; 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