CDO Reference Card

Climate Data Operators Version 1.6.0 March 2013

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http://code.zmaw.de/projects/cdo

Syntax

cdo [Options] Operator1 [-Operator2 [-OperatorN]]

Options

Generate an absolute time axis
Set the number of bits for the output precision
(I8/I16/I32/F32/F64 for nc,nc2,nc4,nc4c;
F32/F64 for grb2,srv,ext,ieg; 1-24 for grb,grb2)
Add L or B for Little or Big endian byteorder
Outputformat: grb,grb2,nc,nc2,nc4,nc4c,srv,ext,ieg
Grid or file name
Grid names: r <nx>x<ny>, n<n>, gme<ni></ni></n></ny></nx>
Help information for the operators
Indicate that the I/O streams have missing values
Set the default missing value (default: -9e+33)
Overwrite existing output file, if checked
Convert GRIB1 data from reduced to regular grid
Generate a relative time axis
Silent mode
Set the parameter table name or file
Predefined tables: echam4 echam5 mpiom1
Print the version number
Print extra details for some operators
SZIP compression of GRIB1 records

Operators

showdate showtime

<operator> ifile

Information		
info	Dataset information listed by parameter identifier	
infon	Dataset information listed by parameter name	
map	Dataset information and simple map	
< operator > ifi	les	
sinfo	Short information listed by parameter identifier	
sinfon	Short information listed by parameter name	
< operator > ifi	les	
diff	Compare two datasets listed by parameter id	
diffn	Compare two datasets listed by parameter name	
<pre></pre>		
npar	Number of parameters	
nlevel	Number of levels	
nyear	Number of years	
nmon	Number of months	
ndate	Number of dates	
ntime	Number of timesteps	
<pre><operator> ifile</operator></pre>		
showformat	Show file format	
showcode	Show code numbers	
showname	Show variable names	
showstdname	Show standard names	
showlevel	Show levels	
showltype	Show GRIB level types	
showyear	Show years	
showmon	Show months	

Show date information

Show time information

showtimestamp Show timestamp

	pardes	Parameter description
.	griddes	Grid description
	zaxisdes	Z-axis description
	vct	Vertical coordinate table
	<pre><operator> ifi</operator></pre>	le

File operations

copy	Copy datasets	
cat	Concatenate datasets	
<pre><operator> ifi</operator></pre>	les ofile	
replace	Replace variables	
replace ifile1	ifile2 ofile	
mergegrid	Merge grid	
mergegrid ifil	e1 ifile2 ofile	
merge	Merge datasets with different fields	
mergetime	Merge datasets sorted by date and time	
< operator > ifi	les ofile	
splitcode	Split code numbers	
splitparam	Split parammeter identifiers	
splitname	Split variable names	
splitlevel	Split levels	
splitgrid	Split grids	
splitzaxis	Split z-axes	
splittabnum	Split parameter table numbers	
<pre><operator>[,swap] ifile obase</operator></pre>		
splithour	Split hours	
splitday	Split days	
splitmon	Split months	
splitseas	Split seasons	
splityear	Split years	
<pre><operator> ifi</operator></pre>	le obase	
splitsel	Split time selection	
splitsel,nsets[,ne	offset[,nskip]] ifile obase	

Selection select

delete	Delete fields	
<pre><operator>,params ifiles ofile</operator></pre>		
selparam	Select parameters by identifier	
delparam	Delete parameters by identifier	
<pre><operator>,params ifile ofile</operator></pre>		
selcode	Select parameters by code number	
delcode	Delete parameters by code number	
< operator >, cool	les ifile ofile	
selname	Select parameters by name	
delname	Delete parameters by name	
<pre><operator>,names ifile ofile</operator></pre>		
selstdname	Select parameters by standard name	
selstdname,stdnames ifile ofile		
sellevel	Select levels	
sellevel, levels ifile ofile		
sellevidx	Select levels by index	
sellevidx, levidx		
selgrid		
selgrid, grids if:		
selzaxis	Select z-axes	
selzaxis,zaxes ifile ofile		
selltype	Select GRIB level types	
selltype, ltypes		
	Select parameter table numbers	
seltabnum,tabr	nums ifile ofile	

