Data file specifications for:

3km 181-level atmosphere with single-moment 6-phase cloud microphysics including 1km global carbon emissions for chemistry transport.

For those with Discover access at NCCS, data files are also available at:

/css/g5nr/DYAMONDv2/03KM/DYAMONDv2_c2880_L181

const_2d_asm_Mx: Constant Model Parameters

Frequency: *constant from 00:00 UTC (time-invariant)*

Spatial Grid: *2D, cubed-sphere on single-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, time=1*

Granule Size: *~404.0 MB*

Name	*Dim*	*Description*	*Units*
AREA	tyx	agrid cell area	m+2
FRLAKE	tyx	fraction of lake	1
FRLAND	tyx	fraction of land	1
FRLANDICE	tyx	fraction of land ice	1
FROCEAN	tyx	fraction of ocean	1
PHIS	tyx	surface geopotential height	m+2 s-2
SGH	tyx	isotropic stdv of GWD topography	m

geosgcm_buda: Mass Budget Increment Diagnostics

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

Spatial Grid: *01HR, longitude-latitude, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, time=1*

Granule Size: *~12.0 MB*

Name	*Dim*	*Description*	*Units*
DMDTANA	tyx	vertically integrated mass tendency due to analysis	kg m-2 s-1
DMDTDYN	tyx	vertically integrated mass tendency due to dynamics	kg m-2 s-1
DMDTPHY	tyx	vertically integrated mass tendency due to physics	kg m-2 s-1
DOXDTANA	tyx	vertically integrated ozone tendency due to analysis	kg m-2 s-1
DOXDTCHM	tyx	vertically integrated odd oxygen tendency due to chemistry	kg m-2 s-1
DOXDTDYN	tyx	vertically integrated ozone tendency due to dynamics	kg m-2 s-1
DOXDTPHY	tyx	vertically integrated odd oxygen tendency due to physics	kg m-2 s-1
DQIDTANA	tyx	vertically integrated ice water tendency due to analysis	kg m-2 s-1
DQIDTDYN	tyx	vertically integrated ice water tendency due to dynamics	kg m-2 s-1

DQIDTMST	tyx	vertically integrated ice tendency due to moist processes	kg m-2 s-1
DQIDTPHY	tyx	vertically integrated ice tendency due to physics	kg m-2 s-1
DQLDTANA	tyx	vertically integrated liquid water tendency due to analysis	kg m-2 s-1
DQLDTDYN	tyx	vertically integrated liquid water tendency due to dynamics	kg m-2 s-1
DQLDTMST	tyx	vertically integrated liquid water tendency due to moist processes	kg m-2 s-1
DQLDTPHY	tyx	vertically integrated liquid water tendency due to physics	kg m-2 s-1
DQVDTANA	tyx	vertically integrated water vapor tendency due to analysis	kg m-2 s-1
DQVDTCHM	tyx	vertically integrated water vapor tendency due to chemistry	kg m-2 s-1
DQVDTDYN	tyx	vertically integrated water vapor tendency due to dynamics	kg m-2 s-1
DQVDTMST	tyx	vertically integrated water vapor tendency due to moist processes	kg m-2 s-1
DQVDTPHY	tyx	vertically integrated water vapor tendency due to physics	kg m-2 s-1
DQVDTTRB	tyx	vertically integrated water vapor tendency due to turbulence	kg m-2 s-1

geosgcm_budi: Mass Budget Diagnostics

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

Spatial Grid: *01HR, longitude-latitude, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, time=1*

Granule Size: *~3.3 MB*

Name	*Dim*	*Description*	*Units*
MASS	tyx	atmospheric mass	kg m-2
TOX	tyx	total column odd oxygen	kg m-2
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

geosgcm_gwd: GWD Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude on pressure-level, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=48, time=1*

Granule Size: *~180.0 MB*

Name	*Dim*	*Description*	*Units*
DTDTBKG	tzyx	air temperature tendency due to background GWD	K s-1
DTDTORO	tzyx	air temperature tendency due to orographic GWD	K s-1

DTDTRAY	tzyx	air temperature tendency due to Rayleigh friction	K s-1
DUDTBKG	tzyx	tendency of eastward wind due to background GWD	m s-2
DUDTORO	tzyx	tendency of eastward wind due to orographic GWD	m s-2
DUDTRAY	tzyx	tendency of eastward wind due to Rayleigh friction	m s-2
DVDTBKG	tzyx	tendency of northward wind due to background GWD	m s-2
DVDTORO	tzyx	tendency of northward wind due to orographic GWD	m s-2
DVDTRAY	tzyx	tendency of northward wind due to Rayleigh friction	m s-2
TAUBKGX	tyx	surface eastward background gravity wave stress	N m-2
TAUBKGY	tyx	surface northward background gravity wave stress	N m-2
TAUOROX	tyx	surface eastward orographic gravity wave stress	N m-2
TAUOROY	tyx	surface northward orographic gravity wave stress	N m-2

geosgcm_iau: IAU Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=125, time=5*

Granule Size: *~18.0 GB*

Name	*Dim*	*Description*	*Units*
CLCN	tzyx	convective cloud area fraction	1
CLLS	tzyx	large scale cloud area fraction	1
CNVMF0	tzyx	cloud base mass flux	kg m-2 s-1
CNVMFC	tzyx	cumulative mass flux	kg m-2 s-1
CNVMFD	tzyx	detraining mass flux	kg m-2 s-1
CNV_FRC	tyx	convective fraction	
DMDTANA	tyx	vertically integrated mass tendency due to analysis	kg m-2 s-1
DPDTCON	tyx	surface pressure adjustment due to constraint	Pa s-1
DPDTPHY	tzyx	tendency of pressure at bottom edges levels due to physics	Pa s-1
DQDTANA	tzyx	total specific humidity vapor analysis tendency	kg kg-1 s-1
DQDTCON	tzyx	total specific humidity vapor analysis tendency due to Constraint	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
DTDTBKG	tzyx	air temperature tendency due to background GWD	K s-1
DTDTDYN	tzyx	tendency of air temperature due to dynamics	K s-1
DTDTFRI	tzyx	tendency of air temperature due to friction	K s-1
DTDTGWD	tzyx	air temperature tendency due to GWD	K s-1
DTDTLW	tzyx	air temperature tendency due to longwave	K s-1
DTDTLWC	tzyx	air temperature tendency due to longwave for clear skies	K s-1
DTDTLWCNA	tzyx	air temperature tendency due to longwave for clear skies no aerosol	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
DTDTRAY	tzyx	air temperature tendency due to Rayleigh friction	K s-1
DTDTSW	tzyx	air temperature tendency due to shortwave	K s-1
DTDTSWC	tzyx	air temperature tendency due to shortwave for clear skies	K s-1
DTDTSWCNA	tzyx	air temperature tendency due to shortwave for clear skies no aerosol	K s-1
DTDTSWNA	tzyx	air temperature tendency due to shortwave no aerosol	K s-1
DTDTTRB	tzyx	tendency of air temperature due to turbulence	K s-1
DTDT_CNV	tzyx	T tendency due to convection	K s-1
DTDT_MAC	tzyx	T tendency due to macrophysics	K s-1
DTDT_MIC	tzyx	T tendency due to microphysics	K s-1
DUDTANA	tzyx	total eastward wind analysis tendency	m s-2
DUDTBKG	tzyx	tendency of eastward wind due to background GWD	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
DUDTORO	tzyx	tendency of eastward wind due to orographic GWD	m s-2
DUDTRAY	tzyx	tendency of eastward wind due to Rayleigh friction	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
DVDTBKG	tzyx	tendency of northward wind due to background GWD	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

