; Example script to produce plots for a WRF real-data run,

; with the ARW coordinate dynamics option.

load "$NCARG\_ROOT/lib/ncarg/nclscripts/csm/gsn\_code.ncl"

load "$NCARG\_ROOT/lib/ncarg/nclscripts/csm/gsn\_csm.ncl"

load "$NCARG\_ROOT/lib/ncarg/nclscripts/csm/contributed.ncl"

load "$NCARG\_ROOT/lib/ncarg/nclscripts/wrf/WRFUserARW.ncl"

;load "./WRFUserARW.ncl"

begin

;

; Make a list of all files we are interested in

DATADir = "/scratch/02126/hargrove/nests/member\_52/"

FILES = systemfunc (" ls -1 " + DATADir + "wrfout\_d03\_\* ")

numFILES = dimsizes(FILES)

print("numFILES = " + numFILES)

print(FILES)

print (" ")

; We generate plots, but what kind do we prefer?

; type = "x11"

; type = "pdf"

type = "ps"

; type = "ncgm"

wks = gsn\_open\_wks(type,"precip")

; Set some basic resources

res = True

res@MainTitle = "REAL-TIME WRF"

pltres = True

mpres = True

mpres@mpGeophysicalLineColor = "Black"

mpres@mpNationalLineColor = "Black"

mpres@mpUSStateLineColor = "Black"

mpres@mpGridLineColor = "Black"

mpres@mpLimbLineColor = "Black"

mpres@mpPerimLineColor = "Black"

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f = addfiles(FILES+".nc","r")

times = wrf\_user\_getvar(f,"times",-1) ; get all times in the file

ntimes = dimsizes(times) ; number of times in the file

; Get non-convective, convective and total precipitation

rain\_exp = wrf\_user\_getvar(f,"RAINNC",-1)

rain\_con = wrf\_user\_getvar(f,"RAINC",-1)

rain\_tot = rain\_exp + rain\_con

rain\_tot = rain\_tot\*0.0394

rain\_tot@description = "Total Precipitation"

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do it = 1,numFILES-1

print("Working on time: " + times(it) )

res@TimeLabel = times(it) ; Set Valid time to use on plots

; Plotting options for Precipitation

opts\_r = res

opts\_r@UnitLabel = "in"

opts\_r@cnLevelSelectionMode = "ExplicitLevels"

opts\_r@cnLevels = (/ .1, .25, .5, .75, 1.,1.25, 1.5, \

2., 3., 4., 5./)

opts\_r@cnFillColors = (/"White","White","DarkOliveGreen1", \

"DarkOliveGreen3","Chartreuse", \

"Chartreuse3","Green","ForestGreen", \

"Yellow","Orange","Red","Violet"/)

opts\_r@cnInfoLabelOn = False

opts\_r@cnConstFLabelOn = False

opts\_r@cnFillOn = True

; Total Precipitation (color fill)

contour\_tot = wrf\_contour(f[it],wks, rain\_tot(it,:,:), opts\_r)

delete(opts\_r)

; MAKE PLOTS

; Total Precipitation

plot = wrf\_map\_overlays(f[it],wks,contour\_tot,pltres,mpres)

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end do ; END OF TIME LOOP

end