MINISTÉRIO DA CIÊNCIA E TECNOLOGIA
INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS

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NOTA TÉCNICA DA ÁREA DMDDADOS

Bárbara Alessandra Gonçalves Pinheiro Yamada

Dayana Castilho de Souza

Paulo Yoshio Kubota

URL do documento original:
<http://urlib.net/8JMKD3MGP3W34R/3SMF7AS>

INPE

São José dos Campos

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Regras de uso da área DMDDADOS

Foi disponibilizada uma área do Tupã pelo CG-Super para uso exclusivo de dados de entrada para os modelos (topografias, SST, condições iniciais, etc) e dados para as validações (observações, reanálises, etc), que estajam sendo utilizados pelos usuários.

A área foi denominada DMDDADOS.

Os dados de entrada para os modelos se encontram no seguinte diretório **/scratchin/grupos/dmddados/projetos**. Já os dados para as validações se encontram no NetApp, no seguinte diretório **/dados/dmddados**. A criação desta área visa ainda, prevenir e tentar extinguir a duplicidade de informações nos diretórios dos usuários. Além de agilizar e facilitar o acesso às informações por todos os grupos da DIDMD.

Esta área foi aberta no modo leitura para todos da DIDMD (e futuramente para todo CPTEC) e modo escrita apenas para a servidora Bárbara A. G. P. Yamada, que será a responsável pela manutenção da área e pela migração dos dados, mediante disponibilização do acesso a esses dados pelo usuário interessado.

Importante informar que a servidora acima citada ficará encarregada de fazer apenas a migração dos dados e não o seu download de qualquer site ou até mesmo da fita do Tupã.

Solicita-se aderir à migração dos dados em uso para esta área, que será de muita utilidade para rodar e/ou validar seus modelos. Após a migração dos novos dados para os diretórios desta área, estes devem ser excluídos dos diretórios do usuário que os forneceu.

A seguir serão apresentados o layout e as variáveis disponíveis na área DMDDADOS.

Implementadoras da área: Bárbara Alessandra G. P. Yamada
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Capacidade em uso dos diretórios da área DMDDADOS

Dados para rodar modelo	
am4	112G
analise_gfs	15T
bam_hybrid	38G
bam_sigma	25G
ci_brams	329G
ci_global	3.8T
ci_wrf	63G
pre_global	40G
tamanho total	19T
Dados para validações	
bam	
pre_global	116G
clima	547G
tamanho atual	663G
bramsrd	22G
experiments_field	
GoAmazon	4K
Dynamo	4K
ARM	4K
Chuva	4K
tamanho atual	20K
forecast_gfs	5.4T
mercator	211G
precipitation	
cmorph	132G
gpcp	2.3G
gpm	1.8T
trmm	364G
tamanho atual	2.3T

radiation_clouds	
ceres	5.6G
cloud_isccp	128M
rad_isccp	166M
tamanho atual	5.9G
reanalysis_era5	8.1T
reanalysis_era_interim	2.8T
reanalysis_ncep	
gldas	20G
cfsr	5.6T
tamanho atual	5.7T
temporary	
scripts	16K
tamanho atual	144K
Tamanho total	25T

Layout dos diretórios da área DMDDADOS

Nome	Resolução Temporal	Resolução Espacial	Tipo	Extensão	Variáveis	Intervalo disponível (dd-mm-aa)
am4	Diário	96 x 96	netcdf	nc	ver anexo	1870 até 2015 para SST e ice
	___	___	ascii	___	___	fixo
	___	___	ascii	txt e dat	___	fixo
	___	___	xml	xml	___	fixo
análise_gfs entrada para a etapa pré 00Z e 12Z	___	0.13°	bin	___	ver anexo	nov-2011 até dez-2018
bam_hybrid	___	___	ascii	___	___	fixo
	___	___	bin	___	ver anexo	fixo
	___	___	bin	dat	ver anexo	fixo
	___	___	bin	___	ver anexo	01 - set - 1997
	___	0.16°	bin	dat	gtopo	fixo
	___	0.13°	bin	bin	___	fixo
	___	___	ascii	___	ver anexo	16-jan-1870 até 16-dez-2017
	___	___	bin	___	ver anexo	jan-1870 até dez-2017
bam_sigma	___	___	ascii	___	___	fixo
	___	___	bin	bin	ver anexo	fixo
	___	___	bin	___	___	fixo
	___	___	ascii, bin e ctl	form	ver anexo	fixo
	___	0.13°	bin	___	ver anexo	fixo
	___	0.16°	bin	dat	gtopo	fixo
	___	___	bin	___	ver anexo	16-jan-1950 até 16-dez-2010
	___	___	ascii	vfm	ver anexo	31-dez-2012, 30-abril-2015 e 17-fev-2020
	___	___	bin	___	ver anexo	31-dez-2012, 30-abril-2015 e 17-fev-2020
	___	___	bin	grib2	ver anexo	30-abril-2015 e 17-fev-2020
	___	___	bin	dat	ver anexo	fixo
	___	___	bin	___	ver anexo	01-set-1981 até 01-dez-2013
	___	___	ascii	___	ver anexo	16-jan-1950 até 15-jun-2015

bam/clima	___	1.8° (TQ0062L028)	___	bin e ascii	ver anexo	01-set-1997 até 01-mar-1999
	___	1.0° (TQ0126L042)	___	bin e ascii	ver anexo	01-set-1997 até 01-mar-1999
	___	___	___	ascii	___	fixo
bramsrd						
pre-análise gfs + climatologia CAMS - CHEM	___	___	ascii	ctl	___	02-set-2020 até 03-set-2020
	3h	0.25°	bin	gra	ver anexo	02-set-2020 00h até 03-set-2020 12h
Emissões do prep_chem_src	___	___	ascii	map e vfm	___	02-set-2020
	___	0.191° x 0.168°	bin	gra	ver anexo	02-set-2020 00h
	___	___	ascii	ctl	___	02-set-2020 até 05-set-2020
	3h	0.143° x 0.126°	bin	gra	ver anexo	02-set-2020 00h até 05-set-2020 00h
ceres	Mensal	1.0°	netcdf	nc3	aux (ver anexo)	mar-2000 até set-2016
				nc3	cloud (ver anexo)	mar-2000 até set-2016
				nc3	modis_aero (ver anexo)	mar-2000 até nov-2016
				nc3	surface (ver anexo)	mar-2000 até ago-2016
				nc3	toa (ver anexo)	mar-2000 até nov-2016
ci_brams	___	90m_500m	ascii	___	topo mapa_veg	fixo
		0.25°	ascii	vfm	soil_moisture_precipitation	01-jan-1997 até 28-jun-2017

ci_global saída pré/ entrada do runmodel	___	1.8° (TQ0062L028)	bin	___	ver anexo	nov e dez-2012 jan, fev e mar-2013
			bin e ascii	___	___	fixo
	___	1.0° (TQ0126L028)	bin	___	ver anexo	nov e dez-2012 jan, fev e mar-2013
			bin e ascii	___	___	fixo
	___	0.3° (TQ0213L042)	bin	___	ver anexo	nov e dez-2012 jan, fev e mar-2013
			bin e ascii	___	___	fixo
	___	0.4° (TQ0299L064)	___	___	ver anexo	set, out, nov e dez-2012 jan, fev, mar, abr, mai, nov e dez-2013 jan, fev, mar, abr, nov e dez-2014 jan até dez-2015 jan até jun-2016 ago até dez-2016 jan, fev e mar-2017
			bin e ascii	___	___	fixo
	___	0.2° (TQ0666L064)	___	___	ver anexo	nov e dez-2012 jan e fev-2013
			bin e ascii	___	___	fixo
cloud_isccp	Mensal	2.5°	bin	bin	ver anexo	jul-1983 até dez-2009
cmorph	03h	0.25°	netcdf	nc	cmorph	01-jan-1998 até 30-06-2013
	Diário	0.25°	netcdf	nc	cmorph	01-jan-1998 até 30-06-2013
gldas	Mensal	0.25°	netcdf	nc4	surface	jan-1948 até out-2017
		1.8° (TQ0062L028)	ascii	ctl	___	jan-1948 até dez-2017
			bin	___	soil_moisture_bam_t62_obs	jan-1948 até dez-2017
			ascii	ctl	___	___
			___	___	soil_moisture_bam_t62_clima	___

