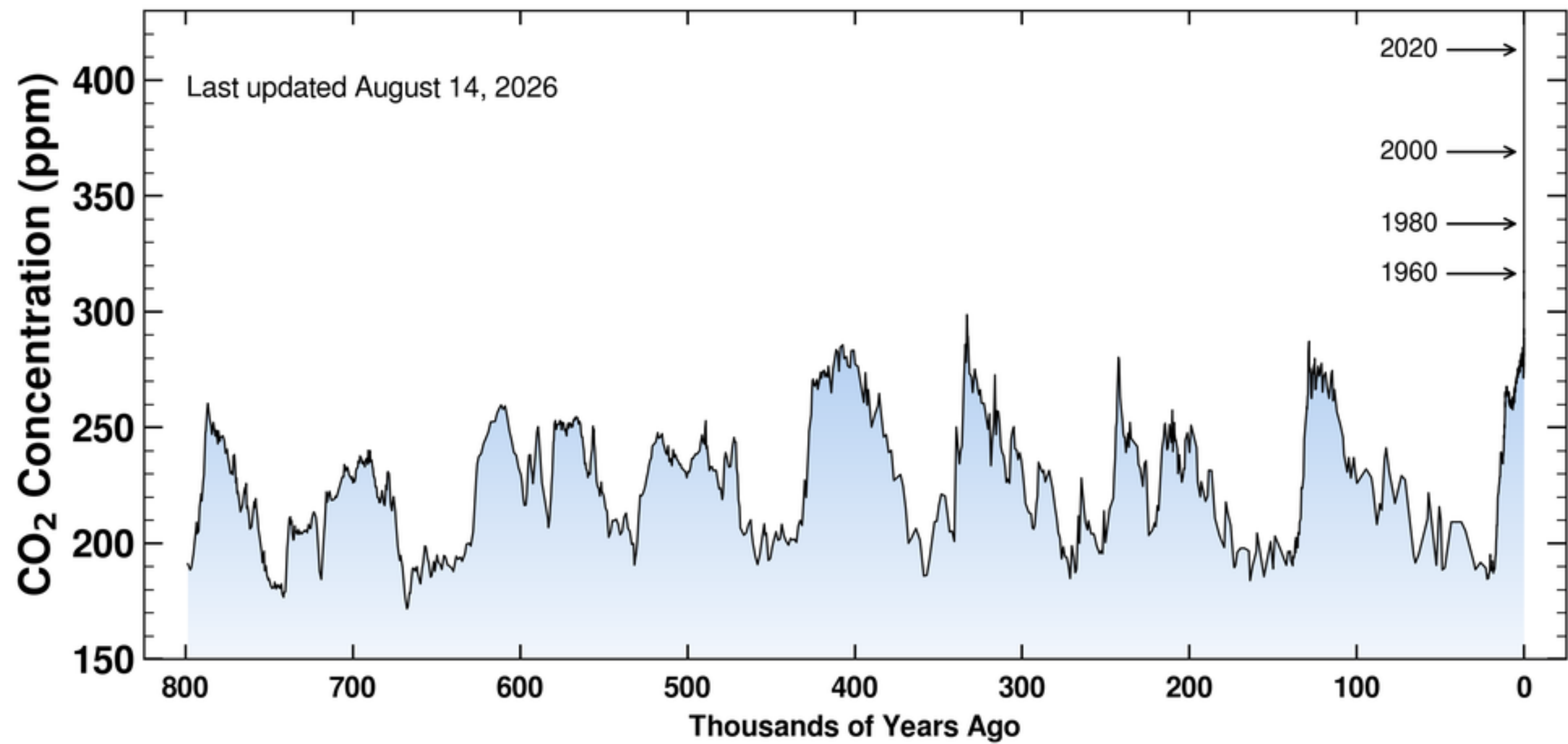


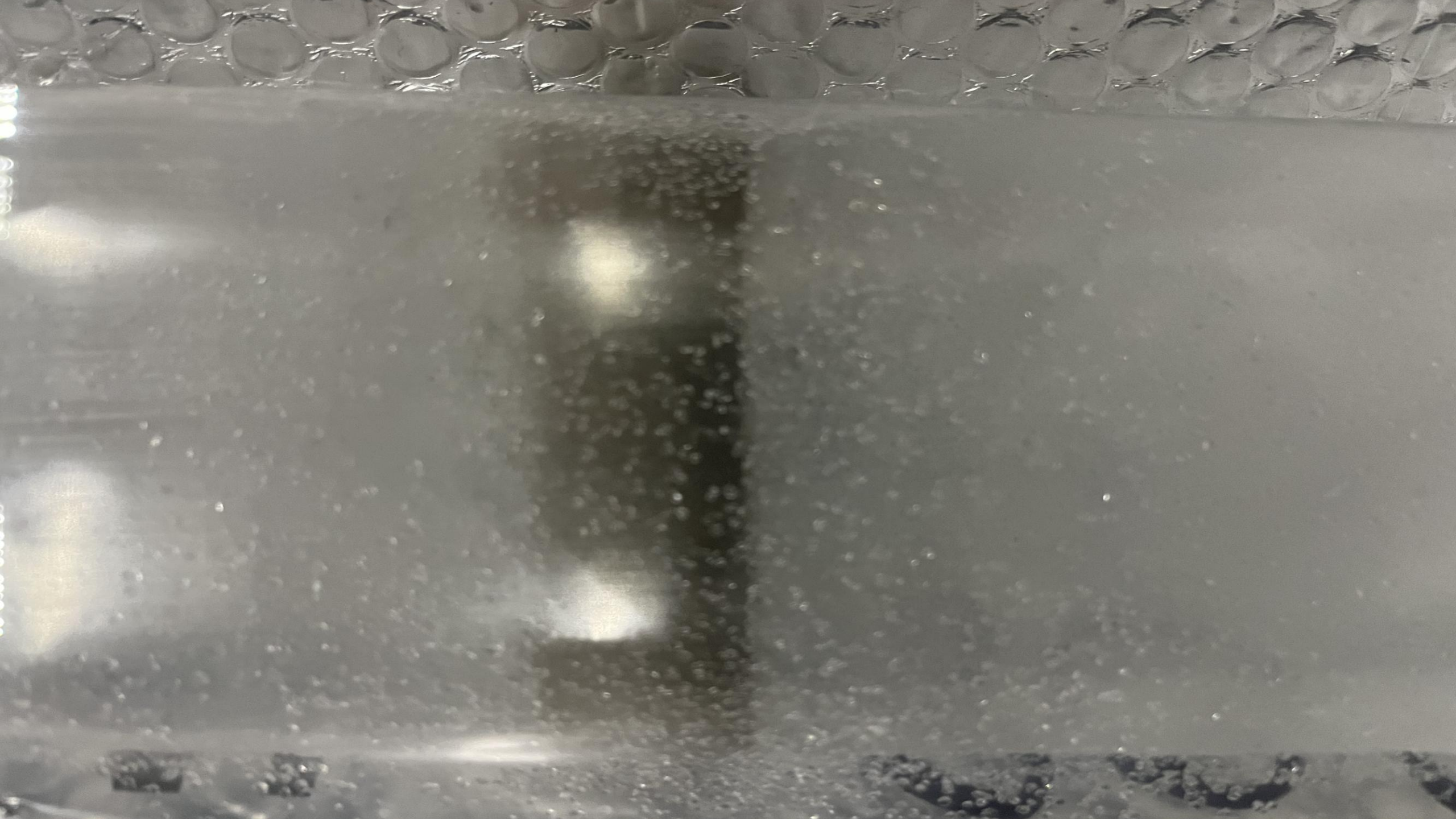


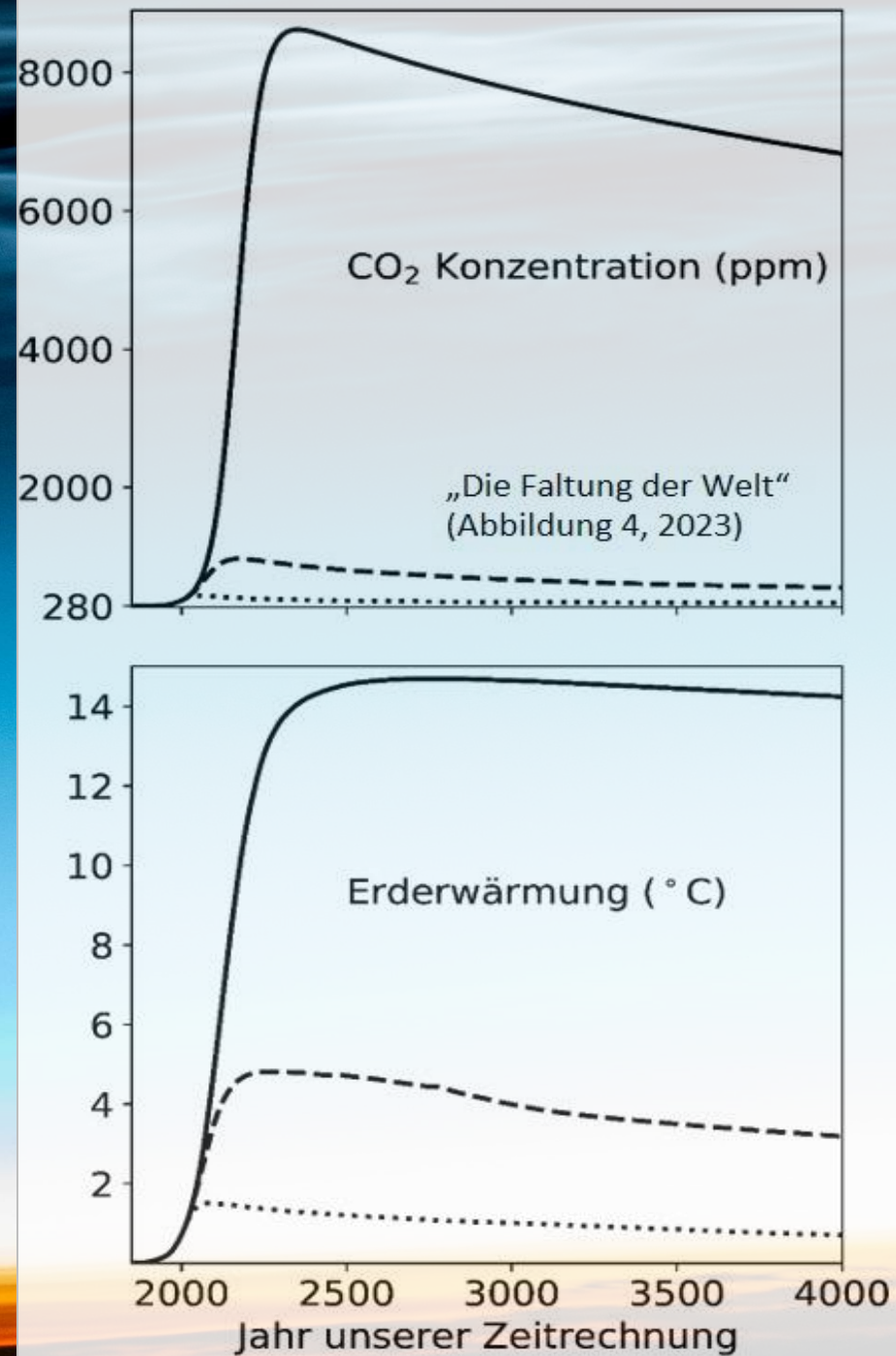
