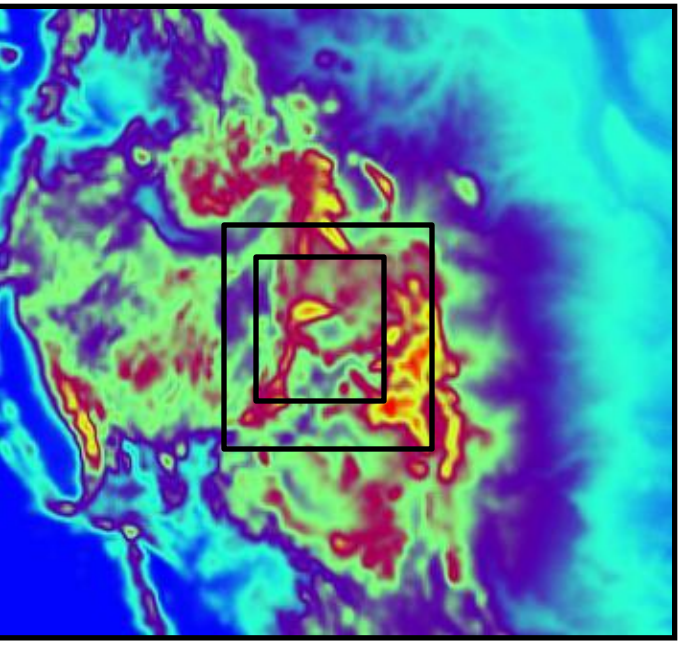
UU Unitah Basin WRF Model Configuration

- **See Alcott and Steenburgh 2013 for further details on most aspects of this numerical configuration:**
- **http://journals.ametsoc.org/doi/abs/10.1175/MWR-D-12-00328.1**
- **Namelist used for real.exe is located at:** http://home.chpc.utah.edu/~u0198116/ubos/namelist_wps
- **Namelist used for wrf.exe is located at**: http://home.chpc.utah.edu/~u0198116/ubos/namelist.input
- **Overview summary of WRF Namelist options**

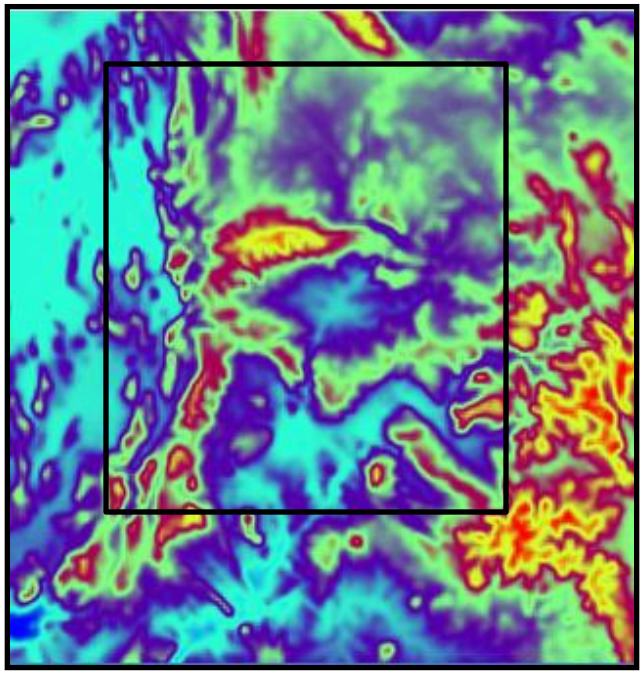
- map_proj= 1: Lambert Conformal
- NAM analyses provide initial cold start and land-surface conditions, and lateral boundary.
- Idealized snowcover as function of height input to replace poor NOHRSC snow
- Domain (see next slide)
- Number of vertical levels = 109
- Time step = 45 seconds (15, 5 s for inner 2 grids)
- Microphysics: Thompson scheme
- Radiation: RRTM longwave, RRTMG shortwave
- Surface layer: Monin-Obukov
- NOAH land-surface option
- YSU PBL Scheme
- Kain-Fritsch cumulus scheme in outer coarse 12 km grid
- Slope effects for radiation, topo shading turned on
- 2nd order diffusion on coordinate surfaces
- Horizontal Smagorinsky first-order closure for eddy coefficient

Domains

1 - Outer (12.15km)



2 - Middle (4.05km)



3 - Inner (1.35km)