DVDTORO	tzyx	tendency of northward wind due to orographic GWD	m s-2
DVDTRAY	tzyx	tendency of northward wind due to Rayleigh friction	m s-2
DVDTTRB	tzyx	tendency of northward wind due to turbulence	m s-2
FCLD	tzyx	cloud fraction for radiation	1
NACTI	tzyx	activ aero # conv ice phase for 1-mom	m-3
NACTL	tzyx	activ aero # conc liq phase for 1-mom	m-3
OLR	tyx	upwelling longwave flux at toa	W m-2
OSR	tyx	toa outgoing shortwave flux	W m-2
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
PRECTOT	tyx	total precipitation	kg m-2 s-1
QGRAUPEL	tzyx	mass fraction of graupel	kg kg-1
QI	tzyx	mass fraction of cloud ice water	kg kg-1
QICN	tzyx	mass fraction of convective cloud ice water	kg kg-1
QILS	tzyx	mass fraction of large scale cloud ice water	kg kg-1
QL	tzyx	mass fraction of cloud liquid water	kg kg-1
QLCN	tzyx	mass fraction of convective cloud liquid water	kg kg-1
QLLS	tzyx	mass fraction of large scale cloud liquid water	kg kg-1
QRAIN	tzyx	mass fraction of rain	kg kg-1
QSNOW	tzyx	mass fraction of snow	kg kg-1
RH1	tzyx	relative humidity before moist	1
RICE	tzyx	ice phase cloud particle effective radius	m
RLIQ	tzyx	liquid cloud particle effective radius	m
STOCH_CNV	tyx	stochastic factor for convection	
TAUBKGX	tyx	surface eastward background gravity wave stress	N m-2
TAUBKGY	tyx	surface northward background gravity wave stress	N m-2
TAUOROX	tyx	surface eastward orographic gravity wave stress	N m-2
TAUOROY	tyx	surface northward orographic gravity wave stress	N m-2
TBISCCP	tyx	isccp mean all sky 10.5 micron brightness temp	K

geosgcm_landice: Landice Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, time=1*

Granule Size: *~1.6 MB*

Name	*Dim*	*Description*	*Units*
ACCUM	tyx	net ice accumulation rate	kg m-2 s-1
ASNOW_GL	tyx	fractional area of glaciated surface snowcover	1
HLATN	tyx	total latent energy flux	W m-2
HLWUP	tyx	surface outgoing longwave flux	W m-2
IMELT	tyx	icemelt flux	kg m-2 s-1
LWNDSRF	tyx	surface net downward longwave flux	W m-2
RAINRFZ	tyx	contribution to smb from refreezed rain over bare ice	kg m-2 s-1
RUNOFF	tyx	runoff flux	kg m-2 s-1
SHOUT	tyx	upward sensible heat flux	W m-2
SNDZ1PERC	tyx	top snow layer thickness change due to percolation	m s-1
SNDZPREC	tyx	top snow layer thickness change due to precip	m s-1
SNDZSC	tyx	top snow layer thickness change due to sub con	m s-1
SNICEALB	tyx	aggregated snow ice broadband albedo	1
SNOMAS_GL	tyx	snow mass over glaciated surface	kg m-2
SNOWALB	tyx	snow broadband albedo	1
SNOWDP_GL	tyx	snow depth over glaciated surface	m
SWNDSRF	tyx	surface net downward shortwave flux	W m-2
TST	tyx	surface skin temperature	K
WESNBOT	tyx	frozen runoff due to fixed max depth	kg m-2 s-1
WESNPREC	tyx	top snow layer mass change due to precip	kg m-2 s-1
WESNSC	tyx	top snow layer mass change due to sub con	kg m-2 s-1

geosgcm_moist: Moist Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude on pressure-level, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=48, time=1*

Granule Size: *~570.0 MB*

Name	*Dim*	*Description*	*Units*
CLCN	tzyx	convective cloud area fraction	1
CLLS	tzyx	large scale cloud area fraction	1
CNVMF0	tzyx	cloud base mass flux	kg m-2 s-1
CNVMFC	tzyx	cumulative mass flux	kg m-2 s-1
CNVMFD	tzyx	detraining mass flux	kg m-2 s-1

DQADT_MAC	tzyx	QA tendency due to macrophysics	kg kg-1 s-1
DQADT_MIC	tzyx	QA tendency due to microphysics	kg kg-1 s-1
DQCDT_CNV	tzyx	condensate tendency due to convection	kg kg-1 s-1
DQGDT_MIC	tzyx	QG tendency due to microphysics	kg kg-1 s-1
DQIDT_MAC	tzyx	QI tendency due to macrophysics	kg kg-1 s-1
DQIDT_MIC	tzyx	QI tendency due to microphysics	kg kg-1 s-1
DQIDT_SCU	tzyx	Ice tendency from shallow convection	kg kg-1 s-1
DQIDT_TOT	tzyx	total ice water tendency due to moist	kg kg-1 s-1
DQLDT_MAC	tzyx	QL tendency due to macrophysics	kg kg-1 s-1
DQLDT_MIC	tzyx	QL tendency due to microphysics	kg kg-1 s-1
DQLDT_SCU	tzyx	Liquid water tendency from shallow convection	kg kg-1 s-1
DQLDT_TOT	tzyx	total liq water tendency due to moist	kg kg-1 s-1
DQRDT_MIC	tzyx	QR tendency due to microphysics	kg kg-1 s-1
DQRDT_SCU	tzyx	shallow cumulus precipitating condensate	kg kg-1 s-1
DQSDT_MIC	tzyx	QS tendency due to microphysics	kg kg-1 s-1
DQSDT_SCU	tzyx	shallow cumulus precipitating frozen condensate	kg kg-1 s-1
DQVDT_MAC	tzyx	QV tendency due to macrophysics	kg kg-1 s-1
DQVDT_MIC	tzyx	Q tendency due to microphysics	kg kg-1 s-1
DQVDT_SCU	tzyx	Specific humidity tendency from shallow convection	kg kg-1 s-1
DQVDT_TOT	tzyx	specific humidity tendency due to moist	kg kg-1 s-1
DTDT_MAC	tzyx	T tendency due to macrophysics	K s-1
DTDT_MIC	tzyx	T tendency due to microphysics	K s-1
DUDT_MIC	tzyx	U tendency due to microphysics	m s-2
DVDT_MIC	tzyx	V tendency due to microphysics	m s-2
EVAPC	tzyx	evaporation of cloud liq	kg kg-1 s-1
FCLD	tzyx	cloud fraction for radiation	1
PHIS	tyx	surface geopotential height	m+2 s-2
QG	tzyx	mass fraction of graupel	kg kg-1
QI	tzyx	in cloud cloud ice for radiation	kg kg-1
QICN	tzyx	mass fraction of convective cloud ice water	kg kg-1
QILS	tzyx	mass fraction of large scale cloud ice water	kg kg-1
QL	tzyx	in cloud cloud liquid for radiation	kg kg-1

QLCN	tzyx	mass fraction of convective cloud liquid water	kg kg-1
QLLS	tzyx	mass fraction of large scale cloud liquid water	kg kg-1
QR	tzyx	Falling rain for radiation	kg kg-1
QS	tzyx	mass fraction of snow	kg kg-1
QV	tzyx	specific humidity	kg kg-1
REVAN	tzyx	evaporation of anvil precipitation	kg kg-1 s-1
REVAP_MIC	tzyx	evaporation of cloud liq	kg kg-1 s-1
REVCN	tzyx	evaporation of convective precipitation	kg kg-1 s-1
REVLS	tzyx	evaporation of nonanvil large scale precipitation	kg kg-1 s-1
RH1	tzyx	relative humidity before moist	1
RICE	tzyx	ice phase cloud particle effective radius	m
RLIQ	tzyx	liquid cloud particle effective radius	m
RSUAN	tzyx	sublimation of anvil precipitation	kg kg-1 s-1
RSUBL_MIC	tzyx	sublimation of cloud ice	kg kg-1 s-1
RSUCN	tzyx	sublimation of convective precipitation	kg kg-1 s-1
RSULS	tzyx	sublimation of nonanvil large scale precipitation	kg kg-1 s-1
SUBLC	tzyx	sublimation of cloud ice	kg kg-1 s-1
THIM	tzyx	pressure weighted tendency of potential temperature due to moist processes	Pa K s-1
dye_conserv	tzyx	Conservative convection tracer	Kg kg -1

geosgcm_prog: Prognostic Diagnostics

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

Spatial Grid: *06HR, longitude-latitude on pressure-level, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=48, time=1*

Granule Size: *~257.0 MB*

Name	*Dim*	*Description*	*Units*
H	tzyx	edge heights	m
O3	tzyx	ozone mass mixing ratio	kg kg-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

geosgcm_snowlayer: Snowlayer Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=15, time=1*

