In class we showed how to estimate the water vapor feedback in the idealized column model. But one feedback we did not discuss in class was the so-called “lapse rate feedback”

The second project therefore consists of three parts.

1) Using the literature as a reference, write a summary of what the lapse rate climate feedback is. Please include a summary of the physics involved in this feedback
2) Conduct a literature review to summarize the lapse rate feedback as diagnosed in CMIP3, CMIP5 and CMIP6 models. Has the assessment of the magnitude of the lapse rate feedback changed over time? What about the assessed uncertainty?
3) Using the python notebook, assess the magnitude of the lapse rate feedback using the RCE in the simple column model. Please explain clearly how you changed the code to make your estimate and why you made the changes you did. Is your assessment larger or lower than that estimated from full climate models (ESMs)? Relative to a full ESM model, explain why your lapse rate assessment is different and why you think that is.