CDO Reference Card

Climate Data Operators Version 1.0.8 June 2007

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Syntax

cdo	Options	Operator

Options

•		
-a	Convert from a relative to an absolute time axis	
-b < nbits >	Set the number of bits for the output precision	
	(32/64 for nc, nc2, srv, ext, ieg; 1 - 32 for grb)	
$-\mathbf{f} < format >$	-f < format > Output file format (grb, nc, nc2, srv, ext, ieg)	
-g < grid>	Grid name or file	
	Available grids: t <res>grid, r<nx>x<ny></ny></nx></res>	
-h	Help information for the operators	
-m < missval >	Set the default missing value (default: -9e+33)	
-R	Convert GRIB data from reduced to regular grid	
-r	Convert from an absolute to a relative time axis	
$-\mathbf{t} $	Set the parameter table name or file	
	Predefined tables: echam4 echam5 mpiom1	
-V	Print the version number	
-v	Print extra details for some operators	

Operators

Information	
info	Dataset information listed by code number
infov	Dataset information listed by variable name
map	Dataset information and simple map
Syntax	<pre><operator> ifiles</operator></pre>
sinfo	Short dataset information listed by code number
sinfov	Short dataset information listed by variable name
Syntax	<pre><operator> ifile</operator></pre>
diff	Compare two datasets listed by code number
diffv	Compare two datasets listed by variable name
Syntax	<pre><operator> ifile1 ifile2</operator></pre>
npar	Number of parameters
nlevel	Number of levels
nyear	Number of years
nmon	Number of months
ndate	Number of dates
ntime	Number of time steps
Syntax	<pre><operator> ifile</operator></pre>
Symax	Coperator > 11110
showformat	Show file format
showformat	Show file format
showformat showcode	Show file format Show code numbers
showformat showcode showname	Show file format Show code numbers Show variable names
showformat showcode showname showstdname	Show file format Show code numbers Show variable names Show standard names
showformat showcode showname showstdname showlevel	Show file format Show code numbers Show variable names Show standard names Show levels
showformat showcode showname showstdname showlevel showltype	Show file format Show code numbers Show variable names Show standard names Show levels Show GRIB level types
showformat showcode showname showstdname showlevel showltype showyear	Show file format Show code numbers Show variable names Show standard names Show levels Show GRIB level types Show years
showformat showcode showname showstdname showlevel showltype showyear showmon	Show file format Show code numbers Show variable names Show standard names Show levels Show GRIB level types Show years Show months
showformat showcode showname showstdname showlevel showlype showyear showmon showdate	Show file format Show code numbers Show variable names Show standard names Show levels Show GRIB level types Show years Show months Show dates
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showformat showcode showname showstdname showlevel showlype showyear showmon showdate showtime Syntax	Show file format Show code numbers Show variable names Show standard names Show levels Show GRIB level types Show years Show months Show dates Show time steps < operator > ifile Parameter description

Syntax < operator > ifile

File operations

copy	Copy datasets
cat	Concatenate datasets
Syntax	$<\!operator\!>$ ifiles ofile
replace	Replace variables
Syntax	replace ifile1 ifile2 ofile
merge	Merge datasets with different fields
mergetime	Merge datasets sorted by date and time
Syntax	<pre><operator> ifiles ofile</operator></pre>
splitcode	Split code numbers
splitname	Split variable names
splitlevel	Split levels
splitgrid	Split grids
splitzaxis	Split zaxis
splitrec	Split records
Syntax	<pre><operator> ifile oprefix</operator></pre>
splithour	Split hours
splitday	Split days
splitmon	Split months
splitseas	Split seasons
splityear	Split years
Syntax	<pre><operator> ifile oprefix</operator></pre>

Selection

	selcode	Select variables by code number
╛	delcode	Delete variables by code number
	Syntax	<pre><operator>,codes ifile ofile</operator></pre>
	selname	Select variables by name
	delname	Delete variables by name
	Syntax	<pre><operator>,vars ifile ofile</operator></pre>
	selstdname	Select variables by standard name
	Syntax	selstdname,stdnames ifile ofile
_	sellevel	Select levels
	Syntax	sellevel, levels ifile ofile
	selgrid	Select grids
	Syntax	selgrid,grids ifile ofile
	selgridname	Select grids by name
٦	Syntax	selgridname, gridnames ifile ofile
9	selzaxis	Select zaxes
	Syntax	selzaxis,zaxes ifile ofile
Ħ	selzaxisname	Select zaxes by name
	Syntax	selzaxisname,zaxisnames ifile ofile
	selltype	Select GRIB level types
ᆜ	Syntax	selltype, ltypes ifile ofile
	seltabnum	Select parameter table numbers
	Syntax	seltabnum,tabnums ifile ofile
	selrec	Select records
	Syntax	selrec, records ifile ofile
	seltimestep	Select time steps
	Syntax	seltimestep, timesteps ifile ofile
	seltime	Select times
	Syntax	seltime, times ifile ofile
	selhour	Select hours
	Syntax	selhour, hours ifile ofile
	selday	Select days
	Syntax	selday,days ifile ofile
	selmon	Select months
	Syntax	selmon.months ifile ofile
	selyear	Select years
	Syntax	selyear, years ifile ofile
	selseas	Select seasons
	Syntax	selseas,seasons ifile ofile
٦	seldate	Select dates
	Syntax	seldate,date1[,date2] ifile ofile
	selsmon	Select single month
	Syntax	selsmon,month[,nts1[,nts2]] ifile ofile

