

inst0_3d_ovp_Nv: Daily Satellite Overpass Fields

Frequency: *daily from 00:00 UTC (instantaneous)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=72, time=1*

Granule Size: *~1.3 GB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
OVP10_AGE	tzyx	Age of air (uniform source) tracer 10am local	days
OVP10_CH2O	tzyx	Formaldehyde 10am local	mol mol-1
OVP10_CH4	tzyx	Methane 10am local	mol mol-1
OVP10_CO	tzyx	Carbon monoxide 10am local	mol mol-1
OVP10_EM_LG TNO	tzyx	NO emissions from lightning 10am local	mol mol-1 s-1
OVP10_EPV	tzyx	ertels potential vorticity 10am local	K m+2 kg-1 s-1
OVP10_FCLD	tzyx	cloud area fraction 10am local	1
OVP10_GOCAR T_SO2_VMR	tzyx	Sulphur dioxide 10am local	mol mol-1
OVP10_GOCAR T_SO2v_VMR	tzyx	Sulphur dioxide volcanic 10am local	mol mol-1
OVP10_NO	tzyx	Nitric oxide 10am local	mol mol-1
OVP10_NO2	tzyx	Nitrogen dioxide 10am local	mol mol-1
OVP10_O3	tzyx	Ozone 10am local	mol mol-1
OVP10_PL	tzyx	mid level pressure 10am local	Pa
OVP10_PPBL	tyx	pbltop pressure 10am local	Pa
OVP10_PS	tyx	surface pressure 10am local	Pa
OVP10_QLTOT	tzyx	mass fraction of cloud liquid water 10am local	kg kg-1
OVP10_QV_VM R	tzyx	water vapor 10am local	mol mol-1
OVP10_T	tzyx	air temperature 10am local	K
OVP10_TAUTT	tyx	optical thickness of all clouds 10am local	1
OVP10_TOTEX TTAU	tyx	Total Aerosol Extinction AOT [550 nm] 10am local	1
OVP10_TROPP	tyx	tropopause pressure 10am local	Pa
OVP10_U10	tyx	eastward 10m wind speed 10am local	m s-1
OVP10_V10	tyx	northward 10m wind speed 10am local	m s-1
OVP10_stO3	tzyx	Strat Ozone w/ loss in Troposphere 10am local	mol mol-1
OVP14_AGE	tzyx	Age of air (uniform source) tracer 2pm local	days
OVP14_Br	tzyx	Ground state atomic bromine 2pm local	mol mol-1

OVP14_BrCl	tzyx	Bromine chloride 2pm local	mol mol-1
OVP14_BrO	tzyx	Bromine monoxide 2pm local	mol mol-1
OVP14_BrONO2	tzyx	Bromine nitrate 2pm local	mol mol-1
OVP14_CH2O	tzyx	Formaldehyde 2pm local	mol mol-1
OVP14_CH3Cl	tzyx	Methyl chloride 2pm local	mol mol-1
OVP14_CH4	tzyx	Methane 2pm local	mol mol-1
OVP14_CO	tzyx	Carbon monoxide 2pm local	mol mol-1
OVP14_Cl	tzyx	Ground state atomic chlorine 2pm local	mol mol-1
OVP14_Cl2	tzyx	Molecular chlorine 2pm local	mol mol-1
OVP14_Cl2O2	tzyx	Chlorine peroxide 2pm local	mol mol-1
OVP14_ClO	tzyx	Chlorine monoxide radical 2pm local	mol mol-1
OVP14_ClONO2	tzyx	Chlorine nitrate 2pm local	mol mol-1
OVP14_EM_LG TNO	tzyx	NO emissions from lightning 2pm local	mol mol-1 s-1
OVP14_EPV	tzyx	ertels potential vorticity 2pm local	K m+2 kg-1 s-1
OVP14_FCLD	tzyx	cloud area fraction 2pm local	1
OVP14_GOCAR T_NH3_VMR	tzyx	Ammonia 2pm local	mol mol-1
OVP14_GOCAR T_SO2_VMR	tzyx	Sulphur dioxide 2pm local	mol mol-1
OVP14_GOCAR T_SO2v_VMR	tzyx	Sulphur dioxide volcanic 2pm local	mol mol-1
OVP14_HBr	tzyx	Hydrogen bromide 2pm local	mol mol-1
OVP14_HCOOH	tzyx	Formic Acid 2pm local	mol mol-1
OVP14_HCl	tzyx	Hydrochloric acid 2pm local	mol mol-1
OVP14_HNO3	tzyx	Nitric acid 2pm local	mol mol-1
OVP14_HNO3C OND	tzyx	Condensed nitric acid 2pm local	mol mol-1
OVP14_HO2	tzyx	Perhydroxyl radical 2pm local	mol mol-1
OVP14_HOBr	tzyx	Hypobromous acid 2pm local	mol mol-1
OVP14_HOCl	tzyx	Hypochlorous acid 2pm local	mol mol-1
OVP14_ISOP	tzyx	Isoprene 2pm local	mol mol-1
OVP14_MOH	tzyx	Methanol 2pm local	mol mol-1
OVP14_N2O	tzyx	Nitrous oxide 2pm local	mol mol-1
OVP14_NO	tzyx	Nitric oxide 2pm local	mol mol-1
OVP14_NO2	tzyx	Nitrogen dioxide 2pm local	mol mol-1
OVP14_O3	tzyx	Ozone 2pm local	mol mol-1
OVP14_OCIO	tzyx	Symmetrical chlorine dioxide 2pm local	mol mol-1
OVP14_OH	tzyx	Hydroxyl radical 2pm local	mol mol-1
OVP14_PAN	tzyx	Peroxyacetyl nitrate 2pm local	mol mol-1

OVP14_PL	tzyx	mid level pressure 2pm local	Pa
OVP14_PPBL	tyx	pbltop pressure 2pm local	Pa
OVP14_PS	tyx	surface pressure 2pm local	Pa
OVP14_QLTOT	tzyx	mass fraction of cloud liquid water 2pm local	kg kg-1
OVP14_QV_VM R	tzyx	water vapor 2pm local	mol mol-1
OVP14_R4N2	tzyx	C4-C5 alkyl nitrates (C4H9O3N) 2pm local	mol mol-1
OVP14_T	tzyx	air temperature 2pm local	K
OVP14_TAUTT	tyx	optical thickness of all clouds 2pm local	1
OVP14_TOTEX TTAU	tyx	Total Aerosol Extinction AOT [550 nm] 2pm local	1
OVP14_TROPP	tyx	tropopause pressure 2pm local	Pa
OVP14_U10	tyx	eastward 10m wind speed 2pm local	m s-1
OVP14_V10	tyx	northward 10m wind speed 2pm local	m s-1
OVP14_stO3	tzyx	Strat Ozone w/ loss in Troposphere 2pm local	mol mol-1

inst1_2d_bot_Nx: Bottom Layer Diagnostics

Frequency: 1-hourly from 01:00 UTC (instantaneous)

Spatial Grid: 2D, single-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=1, time=24

Granule Size: ~177 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
BCMASS_BOT	tzyx	Black Carbon Mass Mixing Ratio	kg/kg
CO_BOT	tzyx	Carbon monoxide	mol mol-1
DD_O3_BOT	tyx	dry deposition of OX	kg m-2 s-1
DELP_BOT	tzyx	pressure thickness	Pa
DUMASS25_BO T	tzyx	Dust Mass Mixing Ratio - PM 2.5	kg kg-1
NIMASS25_BO T	tzyx	Nitrate Mass Mixing Ratio [PM2.5]	kg/kg
NIMASS_BOT	tzyx	Nitrate Mass Mixing Ratio	kg/kg
NO2_BOT	tzyx	Nitrogen dioxide	mol mol-1
NO_BOT	tzyx	Nitric oxide	mol mol-1
O3_BOT	tzyx	Ozone	mol mol-1
OCMASS_BOT	tzyx	Organic Carbon Mass Mixing Ratio	kg kg-1
PL_BOT	tzyx	mid level pressure	Pa
PM25_BOT	tyx	Total reconstructed PM2.5	kg m-3
PM_BOT	tyx	Total reconstructed PM	kg m-3

PS	tyx	surface pressure	Pa
SO4MASS_BOT	tzyx	SO4 Aerosol Mass Mixing Ratio	kg kg-1
SO4MASSvolc_BOT	tzyx	SO4 Aerosol Mass Mixing Ratio (Volcanic)	kg kg-1
SSMASS25_BOT	tzyx	Sea Salt Mass Mixing Ratio - PM 2.5	kg kg-1
T_BOT	tzyx	air temperature	K
stO3_BOT	tzyx	Strat Ozone w/ loss in Troposphere	mol mol-1

inst1_2d_met_Nx: Single-Level Diagnostics

Frequency: 1-hourly from 01:00 UTC (instantaneous)

Spatial Grid: 2D, single-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, time=24

Granule Size: ~201 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DISPH	tyx	zero plane displacement height	m
GMITO3	tyx	total ozone	dobsons
GMITTO3	tyx	total tropospheric ozone	dobsons
PS	tyx	surface pressure	Pa
QV10M	tyx	10-meter specific humidity	kg kg-1
QV2M	tyx	2-meter specific humidity	kg kg-1
SLP	tyx	sea level pressure	Pa
T10M	tyx	10-meter air temperature	K
T2M	tyx	2-meter air temperature	K
TQI	tyx	total precipitable ice water	kg m-2
TQL	tyx	total precipitable liquid water	kg m-2
TQV	tyx	total precipitable water vapor	kg m-2
TROPPB	tyx	tropopause pressure based on blended estimate	Pa
TROPPT	tyx	tropopause pressure based on thermal estimate	Pa
TROPPV	tyx	tropopause pressure based on EPV estimate	Pa
TROPQ	tyx	tropopause specific humidity using blended TROPP estimate	kg kg-1
TROPT	tyx	tropopause temperature using blended TROPP estimate	K
TS	tyx	surface skin temperature	K
U10M	tyx	10-meter eastward wind	m s-1
U2M	tyx	2-meter eastward wind	m s-1
U50M	tyx	eastward wind at 50 meters	m s-1

V10M	tyx	10-meter northward wind	m s-1
V2M	tyx	2-meter northward wind	m s-1
V50M	tyx	northward wind at 50 meters	m s-1

inst1_3d_ozo_Nv: Hourly Ozone Field

Frequency: 1-hourly from 01:00 UTC (instantaneous)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=24

Granule Size: ~526 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
O3	tzyx	Ozone	mol mol-1
PS	tyx	surface pressure	Pa

inst3_3d_aer_Nv: Aerosol Mixing Ratio

Frequency: 3-hourly from 21:00 UTC (instantaneous)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=1

Granule Size: ~636 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
AIRDENS	tzyx	moist air density	kg m-3
BCPHILIC	tzyx	Hydrophilic Black Carbon	kg kg-1
BCPHOBIC	tzyx	Hydrophobic Black Carbon	kg kg-1
DELP	tzyx	pressure thickness	Pa
DMS	tzyx	Dimethylsulphide	kg kg-1
DU001	tzyx	Dust Mixing Ratio (bin 001)	kg kg-1
DU002	tzyx	Dust Mixing Ratio (bin 002)	kg kg-1
DU003	tzyx	Dust Mixing Ratio (bin 003)	kg kg-1
DU004	tzyx	Dust Mixing Ratio (bin 004)	kg kg-1
DU005	tzyx	Dust Mixing Ratio (bin 005)	kg kg-1
LWI	tyx	land(1) water(0) ice(2) flag	1
MSA	tzyx	Methanesulphonic acid	kg kg-1
NO3an1	tzyx	Nitrate size bin 001	kg kg-1
NO3an2	tzyx	Nitrate size bin 002	kg kg-1
NO3an3	tzyx	Nitrate size bin 003	kg kg-1

OCPHILIC	tzyx	Hydrophilic Organic Carbon (Particulate Matter)	kg kg-1
OCPHOBIK	tzyx	Hydrophobic Organic Carbon (Particulate Matter)	kg kg-1
PS	tyx	surface pressure	Pa
RH	tzyx	relative humidity after moist	1
SO2	tzyx	Sulphur dioxide	kg kg-1
SO2v	tzyx	Sulphur dioxide (volcanic)	kg kg-1
SO4	tzyx	Sulphate aerosol	kg kg-1
SO4v	tzyx	Sulphate aerosol (volcanic)	kg kg-1
SS001	tzyx	Sea Salt Mixing Ratio (bin 001)	kg kg-1
SS002	tzyx	Sea Salt Mixing Ratio (bin 002)	kg kg-1
SS003	tzyx	Sea Salt Mixing Ratio (bin 003)	kg kg-1
SS004	tzyx	Sea Salt Mixing Ratio (bin 004)	kg kg-1
SS005	tzyx	Sea Salt Mixing Ratio (bin 005)	kg kg-1

inst3_3d_met_Np: Meteorological Fields

Frequency: 3-hourly from 03:00 UTC (*instantaneous*)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=8

Granule Size: ~1.2 GB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
EPV	tzyx	ertels potential vorticity	K m+2 kg-1 s-1
H	tzyx	edge heights	m
O3	tzyx	Ozone	mol mol-1
OMEGA	tzyx	vertical pressure velocity	Pa s-1
PHIS	tyx	surface geopotential height	m+2 s-2
PS	tyx	surface pressure	Pa
QI	tzyx	mass fraction of cloud ice water	kg kg-1
QL	tzyx	mass fraction of cloud liquid water	kg kg-1
QV	tzyx	specific humidity	kg kg-1
RH	tzyx	relative humidity after moist	1
SLP	tyx	sea level pressure	Pa
T	tzyx	air temperature	K
U	tzyx	eastward wind	m s-1
V	tzyx	northward wind	m s-1

inst3_3d_met_Nv: Meteorological Fields

Frequency: 3-hourly from 03:00 UTC (instantaneous)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=8

Granule Size: ~2.1 GB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CLOUD	tzyx	cloud fraction for radiation	1
DELP	tzyx	pressure thickness	Pa
EPV	tzyx	ertels potential vorticity	K m+2 kg-1 s-1
H	tzyx	mid layer heights	m
O3	tzyx	Ozone	mol mol-1
OMEGA	tzyx	vertical pressure velocity	Pa s-1
PHIS	tyx	surface geopotential height	m+2 s-2
PL	tzyx	mid level pressure	Pa
PS	tyx	surface pressure	Pa
QI	tzyx	mass fraction of cloud ice water	kg kg-1
QL	tzyx	mass fraction of cloud liquid water	kg kg-1
QV	tzyx	specific humidity	kg kg-1
RH	tzyx	relative humidity after moist	1
SLP	tyx	sea level pressure	Pa
T	tzyx	air temperature	K
U	tzyx	eastward wind	m s-1
V	tzyx	northward wind	m s-1

inst6_3d_frt_Np: Dynamical and Chemical Fields

Frequency: 6-hourly from 06:00 UTC (instantaneous)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=4

Granule Size: ~651 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CO	tzyx	Carbon monoxide	mol mol-1
EPV	tzyx	ertels potential vorticity	K m+2 kg-1 s-1
ETH	tzyx	equivalent potential temperature	K

O3	tzyx	Ozone	mol mol-1
OMEGA	tzyx	vertical pressure velocity	Pa s-1
QV	tzyx	specific humidity	kg kg-1
RH	tzyx	relative humidity after moist	1
SLP	tyx	sea level pressure	Pa
T	tzyx	air temperature	K
TH	tzyx	potential temperature	K
U	tzyx	eastward wind	m s-1
V	tzyx	northward wind	m s-1

statD_2d_slv_Nx: Single-Level Diagnostics

Frequency: *daily from 00:30 UTC (aggregated statistics)*

Spatial Grid: *2D, single-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, time=24*

Granule Size: *~56 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
HOURNORAIN	tyx	time-during an hour with no precipitation	s
T2MMAX	tyx	2-meter air temperature	K
T2MMEAN	tyx	2-meter air temperature	K
T2MMIN	tyx	2-meter air temperature	K
TPRECMAX	tyx	total precipitation	kg m-2 s-1
ZPBLMAX	tyx	planetary boundary layer height	m
ZPBLMIN	tyx	planetary boundary layer height	m

tavg1_2d_adg_Nx: Aerosol Diagnostics (extended)

Frequency: *1-hourly from 00:30 UTC (time-averaged)*

Spatial Grid: *2D, single-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, time=24*

Granule Size: *~1.2 GB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
BCDP001	tyx	Black Carbon Dry Deposition Bin 001	kg m-2 s-1
BCDP002	tyx	Black Carbon Dry Deposition Bin 002	kg m-2 s-1
BCEM001	tyx	Black Carbon Emission Bin 001	kg m-2 s-1
BCEM002	tyx	Black Carbon Emission Bin 002	kg m-2 s-1

BCEMAN	tyx	Black Carbon Anthropogenic Emissions	kg m ⁻² s ⁻¹
BCEMBB	tyx	Black Carbon Biomass Burning Emissions	kg m ⁻² s ⁻¹
BCEMBF	tyx	Black Carbon Biofuel Emissions	kg m ⁻² s ⁻¹
BCHYPHIL	tyx	Black Carbon Hydrophobic to Hydrophilic	kg m ⁻² s ⁻¹
BCSD001	tyx	Black Carbon Sedimentation Bin 001	kg m ⁻² s ⁻¹
BCSD002	tyx	Black Carbon Sedimentation Bin 002	kg m ⁻² s ⁻¹
BCSV001	tyx	Black Carbon Convective Scavenging Bin 001	kg m ⁻² s ⁻¹
BCSV002	tyx	Black Carbon Convective Scavenging Bin 002	kg m ⁻² s ⁻¹
BCWT001	tyx	Black Carbon Wet Deposition Bin 001	kg m ⁻² s ⁻¹
BCWT002	tyx	Black Carbon Wet Deposition Bin 002	kg m ⁻² s ⁻¹
DUAERIDX	tyx	Dust TOMS UV Aerosol Index	1
DUDP001	tyx	Dust Dry Deposition Bin 001	kg m ⁻² s ⁻¹
DUDP002	tyx	Dust Dry Deposition Bin 002	kg m ⁻² s ⁻¹
DUDP003	tyx	Dust Dry Deposition Bin 003	kg m ⁻² s ⁻¹
DUDP004	tyx	Dust Dry Deposition Bin 004	kg m ⁻² s ⁻¹
DUDP005	tyx	Dust Dry Deposition Bin 005	kg m ⁻² s ⁻¹
DUEM001	tyx	Dust Emission Bin 001	kg m ⁻² s ⁻¹
DUEM002	tyx	Dust Emission Bin 002	kg m ⁻² s ⁻¹
DUEM003	tyx	Dust Emission Bin 003	kg m ⁻² s ⁻¹
DUEM004	tyx	Dust Emission Bin 004	kg m ⁻² s ⁻¹
DUEM005	tyx	Dust Emission Bin 005	kg m ⁻² s ⁻¹
DUEXTTFM	tyx	Dust Extinction AOT [550 nm] - PM 1.0 um	1
DUSCATFM	tyx	Dust Scattering AOT [550 nm] - PM 1.0 um	1
DUSD001	tyx	Dust Sedimentation Bin 001	kg m ⁻² s ⁻¹
DUSD002	tyx	Dust Sedimentation Bin 002	kg m ⁻² s ⁻¹
DUSD003	tyx	Dust Sedimentation Bin 003	kg m ⁻² s ⁻¹
DUSD004	tyx	Dust Sedimentation Bin 004	kg m ⁻² s ⁻¹
DUSD005	tyx	Dust Sedimentation Bin 005	kg m ⁻² s ⁻¹
DUSV001	tyx	Dust Convective Scavenging Bin 001	kg m ⁻² s ⁻¹
DUSV002	tyx	Dust Convective Scavenging Bin 002	kg m ⁻² s ⁻¹
DUSV003	tyx	Dust Convective Scavenging Bin 003	kg m ⁻² s ⁻¹
DUSV004	tyx	Dust Convective Scavenging Bin 004	kg m ⁻² s ⁻¹
DUSV005	tyx	Dust Convective Scavenging Bin 005	kg m ⁻² s ⁻¹
DUWT001	tyx	Dust Wet Deposition Bin 001	kg m ⁻² s ⁻¹
DUWT002	tyx	Dust Wet Deposition Bin 002	kg m ⁻² s ⁻¹
DUWT003	tyx	Dust Wet Deposition Bin 003	kg m ⁻² s ⁻¹
DUWT004	tyx	Dust Wet Deposition Bin 004	kg m ⁻² s ⁻¹
DUWT005	tyx	Dust Wet Deposition Bin 005	kg m ⁻² s ⁻¹
NH3DP	tyx	Ammonia Dry Deposition	kg m ⁻² s ⁻¹

