University of Bremen Institute of Environmental Physics (IUP)

Constraining uncertainties in multi-model projections of future climate with observations

DISSERTATION

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This dissertation is submitted for the degree Doktor der Naturwissenschaften (Dr. rer. nat.)

March 2021

Abstract (English version)

Abstract (German version)

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1. Introduction

2. Scientific Background

3. Improving routine Model Evaluation

4. Assessment of Climate Metrics in CMIP6

5. Evaluation of Emergent Constraints on ECS in CMIP6

6. Constraining Uncertainties in future GPP with Machine Learning

7. Summary and Outlook

Appendix

A. TBA

A.1. test

test

hi The Effective Climate Sensitivity (ECS) is really cool. I like it very much!

This is e.g. without an "at" and this is it with an "at" e.g. difference? Test space. Real dot!

These are really cool papers: (Schlund, Eyring, et al. 2020; Schlund, Lauer, et al. 2020)

And this one, too: (Lauer et al. 2020)

input <iostream>

$$c_{k_1,k_2} := 1200 \log_2 \left(\frac{f_1^{(k_2)}}{f_1^{(k_1)}} \right) \text{ cents.}$$
 (1)

Table 1.: The effects of treatments X and Y on the four groups studied.

Groups	Treatment X	Treatment Y
1	0.2	0.8
2	0.17	0.7
3	0.24	0.75
4	0.68	0.3

Semitones	Interval	c/cents (ET)	c/cents (JI)
0	Perfect unison	0	0
1	Minor second	100	112
2	Major second	200	204
3	Minor third	300	316
4	Major third	400	386
5	Perfect fourth	500	498
6	Augmented fourth	600	590
7	Perfect fifth	700	702
8	Minor sixth	800	814
9	Major sixth	900	884
10	Minor seventh	1000	996
11	Major seventh	1100	1088
12	Perfect octave	1200	1200

Table 2.: Logarithmic frequency ratios c of certain intervals in the equal temperament (ET) and the just intonation (JI). x cents correspond to a frequency ratio of $2^{x/1200}$.

B. TBA

List of Acronyms

ECS Effective Climate Sensitivity	y																									1.	5
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Declaration of Authorship

I assure that this dissertation is a result of my personal work and that no other than the indicated aids have been used for its completion. Furthermore I assure that all quotations and statements that have been inferred literally or in a general manner from published or unpublished writings are marked as such. Beyond this I assure that the work has not been used, neither completely nor in parts, to pass any previous examination.

Oberpfaffenhofen, March 2021	
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