

## GeoHealth

Supporting Information for

## On the Environmental Determinants of COVID-19 Seasonality

Yeon-Woo Choi<sup>1,\*</sup>, Alexandre Tuel<sup>1,+</sup>, and Elfatih A. B. Eltahir<sup>1</sup>

<sup>1</sup>Ralph M. Parsons Laboratory, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA

<sup>+</sup>Current affiliation: Institute of Geography, Oeschger Centre for Climate Change Research, University of Bern, Bern, Switzerland.

## **Contents of this file**

Figures S1 to S2 Tables S1



**Figure S1.** Government Stringency Index. Time series of government stringency index for five representative countries (Table 1). This index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans (Hale et al., 2021).



**Figure S2.** Seasonal mean COVID-19 prevalence and environmental variables. Spatial distribution of seasonal mean (a-d) ADC, (e-h) UV, (i-l) total confirmed COVID-19 cases per 1 million people for (a, e, and i) spring (March to May), (b, f, and j) summer (June to August), (c, g, and k) autumn (September to November), and (d, h, and l) winter (December to February).

	Temperature	Specific humidity	ADC	UV
Confirmed COVID-19 cases over temperate countries	-0.7**	-0.6**	-0.8**	-0.9**
Confirmed COVID-19 cases over tropical monsoon countries	-0.2	0.4**	-0.7**	-0.7**

\* Significant at the 5% level, \*\* Significant at the 1% level

**Table S1.** Pearson correlation coefficients between weekly country-mean new confirmed COVID-19 cases and all four environmental variables (temperature, specific humidity, ADC, and UV) for the period extending from March 1st 2020 to March 13th 2021. The list of analyzed countries are provided in Table 1.