

Literaturverweise

Statt eines Vorworts: Das Corona-Experiment

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4. Die Abbauzeit (Lebensdauer) des CO₂ ist die Zeit , in der die Konzentration auf ein 1/e (0,3679) des Ausgangswerts gesunken ist. Sie wird berechnet als Quotient des zum Gleichgewicht von 280 ppm hinzugefügten CO₂ durch die Größe des Abbaus. 1959 waren das 34 ppm : 0,64 ppm = 55 Jahre. 2019 sind das 130 ppm : 2,6 ppm =50 Jahre. Die Umrechnung in einen Abbau von 50 % (Halbwertszeit) gelingt durch Multiplikation dieser Abbauzeiten mit ln2 = 0,6931. Das sind dann 1959 38 Jahre und 2019 34,7 Jahre.
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Kapitel 1

Die moderne Erwärmung: Was wissen wir darüber?

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Kapitel 2

Mittelalterliche Wärmeperiode und Kleine Eiszeit: Vernachlässigbare lokale Phänomene?

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Kapitel 3

Noch nie war es so warm wie heute: Stimmt das?

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Kapitel 4

Natürliche Klimaschwankungen im Millenniumstakt: Verborgener Klima-Herzschlag?

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Kapitel 7

Der Herzschlag der Ozeane: Welche Rolle spielen PDO, AMO, NAO & Co.?

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Kapitel 8

Welchen natürlichen Einfluss übt unsere Sonne auf das Erdklima aus?

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Kapitel 9

Wann war der CO₂-Gehalt der Atmosphäre zuletzt so hoch wie heute?

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41. Hinweis: Unter Abbaurate wird die Zeit verstanden, in der der Ausgangswert auf einen Wert von $1/e=0,3679$ absinkt. Die Halbwertszeit ergibt sich aus Abbaurate mal ln 2. So wird aus einer Abbaurate von 50 Jahren eine Halbwertszeit von 34,7 Jahren.
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Kapitel 10

Wie genau lässt sich die Erwärmungswirkung des CO₂ quantitativ heute eingrenzen?

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Klimazustandsbericht des IPCC liegt die CO₂-Klimasensitivität am wahrscheinlichsten im Bereich um 3,0°C, wobei Werte darunter und darüber als zunehmend unwahrscheinlich befunden werden. (b) Die Kosten für Klimaschäden und Anpassungsmaßnahmen nehmen exponentiell mit der CO₂-Klimasensitivität zu. Im Umkehrschluss bedeutet dies, dass geringere CO₂-Klimasensitivitäten vergleichsweise niedrige Kosten verursachen. (c) Darstellung des Gesamtrisikos (Multiplikation von Eintrittswahrscheinlichkeit und Kosten). Trotz geringer Eintrittswahrscheinlichkeit besteht das höchste Risiko für hohe Werte der CO₂-Klimasensitivität. Vieles deutet mittlerweile darauf hin, dass die CO₂-Klimasensitivität eher im unteren Drittel der vom IPCC genannten Unsicherheitsspanne liegt (näheres dazu in diesem Kapitel).

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Kapitel 11

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Kapitel 12

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Kapitel 13

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Kapitel 14

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Kapitel 15

Wie stabil ist das Eis der Antarktis?

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Kapitel 16

Gibt es heute weniger Schnee als früher?

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Kapitel 17

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Kapitel 19

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Kapitel 20

Wie stark werden Waldbrände durch den Klimawandel angefeuert?

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Kapitel 21

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Kapitel 25

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Kapitel 26

Wie stark steigt der Meeresspiegel?

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Kapitel 27

War der Meeresspiegel in vorindustrieller Zeit stets stabil?

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Kapitel 28

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Kapitel 30

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Kapitel 31

Welche Auswirkungen hat der Klimawandel auf die Tierwelt?

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Fortschreitende Ozeanversauerung: Wie gefährlich ist die Lage?

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Kapitel 33

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Kapitel 47

Eine neue Generation sicherer Kerntechnik: Eine neue Chance?

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