Select fields

1.1		
	Select timesteps	
	nesteps ifile ofile	
seltime	Select times	
seltime, times i	file ofile	
selhour	Select hours	
selhour, hours i	file ofile	
selday	Select days	
selday,days ifi	le ofile	
selmon	Select months	
${f selmon}, months$	ifile ofile	
selyear	Select years	
selyear, years ifile ofile		
selseas	Select seasons	
selseas,seasons	ifile ofile	
seldate	Select dates	
seldate,date1[,date2] ifile ofile		
selsmon	Select single month	
selsmon, month	[,nts1[,nts2]] ifile ofile	
sellonlatbox	Select a longitude/latitude box	
sellonlatbox,lon1,lon2,lat1,lat2 ifile ofile		
selindexbox	Select an index box	
selindexbox,id:	x1,idx2,idy1,idy2 ifile ofile	

Conditional selection

ifthen	If then	
ifnotthen	If not then	
<pre>< operator > if:</pre>	ile1 ifile2 ofile	
ifthenelse	If then else	
ifthenelse ifile1 ifile2 ifile3 ofile		
ifthenc	If then constant	
ifnotthenc	If not then constant	
<pre><operator>,c ifile ofile</operator></pre>		

Comparison

eq	Equal	
ne	Not equal	
le	Less equal	
lt	Less than	
ge	Greater equal	
gt	Greater than	
<pre><operator> ifile1 ifile2 ofile</operator></pre>		
eqc	Equal constant	
nec	Not equal constant	
lec	Less equal constant	
ltc	Less than constant	
gec	Greater equal constant	
gtc	Greater than constant	

Modification

<operator>,c ifile ofile

setpartab	Set parameter table
setpartab, table	ifile ofile
setcode	Set code number
setcode, code ifile ofile	
setparam	Set parameter identifier
setparam,paran	n ifile ofile
setname	Set variable name
setname, name:	ifile ofile
setunit	Set variable unit
setunit,unit ifile ofile	
setlevel	Set level
setlevel, level ifile ofile	
setltype	Set GRIB level type
setltype, ltype i	file ofile

setdate	Set date	
setdate, date if:	ile ofile	
settime	Set time of the day	
settime, time if	ile ofile	
setday	Set day	
setday,day ifil	e ofile	
setmon	Set month	
setmon, month	ifile ofile	
setyear	Set year	
setyear, year ifile ofile		
settunits	Set time units	
settunits,units ifile ofile		
settaxis	Set time axis	
settaxis,date,time[,inc] ifile ofile		
setreftime	Set reference time	
setreftime, date	time[,units] ifile ofile	
setcalendar	Set calendar	
setcalendar,cal	endar ifile ofile	
shifttime	Shift timesteps	
$\mathbf{shifttime},sval$ i	file ofile	
chcode	Change code number	
chcode, oldcode,	newcode[,] ifile ofile	
chparam	Change parameter identifier	
-1		

circo de, ordeo de, no mestale, imparato de 1110		
chparam	Change parameter identifier	
chparam,oldpar	ram,newparam, ifile ofile	
chname	Change variable name	
chname,oldname,newname, ifile ofile		
chunit	Change variable unit	
chunit,oldunit,newunit, ifile ofile		
chlevel	Change level	
chlevel,oldlev,newlev, ifile ofile		
chlevelc	Change level of one code	
chlevelc,code,oldlev,newlev ifile ofile		
chlevelv	Change level of one variable	
chlevelv,name,oldlev,newlev ifile ofile		
setgrid	Set grid	
setgrid, grid ifile ofile		

setgridtype	Set grid type
setgridtype,gridtype ifile ofile	
setgridarea	Set grid cell area
setgridarea, gridarea ifile ofile	
setzaxis	Set z-axis