Carbon dioxide concentration at Mauna Loa Observatory*





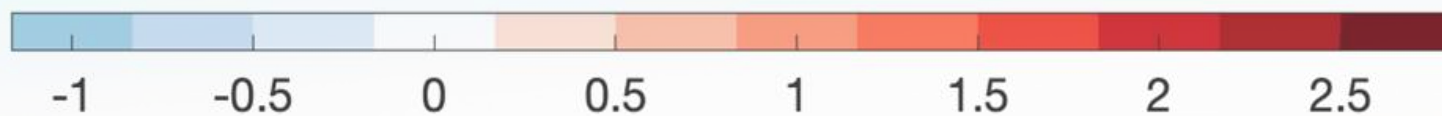
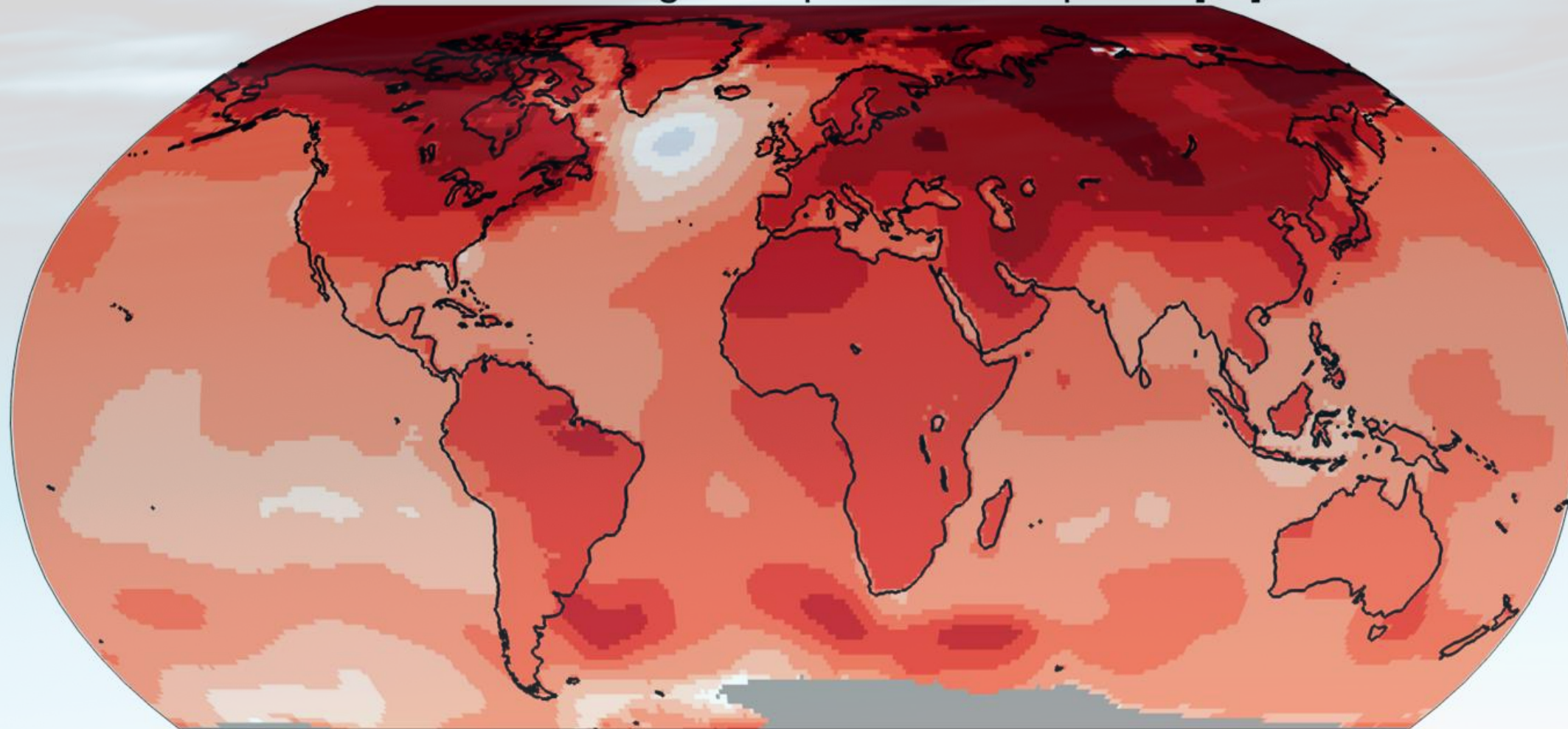