NH3EM	tyx	Ammonia Emission	kg m ⁻² s ⁻¹
NH3SV	tyx	Ammonia Convective Scavenging	kg m ⁻² s ⁻¹
NH3WT	tyx	Ammonia Wet Deposition	kg m ⁻² s ⁻¹
NH4DP	tyx	Ammonium Dry Deposition	kg m ⁻² s ⁻¹
NH4SD	tyx	Ammonium Settling	kg m ⁻² s ⁻¹
NH4SV	tyx	Ammonium Convective Scavenging	kg m ⁻² s ⁻¹
NH4WT	tyx	Ammonium Wet Deposition	kg m ⁻² s ⁻¹
NIDP001	tyx	Nitrate Dry Deposition Bin 001	kg m ⁻² s ⁻¹
NIDP002	tyx	Nitrate Dry Deposition Bin 002	kg m ⁻² s ⁻¹
NIDP003	tyx	Nitrate Dry Deposition Bin 003	kg m ⁻² s ⁻¹
NIEXTTFM	tyx	Nitrate Extinction AOT [550 nm] - PM 1.0 um	1
NIHT001	tyx	Nitrate Production from Het Chem Bin 001	kg m ⁻² s ⁻¹
NIHT002	tyx	Nitrate Production from Het Chem Bin 002	kg m ⁻² s ⁻¹
NIHT003	tyx	Nitrate Production from Het Chem Bin 003	kg m ⁻² s ⁻¹
NIPNH3AQ	tyx	Ammonia Change from Aqueous Chemistry	kg m ⁻² s ⁻¹
NIPNH4AQ	tyx	Ammonium Production from Aqueous Chemistry	kg m ⁻² s ⁻¹
NIPNO3AQ	tyx	Nitrate Production from Aqueous Chemistry	kg m ⁻² s ⁻¹
NISCATFM	tyx	Nitrate Scattering AOT [550 nm] - PM 1.0 um	1
NISD001	tyx	Nitrate Sedimentation Bin 001	kg m ⁻² s ⁻¹
NISD002	tyx	Nitrate Sedimentation Bin 002	kg m ⁻² s ⁻¹
NISD003	tyx	Nitrate Sedimentation Bin 003	kg m ⁻² s ⁻¹
NISV001	tyx	Nitrate Convective Scavenging Bin 001	kg m ⁻² s ⁻¹
NISV002	tyx	Nitrate Convective Scavenging Bin 002	kg m ⁻² s ⁻¹
NISV003	tyx	Nitrate Convective Scavenging Bin 003	kg m ⁻² s ⁻¹
NIWT001	tyx	Nitrate Wet Deposition Bin 001	kg m ⁻² s ⁻¹
NIWT002	tyx	Nitrate Wet Deposition Bin 002	kg m ⁻² s ⁻¹
NIWT003	tyx	Nitrate Wet Deposition Bin 003	kg m ⁻² s ⁻¹
OCDP001	tyx	Organic Carbon Dry Deposition Bin 001	kg m ⁻² s ⁻¹
OCDP002	tyx	Organic Carbon Dry Deposition Bin 002	kg m ⁻² s ⁻¹
OCEM001	tyx	Organic Carbon Emission Bin 001	kg m ⁻² s ⁻¹
OCEM002	tyx	Organic Carbon Emission Bin 002	kg m ⁻² s ⁻¹
OCEMAN	tyx	Organic Carbon Anthropogenic Emissions	kg m ⁻² s ⁻¹
OCEMBB	tyx	Organic Carbon Biomass Burning Emissions	kg m ⁻² s ⁻¹
OCEMBF	tyx	Organic Carbon Biofuel Emissions	kg m ⁻² s ⁻¹
OCEMBG	tyx	Organic Carbon Biogenic Emissions	kg m ⁻² s ⁻¹
OCHYPHIL	tyx	Organic Carbon Hydrophobic to Hydrophilic	kg m ⁻² s ⁻¹
OCSD001	tyx	Organic Carbon Sedimentation Bin 001	kg m ⁻² s ⁻¹
OCSD002	tyx	Organic Carbon Sedimentation Bin 002	kg m ⁻² s ⁻¹
OCSV001	tyx	Organic Carbon Convective Scavenging Bin 001	kg m ⁻² s ⁻¹

OCSV002	tyx	Organic Carbon Convective Scavenging Bin 002	kg m-2 s-1
OCWT001	tyx	Organic Carbon Wet Deposition Bin 001	kg m-2 s-1
OCWT002	tyx	Organic Carbon Wet Deposition Bin 002	kg m-2 s-1
SO2EMAN	tyx	SO2 Anthropogenic Emissions	kg m-2 s-1
SO2EMANvolc	tyx	SO2 Anthropogenic Emissions (Volcanic)	kg m-2 s-1
SO2EMBB	tyx	SO2 Biomass Burning Emissions	kg m-2 s-1
SO2EMBBvolc	tyx	SO2 Biomass Burning Emissions (Volcanic)	kg m-2 s-1
SO2EMVE	tyx	SO2 Volcanic (explosive) Emissions	kg m-2 s-1
SO2EMVEvolc	tyx	SO2 Volcanic (explosive) Emissions (Volcanic)	kg m-2 s-1
SO2EMVN	tyx	SO2 Volcanic (non-explosive) Emissions	kg m-2 s-1
SO2EMVNvolc	tyx	SO2 Volcanic (non-explosive) Emissions (Volcanic)	kg m-2 s-1
SO4EMAN	tyx	SO4 Anthropogenic Emissions	kg m-2 s-1
SO4EMANvolc	tyx	SO4 Anthropogenic Emissions (Volcanic)	kg m-2 s-1
SSAERIDX	tyx	Sea Salt TOMS UV Aerosol Index	1
SSDP001	tyx	Sea Salt Dry Deposition Bin 001	kg m-2 s-1
SSDP002	tyx	Sea Salt Dry Deposition Bin 002	kg m-2 s-1
SSDP003	tyx	Sea Salt Dry Deposition Bin 003	kg m-2 s-1
SSDP004	tyx	Sea Salt Dry Deposition Bin 004	kg m-2 s-1
SSDP005	tyx	Sea Salt Dry Deposition Bin 005	kg m-2 s-1
SSEM001	tyx	Sea Salt Emission Bin 001	kg m-2 s-1
SSEM002	tyx	Sea Salt Emission Bin 002	kg m-2 s-1
SSEM003	tyx	Sea Salt Emission Bin 003	kg m-2 s-1
SSEM004	tyx	Sea Salt Emission Bin 004	kg m-2 s-1
SSEM005	tyx	Sea Salt Emission Bin 005	kg m-2 s-1
SSEXTTFM	tyx	Sea Salt Extinction AOT [550 nm] - PM 1.0 um	1
SSSCATFM	tyx	Sea Salt Scattering AOT [550 nm] - PM 1.0 um	1
SSSD001	tyx	Sea Salt Sedimentation Bin 001	kg m-2 s-1
SSSD002	tyx	Sea Salt Sedimentation Bin 002	kg m-2 s-1
SSSD003	tyx	Sea Salt Sedimentation Bin 003	kg m-2 s-1
SSSD004	tyx	Sea Salt Sedimentation Bin 004	kg m-2 s-1
SSSD005	tyx	Sea Salt Sedimentation Bin 005	kg m-2 s-1
SSSV001	tyx	Sea Salt Convective Scavenging Bin 001	kg m-2 s-1
SSSV002	tyx	Sea Salt Convective Scavenging Bin 002	kg m-2 s-1
SSSV003	tyx	Sea Salt Convective Scavenging Bin 003	kg m-2 s-1
SSSV004	tyx	Sea Salt Convective Scavenging Bin 004	kg m-2 s-1
SSSV005	tyx	Sea Salt Convective Scavenging Bin 005	kg m-2 s-1
SSWT001	tyx	Sea Salt Wet Deposition Bin 001	kg m-2 s-1
SSWT002	tyx	Sea Salt Wet Deposition Bin 002	kg m-2 s-1
SSWT003	tyx	Sea Salt Wet Deposition Bin 003	kg m-2 s-1

SSWT004	tyx	Sea Salt Wet Deposition Bin 004	kg m ⁻² s ⁻¹
SSWT005	tyx	Sea Salt Wet Deposition Bin 005	kg m ⁻² s ⁻¹
SUDP001	tyx	Sulfate Dry Deposition Bin 001	kg m ⁻² s ⁻¹
SUDP002	tyx	Sulfate Dry Deposition Bin 002	kg m ⁻² s ⁻¹
SUDP002volc	tyx	Sulfate Dry Deposition Bin 002 (Volcanic)	kg m ⁻² s ⁻¹
SUDP003	tyx	Sulfate Dry Deposition Bin 003	kg m ⁻² s ⁻¹
SUDP003volc	tyx	Sulfate Dry Deposition Bin 003 (Volcanic)	kg m ⁻² s ⁻¹
SUDP004	tyx	Sulfate Dry Deposition Bin 004	kg m ⁻² s ⁻¹
SUEM001	tyx	Sulfate Emission Bin 001	kg m ⁻² s ⁻¹
SUEM002	tyx	Sulfate Emission Bin 002	kg m ⁻² s ⁻¹
SUEM002volc	tyx	Sulfate Emission Bin 002 (Volcanic)	kg m ⁻² s ⁻¹
SUEM003	tyx	Sulfate Emission Bin 003	kg m ⁻² s ⁻¹
SUEM003volc	tyx	Sulfate Emission Bin 003 (Volcanic)	kg m ⁻² s ⁻¹
SUEM004	tyx	Sulfate Emission Bin 004	kg m ⁻² s ⁻¹
SUPMSA	tyx	MSA Prod from DMS Oxidation [column]	kg m ⁻² s ⁻¹
SUPSO2	tyx	SO2 Prod from DMS Oxidation [column]	kg m ⁻² s ⁻¹
SUPSO2volc	tyx	SO2 Prod from DMS Oxidation [column] (Volcanic)	kg m ⁻² s ⁻¹
SUPSO4AQ	tyx	SO4 Prod from Aqueous SO2 Oxidation [column]	kg m ⁻² s ⁻¹
SUPSO4AQvolc	tyx	SO4 Prod from Aqueous SO2 Oxidation [column] (Volcanic)	kg m ⁻² s ⁻¹
SUPSO4G	tyx	SO4 Prod from Gaseous SO2 Oxidation [column]	kg m ⁻² s ⁻¹
SUPSO4Gvolc	tyx	SO4 Prod from Gaseous SO2 Oxidation [column] (Volcanic)	kg m ⁻² s ⁻¹
SUPSO4WT	tyx	SO4 Prod from Aqueous SO2 Oxidation (wet dep) [column]	kg m ⁻² s ⁻¹
SUPSO4WTvolc	tyx	SO4 Prod from Aqueous SO2 Oxidation (wet dep) [column] (Volcanic)	kg m ⁻² s ⁻¹
SUSD001	tyx	Sulfate Settling Bin 001	kg m ⁻² s ⁻¹
SUSD002	tyx	Sulfate Settling Bin 002	kg m ⁻² s ⁻¹
SUSD002volc	tyx	Sulfate Settling Bin 002 (Volcanic)	kg m ⁻² s ⁻¹
SUSD003	tyx	Sulfate Settling Bin 003	kg m ⁻² s ⁻¹
SUSD003volc	tyx	Sulfate Settling Bin 003 (Volcanic)	kg m ⁻² s ⁻¹
SUSD004	tyx	Sulfate Settling Bin 004	kg m ⁻² s ⁻¹
SUSV001	tyx	Sulfate Convective Scavenging Bin 001	kg m ⁻² s ⁻¹
SUSV002	tyx	Sulfate Convective Scavenging Bin 002	kg m ⁻² s ⁻¹
SUSV002volc	tyx	Sulfate Convective Scavenging Bin 002 (Volcanic)	kg m ⁻² s ⁻¹
SUSV003	tyx	Sulfate Convective Scavenging Bin 003	kg m ⁻² s ⁻¹
SUSV003volc	tyx	Sulfate Convective Scavenging Bin 003 (Volcanic)	kg m ⁻² s ⁻¹
SUSV004	tyx	Sulfate Convective Scavenging Bin 004	kg m ⁻² s ⁻¹
SUWT001	tyx	Sulfate Wet Deposition Bin 001	kg m ⁻² s ⁻¹

SUWT002	tyx	Sulfate Wet Deposition Bin 002	kg m-2 s-1
SUWT002volc	tyx	Sulfate Wet Deposition Bin 002 (Volcanic)	kg m-2 s-1
SUWT003	tyx	Sulfate Wet Deposition Bin 003	kg m-2 s-1
SUWT003volc	tyx	Sulfate Wet Deposition Bin 003 (Volcanic)	kg m-2 s-1
SUWT004	tyx	Sulfate Wet Deposition Bin 004	kg m-2 s-1

avg1_2d_aer_Nx: Aerosol Diagnostics

Frequency: 1-hourly from 00:30 UTC (time-averaged)

Spatial Grid: 2D, single-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, time=24

Granule Size: ~750 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
BCANGSTR	tyx	Black Carbon Angstrom parameter [470-870 nm]	1
BCCMASS	tyx	Black Carbon Column Mass Density	kg m-2
BCEXTTAU	tyx	Black Carbon Extinction AOT [550 nm]	1
BCFLUXU	tyx	Black Carbon column u-wind mass flux	kg m-1 s-1
BCFLUXV	tyx	Black Carbon column v-wind mass flux	kg m-1 s-1
BCSCATAU	tyx	Black Carbon Scattering AOT [550 nm]	1
BCSMASS	tyx	Black Carbon Surface Mass Concentration	kg m-3
DMSCMASS	tyx	DMS Column Mass Density	kg m-2
DMSSMASS	tyx	DMS Surface Mass Concentration	kg m-3
DUANGSTR	tyx	Dust Angstrom parameter [470-870 nm]	1
DUCMASS	tyx	Dust Column Mass Density	kg m-2
DUCMASS25	tyx	Dust Column Mass Density - PM 2.5	kg m-2
DUEXTT25	tyx	Dust Extinction AOT [550 nm] - PM 2.5	1
DUEXTTAU	tyx	Dust Extinction AOT [550 nm]	1
DUFLUXU	tyx	Dust column u-wind mass flux	kg m-1 s-1
DUFLUXV	tyx	Dust column v-wind mass flux	kg m-1 s-1
DUSCAT25	tyx	Dust Scattering AOT [550 nm] - PM 2.5	1
DUSCATAU	tyx	Dust Scattering AOT [550 nm]	1
DUSMASS	tyx	Dust Surface Mass Concentration	kg m-3
DUSMASS25	tyx	Dust Surface Mass Concentration - PM 2.5	kg m-3
HNO3CMASS	tyx	Nitric Acid Column Mass Density	kg m-3
HNO3SMASS	tyx	Nitric Acid Surface Mass Concentration	kg m-3
NH3CMASS	tyx	Ammonia Column Mass Density	kg m-3
NH3SMASS	tyx	Ammonia Surface Mass Concentration	kg m-3

NH4CMASS	tyx	Ammonium Column Mass Density	kg m-3
NH4SMASS	tyx	Ammonium Surface Mass Concentration	kg m-3
NIANGSTR	tyx	Nitrate Angstrom parameter [470-870 nm]	1
NICMASS	tyx	Nitrate Column Mass Density	kg m-2
NICMASS25	tyx	Nitrate Column Mass Density [PM2.5]	kg m-2
NIEXTT25	tyx	Nitrate Extinction AOT [550 nm] - PM 2.5 um	1
NIEXTTAU	tyx	Nitrate Extinction AOT [550 nm]	1
NIFLUXU	tyx	Nitrate column u-wind mass flux	kg m-1 s-1
NIFLUXV	tyx	Nitrate column v-wind mass flux	kg m-1 s-1
NISCAT25	tyx	Nitrate Scattering AOT [550 nm] - PM 2.5 um	1
NISCATAU	tyx	Nitrate Scattering AOT [550 nm]	1
NISMASS	tyx	Nitrate Surface Mass Concentration	kg m-3
NISMASS25	tyx	Nitrate Surface Mass Concentration [PM2.5]	kg m-3
OCANGSTR	tyx	Organic Carbon Angstrom parameter [470-870 nm]	1
OCCMASS	tyx	Organic Carbon Column Mass Density	kg m-2
OCEXTTAU	tyx	Organic Carbon Extinction AOT [550 nm]	1
OCFLUXU	tyx	Organic Carbon column u-wind mass flux	kg m-1 s-1
OCFLUXV	tyx	Organic Carbon column v-wind mass flux	kg m-1 s-1
OCSCATAU	tyx	Organic Carbon Scattering AOT [550 nm]	1
OCSMASS	tyx	Organic Carbon Surface Mass Concentration	kg m-3
PM	tyx	Total reconstructed PM	kg m-3
PM25	tyx	Total reconstructed PM2.5	kg m-3
SO2CMASS	tyx	SO2 Column Mass Density	kg m-2
SO2CMASSvolc	tyx	SO2 Column Mass Density (Volcanic)	kg m-2
SO2SMASS	tyx	SO2 Surface Mass Concentration	kg m-3
SO2SMASSvolc	tyx	SO2 Surface Mass Concentration (Volcanic)	kg m-3
SO4CMASS	tyx	SO4 Column Mass Density	kg m-2
SO4CMASSvolc	tyx	SO4 Column Mass Density (Volcanic)	kg m-2
SO4SMASS	tyx	SO4 Surface Mass Concentration	kg m-3
SO4SMASSvolc	tyx	SO4 Surface Mass Concentration (Volcanic)	kg m-3
SSANGSTR	tyx	Sea Salt Angstrom parameter [470-870 nm]	1
SSCMASS	tyx	Sea Salt Column Mass Density	kg m-2
SSCMASS25	tyx	Sea Salt Column Mass Density - PM 2.5	kg m-2
SSEXTT25	tyx	Sea Salt Extinction AOT [550 nm] - PM 2.5	1
SSEXTTAU	tyx	Sea Salt Extinction AOT [550 nm]	1
SSFLUXU	tyx	Sea Salt column u-wind mass flux	kg m-1 s-1
SSFLUXV	tyx	Sea Salt column v-wind mass flux	kg m-1 s-1
SSSCAT25	tyx	Sea Salt Scattering AOT [550 nm] - PM 2.5	1
SSSCATAU	tyx	Sea Salt Scattering AOT [550 nm]	1