gpcp	Diário	1.0°	netcdf	nc	precipitation	01-out-1996 até 31-out- 2015
		2.5°	bin	___	precipitation	out, nov e dez-1996 até out, nov, e dez-2013 01-jan-2014 até 31-out-2015
	Mensal	2.5°	bin	___	precipitation	Jan-1979 até out-2015
			netcdf	nc	precipitation	Jan-1979 até mar-2017
gpm	30 min	0.1°	3B	nc/v05	precipitationca	mar-2014 até ago-2017
			3B	hdf5	ver anexo	mar-2014 até set-2017
	Mensal	0.1°	3B	nc	ver anexo	abr-2014 até fev-2017
				hdf5/v04	ver anexo	abr-2014 até fev-2017
				hdf5/v05	ver anexo	abr-2014 até jun-2017
	gmi_mensal	0.25°	3A	hdf5	ver anexo	mar-2014 até jan-2018
mercator	Horário	0.083°	netcdf	nc	ver anexo	16-jan-2019 até 02-dez-2019
	Diário	0.083°	netcdf	nc	ver anexo	19-dez-2018 até 02-dez-2019
pre_global	___	___	___	ascii	ver anexo	fixo
	___	___	___	ascii	ver anexo	15-abr-2015, 16-mai-2015 , 15-jun-2015 e 30-abr-2015
	___	0.13°	___	bin	ver anexo	dez-2012 ou abril-2015
	___	___	___	bin	ver anexo	fixo
	___	0.16°		bin	gtopo	fixo
	___	___	___	bin	___	16-jan-1950 até 16-dez-2010
previsão_ gfs 3 em 3 horas	___	0.25°	___	grib2	precipitation	nov e dez-2015 jan(com exceção das pastas 1200, 1300, 1800 e 1900) e fev-2016
	___	0.5°	___	grib2	precipitation	nov e dez-2013 jan e fev-2014 fev e dez-2015 jan-2016
	___	Recorte_ previsões* (0.5°) *previsão para até 7 dias para a variável precipitação	netcdf	nc	precipitation	dez-2013 jan, fev e dez-2014 dez-2014-jan e fev-2015 jan, fev e dez-2015-jan fev e dez-2016 jan e fev-2017

rad_isccp	Mensal	2.5°	___	bin	___	jul-1983 até dez-2009
reanálise_ cfsr	Horário	0.3°_0.2°	netcdf	nc	surface (wind_ice)	jan-1979 até dez-2016
			___	grib2	surface (wind10m_ice)	01-jan-1979 até 31-dez-2014
			___		surface (olr, prec e slp)	01-jan-1979 até 31-dez-2010
			___		levels (wind_200)	01-jan-1979 até 31-dez-2010
			___	grads	surface (wind e ice)	jan-1979 até dez-1990
reanálise_ era_interim	06h	0.75°	netcdf	nc	levels (ver anexo)	01-jan-1979 até 14-mar-1986 01-jan-2016 até 29-fev-2016
	Diário	0.25°	___	grib	levels (ver anexo)	01-jan-1999 até 31-jan-2016
		0.75°	netcdf	nc	surface (sst)	01-jan-1979 até 31-01-2017
	Mensal	1.5°	___	bin	surface (ver anexo)	jan-1979 até dez-2011
				grib	surface (ver anexo)	jan-1979 até dez-2011
					levels (ver anexo)	jan-1979 até dez-2011
		0.75°	___	grib	levels (wind e temp)	dez-1979 até dez-2010

reanálise_era5	Horário	0.25°	netcdf	nc	levels (u_component_of_wind)	jan-1980 até dez-2018
					surface (2_metre_temperature, 2_metre_dewpoint_temperature, surface_pressure)	jan-1979 até jul-2019
					surface (10_metre_u_wind_component)	jan-1979 até jun-2019
					surface (10_metre_v_wind_component)	jan-1979 até mar-2019
					surface (surface_solar_radiation_downwards)	jan-1979 até mai-2019
					single_level (total_precipitation)	jan-1979 até dez-2010
		0.3°	netcdf	nc	surface (wind e wave)	jan-2017 até dez-2017
					surface (wave)	jan-2008 até jun-2018
		0.5°	netcdf	nc	surface (wave)	jan-2019 até dez-2019
	Diário	0.25°	netcdf	nc	surface (sea ice area fraction	jan-1979 até dez-2018
					levels (v component of wind)	jan, fev e dez de 1979 a 2019
					single_level(2_metre_temperature)	jan, fev e dez de 1979 a 2019
					single_level(top_net_thermal_radiation)	jan, fev e dez de 1979 a 2019 e fev_2020
	Mensal	0.25°	netcdf	nc	surface (ver anexo)	jan-1979 até fev-2019
					levels (ver anexo)	jan-1979 até fev-2019
					surface (skin_temperature, top net thermal radation, mean sea level pressure, surface pressure, volumetric_soil_water_layer)	jan-1979 até dez-2019
					levels (ozone)	jan-1979 até dez-2019
		0.3°	___	grib	surface (pressure)	jan-2010 até out-2016
					levels (wind)	Jan-2010 até dez-2016

trmm	03h	0.25°	3B42	bin	precipitation	01-jan-1998 até 31-mai-2016
				nc	precipitation	01-jan-1998 até 31-mai-2017
	Diário	0.25°	3B42	bin	precipitation	01-jan-1998 até 31-mai-2016
				nc	precipitation	01-jan-1998 até 31-mai-2016
				nc4	precipitation	01-jan-1998 até 30-mai-2016
	Mensal	0.25°	3B43	bin	precipitation	jan-1998 até abr-2016
				nc	precipitation	jan-1998 até jul-2017
wrf	___	___	___	bin	ver anexo	___
scripts	• descompacta.sh – utilizado para descompactar arquivos .tgz • copia_fita.gs – usado para copiar arquivos da fita do Tupã • cria_link.sh – cria links simbólicos para os arquivos a serem utilizados					

Variáveis disponíveis na área DMDDADOS

am4 colaboração: Marília Harumi Shimizu – emissions, CO2, ice, SST, land mask, land use, topography e vegetation - 1870 até 2015 para SST and ice	Albedo dimensionless
	Emissions kg(SO2)/m2/s
	Emissions kg(SO4)/m2/s
	CO2 dimensionless
	Ice [%]
	SST [K]
	Land mask dimensionless
	Land use [(1)]
	Topographic depth at T-cell centers [m]
	Variance of sub-grid scale topography [m**2]
	Vegetation [m]
análise_gfs colaboração: Saulo Magnum de Jesus, Bárbara A. G. P. Yamada e Wanderson Henrique dos Santos	Mean sea level pressure [Pa]
	Surface pressure [Pa]
	Surface Temperature [K]
	Topography [m]
	Temperature [K] 26 levels
	U velocity [m s**-1] 26 levels
	V velocity [m s**-1] 26 levels
	Specific humidity [kg kg**-1] 26 levels (Variable at up to 100 hPa (21))
	Sea surface temperature [K]
bam_hybrid colaboração: Carlos Frederico Bastarz	Topography [m]
	Water percentage [%]
	Topography gradient [m]
	Sea surface temperature [K]
	Albedo surface [(0 - 1)] dimensionless
	Sea Surface Co2 Flux [gC]
	Sea ice area fraction [(0 - 1)]
	Sea surface temperature monthly [K]
bam_sigma colaboração: Carlos Frederico Bastarz	Total Precipitation [Kg m2**-1 day]
	Co2 Flux Daily
	Co2 Flux Monthly
	Surface pressure [hPa]
	Topography [m]
	Temperature [K]
	Humidity [kg kg**-1]
	Vorticity [1 s**-1]
	Divergence [1 s**-1]
	Ozone [kg kg**-1]