Granule Size: *~12.0 MB*

Name	*Dim*	*Description*	*Units*
DRHOS0	tzyx	snow layer density change due to densification	kg m-3
RHOSNOW	tzyx	snow layer density	kg m-3
TICE0	tzyx	aggregated ice layer temperature	deg C
TSNOW	tzyx	snow layer temperature	deg C
WESNDENS	tzyx	snow layer mass change due to densification	kg m-2 s-1
WESNEX	tzyx	snow layer mass residual due to densification	kg m-2 s-1
WESNPERC	tzyx	snow layer mass change due to percolation	kg m-2 s-1
WESNREPAR	tzyx	snow layer mass change due to repartition	kg m-2 s-1
WSNOW	tzyx	snow layer water content	kg m-2
ZSNOW	tzyx	snow layer thickness	m

geosgcm_surf: Surface Diagnostics

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

Spatial Grid: *01HR, longitude-latitude, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, time=1*

Granule Size: *~68.0 MB*

Name	*Dim*	*Description*	*Units*
ALBEDO	tyx	surface albedo	1
ALBNF	tyx	surface albedo for near infrared diffuse	1
ALBNR	tyx	surface albedo for near infrared beam	1

ALBVF	tyx	surface albedo for visible diffuse	1
ALBVR	tyx	surface albedo for visible beam	1
ANPRCP	tyx	anvil precipitation	kg m-2 s-1
ASNOW	tyx	fractional area of land snowcover	1
BASEFLOW	tyx	baseflow flux	kg m-2 s-1
BCOOL	tyx	buoyancy generation in cool layer	m+2 s-3
BULK_SST	tyx	foundation temperature for interface layer	K
CCWP	tyx	grid mean conv cond water path diagnostic	kg m-2
CLDHI	tyx	cloud area fraction for high clouds	1
CLDLO	tyx	cloud area fraction for low clouds	1
CLDMD	tyx	cloud area fraction for middle clouds	1
CLDTT	tyx	total cloud area fraction	1
CM	tyx	surface exchange coefficient for momentum	kg m-2 s-1
CN	tyx	surface neutral drag coefficient	1
CNORIG	tyx	moved 2d source of cnv rain	kg kg-1 s-1
CNPRCP	tyx	convective precipitation	kg m-2 s-1
COSZ	tyx	cosine of the solar zenith angle	1
CQ	tyx	surface exchange coefficient for moisture	kg m-2 s-1
CT	tyx	surface exchange coefficient for heat	kg m-2 s-1
CU2DRAINMOVE	tyx	moved 2d source of cnv rain	kg kg-1 s-1
CU2DSNOWMOVE	tyx	moved 2d source of cnv snow	kg kg-1 s-1
DCOOL	tyx	depth of cool layer	m
DELTS	tyx	change of surface skin temperature	K
DELT_COOL	tyx	temperature drop across cool layer	K
DWARM	tyx	depth at base of warm layer	m
EMIS	tyx	surface emissivity	1
EVAP	tyx	evaporation from turbulence	kg m-2 s-1
EVAPOUT	tyx	evaporation	kg m-2 s-1
EVLAND	tyx	Evaporation land	kg m-2 s-1
FLNS	tyx	surface net downward longwave flux	W m-2

FLNSC	tyx	surface net downward longwave flux assuming clear sky	W m-2
FLNSCNA	tyx	surface net downward longwave flux assuming clear sky and no aerosol	W m-2
FRLAKE	tyx	fraction of lake	1
FRLAND	tyx	fraction of land	1
FRLANDICE	tyx	fraction of land ice	1
FROCEAN	tyx	fraction of ocean	1
FRSEAICE	tyx	ice covered fraction of tile	1

GHLAND	tyx	Ground heating land	W m-2
GRN	tyx	greenness fraction	1
GUST	tyx	gustiness	m s-1
LAI	tyx	leaf area index	1
LANGM	tyx	Langmuir number	1
LCOOL	tyx	Saunders parameter	1
LHFX	tyx	total latent energy flux	W m-2
LHLAND	tyx	Latent heat flux land	W m-2
LSORIG	tyx	moved 2d source of cnv rain	kg kg-1 s-1
LSPRCP	tyx	nonanvil large scale precipitation	kg m-2 s-1
LWLAND	tyx	Net longwave land	W m-2
LWP	tyx	liquid water path	kg m-2
LWS	tyx	surface absorbed longwave radiation	W m-2
LWSC	tyx	surface absorbed longwave radiation assuming clear sky	W m-2
LWSCC5	tyx	surface absorbed longwave radiation assuming clear sky masked using cldtt LE 5	W m-2
LWSCNA	tyx	surface absorbed longwave radiation assuming clear sky and no aerosol	W m-2
OLR	tyx	upwelling longwave flux at toa	W m-2
OLRC	tyx	upwelling longwave flux at toa assuming clear sky	W m-2
OLRCC5	tyx	upwelling longwave flux at toa assuming clear sky masked using cldtt LE 5	W m-2
OLRCNA	tyx	upwelling longwave flux at toa assuming clear sky and no aerosol	W m-2
OSR	tyx	toa outgoing shortwave flux	W m-2
OSRCLR	tyx	toa outgoing shortwave flux assuming clear sky	W m-2

OXFILL	tyx	vertically integrated ox adjustment from filling	kg m-2 s-1
PBLH	tyx	planetary boundary layer height	m
PCU	tyx	convective rainfall	kg m-2 s-1
PHIS	tyx	surface geopotential height	m+2 s-2
PHIW	tyx	Similarity function in warm layer	1
PLS	tyx	large scale rainfall	kg m-2 s-1
PS	tyx	surface pressure	Pa
Q10M	tyx	10-meter specific humidity	kg kg-1
Q2M	tyx	2-meter specific humidity	kg kg-1
QA	tyx	surface specific humidity	1
QCOOL	tyx	net cooling in cool layer	W m-2
QHAT	tyx	effective surface specific humidity	kg kg-1
QS	tyx	surface specific humidity	kg kg-1
QVFILL	tyx	vertically integrated qv adjustment from filling	kg m-2 s-1
QWARM	tyx	net heating in warm layer	W m-2
RADSRF	tyx	net downwelling radiation at surface	W m-2
RADSWT	tyx	toa incoming shortwave flux	W m-2
RAS_TIME	tyx	timescale for RAS plumes	s
RHOS	tyx	air density at surface	kg m-3
RISFC	tyx	surface bulk richardson number	1
RUNOFF	tyx	overland runoff including throughflow	kg m-2 s-1
SFCEM	tyx	longwave flux emitted from surface	W m-2
SGH	tyx	isotropic stdv of GWD topography	m
SHFX	tyx	sensible heat flux from turbulence	W m-2
SHLAND	tyx	Sensible heat flux land	W m-2
SMLAND	tyx	Snowmelt flux land	kg m-2 s-1
SNO	tyx	snowfall	kg m-2 s-1
SNOMAS	tyx	snow mass	kg m-2
SPEED	tyx	surface wind speed	m s-1
SPLAND	tyx	rate of spurious land energy source	W m-2
SPWATR	tyx	rate of spurious land water source	kg m-2 s-1

SWCLDPRS	tyx	cloud top pressure	Pa
SWCLDTMP	tyx	cloud top temperature	K
SWCOOL	tyx	solar heating in cool layer	W m-2
SWGDWN	tyx	surface incoming shortwave flux	W m-2
SWGDWNC	tyx	surface incoming shortwave flux assuming clear sky	W m-2
SWGNET	tyx	surface net downward shortwave flux	W m-2
SWGNETC	tyx	surface net downward shortwave flux assuming clear sky	W m-2
SWGNETCNA	tyx	surface net downward shortwave flux assuming clear sky and no aerosol	W m-2
SWGNETNA	tyx	surface net downward shortwave flux assuming no aerosol	W m-2
SWLAND	tyx	Net shortwave land	W m-2
SWTNET	tyx	toa net downward shortwave flux	W m-2
SWTNETC	tyx	toa net downward shortwave flux assuming clear sky	W m-2
SWTNETCNA	tyx	toa net downward shortwave flux assuming clear sky and no aerosol	W m-2
SWTNETNA	tyx	toa net downward shortwave flux assuming no aerosol	W m-2
SWWARM	tyx	solar heating in warm layer	W m-2
T10M	tyx	10-meter air temperature	K
T2M	tyx	2-meter air temperature	K
TA	tyx	surface air temperature	K
TAUHI	tyx	in cloud optical thickness of high clouds(EXPORT)	1
TAULO	tyx	in cloud optical thickness of low clouds	1
TAUMD	tyx	in cloud optical thickness of middle clouds	1
TAUTT	tyx	in cloud optical thickness of all clouds	1
TAUTW	tyx	relaxation time of TW to TS FOUND	s
TAUX	tyx	eastward surface stress	N m-2
TAUY	tyx	northward surface stress	N m-2
TBAR	tyx	mean temperature of interface layer	K
TBISCCP	tyx	Isccp mean all sky 10.5 micron brightness temp	K
TDEL	tyx	temperature at base of cool layer	K
TELAND	tyx	Total energy storage land	J m-2
THAT	tyx	effective surface skin temperature	K