SSSMAS	tyx	Sea Salt Surface Mass Concentration	kg m-3
SSSMAS25	tyx	Sea Salt Surface Mass Concentration - PM 2.5	kg m-3
SUANGSTR	tyx	SO4 Angstrom parameter [470-870 nm]	1
SUANGSTRvolc	tyx	SO4 Angstrom parameter [470-870 nm] (Volcanic)	1
SUEXTTAU	tyx	SO4 Extinction AOT [550 nm]	1
SUEXTTAUvolc	tyx	SO4 Extinction AOT [550 nm] (Volcanic)	1
SUFLUXU	tyx	SO4 column u-wind mass flux	kg m-1 s-1
SUFLUXUvolc	tyx	SO4 column u-wind mass flux (Volcanic)	kg m-1 s-1
SUFLUXV	tyx	SO4 column v-wind mass flux	kg m-1 s-1
SUFLUXVvolc	tyx	SO4 column v-wind mass flux (Volcanic)	kg m-1 s-1
SUSCATAU	tyx	SO4 Scattering AOT [550 nm]	1
SUSCATAUvolc	tyx	SO4 Scattering AOT [550 nm] (Volcanic)	1
TOTANGSTR	tyx	Total Aerosol Angstrom parameter [470-870 nm]	1
TOTEXTTAU	tyx	Total Aerosol Extinction AOT [550 nm]	1
TOTSCATAU	tyx	Total Aerosol Scattering AOT [550 nm]	1

avg1_2d_flux_Nx: Surface Flux Diagnostics

Frequency: 1-hourly from 00:30 UTC (time-averaged)

Spatial Grid: 2D, single-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, time=24

Granule Size: ~406 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
BSTAR	tyx	surface buoyancy scale	m s-2
CDH	tyx	surface exchange coefficient for heat	kg m-2 s-1
CDM	tyx	surface exchange coefficient for momentum	kg m-2 s-1
CDQ	tyx	surface exchange coefficient for moisture	kg m-2 s-1
CN	tyx	surface neutral drag coefficient	1
DISPH	tyx	zero plane displacement height	m
EFLUX	tyx	total latent energy flux	W m-2
EVAP	tyx	evaporation from turbulence	kg m-2 s-1
EVAPOUT	tyx	evaporation	kg m-2 s-1
FRCAN	tyx	areal fraction of anvil showers	1
FRCCN	tyx	areal fraction of convective showers	1
FRCLS	tyx	areal fraction of nonanvil large scale showers	1
FRSEAICE	tyx	ice covered fraction of tile	1
GHTSKIN	tyx	Ground heating for skin temp	W m-2

HFLUX	tyx	sensible heat flux from turbulence	W m-2
HLML	tyx	surface layer height	m
NIRDF	tyx	surface downwelling nearinfrared diffuse flux	W m-2
NIRDR	tyx	surface downwelling nearinfrared beam flux	W m-2
PBLH	tyx	planetary boundary layer height	m
PGENTOT	tyx	Total column production of precipitation	kg m-2 s-1
PRECANV	tyx	anvil precipitation	kg m-2 s-1
PRECCON	tyx	convective precipitation	kg m-2 s-1
PRECLSC	tyx	nonanvil large scale precipitation	kg m-2 s-1
PRECSNO	tyx	snowfall	kg m-2 s-1
PRECTOT	tyx	total precipitation	kg m-2 s-1
PRECTOTCORR	tyx	total precipitation	kg m-2 s-1
PREVTOT	tyx	Total column re-evap/subl of precipitation	kg m-2 s-1
QLML	tyx	surface specific humidity	1
QSH	tyx	effective surface specific humidity	kg kg-1
QSTAR	tyx	surface moisture scale	kg kg-1
RHOA	tyx	air density at surface	kg m-3
RISFC	tyx	surface bulk richardson number	1
SHOUT	tyx	upward sensible heat flux	W m-2
SPEED	tyx	surface wind speed	m s-1
SPEEDMAX	tyx	surface wind speed	m s-1
TAUGWX	tyx	surface eastward gravity wave stress	N m-2
TAUGWY	tyx	surface northward gravity wave stress	N m-2
TAUX	tyx	eastward surface stress	N m-2
TAUY	tyx	northward surface stress	N m-2
TCZPBL	tyx	transcom planetary boundary layer height	m
TLML	tyx	surface air temperature	K
TSH	tyx	effective surface skin temperature	K
TSTAR	tyx	surface temperature scale	K
ULML	tyx	surface eastward wind	m s-1
USTAR	tyx	surface velocity scale	m s-1
VLML	tyx	surface northward wind	m s-1
Z0H	tyx	surface roughness for heat	m
Z0M	tyx	surface roughness	m

avg1_2d_ind_Nx: Land Surface Diagnostics

Frequency: 1-hourly from 00:30 UTC (time-averaged)

Spatial Grid: 2D, single-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, time=24

Granule Size: ~152 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
BASEFLOW	tyx	baseflow flux	kg m-2 s-1
ECHANGE	tyx	rate of change of total land energy	W m-2
EVLAND	tyx	Evaporation land	kg m-2 s-1
EVPINTR	tyx	interception loss energy flux	W m-2
EVPSBLN	tyx	snow ice evaporation energy flux	W m-2
EVPSOIL	tyx	baresoil evap energy flux	W m-2
EVPTRNS	tyx	transpiration energy flux	W m-2
FRSAT	tyx	fractional area of saturated zone	1
FRSNO	tyx	fractional area of land snowcover	1
FRUNST	tyx	fractional area of unsaturated zone	1
FRWLT	tyx	fractional area of wilting zone	1
GHLAND	tyx	Ground heating land	W m-2
GRN	tyx	greenness fraction	1
GWETPROF	tyx	ave prof soil moisture	1
GWETROOT	tyx	root zone soil wetness	1
GWETTOP	tyx	surface soil wetness	1
LAI	tyx	leaf area index	1
LHLAND	tyx	Latent heat flux land	W m-2
LWLAND	tyx	Net longwave land	W m-2
PARDFLAND	tyx	surface downwelling par diffuse flux	W m-2
PARDRLAND	tyx	surface downwelling par beam flux	W m-2
PRECSNOLAN D	tyx	snowfall land	kg m-2 s-1
PECTOTLAN D	tyx	Total precipitation land	kg m-2 s-1
PRMC	tyx	water profile	m-3 m-3
QINFIL	tyx	Soil water infiltration rate	kg m-2 s-1
RUNOFF	tyx	overland runoff including throughflow	kg m-2 s-1
RZMC	tyx	water root zone	m-3 m-3
SFMC	tyx	water surface layer	m-3 m-3
SHLAND	tyx	Sensible heat flux land	W m-2
SMLAND	tyx	Snowmelt flux land	kg m-2 s-1
SNODP	tyx	snow depth	m
SNOMAS	tyx	Total snow storage land	kg m-2
SPLAND	tyx	rate of spurious land energy source	W m-2

SPSNOW	tyx	rate of spurious snow energy	W m-2
SPWATR	tyx	rate of spurious land water source	kg m-2 s-1
SWLAND	tyx	Net shortwave land	W m-2
TELAND	tyx	Total energy storage land	J m-2
TPSNOW	tyx	surface temperature of snow	K
TSAT	tyx	surface temperature of saturated zone	K
TSOIL1	tyx	soil temperatures layer 1	K
TSOIL2	tyx	soil temperatures layer 2	K
TSOIL3	tyx	soil temperatures layer 3	K
TSOIL4	tyx	soil temperatures layer 4	K
TSOIL5	tyx	soil temperatures layer 5	K
TSOIL6	tyx	soil temperatures layer 6	K
TSURF	tyx	surface temperature of land incl snow	K
TUNST	tyx	surface temperature of unsaturated zone	K
TWLAND	tyx	Avail water storage land	kg m-2
TWLT	tyx	surface temperature of wilted zone	K
WCHANGE	tyx	rate of change of total land water	kg m-2 s-1

avg1_2d_rad_Nx: Radiation Diagnostics

Frequency: 1-hourly from 00:30 UTC (time-averaged)

Spatial Grid: 2D, single-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, time=24

Granule Size: ~212 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
ALBEDO	tyx	surface albedo	1
ALBNIRDF	tyx	surface albedo for near infrared diffuse	1
ALBNIRDR	tyx	surface albedo for near infrared beam	1
ALBVISDF	tyx	surface albedo for visible diffuse	1
ALBVISDR	tyx	surface albedo for visible beam	1
CLDHGH	tyx	cloud area fraction for high clouds	1
CLDLOW	tyx	cloud area fraction for low clouds	1
CLDMID	tyx	cloud area fraction for middle clouds	1
CLDTOT	tyx	total cloud area fraction	1
EMIS	tyx	surface emissivity	1
LWGAB	tyx	surface absorbed longwave radiation	W m-2
LWGABCLR	tyx	surface absorbed longwave radiation assuming clear sky	W m-2

LWGABCLRCL N	tyx	surface absorbed longwave radiation assuming clear sky and no aerosol	W m-2
LWGEM	tyx	longwave flux emitted from surface	W m-2
LWGNT	tyx	surface net downward longwave flux	W m-2
LWGNTCLR	tyx	surface net downward longwave flux assuming clear sky	W m-2
LWGNTCLRCL N	tyx	surface net downward longwave flux assuming clear sky and no aerosol	W m-2
LWTUP	tyx	upwelling longwave flux at toa	W m-2
LWTUPCLR	tyx	upwelling longwave flux at toa assuming clear sky	W m-2
LWTUPCLRCL N	tyx	upwelling longwave flux at toa assuming clear sky and no aerosol	W m-2
SWGDN	tyx	surface incoming shortwave flux	W m-2
SWGDNCLR	tyx	surface incoming shortwave flux assuming clear sky	W m-2
SWGNT	tyx	surface net downward shortwave flux	W m-2
SWGNTCLN	tyx	surface net downward shortwave flux assuming no aerosol	W m-2
SWGNTCLR	tyx	surface net downward shortwave flux assuming clear sky	W m-2
SWGNTCLRCL N	tyx	surface net downward shortwave flux assuming clear sky and no aerosol	W m-2
SWTDN	tyx	toa incoming shortwave flux	W m-2
SWTNT	tyx	toa net downward shortwave flux	W m-2
SWTNTCLN	tyx	toa net downward shortwave flux assuming no aerosol	W m-2
SWTNTCLR	tyx	toa net downward shortwave flux assuming clear sky	W m-2
SWTNTCLRCL N	tyx	toa net downward shortwave flux assuming clear sky and no aerosol	W m-2
TAUHG	tyx	in cloud optical thickness of high clouds(EXPORT)	1
TAULOW	tyx	in cloud optical thickness of low clouds	1
TAUMID	tyx	in cloud optical thickness of middle clouds	1
TAUTOT	tyx	in cloud optical thickness of all clouds	1
TS	tyx	surface skin temperature	K

avg1_2d_slv_Nx: Single-Level Diagnostics

Frequency: 1-hourly from 00:30 UTC (time-averaged)

Spatial Grid: 2D, single-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, time=24

Granule Size: ~438 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CLDPRS	tyx	cloud top pressure	Pa
CLDTMP	tyx	cloud top temperature	K

CLDTT	tyx	total cloud area fraction	l
DISPH	tyx	zero plane displacement height	m
GMITO3	tyx	total ozone	dobsons
GMITTO3	tyx	total tropospheric ozone	dobsons
H1000	tyx	height at 1000 mb	m
H250	tyx	height at 250 hPa	m
H500	tyx	height at 500 hPa	m
H850	tyx	height at 850 hPa	m
IWP	tyx	ice water path	kg m-2
LWP	tyx	liquid water path	kg m-2
OMEGA500	tyx	omega at 500 hPa	Pa s-1
PBLTOP	tyx	pbltop pressure	Pa
PS	tyx	surface pressure	Pa
Q250	tyx	specific humidity at 250 hPa	kg kg-1
Q500	tyx	specific humidity at 500 hPa	kg kg-1
Q850	tyx	specific humidity at 850 hPa	kg kg-1
QV10M	tyx	10-meter specific humidity	kg kg-1
QV2M	tyx	2-meter specific humidity	kg kg-1
SLP	tyx	sea level pressure	Pa
T10M	tyx	10-meter air temperature	K
T250	tyx	air temperature at 250 hPa	K
T2M	tyx	2-meter air temperature	K
T2MDEW	tyx	dew point temperature at 2 m	K
T2MWET	tyx	wet bulb temperature at 2 m	K
T500	tyx	air temperature at 500 hPa	K
T850	tyx	air temperature at 850 hPa	K
TQI	tyx	total precipitable ice water	kg m-2
TQL	tyx	total precipitable liquid water	kg m-2
TQV	tyx	total precipitable water vapor	kg m-2
TROPPB	tyx	tropopause pressure based on blended estimate	Pa
TROPPT	tyx	tropopause pressure based on thermal estimate	Pa
TROPPV	tyx	tropopause pressure based on EPV estimate	Pa
TROPQ	tyx	tropopause specific humidity using blended TROPP estimate	kg kg-1
TROPT	tyx	tropopause temperature using blended TROPP estimate	K
TS	tyx	surface skin temperature	K
U10M	tyx	10-meter eastward wind	m s-1
U250	tyx	eastward wind at 250 hPa	m s-1
U2M	tyx	2-meter eastward wind	m s-1

U500	tyx	eastward wind at 500 hPa	m s-1
U50M	tyx	eastward wind at 50 meters	m s-1
U850	tyx	eastward wind at 850 hPa	m s-1
V10M	tyx	10-meter northward wind	m s-1
V250	tyx	northward wind at 250 hPa	m s-1
V2M	tyx	2-meter northward wind	m s-1
V500	tyx	northward wind at 500 hPa	m s-1
V50M	tyx	northward wind at 50 meters	m s-1
V850	tyx	northward wind at 850 hPa	m s-1
Z0H	tyx	surface roughness for heat	m
ZLCL	tyx	lifting condensation level	m

avg24_2d_dad_Nx: Daily Average Diagnostics

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *2D, single-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, time=1*

Granule Size: *~49 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
ALBEDO	tyx	surface albedo	1
ALBNIRDF	tyx	surface albedo for near infrared diffuse	1
ALBNIRDR	tyx	surface albedo for near infrared beam	1
ALBVISDF	tyx	surface albedo for visible diffuse	1
ALBVISDR	tyx	surface albedo for visible beam	1
BSTAR	tyx	surface buoyancy scale	m s-2
CDH	tyx	surface exchange coefficient for heat	kg m-2 s-1
CDM	tyx	surface exchange coefficient for momentum	kg m-2 s-1
CDQ	tyx	surface exchange coefficient for moisture	kg m-2 s-1
CLDHGH	tyx	cloud area fraction for high clouds	1
CLDLOW	tyx	cloud area fraction for low clouds	1
CLDMID	tyx	cloud area fraction for middle clouds	1
CLDPRS	tyx	cloud top pressure	Pa
CLDTMP	tyx	cloud top temperature	K
CLDTOT	tyx	total cloud area fraction	1
CN	tyx	surface neutral drag coefficient	1
DISPH	tyx	zero plane displacement height	m
EFLUX	tyx	total latent energy flux	W m-2

EMBIOCOMETH	tyx	biogenic source of CO from oxidation of methanol	kg m-2 s-1
EMBIOCOMONOT	tyx	biogenic source of CO from oxidation of monoterpenes	kg m-2 s-1
EMBIOPROPENE	tyx	biogenic source of propene	kg m-2 s-1
EMIS	tyx	surface emissivity	1
EMISOPSFC	tyx	surface emission of isoprene	kg m-2 s-1
EMMONOT	tyx	surface emission of monoterpenes	kg m-2 s-1
EMSOILNOX	tyx	soil source of odd nitrogen	kg m-2 s-1
EVAP	tyx	evaporation from turbulence	kg m-2 s-1
EVAPOUT	tyx	evaporation	kg m-2 s-1
FRCAN	tyx	areal fraction of anvil showers	1
FRCCN	tyx	areal fraction of convective showers	1
FRCLS	tyx	areal fraction of nonanvil large scale showers	1
FRSEAICE	tyx	ice covered fraction of tile	1
GHTSKIN	tyx	Ground heating for skin temp	W m-2
GMITO3	tyx	total ozone	dobsons
GMITTO3	tyx	total tropospheric ozone	dobsons
H1000	tyx	height at 1000 mb	m
H250	tyx	height at 250 hPa	m
H500	tyx	height at 500 hPa	m
H850	tyx	height at 850 hPa	m
HFLUX	tyx	sensible heat flux from turbulence	W m-2
HLML	tyx	surface layer height	m
IWP	tyx	ice water path	kg m-2
LWGAB	tyx	surface absorbed longwave radiation	W m-2
LWGABCLR	tyx	surface absorbed longwave radiation assuming clear sky	W m-2
LWGABCLRCLN	tyx	surface absorbed longwave radiation assuming clear sky and no aerosol	W m-2
LWGEM	tyx	longwave flux emitted from surface	W m-2
LWGNT	tyx	surface net downward longwave flux	W m-2
LWGNTCLR	tyx	surface net downward longwave flux assuming clear sky	W m-2
LWGNTCLRCLN	tyx	surface net downward longwave flux assuming clear sky and no aerosol	W m-2
LWP	tyx	liquid water path	kg m-2
LWTUP	tyx	upwelling longwave flux at toa	W m-2
LWTUPCLR	tyx	upwelling longwave flux at toa assuming clear sky	W m-2
LWTUPCLRCLN	tyx	upwelling longwave flux at toa assuming clear sky and no aerosol	W m-2
NIRDF	tyx	surface downwelling nearinfrared diffuse flux	W m-2