sellonlatbox	Select a longitude/latitude box	chcode	Change code number
Syntax	sellonlatbox,lon1,lon2,lat1,lat2 ifile ofile	Syntax	chcode,oldcode,newcode[,] ifile ofile
selindexbox	Select an index box	chname	Change variable name
Syntax	selindexbox,idx1,idx2,idy1,idy2 ifile ofile	Syntax	chname,ovar,nvar, ifile ofile
2,722001		chlevel	Change level
		Syntax	chlevel,oldlev,newlev, ifile ofile
		chlevelc	Change level of one code
Conditional s	election	Syntax	chlevelc,code,oldlev,newlev ifile ofile
ifthen	If then	chlevelv	Change level of one variable
ifnotthen	If not then	Syntax	chlevelv,var,oldlev,newlev ifile ofile
Syntax	<pre></pre>	setgrid	Set grid
V		Syntax	setgrid,grid ifile ofile
ifthenelse	If then else	setgridtype	Set grid type
Syntax	ifthenelse ifile1 ifile2 ifile3 ofile	Syntax	setgridtype,gridtype ifile ofile
ifthenc	If then constant	setzaxis	Set zaxis
ifnotthenc	If not then constant	Syntax	setzaxis,zaxis ifile ofile
Syntax	< operator >, c ifile ofile	444	Set global attribute
		setgatt Syntax	set global attribute setgatt, attname, attstring if ile of ile
		setgatts	Set global attributes
		Syntax	setgatts,attfile ifile ofile
Comparison		U	3 ,
Comparison		invertlat	Invert latitude
eq	Equal	invertion	Invert longitude
ne	Not equal	invertlatdes	Invert latitude description
le	Less equal	invertiondes	Invert longitude description
lt	Less than	invertlatdata	Invert latitude data
ge	Greater equal	invertiondata	Invert longitude data
$_{ m gt}$	Greater than	Syntax	<pre><operator> ifile ofile</operator></pre>
Syntax	< operator > ifile1 ifile2 ofile	smooth9	9 point smoothing
eqc	Equal constant	Syntax	smooth9 ifile ofile
nec	Not equal constant	maskregion	Mask regions
lec	Less equal constant	Syntax	maskregion, regions ifile ofile
ltc	Less then constant		<u> </u>
gec	Greater equal constant	masklonlatbox	
gtc	Greater then constant	Syntax	masklonlatbox,lon1,lon2,lat1,lat2 ifile ofile
Syntax	< operator >, c ifile ofile	maskindexbox	Mask an index box
		Syntax	maskindexbox,idx1,idx2,idy1,idy2 ifile ofile
		setclonlatbox	Set a longitude/latitude box to constant
		Syntax	${f setclonlatbox}, c, lon1, lon2, lat1, lat2 \ {f ifile}$ of ile
Modification		setcindexbox	Set an index box to constant
		Syntax	${f setcindexbox}, c, idx1, idx2, idy1, idy2 \ {f ifile}$ ofile
setpartab	Set parameter table	enlarge	Enlarge fields
Syntax	setpartab, table ifile ofile	Syntax	enlarge,grid ifile ofile
setcode	Set code number		

Syntax setrements Syntax setre	parameter table partab,table ifile ofile code number code,code ifile ofile variable name name,name ifile ofile level evel,level ifile ofile
setcode Set of Syntax Syntax setcode setname Set of Syntax Syntax setro	code number code,code ifile ofile variable name name,name ifile ofile level evel,level ifile ofile
Syntax set of Set of Syntax set of Se	code,code ifile ofile variable name name,name ifile ofile level evel,level ifile ofile
setname Set	variable name name,name ifile ofile level evel,level ifile ofile
Syntax setr	name,name ifile ofile level evel,level ifile ofile
	level evel,level ifile ofile
setlevel Set	evel, level ifile ofile
	,
Syntax setl	
setltype Set	GRIB level type
Syntax set1	type, ltype ifile ofile
setdate Set	date
Syntax seto	date, date ifile ofile
settime Set	time
Syntax sett	ime, time ifile ofile
setday Set	day
Syntax seto	day,day ifile ofile
setmon Set	month
Syntax setr	mon,month ifile ofile
setyear Set	year
Syntax sety	vear,year ifile ofile
settunits Set	time units
	units,units ifile ofile
settaxis Set	time axis
Syntax sett	axis, date, time[,inc] ifile ofile
	reference time
Syntax setr	reftime, date, time ifile ofile
setcalendar Set	calendar
Syntax seto	calendar,calendar ifile ofile
	t time steps
Syntax shif	ttime,sval ifile ofile

Arithmetic

setmissval

setctomiss

setmisstoc

setrtomiss

Syntax

expr		Evaluate expressions
	Syntax	expr,instr ifile ofile
exprf		Evaluate expressions from script file
	Syntax	exprf, filename ifile ofile