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
TSOIL1	tyx	soil temperatures layer 1	K
TSOIL2	tyx	soil temperatures layer 2	K
TWLAND	tyx	Avail water storage land	kg m-2
U10M	tyx	10-meter eastward wind	m s-1
U10N	tyx	equivalent neutral 10-meter eastward wind	m s-1
U2M	tyx	2-meter eastward wind	m s-1
U50M	tyx	50-meter eastward wind	m s-1
US	tyx	surface eastward wind	m s-1
USTAR	tyx	surface velocity scale	m s-1
USTARW	tyx	ustar over water layer	m s-1
V10M	tyx	10-meter northward wind	m s-1
V10N	tyx	equivalent neutral 10-meter northward wind	m s-1
V2M	tyx	2-meter northward wind	m s-1
V50M	tyx	50-meter northward wind	m s-1
VARFLT	tyx	isotropic variance of filtered topography	m+2
VEGTYPE	tyx	vegetation type	1
VENT	tyx	surface ventilation velocity	m s-1
VS	tyx	surface northward wind	m s-1
WET1	tyx	surface soil wetness	1
WET2	tyx	root zone soil wetness	1
WET3	tyx	ave prof soil moisture	1
Z0	tyx	surface roughness	m
Z0H	tyx	surface roughness for heat	m
ZETA_W	tyx	Stability parameter in Warm Layer	1

geosgcm_tend: Tendency Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude on pressure-level, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=48, time=1*

Granule Size: *~762.0 MB*

Name	*Dim*	*Description*	*Units*
DPDTPHY	tzyx	tendency of pressure at bottom edges levels due to physics	Pa 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
DTDTDYN	tzyx	tendency of air temperature due to dynamics	K s-1
DTDTFRI	tzyx	tendency of air temperature due to friction	K s-1
DTDTGWD	tzyx	air temperature tendency due to GWD	K s-1
DTDTLW	tzyx	air temperature tendency due to longwave	K s-1
DTDTLWC	tzyx	air temperature tendency due to longwave for clear skies	K s-1
DTDTLWCNA	tzyx	air temperature tendency due to longwave for clear skies no aerosol	K s-1
DTDTMST	tzyx	tendency of air temperature due to moist processes	K s-1
DTDTSW	tzyx	air temperature tendency due to shortwave	K s-1
DTDTSWC	tzyx	air temperature tendency due to shortwave for clear skies	K s-1
DTDTSWCNA	tzyx	air temperature tendency due to shortwave for clear skies no aerosol	K s-1
DTDTSWNA	tzyx	air temperature tendency due to shortwave no aerosol	K s-1
DTDTTRB	tzyx	tendency of air temperature due to turbulence	K s-1
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
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

geosgcm_tracer: Tracer Diagnostics

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

Spatial Grid: *01HR, longitude-latitude on pressure-level, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=37, time=1*

Granule Size: *~32.0 MB*

Name	*Dim*	*Description*	*Units*
AIRDENS	tzyx	Moist air density	Kg m-3
PS	tyx	Surface pressure	Pa
Dye_conserv	tzyx	Conservative convection tracer	kg kg-1

geosgcm_turb: Turbulence Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude on pressure-level, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=48, time=1*

Granule Size: *~265.0 MB*

Name	*Dim*	*Description*	*Units*
DBUOY	tyx	Buoyancy jump across inversion	m s-2
DU	tzyx	bulk shear from Louis	s-1
EKH	tzyx	entrainment heat diffusivity from Lock	m+2 s-1
EKM	tzyx	entrainment momentum diffusivity from Lock	m+2 s-1
INTDIS	tzyx	p-weighted frictional heating rate from diffusion	K s-1 Pa
KH	tzyx	total scalar diffusivity	m+2 s-1
KHLS	tzyx	scalar diffusivity from Louis	m+2 s-1
KHRAD	tzyx	radiation driven scalar diffusivity from Lock scheme	m+2 s-1
KHSFC	tzyx	surface driven scalar diffusivity from Lock scheme	m+2 s-1
KM	tzyx	total momentum diffusivity	m+2 s-1
KMLS	tzyx	momentum diffusivity from Louis	m+2 s-1
RI	tzyx	Richardson number from Louis	1
SRFDIS	tyx	p-weighted frictional heating rate from surface drag	K s-1 Pa
TOPDIS	tzyx	p-weighted frictional heating rate from orographic drag	K s-1 Pa
WERAD	tyx	entrainment velocity from radiation	m s-1

inst_01hr_3d_AIRDENS_Mv: Model,AIRDENS Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*

AIRDENS	tzyx	moist air density	kg m-3

inst_01hr_3d_BCEXT_Mv: Model,BCEXT Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
BCEXT	tzyx	Black Carbon Extinction Coefficient [550 nm] ENSEMBLE	m-1

inst_01hr_3d_BC_Mv: Model,BC Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
BC	tzyx	Black Carbon Mass Mixing Ratio ENSEMBLE	kg kg-1

inst_01hr_3d_CNVMFC_Mv: Model,CNVMFC Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~1.4 GB*

Name	*Dim*	*Description*	*Units*
CNVMFC	tzyx	cumulative mass flux	kg m-2 s-1

inst_01hr_3d_CNVMFD_Mv: Model,CNVMFD Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~1.1 GB*

Name	*Dim*	*Description*	*Units*
CNVMFD	tzyx	detraining mass flux	kg m-2 s-1

inst_01hr_3d_CO2_Mv: Model,CO2 Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~14.0 GB*

Name	*Dim*	*Description*	*Units*
CO2	tzyx	Dry-air Molar Carbon Dioxide Bin 001	mol mol-1

inst_01hr_3d_CO_Mv: Model,CO Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
CO	tzyx	Carbon Monoxide (All Sources)	mol mol-1

inst_01hr_3d_DELP_Mv: Model,DELP Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~6.0 GB*

Name	*Dim*	*Description*	*Units*
DELP	tzyx	pressure thickness	Pa

inst_01hr_3d_DTHDTCN_Mv: Model,DTHDTCN Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~980.0 MB*

Name	*Dim*	*Description*	*Units*
DTHDTCN	tzyx	potential temperature tendency due to convection	K s-1

inst_01hr_3d_DTHDT_Mv: Model,DTHDT Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~4.4 GB*

Name	*Dim*	*Description*	*Units*
DTHDT	tzyx	pressure weighted potential temperature tendency due to moist	Pa K s-1

inst_01hr_3d_DUEXT_Mv: Model,DUEXT Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
DUEXT	tzyx	Dust Extinction Coefficient [550 nm] ENSEMBLE	m-1

inst_01hr_3d_DU_Mv: Model,DU Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
DU	tzyx	Dust Mass Mixing Ratio ENSEMBLE	kg kg-1

inst_01hr_3d_FCLD_Mv: Model,FCLD Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~1.6 GB*

Name	*Dim*	*Description*	*Units*
FCLD	tzyx	cloud fraction for radiation	1

inst_01hr_3d_H_Mv: Model,Mid-Layer Height Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~14.0 GB*

Name	*Dim*	*Description*	*Units*
H	tzyx	mid layer heights	m

inst_01hr_3d_OCEXT_Mv: Model,OCEXT Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~18.0 GB*