	Tracer
	Cloud ice
	Sea Surface Temperature Daily [K]
	Sea Surface Temperature Monthly [K]
	Climatological CO2 Flux
	Albedo
	Clay percentage [%]
	Climatological Soil Temperature
	Climatological sea surface temperature [K]
	Sand percentage [%]
	Climatological Soil Moisture
	Deep soil temperature
	Surface roughness
	Water percentage [%]
	Vegetation Mask [m]
	Soil moisture
bam/clima colaboração: Dayana Castilho de Souza	Surface Topography [m]
	Surface Land Sea Mask [0,1]
	Inst. Precipitable Water [KG/M2]
	Soil Wetness Of Surface [0-1]
	Soil Wetness Of Root Zone [0-1]
	Soil Wetness Of Drainage Zone [0-1]
	Vegetation [%]
	Ice Mixing Ratio Prognostic [KG/KG] 18 levels
	Liq Mixing Ratio Prognostic [KG/KG] 18 levels
	Cloud Total Prognostic [%] 18 levels
	Time Mean Surface Pressure [HPA]
	Time Mean Surface Zonal Wind (U) [M/S]
	Time Mean Zonal Wind (U) [M/S] 18 levels
	Time Mean Surface Meridional Wind (V) [M/S]
	Time Mean Meridional Wind (V) [M/S] 18 levels
	Time Mean Geopotential Height [M] 18 levels
	Time Mean Sea Level Pressure [HPA]
	Time Mean Surface Absolute Temperature [K]
	Time Mean Absolute Temperature [K] 18 levels
	Time Mean Specific Humidity [KG/KG] 18 levels
	Time Mean Surface Temperature [K]
	Time Mean Omega [CBAR/S] 18 levels
	Total Precipitation [KG/M2/DAY]

	Convective Precipitation [KG/M2/DAY]
	Snowfall [KG/M2/DAY]
	Runoff [KG/M2/S]
	Sensible Heat Flux From Surface [W/M2]
	Latent Heat Flux From Surface [W/M2]
	Cloud Cover [0-1]
	Downward Long Wave At Bottom [W/M2]
	Upward Long Wave At Bottom [W/M2]
	Outgoing Long Wave At Top [W/M2]
	Incident Short Wave Flux [W/M2]
	Downward Short Wave At Ground [W/M2]
	Upward Short Wave At Ground [W/M2]
	Upward Short Wave At Top [W/M2]
	Long Wave Radiative Heating [K/S] 18 levels
	Short Wave Radiative Heating [K/S] 18 levels
	CONVECTIVE LATENT HEATING [K/S] 18 levels
	CONVECTIVE MOISTURE SOURCE [1/S] 18 levels
	LARGE SCALE LATENT HEATING [K/S] 18 levels
	LARGE SCALE MOISTURE SOURCE [1/S] 18 levels
	SHALLOW CONVECTIVE HEATING [K/S] 18 levels
	SHALLOW CONV. MOISTURE SOURCE [1/S] 18 levels
	VERTICAL DIFFUSION HEATING [K/S] 18 levels
	VERTICAL DIFF. MOISTURE SOURCE [1/S] 18 levels
	DOWNWARD LONG WAVE AT BOTTOM (CLEAR) [W/M2]
	OUTGOING LONG WAVE AT TOP (CLEAR) [W/M2]
	DOWNWARD SHORT WAVE AT GROUND (CLEAR) [W/M2]
	UPWARD SHORT WAVE AT TOP (CLEAR) [W/M2]
	OZONE MIXING RATIO [KG/KG] 18 levels
	VERTICAL DIST TOTAL CLOUD COVER [0-1] 18 levels
	INVERSION CLOUD [%] 18 levels
	SUPERSATURATION CLOUD [%] 18 levels
	CONVECTIVE CLOUD [%] 18 levels
	SHALLOW CONVECTIVE CLOUD [%] 18 levels
	CLOUD LIQUID WATER PATH [G/M**2] 18 levels
	LONGWAVE CLOUD EMISSIVITY [%] 18 levels
	SHORTWAVE CLOUD OPTICAL DEPTH [G/M**2] 18 levels
	TIME MEAN TEMP AT 2-M FROM SFC [K]
	TIME MEAN SPEC HUMIDITY AT 2-M FROM SFC [KG/KG]
	TIME MEAN AT 10 METRE U-WIND COMPONENT [M/S]

	TIME MEAN AT 10 METRE V-WIND COMPONENT [M/S]
	INSTANTANEOUS NPP [MOL_CO2/M**2/S]
	NS. NET ECOSY. EXCHANGE CO2 P TIMESTEP [MOL_CO2/M**2/S]
	PLANETARY BOUNDARY LAYER HEIGHT [M]
	INSTANTANEOUS GPP [MOL_CO2/M**2/S]
	SENSIBLE HEAT FLUX FROM CANOPY [W/M2]
	SENSIBLE HEAT FLUX FROM GROUND [W/M2]
	TRANSPIRATION FROM CANOPY [W/M2]
	TRANSPIRATION FROM GROUND COVER [W/M2]
	LIQUID MIXING RATIO KG/KG [KG/KG] 18 levels
	TURBULENT KINETIC ENERGY [M2/M2] 18 levels
	ICE MIXING RATIO KG/KG [KG/KG] 18 levels
	CONVECTIVE AVAIL. POT.ENERGY [M2/S2]
	CONVECTIVE INHIB. ENERGY [M2/S2]
	SEVERE WEATHER THREAT [ ]
	ICE PARTICLE EFFECTIVE RADIUS [M] 18 levels
	Liquid Particle Effective Radius [M] 18 levels
	Health Indexes [g/m**3]
	Time Mean Minimum Temp At 2-M From Sfc [K]
	Time Mean Maximum Temp At 2-M From Sfc [K]
	Pressure Tendency [PA/S]
bramsrd colaboração: Luiz Flávio Rodrigues	UGRD 23 99 vento U [m/s]
	VGRD 23 99 Vento V
	TMP 23 99 Temperatura [K]
	HGT 23 99 Geopotencial [m]
	RH 23 99 Umidade Relativa [%]
	O3 23 99 O3 [kg/m^2]
	NO 23 99 NO [kg/m^2]
	NO2 23 99 NO2 [kg/m^2]
	HNO3 23 99 HNO3 [kg/m^2]
	SO2 23 99 SO2 [kg/m^2]
	CO 23 99 CO [kg/m^2]
	HO 23 99 HO [kg/m^2]
	CH4 23 99 CH4 [kg/m^2]
	ETH 23 99 ETH [kg/m^2]
	ALKA 23 99 ALKA [kg/m^2]
	BIO 23 99 BIO [kg/m^2]
	HCHO 23 99 HCHO [kg/m^2]
	PAN 23 99 PAN [kg/m^2]

	BBURN2 23 99 Aerosol de Biomass Burning [kg/m^2]
	MARIN1 23 99 Aerosol de Sal marinho 1 [kg/m^2]
	MARIN2 23 99 Aerosol de Sal marinho 2 [kg/m^2]
	MARIN3 23 99 Aerosol de Sal marinho 3 [kg/m^2]
	NO_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	NO_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	CO_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	NO2_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	NO2_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	CH4_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	SO2_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	SO2_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	ETH_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	CO_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	CO_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	ALKA_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	CH4_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	CH4_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	ALKE_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	ETH_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	ETH_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	BIO_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	ALKA_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	ALKA_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	ARO_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	ALKE_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	ALKE_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	HCHO_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	ARO_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	BIO_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	ALD_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	HCHO_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	ARO_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	KET_bioge 0 99 - EMISSION DATA : bioge [kg/m^2]
	ALD_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	HCHO_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	KET_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	ALD_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	ORA1_antro 0 99 - EMISSION DATA : antro [kg/m^2]

