

### “diags\_d02\_FHHH.nc”

Here are, at a minimum, the variables contained in the “diags\_d02\_fHHH.nc” files. As the system is evolving, there may be a few additional fields than those listed here after certain dates. Two of the more important fields that were added after April 30, 2015 are listed as well.

Variable	Description
<b>T2</b>	2-m temperature
<b>Q2</b>	2-m mixing ratio
<b>U10</b>	10-m zonal wind
<b>V10</b>	10-m meridional wind
<b>RAINNC</b>	Running total accumulated precipitation (parameterized)
<b>RAINNC</b>	Running total accumulated precipitation (explicit)
<b>PREC_ACC_NC</b>	1-hr accumulated precipitation (explicit)
<b>GRAUPELNC</b>	Total accumulated graupel
<b>HAILNC</b>	Total accumulated hail
<b>HFX</b>	Sensible upward heat flux at surface
<b>LH</b>	Latent heat flux at surface
<b>SNOW</b>	Snow water equivalent
<b>SNOWH</b>	Physical snow depth
<b>SNOWC</b>	Snow coverage flag (1 for snow cover)
<b>SNOWNC</b>	Running total accumulated snow (explicit)
<b>SNOW_ACC_NC</b>	1-hr accumulated snow (explicit)
<b>HAIL_MAXK1</b>	G. Thompson Hail field 1
<b>HAIL_MAX2D</b>	G. Thompson Hail field 2
<b>WSPD10MAX</b>	Hourly-max 10-m wind speed
<b>W_UP_MAX</b>	Hourly-max updraft speed
<b>W_DN_MAX</b>	Hourly-max downdraft speed
<b>UP_HELI_MAX</b>	Hourly-max 2-5-km updraft helicity >0
<b>UP_HELI_MIN</b>	Hourly-max 2-5-km updraft helicity < 0
<b>W_MEAN</b>	Hourly mean vertical velocity
<b>GRPL_MAX</b>	Hourly-max column integrated graupel
<b>C_PBLH</b>	Coniglio PBL height

<b>LTG1_MAX</b>	Lightning threat 1
<b>LTG2_MAX</b>	Lightning threat 2
<b>LTG3_MAX</b>	Lightning threat 3
<b>AFWA_FZRA</b>	Total accumulated freezing rain from AFWA diagnostic
<b>AFWA_ICE</b>	Total accumulated sleet from AFWA diagnostic
<b>AFWA_MSLP</b>	Sea-level pressure from AFWA diagnostic
<b>AFWA_SNOWFALL</b>	Total accumulated snowfall from AFWA diagnostic
<b>REFD_MAX</b>	Maximum column derived radar reflectivity
<b><u>Beginning April 30, 2015</u></b>	
<b>RVORT1_MAX</b>	Hourly-max relative vorticity at 1-km AGL
<b>UP_HELI_MAX03</b>	Hourly-max 0-3-km updraft helicity > 0

### **GRIB files**

Here are, at a minimum, the variables contained in the “ncar\_3km\_YYYYMMDDCC\_mem?\_fHHH.{grb.gz,grb2}” files. As the system is evolving, there may be additional fields than those listed here after certain dates. In fact, beginning October 13, 2015, there are consistently more fields than listed below. Please see “README.grib2” for those records.

The variable names below correspond to those that we use when converting the GRIB files to NETCDF files (for plotting purposes). We did not archive the NETCDF files because they are larger.

<b>Variable</b>	<b>Description</b>
<b>TROP_HEIGHT</b>	Tropopause Height
<b>DEWPOINT_2M</b>	2-m Dewpoint
<b>SR_HELICITY 0-3km</b>	Storm relative helicity 0-3km
<b>SFC_LI</b>	Surface Lifted Index
<b>PARCEL_LIFT_LEV</b>	Press of level where parcel lifted
<b>UBSHR1</b>	zonal 0-1km shear
<b>VBSHR1</b>	meridional 0-1km shear
<b>UBSHR6</b>	zonal 0-6km shear
<b>VBSHR6</b>	meridional 0-6km shear
<b>SBCAPE</b>	Sfc based CAPE

<b>SBCINH</b>	Sfc based CINH
<b>MLCAPE</b>	Mixed layer CAPE
<b>MLCINH</b>	Mixed layer CIHN
<b>BMIN_SFC</b>	Sfc based Buoyancy minimum
<b>PBMIN_SFC</b>	Sfc based Press of BMIN
<b>BMIN (mixed lyr)</b>	Mixed layer BMIN
<b>PBMIN (mixed lyr)</b>	Mixed layer PBMIN
<b>PVORT_320K</b>	Potential vorticity on 320K isentrope
<b>LCL_HEIGHT</b>	LCL height above ground level
<b>U_COMP_STM</b>	zonal component of storm motion
<b>V_COMP_STM</b>	meridional component of storm motion
<b>REFD 1KM AGL</b>	1km AGL reflectivity
<b>REFL_MAX_COL</b>	Composite (column max) reflectivity
<b>PWAT</b>	Precipitable water
<b>MSLP (SHUELL)</b>	Sea level pressure (Sheull formulation from UPP)
<b>CLD_TOP_TEMP</b>	Cloud top temperature
<b>GOESE TB-3 non</b>	GOES East simulated water vapor
<b>GOESE TB-4 non</b>	GOES East simulated IR
<b>GOESW TB-3 non</b>	GOES West simulated water vapor
<b>GOESW TB-4 non</b>	GOES West simulated IR