NIRDR	tyx	surface downwelling nearinfrared beam flux	W m-2
OMEGA500	tyx	omega at 500 hPa	Pa s-1
PBLH	tyx	planetary boundary layer height	m
PBLTOP	tyx	pbltop pressure	Pa
PGENTOT	tyx	Total column production of precipitation	kg m-2 s-1
PRECANV	tyx	anvil precipitation	kg m-2 s-1
PRECCON	tyx	convective precipitation	kg m-2 s-1
PRECLSC	tyx	nonanvil large scale precipitation	kg m-2 s-1
PRECSNO	tyx	snowfall	kg m-2 s-1
PRECTOT	tyx	total precipitation	kg m-2 s-1
PRECTOTCORR	tyx	total precipitation	kg m-2 s-1
PREVTOT	tyx	Total column re-evap/subl of precipitation	kg m-2 s-1
PS	tyx	surface pressure	Pa
Q250	tyx	specific humidity at 250 hPa	kg kg-1
Q500	tyx	specific humidity at 500 hPa	kg kg-1
Q850	tyx	specific humidity at 850 hPa	kg kg-1
QLML	tyx	surface specific humidity	1
QSH	tyx	effective surface specific humidity	kg kg-1
QSTAR	tyx	surface moisture scale	kg kg-1
QV10M	tyx	10-meter specific humidity	kg kg-1
QV2M	tyx	2-meter specific humidity	kg kg-1
RHOA	tyx	air density at surface	kg m-3
RISFC	tyx	surface bulk richardson number	1
SHOUT	tyx	upward sensible heat flux	W m-2
SLP	tyx	sea level pressure	Pa
SPEED	tyx	surface wind speed	m s-1
SPEEDMAX	tyx	surface wind speed	m s-1
SWGDN	tyx	surface incoming shortwave flux	W m-2
SWGDNCLR	tyx	surface incoming shortwave flux assuming clear sky	W m-2
SWGNT	tyx	surface net downward shortwave flux	W m-2
SWGNTCLN	tyx	surface net downward shortwave flux assuming no aerosol	W m-2
SWGNTCLR	tyx	surface net downward shortwave flux assuming clear sky	W m-2
SWGNTCLRCLN	tyx	surface net downward shortwave flux assuming clear sky and no aerosol	W m-2
SWTDN	tyx	toa incoming shortwave flux	W m-2
SWTNT	tyx	toa net downward shortwave flux	W m-2
SWTNTCLN	tyx	toa net downward shortwave flux assuming no aerosol	W m-2
SWTNTCLR	tyx	toa net downward shortwave flux assuming clear sky	W m-2
SWTNTCLRCLN	tyx	toa net downward shortwave flux assuming clear sky and	W m-2

N		no aerosol	
T10M	tyx	10-meter air temperature	K
T250	tyx	air temperature at 250 hPa	K
T2M	tyx	2-meter air temperature	K
T2MDEW	tyx	dew point temperature at 2 m	K
T2MWET	tyx	wet bulb temperature at 2 m	K
T500	tyx	air temperature at 500 hPa	K
T850	tyx	air temperature at 850 hPa	K
TAUGWX	tyx	surface eastward gravity wave stress	N m-2
TAUGWY	tyx	surface northward gravity wave stress	N m-2
TAUHGHI	tyx	in cloud optical thickness of high clouds(EXPORT)	1
TAULOW	tyx	in cloud optical thickness of low clouds	1
TAUMID	tyx	in cloud optical thickness of middle clouds	1
TAUTOT	tyx	in cloud optical thickness of all clouds	1
TAUX	tyx	eastward surface stress	N m-2
TAUY	tyx	northward surface stress	N m-2
TCZPBL	tyx	transcom planetary boundary layer height	m
TLML	tyx	surface air temperature	K
TQI	tyx	total precipitable ice water	kg m-2
TQL	tyx	total precipitable liquid water	kg m-2
TQV	tyx	total precipitable water vapor	kg m-2
TROPPB	tyx	tropopause pressure based on blended estimate	Pa
TROPPT	tyx	tropopause pressure based on thermal estimate	Pa
TROPPV	tyx	tropopause pressure based on EPV estimate	Pa
TROPQ	tyx	tropopause specific humidity using blended TROPP estimate	kg kg-1
TROPT	tyx	tropopause temperature using blended TROPP estimate	K
TS	tyx	surface skin temperature	K
TSH	tyx	effective surface skin temperature	K
TSTAR	tyx	surface temperature scale	K
U10M	tyx	10-meter eastward wind	m s-1
U250	tyx	eastward wind at 250 hPa	m s-1
U2M	tyx	2-meter eastward wind	m s-1
U500	tyx	eastward wind at 500 hPa	m s-1
U50M	tyx	eastward wind at 50 meters	m s-1
U850	tyx	eastward wind at 850 hPa	m s-1
ULML	tyx	surface eastward wind	m s-1
USTAR	tyx	surface velocity scale	m s-1
V10M	tyx	10-meter northward wind	m s-1

V250	tyx	northward wind at 250 hPa	m s-1
V2M	tyx	2-meter northward wind	m s-1
V500	tyx	northward wind at 500 hPa	m s-1
V50M	tyx	northward wind at 50 meters	m s-1
V850	tyx	northward wind at 850 hPa	m s-1
VLML	tyx	surface northward wind	m s-1
Z0H	tyx	surface roughness for heat	m
Z0M	tyx	surface roughness	m
ZLCL	tyx	lifting condensation level	m

avg24_3d_adf_Nv: Aerosol Diagnostics Fields

Frequency: 24-hourly from 12:00 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=1

Granule Size: ~591 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
AIRDENS	tzyx	moist air density	kg m-3
BCCONC	tzyx	Black Carbon Mass Concentration	kg m-3
BCEXTCOEF	tzyx	Black Carbon Extinction Coefficient [550 nm]	m-1
BCSCACOEf	tzyx	Black Carbon Scattering Coefficient [550 nm]	m-1
DUCONC	tzyx	Dust Mass Concentration	kg m-3
DUEXTCOEF	tzyx	Dust Extinction Coefficient [550 nm]	m-1
DUSCACOEf	tzyx	Dust Scattering Coefficient [550 nm]	m-1
LWI	tyx	land(1) water(0) ice(2) flag	1
NICONC	tzyx	Nitrate Mass Concentration	kg m-3
NIEXTCOEF	tzyx	Nitrate Extinction Coefficient [550 nm]	m-1
NISCACOEf	tzyx	Nitrate Scattering Coefficient [550 nm]	m-1
OCCONC	tzyx	Organic Carbon Mass Concentration	kg m-3
OCEXTCOEF	tzyx	Organic Carbon Ext. Coefficient [550 nm]	m-1
OCSCACOEf	tzyx	Organic Carbon Scatt. Coefficient [550 nm]	m-1
RH	tzyx	relative humidity after moist	1
SSCONC	tzyx	Sea Salt Mass Concentration	kg m-3
SSEXTCOEF	tzyx	Sea Salt Extinction Coefficient [550 nm]	m-1
SSSCACOEf	tzyx	Sea Salt Scattering Coefficient [550 nm]	m-1
SUCONC	tzyx	SO4 Aerosol Mass Concentration	kg m-3
SUCONCvolc	tzyx	SO4 Aerosol Mass Concentration (Volcanic)	kg m-3

SUEXTCOEF	tzyx	SO4 Extinction Coefficient [550 nm]	m-1
SUEXTCOEFvol c	tzyx	SO4 Extinction Coefficient [550 nm] (Volcanic)	m-1
SUSCACOEFC	tzyx	SO4 Scattering Coefficient [550 nm]	m-1
SUSCACOEFCvol c	tzyx	SO4 Scattering Coefficient [550 nm] (Volcanic)	m-1
delp	tzyx	pressure thickness	Pa
ps	tyx	surface pressure	Pa

tavg24_3d_aer_Np: Aerosol Fields

Frequency: 24-hourly from 12:00 UTC (time-averaged)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=1

Granule Size: ~205 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
AIRDENS	tzyx	moist air density	kg m-3
BC	tzyx	Black Carbon Mass Mixing Ratio	kg/kg
DU	tzyx	Dust Mass Mixing Ratio	kg kg-1
HNO3CONC	tzyx	Nitric Acid Mass Concentration	kg m-3
LWI	tyx	land(1) water(0) ice(2) flag	1
NH3	tzyx	Ammonia (NH3, gas phase)	kg kg-1
NH4	tzyx	Ammonium ion (NH4+, aerosol phase)	kg kg-1
NI	tzyx	Nitrate Mass Mixing Ratio	kg/kg
NICONC	tzyx	Nitrate Mass Concentration	kg m-3
OC	tzyx	Organic Carbon Mass Mixing Ratio	kg kg-1
PS	tyx	surface pressure	Pa
SO2	tzyx	Sulphur dioxide	kg kg-1
SO2v	tzyx	Sulphur dioxide (volcanic)	kg kg-1
SO4	tzyx	Sulphate aerosol	kg kg-1
SO4v	tzyx	Sulphate aerosol (volcanic)	kg kg-1
SS	tzyx	Sea Salt Mass Mixing Ratio	kg kg-1

tavg24_3d_dac_Np: Daily Average Chemical Fields

Frequency: daily from 12:00 UTC (time-averaged)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=1

Granule Size: ~934 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
ACET	tzyx	Acetone	mol mol-1
AIRDENS	tzyx	moist air density	kg m-3
AIRMASS	tzyx	mass of air in layer	kg m-2
ALD2	tzyx	Acetaldehyde (C2H4O)	mol mol-1
ALK4	tzyx	C4-5 alkanes (C4H10 C5H12)	mol mol-1
AOADAYS	tzyx	Age-of-air	days
BCOD	tzyx	black carbon optical depth (400 nm)	1
BCSA	tzyx	black carbon surface area	cm+2 cm-3
Br	tzyx	Ground state atomic bromine (2P3/2)	mol mol-1
BrCl	tzyx	Bromine chloride	mol mol-1
BrO	tzyx	Bromine monoxide radical	mol mol-1
BrONO2	tzyx	Bromine nitrate	mol mol-1
C2H6	tzyx	Ethane	mol mol-1
C3H8	tzyx	Propane	mol mol-1
CCl4	tzyx	Carbon tetrachloride	mol mol-1
CFC11	tzyx	CFC11 (CFCl3)	mol mol-1
CFC113	tzyx	CFC113 (C2Cl3F3)	mol mol-1
CFC12	tzyx	CFC12 (CF2Cl2)	mol mol-1
CH2O	tzyx	Formaldehyde	mol mol-1
CH3Br	tzyx	Methyl bromide	mol mol-1
CH3CCl3	tzyx	Methyl chloroform	mol mol-1
CH3Cl	tzyx	Methyl chloride	mol mol-1
CH4	tzyx	Methane	mol mol-1
CO	tzyx	Carbon monoxide	mol mol-1
Cl	tzyx	Ground state atomic chlorine (2P3/2)	mol mol-1
Cl2	tzyx	Molecular chlorine	mol mol-1
Cl2O2	tzyx	Chlorine peroxide	mol mol-1
ClO	tzyx	Chlorine monoxide radical	mol mol-1
ClONO2	tzyx	Chlorine nitrate	mol mol-1
DUSTOD	tzyx	dust optical depth (400 nm)	1
DUSTSA	tzyx	dust surface area	cm+2 cm-3
EM_ALD2	tzyx	acetaldehyde (C2H4O) emissions	mol mol-1 s-1
EM_ALK4	tzyx	C4,5 alkanes (C4H10) emissions	mol mol-1 s-1
EM_C2H6	tzyx	ethane emissions	mol mol-1 s-1

EM_C3H8	tzyx	propane emissions	mol mol-1 s-1
EM_CH2O	tzyx	formaldehyde emissions	mol mol-1 s-1
EM_CO	tzyx	carbon monoxide emissions	mol mol-1 s-1
EM_LGTNO	tzyx	NO emissions from lightning	mol mol-1 s-1
EM_MEK	tzyx	methyl ethyl ketone (C4H8O) emissions	mol mol-1 s-1
EM_NO	tzyx	nitric oxide emissions	mol mol-1 s-1
EM_PRPE	tzyx	propene (C3H6) emissions	mol mol-1 s-1
H2O2	tzyx	Hydrogen peroxide	mol mol-1
H2OCOND	tzyx	mass fraction of total cloud water	kg kg-1
HBr	tzyx	Hydrogen bromide	mol mol-1
HCl	tzyx	Hydrochloric acid	mol mol-1
HNO3	tzyx	Nitric acid	mol mol-1
HNO3COND	tzyx	Condensed nitric acid	mol mol-1
HNO4	tzyx	Pernitric acid	mol mol-1
HO2	tzyx	Perhydroxyl radical	mol mol-1
HOBr	tzyx	Hydrobromous acid	mol mol-1
HOCl	tzyx	Hydrochlorous acid	mol mol-1
ICESAD	tzyx	ice surface area density	cm ² cm ⁻³
ISOP	tzyx	Isoprene (C5H8)	mol mol-1
LBSSAD	tzyx	LBS surface area density	cm ² cm ⁻³
MO2	tzyx	Methylperoxy radical (CH3O2)	mol mol-1
MP	tzyx	Methyl hydroperoxide	mol mol-1
MVK	tzyx	Methyl vinyl ketone (C4H6O)	mol mol-1
N	tzyx	Ground state atomic nitrogen	mol mol-1
N2O	tzyx	Nitrous oxide	mol mol-1
N2O5	tzyx	Dinitrogen pentoxide	mol mol-1
NATSAD	tzyx	NAT surface area density	cm ² cm ⁻³
NO	tzyx	Nitric oxide	mol mol-1
NO2	tzyx	Nitrogen dioxide	mol mol-1
NO3	tzyx	Nitrogen trioxide	mol mol-1
NUMDENS10	tzyx	Total number density * 1e-10	cm ⁻³
O1D	tzyx	First excited singlet state of atomic oxygen (1D)	mol mol-1
O3	tzyx	Ozone	mol mol-1
OCOD	tzyx	organic carbon optical depth (400 nm)	1

OCSA	tzyx	organic carbon surface area	cm ² cm ⁻³
OCIO	tzyx	Symmetrical chlorine dioxide	mol mol ⁻¹
OH	tzyx	Hydroxyl radical	mol mol ⁻¹
PAN	tzyx	Peroxyacetyl nitrate (C ₂ H ₃ NO ₅)	mol mol ⁻¹
PRPE	tzyx	Propene (C ₃ H ₆)	mol mol ⁻¹
PS	tyx	surface pressure	Pa
R4N2	tzyx	C4-C5 alkylnitrates (C ₄ H ₉ O ₃ N)	mol mol ⁻¹
RCHO	tzyx	C2 aldehydes (C ₃ H ₆ O)	mol mol ⁻¹
SO4OD	tzyx	sulfate optical depth (400 nm)	1
SO4SA	tzyx	sulfate surface area	cm ² cm ⁻³
V_CH4	tzyx	northward wind * Methane	m s ⁻¹ mol mol ⁻¹
V_EPV	tzyx	northward wind * ertels potential vorticity	m s ⁻¹ K m ² kg ⁻¹ s ⁻¹
V_N2O	tzyx	northward wind * Nitrous oxide	m s ⁻¹ mol mol ⁻¹
W_CH4	tzyx	vertical velocity * Methane	m s ⁻¹ mol mol ⁻¹
W_EPV	tzyx	vertical velocity * ertels potential vorticity	m s ⁻¹ K m ² kg ⁻¹ s ⁻¹
W_N2O	tzyx	vertical velocity * Nitrous oxide	m s ⁻¹ mol mol ⁻¹

avg24_3d_dac_Nv: Daily Average Chemical Fields

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=72, time=1*

Granule Size: *~1.5 GB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
ACET	tzyx	Acetone	mol mol ⁻¹
AIRDENS	tzyx	moist air density	kg m ⁻³
AIRMASS	tzyx	mass of air in layer	kg m ⁻²
ALD2	tzyx	Acetaldehyde (C ₂ H ₄ O)	mol mol ⁻¹
ALK4	tzyx	C4-5 alkanes (C ₄ H ₁₀ C ₅ H ₁₂)	mol mol ⁻¹
AOADAYS	tzyx	Age-of-air	days
BCOD	tzyx	black carbon optical depth (400 nm)	1
BCSA	tzyx	black carbon surface area	cm ² cm ⁻³
Br	tzyx	Ground state atomic bromine (2P _{3/2})	mol mol ⁻¹

BrCl	tzyx	Bromine chloride	mol mol-1
BrO	tzyx	Bromine monoxide radical	mol mol-1
BrONO2	tzyx	Bromine nitrate	mol mol-1
C2H6	tzyx	Ethane	mol mol-1
C3H8	tzyx	Propane	mol mol-1
CCl4	tzyx	Carbon tetrachloride	mol mol-1
CFC11	tzyx	CFC11 (CFC13)	mol mol-1
CFC113	tzyx	CFC113 (C2Cl3F3)	mol mol-1
CFC12	tzyx	CFC12 (CF2Cl2)	mol mol-1
CH2O	tzyx	Formaldehyde	mol mol-1
CH3Br	tzyx	Methyl bromide	mol mol-1
CH3CCl3	tzyx	Methyl chloroform	mol mol-1
CH3Cl	tzyx	Methyl chloride	mol mol-1
CH4	tzyx	Methane	mol mol-1
CO	tzyx	Carbon monoxide	mol mol-1
Cl	tzyx	Ground state atomic chlorine (2P3/2)	mol mol-1
Cl2	tzyx	Molecular chlorine	mol mol-1
Cl2O2	tzyx	Chlorine peroxide	mol mol-1
ClO	tzyx	Chlorine monoxide radical	mol mol-1
ClONO2	tzyx	Chlorine nitrate	mol mol-1
DELP	tzyx	pressure thickness	Pa
DUSTOD	tzyx	dust optical depth (400 nm)	1
DUSTSA	tzyx	dust surface area	cm ² cm ⁻³
EM_ALD2	tzyx	acetaldehyde (C2H4O) emissions	mol mol-1 s-1
EM_ALK4	tzyx	C4,5 alkanes (C4H10) emissions	mol mol-1 s-1
EM_C2H6	tzyx	ethane emissions	mol mol-1 s-1
EM_C3H8	tzyx	propane emissions	mol mol-1 s-1
EM_CH2O	tzyx	formaldehyde emissions	mol mol-1 s-1
EM_CO	tzyx	carbon monoxide emissions	mol mol-1 s-1
EM_LGTNO	tzyx	NO emissions from lightning	mol mol-1 s-1
EM_MEK	tzyx	methyl ethyl ketone (C4H8O) emissions	mol mol-1 s-1
EM_NO	tzyx	nitric oxide emissions	mol mol-1 s-1
EM_PRPE	tzyx	propene (C3H6) emissions	mol mol-1

			s-1
H2O2	tzyx	Hydrogen peroxide	mol mol-1
H2OCOND	tzyx	mass fraction of total cloud water	kg kg-1
HBr	tzyx	Hydrogen bromide	mol mol-1
HCl	tzyx	Hydrochloric acid	mol mol-1
HNO3	tzyx	Nitric acid	mol mol-1
HNO3COND	tzyx	Condensed nitric acid	mol mol-1
HNO4	tzyx	Pernitric acid	mol mol-1
HO2	tzyx	Perhydroxyl radical	mol mol-1
HOBr	tzyx	Hydrobromous acid	mol mol-1
HOCl	tzyx	Hydrochlorous acid	mol mol-1
ICESAD	tzyx	ice surface area density	cm+2 cm-3
ISOP	tzyx	Isoprene (C5H8)	mol mol-1
LBSSAD	tzyx	LBS surface area density	cm+2 cm-3
MO2	tzyx	Methylperoxy radical (CH3O2)	mol mol-1
MP	tzyx	Methyl hydroperoxide	mol mol-1
MVK	tzyx	Methyl vinyl ketone (C4H6O)	mol mol-1
N	tzyx	Ground state atomic nitrogen	mol mol-1
N2O	tzyx	Nitrous oxide	mol mol-1
N2O5	tzyx	Dinitrogen pentoxide	mol mol-1
NATSAD	tzyx	NAT surface area density	cm+2 cm-3
NO	tzyx	Nitric oxide	mol mol-1
NO2	tzyx	Nitrogen dioxide	mol mol-1
NO3	tzyx	Nitrogen trioxide	mol mol-1
NUMDENS10	tzyx	Total number density * 1e-10	cm-3
O1D	tzyx	First excited singlet state of atomic oxygen (1D)	mol mol-1
O3	tzyx	Ozone	mol mol-1
OCOD	tzyx	organic carbon optical depth (400 nm)	1
OCSA	tzyx	organic carbon surface area	cm+2 cm-3
OCIO	tzyx	Symmetrical chlorine dioxide	mol mol-1
OH	tzyx	Hydroxyl radical	mol mol-1
PAN	tzyx	Peroxyacetyl nitrate (C2H3NO5)	mol mol-1
PRPE	tzyx	Propene (C3H6)	mol mol-1
PS	tyx	surface pressure	Pa
R4N2	tzyx	C4-C5 alkylnitrates (C4H9O3N)	mol mol-1
RCHO	tzyx	C2 aldehydes (C3H6O)	mol mol-1
SO4OD	tzyx	sulfate optical depth (400 nm)	1
SO4SA	tzyx	sulfate surface area	cm+2 cm-3
V_CH4	tzyx	northward wind * Methane	m s-1 mol

			mol-1
V_EPV	tzyx	northward wind * ertels potential vorticity	m s-1 K m+2 kg-1 s-1
V_N2O	tzyx	northward wind * Nitrous oxide	m s-1 mol mol-1
W_CH4	tzyx	vertical velocity * Methane	m s-1 mol mol-1
W_EPV	tzyx	vertical velocity * ertels potential vorticity	m s-1 K m+2 kg-1 s-1
W_N2O	tzyx	vertical velocity * Nitrous oxide	m s-1 mol mol-1

avg24_3d_dad_Np: Daily Average Diagnostics

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, pressure-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=44, time=1*

