



AMS
American Meteorological Society

Supplemental Material

Journal of Climate

The Global Patterns of Instantaneous CO₂ Forcing at the Top of the Atmosphere and the Surface

<https://doi.org/10.1175/JCLI-D-22-0708.1>

© [Copyright 2023 American Meteorological Society](#) (AMS)

For permission to reuse any portion of this work, please contact permissions@ametsoc.org. Any use of material in this work that is determined to be “fair use” under Section 107 of the U.S. Copyright Act (17 USC §107) or that satisfies the conditions specified in Section 108 of the U.S. Copyright Act (17 USC §108) does not require AMS’s permission. Republication, systematic reproduction, posting in electronic form, such as on a website or in a searchable database, or other uses of this material, except as exempted by the above statement, requires written permission or a license from AMS. All AMS journals and monograph publications are registered with the Copyright Clearance Center (<https://www.copyright.com>). Additional details are provided in the AMS Copyright Policy statement, available on the AMS website (<https://www.ametsoc.org/PUBSCopyrightPolicy>).

1 **Supplement material for:**

2 **The global pattern of instantaneous CO₂ forcing at the top of atmosphere**
3 **and surface**

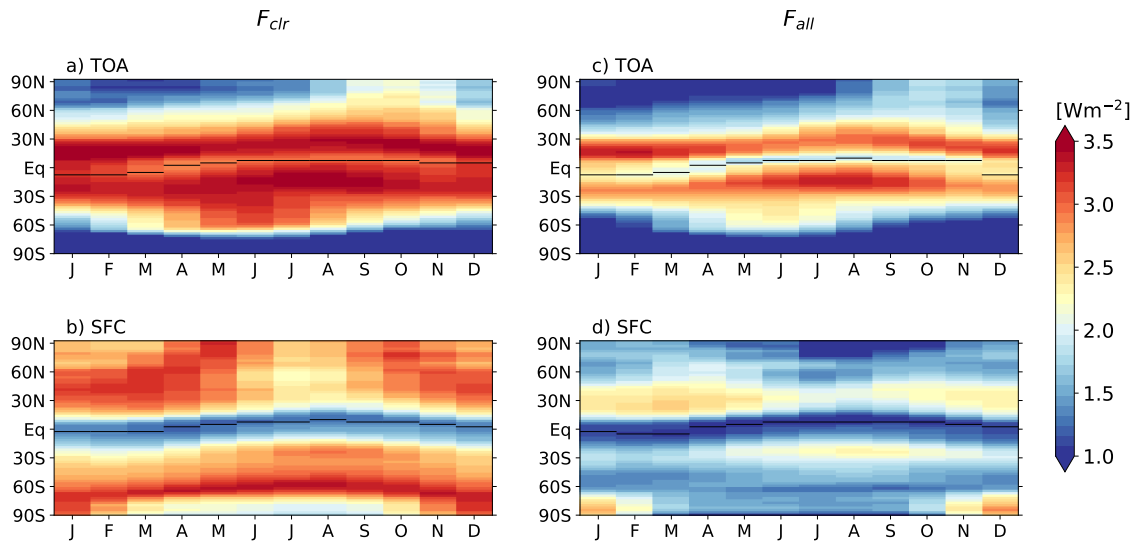
4 Yan-Ting Chen,^a Yi Huang,^a and Timothy M. Merlis^b

5 ^a *Department of Atmospheric and Oceanic Sciences, McGill University, Montreal, Quebec,*
6 *Canada*

7 ^b *Program in Atmospheric and Oceanic Sciences, Princeton University, Princeton, NJ, USA*

8 *Corresponding author: Yan-Ting Chen, yan-ting.chen@mail.mcgill.ca*

9 **1. Zonal-mean forcing seasonality**



10 FIG. S1. Same as Figure 3 but only for TOA and surface forcing under (a-b) clear-sky and (c-d) all-sky with a
11 different color map. Please note that the colorbar starts at 1 Wm^{-2} .