CDO Bot	erence Card	merge mergetime	Merge datasets with different fields Merge datasets sorted by date and time	Compariso
CDO Itel	erence Caru	Syntax	<pre><pre>< operator > ifiles ofile</pre></pre>	eq
		splitcode	Split codes	ne
	Climate Data Operators	splitvar	Split variables	le
	Version 1.0.0	splitlevel	Split levels	lt
	June 2006	splitgrid	Split grids	ge
Uwe Schulzweida		splitzaxis	Split zaxis	gt
	itute for Meteorology	splitrec	Split records	Synta
With Figure 11150	indic for infectorology	Syntax	<pre><operator> ifile oprefix</operator></pre>	eqc
		splithour	Split hours	nec
Syntax		splitday	Split days	lec
-1- [0-4:	0	splitmon	Split months	ltc
cdo [Options]	Operators	splitseas	Split seasons	gec
Options		splityear	Split years	gtc Synt:
		Syntax	<pre><operator> ifile oprefix</operator></pre>	Sylle
-a	Convert from relative to absolute time axis			
-f < format >	Output file format (grb, nc, nc2, srv, ext, ieg)	Selection		
$-\mathbf{g} < grid >$	Grid name or file	selcode	Select codes	7
-h	Available grids: t <res>grid, r<nx>x<ny> Help information for the operators</ny></nx></res>	delcode	Delete codes	Modification
-m < missval >	Set the default missing value (default: -9e+33)	Syntax	<pre><operator>,codes ifile ofile</operator></pre>	- Wiodineduk
- p < prec>	Set the precision of the output data in bytes	selvar	Select variables	setpartab
-p <pre>-prec></pre>	(4/8 for nc, nc2, srv, ext; 1/2/3 for grb)	delvar	Delete variables	Synta
-R	Convert GRIB data from reduced to regular grid	Syntax	<pre><operator>,vars ifile ofile</operator></pre>	setcode
-r	Convert from absolute to relative time axis	sellevel	Select levels	Synta
-t	Set the parameter table name or file	Syntax	sellevel, levels ifile ofile	setvar
	Predefined tables: echam4 echam5 mpiom1	selgrid	Select grids	Synts
-V	Print the version number	Syntax	selgrid,grids ifile ofile	Synta
-v	Print extra details for some operators	selgridname Syntax	Select grid by name selgridname, gridnames ifile ofile	
		selzaxis	Select zaxis	setdate
Operators		Syntax	selzaxis.zaxis ifile ofile	Synta
Information		selzaxisname	Select zaxis by name	settime Synt:
info	Dataset information	Syntax	selzaxisname,zaxisnames ifile ofile	setday
map	Dataset information and simple map	seltabnum	Select parameter table number	Synt
Syntax	<pre><pre><pre><pre>coperator > ifiles</pre></pre></pre></pre>	Syntax	seltabnum,tabnum ifile ofile	setmon
sinfo	Short dataset information	selrec	Select records	Synta
Syntax	<pre><pre><pre><pre>coperator> ifile</pre></pre></pre></pre>	Syntax	selrec,records ifile ofile	setyear
		seltimestep	Select time steps	Synta
diff Syntax	Compare two datasets	Syntax	seltimestep,timesteps ifile ofile	settunits
	<pre><operator> ifile1 ifile2</operator></pre>	seltime Syntax	Select times seltime, times ifile ofile	Synt
ncode	Number of codes	selhour	Select hours	Synta
nvar nlevel	Number of variables Number of levels	Syntax	selhour, hours ifile ofile	setreftime
nyear	Number of levels Number of years	selday	Select days	Synta
nmon	Number of years Number of months	Syntax	selday,days ifile ofile	setcalendar
ndate	Number of dates	selmon	Select months	Synta
ntime	Number of time steps	Syntax	selmon, months ifile ofile	shifttime
Syntax	< operator > ifile	selyear	Select years	Synta
showcode	Show codes	Syntax	selyear, years ifile ofile	chcode
showvar	Show variable names	selseas Syntax	Select seasons selseas,seasons ifile ofile	Synta
showlevel	Show levels	seldate	Select dates	chvar
showyear	Show years	Syntax	seldate, date1[, date2] ifile ofile	Synta
showmon	Show months			chlevel
showdate	Show dates	sellonlatbox	Select lon/lat box sellonlatbox,lon1,lon2,lat1,lat2 ifile ofile	Synt
showtime Syntax	Show time steps <pre><operator> ifile</operator></pre>	Syntax	Select index box	Synta
		Syntax	selindexbox,idx1,idx2,idy1,idy2 ifile ofile	chlevely
vardes	Variable description	~ 5		Synta
griddes vct	Grid description Vertical coordinate table			setgrid
Syntax	<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	Conditional s		Synta
Sylloda	(apa. 2001 > 22220	ifthen	If then	setgridtype
		ifnotthen	If not then	Synta
File operation	ıs	Syntax	<pre><operator> ifile1 ifile2 ofile</operator></pre>	setzaxis
copy	Copy datasets	ifthenelse	If then else	Synta
cat	Concatenate datasets	Syntax	ifthenelse ifile1 ifile2 ifile3 ofile	
Syntax	<pre><pre><pre>coperator> ifiles ofile</pre></pre></pre>	ifthenc	If then constant	setgatt
replace	Replace variables	ifnotthenc	If not then constant	Synts
Syntax	replace ifile1 ifile2 ofile	Syntax	< operator >, c ifile ofile	Synta
~,				⇒ J He