Set a new missing value setmissval, miss ifile ofile

Set constant to missing value Set missing value to constant

< operator >, c ifile ofile

Set range to missing value setrtomiss,rmin,rmax ifile ofile

abs int				
int	Absolute value			
	Integer value	mermin	Meridional minimum	m
nint	Nearest integer value	mermax	Meridional maximum	m
\mathbf{sqr}	Square	mersum	Meridional sum	m
\mathbf{sqrt}	Square root	mermean	Meridional mean	n
exp	Exponential	meravg	Meridional average	m
ln	Natural logarithm	mervar	Meridional variance	n
log10	Base 10 logarithm	merstd	Meridional standard deviation	n
\sin	Sine	Syntax	<pre><operator> ifile ofile</operator></pre>	
cos	Cosine	merpctl	Meridional percentiles	_
tan	Tangent	Syntax	merpctl,p ifile ofile	n
asin	Arc sine		Vertical minimum	
acos	Arc cosine	vertmin		y
atan	Arc tangent	vertmax	Vertical maximum	y
Syntax	<pre><operator> ifile ofile</operator></pre>	vertsum	Vertical sum	y
addc	Add a constant	vertmean	Vertical mean	у
subc	Subtract a constant	vertavg	Vertical average	y
mulc	Multiply with a constant	vertvar	Vertical variance	y
divc	Divide by a constant	vertstd	Vertical standard deviation	y
Syntax	<pre><pre>< operator >, c ifile ofile</pre></pre>	Syntax	<pre><operator> ifile ofile</operator></pre>	
		timselmin	Time range minimum	-
add	Add two fields	timselmax	Time range maximum	У
$\operatorname{\mathbf{sub}}$	Subtract two fields	timselsum	Time range sum	
mul	Multiply two fields	timselmean	Time range mean	S
div	Divide two fields	timselavg	Time range average	se
min	Minimum of two fields	timselvar	Time range variance	se
max	Maximum of two fields	timselstd	Time range standard deviation	se
atan2	Arc tangent of two fields	Syntax	<pre>< operator > ,nsets[,noffset[,nskip]] ifile ofile</pre>	S
Syntax	<pre><operator> ifile1 ifile2 ofile</operator></pre>	-		se
ymonadd	Add multi-year monthly time average	timselpctl	Time range percentiles	S
ymonsub	Subtract multi-year monthly time average	Syntax	timselpctl,p,nsets[,noffset[,nskip]] ifile1 ifile2	1
ymonmul	Multiply multi-year monthly time average	runmin	Running minimum	
ymondiv	Divide multi-year monthly time average	runmax	Running maximum	se
Syntax	<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	runsum	Running sum	
v	*	runmean	Running mean	y
\mathbf{muldpm}	Multiply with days per month	runavg	Running average	y
divdpm	Divide by days per month	runvar	Running variance	y
muldpy	Multiply with days per year	runstd	Running standard deviation	y
divdpy	Divide by days per year	Syntax	<pre>< operator > ,nts ifile ofile</pre>	y
Syntax	< operator > ifile ofile			
Dyntax	Coperator > 1111c office	mumm ot l	Dunning paraentiles	y
Dyniax	Coperator > 1111c office	runpctl	Running percentiles	
•		Syntax	runpctl,p,nts ifile1 ofile	
•		Syntax	runpctl,p,nts ifile1 ofile Time minimum	У
Statistical val	lues	Syntax	runpctl,p,nts ifile1 ofile Time minimum Time maximum	У
Statistical val	lues Ensemble minimum	Syntax	runpctl,p,nts ifile1 ofile Time minimum	У
Statistical val	lues Ensemble minimum Ensemble maximum	Syntax timmin timmax	runpctl,p,nts ifile1 ofile Time minimum Time maximum	У
Statistical valuensmin ensmax enssum	lues Ensemble minimum Ensemble maximum Ensemble sum	Syntax timmin timmax timsum	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time mean Time average	y
Statistical val ensmin ensmax enssum ensmean	Ensemble minimum Ensemble maximum Ensemble sum Ensemble mean	timmin timmax timsum timmean	runpetl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time mean	y
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ensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax enspetl Syntax fldmin	Ensemble minimum Ensemble maximum Ensemble sum Ensemble mean Ensemble variance Ensemble variance Ensemble standard deviation < operator > ifiles ofile Ensemble percentiles enspctl,p ifiles ofile Field minimum	timmin timmax timsum timmean timavg timvar timstd Syntax timpetl Syntax	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time mean Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum</operator>	y y y y y y y
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ensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax enspctl Syntax fldmin fldmax flddsum flddsum flddnean fldavg	Ensemble minimum Ensemble maximum Ensemble sum Ensemble sum Ensemble warage Ensemble variance Ensemble standard deviation < operator > ifiles ofile Ensemble percentiles enspctl,p ifiles ofile Field minimum Field maximum Field mean Field average	timmin timmax timsum timmay timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hourmean houravg hourvar hourstd	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time mean Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly sum Hourly average Hourly variance Hourly standard deviation</operator>	y y y y y y y y y y
Statistical valensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax enspetl Syntax fldmin fldmax fldsum fldmean fldavg fldvar	Ensemble minimum Ensemble maximum Ensemble sum Ensemble mean Ensemble variance Ensemble variance Ensemble standard deviation < operator > ifiles ofile Ensemble percentiles enspetl,p ifiles ofile Field minimum Field maximum Field mean Field average Field variance	timmin timmax timsum timmean timstd Syntax timpctl Syntax hourmin hourmax hoursum hourmean hourayg hourvar hourstd Syntax	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time mean Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly warage Hourly variance Hourly standard deviation <operator> ifile ofile</operator></operator>	Y/1
ensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax enspetl Syntax fldmin fldmax fldsum fldmean fldavg fldvar fldstd Syntax	Ensemble minimum Ensemble maximum Ensemble sum Ensemble sum Ensemble variage Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspetl,p ifiles ofile Field minimum Field sum Field warage Field variance Field variance Field standard deviation <operator> ifile ofile</operator></operator>	timmin timmax timsum timmean timavg timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hoursum houravg hourvar hourstd Syntax	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time warage Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly warage Hourly variance Hourly standard deviation <operator> ifile ofile Hourly percentiles Hourly standard deviation <operator> ifile ofile Hourly percentiles</operator></operator></operator>	Y
Statistical valensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax fldmin fldmax fldsum fldmean fldavg fldvar fldstd	Ensemble minimum Ensemble maximum Ensemble sum Ensemble sum Ensemble wariage Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspetl,p ifiles ofile Field minimum Field maximum Field sum Field wariance Field variance Field standard deviation</operator>	timmin timmax timsum timsum timmayg timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hoursum hoursud Syntax hourstd Syntax	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time sum Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly wavrage Hourly variance Hourly standard deviation <operator> ifile ofile Hourly percentiles Hourly standard deviation <operator> ifile ofile Hourly percentiles hourpctl,p ifile1 ifile2 ifile3 ofile</operator></operator></operator>	Y
Statistical valensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax fldmin fldmax fldsum fldmax fldsum flddavg fldvar fldstd Syntax fldpctl Syntax	Ensemble minimum Ensemble maximum Ensemble sum Ensemble wean Ensemble variance Ensemble variance Ensemble standard deviation < operator > ifiles ofile Ensemble percentiles enspetl.p ifiles ofile Field minimum Field sum Field sum Field wean Field variance Field variance Field standard deviation < operator > ifile ofile Field percentiles flipercentiles floptl.p ifile ofile	timmin timmax timsum timmean timavg timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hourwar hoursud Syntax hourpetl Syntax daymin	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time warage Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly warage Hourly variance Hourly standard deviation <operator> ifile ofile Hourly percentiles Hourly standard deviation <operator> ifile ofile Hourly percentiles</operator></operator></operator>	Y
Statistical valensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax fldmin fldmax fldsum fldmean fldavg fldvar fldstd Syntax fldpctl Syntax zonmin	Ensemble minimum Ensemble maximum Ensemble sum Ensemble mean Ensemble wariance Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspetl,p ifiles ofile Field minimum Field maximum Field wean Field average Field variance Field standard deviation <operator> ifile ofile Field percentiles fldpctl,p ifile ofile Zonal minimum</operator></operator>	timmin timmax timsum timsum timmayg timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hoursum hoursud Syntax hourstd Syntax	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time sum Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly wavrage Hourly variance Hourly standard deviation <operator> ifile ofile Hourly percentiles Hourly standard deviation <operator> ifile ofile Hourly percentiles hourpctl,p ifile1 ifile2 ifile3 ofile</operator></operator></operator>	Y
ensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax enspctl Syntax fldmin fldmax fldsum fldmean fldavg fldvar fldstd Syntax fldpctl Syntax zonmin	Ensemble minimum Ensemble maximum Ensemble sum Ensemble sum Ensemble variance Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspctl,p ifiles ofile Field minimum Field maximum Field warage Field variance Field variance Field standard deviation <operator> ifile ofile Field Field maximum Field maximum Field maximum Field maximum Field oright oright Zoral minimum Zonal maximum</operator></operator>	timmin timmax timsum timmean timavg timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hourwar hoursud Syntax hourpetl Syntax daymin	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time wean Time average Time variance Time standard deviation <pre><pre>coperator> ifile ofile</pre> Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly sum Hourly wean Hourly veriance Hourly standard deviation <pre><pre>coperator> ifile ofile</pre> Hourly minimum Hourly maximum Hourly sean Hourly oriance Hourly standard deviation <pre><pre>coperator> ifile ofile</pre> Hourly percentiles hourpctl,p ifile1 ifile2 ifile3 ofile Daily minimum</pre></pre></pre>	Y
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ensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax fldmin fldmax fldsum fldmean fldavg fldvar fldstd Syntax fldpctl Syntax zonmin zonmax zonsum zonmean	Ensemble minimum Ensemble maximum Ensemble sum Ensemble weran Ensemble variance Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspetl.p ifiles ofile Field minimum Field sum Field sum Field variance Field variance Field variance Field standard deviation <operator> ifile ofile Field percentiles fldpctl.p ifile ofile Zonal minimum Zonal maximum Zonal sum Zonal sum Zonal mean</operator></operator>	timmin timmax timsum timmean timavg timvar timstd Syntax hourmin hourmax hoursum houravg hourvar hourstd Syntax hourpctl Syntax daymin daymax daysum	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly average Hourly average Hourly standard deviation <operator> ifile ofile Hourly maximum Hourly maximum Hourly maximum Hourly average Hourly standard deviation <operator> ifile ofile Hourly percentiles hourpctl,p ifile1 ifile2 ifile3 ofile Daily minimum Daily maximum Daily maximum Daily sum</operator></operator></operator>	y
ensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax fldmin fldmax fldsum flddmean fldavg fldvar fldstd Syntax zonmin zonmax zonsum zonsum zonavg	Ensemble minimum Ensemble maximum Ensemble sum Ensemble mean Ensemble wariance Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspetl,p ifiles ofile Field minimum Field maximum Field wariance Field average Field variance Field standard deviation <operator> ifile ofile Field percentiles fldpctl,p ifile ofile Zonal minimum Zonal maximum Zonal sum Zonal average</operator></operator>	timmin timmax timsum timsum timmay timstd Syntax timyctl Syntax hourmin hourmax hoursum hourwar hourvar hourstd Syntax hourpctl Syntax daymin daymax daysum daymean	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly average Hourly variance Hourly variance Hourly standard deviation <operator> ifile ofile Hourly minimum Doully average Hourly ifile1 ifile2 ifile3 ofile Hourly percentiles hourpctl,p ifile1 ifile2 ifile3 ofile Daily minimum Daily sum Daily sum Daily sum Daily mean</operator></operator>	Y
Statistical valensmin ensmax enssum ensmean ensavg ensvar enspettl Syntax fldmin fldmax fldsum flddman fldavg fldyar fldstd Syntax syntax fldpett Syntax zonmin zonmax zonsum zonmean zonavg zonvar	Ensemble minimum Ensemble maximum Ensemble sum Ensemble sum Ensemble wariage Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspctl,p ifiles ofile Field minimum Field maximum Field warage Field variance Field standard deviation <operator> ifile ofile Ensemble percentiles enspctl,p ifiles ofile Field paximum Field minimum Field maximum Field operator> ifile ofile Field percentiles fidpctl,p ifile ofile Zonal minimum Zonal maximum Zonal sum Zonal warage Zonal variance</operator></operator>	timmin timmax timsum timmean timavg timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hoursum hoursud Syntax daymin daymax daysum daymean dayavg	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time werage Time variance Time standard deviation <pre> <pre> <pre></pre></pre></pre>	Y
ensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax enspetl Syntax fldmin fldmax fldsum fldmean fldavg fldvar fldstd Syntax zonmin zonmax zonsum zonmean zonavg zonvar zonstd	Ensemble minimum Ensemble maximum Ensemble sum Ensemble sum Ensemble variance Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspctl,p ifiles ofile Field minimum Field sum Field waximum Field daverage Field variance Field standard deviation <operator> ifile ofile Field percentiles fldpctl,p ifile ofile Zonal minimum Zonal maximum Zonal sum Zonal waximum Zonal waximum Zonal waximum Zonal average Zonal variance Zonal standard deviation</operator></operator>	timmin timmax timsum timmean timavg timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hourwar hourstd Syntax hourpetl Syntax daymin daymax daysum daymean dayavg dayvar daystd	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time warage Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly sum Hourly warage Hourly average Hourly aviance Hourly standard deviation <operator> ifile ofile Topic of the standard deviation operator ifile3 ofile Daily minimum Daily maximum Daily sum Daily wean Daily average Daily variance </operator></operator></operator></operator></operator></operator></operator></operator>	y y y y y y y y y y
Statistical valensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax fldmin fldmax fldsum flddmax fldsum flddvaf fldvar fldstd Syntax zonmin zonmax zonsum zonavg zonvar zonstd Syntax	Ensemble minimum Ensemble maximum Ensemble sum Ensemble weran Ensemble variance Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspetl,p ifiles ofile Field minimum Field sum Field werage Field variance Field standard deviation <operator> ifile ofile Field precentiles flipercentiles floptl,p ifile ofile Zonal minimum Zonal maximum Zonal sum Zonal sum Zonal average Zonal average Zonal variance Zonal variance Zonal variance Zonal variance Zonal variance Zonal variance Zonal standard deviation <operator> ifile ofile </operator></operator></operator>	timmin timmax timsum timmean timseq timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hournean hourava hourvar hourstd Syntax daymin daymax daysum daymean dayavag dayvar daystd Syntax	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time warage Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly sum Hourly average Hourly average Hourly standard deviation <operator> ifile ofile Hourly minimum Daily maximum Hourly standard deviation <operator> ifile ofile Daily minimum Daily maximum Daily sum Daily maximum Daily sum Daily warage Daily variance Daily standard deviation <operator> ifile ofile coperator> ifile ofile Daily standard deviation <operator> ifile ofile</operator></operator></operator></operator></operator>	y y y y y y y y y y
ensmin ensmax enssum ensmean ensavg ensvar ensstd Syntax enspetl Syntax fldmin fldmax fldsum flddmean fldavg fldvar fldstd Syntax zonmin zonmax zonsum zonnean zonavg zonstd	Ensemble minimum Ensemble maximum Ensemble sum Ensemble sum Ensemble variance Ensemble variance Ensemble standard deviation <operator> ifiles ofile Ensemble percentiles enspctl,p ifiles ofile Field minimum Field sum Field waximum Field daverage Field variance Field standard deviation <operator> ifile ofile Field percentiles fldpctl,p ifile ofile Zonal minimum Zonal maximum Zonal sum Zonal waximum Zonal waximum Zonal waximum Zonal average Zonal variance Zonal standard deviation</operator></operator>	timmin timmax timsum timmean timavg timvar timstd Syntax timpetl Syntax hourmin hourmax hoursum hourwar hourstd Syntax hourpetl Syntax daymin daymax daysum daymean dayavg dayvar daystd	runpctl,p,nts ifile1 ofile Time minimum Time maximum Time sum Time average Time variance Time standard deviation <operator> ifile ofile Time percentiles timpctl,p ifile1 ifile2 ifile3 ofile Hourly minimum Hourly maximum Hourly average Hourly variance Hourly variance Hourly standard deviation <operator> ifile ofile Hourly maximum Hourly average Hourly to variance Hourly standard deviation <operator> ifile ofile Daily minimum Daily maximum Daily maximum Daily sum Daily maximum Daily warage Daily variance Daily standard deviation</operator></operator></operator>	you you