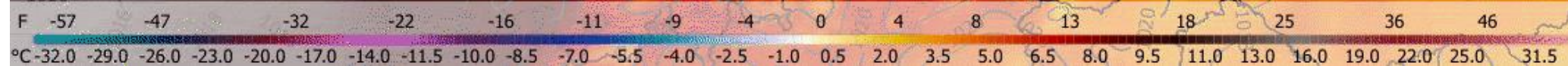
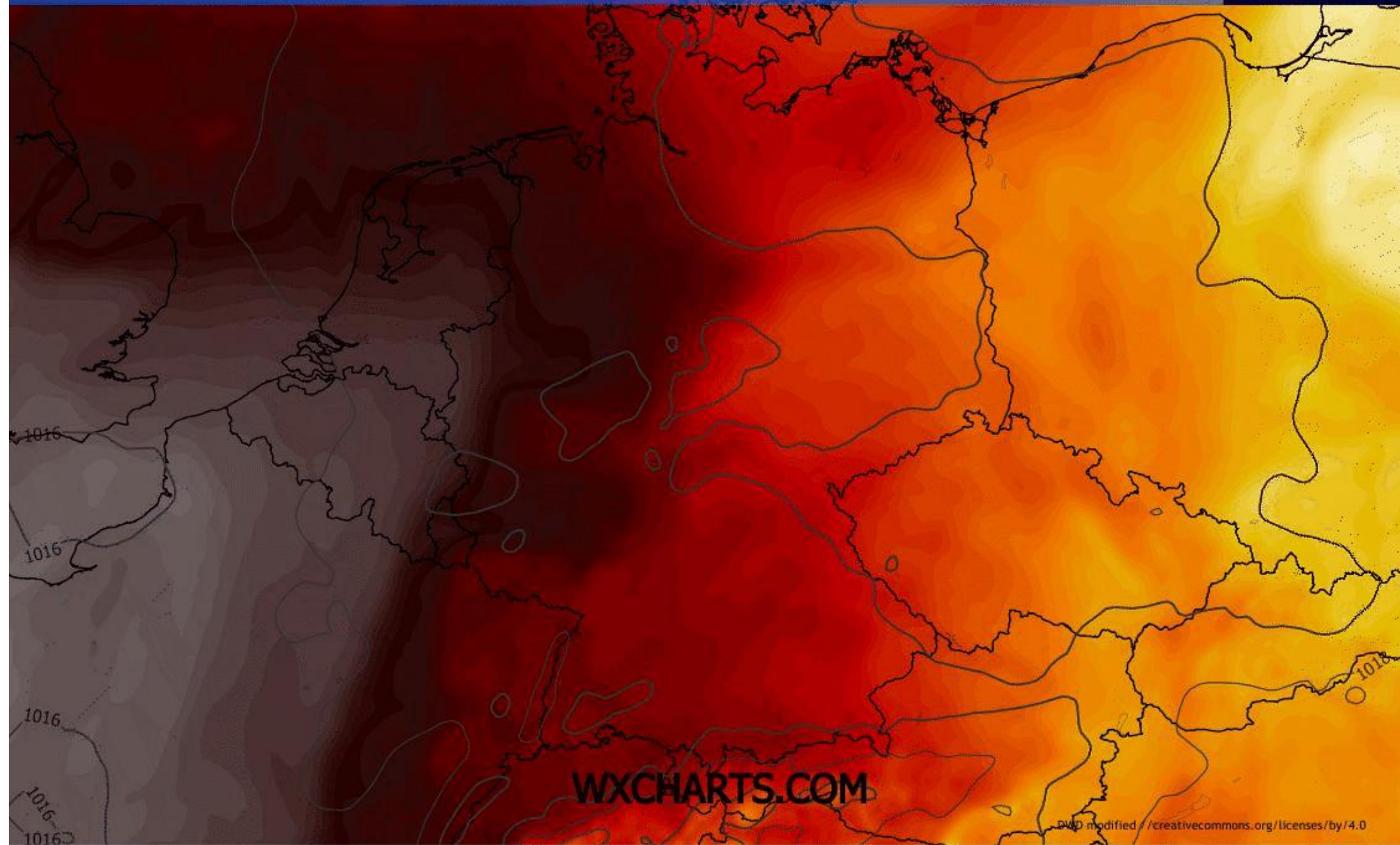


Aus „Die Faltung der Welt“
von Professor Anders Levermann (PIK)

Observed warming since pre-industrial period [$^{\circ}\text{C}$]