	KET_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	ORA2_antro 0 99 - EMISSION DATA : antro [kg/m^2]
	ORA1_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	URBAN2_ant 0 99 - EMISSION DATA : antro [kg/m^2]
	ORA2_bburn 0 99 - EMISSION DATA : bburn [kg/m^2]
	URBAN3_ant 0 99 - EMISSION DATA : antro [kg/m^2]
	BBURN2_bbu 0 99 - EMISSION DATA : bburn [kg/m^2]
	BBURN3_bbu 0 99 - EMISSION DATA : bburn [kg/m^2]
	mean_fct_agtf 0 99 - PLUME DATA : agtf [fract]
	mean_fct_agef 0 99 - PLUME DATA : agef [fract]
	mean_fct_agsv 0 99 - PLUME DATA : agsv [fract]
	mean_fct_aggr 0 99 - PLUME DATA : aggr [fract]
	firesize_agtf 0 99 - PLUME DATA : agtf [fract]
	firesize_agef 0 99 - PLUME DATA : agef [fract]
	firesize_agsv 0 99 - PLUME DATA : agsv [fract]
	firesize_aggr 0 99 - PLUME DATA : aggr [fract]
	TOPO 0 99 - RAMS : topo [m]
	LAND 0 99 - RAMS : land frac area [ ]
	SEA_PRESS 0 99 - RAMS : sea level pressure; [mb;]
	PRECIP 0 99 - RAMS : total accum precip [mm liq]
	ACCCON 0 99 - RAMS : accum convective pcp [mm]
	TVEG1 0 99 - RAMS : vegetation temperature: patch # 1 [C]
	TVEG2 0 99 - RAMS : vegetation temperature: patch # 2 [C]
	TVEG3 0 99 - RAMS : vegetation temperature: patch # 3 [C]
	TVEG4 0 99 - RAMS : vegetation temperature: patch # 4 [C]
	T2MJ 0 99 - RAMS : temp - 2m AGL; [C]
	LE 0 99 - RAMS : sfc lat heat flx [W/m2]
	H 0 99 - RAMS : sfc sens heat flx [W/m2]
	RSHORT 0 99 - RAMS : rshort [W/m2]
	RLONG 0 99 - RAMS : rlong [W/m2]
	ALBEDT 0 99 - RAMS : albedt [ ]
	RLONGUP 0 99 - RAMS : rlongup [W/m2]
	CAPE 0 99 - RAMS : cape [J/kg]
	CINE 0 99 - RAMS : cine [J/kg]
	ZI 0 99 - RAMS : Zi [m]
	SST 0 99 - RAMS : water temperature [C]
	PWT 0 99 - RAMS : precipitable total water [cm]
	SLP_METAR 0 99 - RAMS : sea level pressure - METAR formulation [mb]
	TD2MJ 0 99 - RAMS : Dewpoint temp in 2m [C]

	U10MJ 0 99 - RAMS : Zonal Wind at 10m - from JULES [m/s]
	V10MJ 0 99 - RAMS : Meridional Wind at 10m - from JULES [m/s]
	SMOIST1 7 99 - RAMS : soil moisture: patch # 1 [m3/m3]
	SMOIST2 7 99 - RAMS : soil moisture: patch # 2 [m3/m3]
	SMOIST3 7 99 - RAMS : soil moisture: patch # 3 [m3/m3]
	SMOIST4 7 99 - RAMS : soil moisture: patch # 4 [m3/m3]
	TEMPC 32 99 - RAMS : temperature [C]
	UE_AVG 32 99 - RAMS : ue_avg [m/s]
	VE_AVG 32 99 - RAMS : ve_avg [m/s]
	RH 32 99 - RAMS : relative humidity [pct]
	GEO 32 99 - RAMS : geopotential height [m]
	CLOUD 32 99 - RAMS : cloud mix ratio [g/kg]
	OMEG 32 99 - RAMS : omega [Pa/s]
	NDVI1 0 99 - RAMS : ndvi: patch # 1 [#]
	NDVI2 0 99 - RAMS : ndvi: patch # 2 [#]
	NDVI3 0 99 - RAMS : ndvi: patch # 3 [#]
	NDVI4 0 99 - RAMS : ndvi: patch # 4 [#]
	LAI1 0 99 - RAMS : green leaf area index: patch # 1 [ ]
	LAI2 0 99 - RAMS : green leaf area index: patch # 2 [ ]
	LAI3 0 99 - RAMS : green leaf area index: patch # 3 [ ]
	LAI4 0 99 - RAMS : green leaf area index: patch # 4 [ ]
	RV 32 99 - RAMS : vapor mix ratio [g/kg]
	SFC_PRESS 0 99 - RAMS : Surface pressure [mb]
	ALBEDT 0 99 - RAMS : albedt [ ]
	TEMPK 32 99 - RAMS : temperature [K]
	CUCLDP 32 99 - RAMS : deep conv cloud/ice tend [g/kg/day]
	CURTDP 32 99 - RAMS : deep conv moist tend [g/kg/day]
	CUTHDP 32 99 - RAMS : deep conv heat tend [K/day]
	AOT500 0 99 - RAMS : AOT 500nm [ ]
	AOT550 0 99 - RAMS : AOT 550nm [ ]
	PMINT 0 99 - RAMS : PM25 urb+bburn vert int [mg/m2]
	CO 32 99 - RAMS : COP Concentration [ppbv]
	PM25 32 99 - RAMS : PM25 urb+bburn concentration [ug/m3]
	PM25WD 0 99 - RAMS : WET deposition mass tracer PM25 [kg/m2]
	NO 32 99 - RAMS : NOP Concentration [ppbv]
	NO2 32 99 - RAMS : NO2 mixing ratio [ppbv]
	O3 32 99 - RAMS : O3P Concentration [ppbv]
	CO_SRC 32 99 - RAMS : source of CO [kg/kg/da]
	NO_SRC 32 99 - RAMS : source of NO [kg/kg/da]

	R_BBURN2 32 99 - RAMS : bburn2P Concentration [ppbv]
	R_BBURN3 32 99 - RAMS : bburn3P Concentration [ppbv]
	R_URBAN2 32 99 - RAMS : urban2P Concentration [ppbv]
	R_URBAN3 32 99 - RAMS : urban3P Concentration [ppbv]
	R_MARIN1 32 99 - RAMS : marin1P Concentration [ppbv]
ceres colaboração: Diego Pereira Enore	Aux: Total Precipitable Water The Precipitable Water is the total atmospheric water vapor (wv) mass in a unit area vertical column extending from surface to TOA and it is expressed as the height (in cm) of the equivalent mass of accumulated precipitable water as if it was condensed. Upper Tropospheric Humidity The Upper Tropospheric Humidity is the Meteorological, Ozone, and Aerosols (MOA) column averaged relative humidity for the upper troposphere. Total Aerosol Visible Optical Depth @ 0.55 microns Skin Temperature The Surface Skin Temperature is the Meteorological, Ozone, and Aerosols (MOA) surface skin temperature. The surface skin temperature is the radiating temperature of the surface and has also been defined as the temperature 2 cm into the surface. Over Ocean, the MOA surface skin temperature corresponds to the Reynold's SST. Surface Pressure The Surface Pressure is the Meteorological, Ozone, and Aerosols (MOA) pressure at surface in hPa. Column Ozone The Column Ozone is a measure of the total columnar density of Ozone (O_3) in the atmosphere. It is expressed in Dobson Units (DU).
	Cloud: Cloud Area Fraction Cloud Top Pressure Cloud Effective Pressure Cloud Bottom Pressure Cloud Effective Temperature Cloud Effective Height Cloud Particle Phase Liquid Water Path Ice Water Path Water Particle Radius Ice Particle Effective Diameter Cloud Visible Optical Depth IR Emissivity
	Modis_Aero: modis_aod_47 The MODIS-derived Aerosols are obtained from the MODIS operational algorithm that derives aerosol optical depths (AODs) from measurements at 0.47, 0.55, 0.66, 0.87, 1.24, 1.64, and 2.13 µm bands. modis_aod_55 The MODIS-derived Aerosols are obtained from the MODIS operational algorithm that derives aerosol optical depths (AODs) from measurements at 0.47, 0.55, 0.66, 0.87, 1.24, 1.64, and 2.13 µm bands. modis_aod_66 The MODIS-derived Aerosols are obtained from the MODIS operational