Granule Size: *~422 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DTDTANA	tzyx	total temperature analysis tendency	K s-1
DTDTDYN	tzyx	tendency of air temperature due to dynamics	K s-1
DTDTGWD	tzyx	mass weighted air temperature tendency due to GWD	Pa K s-1
DTDTMST	tzyx	tendency of air temperature due to moist processes	K s-1
DTDTORO	tzyx	air temperature tendency due to orographic GWD	K s-1
DTDTRAD	tzyx	tendency of air temperature due to radiation	K s-1
DTDTTOT	tzyx	tendency of air temperature due to physics	K s-1
DTDTTRB	tzyx	tendency of air temperature due to turbulence	K s-1
DUDTGWD	tzyx	tendency of eastward wind due to GWD	m s-2
DUDTORO	tzyx	tendency of eastward wind due to orographic GWD	m s-2
DVDTGWD	tzyx	tendency of northward wind due to GWD	m s-2
DVDTORO	tzyx	tendency of northward wind due to orographic GWD	m s-2
EPV	tzyx	ertels potential vorticity	K m+2 kg-1 s-1
FCLD	tzyx	cloud fraction for radiation	1
H2OCOND	tzyx	mass fraction of total cloud water	kg kg-1
OMEGA	tzyx	vertical pressure velocity	Pa s-1
PS	tyx	surface pressure	Pa
PV	tzyx	ertels isentropic potential vorticity	m+2 kg-1 s-1
Q	tzyx	specific humidity	kg kg-1

QCTOT	tzyx	mass fraction of total cloud water	kg kg-1
QITOT	tzyx	grid box mass fraction of cloud ice water	kg kg-1
QLTOT	tzyx	grid box mass fraction of cloud liquid water	kg kg-1
QR	tzyx	Falling rain for radiation	kg kg-1
RADLW	tzyx	air temperature tendency due to longwave	K s-1
RADSW	tzyx	air temperature tendency due to shortwave	K s-1
RH2	tzyx	relative humidity after moist	1
RI	tzyx	ice phase cloud particle effective radius	m
RL	tzyx	liquid cloud particle effective radius	m
RR	tzyx	falling rain particle effective radius	m
T	tzyx	air temperature	K
TAUCLI	tzyx	in cloud optical thickness for ice clouds	1
TAUCLW	tzyx	in cloud optical thickness for liquid clouds	1
U	tzyx	eastward wind	m s-1
U_V	tzyx	eastward wind * northward wind	m s-1 m s-1
V	tzyx	northward wind	m s-1
V_T	tzyx	northward wind * air temperature	m s-1 K
W	tzyx	vertical velocity	m s-1
ZL	tzyx	mid layer heights	m

avg24_3d_dae_Np: Daily Average Extra Chemical Fields

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, pressure-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=44, time=1*

Granule Size: *~854 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
A3O2	tzyx	Primary RO2 (C3H7O2) from propane	mol mol-1
ACTA	tzyx	Acetic acid (C2H4O2)	mol mol-1
ATO2	tzyx	RO2 from acetone (C3H6O3)	mol mol-1
B3O2	tzyx	Secondary RO2 (C3H7O2) from propane	mol mol-1
CF2Br2	tzyx	Halon 1202	mol mol-1
CF2ClBr	tzyx	Halon 1211	mol mol-1
CF3Br	tzyx	Halon 1301	mol mol-1
CFC114	tzyx	CFC114 (C2Cl2F4)	mol mol-1
CFC115	tzyx	CFC115 (C2ClF5)	mol mol-1
EOH	tzyx	Ethanol	mol mol-1

ETO2	tzyx	Ethylperoxy radical (C2H5O2)	mol mol-1
ETP	tzyx	Ethylhydroperoxide (C2H6O2) from ETO2	mol mol-1
GCO3	tzyx	Hydroxy peroxyacetyl radical (C2H3O4)	mol mol-1
GLYC	tzyx	Glycolaldehyde (Hydroxyacetaldehyde C2H4O2)	mol mol-1
GLYX	tzyx	Glyoxal (2CHO)	mol mol-1
GP	tzyx	Peroxide (C2H4O4) from GCO3	mol mol-1
GPAN	tzyx	Peroxyacylnitrate (C2H3O6N)	mol mol-1
H	tzyx	Ground state atomic hydrogen (2S)	mol mol-1
H2	tzyx	Molecular hydrogen	mol mol-1
H2402	tzyx	Halon 2402 (C2Br2F4)	mol mol-1
HAC	tzyx	Hydroxyacetone (C3H6O2)	mol mol-1
HCFC141b	tzyx	HCFC141b (C2Cl2FH3)	mol mol-1
HCFC142b	tzyx	HCFC142b (C2ClF2H3)	mol mol-1
HCFC22	tzyx	HCFC22 (CClF2H)	mol mol-1
HCOOH	tzyx	Formic acid (CH2O2)	mol mol-1
HNO2	tzyx	Nitrous acid	mol mol-1
IALD	tzyx	Hydroxy carbonyl alkenes (C5H8O2) from isoprene	mol mol-1
IAO2	tzyx	RO2 (C5H9O5) from isoprene oxidation products	mol mol-1
IAP	tzyx	Peroxide (C5H10O5) from IAO2	mol mol-1
INO2	tzyx	RO2 (C5H8O3N) from ISOP+NO3	mol mol-1
INPN	tzyx	Peroxide (C5H8O6N2) from INO2	mol mol-1
ISN1	tzyx	RO2 (C4H7O4N) from ISN2	mol mol-1
ISNP	tzyx	Peroxide (C4H7O4N) from ISN1	mol mol-1
KO2	tzyx	RO2 (C4H7O3) from C3 ketones	mol mol-1
MACR	tzyx	Methacrolein (C4H6O)	mol mol-1
MAN2	tzyx	RO2 (C4H6O6N) from MACR+NO3	mol mol-1
MAO3	tzyx	Peroxyacyl (C4H5O3) from MACR and MVK	mol mol-1
MAOP	tzyx	Peroxide (C4H6O3) from MAO3	mol mol-1
MAP	tzyx	Peroxyacetic acid (C2H4O3)	mol mol-1
MCO3	tzyx	Peroxyacetyl radical (C2H3O3)	mol mol-1
MEK	tzyx	Methyl ethyl ketone (C4H8O)	mol mol-1
MGLY	tzyx	Methylglyoxal (C3H4O2)	mol mol-1
MOH	tzyx	Methanol	mol mol-1
MRO2	tzyx	RO2 (C4H7O4) from MACR+OH	mol mol-1
MRP	tzyx	Peroxide (C4H8O4) from MRO2	mol mol-1
MVN2	tzyx	C4H6O4N	mol mol-1
O	tzyx	Ground state atomic oxygen (3P)	mol mol-1
PMN	tzyx	Peroxymethacryloyl nitrate (C4H5O5N)	mol mol-1
PO2	tzyx	RO2 (C3H7O3) from propene	mol mol-1

PP	tzyx	Peroxide (C3H8O3) from PO2	mol mol-1
PPN	tzyx	Peroxypropionyl nitrate (C3H5NO5)	mol mol-1
PRN1	tzyx	RO2 (C3H6O3N) from propene+NO3	mol mol-1
PRPN	tzyx	Peroxide (C3H6O3N) from PRN1	mol mol-1
PS	tyx	surface pressure	Pa
R4N1	tzyx	RO2 (C4H9O3N) from R4N2	mol mol-1
R4O2	tzyx	RO2 (C4H9O2) from ALK4	mol mol-1
R4P	tzyx	Peroxide (C4H10O2) from R4O2	mol mol-1
RA3P	tzyx	Peroxy propyl alcohol (C3H8O2) from A3O2	mol mol-1
RB3P	tzyx	Peroxide (C3H8O2) from B3O2	mol mol-1
RCO3	tzyx	Peroxypropionyl radical (C3H5O3)	mol mol-1
RIO1	tzyx	RO2 (C5H9O3) from isoprene oxydation products	mol mol-1
RIO2	tzyx	RO2 (C5H9O3) from isoprene	mol mol-1
RIP	tzyx	Peroxide (C5H10O3) from RIO2	mol mol-1
ROH	tzyx	C2 alcohols	mol mol-1
RP	tzyx	Methacrolein peroxy acid (C4H6O3)	mol mol-1
VRO2	tzyx	RO2 (C4H7O4) from MVK+OH	mol mol-1
VRP	tzyx	Peroxide (C4H8O4) from VRO2	mol mol-1

tavg24_3d_dat_Np: Daily Average Tracer Diagnostics

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, pressure-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=44, time=1*

Granule Size: *~280 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
Be10	tzyx	Beryllium-10	mol mol-1
Be7	tzyx	Beryllium-7	mol mol-1
CH3I	tzyx	Methyl iodide	mol mol-1
PS	tyx	surface pressure	Pa
Pb210	tzyx	Lead-210	mol mol-1
Rn222	tzyx	Radon-222	mol mol-1
aoa	tzyx	Age-of-air	days
aoa_nh	tzyx	Age of air northern hemisphere tracer	days
co_25	tzyx	Anthro CO 25 day tracer	mol mol-1
co_50	tzyx	Anthro CO 50 day tracer	mol mol-1
co_50_ea	tzyx	Anthro CO 50 day tracer East Asia	mol mol-1

co_50_eu	tzyx	Anthro CO 50 day tracer Europe	mol mol-1
co_50_na	tzyx	Anthro CO 50 day tracer North America	mol mol-1
co_50_sa	tzyx	Anthro CO 50 day tracer South Asia	mol mol-1
e90	tzyx	Constant burden 90 day tracer	mol mol-1
e90n	tzyx	Constant burden 90 day tracer 40N-pole emiss	mol mol-1
e90s	tzyx	Constant burden 90 day tracer 40S-pole emiss	mol mol-1
nh_5	tzyx	Northern Hemisphere 5 day tracer	mol mol-1
nh_50	tzyx	Northern Hemisphere 50 day tracer	mol mol-1
sf6	tzyx	Sulfur Hexaflouride	mol mol-1
st80_25	tzyx	Stratospheric source 25 day tracer	mol mol-1
stO3	tzyx	Strat Ozone w/ loss in Troposphere	mol mol-1

tavg24_3d_dep_Nv: Daily Average Deposition and Scavenging Fields

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=35, time=1*

Granule Size: *~192 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DD_BR	tyx	dry deposition of BR	kg m-2 s-1
DD_BRCL	tyx	dry deposition of BRCL	kg m-2 s-1
DD_BRONO2	tyx	dry deposition of BRONO2	kg m-2 s-1
DD_CH2O	tyx	dry deposition of CH2O	kg m-2 s-1
DD_CLO	tyx	dry deposition of CLO	kg m-2 s-1
DD_CLONO2	tyx	dry deposition of CLONO2	kg m-2 s-1
DD_H2O2	tyx	dry deposition of H2O2	kg m-2 s-1
DD_HBR	tyx	dry deposition of HBR	kg m-2 s-1
DD_HCL	tyx	dry deposition of HCL	kg m-2 s-1
DD_HNO2	tyx	dry deposition of HNO2	kg m-2 s-1
DD_HNO3	tyx	dry deposition of HNO3	kg m-2 s-1
DD_HNO4	tyx	dry deposition of HNO4	kg m-2 s-1
DD_HO2	tyx	dry deposition of HO2	kg m-2 s-1
DD_HOBR	tyx	dry deposition of HOBR	kg m-2 s-1
DD_HOCL	tyx	dry deposition of HOCL	kg m-2 s-1
DD_MP	tyx	dry deposition of MP	kg m-2 s-1
DD_N2O5	tyx	dry deposition of N2O5	kg m-2 s-1
DD_NO2	tyx	dry deposition of NO2	kg m-2 s-1

DD_NO3	tyx	dry deposition of NO3	kg m-2 s-1
DD_O3	tyx	dry deposition of OX	kg m-2 s-1
DD_PAN	tyx	dry deposition of PAN	kg m-2 s-1
DD_PMN	tyx	dry deposition of PMN	kg m-2 s-1
DD_PPN	tyx	dry deposition of PPN	kg m-2 s-1
DD_R4N2	tyx	dry deposition of R4N2	kg m-2 s-1
DELP	tzyx	pressure thickness	Pa
PS	tyx	surface pressure	Pa
SCAV_BR	tzyx	scavenging of BR	kg m-3 s-1
SCAV_BRCL	tzyx	scavenging of BRCL	kg m-3 s-1
SCAV_BRONO2	tzyx	scavenging of BRONO2	kg m-3 s-1
SCAV_CH2O	tzyx	scavenging of CH2O	kg m-3 s-1
SCAV_CLO	tzyx	scavenging of CLO	kg m-3 s-1
SCAV_CLONO2	tzyx	scavenging of CLONO2	kg m-3 s-1
SCAV_H2O2	tzyx	scavenging of H2O2	kg m-3 s-1
SCAV_HBR	tzyx	scavenging of HBR	kg m-3 s-1
SCAV_HCL	tzyx	scavenging of HCL	kg m-3 s-1
SCAV_HNO2	tzyx	scavenging of HNO2	kg m-3 s-1
SCAV_HNO3	tzyx	scavenging of HNO3	kg m-3 s-1
SCAV_HNO4	tzyx	scavenging of HNO4	kg m-3 s-1
SCAV_HO2	tzyx	scavenging of HO2	kg m-3 s-1
SCAV_HOBR	tzyx	scavenging of HOBR	kg m-3 s-1
SCAV_HOCL	tzyx	scavenging of HOCL	kg m-3 s-1
SCAV_MP	tzyx	scavenging of MP	kg m-3 s-1
SCAV_N2O5	tzyx	scavenging of N2O5	kg m-3 s-1
SCAV_NO2	tzyx	scavenging of NO2	kg m-3 s-1
SCAV_NO3	tzyx	scavenging of NO3	kg m-3 s-1
SCAV_O3	tzyx	scavenging of OX	kg m-3 s-1
SCAV_PAN	tzyx	scavenging of PAN	kg m-3 s-1
SCAV_PMN	tzyx	scavenging of PMN	kg m-3 s-1
SCAV_PPN	tzyx	scavenging of PPN	kg m-3 s-1
SCAV_R4N2	tzyx	scavenging of R4N2	kg m-3 s-1
WD_BR	tyx	wet deposition of BR	kg m-2 s-1
WD_BRCL	tyx	wet deposition of BRCL	kg m-2 s-1
WD_BRONO2	tyx	wet deposition of BRONO2	kg m-2 s-1
WD_CH2O	tyx	wet deposition of CH2O	kg m-2 s-1
WD_CLO	tyx	wet deposition of CLO	kg m-2 s-1
WD_CLONO2	tyx	wet deposition of CLONO2	kg m-2 s-1
WD_H2O2	tyx	wet deposition of H2O2	kg m-2 s-1

WD_HBR	tyx	wet deposition of HBR	kg m-2 s-1
WD_HCL	tyx	wet deposition of HCL	kg m-2 s-1
WD_HNO2	tyx	wet deposition of HNO2	kg m-2 s-1
WD_HNO3	tyx	wet deposition of HNO3	kg m-2 s-1
WD_HNO4	tyx	wet deposition of HNO4	kg m-2 s-1
WD_HO2	tyx	wet deposition of HO2	kg m-2 s-1
WD_HOBR	tyx	wet deposition of HOBR	kg m-2 s-1
WD_HOCL	tyx	wet deposition of HOCL	kg m-2 s-1
WD_MP	tyx	wet deposition of MP	kg m-2 s-1
WD_N2O5	tyx	wet deposition of N2O5	kg m-2 s-1
WD_NO2	tyx	wet deposition of NO2	kg m-2 s-1
WD_NO3	tyx	wet deposition of NO3	kg m-2 s-1
WD_O3	tyx	wet deposition of OX	kg m-2 s-1
WD_PAN	tyx	wet deposition of PAN	kg m-2 s-1
WD_PMN	tyx	wet deposition of PMN	kg m-2 s-1
WD_PPN	tyx	wet deposition of PPN	kg m-2 s-1
WD_R4N2	tyx	wet deposition of R4N2	kg m-2 s-1
ZL	tzyx	mid layer heights	m

tavg24_3d_rec_Nv: Daily Average Reaction Rates Combined

Frequency: daily from 12:00 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=1