ı	setzaxis,zaxis 1	IIIe ollie
setgatt Set global attribute		Set global attribute
	setgatt,attname,attstring ifile ofile	
	setgatts	Set global attributes
setgatts.attfile ifile ofile		ifile ofile

invertlat	Invert latitudes
invertlat ifile	ofile
invertlev	Invert levels

invertlev ifile	ofile
maskregion	Mask regions
maskregion,reg	ions ifile ofile

nasklonlatbox	Mask a longitude/latitude box			
masklonlatbox,lon1,lon2,lat1,lat2 ifile ofile				
maskindexbox	Mask an index box			
naskindexbox	idx1 idx2 idv1 idv2 ifile ofile			

setclonlatbox	Set a longitude/latitude box to constant		
setclonlatbox,c,lon1,lon2,lat1,lat2 ifile ofile			
setcindexbox	Set an index box to constant		
setcindexbox,c,idx1,idx2,idy1,idy2 ifile ofile			

enlarge	Enlarge fields
enlarge grid ifi	ile ofile

setmissval	Set a new missing value		
setmissval,newmiss ifile ofile			
setctomiss	Set constant to missing value		
setmisstoc	Set missing value to constant		
<pre><operator>,c ifile ofile</operator></pre>			
setrtomiss	Set range to missing value		
setvrange	Set valid range		
<pre><operator>,rmin,rmax ifile ofile</operator></pre>			

Arithmetic

Arithmetic				
expr	Evaluate expressions			
expr,instr ifile	e ofile			
exprf	Evaluate expressions from script file			
exprf,filename i	file ofile			
abs	Absolute value			
int	Integer value			
nint	Nearest integer value			
pow	Power			
sqr	Square			
sqrt	Square root			
exp	Exponential			
ln	Natural logarithm			
log10	Base 10 logarithm			
sin	Sine			
cos	Cosine			
tan asin	Tangent Arc sine			
acos	Arc cosine			
reci	Reciprocal value			
<pre>< operator > ifi</pre>				
	Add a constant			
addc subc	Add a constant Subtract a constant			
mulc	Multiply with a constant			
divc	Divide by a constant			
<pre>< operator >, c i</pre>				
add	Add two fields			
sub mul	Subtract two fields Multiply two fields			
div	Divide two fields			
min	Minimum of two fields			
max	Maximum of two fields			
atan2	Arc tangent of two fields			
<pre></pre> <pre><operator> ifile1 ifile2 ofile</operator></pre>				
monadd Add monthly time series				
monsub	Subtract monthly time series			
monmul	Multiply monthly time series			
mondiv	Divide monthly time series			
<pre></pre>				
ymonadd	Add multi-year monthly time series			
ymonsub	Subtract multi-year monthly time series			
ymonmul	Multiply multi-year monthly time series			
ymondiv	Divide multi-year monthly time series			
<pre><operator> ifi</operator></pre>	le1 ifile2 ofile			
ydayadd	Add multi-year daily time series			
ydaysub	Subtract multi-year daily time series			
ydaymul	Multiply multi-year daily time series			
ydaydiv	Divide multi-year daily time series			
<pre><pre><pre><pre>coperator> ifile1 ifile2 ofile</pre></pre></pre></pre>				
yhouradd	Add multi-year hourly time series			
yhoursub	Subtract multi-year hourly time series			
yhourmul	Multiply multi-year hourly time series			
yhourdiv	Divide multi-year hourly time series			
<pre><operator> ifi</operator></pre>	le1 ifile2 ofile			
muldpm	Multiply with days per month			
divdpm	Divide by days per month			
muldpy	Multiply with days per year			
divdpy	Divide by days per year			
<pre><operator> ifi</operator></pre>				

Statistical values

Available statistical functions	< stat >
minimum	min
maximum	max
sum	sum
mean	mean
average	avg
variance	var, var1
standard deviation	std , $\operatorname{std1}$

