

axis id	standard_name	units	comment
time	time	seconds since YYYY-MM-DD HH:MM:SS	of the form "seconds since YYYY-MM-DD HH:MM:SS" where YYYY-MM-DD HH:MM:SS is the initial date of the simulation. The 'calendar' attribute must be specified
levf	full_level_number	-	could be full-level pressure/altitude whenever relevant possibly add axis='z' attribute
levh	half_level_number	-	could be half-level pressure/altitude whenever relevant possibly add axis='z' attribute
plev	air_pressure	Pa	generic pressure level axis
variable id	standard_name	units	comment
Standard variables			
longitude	longitude	degrees_east	
latitude	latitude	degrees_north	
pa	air_pressure	Pa	
pfull	air_pressure_on_model_levels	Pa	
phalf	air_pressure_on_model_half_levels	Pa	
zf	height	m	above reference ellipsoid
zfull	height_of_model_levels	m	above reference ellipsoid
zhalf	height_of_model_half_levels	m	above reference ellipsoid
rho	air_volumic_mass	kg m-3	
ta	air_temperature	K	
qv	specific_humidity	1	
rv	humidity_mixing_ratio	1	
qt	total_water_content	1	specific mass
rt	total_water_mixing_ratio	1	
hur	relative_humidity	1	Relative to ice/liquid water depending on temperature
hurl	relative_humidity_wrt_liquid	1	Relative to liquid
huri	relative_humidity_wrt_ice	1	Relative to ice
ua	eastward_wind	m s-1	
va	northward_wind	m s-1	
wa	upward_air_velocity	m s-1	

wap	lagrangian_tendency_of_air_pressure	Pa s-1	
theta	air_potential_temperature	K	
thetav	air_virtual_potential_temperature	K	
thetal	air_liquid_potential_temperature	K	
tke	specific_turbulent_kinetic_energy	m2 s-2	
Microphysical species			
qlrad	radiatively_active_liquid_water_content	1	specific mass
qirad	radiatively_active_ice_water_content	1	specific mass
ql	mass_fraction_of_cloud_liquid_water_in_air	1	specific mass, $ql = qls+qlc$
qls	mass_fraction_of_stratiform_cloud_liquid_water_in_air	1	specific mass
qlc	mass_fraction_of_convective_cloud_liquid_water_in_air	1	specific mass
qi	mass_fraction_of_cloud_ice_water_in_air	1	specific mass, $qi = qis+qic$
qis	mass_fraction_of_stratiform_cloud_ice_water_in_air	1	specific mass
qic	mass_fraction_of_convective_cloud_ice_water_in_air	1	specific mass
qr	mass_fraction_of_rain_water_in_air	1	specific mass, $qr = qrs+qrc$
qrs	mass_fraction_of_stratiform_rain_water_in_air	1	specific mass
qrc	mass_fraction_of_convective_rain_water_in_air	1	specific mass
qsn	mass_fraction_of_snow_water_in_air	1	specific mass, $qsn = qsns+qsnc$
qsns	mass_fraction_of_stratiform_snow_water_in_air	1	specific mass
qsnc	mass_fraction_of_convective_snow_water_in_air	1	specific mass
rl	cloud_liquid_water_mixing_ratio	1	
ri	cloud_ice_water_mixing_ratio	1	
rr	rain_water_mixing_ratio	1	
rsn	snow_water_mixing_ratio	1	
Cloud variables			
cl	cloud_area_fraction_in_atmospheric_layer	1	
cls	stratiform_cloud_area_fraction_in_atmospheric_layer	1	
clc	convective_cloud_area_fraction_in_atmospheric_layer	1	
clt	cloud_area_fraction	1	for the whole atmospheric column, depends on overlap assumption of the model
Precipitation variables			