Granule Size: ~252 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CH4_Oxidation	tzyx	QQK011+QQK012+QQK013+QQK039+QQK102	mole m-3 s-1
DELP	tzyx	pressure thickness	Pa
H2O2_prod	tzyx	QQK031+QQK035+QQK036+QQK318*0.5	mole m-3 s-1
O3_loss	tzyx	QQK027+QQK028+QQK204+QQK222+QQK253+QQK007	mole m-3 s-1
O3_loss_ext	tzyx	QQK207+QQK223+QQK224	mole m-3 s-1
O3_prod1	tzyx	QQK034+QQK040+QQK117+QQK120+QQK121+QQK123+QQK125*2.+QQK126*0.96+QQK127*0.93+QQK128+QQK129+QQK130	mole m-3 s-1
O3_prod2	tzyx	QQK131+QQK132+QQK133+QQK134+QQK135+QQK136+QQK137*1.9+(QQK138+QQK140+QQK141)*2.+QQK139+QQK151+QQK152+QQK153	mole m-3 s-1
OH_Prod1	tzyx	2.*(QQK007+QQK025+QQJ009)+QQK008+QQK011+Q	mole m-3 s-1

		QK022+QK024+QK028+QK034+QK058+QJ010+QJ013+QJ014+QJ024	
OH_Prod2	tzyx	QK071+QK101+QK204*0.14+QK222*0.27+QK223*0.08+QK224*0.22+QK253*0.1+QK316	mole m-3 s-1
OH_ProdJ	tzyx	QJ015+QJ065+QJ066+QJ067+QJ068+QJ069+QJ070+QJ071+QJ072+QJ073+QJ074+QJ075+QJ076+QJ077+QJ078+QJ079+QJ081	mole m-3 s-1
PS	tyx	surface pressure	Pa
rcoo2_no2	tzyx	QK113+QK147+QK148	mole m-3 s-1
ro2_no3	tzyx	QK212+QK213+QK058	mole m-3 s-1

tavg24_3d_rej_Nv: Daily Average Photolysis Rate Constants

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=72, time=1*

Granule Size: *~818 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DELP	tzyx	pressure thickness	Pa
PS	tyx	surface pressure	Pa
QJ001	tzyx	rate constant: O ₂ + hv = 2 O	s-1
QJ002	tzyx	rate constant: O ₃ + hv = O + O ₂	s-1
QJ003	tzyx	rate constant: O ₃ + hv = O ^{1D} + O ₂	s-1
QJ006	tzyx	rate constant: NO + hv = N + O	s-1
QJ007	tzyx	rate constant: N ₂ O + hv = N ₂ + O ^{1D}	s-1
QJ008	tzyx	rate constant: NO ₂ + hv = NO + O	s-1
QJ009	tzyx	rate constant: H ₂ O ₂ + hv = 2 OH	s-1
QJ010	tzyx	rate constant: MP + hv = CH ₂ O + HO ₂ + OH	s-1
QJ011	tzyx	rate constant: CH ₂ O + hv = CO + H + HO ₂	s-1
QJ012	tzyx	rate constant: CH ₂ O + hv = CO + H ₂	s-1
QJ013	tzyx	rate constant: HNO ₃ + hv = NO ₂ + OH	s-1
QJ014	tzyx	rate constant: HNO ₂ + hv = NO + OH	s-1
QJ015	tzyx	rate constant: HNO ₄ + hv = NO ₃ + OH	s-1
QJ016	tzyx	rate constant: NO ₃ + hv = NO ₂ + O ₃	s-1
QJ017	tzyx	rate constant: NO ₃ + hv = NO + O ₂	s-1
QJ018	tzyx	rate constant: N ₂ O ₅ + hv = NO ₂ + NO ₃	s-1
QJ020	tzyx	rate constant: HNO ₄ + hv = HO ₂ + NO ₂	s-1
QJ021	tzyx	rate constant: Cl ₂ + hv = 2 Cl	s-1
QJ022	tzyx	rate constant: OCIO + hv = ClO + O	s-1

QJ023	tzyx	rate constant: $\text{Cl}_2\text{O}_2 + \text{h}\nu = 2 \text{Cl} + \text{O}_2$	s-1
QJ024	tzyx	rate constant: $\text{HOCl} + \text{h}\nu = \text{Cl} + \text{OH}$	s-1
QJ025	tzyx	rate constant: $\text{ClONO}_2 + \text{h}\nu = \text{Cl} + \text{NO}_3$	s-1
QJ026	tzyx	rate constant: $\text{ClONO}_2 + \text{h}\nu = \text{ClO} + \text{NO}_2$	s-1
QJ027	tzyx	rate constant: $\text{BrCl} + \text{h}\nu = \text{Br} + \text{Cl}$	s-1
QJ028	tzyx	rate constant: $\text{BrO} + \text{h}\nu = \text{Br} + \text{O}$	s-1
QJ029	tzyx	rate constant: $\text{HOBr} + \text{h}\nu = \text{Br} + \text{OH}$	s-1
QJ030	tzyx	rate constant: $\text{BrONO}_2 + \text{h}\nu = \text{Br} + \text{NO}_3$	s-1
QJ032	tzyx	rate constant: $\text{CH}_3\text{Cl} + \text{h}\nu = \text{Cl} + \text{MO}_2$	s-1
QJ033	tzyx	rate constant: $\text{CCl}_4 + \text{h}\nu = 4 \text{Cl}$	s-1
QJ034	tzyx	rate constant: $\text{CH}_3\text{CCl}_3 + \text{h}\nu = 3 \text{Cl}$	s-1
QJ035	tzyx	rate constant: $\text{CFCl}_3 + \text{h}\nu = 3 \text{Cl}$	s-1
QJ036	tzyx	rate constant: $\text{CF}_2\text{Cl}_2 + \text{h}\nu = 2 \text{Cl}$	s-1
QJ037	tzyx	rate constant: $\text{CFC113} + \text{h}\nu = 3 \text{Cl}$	s-1
QJ038	tzyx	rate constant: $\text{CFC114} + \text{h}\nu = 2 \text{Cl}$	s-1
QJ039	tzyx	rate constant: $\text{CFC115} + \text{h}\nu = \text{Cl}$	s-1
QJ040	tzyx	rate constant: $\text{HCFC141b} + \text{h}\nu = 2 \text{Cl}$	s-1
QJ041	tzyx	rate constant: $\text{HCFC142b} + \text{h}\nu = \text{Cl}$	s-1
QJ042	tzyx	rate constant: $\text{CH}_3\text{Br} + \text{h}\nu = \text{Br} + \text{MO}_2$	s-1
QJ043	tzyx	rate constant: $\text{CF}_3\text{Br} + \text{h}\nu = \text{Br}$	s-1
QJ044	tzyx	rate constant: $\text{CF}_2\text{Br}_2 + \text{h}\nu = 2 \text{Br}$	s-1
QJ045	tzyx	rate constant: $\text{H2402} + \text{h}\nu = 2 \text{Br}$	s-1
QJ046	tzyx	rate constant: $\text{CF}_2\text{ClBr} + \text{h}\nu = \text{Br} + \text{Cl}$	s-1
QJ047	tzyx	rate constant: $\text{ALD}_2 + \text{h}\nu = \text{CO} + \text{HO}_2 + \text{MO}_2$	s-1
QJ049	tzyx	rate constant: $\text{PAN} + \text{h}\nu = \text{MCO}_3 + \text{NO}_2$	s-1
QJ050	tzyx	rate constant: $\text{RCHO} + \text{h}\nu = \text{CO} + \text{ETO}_2 + \text{HO}_2$	s-1
QJ051	tzyx	rate constant: $\text{ACET} + \text{h}\nu = \text{MCO}_3 + \text{MO}_2$	s-1
QJ065	tzyx	rate constant: $\text{INPN} + \text{h}\nu = \text{HO}_2 + \text{NO}_2 + \text{OH} + \text{RCHO}$	s-1
QJ066	tzyx	rate constant: $\text{PRPN} + \text{h}\nu = \text{HO}_2 + \text{NO}_2 + \text{OH} + \text{RCHO}$	s-1
QJ074	tzyx	rate constant: $\text{RIP} + \text{h}\nu = 0.69 \text{CH}_2\text{O} + 0.86 \text{HO}_2 + 0.13 \text{IALD} + 0.29 \text{MACR}$	s-1
QJ076	tzyx	rate constant: $\text{ISNP} + \text{h}\nu = \text{HO}_2 + \text{NO}_2 + \text{OH} + \text{RCHO}$	s-1

avg24_3d_rek_Nv: Daily Average Kinetic Reaction Constants

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=72, time=1*

Granule Size: *~677 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DELP	tzyx	pressure thickness	Pa
PS	tyx	surface pressure	Pa
QK001	tzyx	rate constant: $O + O_2 = O_3$	2-3body_varies
QK002	tzyx	rate constant: $O + O_3 = 2 O_2$	2-3body_varies
QK003	tzyx	rate constant: $N_2 + O_1D = N_2 + O$	2-3body_varies
QK004	tzyx	rate constant: $O_1D + O_2 = O + O_2$	2-3body_varies
QK005	tzyx	rate constant: $O_1D + O_3 = 2 O_2$	2-3body_varies
QK006	tzyx	rate constant: $O_1D + O_3 = 2 O + O_2$	2-3body_varies
QK007	tzyx	rate constant: $H_2O + O_1D = 2 OH$	2-3body_varies
QK008	tzyx	rate constant: $H_2 + O_1D = H + OH$	2-3body_varies
QK009	tzyx	rate constant: $N_2O + O_1D = N_2 + O_2$	2-3body_varies
QK010	tzyx	rate constant: $N_2O + O_1D = 2 NO$	2-3body_varies
QK011	tzyx	rate constant: $CH_4 + O_1D = MO_2 + OH$	2-3body_varies
QK012	tzyx	rate constant: $CH_4 + O_1D = CH_2O + H + HO_2$	2-3body_varies
QK013	tzyx	rate constant: $CH_4 + O_1D = CH_2O + H_2$	2-3body_varies
QK022	tzyx	rate constant: $H + O_3 = O_2 + OH$	2-3body_varies
QK024	tzyx	rate constant: $HO_2 + O = O_2 + OH$	2-3body_varies
QK026	tzyx	rate constant: $NO + O_3 = NO_2 + O_2$	2-3body_varies
QK027	tzyx	rate constant: $O_3 + OH = HO_2 + O_2$	2-3body_varies
QK028	tzyx	rate constant: $HO_2 + O_3 = 2 O_2 + OH$	2-3body_varies
QK031	tzyx	rate constant: $OH + OH = H_2O_2$	2-3body_varies
QK034	tzyx	rate constant: $HO_2 + NO = NO_2 + OH$	2-3body_varies
QK035	tzyx	rate constant: $HO_2 + HO_2 = H_2O_2 + O_2$	2-3body_varies

QK038	tzyx	rate constant: $\text{CO} + \text{OH} = \text{H}$	2-3body_varies
QK039	tzyx	rate constant: $\text{CH}_4 + \text{OH} = \text{H}_2\text{O} + \text{MO}_2$	2-3body_varies
QK040	tzyx	rate constant: $\text{MO}_2 + \text{NO} = \text{CH}_2\text{O} + \text{HO}_2 + \text{NO}_2$	2-3body_varies
QK051	tzyx	rate constant: $\text{NO}_2 + \text{OH} = \text{HNO}_3$	2-3body_varies
QK058	tzyx	rate constant: $\text{HO}_2 + \text{NO}_3 = \text{NO}_2 + \text{O}_2 + \text{OH}$	2-3body_varies
QK113	tzyx	rate constant: $\text{MCO}_3 + \text{NO}_2 = \text{PAN}$	2-3body_varies
QK114	tzyx	rate constant: $\text{PAN} = \text{MCO}_3 + \text{NO}_2$	2-3body_varies
QK115	tzyx	rate constant: $\text{MCO}_3 + \text{NO} = \text{MO}_2 + \text{NO}_2$	2-3body_varies
QK116	tzyx	rate constant: $\text{C}_2\text{H}_6 + \text{OH} = \text{ETO}_2 + \text{H}_2\text{O}$	2-3body_varies
QK118	tzyx	rate constant: $\text{C}_3\text{H}_8 + \text{OH} = \text{B}_3\text{O}_2$	2-3body_varies
QK119	tzyx	rate constant: $\text{C}_3\text{H}_8 + \text{OH} = \text{A}_3\text{O}_2$	2-3body_varies
QK122	tzyx	rate constant: $\text{ALK}_4 + \text{OH} = \text{R}_4\text{O}_2$	2-3body_varies
QK147	tzyx	rate constant: $\text{GCO}_3 + \text{NO}_2 = \text{GPAN}$	2-3body_varies
QK148	tzyx	rate constant: $\text{MAO}_3 + \text{NO}_2 = \text{PMN}$	2-3body_varies
QK191	tzyx	rate constant: $\text{EOH} + \text{OH} = \text{ALD}_2 + \text{HO}_2$	2-3body_varies
QK192	tzyx	rate constant: $\text{OH} + \text{ROH} = \text{HO}_2 + \text{RCHO}$	2-3body_varies
QK203	tzyx	rate constant: $\text{OH} + \text{PRPE} = \text{PO}_2$	2-3body_varies
QK204	tzyx	rate constant: $\text{O}_3 + \text{PRPE} = 0.50 \text{ ALD}_2 + 0.54 \text{ CH}_2\text{O} + 0.42 \text{ CO} + 0.06 \text{ H}_2 +$	2-3body_varies
QK208	tzyx	rate constant: $\text{GLYC} + \text{OH} = 0.80 \text{ GCO}_3 + 0.20 \text{ GLYX} + 0.20 \text{ HO}_2$	2-3body_varies
QK212	tzyx	rate constant: $\text{GLYX} + \text{NO}_3 = 2 \text{ CO} + \text{HNO}_3 + \text{HO}_2$	2-3body_varies
QK213	tzyx	rate constant: $\text{MGLY} + \text{NO}_3 = \text{CO} + \text{HNO}_3 + \text{MCO}_3$	2-3body_varies
QK214	tzyx	rate constant: $\text{ISOP} + \text{OH} = \text{RIO}_2$	2-3body_varies
QK215	tzyx	rate constant: $\text{MVK} + \text{OH} = \text{VRO}_2$	2-3body_varies

QK222	tzyx	rate constant: ISOP + O3 = 0.90 CH2O + 0.05 CO + 0.06 HO2 + 0.39 MACR +	2-3body_varies
QK253	tzyx	rate constant: IALD + O3 = 0.12 CH2O + 0.28 GLYC + 0.20 GLYX + 0.20 HAC	2-3body_varies

avg24_3d_rj2_Nv: Daily Average Photolysis Reaction Rates

Frequency: daily from 12:00 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=1

Granule Size: ~964 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DELP	tzyx	pressure thickness	Pa
PS	tyx	surface pressure	Pa
QQJ001	tzyx	reaction rate: O2 + hv = 2 O	mole m-3 s-1
QQJ002	tzyx	reaction rate: O3 + hv = O + O2	mole m-3 s-1
QQJ003	tzyx	reaction rate: O3 + hv = O1D + O2	mole m-3 s-1
QQJ006	tzyx	reaction rate: NO + hv = N + O	mole m-3 s-1
QQJ007	tzyx	reaction rate: N2O + hv = N2 + O1D	mole m-3 s-1
QQJ008	tzyx	reaction rate: NO2 + hv = NO + O	mole m-3 s-1
QQJ009	tzyx	reaction rate: H2O2 + hv = 2 OH	mole m-3 s-1
QQJ010	tzyx	reaction rate: MP + hv = CH2O + HO2 + OH	mole m-3 s-1
QQJ011	tzyx	reaction rate: CH2O + hv = CO + H + HO2	mole m-3 s-1
QQJ012	tzyx	reaction rate: CH2O + hv = CO + H2	mole m-3 s-1
QQJ013	tzyx	reaction rate: HNO3 + hv = NO2 + OH	mole m-3 s-1
QQJ014	tzyx	reaction rate: HNO2 + hv = NO + OH	mole m-3 s-1
QQJ015	tzyx	reaction rate: HNO4 + hv = NO3 + OH	mole m-3 s-1
QQJ016	tzyx	reaction rate: NO3 + hv = NO2 + O3	mole m-3 s-1
QQJ017	tzyx	reaction rate: NO3 + hv = NO + O2	mole m-3 s-1
QQJ018	tzyx	reaction rate: N2O5 + hv = NO2 + NO3	mole m-3 s-1
QQJ020	tzyx	reaction rate: HNO4 + hv = HO2 + NO2	mole m-3 s-1
QQJ021	tzyx	reaction rate: Cl2 + hv = 2 Cl	mole m-3 s-1
QQJ022	tzyx	reaction rate: OClO + hv = ClO + O	mole m-3 s-1
QQJ023	tzyx	reaction rate: Cl2O2 + hv = 2 Cl + O2	mole m-3 s-1
QQJ024	tzyx	reaction rate: HOCl + hv = Cl + OH	mole m-3 s-1
QQJ025	tzyx	reaction rate: ClONO2 + hv = Cl + NO3	mole m-3 s-1
QQJ026	tzyx	reaction rate: ClONO2 + hv = ClO + NO2	mole m-3 s-1
QQJ027	tzyx	reaction rate: BrCl + hv = Br + Cl	mole m-3 s-1