Compariso	on	invertlat	Invert latitude
		invertion	Invert longitude
eq	Equal	invertlatdes	Invert latitude description
ne	Not equal	invertiondes	Invert longitude description
le	Less equal	invertlatdata	Invert latitude data
lt	Less than	invertiondata	Invert longitude data
ge	Greater equal	Syntax	<pre><operator> ifile ofile</operator></pre>
gt	Greater than	masklonlatbox	Mask lon/lat box
Syn	tax < operator > ifile1 ifile2 ofile	Syntax	masklonlatbox,lon1,lon2,lat1,lat2 ifile ofile
eqc	Equal constant	maskindexbox	Mask index box
nec	Not equal constant	Syntax	maskindexbox,idx1,idx2,idy1,idy2 ifile ofile
lec	Less equal constant	enlarge	Enlarge fields
ltc	Less then constant	Syntax	enlarge.grid ifile ofile
gec	Greater equal constant	V	0.0
$_{ m gtc}$	Greater then constant	setmissval	Set a new missing value
Syn		Syntax	setmissval, miss ifile ofile
~,	(setctomiss	Set constant to missing value
		setmisstoc	Set missing value to constant
		Syntax	< operator >, c ifile ofile
		setrtomiss	Set range to missing value
£ 110		Syntax	setrtomiss,rmin,rmax ifile ofile
Iodificat i	on		

Syntax setcode, code ifile ofile Set variable name Syntax setvar, name ifile ofile

Set parameter table

Syntax setpartab, table ifile ofile

Syntax setgatts, attfile ifile ofile

Set code number

411	Set level	Arithmetic	
setlevel		Aritimetic	
Syntax	setlevel, level ifile ofile		
setdate	Set date	expr	Evaluate expressions
Syntax	setdate, date ifile ofile	Syntax	expr,instr ifile ofile
settime	Set time	exprf	Evaluate expressions from script file
Syntax	settime, time ifile ofile	Syntax	exprf, filename ifile ofile
setday	Set day	abs	Absolute value
Syntax	setday,day ifile ofile	sqr	Square
setmon	Set month	sqrt	Square root
Syntax	setmon, month ifile ofile	exp	Exponential
setyear	Set year	ln	Natural logarithm
Syntax	setyear, year ifile ofile	log10	Base 10 logarithm
settunits	Set time units	sin	Sine
Syntax	settunits, units ifile ofile	cos	Cosine
settaxis	Set time axis	tan	Tangent
Syntax	settaxis, date, time[,inc] ifile ofile	asin	Arc sine
setreftime	Set reference time	acos	Arc cosine
Syntax	setreftime, date, time ifile ofile	atan	Arc tangent
setcalendar	Set calendar	Syntax	<pre>< operator > ifile ofile</pre>
Syntax	setcalendar,calendar ifile ofile		*
shifttime	Shift time steps	addc	Add a constant
Syntax	shifttime,sval ifile ofile	subc mulc	Subtract a constant
chcode	Change code number		Multiply with a constant
		divc	Divide by a constant
Syntax	chcode,oldcode,newcode[,] ifile ofile	Syntax	< operator >, c ifile ofile
chvar	Change variable name	add	Add two fields
Syntax	chvar,ovar,nvar, ifile ofile	\mathbf{sub}	Subtract two fields
chlevel	Change level	mul	Multiply two fields
Syntax	chlevel,oldlev,newlev, ifile ofile	div	Divide two fields
chlevelc	Change level of one code	min	Minimum of two fields
Syntax	chlevelc,code,oldlev,newlev ifile ofile	max	Maximum of two fields
chlevelv	Change level of one variable	atan2	Arc tangent of two fields
Syntax	chlevelv,var,oldlev,newlev ifile ofile	Syntax	<pre><operator> ifile1 ifile2 ofile</operator></pre>
setgrid	Set grid	ymonadd	Add multi-year monthly time average
Syntax	setgrid,grid ifile ofile	ymonsub	Subtract multi-year monthly time average
setgridtype	Set grid type	ymonmul	Multiply multi-year monthly time average
Syntax	setgridtype,gridtype ifile ofile	ymondiv	Divide multi-year monthly time average
setzaxis	Set zaxis	Syntax	<pre><pre>< operator > ifile1 ifile2 ofile</pre></pre>
Syntax	setzaxis,zaxis ifile ofile	v	*
Symax	SetZaxis,Zaxis iiile oille	muldpm	Multiply with days per month
setgatt	Set global attribute	divdpm	Divide by days per month
Syntax	setgatt,attname,attstring ifile ofile	muldpy	Multiply with days per year
setgatts	Set global attributes	divdpy	Divide by days per year
α .		Syntar	<pre>< onemator > ifile ofile</pre>