pr	precipitation_flux_at_surface	kg m-2 s-1	include both liquid and solid phase
pri	rainfall_flux_at_surface	kg m-2 s-1	
prsn	snowfall_flux_at_surface	kg m-2 s-1	
Vertically-integrated variables			
prw	atmospheric_water_vapor_content	kg m-2	or equivalently water vapor path
cwp	atmospheric_condensed_water_content	kg m-2	Radiatively-active or not ??
lwp	atmospheric_liquid_water_content	kg m-2	Radiatively-active or not ??
iwp	atmospheric_ice_water_content	kg m-2	Radiatively-active or not ??
Surface turbulent flux variables			
hfss	surface_upward_sensible_heat_flux	W m-2	Positive upward
hfis	surface_upward_latent_heat_flux	W m-2	Positive upward
ustar	surface_friction_velocity	m s-1	
Surface variables			
ps	surface_pressure	Pa	
ts	surface_temperature	K	
tskin	skin_surface_temperature	K	
tas	2m_air_temperature	K	
qvs	2m_specific_humidity		1
qs	surface_humidity		1
mrso	soil_moisture_content	kg m-2	
Tendencies			
tnta	tendency_of_air_temperature	K s-1	total temperature tendency
tnta_adv	tendency_of_air_temperature_due_to_advection	K s-1	
tnta_advh	tendency_of_air_temperature_due_to_horizontal_advection	K s-1	
tnta_advv	tendency_of_air_temperature_due_to_vertical_advection	K s-1	
tnta_nud	tendency_of_air_temperature_due_to_nudging	K s-1	
tnta_diab	tendency_of_air_temperature_due_to_diabatic_processes	K s-1	
tnta_conv	tendency_of_air_temperature_due_to_convection	K s-1	shallow + deep convection contributions
tnta_shconc	tendency_of_air_temperature_due_to_shallow_convection	K s-1	
tnta_dconv	tendency_of_air_temperature_due_to_deep_convection	K s-1	
tnta_turb	tendency_of_air_temperature_due_to_turbulence	K s-1	

tnta_micro	tendency_of_air_temperature_due_to_microphysics	K s-1	
tnta_rad	tendency_of_air_temperature_due_to_radiation	K s-1	total
tnta_radsw	tendency_of_air_temperature_due_to_sw_radiation	K s-1	short-wave component
tnta_radlw	tendency_of_air_temperature_due_to_lw_radiation	K s-1	long-wave component
tnta_radswcs	tendency_of_air_temperature_due_to_sw_clear_sky_radiation	K s-1	clear-sky short-wave component
tnta_radlwcs	tendency_of_air_temperature_due_to_lw_clear_sky_radiation	K s-1	clear-sky long-wave component
tnta_wake	tendency_of_air_temperature_due_to_wake	K s-1	
tnqv	tendency_of_specific_humidity	s-1	total specific humidity tendency
tnqv_adv	tendency_of_specific_humidity_due_to_advection	s-1	
tnqv_advh	tendency_of_specific_humidity_due_to_horizontal_advection	s-1	
tnqv_advv	tendency_of_specific_humidity_due_to_vertical_advection	s-1	
tnqv_nud	tendency_of_specific_humidity_due_to_nudging	s-1	
tnqv_diab	tendency_of_specific_humidity_due_to_diabatic_processes	s-1	
tnqv_conv	tendency_of_specific_humidity_due_to_convection	s-1	shallow + deep convection contributions
tnqv_shconv	tendency_of_specific_humidity_due_to_shallow_convection	s-1	
tnqv_dconv	tendency_of_specific_humidity_due_to_deep_convection	s-1	
tnqv_turb	tendency_of_specific_humidity_due_to_turbulence	s-1	
tnqv_micro	tendency_of_specific_humidity_due_to_microphysics	s-1	
tnqv_wake	tendency_of_specific_humidity_due_to_wake	s-1	
tnua	tendency_of_eastward_wind	m s-2	total eastward wind tendency
tnua_adv	tendency_of_eastward_wind_due_to_advection	m s-2	
tnua_advh	tendency_of_eastward_wind_due_to_horizontal_advection	m s-2	
tnua_advv	tendency_of_eastward_wind_due_to_vertical_advection	m s-2	
tnua_nud	tendency_of_eastward_wind_due_to_nudging	m s-2	
tnua_geo	tendency_of_eastward_wind_due_to_geostrophic_forcing	m s-2	
tnua_diab	tendency_of_eastward_wind_due_to_diabatic_processes	m s-2	
tnua_conv	tendency_of_eastward_wind_due_to_convection	m s-2	shallow + deep convection contributions
tnua_shconc	tendency_of_eastward_wind_due_to_shallow_convection	m s-2	
tnua_dconv	tendency_of_eastward_wind_due_to_deep_convection	m s-2	
tnua_turb	tendency_of_eastward_wind_due_to_turbulence	m s-2	
tnva	tendency_of_northward_wind	m s-2	total westward wind tendency