QQJ028	tzyx	reaction rate: $\text{BrO} + \text{h}\nu = \text{Br} + \text{O}$	mole m-3 s-1
QQJ029	tzyx	reaction rate: $\text{HOBr} + \text{h}\nu = \text{Br} + \text{OH}$	mole m-3 s-1
QQJ030	tzyx	reaction rate: $\text{BrONO}_2 + \text{h}\nu = \text{Br} + \text{NO}_3$	mole m-3 s-1
QQJ032	tzyx	reaction rate: $\text{CH}_3\text{Cl} + \text{h}\nu = \text{Cl} + \text{MO}_2$	mole m-3 s-1
QQJ033	tzyx	reaction rate: $\text{CCl}_4 + \text{h}\nu = 4 \text{Cl}$	mole m-3 s-1
QQJ034	tzyx	reaction rate: $\text{CH}_3\text{CCl}_3 + \text{h}\nu = 3 \text{Cl}$	mole m-3 s-1
QQJ035	tzyx	reaction rate: $\text{CFCI}_3 + \text{h}\nu = 3 \text{Cl}$	mole m-3 s-1
QQJ036	tzyx	reaction rate: $\text{CF}_2\text{Cl}_2 + \text{h}\nu = 2 \text{Cl}$	mole m-3 s-1
QQJ037	tzyx	reaction rate: $\text{CFC113} + \text{h}\nu = 3 \text{Cl}$	mole m-3 s-1
QQJ038	tzyx	reaction rate: $\text{CFC114} + \text{h}\nu = 2 \text{Cl}$	mole m-3 s-1
QQJ039	tzyx	reaction rate: $\text{CFC115} + \text{h}\nu = \text{Cl}$	mole m-3 s-1
QQJ040	tzyx	reaction rate: $\text{HCFC141b} + \text{h}\nu = 2 \text{Cl}$	mole m-3 s-1
QQJ041	tzyx	reaction rate: $\text{HCFC142b} + \text{h}\nu = \text{Cl}$	mole m-3 s-1
QQJ042	tzyx	reaction rate: $\text{CH}_3\text{Br} + \text{h}\nu = \text{Br} + \text{MO}_2$	mole m-3 s-1
QQJ043	tzyx	reaction rate: $\text{CF}_3\text{Br} + \text{h}\nu = \text{Br}$	mole m-3 s-1
QQJ044	tzyx	reaction rate: $\text{CF}_2\text{Br}_2 + \text{h}\nu = 2 \text{Br}$	mole m-3 s-1
QQJ045	tzyx	reaction rate: $\text{H2402} + \text{h}\nu = 2 \text{Br}$	mole m-3 s-1
QQJ046	tzyx	reaction rate: $\text{CF}_2\text{ClBr} + \text{h}\nu = \text{Br} + \text{Cl}$	mole m-3 s-1
QQJ047	tzyx	reaction rate: $\text{ALD}_2 + \text{h}\nu = \text{CO} + \text{HO}_2 + \text{MO}_2$	mole m-3 s-1
QQJ049	tzyx	reaction rate: $\text{PAN} + \text{h}\nu = \text{MCO}_3 + \text{NO}_2$	mole m-3 s-1
QQJ050	tzyx	reaction rate: $\text{RCHO} + \text{h}\nu = \text{CO} + \text{ETO}_2 + \text{HO}_2$	mole m-3 s-1
QQJ051	tzyx	reaction rate: $\text{ACET} + \text{h}\nu = \text{MCO}_3 + \text{MO}_2$	mole m-3 s-1
QQJ065	tzyx	reaction rate: $\text{INPN} + \text{h}\nu = \text{HO}_2 + \text{NO}_2 + \text{OH} + \text{RCHO}$	mole m-3 s-1
QQJ066	tzyx	reaction rate: $\text{PRPN} + \text{h}\nu = \text{HO}_2 + \text{NO}_2 + \text{OH} + \text{RCHO}$	mole m-3 s-1
QQJ074	tzyx	reaction rate: $\text{RIP} + \text{h}\nu = 0.69 \text{CH}_2\text{O} + 0.86 \text{HO}_2 + 0.13 \text{IALD} + 0.29 \text{MACR}$	mole m-3 s-1
QQJ076	tzyx	reaction rate: $\text{ISNP} + \text{h}\nu = \text{HO}_2 + \text{NO}_2 + \text{OH} + \text{RCHO}$	mole m-3 s-1

avg24_3d_rk2_Nv: Daily Average Kinetic Reaction Rates

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=72, time=1*

Granule Size: *~951 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DELP	tzyx	pressure thickness	Pa
PS	tyx	surface pressure	Pa
QQK001	tzyx	reaction rate: $\text{O} + \text{O}_2 = \text{O}_3$	mole m-3 s-1

QQK002	tzyx	reaction rate: $O + O_3 = 2 O_2$	mole m-3 s-1
QQK003	tzyx	reaction rate: $N_2 + O_1D = N_2 + O$	mole m-3 s-1
QQK004	tzyx	reaction rate: $O_1D + O_2 = O + O_2$	mole m-3 s-1
QQK005	tzyx	reaction rate: $O_1D + O_3 = 2 O_2$	mole m-3 s-1
QQK006	tzyx	reaction rate: $O_1D + O_3 = 2 O + O_2$	mole m-3 s-1
QQK007	tzyx	reaction rate: $H_2O + O_1D = 2 OH$	mole m-3 s-1
QQK008	tzyx	reaction rate: $H_2 + O_1D = H + OH$	mole m-3 s-1
QQK009	tzyx	reaction rate: $N_2O + O_1D = N_2 + O_2$	mole m-3 s-1
QQK010	tzyx	reaction rate: $N_2O + O_1D = 2 NO$	mole m-3 s-1
QQK011	tzyx	reaction rate: $CH_4 + O_1D = MO_2 + OH$	mole m-3 s-1
QQK012	tzyx	reaction rate: $CH_4 + O_1D = CH_2O + H + HO_2$	mole m-3 s-1
QQK013	tzyx	reaction rate: $CH_4 + O_1D = CH_2O + H_2$	mole m-3 s-1
QQK022	tzyx	reaction rate: $H + O_3 = O_2 + OH$	mole m-3 s-1
QQK024	tzyx	reaction rate: $HO_2 + O = O_2 + OH$	mole m-3 s-1
QQK026	tzyx	reaction rate: $NO + O_3 = NO_2 + O_2$	mole m-3 s-1
QQK027	tzyx	reaction rate: $O_3 + OH = HO_2 + O_2$	mole m-3 s-1
QQK028	tzyx	reaction rate: $HO_2 + O_3 = 2 O_2 + OH$	mole m-3 s-1
QQK031	tzyx	reaction rate: $OH + OH = H_2O_2$	mole m-3 s-1
QQK034	tzyx	reaction rate: $HO_2 + NO = NO_2 + OH$	mole m-3 s-1
QQK035	tzyx	reaction rate: $HO_2 + HO_2 = H_2O_2 + O_2$	mole m-3 s-1
QQK038	tzyx	reaction rate: $CO + OH = H$	mole m-3 s-1
QQK039	tzyx	reaction rate: $CH_4 + OH = H_2O + MO_2$	mole m-3 s-1
QQK040	tzyx	reaction rate: $MO_2 + NO = CH_2O + HO_2 + NO_2$	mole m-3 s-1
QQK051	tzyx	reaction rate: $NO_2 + OH = HNO_3$	mole m-3 s-1
QQK058	tzyx	reaction rate: $HO_2 + NO_3 = NO_2 + O_2 + OH$	mole m-3 s-1
QQK113	tzyx	reaction rate: $MCO_3 + NO_2 = PAN$	mole m-3 s-1
QQK114	tzyx	reaction rate: $PAN = MCO_3 + NO_2$	mole m-3 s-1
QQK115	tzyx	reaction rate: $MCO_3 + NO = MO_2 + NO_2$	mole m-3 s-1
QQK116	tzyx	reaction rate: $C_2H_6 + OH = ETO_2 + H_2O$	mole m-3 s-1
QQK118	tzyx	reaction rate: $C_3H_8 + OH = B_3O_2$	mole m-3 s-1
QQK119	tzyx	reaction rate: $C_3H_8 + OH = A_3O_2$	mole m-3 s-1
QQK122	tzyx	reaction rate: $ALK_4 + OH = R_4O_2$	mole m-3 s-1
QQK147	tzyx	reaction rate: $GCO_3 + NO_2 = GPAN$	mole m-3 s-1
QQK148	tzyx	reaction rate: $MAO_3 + NO_2 = PMN$	mole m-3 s-1
QQK191	tzyx	reaction rate: $EOH + OH = ALD_2 + HO_2$	mole m-3 s-1
QQK192	tzyx	reaction rate: $OH + ROH = HO_2 + RCHO$	mole m-3 s-1
QQK203	tzyx	reaction rate: $OH + PRPE = PO_2$	mole m-3 s-1
QQK204	tzyx	reaction rate: $O_3 + PRPE = 0.50 ALD_2 + 0.54 CH_2O + 0.42 CO + 0.06 H_2 +$	mole m-3 s-1

QQK208	tzyx	reaction rate: $\text{GLYC} + \text{OH} = 0.80 \text{ GCO}_3 + 0.20 \text{ GLYX} + 0.20 \text{ HO}_2$	mole m-3 s-1
QQK212	tzyx	reaction rate: $\text{GLYX} + \text{NO}_3 = 2 \text{ CO} + \text{HNO}_3 + \text{HO}_2$	mole m-3 s-1
QQK213	tzyx	reaction rate: $\text{MGLY} + \text{NO}_3 = \text{CO} + \text{HNO}_3 + \text{MCO}_3$	mole m-3 s-1
QQK214	tzyx	reaction rate: $\text{ISOP} + \text{OH} = \text{RIO}_2$	mole m-3 s-1
QQK215	tzyx	reaction rate: $\text{MVK} + \text{OH} = \text{VRO}_2$	mole m-3 s-1
QQK222	tzyx	reaction rate: $\text{ISOP} + \text{O}_3 = 0.90 \text{ CH}_2\text{O} + 0.05 \text{ CO} + 0.06 \text{ HO}_2 + 0.39 \text{ MACR} +$	mole m-3 s-1
QQK253	tzyx	reaction rate: $\text{IALD} + \text{O}_3 = 0.12 \text{ CH}_2\text{O} + 0.28 \text{ GLYC} + 0.20 \text{ GLYX} + 0.20 \text{ HAC}$	mole m-3 s-1

tavg24_3d_rk3_Nv: Additional Daily Average Kinetic Reaction Rates

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=72, time=1*

Granule Size: *~1.2 GB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DELP	tzyx	pressure thickness	Pa
PS	tyx	surface pressure	Pa
QQK019	tzyx	reaction rate: $\text{HCFC141b} + \text{O1D} = 2 \text{ Cl}$	mole m-3 s-1
QQK020	tzyx	reaction rate: $\text{HCFC142b} + \text{O1D} = \text{Cl}$	mole m-3 s-1
QQK021	tzyx	reaction rate: $\text{H} + \text{O}_2 = \text{HO}_2$	mole m-3 s-1
QQK023	tzyx	reaction rate: $\text{O} + \text{OH} = \text{H} + \text{O}_2$	mole m-3 s-1
QQK025	tzyx	reaction rate: $\text{H} + \text{HO}_2 = 2 \text{ OH}$	mole m-3 s-1
QQK029	tzyx	reaction rate: $\text{NO}_2 + \text{O}_3 = \text{NO}_3 + \text{O}_2$	mole m-3 s-1
QQK030	tzyx	reaction rate: $\text{OH} + \text{OH} = \text{H}_2\text{O} + \text{O}$	mole m-3 s-1
QQK032	tzyx	reaction rate: $\text{HO}_2 + \text{OH} = \text{H}_2\text{O} + \text{O}_2$	mole m-3 s-1
QQK033	tzyx	reaction rate: $\text{H}_2\text{O}_2 + \text{OH} = \text{H}_2\text{O} + \text{HO}_2$	mole m-3 s-1
QQK036	tzyx	reaction rate: $\text{H}_2\text{O} + \text{HO}_2 + \text{HO}_2 = \text{H}_2\text{O} + \text{H}_2\text{O}_2 + \text{O}_2$	mole m-3 s-1
QQK037	tzyx	reaction rate: $\text{H}_2 + \text{OH} = \text{H} + \text{H}_2\text{O}$	mole m-3 s-1
QQK041	tzyx	reaction rate: $\text{HO}_2 + \text{MO}_2 = \text{MP} + \text{O}_2$	mole m-3 s-1
QQK042	tzyx	reaction rate: $\text{MO}_2 + \text{MO}_2 = \text{CH}_2\text{O} + \text{MOH} + \text{O}_2$	mole m-3 s-1
QQK043	tzyx	reaction rate: $\text{MO}_2 + \text{MO}_2 = 2 \text{ CH}_2\text{O} + 2 \text{ HO}_2$	mole m-3 s-1
QQK044	tzyx	reaction rate: $\text{MP} + \text{OH} = \text{H}_2\text{O} + \text{MO}_2$	mole m-3 s-1
QQK045	tzyx	reaction rate: $\text{MP} + \text{OH} = \text{CH}_2\text{O} + \text{H}_2\text{O} + \text{OH}$	mole m-3 s-1
QQK046	tzyx	reaction rate: $\text{CH}_2\text{O} + \text{OH} = \text{CO} + \text{H}_2\text{O} + \text{HO}_2$	mole m-3 s-1
QQK047	tzyx	reaction rate: $\text{N} + \text{O}_2 = \text{NO} + \text{O}$	mole m-3 s-1

QQK048	tzyx	reaction rate: $N + NO = N_2 + O$	mole m-3 s-1
QQK049	tzyx	reaction rate: $NO_2 + O = NO + O_2$	mole m-3 s-1
QQK050	tzyx	reaction rate: $NO_3 + O = NO_2 + O_2$	mole m-3 s-1
QQK052	tzyx	reaction rate: $HNO_3 + OH = H_2O + NO_3$	mole m-3 s-1
QQK053	tzyx	reaction rate: $NO + OH = HNO_2$	mole m-3 s-1
QQK054	tzyx	reaction rate: $HNO_2 + OH = H_2O + NO_2$	mole m-3 s-1
QQK055	tzyx	reaction rate: $HO_2 + NO_2 = HNO_4$	mole m-3 s-1
QQK056	tzyx	reaction rate: $HNO_4 = HO_2 + NO_2$	mole m-3 s-1
QQK057	tzyx	reaction rate: $HNO_4 + OH = H_2O + NO_2 + O_2$	mole m-3 s-1
QQK059	tzyx	reaction rate: $NO + NO_3 = 2 NO_2$	mole m-3 s-1
QQK060	tzyx	reaction rate: $NO_3 + OH = HO_2 + NO_2$	mole m-3 s-1
QQK061	tzyx	reaction rate: $NO_2 + NO_3 = N_2O_5$	mole m-3 s-1
QQK062	tzyx	reaction rate: $N_2O_5 = NO_2 + NO_3$	mole m-3 s-1
QQK063	tzyx	reaction rate: $HCOOH + OH = H_2O + HO_2$	mole m-3 s-1
QQK064	tzyx	reaction rate: $MOH + OH = CH_2O + HO_2$	mole m-3 s-1
QQK065	tzyx	reaction rate: $NO_2 + NO_3 = NO + NO_2 + O_2$	mole m-3 s-1
QQK066	tzyx	reaction rate: $CH_2O + NO_3 = CO + HNO_3 + HO_2$	mole m-3 s-1
QQK067	tzyx	reaction rate: $Cl + O_3 = ClO + O_2$	mole m-3 s-1
QQK068	tzyx	reaction rate: $Cl + H_2 = H + HCl$	mole m-3 s-1
QQK069	tzyx	reaction rate: $Cl + H_2O_2 = HCl + HO_2$	mole m-3 s-1
QQK070	tzyx	reaction rate: $Cl + HO_2 = HCl + O_2$	mole m-3 s-1
QQK071	tzyx	reaction rate: $Cl + HO_2 = ClO + OH$	mole m-3 s-1
QQK072	tzyx	reaction rate: $ClO + O = Cl + O_2$	mole m-3 s-1
QQK073	tzyx	reaction rate: $ClO + OH = Cl + HO_2$	mole m-3 s-1
QQK074	tzyx	reaction rate: $ClO + OH = HCl + O_2$	mole m-3 s-1
QQK075	tzyx	reaction rate: $ClO + HO_2 = HOCl + O_2$	mole m-3 s-1
QQK076	tzyx	reaction rate: $ClO + HO_2 = HCl + O_3$	mole m-3 s-1
QQK077	tzyx	reaction rate: $ClO + NO = Cl + NO_2$	mole m-3 s-1
QQK078	tzyx	reaction rate: $ClO + NO_2 = ClONO_2$	mole m-3 s-1
QQK079	tzyx	reaction rate: $ClO + ClO = 2 Cl + O_2$	mole m-3 s-1
QQK080	tzyx	reaction rate: $ClO + ClO = Cl_2 + O_2$	mole m-3 s-1
QQK081	tzyx	reaction rate: $ClO + ClO = Cl + OClO$	mole m-3 s-1
QQK082	tzyx	reaction rate: $ClO + ClO = Cl_2O_2$	mole m-3 s-1
QQK083	tzyx	reaction rate: $Cl_2O_2 = 2 ClO$	mole m-3 s-1
QQK084	tzyx	reaction rate: $HCl + OH = Cl + H_2O$	mole m-3 s-1

avg24_3d_rk4_Nv: Additional Daily Average Kinetic Reaction Rates

Frequency: daily from 12:00 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=1

Granule Size: ~769 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DELP	tzyx	pressure thickness	Pa
PS	tyx	surface pressure	Pa
QQK085	tzyx	reaction rate: HOCl + OH = ClO + H ₂ O	mole m ⁻³ s ⁻¹
QQK086	tzyx	reaction rate: ClONO ₂ + O = ClO + NO ₃	mole m ⁻³ s ⁻¹
QQK087	tzyx	reaction rate: ClONO ₂ + OH = HOCl + NO ₃	mole m ⁻³ s ⁻¹
QQK088	tzyx	reaction rate: Cl + ClONO ₂ = Cl ₂ + NO ₃	mole m ⁻³ s ⁻¹
QQK089	tzyx	reaction rate: Br + O ₃ = BrO + O ₂	mole m ⁻³ s ⁻¹
QQK090	tzyx	reaction rate: Br + HO ₂ = HBr + O ₂	mole m ⁻³ s ⁻¹
QQK091	tzyx	reaction rate: Br + CH ₂ O = CO + HBr + HO ₂	mole m ⁻³ s ⁻¹
QQK092	tzyx	reaction rate: BrO + O = Br + O ₂	mole m ⁻³ s ⁻¹
QQK093	tzyx	reaction rate: BrO + HO ₂ = HOBr + O ₂	mole m ⁻³ s ⁻¹
QQK094	tzyx	reaction rate: BrO + NO = Br + NO ₂	mole m ⁻³ s ⁻¹
QQK095	tzyx	reaction rate: BrO + NO ₂ = BrONO ₂	mole m ⁻³ s ⁻¹
QQK096	tzyx	reaction rate: BrO + ClO = Br + OClO	mole m ⁻³ s ⁻¹
QQK097	tzyx	reaction rate: BrO + ClO = Br + Cl + O ₂	mole m ⁻³ s ⁻¹
QQK098	tzyx	reaction rate: BrO + ClO = BrCl + O ₂	mole m ⁻³ s ⁻¹
QQK099	tzyx	reaction rate: BrO + BrO = 2 Br + O ₂	mole m ⁻³ s ⁻¹
QQK100	tzyx	reaction rate: HBr + OH = Br + H ₂ O	mole m ⁻³ s ⁻¹
QQK101	tzyx	reaction rate: CH ₂ O + O = CO + HO ₂ + OH	mole m ⁻³ s ⁻¹
QQK102	tzyx	reaction rate: CH ₄ + Cl = HCl + MO ₂	mole m ⁻³ s ⁻¹
QQK103	tzyx	reaction rate: CH ₂ O + Cl = CO + HCl + HO ₂	mole m ⁻³ s ⁻¹
QQK104	tzyx	reaction rate: CH ₃ Cl + OH = Cl + H ₂ O + HO ₂	mole m ⁻³ s ⁻¹
QQK105	tzyx	reaction rate: CH ₃ CCl ₃ + OH = 3 Cl + H ₂ O	mole m ⁻³ s ⁻¹
QQK106	tzyx	reaction rate: HCFC22 + OH = Cl + H ₂ O	mole m ⁻³ s ⁻¹
QQK107	tzyx	reaction rate: HCFC141b + OH = 2 Cl + H ₂ O	mole m ⁻³ s ⁻¹
QQK108	tzyx	reaction rate: HCFC142b + OH = Cl + H ₂ O	mole m ⁻³ s ⁻¹
QQK109	tzyx	reaction rate: CH ₃ Cl + Cl = CO + 2 HCl + HO ₂	mole m ⁻³ s ⁻¹
QQK110	tzyx	reaction rate: CH ₃ Br + OH = Br + H ₂ O + HO ₂	mole m ⁻³ s ⁻¹
QQK292	tzyx	reaction rate: N ₂ O ₅ = 2 HNO ₃	mole m ⁻³ s ⁻¹
QQK293	tzyx	reaction rate: ClONO ₂ = HNO ₃ + HOCl	mole m ⁻³ s ⁻¹
QQK294	tzyx	reaction rate: BrONO ₂ = HNO ₃ + HOBr	mole m ⁻³ s ⁻¹
QQK295	tzyx	reaction rate: ClONO ₂ + HCl = Cl ₂ + HNO ₃	mole m ⁻³ s ⁻¹
QQK296	tzyx	reaction rate: HCl + HOCl = Cl ₂ + H ₂ O	mole m ⁻³ s ⁻¹