	monmin	Monthly minimum	ydrunmax	Multi-year daily running max
	monmax	Monthly maximum	ydrunsum	Multi-year daily running sum
	monsum	Monthly sum	ydrunmean	Multi-year daily running mea
	monmean	Monthly mean	ydrunavg	Multi-year daily running aver
	monavg	Monthly average	ydrunvar	Multi-year daily running varia
	monvar	Monthly variance	ydrunstd	Multi-year daily running stan
	monstd	Monthly standard deviation	Syntax	<pre>< operator > ,nts ifile ofile</pre>
	Syntax	<pre><operator> ifile ofile</operator></pre>	ydrunpctl	Multi-year daily running perc
	monpctl	Monthly percentiles	Syntax	ydrunpctl,p,nts ifile1 ifi
	Syntax	monpctl,p ifile1 ifile2 ifile3 ofile		
		V	=	
	yearmin	Yearly minimum		
	yearmax	Yearly maximum	Regression	
	yearsum	Yearly sum		
	yearmean	Yearly mean	detrend	Detrend
	yearavg	Yearly average	Syntax	detrend ifile ofile
	yearvar	Yearly variance	trend	Trend
	yearstd	Yearly standard deviation	Syntax	trend ifile ofile1 ofile2
	Syntax	< operator > ifile ofile	V	
	yearpctl	Yearly percentiles	subtrend	Subtract trend
	Syntax	yearpctl,p ifile1 ifile2 ifile3 ofile	Syntax	subtrend ifile1 ifile2 if
	Dyntax	year peti, p illier illiez illies ollie		
	seasmin	Seasonal minimum		
	seasmax	Seasonal maximum		
	seassum	Seasonal sum	Interpolation	
	seasmean	Seasonal mean		
	seasavg	Seasonal average	remapbil	Bilinear interpolation
	seasvar	Seasonal variance	remapbic	Bicubic interpolation
	seasstd	Seasonal standard deviation	remapcon	Conservative remapping
i	Syntax	<pre><pre><pre><pre>coperator> ifile ofile</pre></pre></pre></pre>	remapdis	Distance-weighted averaging
		•	Syntax	<pre><operator>,grid ifile ofil</operator></pre>
	seaspctl	Seasonal percentiles	genbil	Generate bilinear interpolation
	Syntax	$\mathbf{seaspctl}, p$ ifile1 ifile2 ifile3 ofile	genbic	Generate bicubic interpolation
	ydaymin	Multi-year daily minimum	¬ ~	Generate conservative interpolation
	ydaymax	Multi-year daily maximum	gencon	
	ydaysum		gendis	Generate distance-weighted a
		Multi-year daily sum	Syntax	<pre>< operator > ,grid ifile ofil</pre>
	ydaymean	Multi-year daily mean	remap	SCRIP grid remapping
	ydayavg	Multi-year daily average	Syntax	remap,grid,weights ifile of
	ydayvar	Multi-year daily variance		
	ydaystd	Multi-year daily standard deviation	interpolate	PINGO grid interpolation
	Syntax	< operator > ifile ofile	intgridbil	Bilinear grid interpolation
	ydaypctl	Multi-year daily percentiles	Syntax	<pre>< operator > ,grid ifile ofil</pre>
	Syntax	ydaypctl,p ifile1 ifile2 ifile3 ofile	remapeta	Remap model level
			Syntax	remapeta, vct[,oro] ifile of
	ymonmin	Multi-year monthly minimum		
	ymonmax	Multi-year monthly maximum	ml2pl	Model to pressure level interp
	ymonsum	Multi-year monthly sum	Syntax	ml2pl,plevels ifile ofile
	ymonmean	Multi-year monthly mean	ml2hl	Model to height level interpol
	ymonavg	Multi-year monthly average	Syntax	ml2hl,hlevels ifile ofile
	ymonvar	Multi-year monthly variance	inttime	Time interpolation
	ymonstd	Multi-year monthly standard deviation	Syntax	inttime, date, time[,inc] ifile
	Syntax	< operator > ifile ofile	intntime	Time interpolation
	ymonpctl	Multi-year monthly percentiles	Syntax	intntime,n ifile ofile
	Syntax	ymonpctl,p ifile1 ifile2 ifile3 ofile		,
	Бунтах	ymonpcu,p iiiiei iiiiez iiiies oiiie	intyear	Year interpolation
	yseasmin	Multi-year seasonal minimum	Syntax	intyear, years ifile1 ifile2
	yseasmax	Multi-year seasonal maximum		
	yseassum	Multi-year seasonal sum		
	yseasmean	Multi-year seasonal mean		
	yseasavg	Multi-year seasonal average	Transformati	on
	yseasvar	Multi-year seasonal variance	an 2 mn	Constant to swide sint
	yseasstd	Multi-year seasonal standard deviation	sp2gp	Spectral to gridpoint
	Syntax	<pre><pre><pre><pre>coperator > ifile ofile</pre></pre></pre></pre>	sp2gpl	Spectral to gridpoint (linear)
	-		gp2sp	Gridpoint to spectral
	yseaspctl	Multi-year seasonal percentiles	gp2spl	Gridpoint to spectral (linear)
	Syntax	yseaspctl,p ifile1 ifile2 ifile3 ofile	Syntax	<pre>< operator > ifile ofile</pre>
			sp2sp	Spectral to spectral
			Syntax	${\bf sp2sp}, trunc$ ifile ofile
			dv2uv	Divergence and vorticity to U
			dv2uvl	Divergence and vorticity to U
			uv2dv	U and V wind to divergence a

