Script for Kansas test case KANSAS01 (Part 1)

* -------------- preliminaries -------------- *

from your home directory:

\$ csh /network/rit/home/atm419/modify_cshrc.csh
\$ resource

* allocate one node on snow
* make a directory in your lab space called KANSAS, and move into it
* copy /network/rit/lab/atm419lab/KANSAS/SETUP.tar and unpack it
* execute make_all_links.csh as usual

* -------------- geogrid --------------------- *

srun geogrid.exe
ncl plotgrids.ncl
ncwa -y max -v MAPFAC_M geo_em.d01.nc junk.nc
ncdump junk.nc
ncwa -y min -v MAPFAC_M geo_em.d01.nc junk2.nc
ncdump junk2.nc

IF NECESSARY: call ncwa using full path: e.g.,
/network/rit/lab/snowclus/bin/ncwa -y max -v MAPFAC_M geo_em.d01.nc junk.nc
ncview geo_em.d01.nc
[select 2D variable MAPFAC_M from drop down menu]

* -------------- ungrib ---------------------- *

link_grib.csh /network/rit/lab/atm419lab/GFS_2016031300/gfs.*
ls -al GRIBFILE*
wgrib2 GRIBFILE.AAA | more
cp Vtable.GFS Vtable
srun ungrib.exe (this takes some time...)
ls FILE*
ncl62 plotfmt.ncl 'filename="FILE:2016-03-13_00"' (requires NCL v. 6.2)
[Ctrl-C to break out when you're done]

* -------------- metgrid --------------------- *
srun metgrid.exe
ls met_em*

ncdump met_em.d01.2016-03-13_00:00:00.nc | more

* -------------- TOUR of batch scripts  -------------- *
(see PPT)

* -------------- real.exe  -------------- *
sbatch -p snow submit_real
[check job status as directed]
squeue -u [yournetid]

[when job is finished, check ‘tail’ of rsl.out.0000 file with ‘trsl’ command.  
Make sure it says “SUCCESS COMPLETE REAL_EM INIT”]
trsl
ls -al wrfbdy* wrfin*

* -------------- wrf.exe  -------------- *
sbatch -p snow submit_wrf
[check job status as directed]
squeue -u [yournetid]

* -------------- while WRF is running  -------------- *
* -------------- look at wrfinput_d01  -------------- *
python read_wrfinput.py wrfinput_d01
srun wrf_to_grads control_file.real real_grads
open real_grads.ctl in GrADS
then run script terrain.gs

* monitor WRF run
trsl

* -------------- TOUR of namelist.input settings  -------------- *
(see PPT)
when WRF job finishes

[check for successful completion with 'trsl']

ls -1 wrfout_d01*

[control_file already configured to read in these wrfout files]
srun wrf_to_grads control_file.3Ds kansas01

* look at kansas01.ctl

open kansas01.ctl in GrADS
set mpdset hires
step.gs slvl 1 49 4

c
set t 13
wind.gs

c
* looking at a single point, near Wichita, KS. Daytime will be ~ 12Z to 00Z
set t 1 49
set z 1
set lat 38
set lon -97
d swdown
c
d mag(u,v)
c
d theta

(look at 296 K contour @18Z day 1, 300 K day 2)

c
set z 1
d max(mag(u,v),z=1,z=10)
(d max wind over lowest 10 levels, about 1500m)
d mag(u10,v10)

c
set z 1 10
set lon -105
(d theta
(c
d mag(u,v)

(make or copy kansas01_z.ctl)

* ----- OR cp ../..//KANSAS/kansas01_z*. 
srun wrf_to_grads control_file.3Dz kansas01_z
set t 13
vert_xz.gs

(West-east vertical x-section along 38N)