	algorithm that derives aerosol optical depths (AODs) from measurements at 0.47, 0.55, 0.66, 0.87, 1.24, 1.64, and 2.13 µm bands. modis_aod_87 The MODIS-derived Aerosols are obtained from the MODIS operational algorithm that derives aerosol optical depths (AODs) from measurements at 0.47, 0.55, 0.66, 0.87, 1.24, 1.64, and 2.13 µm bands. modis_aod_124 The MODIS-derived Aerosols are obtained from the MODIS operational algorithm that derives aerosol optical depths (AODs) from measurements at 0.47, 0.55, 0.66, 0.87, 1.24, 1.64, and 2.13 µm bands. modis_aod_164 The MODIS-derived Aerosols are obtained from the MODIS operational algorithm that derives aerosol optical depths (AODs) from measurements at 0.47, 0.55, 0.66, 0.87, 1.24, 1.64, and 2.13 µm bands. modis_aod_213 The MODIS-derived Aerosols are obtained from the MODIS operational algorithm that derives aerosol optical depths (AODs) from measurements at 0.47, 0.55, 0.66, 0.87, 1.24, 1.64, and 2.13 µm bands.
	Surface: Shortwave Flux Down The Shortwave Flux Down is the computed downward shortwave flux at a given level based on the Langley Fu-Liou Radiative Transfer Code. Cloud-free is defined as "Clear area percent coverage at subpixel resolution", greater than 99.9%. Shortwave Flux Up The Shortwave Flux Up is the computed upward shortwave flux at a given level based on the Langley Fu-Liou Radiative Transfer Code. Cloud-free is defined as "Clear area percent coverage at subpixel resolution", greater than 99.9%. Longwave Flux Down The Longwave Flux Down is the computed downward longwave flux at a given level based on the Langley Fu-Liou Radiative Transfer Code. Cloud-free is defined as "Clear area percent coverage at subpixel resolution", greater than 99.9%. Longwave Flux Up The Longwave Flux Up is the computed upward longwave flux at a given level based on the Langley Fu-Liou Radiative Transfer Code. Cloud-free is defined as "Clear area percent coverage at subpixel resolution", greater than 99.9%. Net Shortwave Flux The Net Flux is defined as the difference between the downward flux and the upward flux. Depending on the spectral band considered, one can define a Net Shortwave Flux, a Net Longwave Flux, or a Net Total (Shortwave + Longwave) Flux. Net Longwave Flux The Net Flux is defined as the difference between the downward flux and the upward flux. Depending on the spectral band considered, one can define a Net Shortwave Flux, a Net Longwave Flux, or a Net Total (Shortwave + Longwave) Flux. Net Total Flux The Net Flux is defined as the difference between the downward flux and the upward flux. Depending on the spectral band considered, one can define a Net Shortwave Flux, a Net Longwave Flux, or a Net Total (Shortwave + Longwave) Flux.
	TOA: * TOA Fluxes:

	Shortwave Flux The TOA Shortwave (SW) Flux Up, is the CERES-observed broadband shortwave reflected (upwelling) flux at the top of the atmosphere (TOA - around 20 km altitude). The upwelling flux is defined as positive. The TOA SW absorbed is the incoming solar flux minus the SW reflected flux. When the solar zenith angle is greater than 90°, twilight flux (Kato and Loeb, 2003) is added to the SW flux to take into account the atmospheric refraction of light. The magnitude of this correction varies with latitude and season. In general, the regional correction is less than 0.5 W m-2 and the global mean correction is 0.2 W m-2. The CERES footprint fluxes are first spatially averaged into 1° latitude by 1° longitude gridded regions. The gridded fluxes for a given region are then diurnally averaged using ERBE (constant meterology) flux temporal interpolation algorithm in between Terra (10:30AM equator local time) or Aqua (1:30PM) observations and to derive the daily/monthly regional means. Fluxes are also zonally and globally averaged. Moreover only the CERES instrument measurements in cross-track mode are used to ensure uniform sampling. It is important not to mix CERES product (EBAF, SYN1deg, SSF1deg, etc) fluxes, since they were obtained with differing algorithms. SSF1deg clear-sky definition The clear-sky scene is determined from CERES footprints (20 km nominal resolution) that are 99% clear, as identified by CERES-MODIS clear-sky mask from the MODIS pixels contained within the CERES footprint. However, there are many cloudy regions (like ITCZ, maritime stratus, etc.) that may not have any clear-sky observations for one particular month. If there are no CERES observed clear-sky footprints in the spatial or temporal in a given domain the clear-sky flux is default. The SSF1deg product does not attempt to fill in these non-measured clear-sky regions. The EBAF clear-sky filled product has a spatially complete clear-sky product. Longwave Flux The TOA Longwave (LW) Flux Up is the CERES-observed broadband emitted (upwelling) thermal outgoing LW flux (or radiance - OLR) at the top of the atmosphere (TOA - around 20 km altitude). The upwelling component of the flux is defined as positive, while the downwelling component is negative. The SFC Down LW Flux is the parameterized broadband (downwelling) thermal longwave (LW) flux at the surface. The downwelling flux is defined as negative. The all-sky and clear-sky LW surface flux are calculated at all hourly increments during the month, regardless of cloud amount. The GEOS-4 profile is the same for both clear-sky and all-sky conditions. The all-sky condition includes the cloud properties in the parameterizations. * TOA CRE Fluxes: The Cloud Radiative Effect or cloud forcing is a measure of radiative effects of clouds. For regions above the cloud layer (i.e. at TOA) the cloud forcing is defined as the difference between clear-sky and all-sky fluxes, while for regions below the cloud layer (i.e. at Surface) it is defined as the difference between all-sky and clear-sky fluxes. This parameter is available only for the EBAF-TOA and EBAF-Surface products. Shortwave Fluxes The TOA Shortwave (SW) Flux Up, is the CERES-observed broadband shortwave reflected (upwelling) flux at the top of the atmosphere (TOA - around 20 km altitude). The upwelling flux is defined as positive. The TOA SW absorbed is the incoming solar flux minus the SW reflected flux. When the solar zenith angle is greater than 90°, twilight flux (Kato and Loeb, 2003) is added to the SW flux to take into account the atmospheric refraction of light. The magnitude of this correction varies with latitude and season. In general, the regional correction is less than 0.5 W m-2 and the global mean correction is 0.2 W m-2. The CERES