Name	*Dim*	*Description*	*Units*

OCEXT	tzyx	Organic Carbon Ext. Coefficient [550 nm] ENSEMBLE	m-1

inst_01hr_3d_OC_Mv: Model,OC Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
OC	tzyx	Organic Carbon Mass Mixing Ratio ENSEMBLE	kg kg-1

inst_01hr_3d_OMEGA_Mv: Model,Omega Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~24.0 GB*

Name	*Dim*	*Description*	*Units*
OMEGA	tzyx	vertical pressure velocity	Pa s-1

inst_01hr_3d_P_Mv: Model,Pressure Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~6.8 GB*

Name	*Dim*	*Description*	*Units*
P	tzyx	mid level pressure	Pa

inst_01hr_3d_QG_Mv: Model,QG Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~1.7 GB*

Name	*Dim*	*Description*	*Units*
QGRAUPEL	tzyx	mass fraction of graupel	kg kg-1

inst_01hr_3d_QI_Mv: Model,QI Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~2.5 GB*

Name	*Dim*	*Description*	*Units*
QI	tzyx	mass fraction of cloud ice water	kg kg-1

inst_01hr_3d_QL_Mv: Model,QL Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.3 GB*

Name	*Dim*	*Description*	*Units*
QL	tzyx	mass fraction of cloud liquid water	kg kg-1

inst_01hr_3d_QR_Mv: Model,QR Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*
QRAIN	tzyx	mass fraction of rain	kg kg-1

inst_01hr_3d_QS_Mv: Model,QS Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*
QSNOW	tzyx	mass fraction of snow	kg kg-1

inst_01hr_3d_QV_Mv: Model,QV Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*
QV	tzyx	specific humidity	kg kg-1

inst_01hr_3d_RI_Mv: Model,RI Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*
RI	tzyx	ice phase cloud particle effective radius	m

inst_01hr_3d_RL_Mv: Model,RL Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*
RL	tzyx	liquid cloud particle effective radius	m

inst_01hr_3d_SO2_Mv: Model,SO2 Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
SO2	tzyx	Sulphur dioxide	kg kg-1

inst_01hr_3d_SO4_Mv: Model,SO4 Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
SO4	tzyx	Sulphate aerosol	kg kg-1

inst_01hr_3d_SSEXT_Mv: Model,SSEXT Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
SSEXT	tzyx	Sea Salt Extinction Coefficient [550 nm] ENSEMBLE	m-1

inst_01hr_3d_SS_Mv: Model,SS Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
SS	tzyx	Sea Salt Mass Mixing Ratio ENSEMBLE	kg kg-1

inst_01hr_3d_SUEXT_Mv: Model,SUEXT Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
SUEXT	tzyx	SO4 Extinction Coefficient [550 nm] ENSEMBLE	m-1

inst_01hr_3d_T_Mv: Model,T Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*
T	tzyx	air temperature	K

inst_01hr_3d_TR_Mv: Model,TR Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~2.6 GB*

Name	*Dim*	*Description*	*Units*
TR	tzyx	Conservative convection tracer	kg kg-1

inst_01hr_3d_U_Mv: Model,U-Wind Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*

U	tzyx	eastward wind	m s-1

inst_01hr_3d_V_Mv: Model,V-Wind Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*
V	tzyx	northward wind	m s-1

inst_01hr_3d_W_Mv: Model,W-Wind Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~3.0 GB*

Name	*Dim*	*Description*	*Units*
W	tzyx	vertical velocity	m s-1

inst_15mn_2d_asm_Mx: Single-Level Diagnostics

Frequency: *15-minutes from 00:00 UTC (instantaneous)*

Spatial Grid: *15MN, native cubed-sphere on single-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, time=1*

Granule Size: *~7.8 GB*

Name	Dim	Description	Units
BCEXTTAU	tyx	Black Carbon Extinction AOT [550 nm] ENSEMBLE	1
BCSMASS	tyx	Black Carbon Surface Mass Concentration ENSEMBLE	kg m-3
BSTAR	tyx	surface buoyancy scale	m s-2
CAPE	tyx	cape for surface parcel	J kg-1
CIN	tyx	inhibition for surface parcel	J kg-1
CNV_FRC	tyx	convective fraction	
CO2CL	tyx	CO2 Bulk Mixing Ratio (Column Mass/ps) Bin 001	1
CO2EM	tyx	CO2 Emission Bin 001	kg m-2 s-1
CO2SC	tyx	CO2 Surface Concentration Bin 001	1e-6
COCL	tyx	CO Column Burden ENSEMBLE	kg m-2
COEM	tyx	CO Emission ENSEMBLE	kg m-2 s-1
COLS	tyx	CO Chemical Loss ENSEMBLE	kg m-2 s-1

COPD	tyx	CO Chemical Production ENSEMBLE	kg m-2 s-1
COSC	tyx	CO Surface Concentration in ppbv ENSEMBLE	1e-9
CWP	tyx	condensed water path	kg m-2
DBZ_MAX	tyx	Maximum simulated radar reflectivity	dBZ
DIVG200	tyx	divergence at 200 hPa	s-1
DIVG500	tyx	divergence at 500 hPa	s-1
DIVG700	tyx	divergence at 700 hPa	s-1
DIVG850	tyx	divergence at 850 hPa	s-1
DUEXTTAU	tyx	Dust Extinction AOT [550 nm] ENSEMBLE	1
DUSMASS	tyx	Dust Surface Mass Concentration ENSEMBLE	kg m-3
DUSMASS25	tyx	Dust Surface Mass Concentration - PM 2.5 ENSEMBLE	kg m-3
EFLUX	tyx	total latent energy flux	W m-2
EVAP	tyx	evaporation from turbulence	kg m-2 s-1
H1000	tyx	height at 1000 mb	m
H500	tyx	height at 500 hPa	m
HFLUX	tyx	sensible heat flux from turbulence	W m-2
IWP	tyx	ice water path	kg m-2
LWP	tyx	liquid water path	kg m-2
MDSCLDSZICE	tyx	modis cloud particle size ice mean	1
MDSCLDSZWTR	tyx	modis cloud particle size water mean	1
OCEXTTAU	tyx	Organic Carbon Extinction AOT [550 nm] ENSEMBLE	1
OCSMASS	tyx	Organic Carbon Surface Mass Concentration ENSEMBLE	kg m-3
PBLH	tyx	planetary boundary layer height	m
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
PS	tyx	surface pressure	Pa
PTYPE	tyx	surface precipitation type	1
QV2M	tyx	2-meter specific humidity	kg kg-1
SLP	tyx	sea level pressure	Pa
SNOMAS	tyx	Total snow storage land	kg m-2

SO2CMASS	tyx	SO2 Column Mass Density ENSEMBLE	kg m-2
SO2SMASS	tyx	SO2 Surface Mass Concentration ENSEMBLE	kg m-3
SO4SMASS	tyx	SO4 Surface Mass Concentration ENSEMBLE	kg m-3
SPEED	tyx	surface wind speed	m s-1
SSEXTTAU	tyx	Sea Salt Extinction AOT [550 nm] ENSEMBLE	1
SSSMASS	tyx	Sea Salt Surface Mass Concentration ENSEMBLE	kg m-3
SSSMASS25	tyx	Sea Salt Surface Mass Concentration - PM 2.5 ENSEMBLE	kg m-3
SUEXTTAU	tyx	SO4 Extinction AOT [550 nm] ENSEMBLE	1
T2M	tyx	2-meter air temperature	K
T2MDEW	tyx	dew point temperature at 2 m	K
TAUX	tyx	eastward surface stress	N m-2
TAUY	tyx	northward surface stress	N m-2
TBISCCP	tyx	isccp mean all sky 10.5 micron brightness temp	K
TBRB09RG	tyx	brightness temperature in RRTMG band09 (1180-1390 cm-1)	K
TBRB10RG	tyx	brightness temperature in RRTMG band10 (1390-1480 cm-1)	K
TBRB11RG	tyx	brightness temperature in RRTMG band11 (1480-1800 cm-1)	K
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
TQC	tyx	vertically integrated cloud cover	1
TQG	tyx	vertically integrated graupel	kg m-2
TQI	tyx	total precipitable ice water	kg m-2
TQL	tyx	total precipitable liquid water	kg m-2
TQR	tyx	vertically integrated rain water	kg m-2
TQS	tyx	vertically integrated snow	kg m-2
TQV	tyx	total precipitable water vapor	kg m-2
TSKIN	tyx	surface skin temperature	K
U10M	tyx	10-meter eastward wind	m s-1
U200	tyx	eastward wind at 200 hPa	m s-1
U500	tyx	eastward wind at 500 hPa	m s-1
U700	tyx	eastward wind at 700 hPa	m s-1
U850	tyx	eastward wind at 850 hPa	m s-1

