README describing data files for "Assessing Long-Distance Atmospheric Transport of Soilborne Plant Pathogens"

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Keywords

Earth System Model; Dust; Spore; Pathogen; Plant disease

Summary of files

All files contain output data from the Community Atmosphere Model Version 6 (CAM6) of the Community Earth System Model (CESM). See relevant paper and supplementary material for more details about the model versions.

Model version used in each file

File name	*Model version*
default_dep_data_tuned.nc	Default
production_no_map_dep_data_tuned.nc	Production_no_map
production_spore_map_dep_data.nc	Production_spore_map
production_40_year_dep_data_tuned.nc	Production_40_year

*See Supplementary Material for more information about each model version

Variables in each file

dst1

dst1_a1SFWET	dst1_a2SFWET	dst1_a3SFWET			
dst1_a1DDF	dst1_a2DDF	dst1_a3DDF			

dst2

dst2_a1SFWET	dst2_a2SFWET	dst2_a3SFWET	dst2_c1SFWET	dst2_c2SFWET	dst2_c3SFWET
dst2_a1DDF	dst2_a2DDF	dst2_a3DDF	dst2_c1DDF	dst2_c2DDF	dst2_c3DDF

dst3

dst3_a1SFWET	dst3_a2SFWET	dst3_a3SFWET	dst3_c1SFWET	dst3_c2SFWET	dst3_c3SFWET
dst3_a1DDF	dst3_a2DDF	dst3_a3DDF	dst3_c1DDF	dst3_c2DDF	dst3_c3DDF

dst4

dst4_a1SFWET	dst4_a2SFWET	dst4_a3SFWET	dst4_c1SFWET	dst4_c2SFWET	dst4_c3SFWET
dst4_a1DDF	dst4_a2DDF	dst4_a3DDF	dst4_c1DDF	dst4_c2DDF	dst4_c3DDF

dst5

dst5_a1SFWET	dst5_a2SFWET	dst5_a3SFWET	dst5_c1SFWET	dst5_c2SFWET	dst5_c3SFWET
dst5_a1DDF	dst5_a2DDF	dst5_a3DDF	dst5_c1DDF	dst5_c2DDF	dst5_c3DDF

dst6

dst6_a1SFWET	dst6_a2SFWET	dst6_a3SFWET	dst6_c1SFWET	dst6_c2SFWET	dst6_c3SFWET
dst6_a1DDF	dst6_a2DDF	dst6_a3DDF	dst6_c1DDF	dst6_c2DDF	dst6_c3DDF

dst7

dst7_a1SFWET	dst7_a2SFWET	dst7_a3SFWET	dst7_c1SFWET	dst7_c2SFWET	dst7_c3SFWET
dst7_a1DDF	dst7_a2DDF	dst7_a3DDF	dst7_c1DDF	dst7_c2DDF	dst7_c3DDF

dst8

dst8_a1SFWET dst8_a1DDF	dst8_a2SFWET dst8_a2DDF	dst8_a3SFWET dst8_a3DDF	dst8_c1SFWET dst8_c1DDF	dst8_c2SFWET dst8_c2DDF	dst8_c3SFWET dst8_c3DDF

dst9

dst1_c1SFWET dst1_c1DDF	dst1_c2SFWET dst1_c2DDF	dst1_c3SFWET dst1_c3DDF

fets

fets_a1SFWET fets_a1DDF	fets_a2SFWET fets_a2DDF	fets_a3SFWET fets_a3DDF	fets_c1SFWET fets_c1DDF	fets_c2SFWET fets_c2DDF	fets_c3SFWET fets_c3DDF

fetm

fetm_a1SFWET fetm_a1DDF	fetm_a2SFWET fetm_a2DDF	fetm_a3SFWET fetm_a3DDF	fetm_c1SFWET fetm_c1DDF	fetm_c2SFWET fetm_c2DDF	fetm_c3SFWET fetm_c3DDF

fess

fess_a1SFWET fess_a1DDF	fess_a2SFWET fess_a2DDF	fess_a3SFWET fess_a3DDF	fess_c1SFWET fess_c1DDF	fess_c2SFWET fess_c2DDF	fess_c3SFWET fess_c3DDF

fesm

fesm_a1SFWET fesm_a1DDF	fesm_a2SFWET fesm_a2DDF	fesm_a3SFWET fesm_a3DDF	fesm_c1SFWET fesm_c1DDF	fesm_c2SFWET fesm_c2DDF	fesm_c3SFWET fesm_c3DDF

fetc

fetc_a1SFWET fetc_a1DDF	fetc_a2SFWET fetc_a2DDF	fetc_a3SFWET fetc_a3DDF	fetc_c1SFWET fetc_c1DDF	fetc_c2SFWET fetc_c2DDF	fetc_c3SFWET fetc_c3DDF

fesc

fesc_a1SFWET fesc_a1DDF	fesc_a2SFWET fesc_a2DDF	fesc_a3SFWET fesc_a3DDF	fesc_c1SFWET fesc_c1DDF	fesc_c2SFWET fesc_c2DDF	fesc_c3SFWET fesc_c3DDF

fetf					
fetf_a1SFWET fetf_a1DDF	fetf_a2SFWET fetf_a2DDF	fetf_a3SFWET fetf_a3DDF	fetf_c1SFWET fetf_c1DDF	fetf_c2SFWET fetf_c2DDF	fetf_c3SFWET fetf_c3DDF

fesf					
fesf_a1SFWET fesf_a1DDF	fesf_a2SFWET fesf_a2DDF	fesf_a3SFWET fesf_a3DDF	fesf_c1SFWET fesf_c1DDF	fesf_c2SFWET fesf_c2DDF	fesf_c3SFWET fesf_c3DDF

other
gw

Variable meaning

First part of variable name

Global mineral dust: dst1

Agricultural dust:

Variable name	*Emission region*
Dst2	North America and Australia
Dst3	South America
Dst4	Southern Sub-Saharan Africa
Dst5	Northern Sub-Saharan Africa
Dst6	Northern Africa
Dst7	Central Asia
Dst8	Eastern Asia

Deactivated (dead) spores: fets

Viable (alive) spores:

Variable name	*Emission region*
fetm	North America and Australia
fess	South America
fesm	Southern Sub-Saharan Africa
fetc	Northern Sub-Saharan Africa
fesc	Northern Africa
fetf	Central Asia
fesf	Eastern Asia

Second part of variable name (a, c):

a: In-cloud
c: Interstitial

Third part of variable name (1, 2, 3):

1: Accumulation mode
2: Aitken mode
3: Coarse mode

Fourth part of variable name:

DDF: Dry deposition
SFWET: Wet deposition

Other

gw: Area weighting for grid cells

Variable units

$kg/m^2/s$ (all except gw, which is unitless)

Calculation of variables

- Averaging: All variables besides gw are averaged over June 2020
- Tuning: All variables besides gw in the following files are tuned by a factor of 0.1676
    - default_dep_data_tuned.nc
    - production_no_map_dep_data_tuned.nc
    - production_40_year_dep_data_tuned.nc

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