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LIST OF SYMBOLS

SYMBOL

C	conductive heating
E	evaporation
N	number of grid points
M	time integration of the numerical scheme
R	gas constant
$\vec{R}$	radiation vector
S	latent heating
T	temperature
$\vec{V}$	velocity
F_d	drag force of the earth
R_d	dry air gas constant
S_q	phase-change source
g	acceleration due to gravity
k	diffusion coefficients
p	pressure
q	specific humidity
w	weight
c_p	heat capacity at constant pressure
d_t	distance between the trajectories at the time
$\hat{x}_i$	forecast value
x_i	observed value
ρ	density
δ	deviation from the trajectory
λ	Lyapunov exponent
ϕ	geopotential height
Ω	rotation of the earth
α_i	rescaling parameter

LIST OF TECHNICAL TERMS AND ABBREVIATIONS

CTRL	Control Run
EdGCM	Educational Global Climate Model
FSLE	Finite Size Lyapunov Exponent
FTLE	Finite Time Lyapunov Exponent
GCM	Global Climate Model
GISS GCM Model II	Goddard Institute for Space Studies General Circulation Model II
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
LE	Lyapunov Exponents
LLE	Local Lyapunov Exponent
MLE	Maximum Lyapunov Exponent
MoLE	Modified Lyapunov Exponent
NASA/GISS	NASA's Goddard Institute for Space Studies
NWP	Numerical Weather Prediction
PER	Perturbed Run
RMSE	Root Mean Square Error
SLE	Supremum Lyapunov Exponent
med	Median