USTAR	tyx	surface velocity scale	m s-1
V10M	tyx	10-meter northward wind	m s-1
V200	tyx	northward wind at 200 hPa	m s-1
V500	tyx	northward wind at 500 hPa	m s-1
V700	tyx	northward wind at 700 hPa	m s-1
V850	tyx	northward wind at 850 hPa	m s-1
VORT200	tyx	vorticity at 200 hPa	s-1
VORT500	tyx	vorticity at 500 hPa	s-1
VORT700	tyx	vorticity at 700 hPa	s-1
VORT850	tyx	vorticity at 850 hPa	s-1

tavg_01hr_3d_CNVMFC_Mv: Model,CNVMFC Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~194 GB*

Name	*Dim*	*Description*	*Units*
CNVMFC	tzyx	cumulative mass flux	kg m-2 s-1

tavg_01hr_3d_CNVMFD_Mv: Model,CNVMFD Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~1.4 GB*

Name	*Dim*	*Description*	*Units*
CNVMFD	tzyx	detraining mass flux	kg m-2 s-1

tavg_01hr_3d_H_Mv: Model,H Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~13.0 GB*

Name	*Dim*	*Description*	*Units*
H	tzyx	mid layer heights	m

tavg_01hr_3d_TR_Mv: Model,TR Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~2.1 GB*

Name	*Dim*	*Description*	*Units*
dye_conserv	tzyx	Conservative convection tracer	kg kg-1

tavg_01hr_3d_U_Mv: Model, U Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~17.0 GB*

Name	*Dim*	*Description*	*Units*
U	tzyx	eastward wind	m s-1

tavg_01hr_3d_V_Mv: Model,V Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~18.0 GB*

Name	*Dim*	*Description*	*Units*
V	tzyx	northward wind	m s-1

tavg_01hr_3d_W_Mv: Model,W Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~23.0 GB*

Name	*Dim*	*Description*	*Units*
W	tzyx	vertical velocity	m s-1

tavg_01hr_3d_WU_Mv: Model,WU Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=181, time=1*

Granule Size: *~24.0 GB*

Name	*Dim*	*Description*	*Units*
WU	tzyx	vertical velocity	m s-1

tavg_01hr_3d_WV_Mv: Model,WV Meteorological Field

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

Spatial Grid: *01HR, cubed-sphere on model-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, level=132, time=1*

Granule Size: *~24.0 GB*

Name	*Dim*	*Description*	*Units*
WV	tzyx	vertical velocity	m s-1

tavg_15mn_2d_flx_Mx: Surface Flux Diagnostics

Frequency: *15-minutes from 00:00 UTC (time-averaged)*

Spatial Grid: *15MN, native cubed-sphere on single-level, full horizontal resolution on cube*

Dimensions: *grid resolution=2880, time=1*

Granule Size: *~2.4 GB*

Name	*Dim*	*Description*	*Units*
ALBEDO	tyx	surface albedo	1
FLNS	tyx	surface net downward longwave flux	W m-2
FLNSC	tyx	surface net downward longwave flux assuming clear sky	W m-2
FLNSCNA	tyx	surface net downward longwave flux assuming clear sky and no aerosol	W m-2
LWS	tyx	surface absorbed longwave radiation	W m-2
LWSC	tyx	surface absorbed longwave radiation assuming clear sky	W m-2
LWSCNA	tyx	surface absorbed longwave radiation assuming clear sky and no aerosol	W m-2
OLR	tyx	upwelling longwave flux at toa	W m-2
OLRC	tyx	upwelling longwave flux at toa assuming clear sky	W m-2
OLRCNA	tyx	upwelling longwave flux at toa assuming clear sky and no aerosol	W m-2
OSR	tyx	toa outgoing shortwave flux	W m-2
OSRCLR	tyx	toa outgoing shortwave flux assuming clear sky	W m-2
PBLH	tyx	planetary boundary layer height	m
PRCP_GRAUPEL	tyx	falling graupel precipitation at surface	kg m-2 s-1
PRCP_ICE	tyx	falling ice precipitation at surface	kg m-2 s-1
PRCP_RAIN	tyx	falling rain precipitation at surface	kg m-2 s-1
PRCP_SNOW	tyx	falling snow precipitation at surface	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
RADSRF	tyx	net downwelling radiation at surface	W m-2
RADSWT	tyx	toa incoming shortwave flux	W m-2
SFCEM	tyx	longwave flux emitted from surface	W m-2
SWCLDPRS	tyx	cloud top pressure	Pa
SWCLDTMP	tyx	cloud top temperature	K
SWGDWN	tyx	surface incoming shortwave flux	W m-2
SWGDWNC	tyx	surface incoming shortwave flux assuming clear sky	W m-2
SWGNET	tyx	surface net downward shortwave flux	W m-2
SWGNETC	tyx	surface net downward shortwave flux assuming clear sky	W m-2
SWGNETCNA	tyx	surface net downward shortwave flux assuming clear sky and no aerosol	W m-2
SWGNETNA	tyx	surface net downward shortwave flux assuming no aerosol	W m-2
SWTNET	tyx	toa net downward shortwave flux	W m-2
SWTNETC	tyx	toa net downward shortwave flux assuming clear sky	W m-2
SWTNETCNA	tyx	toa net downward shortwave flux assuming clear sky and no aerosol	W m-2
SWTNETNA	tyx	toa net downward shortwave flux assuming no aerosol	W m-2
UH25MX	tyx	updraft helicity 2 to 5 km mean	M+2 s-2

tavg2d_aer_x: Aerosol 2-D Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, time=1*

Granule Size: *~84.0 MB*

Name	*Dim*	*Description*	*Units*
BCANGSTR	tyx	Black Carbon Angstrom parameter [470-870 nm] __ENSEMBLE__	1
BCCMASS	tyx	Black Carbon Column Mass Density __ENSEMBLE__	kg m-2
BCDP001	tyx	Black Carbon Dry Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
BCDP002	tyx	Black Carbon Dry Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
BCEM001	tyx	Black Carbon Emission Bin 001 __ENSEMBLE__	kg m-2 s-1

BCEM002	tyx	Black Carbon Emission Bin 002 __ENSEMBLE__	kg m-2 s-1
BCEMAN	tyx	Black Carbon Anthropogenic Emissions __ENSEMBLE__	kg m-2 s-1
BCEMBB	tyx	Black Carbon Biomass Burning Emissions __ENSEMBLE__	kg m-2 s-1
BCEMBF	tyx	Black Carbon Biofuel Emissions __ENSEMBLE__	kg m-2 s-1
BCEXTTAU	tyx	Black Carbon Extinction AOT [550 nm] __ENSEMBLE__	1
BCFLUXU	tyx	Black Carbon column u-wind mass flux __ENSEMBLE__	kg m-1 s-1
BCFLUXV	tyx	Black Carbon column v-wind mass flux __ENSEMBLE__	kg m-1 s-1
BCHYPHIL	tyx	Black Carbon Hydrophobic to Hydrophilic __ENSEMBLE__	kg m-2 s-1
BCSCATAU	tyx	Black Carbon Scattering AOT [550 nm] __ENSEMBLE__	1
BCSMASS	tyx	Black Carbon Surface Mass Concentration __ENSEMBLE__	kg m-3
BCSV	tyx	Black carbon tendency due to conv scav	kg m-2 s-1
BCSV001	tyx	Black Carbon Convective Scavenging Bin 001 __ENSEMBLE__	kg m-2 s-1
BCSV002	tyx	Black Carbon Convective Scavenging Bin 002 __ENSEMBLE__	kg m-2 s-1
BCWT001	tyx	Black Carbon Wet Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
BCWT002	tyx	Black Carbon Wet Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
DMSCMASS	tyx	DMS Column Mass Density __ENSEMBLE__	kg m-2
DMSSMASS	tyx	DMS Surface Mass Concentration __ENSEMBLE__	kg m-3
DUAERIDX	tyx	Dust TOMS UV Aerosol Index __ENSEMBLE__	1
DUANGSTR	tyx	Dust Angstrom parameter [470-870 nm] __ENSEMBLE__	1
DUCMASS	tyx	Dust Column Mass Density __ENSEMBLE__	kg m-2
DUCMASS25	tyx	Dust Column Mass Density - PM 2.5 __ENSEMBLE__	kg m-2
DUDP001	tyx	Dust Dry Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
DUDP002	tyx	Dust Dry Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
DUDP003	tyx	Dust Dry Deposition Bin 003 __ENSEMBLE__	kg m-2 s-1
DUDP004	tyx	Dust Dry Deposition Bin 004 __ENSEMBLE__	kg m-2 s-1
DUDP005	tyx	Dust Dry Deposition Bin 005 __ENSEMBLE__	kg m-2 s-1
DUEM001	tyx	Dust Emission Bin 001 __ENSEMBLE__	kg m-2 s-1
DUEM002	tyx	Dust Emission Bin 002 __ENSEMBLE__	kg m-2 s-1
DUEM003	tyx	Dust Emission Bin 003 __ENSEMBLE__	kg m-2 s-1
DUEM004	tyx	Dust Emission Bin 004 __ENSEMBLE__	kg m-2 s-1
DUEM005	tyx	Dust Emission Bin 005 __ENSEMBLE__	kg m-2 s-1