QQK297	tzyx	reaction rate: $\text{HCl} + \text{HOBr} = \text{BrCl} + \text{H}_2\text{O}$	mole m-3 s-1
QQK304	tzyx	reaction rate: $\text{ClONO}_2 = \text{HNO}_3 + \text{HOCl}$	mole m-3 s-1
QQK305	tzyx	reaction rate: $\text{BrONO}_2 = \text{HNO}_3 + \text{HOBr}$	mole m-3 s-1
QQK306	tzyx	reaction rate: $\text{ClONO}_2 + \text{HCl} = \text{Cl}_2 + \text{HNO}_3$	mole m-3 s-1
QQK307	tzyx	reaction rate: $\text{HCl} + \text{HOCl} = \text{Cl}_2 + \text{H}_2\text{O}$	mole m-3 s-1
QQK308	tzyx	reaction rate: $\text{BrONO}_2 + \text{HCl} = \text{BrCl} + \text{HNO}_3$	mole m-3 s-1
QQK309	tzyx	reaction rate: $\text{HCl} + \text{HOBr} = \text{BrCl} + \text{H}_2\text{O}$	mole m-3 s-1
QQK310	tzyx	reaction rate: $\text{ClONO}_2 = \text{HNO}_3 + \text{HOCl}$	mole m-3 s-1
QQK311	tzyx	reaction rate: $\text{BrONO}_2 = \text{HNO}_3 + \text{HOBr}$	mole m-3 s-1
QQK312	tzyx	reaction rate: $\text{ClONO}_2 + \text{HCl} = \text{Cl}_2 + \text{HNO}_3$	mole m-3 s-1
QQK313	tzyx	reaction rate: $\text{HCl} + \text{HOCl} = \text{Cl}_2 + \text{H}_2\text{O}$	mole m-3 s-1
QQK314	tzyx	reaction rate: $\text{BrONO}_2 + \text{HCl} = \text{BrCl} + \text{HNO}_3$	mole m-3 s-1
QQK315	tzyx	reaction rate: $\text{HCl} + \text{HOBr} = \text{BrCl} + \text{H}_2\text{O}$	mole m-3 s-1
QQK316	tzyx	reaction rate: $\text{HNO}_3 = \text{NO}_2 + \text{OH}$	mole m-3 s-1
QQK317	tzyx	reaction rate: $\text{NO}_3 + \text{NO}_3 = 2 \text{NO}_2 + \text{O}_2$	mole m-3 s-1
QQK318	tzyx	reaction rate: $\text{HO}_2 = 0.50 \text{H}_2\text{O}_2$	mole m-3 s-1
QQK319	tzyx	reaction rate: $\text{NO}_2 = 0.50 \text{HNO}_2 + 0.50 \text{HNO}_3$	mole m-3 s-1
QQK320	tzyx	reaction rate: $\text{NO}_3 = \text{HNO}_3$	mole m-3 s-1
QQK321	tzyx	reaction rate: $\text{N}_2\text{O}_5 = 2 \text{HNO}_3$	mole m-3 s-1

avg24_3d_tnd_Nv: Daily Average Constituent Tendencies

Frequency: *daily from 12:00 UTC (time-averaged)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=72, time=1*

Granule Size: *~441 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CH2O_AGCMT END	tzyx	dynamics rate of change CH2O	mol mol-1 s-1
CH2O_GMITEN D	tzyx	chemistry rate of change CH2O	mol mol-1 s-1
CH2O_PHYSTE ND	tzyx	physics rate of change CH2O	mol mol-1 s-1
CH4_AGCMTE ND	tzyx	dynamics rate of change CH4	mol mol-1 s-1
CH4_GMITEND	tzyx	chemistry rate of change CH4	mol mol-1 s-1
CH4_PHYSTEN D	tzyx	physics rate of change CH4	mol mol-1 s-1

CO_AGCMTEND	tzyx	dynamics rate of change CO	mol mol-1 s-1
CO_GMITEND	tzyx	chemistry rate of change CO	mol mol-1 s-1
CO_PHYSTEND	tzyx	physics rate of change CO	mol mol-1 s-1
DELP	tzyx	pressure thickness	Pa
NO2_AGCMTEND	tzyx	dynamics rate of change NO2	mol mol-1 s-1
NO2_GMITEND	tzyx	chemistry rate of change NO2	mol mol-1 s-1
NO2_PHYSTEND	tzyx	physics rate of change NO2	mol mol-1 s-1
NO_AGCMTEND	tzyx	dynamics rate of change NO	mol mol-1 s-1
NO_GMITEND	tzyx	chemistry rate of change NO	mol mol-1 s-1
NO_PHYSTEND	tzyx	physics rate of change NO	mol mol-1 s-1
O3_AGCMTEND	tzyx	dynamics rate of change OX	mol mol-1 s-1
O3_GMITEND	tzyx	chemistry rate of change OX	mol mol-1 s-1
O3_PHYSTEND	tzyx	physics rate of change OX	mol mol-1 s-1
PS	tyx	surface pressure	Pa

avg3_3d_cld_Np: Cloud Diagnostics

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=8

Granule Size: ~471 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CFCU	tzyx	updraft areal fraction	1
CLOUD	tzyx	cloud fraction for radiation	1
DTRAIN	tzyx	detraining mass flux	kg m-2 s-1
INCLOUDQI	tzyx	in cloud cloud ice for radiation	kg kg-1
INCLOUDQL	tzyx	in cloud cloud liquid for radiation	kg kg-1
QI	tzyx	mass fraction of cloud ice water	kg kg-1
QL	tzyx	mass fraction of cloud liquid water	kg kg-1

RH	tzyx	relative humidity after moist	1
TAUCLI	tzyx	in cloud optical thickness for ice clouds	1
TAUCLW	tzyx	in cloud optical thickness for liquid clouds	1

tavg3_3d_cld_Nv: Cloud Diagnostics

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=8

Granule Size: ~756 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CFCU	tzyx	updraft areal fraction	1
CLOUD	tzyx	cloud fraction for radiation	1
DELP	tzyx	pressure thickness	Pa
DTRAIN	tzyx	detraining mass flux	kg m ⁻² s ⁻¹
INCLOUDQI	tzyx	in cloud cloud ice for radiation	kg kg ⁻¹
INCLOUDQL	tzyx	in cloud cloud liquid for radiation	kg kg ⁻¹
PS	tyx	surface pressure	Pa
QI	tzyx	mass fraction of cloud ice water	kg kg ⁻¹
QICN	tzyx	mass fraction of convective cloud ice water	kg kg ⁻¹
QL	tzyx	mass fraction of cloud liquid water	kg kg ⁻¹
RH	tzyx	relative humidity after moist	1
TAUCLI	tzyx	in cloud optical thickness for ice clouds	1
TAUCLW	tzyx	in cloud optical thickness for liquid clouds	1

tavg3_3d_met_Np: Meteorological Fields

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=8

Granule Size: ~1.1 GB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
EPV	tzyx	ertels potential vorticity	K m ² kg ⁻¹ s ⁻¹
H	tzyx	mid layer heights	m
OMEGA	tzyx	vertical pressure velocity	Pa s ⁻¹

QI	tzyx	mass fraction of cloud ice water	kg kg-1
QL	tzyx	mass fraction of cloud liquid water	kg kg-1
QV	tzyx	specific humidity	kg kg-1
RH	tzyx	relative humidity after moist	1
T	tzyx	air temperature	K
U	tzyx	eastward wind	m s-1
V	tzyx	northward wind	m s-1

avg3_3d_met_Nv: Meteorological Fields

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=8

Granule Size: ~2.1 GB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DELP	tzyx	pressure thickness	Pa
EPV	tzyx	ertels potential vorticity	K m+2 kg-1 s-1
H	tzyx	mid layer heights	m
O3	tzyx	Ozone	mol mol-1
OMEGA	tzyx	vertical pressure velocity	Pa s-1
PHIS	tyx	surface geopotential height	m+2 s-2
PL	tzyx	mid level pressure	Pa
PS	tyx	surface pressure	Pa
QI	tzyx	mass fraction of cloud ice water	kg kg-1
QL	tzyx	mass fraction of cloud liquid water	kg kg-1
QV	tzyx	specific humidity	kg kg-1
RH	tzyx	relative humidity after moist	1
SLP	tyx	sea level pressure	Pa
T	tzyx	air temperature	K
U	tzyx	eastward wind	m s-1
V	tzyx	northward wind	m s-1

avg3_3d_mst_Ne: Moist Processes Diagnostics

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, model-level edge, full horizontal resolution

Dimensions: *longitude=576, latitude=361, level=73, time=8*

Granule Size: *~375 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CMFMC	tzyx	cumulative mass flux	kg m-2 s-1
PFICU	tzyx	3D flux of ice convective precipitation	kg m-2 s-1
PFILSAN	tzyx	3D flux of ice nonconvective precipitation	kg m-2 s-1
PFLCU	tzyx	3D flux of liquid convective precipitation	kg m-2 s-1
PFLLSAN	tzyx	3D flux of liquid nonconvective precipitation	kg m-2 s-1
PLE	tzyx	edge pressure	Pa
ZLE	tzyx	edge heights	m

avg3_3d_mst_Np: Moist Processes Diagnostics

Frequency: *3-hourly from 01:30 UTC (time-averaged)*

Spatial Grid: *3D, pressure-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=44, time=8*

Granule Size: *~2.5 GB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CMFMC	tzyx	cumulative mass flux	kg m-2 s-1
DQRCU	tzyx	convective rainwater source	kg kg-1 s-1
DQRLSAN	tzyx	large scale rainwater source	kg kg-1 s-1
PFICU	tzyx	3D flux of ice convective precipitation	kg m-2 s-1
PFILSAN	tzyx	3D flux of ice nonconvective precipitation	kg m-2 s-1
PFLCU	tzyx	3D flux of liquid convective precipitation	kg m-2 s-1
PFLLSAN	tzyx	3D flux of liquid nonconvective precipitation	kg m-2 s-1
REEVAPCN	tzyx	evap subl of convective precipitation	kg kg-1 s-1
REEVAPLSAN	tzyx	evap subl of non convective precipitation	kg kg-1 s-1

avg3_3d_mst_Nv: Moist Processes Diagnostics

Frequency: *3-hourly from 01:30 UTC (time-averaged)*

Spatial Grid: *3D, model-level, full horizontal resolution*

Dimensions: *longitude=576, latitude=361, level=72, time=8*

Granule Size: *~266 MB*

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
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DELP	tzyx	pressure thickness	Pa
DQRCU	tzyx	convective rainwater source	kg kg-1 s-1
DQRLSAN	tzyx	large scale rainwater source	kg kg-1 s-1
PS	tyx	surface pressure	Pa
REEVAPCN	tzyx	evap subl of convective precipitation	kg kg-1 s-1
REEVAPLSAN	tzyx	evap subl of non convective precipitation	kg kg-1 s-1

avg3_3d_odt_Np: Ozone Tendencies

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=8

Granule Size: ~980 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DOXDTCHM	tzyx	chemistry rate of change OX	mol mol-1 s-1
DOXDTDYN	tzyx	dynamics rate of change OX	mol mol-1 s-1
DOXDTMST	tzyx	moist rate of change OX	mol mol-1 s-1
DOXDTTRB	tzyx	turbulence rate of change OX	mol mol-1 s-1
O3	tzyx	Ozone	mol mol-1
U_O3	tzyx	eastward wind * Ozone	m s-1 mol mol-1
V_O3	tzyx	northward wind * Ozone	m s-1 mol mol-1
W_O3	tzyx	vertical velocity * Ozone	m s-1 mol mol-1

avg3_3d_rad_Np: Radiation Diagnostics

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=8

Granule Size: ~435 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CLOUD	tzyx	cloud fraction for radiation	1

DTDTLWR	tzyx	air temperature tendency due to longwave	K s-1
DTDTLWRCLR	tzyx	air temperature tendency due to longwave for clear skies	K s-1
DTDTSWR	tzyx	air temperature tendency due to shortwave	K s-1
DTDTSWRCLR	tzyx	air temperature tendency due to shortwave for clear skies	K s-1

tavg3_3d_rad_Nv: Radiation Diagnostics

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=8

Granule Size: ~750 MB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
CLOUD	tzyx	cloud fraction for radiation	1
DELP	tzyx	pressure thickness	Pa
DTDTLWR	tzyx	air temperature tendency due to longwave	K s-1
DTDTLWRCLR	tzyx	air temperature tendency due to longwave for clear skies	K s-1
DTDTSWR	tzyx	air temperature tendency due to shortwave	K s-1
DTDTSWRCLR	tzyx	air temperature tendency due to shortwave for clear skies	K s-1
PS	tyx	surface pressure	Pa

tavg3_3d_tac_Np: 3-Hourly Average Chemical Fields

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=8

Granule Size: ~1.8 GB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
BrO	tzyx	Bromine monoxide radical	mol mol-1
CH2O	tzyx	Formaldehyde	mol mol-1
CH4	tzyx	Methane	mol mol-1
CO	tzyx	Carbon monoxide	mol mol-1
ClO	tzyx	Chlorine monoxide radical	mol mol-1
ClONO2	tzyx	Chlorine nitrate	mol mol-1
HCl	tzyx	Hydrochloric acid	mol mol-1
HNO3	tzyx	Nitric acid	mol mol-1
ISOP	tzyx	Isoprene (C5H8)	mol mol-1

N2O	tzyx	Nitrous oxide	mol mol-1
NO	tzyx	Nitric oxide	mol mol-1
NO2	tzyx	Nitrogen dioxide	mol mol-1
O3	tzyx	Ozone	mol mol-1
OH	tzyx	Hydroxyl radical	mol mol-1
PAN	tzyx	Peroxyacetyl nitrate (C2H3NO5)	mol mol-1
PS	tyx	surface pressure	Pa
stO3	tzyx	Strat Ozone w/ loss in Troposphere	mol mol-1

avg3_3d_tac_Nv: 3-Hourly Average Chemical Fields

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, model-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=72, time=8

Granule Size: ~2.9 GB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
BrO	tzyx	Bromine monoxide radical	mol mol-1
CH2O	tzyx	Formaldehyde	mol mol-1
CH4	tzyx	Methane	mol mol-1
CO	tzyx	Carbon monoxide	mol mol-1
ClO	tzyx	Chlorine monoxide radical	mol mol-1
ClONO2	tzyx	Chlorine nitrate	mol mol-1
DELP	tzyx	pressure thickness	Pa
HCl	tzyx	Hydrochloric acid	mol mol-1
HNO3	tzyx	Nitric acid	mol mol-1
ISOP	tzyx	Isoprene (C5H8)	mol mol-1
N2O	tzyx	Nitrous oxide	mol mol-1
NO	tzyx	Nitric oxide	mol mol-1
NO2	tzyx	Nitrogen dioxide	mol mol-1
O3	tzyx	Ozone	mol mol-1
OH	tzyx	Hydroxyl radical	mol mol-1
PAN	tzyx	Peroxyacetyl nitrate (C2H3NO5)	mol mol-1
PS	tyx	surface pressure	Pa
stO3	tzyx	Strat Ozone w/ loss in Troposphere	mol mol-1

avg3_3d_wdt_Np: Wind Tendencies

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=8

Granule Size: ~1.5 GB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DUDTANA	tzyx	total eastward wind analysis tendency	m s-2
DUDTDYN	tzyx	tendency of eastward wind due to dynamics	m/s/s
DUDTGWD	tzyx	tendency of eastward wind due to GWD	m s-2
DUDTMST	tzyx	zonal wind tendency due to moist	m s-2
DUDTTRB	tzyx	tendency of eastward wind due to turbulence	m s-2
DVDTANA	tzyx	total northward wind analysis tendency	m s-2
DVDTDYN	tzyx	tendency of northward wind due to dynamics	m/s/s
DVDTGWD	tzyx	tendency of northward wind due to GWD	m s-2
DVDTMST	tzyx	meridional wind tendency due to moist	m s-2
DVDTTRB	tzyx	tendency of northward wind due to turbulence	m s-2
U_V	tzyx	eastward wind * northward wind	m s-1 m s-1
V_T	tzyx	northward wind * air temperature	m s-1 K

tavg3_3d_xdt_Np: Temperature and Moisture Tendencies

Frequency: 3-hourly from 01:30 UTC (time-averaged)

Spatial Grid: 3D, pressure-level, full horizontal resolution

Dimensions: longitude=576, latitude=361, level=44, time=8

Granule Size: ~1.5 GB

<i>Name</i>	<i>Dim</i>	<i>Description</i>	<i>Units</i>
DQIDTDYN	tzyx	tendency of ice water due to dynamics	kg/kg/s
DQIDTMST	tzyx	total ice water tendency due to moist	kg kg-1 s-1
DQIDTTRB	tzyx	tendency of frozen condensate due to turbulence	kg kg-1 s-1
DQLDTDYN	tzyx	tendency of liquid water due to dynamics	kg/kg/s
DQLDTMST	tzyx	total liq water tendency due to moist	kg kg-1 s-1
DQLDTTRB	tzyx	tendency of liquid condensate due to turbulence	kg kg-1 s-1
DQVDTANA	tzyx	total specific humidity vapor analysis tendency	kg kg-1 s-1
DQVDTCHM	tzyx	tendency of water vapor mixing ratio due to chemistry	kg kg-1 s-1
DQVDTDYN	tzyx	tendency of specific humidity due to dynamics	kg/kg/s
DQVDTMST	tzyx	specific humidity tendency due to moist	kg kg-1 s-1
DQVDTTRB	tzyx	tendency of specific humidity due to turbulence	kg kg-1 s-1

DTDTANA	tzyx	total temperature analysis tendency	K s-1
DTDTDYN	tzyx	tendency of air temperature due to dynamics	K s-1
DTDTMST	tzyx	T tendency due to moist	K s-1
DTDTRAD	tzyx	tendency of air temperature due to radiation	K s-1
DTDTTOT	tzyx	tendency of air temperature due to physics	K s-1
DTDTTRB	tzyx	tendency of air temperature due to turbulence	K s-1