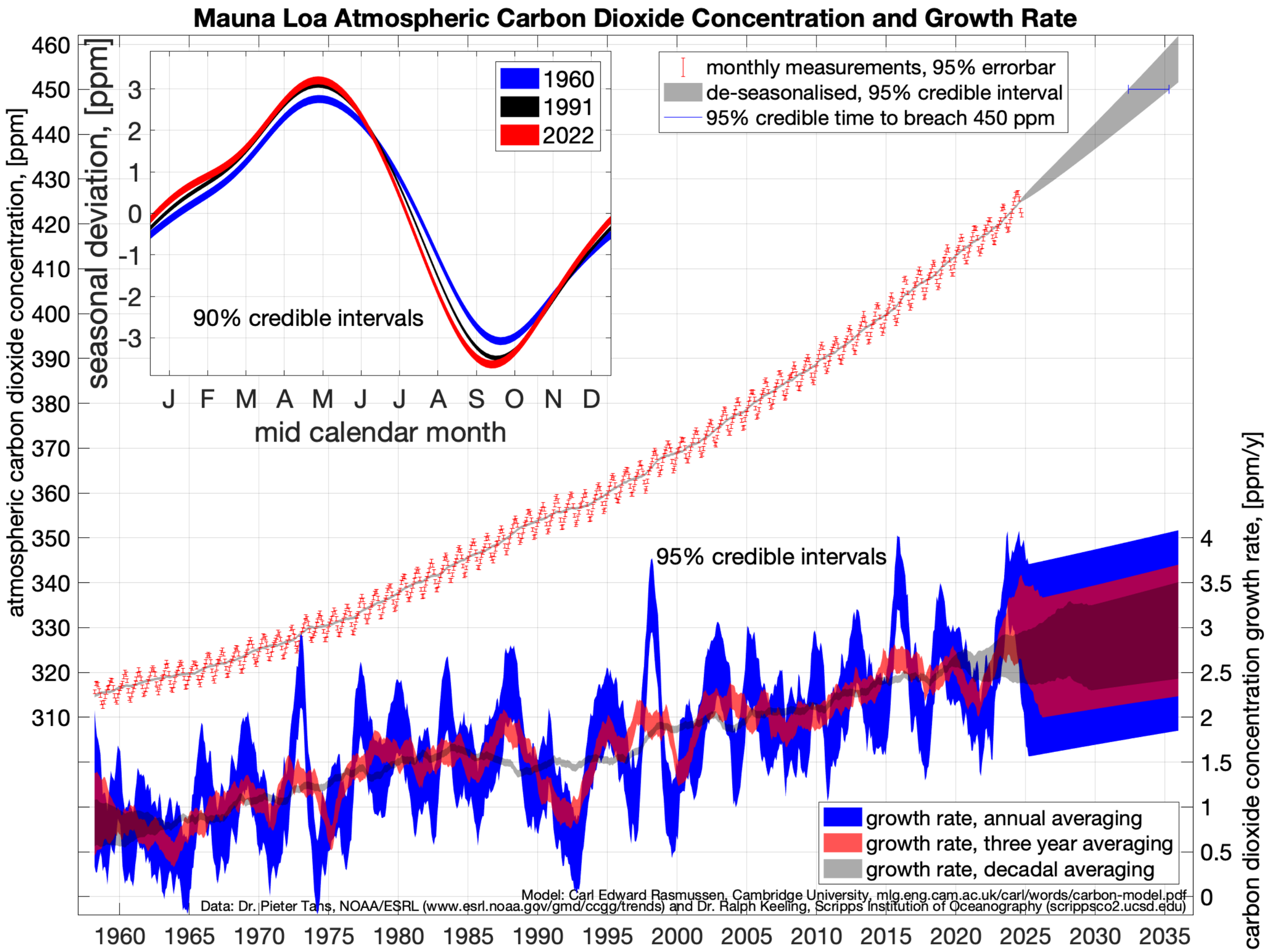
Mauna Loa Atmospheric Carbon Dioxide Concentration and Growth Rate
atmospheric carbon dioxide concentration, [ppm]
carbon dioxide concentration growth rate, [ppm/y]
monthly measurements, 95% errorbar
de-seasonalised, 95% credible interval
95% credible time to breach 450 ppm
seasonal deviation, [ppm]
1960
1991
2022
90% credible intervals
J F M A M J J A S O N D
mid calendar month
95% credible intervals
growth rate, annual averaging
growth rate, three year averaging
growth rate, decadal averaging
Model: Carl Edward Rasmussen, Cambridge University, mlg.eng.cam.ac.uk/carl/words/carbon-model.pdf
Data: Dr. Pieter Tans, NOAA/ESRL (www.esrl.noaa.gov/gmd/ccgg/trends) and Dr. Ralph Keeling, Scripps Institution of Oceanography (scrippsco2.ucsd.edu)
460 450 440 430 420 410 400 390 380 370 360 350 340 330 320 310
3 2 1 0 -1 -2 -3
4 3.5 3 2.5 2 1.5 1 0.5 0
1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035