Ed Hawkins



Mars,
Mittlere Temperatur -63 °C



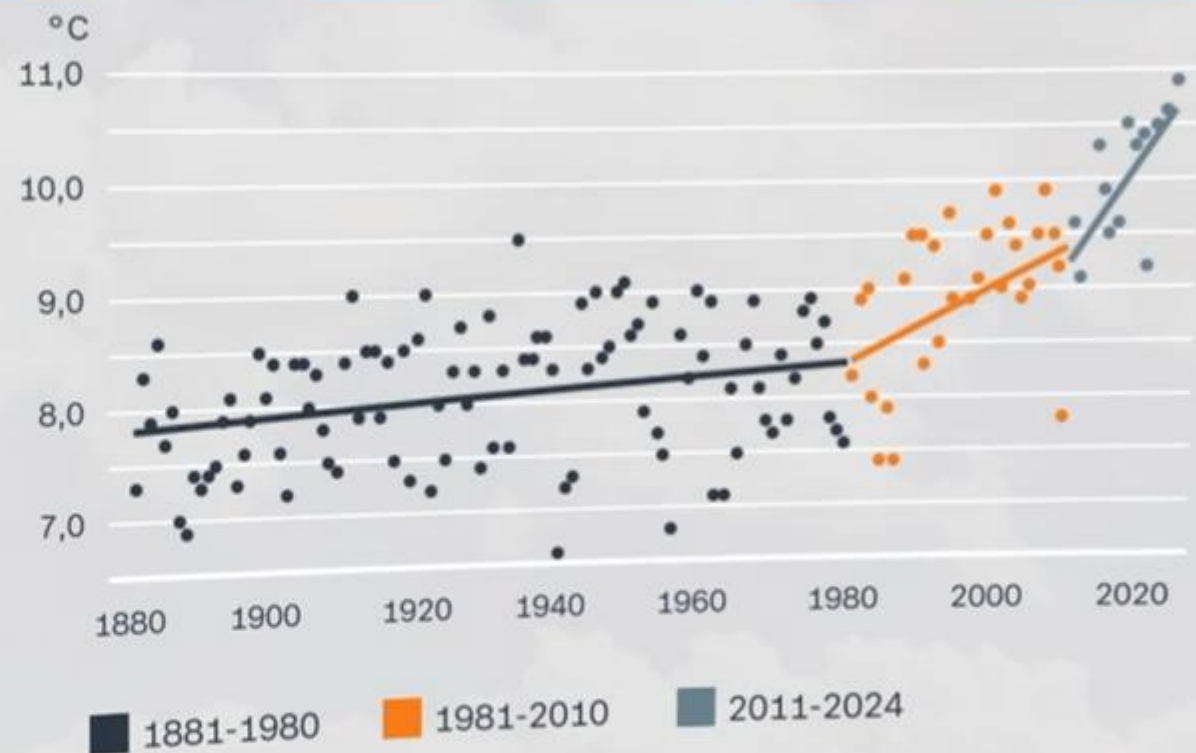
Venus, Venera 13

Mittlere Temperatur 464 °C

Ohne Treibhauseffekt -41 °C



Beschleunigte Erhitzung in Deutschland



Quelle: Deutscher Wetterdienst



tagesschau



I LOVE YOU,
BUT I LOVE
FOSSIL FUELS
MORE.

Dec. 4, 1997 Climate change: a degree of uncertainty



The debate on climate change has been long, complex and intense. Governments, corporations, scientists, economists and private citizens have all helped to frame this debate. Today, we respectfully submit our message to the officials who are gathered in Kyoto to consider actions to reduce emissions of carbon dioxide and other greenhouse gases.

Mobil shares the widespread concern about the potential impact of these emissions on the global climate. At the same time, we are concerned that mandated emission cutbacks now will produce grave economic consequences for all nations.

Fossil fuels dominate the world's energy picture today. For at least several decades, they will continue to be the major source of the world's energy. Government and the private sector share an array of technological options to reduce our emission of greenhouse gases.

The mission of the conference is to

■ Governments should encourage and accelerate cooperative research on climate change while harnessing free markets and voluntary measures to deliver optimum emission reductions while preserving sustained economic growth.

■ To address the scientific uncertainty, governments, universities and industry should form global research partnerships to fill in the knowledge gap, with the goal of achieving a consensus view on critical issues within a defined time frame.

■ During the fact-finding period, governments should encourage and promote voluntary actions by industry and citizens that reduce emissions and use energy wisely. Governments can do much to raise public awareness of the importance of energy conservation.

Mobil is already participating in such efforts. Through cooperative endeavors, we are conducting research on technologies that promise to reduce greenhouse gas emissions.

Do No Harm

Just as changeable as your local weather forecast, views on the climate change debate range from seeing the issue as serious or trivial, and from seeing the possible future impacts as harmful or beneficial.

Some in the debate believe they can predict changes in climate decades from now. Advocating "precaution," and despite scientific uncertainty, they believe actions should be taken immediately to reduce carbon dioxide emissions by mandating severe restrictions on energy use.

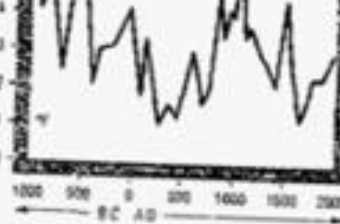
Though we wholly support the efficient use of fuel, a prudent approach to the climate issue must recognize that there is not enough information to justify such actions.

enormous transfers of wealth to other countries. Even if it were implemented, the Protocol would not accomplish what it is supposed to do—reduce the global buildup of greenhouse gases. Why? Because the Kyoto Protocol restricts emissions in developing countries. These countries, which are growing rapidly, need energy to improve the lives of their people. They have not agreed to limit energy use and could not do so without hindering growth.

Moreover, for most nations the Kyoto Protocol would require substantial

warning, and they point to storms or floods to say that dangerous impacts are already under way. Yet scientists remain unable to confirm either contention.

Geological evidence indicates that climate and greenhouse gas levels experience significant natural variability for reasons having nothing to do with human activity. Historical records and recent scientific evidence show that Europe and North America experienced a warm period



inevitably, future scientific research will help us understand how human actions and natural climate change may affect the world and will help determine what actions may be desirable to address the long-term

Science has given us enough information to know that climate changes may pose long-term risks. Natural variability and human activity may lead to climate change that could be significant and perhaps both positive and negative. Consequently, people,

July 18, 1996

Less heat, more light on climate change

No longer just talking about the weather, many governments are grappling with the possibility that human activities are enhancing nature's greenhouse effect, which might trigger significant changes in the global climate. Under the United Nations Framework Convention on Climate Change, countries are pressing for the stabilization, and eventual reduction, of man-made greenhouse-gas emissions. Nations are gathered this month in Geneva for the Second Conference of Parties meeting. Negotiations will culminate late next year and could result in legally binding targets, timetables and common measures to reduce emissions. These deliberations

the effect of CO₂.

Worldwide, the burning of fossil fuels coupled with massive deforestation yields some 20 billion metric tons of CO₂ annually. About half these emissions wind up in the atmosphere. The rest is believed to be absorbed by increased plant growth and the oceans. We know little about this nonatmospheric absorption, which complicates decision-making. For example, how might plant growth and absorption by the ocean change with higher global temperatures? Moreover, greenhouse-gas emissions, which have a warming effect, are offset by another combustion product—particulates—which leads to cooling.

