

Variable	Meaning
tp	Time of ponding [T]
h1	Average depth function in Domain 1 [L]
x0	Start point for a characteristic in Domain 1 [L]
x	Distance along hillslope, moving downhill [L]
r	Rainfall intensity [L/T]
f	Infiltration rate [L/T]
a	Curvature parameter from width function $w=ce^{(ax)}$ [1/L]
alpha	Roughness [ ]
t1	Time characteristic in Domain 1 [T]
tr	Length of rainstorm [T]
hstar1	Depth at tr from Domain 1 solution [L]
xstar1	Location at tr from Domain 1 solution [L]
h2	Average depth function in Domain 2 [L]
t2	Characteristic t(x) in Domain 2 [L]
xtop	Location of divide [L]
hstar2	Depth at tr from Domain 2 [L]
xstar2	Location at tr from Domain 2 [L]
h3	Depth function in Domain 3 [L]
xzw	Location at which characteristic dries up [L]
t3	Characteristic t(x) in Domain 3 [T]
color1	Characteristic color for plotting
colorbold	Color of limiting characteristic
alist	List of a values to solve
different	Boolean for whether hillslopes have different length dimensions

hillslopeSizeDict	Python dictionary for length dimensions, used if different=True
touts_tot	Python dictionary for time values for hydrograph. Keys are a values.
houts_tot	Python dictionary for depth values for hydrograph. Keys are a values.
xstarvals	List of locations at tr
hstarvals	List of depths at tr
houts1	List of depth values from Domain 1 solution
touts1	List of time values from Domain 1 solution
houts2	List of depth values from Domain 2 solution
touts2	List of time values from Domain 2 solution
houts3	List of depth values from Domain 3 solution
touts3	List of time values from Domain 3 solution
xstarplot	List of xstar values to begin at for plotting
x0vals	List of x0's
xvals	List of x's for solving a characteristic along
hvals	List of depths along a characteristic
tvals	List of times along a characteristic
t0vals	List of t0's
xzwvals	List of xzw's
tzwvals	Times associated with xzw's
showq	Boolean for whether or not to plot q in the hydrograph
showQ	Boolean for whether or not to plot Q in the hydrograph
outlet_width	Dictionary of outlet widths. Keys are a values. This is used only if plotting Q and if outletSame = False
outletSame	Boolean for whether or not the outlet widths are the same for all simulations.
outlet	A key defining the outlet width [L]
plotnames	List of keys to refer to different plot cases. Used for coloring and legend.

maxq	Python dictionary for maximum flow rate as q or Q depending on user specification
keylist	Sorted list of a values
qouts	List of q values for hydrograph
Qouts	List of Q values for hydrograph
tmin	List of t values in minutes for hydrograph
qoutsmmhr	List of q values for hydrograph in mm/hr
Qoutsmmhr	List of Q values for hydrograph in mm <sup>2</sup> /hr