	footprint fluxes are first spatially averaged into 1° latitude by 1° longitude gridded regions. The gridded fluxes for a given region are then diurnally averaged using ERBE (constant meterology) flux temporal interpolation algorithm in between Terra (10:30AM equator local time) or Aqua (1:30PM) observations and to derive the daily/monthly regional means. Fluxes are also zonally and globally averaged. Moreover only the CERES instrument measurements in cross-track mode are used to ensure uniform sampling. It is important not to mix CERES product (EBAF, SYN1deg, SSF1deg, etc) fluxes, since they were obtained with differing algorithms. links provided in next version SSF1deg clear-sky definition The clear-sky scene is determined from CERES footprints (20 km nominal resolution) that are 99% clear, as identified by CERES-MODIS clear-sky mask from the MODIS pixels contained within the CERES footprint. However, there are many cloudy regions (like ITCZ, maritime stratus, etc.) that may not have any clear-sky observations for one particular month. If there are no CERES observed clear-sky footprints in the spatial or temporal in a given domain the clear-sky flux is default. The SSF1deg product does not attempt to fill in these non-measured clear-sky regions. The EBAF clear-sky filled product has a spatially complete clear-sky product. Longwave Flux The TOA Longwave (LW) Flux Up is the CERES-observed broadband emitted (upwelling) thermal outgoing LW flux (or radiance - OLR) at the top of the atmosphere (TOA - around 20 km altitude). The upwelling component of the flux is defined as positive, while the downwelling component is negative. The SFC Down LW Flux is the parameterized broadband (downwelling) thermal longwave (LW) flux at the surface. The downwelling flux is defined as negative. The all-sky and clear-sky LW surface flux are calculated at all hourly increments during the month, regardless of cloud amount. The GEOS-4 profile is the same for both clear-sky and all-sky conditions. The all-sky condition includes the cloud properties in the parameterizations. Net Flux The Net TOA Flux, is the broadband incoming solar (downwelling) minus the reflected shortwave (SW) (upwelling) and longwave (LW) emitted (up-welling) flux at the top of the atmosphere (TOA - around 20 km altitude). When the Net Flux is positive the Earth is warming, while when negative the Earth is cooling. The Surface Net SW Flux is the parameterized broadband SW downwelling minus upwelling SW flux at the surface. The Surface Net LW Flux is the parameterized broadband LW downwelling minus upwelling LW flux at the surface. Surface fluxes are calculated from hourly Model A/B/C parameterizations on a 1° latitude by 1° longitude grid using MODIS-only cloud property temporal interpolation, and CERES-only TOA flux temporal interpolation, in between Terra (10:30AM) or Aqua (1:30PM) observations, and using GEOS-4 atmospheric profile, NCEP SMOBA ozone, and MATCH aerosols. Monthly/Daily mean surface fluxes are then the average all hourly fluxes for the month/day. Fluxes are also zonally and globally averaged. For more information on the validation of surface parameterized fluxes refer to Kratz et al 2009. For comparison of SSF/CRS and SYN surface fluxes, see cautions and helpful hints (http://eosweb.larc.nasa.gov/PRODOCS/ceres/SSF/Quality_Summaries/CER_SSF_Terra_Edition2B.html#Cautions) and accuracy and validation (http://eosweb.larc.nasa.gov/PRODOCS/ceres/SSF/Quality_Summaries/ssf_surface_flux_terra_ed2B.html) * SOLAR INCOMING FLUX: The Solar Incoming Flux, is the broadband solar incoming (downwelling) flux or

	irradiance, which is the radiant energy transferred across a unit area in unit time (W m-2), at the top of the atmosphere (TOA - 20 km altitude). The downwelling flux is defined as positive. EBAF - The CERES EBAF Edition 2 and 3 products uses the solar irradiance based on daily input, thereby taking into the account the 11-year (sunspot) cycle, from SORCE (Kopp et al., 2003, http://lasp.colorado.edu/sorce/data/tsi_data.htm), which has a mean solar constant of 1361 W m-2, whereas other CERES Edition2 and ERBE products used a constant of 1365 W m-2. ERBElike - The CERES ERBElike Edition 2 and 3 products use a solar constant of 1365 W m-2 to maintain consistency between ERBE scanner (1985-1989) products. SSF/SYN - The CERES SSF Edition 3 products uses the solar irradiance based on daily input, thereby taking into the account the 11-year (sunspot) cycle, from SORCE (Kopp et al., 2003, http://lasp.colorado.edu/sorce/data/tsi_data.htm), which has a mean solar constant of 1361 W m-2, whereas Edition 2 used a constant of 1365 W m-2. Cloud Area Fraction The Cloud Area Fraction is the fraction of the cloudy identified MODIS pixels based on the CERES-MODIS cloud mask algorithm (not the official Goddard product) divided by the total (cloudy + clear-sky) number of pixels; a MODIS pixel is either identified as clear or cloudy. If no clouds were observed, then the Cloud Area Fraction is zero and the associated cloud property is filled with the CERES default value. Cloud Effective Pressure The Cloud Effective Pressure is determined from the Cloud Effective Temperature product with the corresponding GSFC atmospheric profile of temperature and pressure. Cloud Effective Temperature The Cloud Effective Temperature is the retrieved radiative center temperature of the cloud, not necessarily the geometric top (usually the radiative center is lower than the geometric center). The cloud temperature is based on the cloud emissivity. If the cloud is not a black body, then the cloud temperature is colder than the MODIS window channel temperature. Cloud Visible Optical Depth (daytime only) The Cloud Visible Optical Depth is the visible (0.65µm) cloud optical depth of the MODIS cloud pixels. At night an equivalent Cloud Visible Optical Depth is determined using MODIS IR channels. This quantity is related to the radiative extinction of cloud particles and is almost entirely due to scattering of visible light by cloud particles.
ci_brams colaboração: Valter José Ferreira de Oliveira e Luiz Flávio Rodrigues	Us umid do solo [mm^3/mm^3] 8 levels
	Tr precipitacao [mm]
	Topography [m]
	Mapa_veg
ci_global colaboração: Saulo Magnum de Jesus e Wanderson Henrique dos Santos	Topography gradient [m]
	Sea surface temperature [K]
	Sea Surface Co2 Flux
	Canopy temperature (T_c)
	Soil surface temperature (T_{gs})
	Deep soil temperature (T_d)
	Water storage by Canopy interception (M_c)

	Degree of saturation in each soil layer (W_1, W_2, W_3, W_x)
	Ozone [kg kg**-1]
	Snow
	Liquid Water
	Soil Moisture
	Temperature [K]
	Roughness Length
	Vegetation Mask [m]
	Clay percentage [%]
	Sand percentage [%]
	Soil Texture Mask
	Topography Variance [m2]
cloud_isccp colaboração: Marcus Jorge Bottino	Cumulus cloudness [0-1]
	Stratocumulus cloudness [0-1]
	Stratus cloudness [0-1]
	Altocumulus cloudness [0-1]
	Altostratus cloudness [0-1]
	Nimbostratus cloudness [0-1]
	Cirrus cloudness [0-1]
	Cirrostratus cloudness [0-1]
	Deep convective cloudness [0-1]
	Total cloudness [0-1]
cmorph colaboração: Julio Pablo Reyes Fernandez	RAW CMORPH integrated satellite precipitation estimates [mm/3hr]
gldas colaboração: Paulo Yoshio Kubota Dados usados pela Assimilação – dados de reanálise	Net short wave radiation flux [W m-2]
	Net long-wave radiation flux [W m-2]
	Latent heat net flux [W m-2]
	Sensible heat net flux [W m-2]
	Heat flux [W m-2]
	Snow precipitation rate [kg m-2 s-1]
	Rain precipitation rate [kg m-2 s-1]
	Evapotranspiration [kg m-2 s-1]
	Storm surface runoff [kg m-2]
	Baseflow-groundwater runoff [kg m-2]
	Snow melt [kg m-2]
	Average Surface Skin temperature [K]
	Albedo [%]
	Snow depth water equivalent [kg m-2]
	Snow depth [m]

