Variables description

Name	Dimension	Type	Units	Description
tc	4D	decimal	deg C	Temperature
tc2	3D	decimal	deg C	Temperature at 2 m above ground (model terrain)
icing	4D	integer		Active icing conditions [Yes-1, No-0]
wdir	4D	decimal	degrees	Wind direction relative to local north
times	1D	integer		UNIX epoch time
xlat	3D	decimal	degrees N	Latitude of mass point, south is negative
xlong	3D	decimal	degrees E	Longitude of mass point, west is negative
dx	3D	integer	m	WRF model horizontal grid resolution
zl	4D	decimal	m	Level height above ground (model terrain)
hgt	3D	decimal	m	Model terrain height above sea level
wsp	4D	decimal	m s**-1	Wind speed
prs	4D	decimal	Pa	Air pressure
psfc	3D	decimal	Pa	Air pressure at surface
tk	4D	decimal	K	Air temperature
rh	4D	decimal	%	Relative humidity
rho	4D	decimal	kg m**-3	Air density
qvapor	4D	decimal	kg kg**-1	Water wapor mixing ratio
qcloud	4D	decimal	kg kg**-1	Cloud water mixing ratio
qrain	4D	decimal	kg kg**-1	Rain water mixing ratio
qice	4D	decimal	kg kg**-1	Ice mixing ratio
qnrain	4D	decimal	kg**-1	Rain number concentration
rainc	3D	decimal	mm	Accumulated total cumulus precipitation
rainnc	3D	decimal	mm	Accumulated total grid-scale precipitation
snownc	3D	decimal	mm	Accumulated total grid-scale snow and ice
graupelnc	3D	decimal	mm	Accumulated total grid scale graupel

hailnc	3D	decimal	mm	Accumulated total grid scale hail
snow	3D	decimal	kg m**-2	Snow water equivalent
snowh	3D	decimal	m	Physical snow depth
swdown	3D	decimal	W m**-2	Downward short wave flux at ground surface
swddni	3D	decimal	W m**-2	Shortwave surface downward direct normal irradiance
swddif	3D	decimal	W m**-2	Shortwave surface downward diffuse irradiance
luindex	3D	integer		Land use category
landmask	3D	integer		Landmask [0: off, 1: on]
wsp10	3D	decimal	m s**-1	Wind speed at 10 m above ground
wdir10	3D	decimal	degrees	Wind direction at 10 m above ground relative to local north
q2	3D	decimal	kg kg**-1	Water vapor mixing ratio at 2 m above ground
t2	3D	decimal	K	Air temperature at 2 m above ground
hfx	3D	decimal	W m**-2	Upward heat flux at the surface
ust	3D	decimal	m s**-1	U* in similarity theory
tkepbl	3D	decimal	m**2 s**-2	Destaggered TKE from the PBL
w	4D	decimal	m s**-1	Destaggered vertical wind component
pblh	3D	decimal	m	PBL height
elpbl	4D	decimal	m	Destaggered length scale from PBL
u	4D	decimal	m s**-1	Destaggered local W-E wind component
v	4D	decimal	m s**-1	Destaggered local S-N wind component
u10	3D	decimal	m s**-1	Local E-W wind component at 10 m above ground
v10	3D	decimal	m s**-1	Local S-N wind component at 10 m above ground
rainsh	3D	decimal	mm	Accumulated shallow cumulus precipitation
snowc	3D	integer		Flag for snow coverage (1 for snow cover)
qsnow	4D	decimal	kg kg**-1	Snow mixing ratio
qgraup	4D	decimal	kg kg**-1	Graupel mixing ratio

qnice	4D	decimal	kg**-1	Ice number concentration
albedo	3D	decimal		Albedo
sst	3D	decimal	K	Sea surface temperature
seaice	3D	integer		Sea ice flag
tsk	3D	decimal	K	Surface skin temperature
vegfra	3D	decimal		Vegetation fraction
lai	3D	decimal		Leaf area index
glw	3D	decimal	W m**-2	Downward long wave flux at ground surface
olr	3D	decimal	W m**-2	TOA outgoing long wave
lh	3D	decimal	W m**-2	Latent heat flux at the surface
emiss	3D	decimal		Surface emissivity
sr	3D	decimal		Fraction of frozen precipitation
sroff	3D	decimal	mm	Surface runoff
udroff	3D	decimal	mm	Underground runoff
mapfacm	3D	decimal		Map scale factor on mass grid
mapfacmx	3D	decimal		Map scale factor on mass grid, x direction
mapfacmy	3D	decimal		Map scale factor on mass grid, y direction
xland	3D	integer		Land mask (1 for land, 2 for water)
sinalpha	3D	decimal		Local sine of map rotation
cosalpha	3D	decimal		Local cosine of map rotation