When facts don't square with the theory, throw out the facts

Aug. 14, 1997

That seems to characterize the administration's attitude on two of its own policies: that international

happen if the U.S. had to commit to higher energy prices under the emission reduction plans that several nations had advanced last year. Such increases, the report concluded, would lead to a significant increase in output

Bild
am Sonntag

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erscheint wöchentlich

Die drei
Gesichter der
Primadonna



56 Grad! Ganz Deutschland ein Brutofen!

**Menschen sterben
Wälder brennen
Vieh verendet**

Frankfurt, 7. Juli

Die Glutglocke schlingt sich um den Sommer. In ganz Deutschland sterben an Hitzschlag und Sonnenstich. Wälder brennen. Die Städte lechzen nach Wasser. Auf Weiden und in Ställen geht das Vieh zu Grunde. Bei 56 Grad im Gehäuse verlor die Bahnhofsuhr von Wanne-Eickel den Dienst.

Kein Ende abzusehen! Örtliche Gewitter bringen keine Milderung. Die Sahara-Hitze strömt weiter aus Nordafrika nach Europa ein.

Auch Österreich stöhnt unter der Hitze. Bei 48 Grad im Schatten fahndet die Wiener Polizei nach Wasserverschwendern.

In Salzburg war der Schrankenwärter Peter Viertel (59) unter der Sonnenglut zusammengebrochen. Auf dem nun unbewachten Bahnübergang zertrümmerte ein wachsender Lastzug von Simon Schleicher (36) aus Salzburg. Schleicher starb, sein Beifahrer wurde lebensgefährlich verletzt.

(Fortsetzung Seite 24)

SPORT

**Negerin
schlägt
Tennis-
Elite
der Welt**

London, 7.

Eine Negerin
seit gestern
beste Tennisspielerin der Welt!

In Wimbledon
wann Althea Gibson
Tochter einer...



Familie
mit 6
Darlehen
die in
meiste
Tennis
Noch
ein F
heilig
Wimbl
meiste
Die
über
Jubil
schw
die 5

(B)