	sum mean		sum mean	
	average		avg	
	variance standar	e d deviation	var, var1 std, std1	
consect	s	Consecutive Timesteps		
< operat	tor> ifi			
ens <ste< td=""><td>at ></td><td>Statistical values over an</td><td>ensemble</td><td></td></ste<>	at >	Statistical values over an	ensemble	
		les ofile		
enspetl		Ensemble percentiles		
	p ifiles			
		Ranked Histogram averag Ranked Histogram averag		
ensroc		Ensemble Receiver Opera		istics
< operat	tor > obs:	file ensfiles ofile		
enscrps		Ensemble CRPS and deco	omposition	
	rfile i	files ofilebase		
ensbrs	v rfile	Ensemble Brier score ifiles ofilebase		
fld <sta< td=""><td></td><td>Statistical values over a f</td><td>iold</td><td></td></sta<>		Statistical values over a f	iold	
		le ofile	ieid	
fldpctl		Field percentiles		
	p ifile			
		Zonal statistical values		
	tor> ifi			
zonpct	$l_{,p}$ ifile	Zonal percentiles		
mer <st< td=""><td>tat> tor> ifi</td><td>Meridional statistical value of ile</td><td>1es</td><td></td></st<>	tat> tor> ifi	Meridional statistical value of ile	1es	
merpct	:l	Meridional percentiles		
	$\mathbf{l}_{,p}$ ifile			
gridbox	x < stat >	Statistical values over gri	d boxes	
< operat	tor > ,nx,n	ny ifile ofile		
		Vertical statistical values		
< operat	tor> ifi	le ofile		
		Time range statistical val		
		ss[,noffset[,nskip]] ifile of	file	
		Time range percentiles		
		ts[,noffset[,nskip]] ifile1		ofile
		Running statistical values	3	
		ifile ofile		
runpct		Running percentiles		
		ile1 ofile		
	at> $tor>$ ifi	Statistical values over all	timesteps	
timpct		Time percentiles 1 ifile2 ifile3 ofile		
hour <s <operat< td=""><td>tat></td><td>Hourly statistical values le ofile</td><td></td><td></td></operat<></s 	tat>	Hourly statistical values le ofile		
hourpe		Hourly percentiles		
hourpe	\mathbf{tl} , p ifil	e1 ifile2 ifile3 ofile		
day < st	at >	Daily statistical values		
	tor > ifi			
daypct	l	Daily percentiles		
		1 ifile2 ifile3 ofile		
		Monthly statistical values	3	
	tor> ifi			
		Monthly percentiles		
monnet	tl n ifila	1 ifilo2 ifilo2 ofilo		

monpctl,p ifile1 ifile2 ifile3 ofile

year <stat> Yearly statistical values</stat>	Interpolatio	n
<pre><operator> ifile ofile</operator></pre>	remapbil	Bilinear interpolation
yearpctl Yearly percentiles	remapbic	Bicubic interpolation
yearpctl,p ifile1 ifile2 ifile3 ofile	remapdis	Distance-weighted avera
seas <stat> Seasonal statistical values</stat>	remapnn	Nearest neighbor remap
<pre><operator> ifile ofile</operator></pre>	remapcon	First order conservative
seaspctl Seasonal percentiles	remapcon2	Second order conservati
seaspctl,p ifile1 ifile2 ifile3 ofile	remaplaf	Largest area fraction re rid ifile ofile
yhour <stat> Multi-year hourly statistical</stat>		
<pre><pre>< operator > ifile ofile</pre></pre>	genbil genbic	Generate bilinear interp Generate bicubic interp
		Generate distance-weigh
yday <stat> Multi-year daily statistical va</stat>	gennn	Generate nearest neight
*	gencon	Generate 1st order cons
ydaypctl Multi-year daily percentiles	gencon2	Generate 2nd order con
ydaypctl,p ifile1 ifile2 ifile3 ofile	genlaf	Generate largest area fr
ymon <stat> Multi-year monthly statistica</stat>	l values <pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	rid ifile ofile
$<\!operator\!>$ ifile ofile	remap	SCRIP grid remapping
ymonpctl Multi-year monthly percentile	remap,grid,we	eights ifile ofile
ymonpctl,p ifile1 ifile2 ifile3 ofile	remapeta	Remap vertical hybrid l
vseas < stat > Multi-year seasonal statistica		[,oro] ifile ofile
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>		
*	ml2pl ml2pl,plevels	Model to pressure level
yseaspetl Multi-year seasonal percentile	ml2hl	Model to height level in
yseaspctl,p ifile1 ifile2 ifile3 ofile	ml2hl.hlevels	
ydrun <stat> Multi-year daily running stat</stat>	istical values intlevel	Linear level interpolation
<pre><operator>,nts ifile ofile</operator></pre>	intlevel	
ydrunpctl Multi-year daily running per	entiles	
ydrunpctl,p,nts ifile1 ifile2 ifile3 ofile	intlevel3d	Linear level interpolation
	intlevelx3d	like intlevel3d but with
	inttime	Interpolation between t
Correlation and co.	intume, date, t	ime[,inc] ifile ofile Interpolation between t
fldcor Correlation in grid space	intuine intuine	
fldcor ifile1 ifile2 ofile		
timcor Correlation over time	intyear	Interpolation between t ifile1 ifile2 obase
timcor ifile1 ifile2 ofile	intyear, years	illiel lillez obase
fldcovar Covariance in grid space		
fldcovar ifile1 ifile2 ofile	Transformat	ion
	sp2gp	Spectral to gridpoint
timcovar Covariance over time	sp2gp sp2gpl	Spectral to gridpoint (li
timcovar ifile1 ifile2 ofile	gp2sp	Gridpoint to spectral
	gp2spl	Gridpoint to spectral (l
	<pre>< operator > i</pre>	
Damasian	sp2sp	Spectral to spectral
Regression	sp2sp,trunc i	file ofile
regres Regression	dv2uv	Divergence and vorticity