DUEXTT25	tyx	Dust Extinction AOT [550 nm] - PM 2.5 __ENSEMBLE__	1
DUEXTTAU	tyx	Dust Extinction AOT [550 nm] __ENSEMBLE__	1
DUEXTTFM	tyx	Dust Extinction AOT [550 nm] - PM 1.0 um __ENSEMBLE__	1
DUFLUXU	tyx	Dust column u-wind mass flux __ENSEMBLE__	kg m-1 s-1
DUFLUXV	tyx	Dust column v-wind mass flux __ENSEMBLE__	kg m-1 s-1
DUSCAT25	tyx	Dust Scattering AOT [550 nm] - PM 2.5 __ENSEMBLE__	1
DUSCATAU	tyx	Dust Scattering AOT [550 nm] __ENSEMBLE__	1
DUSCATFM	tyx	Dust Scattering AOT [550 nm] - PM 1.0 um __ENSEMBLE__	1
DUSD001	tyx	Dust Sedimentation Bin 001 __ENSEMBLE__	kg m-2 s-1
DUSD002	tyx	Dust Sedimentation Bin 002 __ENSEMBLE__	kg m-2 s-1
DUSD003	tyx	Dust Sedimentation Bin 003 __ENSEMBLE__	kg m-2 s-1
DUSD004	tyx	Dust Sedimentation Bin 004 __ENSEMBLE__	kg m-2 s-1
DUSD005	tyx	Dust Sedimentation Bin 005 __ENSEMBLE__	kg m-2 s-1
DUSMASS	tyx	Dust Surface Mass Concentration __ENSEMBLE__	kg m-3
DUSMASS25	tyx	Dust Surface Mass Concentration - PM 2.5 __ENSEMBLE__	kg m-3
DUSV	tyx	Dust tendency due to conv scav	kg m-2 s-1
DUSV001	tyx	Dust Convective Scavenging Bin 001 __ENSEMBLE__	kg m-2 s-1
DUSV002	tyx	Dust Convective Scavenging Bin 002 __ENSEMBLE__	kg m-2 s-1
DUSV003	tyx	Dust Convective Scavenging Bin 003 __ENSEMBLE__	kg m-2 s-1
DUSV004	tyx	Dust Convective Scavenging Bin 004 __ENSEMBLE__	kg m-2 s-1
DUSV005	tyx	Dust Convective Scavenging Bin 005 __ENSEMBLE__	kg m-2 s-1
DUWT001	tyx	Dust Wet Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
DUWT002	tyx	Dust Wet Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
DUWT003	tyx	Dust Wet Deposition Bin 003 __ENSEMBLE__	kg m-2 s-1
DUWT004	tyx	Dust Wet Deposition Bin 004 __ENSEMBLE__	kg m-2 s-1
DUWT005	tyx	Dust Wet Deposition Bin 005 __ENSEMBLE__	kg m-2 s-1
LWI	tyx	land(1)_water(0)_ice(2)_flag	1
OCANGSTR	tyx	Organic Carbon Angstrom parameter [470-870 nm] __ENSEMBLE__	1
OCCMASS	tyx	Organic Carbon Column Mass Density __ENSEMBLE__	kg m-2
OCDP001	tyx	Organic Carbon Dry Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
OCDP002	tyx	Organic Carbon Dry Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1

OCEM001	tyx	Organic Carbon Emission Bin 001 __ENSEMBLE__	kg m-2 s-1
OCEM002	tyx	Organic Carbon Emission Bin 002 __ENSEMBLE__	kg m-2 s-1
OCEMAN	tyx	Organic Carbon Anthropogenic Emissions __ENSEMBLE__	kg m-2 s-1
OCEMBB	tyx	Organic Carbon Biomass Burning Emissions __ENSEMBLE__	kg m-2 s-1
OCEMBF	tyx	Organic Carbon Biofuel Emissions __ENSEMBLE__	kg m-2 s-1
OCEMBG	tyx	Organic Carbon Biogenic Emissions __ENSEMBLE__	kg m-2 s-1
OCEXTTAU	tyx	Organic Carbon Extinction AOT [550 nm] __ENSEMBLE__	1
OCFLUXU	tyx	Organic Carbon column u-wind mass flux __ENSEMBLE__	kg m-1 s-1
OCFLUXV	tyx	Organic Carbon column v-wind mass flux __ENSEMBLE__	kg m-1 s-1
OCHYPHIL	tyx	Organic Carbon Hydrophobic to Hydrophilic __ENSEMBLE__	kg m-2 s-1
OCSCATAU	tyx	Organic Carbon Scattering AOT [550 nm] __ENSEMBLE__	1
OCSMASS	tyx	Organic Carbon Surface Mass Concentration __ENSEMBLE__	kg m-3
OCSV	tyx	Organic carbon tendency due to conv scav	kg m-2 s-1
OCSV001	tyx	Organic Carbon Convective Scavenging Bin 001 __ENSEMBLE__	kg m-2 s-1
OCSV002	tyx	Organic Carbon Convective Scavenging Bin 002 __ENSEMBLE__	kg m-2 s-1
OCWT001	tyx	Organic Carbon Wet Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
OCWT002	tyx	Organic Carbon Wet Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
SO2CMASS	tyx	SO2 Column Mass Density __ENSEMBLE__	kg m-2
SO2EMAN	tyx	SO2 Anthropogenic Emissions __ENSEMBLE__	kg m-2 s-1
SO2EMBB	tyx	SO2 Biomass Burning Emissions __ENSEMBLE__	kg m-2 s-1
SO2EMVE	tyx	SO2 Volcanic (explosive) Emissions __ENSEMBLE__	kg m-2 s-1
SO2EMVN	tyx	SO2 Volcanic (non-explosive) Emissions __ENSEMBLE__	kg m-2 s-1
SO2SMASS	tyx	SO2 Surface Mass Concentration __ENSEMBLE__	kg m-3
SO4CMASS	tyx	SO4 Column Mass Density __ENSEMBLE__	kg m-2
SO4EMAN	tyx	SO4 Anthropogenic Emissions __ENSEMBLE__	kg m-2 s-1
SO4SMASS	tyx	SO4 Surface Mass Concentration __ENSEMBLE__	kg m-3
SSAERIDX	tyx	Sea Salt TOMS UV Aerosol Index __ENSEMBLE__	1
SSANGSTR	tyx	Sea Salt Angstrom parameter [470-870 nm] __ENSEMBLE__	1
SSCMASS	tyx	Sea Salt Column Mass Density __ENSEMBLE__	kg m-2
SSCMASS25	tyx	Sea Salt Column Mass Density - PM 2.5 __ENSEMBLE__	kg m-2