tnva_adv	tendency_of_northward_wind_due_to_advection	m s-2	
tnva_advh	tendency_of_northward_wind_due_to_horizontal_advection	m s-2	
tnva_advv	tendency_of_northward_wind_due_to_vertical_advection	m s-2	
tnva_nud	tendency_of_northward_wind_due_to_nudging	m s-2	
tnva_geo	tendency_of_northward_wind_due_to_geostrophic_forcing	m s-2	
tnva_diab	tendency_of_northward_wind_due_to_diabatic_processes	m s-2	
tnva_conv	tendency_of_northward_wind_due_to_convection	m s-2	shallow + deep convection contributions
tnva_shconc	tendency_of_northward_wind_due_to_shallow_convection	m s-2	
tnva_dconv	tendency_of_northward_wind_due_to_deep_convection	m s-2	
tnva_turb	tendency_of_northward_wind_due_to_turbulence	m s-2	
Fluxes			
	To be completed		
Convection parameterization variables			
mf_up	convective_updraft_mass_flux	kg m-2 s-1	To be used when convection scheme does not treat separately shallow and deep convection
alpha_up	convective_updraft_fraction	1	
w_up	convective_updraft_vertical_velocity	m s-1	
omega_up	convective_updraft_pressure_velocity	Pa s-1	
ta_up	convective_updraft_air_temperature	K	
qv_up	convective_updraft_specific_humidity	1	
b_up	convective_updraft_buoyancy	m s-2	
ent_up	convective_entrainment	m-1	
det_up	convective_detrainment	m-1	
mf_up_shconv	shallow_convective_updraft_mass_flux	kg m-2 s-1	
alpha_up_shconv	shallow_convective_updraft_fraction	1	
wa_up_shconv	shallow_convective_updraft_vertical_velocity	m s-1	
wap_up_shconv	shallow_convective_updraft_pressure_velocity	Pa s-1	
ta_up_shconv	shallow_convective_updraft_temperature	K	
qv_up_shconv	shallow_convective_updraft_specific_humidity	1	
b_up_shconv	shallow_convective_updraft_buoyancy	m s-2	
ent_up	shallow_convective_entrainment	m-1	
det_up	shallow_convective_detrainment	m-1	

mf_up_dconv	deep_convection_updraft_mass_flux	kg m-2 s-1	
alpha_up_dconv	deep_convective_updraft_fraction		1
wa_up_dconv	deep_convective_updraft_vertical_velocity	m s-1	
wap_up_dconv	deep_convective_updraft_pressure_velocity	Pa s-1	
ta_up_dconv	deep_convective_updraft_temperature	K	
qv_up_dconv	deep_convective_updraft_specific_humidity		1
b_up_dconv	deep_convective_updraft_buoyancy	m s-2	
ent_up_dconv	deep_convective_entrainment	m-1	
det_up_dconv	deep_convective_detrainment	m-1	
Wake parameterization variables			
delta_ta	air_temperature_difference_between_wake_and_offwake_regions	K	
delta_theta	potential_temperature_difference_between_wake_and_offwake_regions	K	
delta_qv	specific_humidity_difference_between_wake_and_offwake_regions		1 specific mass
sigmaw	wake_fractional_area		1
hw	wake_depth	m	
wdens	wake_density	m-2	
cstar	wake_spreading_velocity	m s-1	
wake_pe	wake_potential_energy	J kg-1	WAPE
wake_alp	wake_available_lifting_power	W m-2	
wake_wap	wake_vertical_velocity	Pa s-1	
delta_tnta_dconv	differential_tendency_of_air_temperature_between_wake_and_offwake_regions_due_to_convection	K s-1	
delta_tnqv_dconv	differential_tendency_of_specific_humidity_between_wake_and_offwake_regions_due_to_convection	s-1	
delta_tnta_turb	differential_tendency_of_air_temperature_between_wake_and_offwake_regions_due_to_turbulence	K s-1	
delta_tnqv_turb	differential_tendency_of_specific_humidity_between_wake_and_offwake_regions_due_to_turbulence	s-1	
Radiative flux variables			
rlid	downwelling_longwave_flux_in_air	W m-2	vertical profile
rlu	upwelling_longwave_flux_in_air	W m-2	vertical profile
rsd	downwelling_longwave_flux_in_air	W m-2	vertical profile