regres	Regression	Ш	
regres ifile of	file		
detrend	Detrend	1	
detrend ifile ofile			
trend Trend			
trend ifile ofile1 ofile2			
subtrend	Subtract trend	١.	
subtrend ifile1 ifile2 ifile3 ofile			

EOFs

eof	Calculate EOFs in spatial or time space
eoftime	Calculate EOFs in time space
eofspatial	Calculate EOFs in spatial space
eof3d	Calculate 3-Dimensional EOFs in time space
<pre><operator>,neof ifile ofile1 ofile2</operator></pre>	
0 00	Glil
eofcoeff	Calculate principal coefficients of EOFs
enfcoeff ifile1	ifile2 obase

rpolation

	remapbic	Bicubic interpolation
	remapdis	Distance-weighted average remapping
	remapnn	Nearest neighbor remapping
	remapcon	First order conservative remapping
=	remapcon2	Second order conservative remapping
	remaplaf	Largest area fraction remapping
	<pre><operator>,grid ifile ofile</operator></pre>	
	genbil	Generate bilinear interpolation weights
	genbic	Generate bicubic interpolation weights
	gendis	Generate distance-weighted average remap weights
	gennn	Generate nearest neighbor remap weights
=	gencon	Generate 1st order conservative remap weights
	gencon2	Generate 2nd order conservative remap weights
	genlaf	Generate largest area fraction remap weights
	<pre>< operator > ,grie</pre>	d ifile ofile
		CCDID: 1
	remap	SCRIP grid remapping

<pre>coperator >,grid fifte office</pre>		
remap	SCRIP grid remapping	
remap,grid,weights ifile ofile		
remapeta	Remap vertical hybrid level	
remapeta,vct[,oro] ifile ofile		
ml2pl	Model to pressure level interpolation	
ml2pl,plevels ifile ofile		
ml2hl	Model to height level interpolation	
ml2hl,hlevels ifile ofile		
intlevel	Linear level interpolation	
intlevel, levels ifile ofile		

	intlevel3d	Linear level interpolation onto a 3d vertical coordi	
J	intlevelx3d	like intlevel3d but with extrapolation	
	<pre><operator>,icoordinate ifile1 ifile2 ofile</operator></pre>		
inttime Interpolation between timesteps			
		*	

inttime	Interpolation between timesteps	
<pre>inttime,date,time[,inc] ifile ofile</pre>		
intntime	Interpolation between timesteps	
intntime,n ifile ofile		

intyear	Interpolation between two years	
intyear, years if	ile1 ifile2 obase	

nsformation

ı	sp2gp	Spectral to gridpoint
	sp2gpl	Spectral to gridpoint (linear)
	gp2sp	Gridpoint to spectral
	gp2spl	Gridpoint to spectral (linear)
<pre><operator> ifile ofile</operator></pre>		ile ofile
	sp2sp	Spectral to spectral
	$\mathbf{sp2sp}, trunc$ ifile ofile	

dv2uv dv2uvl Divergence and vorticity to U and V wind Divergence and vorticity to U and V wind (linear) U and V wind to divergence and vorticity U and V wind to divergence and vorticity (linear) D and V to velocity potential and stream function uv2dvuv2dvl dv2ps<operator> ifile ofile