Syntax <operator>,nts ifile ofile ydrunpctl Multi-year daily running percentiles</operator>	ydrunmin	Multi-year daily running minimum
ydrunmean ydrunavg ydrunvar ydrunvat Multi-year daily running mean Multi-year daily running average ydrunvat ydrunstd Multi-year daily running variance ydrunstd Multi-year daily running standard deviation coperator >,nts ifile ofile ydrunpctl Multi-year daily running percentiles	ydrunmax	Multi-year daily running maximum
ydrunavg ydrunvar ydrunstd Syntax ydrunpctl Multi-year daily running average Multi-year daily running variance Multi-year daily running standard deviation coperator >,nts ifile ofile ydrunpctl Multi-year daily running percentiles	ydrunsum	Multi-year daily running sum
ydrunvar ydrunstd Multi-year daily running variance Multi-year daily running standard deviation Syntax < operator >,nts ifile offile ydrunpctl Multi-year daily running percentiles	ydrunmean	Multi-year daily running mean
ydrunstd Multi-year daily running standard deviation Syntax operator>,nts ifile ofile ydrunpctl Multi-year daily running percentiles 	ydrunavg	Multi-year daily running average
Syntax <operator>,nts ifile ofile ydrunpctl Multi-year daily running percentiles</operator>	ydrunvar	Multi-year daily running variance
ydrunpctl Multi-year daily running percentiles	ydrunstd	Multi-year daily running standard deviation
	Syntax	< operator >, nts ifile ofile
	vdrunpctl	Multi-vear daily running percentiles
0 1 147		ydrunpctl,p,nts ifile1 ifile2 ifile3 ofil
	Syntax	detrend ifile ofile
Syntax detrend ifile ofile	trond	Trend
	or curr	
		trend ifile ofile1 ofile2
trend Trend	Syntax	
etrend Detrend		
Syntax dotword ifile ofile	V	
trend Trend		trend ifile ofile1 ofile2
trend Syntax trend ifile ofile1 ofile2	Syntax	
trend Syntax trend ifile ofile1 ofile2 subtrend Subtract trend	Syntax subtrend	Subtract trend
trend Syntax trend ifile ofile1 ofile2	Syntax subtrend	Subtract trend
trend Syntax trend ifile ofile1 ofile2 subtrend Subtract trend	Syntax subtrend Syntax	Subtract trend
trend Syntax Trend ifile ofile1 ofile2 subtrend Subtract trend subtrend ifile1 ifile2 ifile3 ofile	Syntax subtrend Syntax nterpolation	Subtract trend subtrend ifile1 ifile2 ifile3 ofile
trend Syntax Trend ifile ofile1 ofile2 subtrend Subtract trend subtrend ifile1 ifile2 ifile3 ofile interpolation remapbil Bilinear interpolation	subtrend Syntax Interpolation remapbil	Subtract trend subtrend ifile1 ifile2 ifile3 ofile Bilinear interpolation
trend Syntax Trend ifile ofile1 ofile2 subtrend Subtract trend subtrend ifile1 ifile2 ifile3 ofile Interpolation remapbil Bilinear interpolation Bicubic interpolation	subtrend Syntax nterpolation remapbil remapbic	Subtract trend subtrend ifile1 ifile2 ifile3 ofile Bilinear interpolation Bicubic interpolation
trend Syntax Trend ifile ofile1 ofile2 subtrend Syntax Subtract trend subtrend ifile1 ifile2 ifile3 ofile interpolation remapbil Bilinear interpolation Bicubic interpolation Conservative remapping	subtrend Syntax Interpolation remapbil remapbic remapcon	Subtract trend subtrend ifile1 ifile2 ifile3 ofile Bilinear interpolation Bicubic interpolation Conservative remapping
trend Syntax trend ifile ofile1 ofile2 subtrend Syntax subtrend ifile1 ofile2 subtrend Syntax subtrend ifile1 ifile2 ifile3 ofile nterpolation remapbil Bilinear interpolation remapbic Bicubic interpolation remapon Conservative remapping Distance-weighted averaging	subtrend Syntax Interpolation remapbil remapbic remapcon remapdis	Subtract trend subtrend ifile1 ifile2 ifile3 ofile Bilinear interpolation Bicubic interpolation Conservative remapping Distance-weighted averaging
trend Syntax trend ifile ofile1 ofile2 subtrend Syntax subtrend ifile1 ifile2 ifile3 ofile interpolation remapbil Bilinear interpolation Bicubic interpolation remapcon Conservative remapping	subtrend Syntax Interpolation remapbil remapbic remapcon remapdis Syntax	Subtract trend subtrend ifile1 ifile2 ifile3 ofile Bilinear interpolation Bicubic interpolation Conservative remapping Distance-weighted averaging < operator > ,grid ifile ofile