	SoilMoi0_10cm_inst [kg m-2]
	SoilMoi10_40cm_inst [kg m-2]
	SoilMoi40_100cm_inst [kg m-2]
	SoilMoi100_200cm_inst [kg m-2]
	SoilTMP0_10cm_inst [kg m-2]
	SoilTMP10_40cm_inst [kg m-2]
	SoilTMP40_100cm_inst [kg m-2]
	SoilTMP100_200cm_inst [kg m-2]
	Soil temperature [K]
	Potential evaporation rate [W m-2]
	Canopy water evaporation [W m-2]
	Transpiration [W m-2]
	Direct Evaporation from Bare Soil [W m-2]
	Root zone soil moisture [kg m-2]
	Plant canopy surface water [kg m-2]
	Wind speed [m s-1]
	Total precipitation rate [kg m-2 s-1]
	Temperature [K]
	Specific humidity [kg kg-1]
	Pressure [Pa]
	Downward short-wave radiation flux [W m-2]
	Downward long-wave radiation flux ["W m-2]
gpcp colaboração: Paulo Yoshio Kubota e Bárbara A. G. P. Yamada	Precipitation
gpm colaboração: Bárbara A. G. P. Yamada e Graziela Luzia	Precipitation
	Gaugerelativewe
	ProbabilityLiquidPrecipitation
	RandomError
	PrecipitationCal
	HQobservationTime
	HQprecipSource
	IRkalmanFilterWeight
	IRprecipitation
	PrecipitationQualityIndex
gpm_gmi colaboração: Bárbara A. G. P. Yamada	CloudIce
	CloudWater
	CloudWaterPath
	ConvectivePrecipitation
	FractionQuality0

	FractionQuality1
	FractionQuality2
	FractionQuality3
	FrozenPrecipitation
	IceWaterPath
	NpixPrecipitation
	NpixTotal
	RainWater
	RainWaterPath
	Snow
	SurfacePrecipitation
	SurfaceTypeIndex
mercator colaboração: Rosio Del Pilar Camayo Maita – diário-levels (16-jan-2019 até 02-dez-2019): meridional_velocity, salinity, temperature, vertical_velocity e zonal_velocity horário-single_level-superfície(19-dez-2018 até 02-dez-2019): meridional_sea_surface_velocity, zonal_sea_surface_velocity e sea_surface_temperature	meridional_velocity [m s**-1]
	salinity [PSU]
	temperature [degree_Celsius]
	vertical_velocity [m s**-1]
	zonal_velocity [m s**-1]
	meridional_sea_surface_velocity [m s**-1]
	zonal_sea_surface_velocity [m s**-1]
	sea_surface_temperature [degree_Celsius]
pre_global colaboração: Denis Magalhaes de Almeida Eiras, Eduardo Georges Khamis e Bárbara A. G. P. Yamada contribuíram com testcase_0.0.1_PGI, testcase_1.1.0_PGI, testcase_1.1.1_PGI, testcase_1.1.2_PGI e testcase_1.1.3_PGI), Carlos Frederico Bastarz (testcase_2.2.0)	Sea surface temperature [K]
	Surface pressure [hPa]
	Topography [m]
	Temperature [K]
	Humidity [kg kg**-1]
	Vorticity [1 s**-1] 64 levels
	Divergence [1 s**-1] 64 levels
	Ozone [kg kg**-1] 64 levels
	Tracer 64 levels
	Cloud ice
	Soil moisture
	Specific humidity [kg kg**-1] 64 levels
	Climatological CO2 Flux
	Albedo
	Albedo [No Dim]
	Climatological sea surface temperature [K]

	U velocity [m s**-1] 64 levels
	V velocity [m s**-1] 64 levels
	Climatological Snow Depth [kg m2**-1]
	Deep soil temperature (T_d)
	Percentage of water [%]
	Topography Variance [m2]
	Clay percentage [%]
	Sand percentage [%]
	Surface roughness
	Climatological Soil Temperature
	Climatological Soil Moisture
	Co2 Flux Daily
	Co2 Flux Monthly
	Sea Surface Temperature Daily [K]
	Sea Surface Temperature Monthly [K]
	Model Recomposed Topography [m]
	Land Sea Mask
	Sea Ice Mask [1:SeaIce 0:NoIce]
	Climatological SST Topography Corrected [K]
	Climatological CO2 Topography Corrected [kg m2**-1 s]
	Virt Temperature [K] 64 levels
	Pressure [kg kg**-1] 64 levels
	Specific Humidity Wind [m s**-1] 64 levels
	NCEP Weekly SST [K]
	Weekly SST Topography Corrected [K]
	Climatological Snow Depth [kg m2**-1]
	Soil Moisture Weekly [kg m3**-1] 8 levels
	Zonal Gradient of Topography [m m**-1]
	Meridional Gradient of Topography [m m**-1]
	Interpolated Topography [m]
	Recomposed Topography [m]
	Total Precipitation [Kg m2**-1 day]
	Otemp 19 levels
	Waterqual
previsão_gfs colaboração: Wanderson Henrique dos Santos	Precipitation
rad_isccp colaboração: Marcus Jorge Bottino	Downward short wave at ground
	Upward short wave at ground
	Downward long wave at bottom

	Upward long wave at bottom
	Incident short wave flux
	Upward short wave at top
	Outgoing long wave at top
	Downward short wave at ground (clear)
	Upward short wave at ground (clear)
	Downward long wave at bottom (clear)
	Upward long wave at bottom (clear)
	Upward short wave at top (clear)
	Outgoing long wave at top (clear)
reanálise_cfsr colaboração: Jonas Takeo Carvalho, Rosio Del Pilar Camayo Maita e Dayana Castilho de Souza	Ice Cover
	U-Component of Wind (10 m)
	V-Component of Wind (10 m)
	top of atmosphere Upward Long-Wave Rad. Flux [W/m^2]
	surface Precipitation Rate [kg/m^2/s]
	mean sea level Pressure Reduced to MSL [Pa]
	U-Component of Wind [m/s] (200 mb)
	V-Component of Wind [m/s] (200 mb)
reanálise_era_interim colaboração: Sheila Barros, Josiane Silva, João Gerd Zell De Mattos, Dayana Castilho de Souza, Layrson de Jesus Menezes Gonçalves e Valter José Ferreira de Oliveira **Observação**: ao manipular a variável skt do dado diário, 0.75°, nc, surface sempre multiplicar pelo fator de conversao skt:scale_factor = 0.00205335479834587 e somar com skt:add_offset = 267.488231135101	Relative humidity [%]
	Temperature [K]
	U velocity [m s**-1]
	V velocity [m s**-1]
	Geopotential [m**2 s**-2]
	U-Component of Wind Profile
	V-Component of Wind Profile
	Cloud cover profile
	Cloud ice water content profile
	Cloud liquid water content profile
	Divergence profile
	Ozone mass mixing ratio profile
	Potential vorticity profile
	Specific humidity profile
	Relative humidity profile
	Temperature profile
	U velocity profile
	V velocity profile
	Vorticity (relative) profile
	Vertical velocity profile
	Geopotential profile

	Surface 10 metre U wind component [m s**-1]
	Surface 10 metre V wind component [m s**-1]
	Surface 2 metre temperature [K]
	Surface Albedo [(0 - 1)] dimensionless
	Surface Snow albedo [(0 - 1)] dimensionless
	Surface sea-ice cover [(0 - 1)]
	Surface high cloud cover [(0 - 1)]
	Surface low cloud cover [(0 - 1)]
	Surface medium cloud cover [(0 - 1)]
	Surface mean sea level pressure [pa]
	Surface snow depth [m of water equivalent]
	Surface surface pressure [pa]
	Surface surface roughness [m]
	Surface sea surface temperature [k]
	0-7 cm underground soil temperature level 1 [k]
	Surface total cloud cover [(0 - 1)]
	Surface total column ozone [kg m**-2]
	Surface total column water vapour [kg m**-2]
	Surface temperature of snow layer [k]
	Convective precipitation
	Convective snowfall
	Evaporation
	Snow evaporation
	East-West surface stress
	Large-scale snowfall
	Stratiform precipitation (Large-scale precipitation)
	Large-scale precipitation fraction
	North-South surface stress
	Surface Snowfall
	Surface latent heat flux
	surface Snowmelt
	Surface sensible heat flux
	Surface solar radiation
	Surface net solar radiation, clear sky
	Surface solar radiation downwards
	Surface thermal radiation
	Surface net thermal radiation, clear sky
	Surface thermal radiation downwards
	TOA incident solar radiation