SUSANNE GÖTZE
ANNIKA JOERES

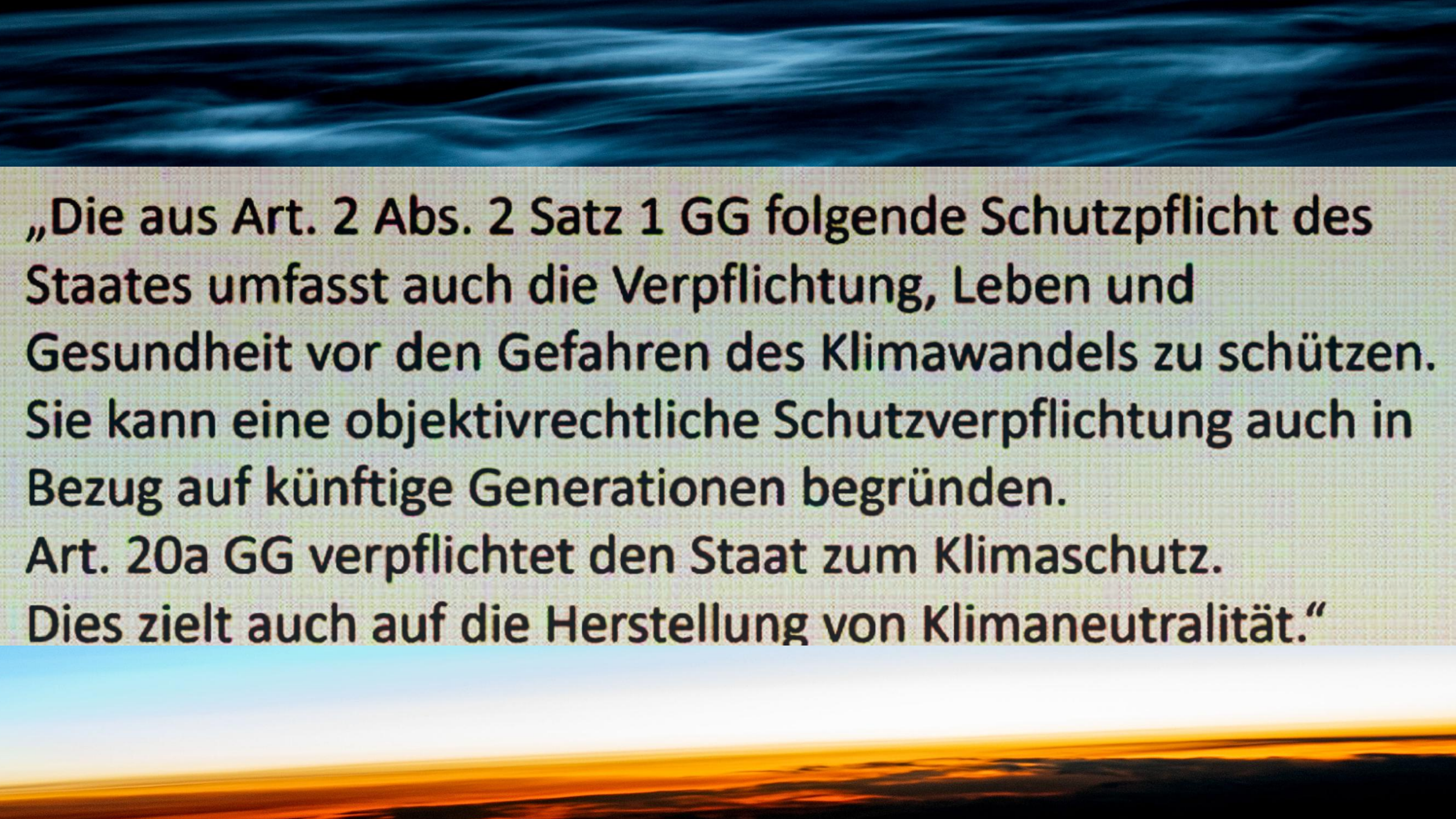
PIPER

DIE MILLIARDEN LOBBY

WER UNS VON
ÖL UND GAS
ABHÄNGIG
MACHT

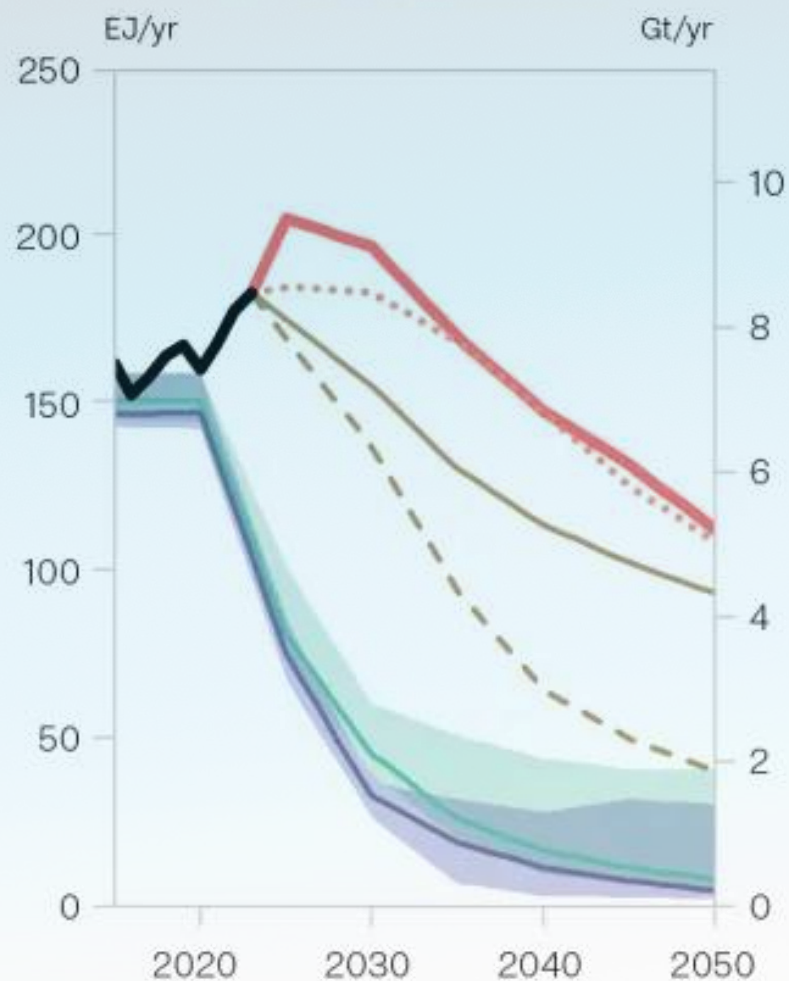
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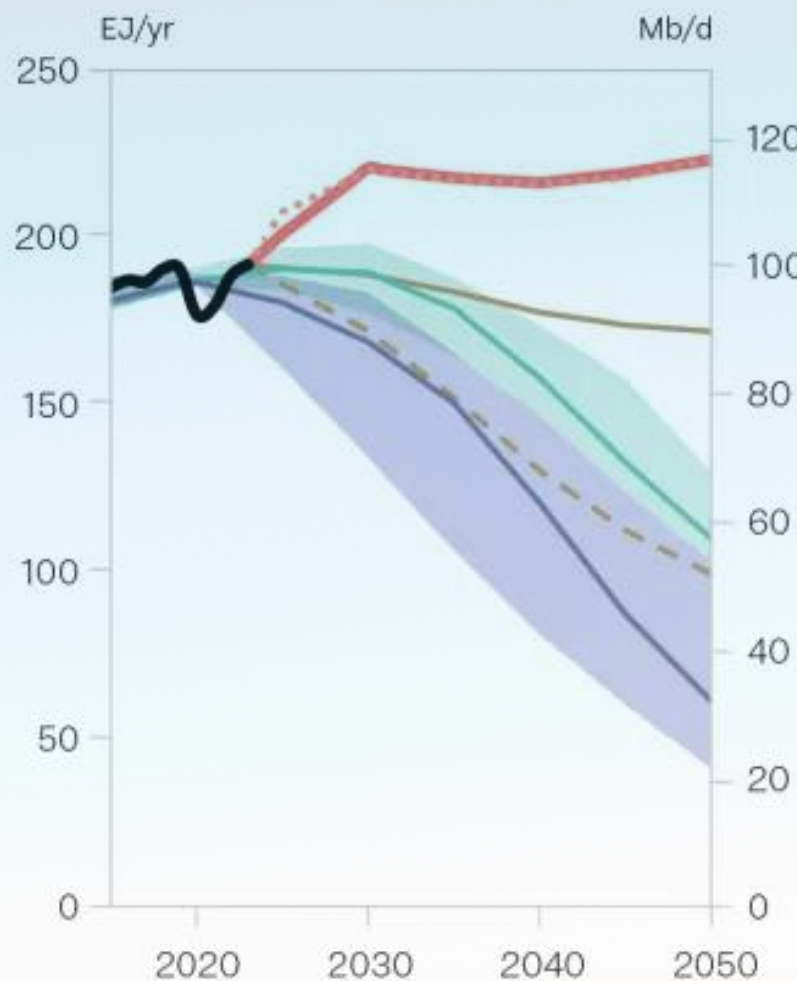


„Die aus Art. 2 Abs. 2 Satz 1 GG folgende Schutzpflicht des Staates umfasst auch die Verpflichtung, Leben und Gesundheit vor den Gefahren des Klimawandels zu schützen. Sie kann eine objektivrechtliche Schutzverpflichtung auch in Bezug auf künftige Generationen begründen. Art. 20a GG verpflichtet den Staat zum Klimaschutz. Dies zielt auch auf die Herstellung von Klimaneutralität.“

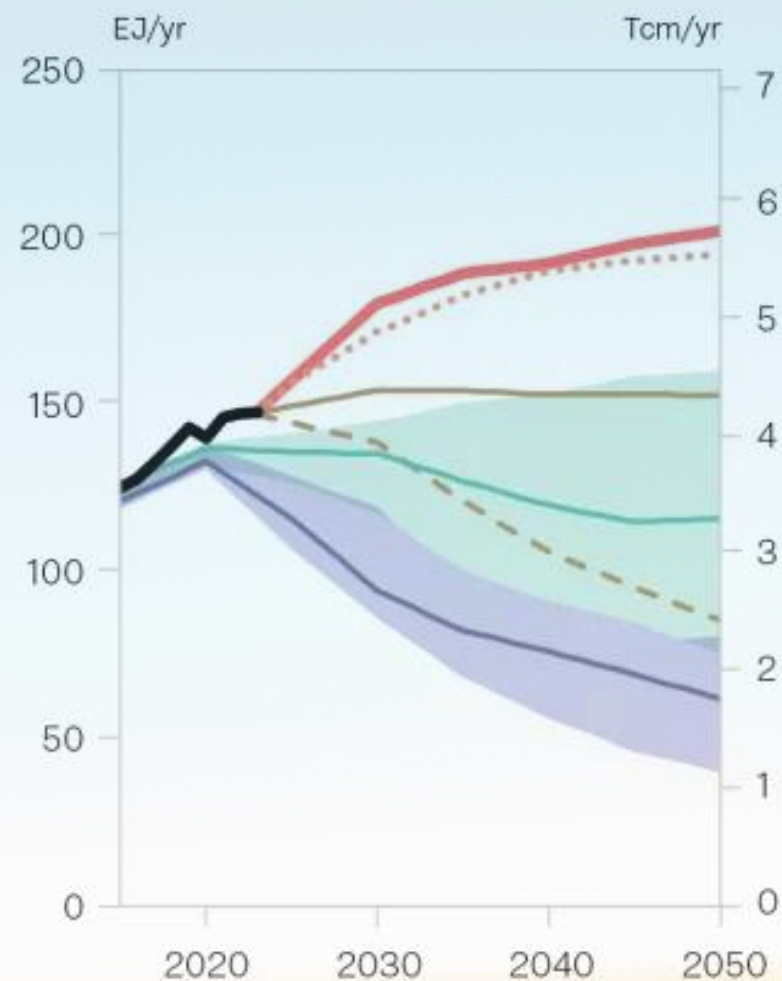
Coal production



Oil production



Gas production



— Government plans and projections (GPP) 2025
 GPP 2023

— Stated policies (IEA STEPS)
 - - - Announced pledges (IEA APS)

— 2°C-consistent pathway
 — 1.5°C-consistent pathway
 — Historical



DMG

Deutsche Meteorologische Gesellschaft

Deutsche Physikalische Gesellschaft



DPG

Die Ambitionsücke führt bis 2100 mit großer Wahrscheinlichkeit zu einer Erwärmung von 2 bis zu 5 Grad gegenüber den vorindustriellen Temperaturen, die Umsetzungslücke zu einer weiteren Erwärmung um einige Grad.