Import/Export		
import_binary	Import binary data sets	
import_binary ifile ofile		
import_cmsaf	Import CM-SAF HDF5 files	
import_cmsaf ifile ofile		
import_amsr	Import AMSR binary files	
import_amsr ifile ofile		
input	ASCII input	
input,grid ofile		
inputsrv	SERVICE ASCII input	
inputext	EXTRA ASCII input	
<pre><operator> ofile</operator></pre>		

con.wgs.final, file of ite			
outputf outputed outputed outputed outputed outputed outputed outputed SERVICE ASCII output SECALOR Consecutive dry days index per time period sea.catl Consecutive summer days index per time period sea.catl Consecutive wer days index per time period sea.catl Consecutive wer days index per time period sea.catl I it offile SECALOR (Sites offile offile SECALO	_	ASCII output	
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outputs outputs EXTRA ASCII output outputs EXTRA ASCII output Ascillaneous Miscellaneous Mis	•		
outputexy SERVICE ASCII output			
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Canada Consecutive dry days index per time period ecanded Consecutive dry days index per time period ecanded Consecutive fort days index per time pe			Climate indices
cadd Consecutive wet days index per time period caed fill of ills caed ca	-	•	eca_cdd Consecutive dry days index per time period
gradedeal GrADS data descriptor file (version I GRB man) coperator > file (version 2 GRB man) coperator > file of ile version coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man)	<pre><pre><pre>coperator > 111</pre></pre></pre>	1100	
gradedeal GrADS data descriptor file (version I GRB man) coperator > file (version 2 GRB man) coperator > file of ile version coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man) coperator > file of ile version 2 GRB man)			Consequeive front days index per time period
Miscellaneous GrADS data descriptor file (version 2 GRIB map) gradeded 2 GrADS data descriptor file (version 2 GRIB map) gradeded 2 GrADS data descriptor file (version 2 GRIB map) Graded version 2 Graded versio			The state of the s
gradades GrADS data descriptor file (version I GRIB map)	Miscellaneous	8	
canced Consecutive wet days index per time period			
Consecutive wet days makes per time period eca.cwd Recard Re			eca_csu[,T] ifile ofile
Dandpass Bandpass filtering Dandpass, min, max first of the bandpass, min, max first of the bandpass, min, max first of the bandpass, min, max first of the lowpass Lowpass filtering Dowpass Lowpass filtring Lowpass filtring Lowpass filtring	~	- \	eca_cwd Consecutive wet days index per time period
bandpass, finin, finax if ile of ile lowpass Loopass filtering lowpass Loopass filtering lowpass Loopass filtering lowpass Loopass filtering lowpass, finin, filte of ile lighpass filtering lighpass filte			eca_cwd[,R] ifile ofile
concept Cold-spass International periods	-		eca_cwdi Cold wave duration index wrt mean of reference pe
lowpass_fmax fifle of fife			
highpass, finitile offile gridarea Grid cell area gridweights Grid cell weights coperators 'ifile offile smooth9 grib in smoothing smooth) if it offile setvals Set list of old values to new values setvals. Odval.newval	•		coa cwfi Cold enall days index wrt 10th percentile of referen
Second S			
gridweights Grid cell area gridweights Grid cell weights control till of tile smooth file of the smooth file of the sectors Set list of old values to new values sectors. Set list of old values to new values sectors. Set range to constant others to constant sectors. Set range to set time period sectors. Set price time period sectors. Set price time period sectors. Set price time period sect			
cand for the wights smooth9 9 point smoothing smooth9 11 is of 11 of 1			
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eca_tr	Tropical nights index per time period	
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