	Total precipitation
	Top solar radiation
	Top thermal radiation
	Top net thermal radiation, clear sky
reanálise_era5 colaboração: Dayana Castilho de Souza - pressure – jan-2010 até out-2016 e wind – jan-2010 até dez-2016 Dayana Castilho de Souza – wind e temp - nov-2017 até jan-2018 Rosio Del Pilar Camayo Maita –wind e wave – jan-2017 até dez-2017 Rosio Del Pilar Camayo Maita – wave – jan-2008 até dez-2017 Dayana Castilho de Souza – levels: temperature, zonal wind, meridional wind - jan-1979 até fev-2019 surface: total_precipitation, evaporation, mean_latent_heat_flux, mean_sensible_heat_flux, mean_top_downward_short_wave_radiation_flux, surface_latent_heat_flux, surface_runoff, surface_sensible_heat_flux, toa_incident_solar_radiation - jan-1979 até fev-2019 Bárbara A. G. P. Yamada – levels: specific_humidity, vertical_velocity, geopotencial e fraction_of_cloud_cover - jan-1979 até fev-2019 surface: 2_metre_dewpoint_temperature, 2_metre_temperature, geopotencial, land_sea_mask, total_cloud_cover, mean total precipitation rate, mean surface direct short-wave radiation flux, mean surface direct short-wave radiation flux clear sky, mean surface downward long-wave radiation flux, mean surface downward long-wave radiation flux clear sky, mean surface downward short-wave radiation flux, mean surface downward short-wave radiation flux clear sky - jan-1979 até fev-2019 Josiane Silva – surface: surface pressure, 10 metre U wind component, 10 metre V wind component, 2 metre dewpoint	Surface Mean sea level pressure [Pa]
	Surface pressure [Pa]
	Surface Convective precipitation [m]
	Surface Total precipitation [m]
	Surface Top thermal radiation [W m**-2 s]
	U component of wind [m s**-1] 37 levels
	V component of wind [m s**-1] 37 levels
	Significant height of combined wind waves and swell (m)
	Mean wave direction (degrees)
	Peak wave period (s)
	Significant height of wind waves (m)
	Mean direction of wind waves (degrees)
	Significant height of total swell (m)
	Mean direction of total swell (degrees)
	10 metre U wind component [m s**-1]
	10 metre V wind component [m s**-1]
	Temperature [K] 37 levels
	2 metre dewpoint temperature [K]
	2 metre temperature [K]
	Surface Geopotential [m**2 s**-2]
	Surface Land-sea mask [(0 - 1)] dimensionless
	Surface Total cloud cover [(0 - 1)] dimensionless
	Specific humidity [kg kg**-1] 37 levels
	Vertical velocity [Pa s**-1] 37 levels
	Geopotential [m**2 s**-2] 37 levels
	Fraction of cloud cover [(0 – 1)] 37 levels
	Surface Mean total precipitation rate [kg m**-2 s**-1]
	Mean surface direct short-wave radiation flux [W m**-2]
	Mean surface direct short-wave radiation flux, clear sky [W m**-2]
	Mean surface downward long-wave radiation flux [W m**-2]
	Mean surface downward long-wave radiation flux, clear sky [W m**-2]
	Mean surface downward short-wave radiation flux [W m**-2]
	Mean surface downward short-wave radiation flux, clear sky [W m**-2]
	Evaporation [m of water equivalent]
	Mean surface latent heat flux [W m**-2]

temperature, 2 metre temperature, surface solar radiation downwards Francisco Agustinho de Brito Neto – surface: sea ice area fraction Dayana Castilho de Souza – levels: ozone - jan-1979 até dez-2019 surface: skin_temperature, top net thermal radation, mean sea level pressure, surface pressure, volumetric_soil_water_layer - jan-1979 até dez-2019 Rosio Del Pilar Camayo Maita – wave – jan-2019 até dez-2019 Dayana Castilho de Souza – diário (levels: v component of wind, single_level: 2_metre_temperature e top_net_thermal_radiation) – horário (single_level: total_precipitation) **Observação**: a resolução nativa do ERA5 para os dados de ondas é 0.36º (40km). No download, os dados foram interpolados bilinearmente para uma grade regular Lat/Lon de 0.3º.	Mean surface sensible heat flux [W m**-2]
	Mean top downward short-wave radiation flux [W m**-2]
	Surface latent heat flux [J m**-2]
	Surface runoff [m]
	Surface sensible heat flux [J m**-2]
	TOA incident solar radiation [J m**-2]
	Surface solar radiation downwards [J m**-2]
	Sea ice area fraction [(0 - 1)]
	Ozone [kg kg**-1]
	Skin_temperature [K]
	Top net thermal radation [J m**-2]
	Volumetric_soil_water_layer [m**3 m**-3]
	Air density over the oceans [kg m**-3]
	Altimeter corrected wave height [m]
	Altimeter wave height [m]
	Coefficient of drag with waves dimensionless
	Free convective velocity over the oceans [m s**-1]
	Maximum individual wave height [m]
	Mean direction of total swell [degrees]
	Mean direction of wind waves [degrees]
	Mean period of total swell [s]
	Mean period of wind waves [s]
	Mean square slope of waves dimensionless
	Mean wave direction Degree true
	Mean wave direction of first swell partition [degrees]
	Mean wave direction of second swell partition [degrees]
	Mean wave direction of third swell partition [degrees]
	Mean wave period [s]
	Mean wave period based on first moment [s]
	Mean wave period based on first moment for swell [s]
	Mean wave period based on first moment for wind waves [s]
	Mean wave period based on second moment for swell [s]
	Mean wave period based on second moment for wind waves [s]
	Mean wave period of first swell partition [s]
	Mean wave period of second swell partition [s]
	Mean wave period of third swell partition [s]
	Mean zero-crossing wave period [s]
	Normalized energy flux into ocean dimensionless
	Normalized energy flux into waves dimensionless

	Normalized stress into ocean dimensionless
	10 metre wind direction dimensionless
	10 metre wind speed [m s**-1]
	Peak wave period [s]
	Period corresponding to maximum individual wave height [s]
	Significant height of combined wind waves and swell [m]
	Significant height of total swell [m]
	Significant height of wind waves [m]
	Significant wave height of first swell partition [m]
	Significant wave height of second swell partition [m]
	Significant wave height of third swell partition [m]
	Wave spectral directional width dimensionless
	Wave spectral directional width for swell dimensionless
	Wave spectral directional width for wind waves dimensionless
	Wave spectral kurtosis dimensionless
	Wave spectral peakedness dimensionless
	Wave Spectral Skewness dimensionless
trmm colaboração: Bárbara A. G. P. Yamada, Dayana Castilho de Souza e Wanderson Henrique dos Santos	Precipitation (mm/hr)
wrf colaboração: Éder Vendrasco	Monthly surface albedo [%]
	16-category bottom-layer soil type [category]
	16-category top-layer soil type [category]
	Clay Fraction [fraction]
	Growing Season GDD [dy]
	Mean Harvest Date [date]
	Mean Planting Date [date]
	corn/soybean/wheat/cotton/crop [fraction]