Generate bicubic interpolation weights Generate conservative interpolation weights Generate distance-weighted averaging weights <operator>,grid ifile ofile SCRIP grid remapping remap,grid,weights ifile ofile Syntax PINGO grid interpolation bil Bilinear grid interpolation < operator > , grid ifile ofile Syntax Remap model level eta remapeta,vct[,oro] ifile ofile Model to pressure level interpolation

inttime	Time interpolation	
Syntax	<pre>inttime,date,time[,inc] ifile ofile</pre>	
intntime	Time interpolation	
Syntax	intntime,n ifile ofile	
r		
intyear	Year interpolation	
Syntax	intyear, years ifile1 ifile2 oprefix	

Model to height level interpolation

ormation

	sp2gp		Spectral to gridpoint		
l	sp2gpl		Spectral to gridpoint (linear)		
J	gp2sp		Gridpoint to spectral		
1	gp2spl		Gridpoint to spectral (linear)		
		Syntax	< operator > ifile ofile		
•	sp2sp		Spectral to spectral		
		Syntax	$\mathbf{sp2sp}, trunc$ ifile ofile		
	dv2uv		Divergence and vorticity to U and V wind		

Divergence and vorticity to U and V wind (linear) uv2dv U and V wind to divergence and vorticity uv2dvl U and V wind to divergence and vorticity (linear) Syntax | < operator > ifile ofile