Bereits bis 2050 besteht das Risiko einer Erwärmung um 3 Grad.

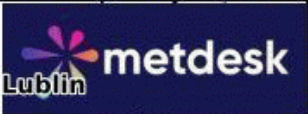


Total Accumulated Precipitation (mm)

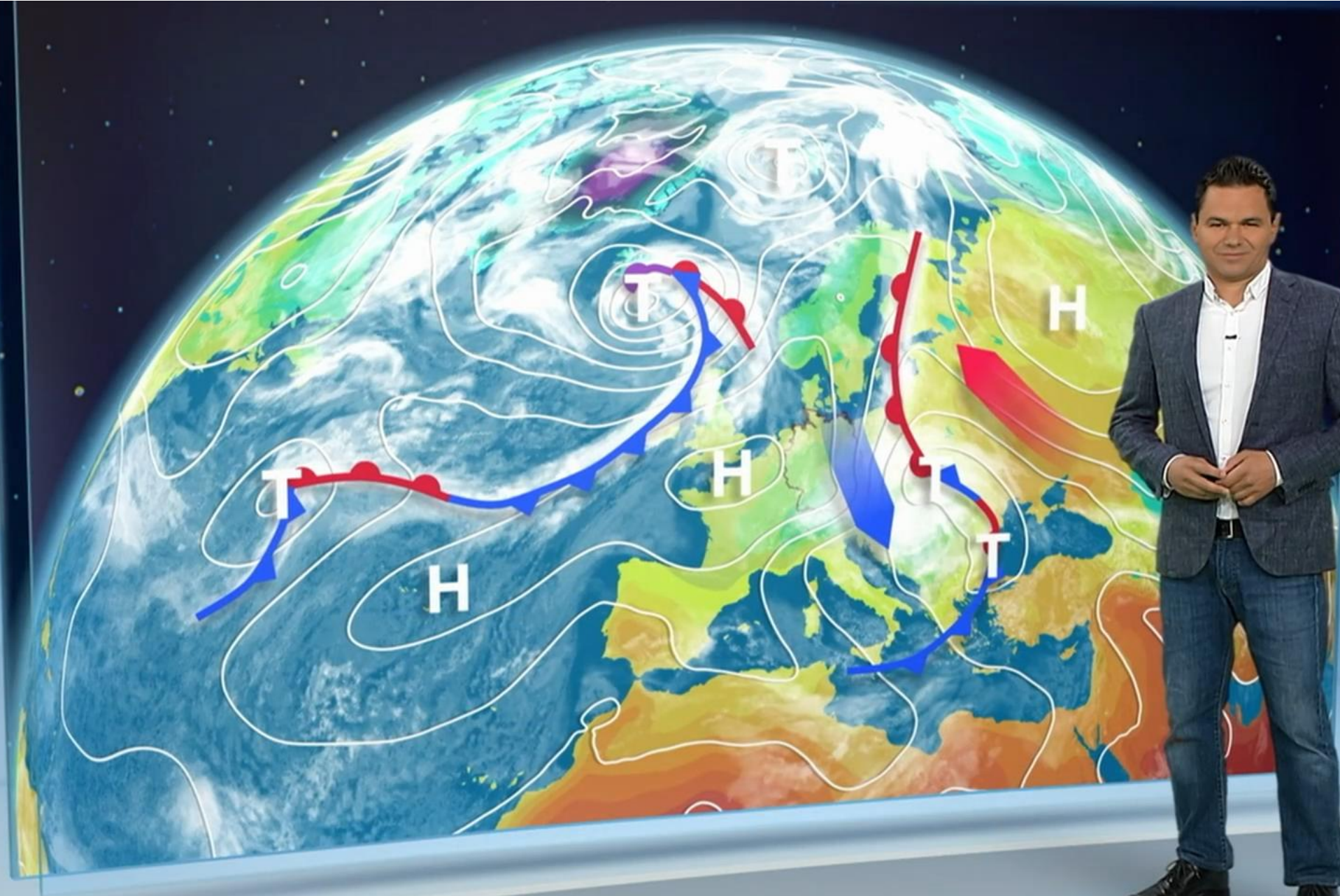
ECMWF HRES 0.1°

Total accumulation since T+0

Run: Wed 11 Sep 00Z
Valid: Wed 11 Sep 00:00 UTC



Beispiele



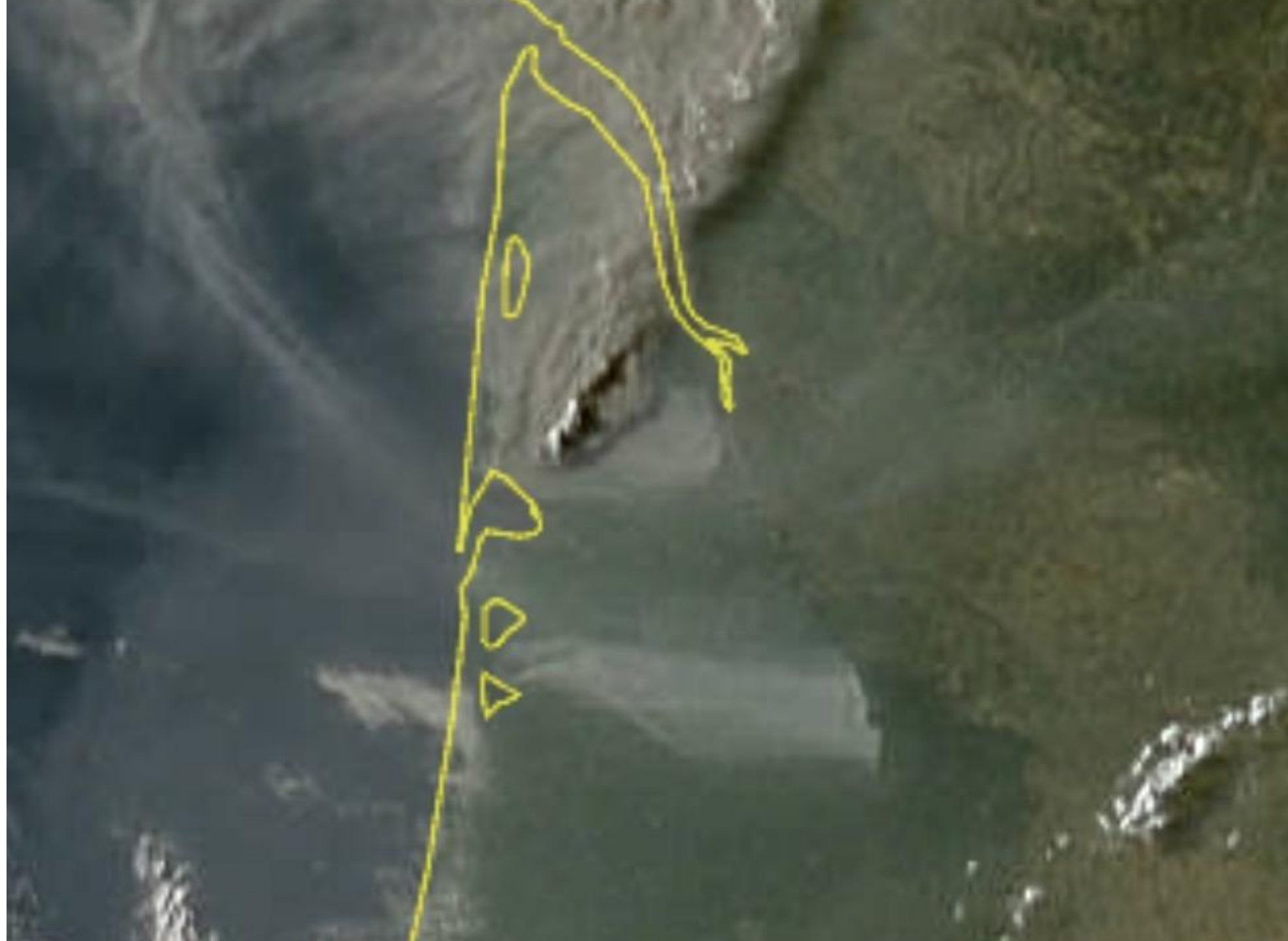


Eddies











MARINE HEATWAVE CONDITIONS IN AUGUST 2026

13 AUGUST 2026



Sea Surface Temperature Anomaly (°C)



ATLANTIC OCEAN

MEDITERRANEAN SEA



PROGRAMME OF THE
EUROPEAN UNION
Copernicus
Europe's eyes on Earth

Credit: European Union, Copernicus Marine Service data
The Copernicus Marine Service is implemented by Mercator Ocean International

150 km



Basemap: Copernicus Sentinel-2 Imagery



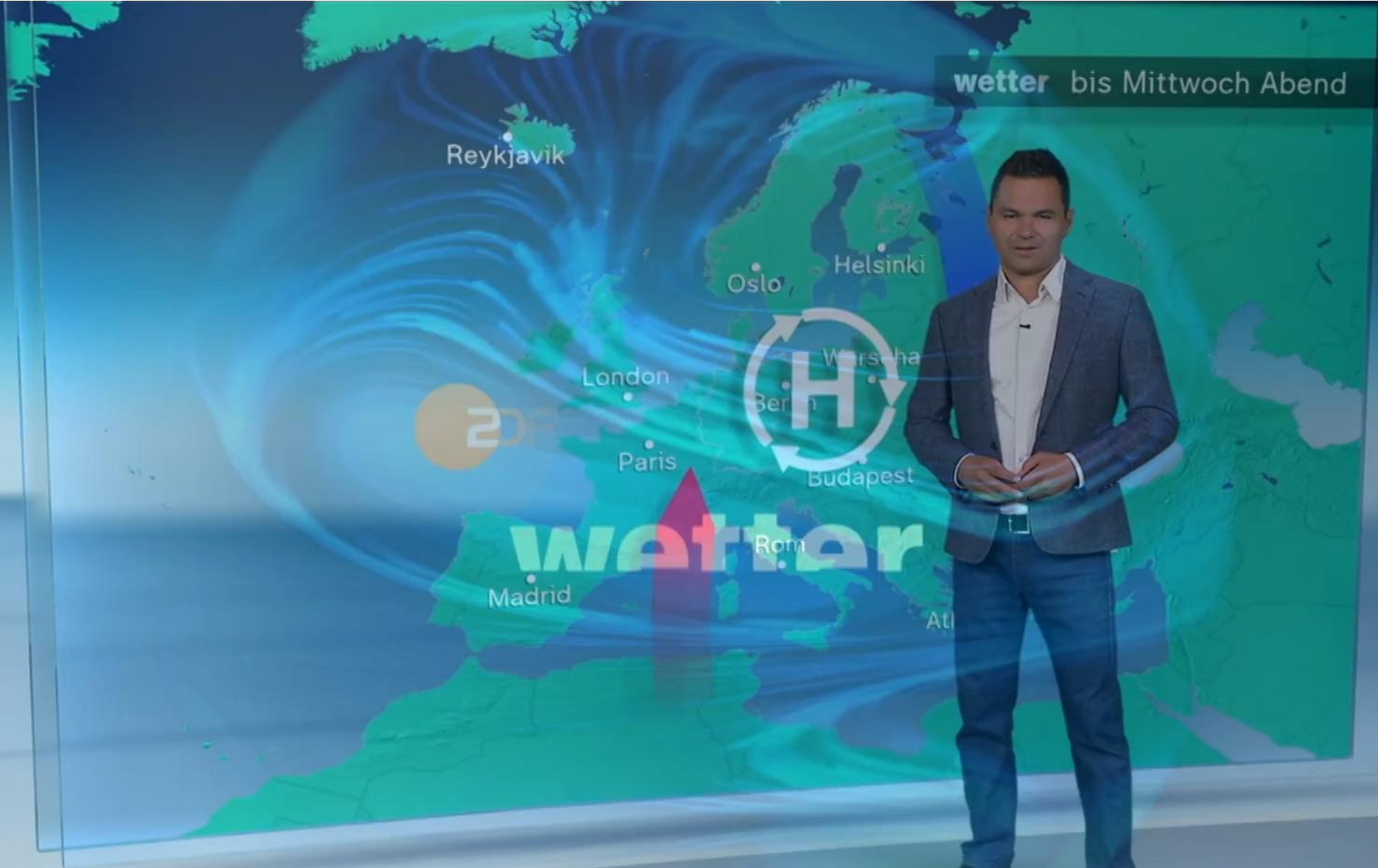
wetter Valencia 25.10.2022

Quelle: NASA





wetter bis Mittwoch Abend



Hitzewellen

- kommen früher
- kommen häufiger
- betreffen größere Regionen
- dauern länger
- werden heißer





COP²⁸
UAE





00:49 | 43:42



nächstes Video



Wissen

Wind im Klimawandel - Wetterextreme durch globale Erhitzung

VERFÜGBAR
bis 21.11.2029

Wetterextreme nehmen zu, und die Windsysteme der Erde sind maßgeblich daran beteiligt. Immer häufiger führen sie Unmengen an Niederschlag in allen Formen mit sich. Oder bringen gar nichts. Wir brauchen den Wind. Er gleicht Temperaturunterschiede aus.

A satellite image of a large tropical cyclone, possibly a hurricane, viewed from space. The storm's eye is visible as a dark, circular center, surrounded by dense, swirling white clouds that form a spiral pattern over the dark blue ocean. The Earth's horizon is visible at the top of the frame. The text "Herzlichen Dank!" is overlaid in the center of the image.

Herzlichen Dank!