SSDP001	tyx	Sea Salt Dry Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
SSDP002	tyx	Sea Salt Dry Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
SSDP003	tyx	Sea Salt Dry Deposition Bin 003 __ENSEMBLE__	kg m-2 s-1
SSDP004	tyx	Sea Salt Dry Deposition Bin 004 __ENSEMBLE__	kg m-2 s-1
SSDP005	tyx	Sea Salt Dry Deposition Bin 005 __ENSEMBLE__	kg m-2 s-1
SSEM001	tyx	Sea Salt Emission Bin 001 __ENSEMBLE__	kg m-2 s-1
SSEM002	tyx	Sea Salt Emission Bin 002 __ENSEMBLE__	kg m-2 s-1
SSEM003	tyx	Sea Salt Emission Bin 003 __ENSEMBLE__	kg m-2 s-1
SSEM004	tyx	Sea Salt Emission Bin 004 __ENSEMBLE__	kg m-2 s-1
SSEM005	tyx	Sea Salt Emission Bin 005 __ENSEMBLE__	kg m-2 s-1
SSEXTT25	tyx	Sea Salt Extinction AOT [550 nm] - PM 2.5 __ENSEMBLE__	1
SSEXTTAU	tyx	Sea Salt Extinction AOT [550 nm] __ENSEMBLE__	1
SSEXTTFM	tyx	Sea Salt Extinction AOT [550 nm] - PM 1.0 um __ENSEMBLE__	1
SSFLUXU	tyx	Sea Salt column u-wind mass flux __ENSEMBLE__	kg m-1 s-1
SSFLUXV	tyx	Sea Salt column v-wind mass flux __ENSEMBLE__	kg m-1 s-1
SSSCAT25	tyx	Sea Salt Scattering AOT [550 nm] - PM 2.5 __ENSEMBLE__	1
SSSCATAU	tyx	Sea Salt Scattering AOT [550 nm] __ENSEMBLE__	1
SSSCATFM	tyx	Sea Salt Scattering AOT [550 nm] - PM 1.0 um __ENSEMBLE__	1
SSSD001	tyx	Sea Salt Sedimentation Bin 001 __ENSEMBLE__	kg m-2 s-1
SSSD002	tyx	Sea Salt Sedimentation Bin 002 __ENSEMBLE__	kg m-2 s-1
SSSD003	tyx	Sea Salt Sedimentation Bin 003 __ENSEMBLE__	kg m-2 s-1
SSSD004	tyx	Sea Salt Sedimentation Bin 004 __ENSEMBLE__	kg m-2 s-1
SSSD005	tyx	Sea Salt Sedimentation Bin 005 __ENSEMBLE__	kg m-2 s-1
SSSMASS	tyx	Sea Salt Surface Mass Concentration __ENSEMBLE__	kg m-3
SSSMASS25	tyx	Sea Salt Surface Mass Concentration - PM 2.5 __ENSEMBLE__	kg m-3
SSSV	tyx	Sea salt tendency due to conv scav	kg m-2 s-1
SSSV001	tyx	Sea Salt Convective Scavenging Bin 001 __ENSEMBLE__	kg m-2 s-1
SSSV002	tyx	Sea Salt Convective Scavenging Bin 002 __ENSEMBLE__	kg m-2 s-1
SSSV003	tyx	Sea Salt Convective Scavenging Bin 003 __ENSEMBLE__	kg m-2 s-1
SSSV004	tyx	Sea Salt Convective Scavenging Bin 004 __ENSEMBLE__	kg m-2 s-1
SSSV005	tyx	Sea Salt Convective Scavenging Bin 005 __ENSEMBLE__	kg m-2 s-1

SSWT001	tyx	Sea Salt Wet Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
SSWT002	tyx	Sea Salt Wet Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
SSWT003	tyx	Sea Salt Wet Deposition Bin 003 __ENSEMBLE__	kg m-2 s-1
SSWT004	tyx	Sea Salt Wet Deposition Bin 004 __ENSEMBLE__	kg m-2 s-1
SSWT005	tyx	Sea Salt Wet Deposition Bin 005 __ENSEMBLE__	kg m-2 s-1
SUANGSTR	tyx	SO4 Angstrom parameter [470-870 nm] __ENSEMBLE__	1
SUDP001	tyx	Sulfate Dry Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
SUDP002	tyx	Sulfate Dry Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
SUDP003	tyx	Sulfate Dry Deposition Bin 003 __ENSEMBLE__	kg m-2 s-1
SUDP004	tyx	Sulfate Dry Deposition Bin 004 __ENSEMBLE__	kg m-2 s-1
SUEM001	tyx	Sulfate Emission Bin 001 __ENSEMBLE__	kg m-2 s-1
SUEM002	tyx	Sulfate Emission Bin 002 __ENSEMBLE__	kg m-2 s-1
SUEM003	tyx	Sulfate Emission Bin 003 __ENSEMBLE__	kg m-2 s-1
SUEM004	tyx	Sulfate Emission Bin 004 __ENSEMBLE__	kg m-2 s-1
SUEXTTAU	tyx	SO4 Extinction AOT [550 nm] __ENSEMBLE__	1
SUFLUXU	tyx	SO4 column u-wind mass flux __ENSEMBLE__	kg m-1 s-1
SUFLUXV	tyx	SO4 column v-wind mass flux __ENSEMBLE__	kg m-1 s-1
SUPMSA	tyx	MSA Prod from DMS Oxidation [column] __ENSEMBLE__	kg m-2 s-1
SUPSO2	tyx	SO2 Prod from DMS Oxidation [column] __ENSEMBLE__	kg m-2 s-1
SUPSO4AQ	tyx	SO4 Prod from Aqueous SO2 Oxidation [column] __ENSEMBLE__	kg m-2 s-1
SUPSO4G	tyx	SO4 Prod from Gaseous SO2 Oxidation [column] __ENSEMBLE__	kg m-2 s-1
SUPSO4WT	tyx	SO4 Prod from Aqueous SO2 Oxidation (wet dep) [column] __ENSEMBLE__	kg m-2 s-1
SUSCATAU	tyx	SO4 Scattering AOT [550 nm] __ENSEMBLE__	1
SUSV	tyx	Sulfate tendency due to conv scav	kg m-2 s-1
SUSV001	tyx	Sulfate Convective Scavenging Bin 001 __ENSEMBLE__	kg m-2 s-1
SUSV002	tyx	Sulfate Convective Scavenging Bin 002 __ENSEMBLE__	kg m-2 s-1
SUSV003	tyx	Sulfate Convective Scavenging Bin 003 __ENSEMBLE__	kg m-2 s-1
SUSV004	tyx	Sulfate Convective Scavenging Bin 004 __ENSEMBLE__	kg m-2 s-1
SUWT001	tyx	Sulfate Wet Deposition Bin 001 __ENSEMBLE__	kg m-2 s-1
SUWT002	tyx	Sulfate Wet Deposition Bin 002 __ENSEMBLE__	kg m-2 s-1
SUWT003	tyx	Sulfate Wet Deposition Bin 003 __ENSEMBLE__	kg m-2 s-1
SUWT004	tyx	Sulfate Wet Deposition Bin 004 __ENSEMBLE__	kg m-2 s-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

tavg3d_aer_p: Aerosol 3-D Diagnostics

Frequency: *daily from 09:00 UTC (time-averaged)*

Spatial Grid: *01DY, longitude-latitude on pressure-level, coarsened horizontal resolution*

Dimensions: *longitude=720, latitude=361, level=26, time=1*

Granule Size: *~113.0 MB*

Name	*Dim*	*Description*	*Units*
AIRDENS	tzyx	moist air density	kg m-3
BC	tzyx	Black Carbon Mass Mixing Ratio __ENSEMBLE__	kg kg-1
DU	tzyx	Dust Mass Mixing Ratio __ENSEMBLE__	kg kg-1
LWI	tzyx	land(1)_water(0)_ice(2)_flag	1
OC	tzyx	Organic Carbon Mass Mixing Ratio __ENSEMBLE__	kg kg-1
PS	tzyx	surface pressure	Pa
SO2	tzyx	Sulphur dioxide	kg kg-1
SO4	tzyx	Sulphate aerosol	kg kg-1
SS	tzyx	Sea Salt Mass Mixing Ratio __ENSEMBLE__	kg kg-1