Formatted I/		eca_hd Syntax	Heating degree days per time period eca_hd[,T1[,T2]] ifile ofile
input Syntax	ASCII input input,grid ofile	eca_hwdi	Heat wave duration index wrt mean of reference pe
inputsrv	SERVICE input	Syntax	eca_hwdi[,nday[,T]] ifile1 ifile2 ofile
inputext	EXTRA input	eca_hwfi	Warm spell days index wrt 90th percentile of refer
Syntax	<pre><operator> ofile</operator></pre>	Syntax	eca_hwfi[,nday] ifile1 ifile2 ofile
output	ASCII output	eca_id	Ice days index per time period
Syntax	output ifiles	Syntax	eca_id ifile ofile
outputf	Formatted output	eca_r10mm	Heavy precipitation days index per time period
Syntax	outputf, format, nelem ifiles Integer output	Syntax	eca_r10mm ifile ofile
outputsrv	SERVICE output	eca_r20mm	Very heavy precipitation days index per time peri
outputext	EXTRA output	Syntax	eca_r20mm ifile ofile
Syntax	<pre><operator> ifiles</operator></pre>	eca_r75p	Moderate wet days wrt 75th percentile of reference
		Syntax	eca_r75p ifile1 ifile2 ofile
Miscellaneous	3	eca_r75ptot Syntax	Precipitation percent due to R75p days eca_r75ptot ifile1 ifile2 ofile
gradsdes1	Grads data descriptor file (version 1 GRIB map)		
gradsdes2	GrADS data descriptor file (version 2 GRIB map)	eca_r90p	Wet days wrt 90th percentile of reference period
Syntax	<pre><operator> ifile</operator></pre>	Syntax	eca_r90p ifile1 ifile2 ofile
timsort	Sort over the time	eca_r90ptot	Precipitation percent due to R90p days
Syntax	timsort ifile ofile	Syntax	eca_r90ptot ifile1 ifile2 ofile
const	Create a constant field	eca_r95p	Very wet days wrt 95th percentile of reference per
Syntax	const,const,grid ofile	Syntax	eca_r95p ifile1 ifile2 ofile
random	Create a field with random values	eca_r95ptot	Precipitation percent due to R95p days
Syntax	random,grid ofile	Syntax	eca_r95ptot ifile1 ifile2 ofile
rotuvb	Backward rotation	eca_r99p	Extremely wet days wrt 99th percentile of referen
Syntax	${f rotuvb}, u, v,$ ifile ofile	Syntax	eca_r99p ifile1 ifile2 ofile
mastrfu	Mass stream function	eca_r99ptot	*
Syntax	mastrfu ifile ofile	Svntax	Precipitation percent due to R99p days eca_r99ptot ifile1 ifile2 ofile
wct	Windchill temperature (C)		
Syntax	wct ifile1 ifile2 ofile	eca_rr1 Syntax	Wet days index per time period
fdns	Frost days where no snow index per time period	V	eca_rr1 ifile ofile
Syntax	fdns ifile1 ifile2 ofile	eca_rx1day	Highest one day precipitation amount per time pe
strwin	Strong wind days index per time period	Syntax	eca_rx1day[,mode] ifile ofile
Syntax	strwin[,v] ifile ofile	eca_rx5day	Highest five-day precipitation amount per time per
	Strong breeze days index per time period	Syntax	eca_rx5day[,x] ifile ofile
strbre Syntax	strbre ifile ofile	eca_sdii	Simple daily intensity index per time period
•		Syntax	eca_sdii ifile ofile
strgal Syntax	Strong gale days index per time period strgal ifile ofile	eca_su	Summer days index per time period
•		Syntax	$eca_su[,T]$ ifile ofile
hurr	Hurricane days index per time period	eca_tg10p	Cold days percent wrt 10th percentile of reference
Syntax	hurr ifile ofile	Syntax	eca_tg10p ifile1 ifile2 ofile
		eca_tg90p	Warm days percent wrt 90th percentile of reference
ECA indices		Syntax	eca_tg90p ifile1 ifile2 ofile
eca_cdd	Consecutive dry days index per time period	eca_tn10p	Cold nights percent wrt 10th percentile of reference
Syntax	eca_cdd ifile ofile	Syntax	eca_tn10p ifile1 ifile2 ofile
eca_cfd	,	eca_tn90p	Warm nights percent wrt 90th percentile of refere
Syntax	Consecutive frost days index per time period eca cfd ifile ofile	Syntax	eca_tn90p ifile1 ifile2 ofile
•			
eca_csu		eca_tr	Tropical nights index per time period
	Consecutive summer days index per time period		000 tu[T]:f:l- +f:l-
Syntax	consecutive summer days index per time period eca_csu[,T] ifile ofile	Syntax	eca_tr[,T] ifile ofile
Syntax eca_cwd	eca_csu[,T] ifile ofile Consecutive wet days index per time period	Syntax eca_tx10p	Very cold days percent wrt 10th percentile of refer
Syntax	eca_csu[,T] ifile ofile	Syntax	
Syntax eca_cwd	eca_csu[,T] ifile ofile Consecutive wet days index per time period eca_cwd ifile ofile Cold wave duration index wrt mean of reference pe	Syntax eca_tx10p Syntax rocka_tx90p	Very cold days percent wrt 10th percentile of refe eca_tx10p ifile1 ifile2 ofile Very warm days percent wrt 90th percentile of ref
Syntax eca_cwd Syntax	eca_csu[,T] ifile ofile Consecutive wet days index per time period eca_cwd ifile ofile	Syntax eca_tx10p Syntax	Very cold days percent wrt 10th percentile of refe eca_tx10p ifile1 ifile2 ofile
Syntax eca_cwd Syntax eca_cwdi	eca_csu[,T] ifile ofile Consecutive wet days index per time period eca_cwd ifile ofile Cold wave duration index wrt mean of reference pe	Syntax eca_tx10p Syntax locka_tx90p Syntax	Very cold days percent wrt 10th percentile of refe eca_tx10p ifile1 ifile2 ofile Very warm days percent wrt 90th percentile of ref
Syntax eca_cwd Syntax eca_cwdi Syntax	eca_csu[,T] ifile ofile Consecutive wet days index per time period eca_cwd ifile ofile Cold wave duration index wrt mean of reference pe eca_cwdi[,nday[,T]] ifile1 ifile2 ofile	Syntax eca_tx10p Syntax locka_tx90p Syntax	Very cold days percent wrt 10th percentile of refe eca_tx10p ifile1 ifile2 ofile Very warm days percent wrt 90th percentile of ref
Syntax eca_cwd Syntax eca_cwdi Syntax eca_cwfi Syntax	eca_csu[,T] ifile ofile Consecutive wet days index per time period eca_cwd ifile ofile Cold wave duration index wrt mean of reference pe eca_cwdi[,nday[,T]] ifile1 ifile2 ofile Cold-spell days index wrt 10th percentile of reference a_cwfi[,nday] ifile1 ifile2 ofile	Syntax eca_tx10p Syntax locka_tx90p Syntax	Very cold days percent wrt 10th percentile of refe eca_tx10p ifile1 ifile2 ofile Very warm days percent wrt 90th percentile of ref
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