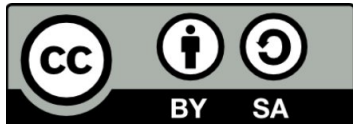


Video: From CO₂ stripes to warming stripes

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Hello everyone!

In this video we want to understand the connection between the warming stripes and the CO₂ stripes. If a reminder about those two would help you, you can rewatch our video about them.

CO₂ and other greenhouse gases trap the heat on our planet. This is called the greenhouse effect. There are a lot of great videos about the greenhouse effect on the internet. For example, we can recommend this one by NASA.

In this video we want to take a closer look at how CO₂ traps heat. The atmosphere mainly consists of nitrogen and oxygen. The proportion of carbon dioxide (CO₂) in the atmosphere is small. But it has a major impact!

Because the CO₂ molecules collide with other molecules, they move in different directions and they are rotating and vibrating [in electrically lopsided ways]. You can imagine them dancing. This allows them to absorb infrared rays and therefore trap the heat. If a CO₂ atom absorbs an infrared ray, it vibrates even faster. It is getting more excited, like its favourite song would be playing.

The CO₂ stripes show the evolution of CO₂ in the atmosphere. Purple colours stand for lower portions of CO₂ and green colours for larger portions. As you can see, there is more CO₂ in the atmosphere today, than there was in 1958, when the measurement started.

More CO₂ means more molecules at the party. This means a stronger greenhouse effect. More heat is trapped and the temperatures rise. This leads us to the warming stripes.

The part in the red rectangle is directly comparable with the CO₂ stripes, as the CO₂ measurements began in 1958. You can see that the trend is very similar. Larger CO₂ concentrations in the atmosphere lead to larger temperatures.

Now you know how the CO₂ traps heat and what the connection is between the CO₂ stripes and the warming stripes.

Thank you for watching.

More detail from MinuteEarth:

<https://www.youtube.com/watch?v=sTvqlijqvTg>