 $<\!operator\!>$ ifile ofile

consmin Ensemble minimum Ensemble minimum Ensemble minimum Ensemble minimum Ensemble maximum Ensemble maximum Ensemble maximum Ensemble maximum Ensemble maximum Ensemble maximum Ensemble standard deviation Ensemble standar				
casemin	Statistical va	lues		
commin Ensemble minimum consum				
enseman ensema			-	
consume Casemble sum Casemble sum Casemble sum Casemble sum Casemble sum Casemble warange Ca			-	
sensory constant common problem noun consumers of the con				
memstd Ensemble sandard deviation ensvar Ensemble variance Syntax Coperator > filse of lie didmin flidman Field minimum flidsum Field sum flidman Field mean flidman Field mean flidway Field warrage flidst Field warrage flidst Field warrage Syntax Coperator > list of lie zonmax Zonal minimum Zonal minimum Zonal mean Zonal mean Zonal mean Zonal deviation Zonal varrage Zonst Zonal standard deviation Syntax Coperator > list of lie Zonal maximum merrmax Meridional maximum merrmax Meridional maximum merrmam Meridional assum merrman Meridional assum merrman Meridional assum merrman Meridional assum merrman Wertical minimum Xyntax Coperator > list of lie Xyntax Coperator > list of				*
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Ensemble variance Syntax Coperator's fiftile offile monusum Monthly sum Monthly sum Monthly sum Monthly average monstd Monthly standard deviation Syntax Coperator's fiftile offile Syntax Coperat	_	ĕ		v
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Month Sandard deviation Syntax Separator Sitle of the sandard deviation Syntax Separator Syntax Syntax Separator Syntax Separator Syntax Synt				
Indiamax Field maximm Field sum Field sum Field sum Field sum Field standard deviation Field standard deviation Field variance Field varian		•	J	
Indiaman Field sum Indiaway Field werage Field variance Field			monstd	Monthly standard deviation
Iddinean Field mean Field standard deviation Field standard eleviation Field standard eleviation Field standard eleviation Field variance Field			Syntax	< operator > ifile ofile
Ridst Field standard deviation Field variance Fie	fldmean	Field mean	yearmin	Yearly minimum
Bitdwar Field variance Syntax Coperator > 1file ofile Syntax Seasonally minimum Seasonally minimum Seasonally mem Sea	fldavg	Field average	yearmax	Yearly maximum
Syntax Coperator > ifile ofile yearawg	fldstd	Field standard deviation	yearsum	Yearly sum
Zonnim	l .			
Syntax Soperators Sitle of site	Syntax	<pre><operator> ifile ofile</operator></pre>		
Somman Zonal standard Zonal standard deviation Zonal variance Zonal varianc	zonmin	Zonal minimum		
zonnean zonavg zonstd zonal average zonstd zonavd variance zon	zonmax	Zonal maximum	Syntax	<pre><operator> ifile ofile</operator></pre>
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Zonal standard deviation Syntax Conal standard deviation Syntax Coperator > ifile ofile				
Zonar Zonal variance Syntax Soperator > ifile ofile	_	~		
Syntax Seasonally standard deviation				
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mersum Meridional sum Meridional mean Meridional mean Meridional mean Meridional warage Meridional avarage Syntax Operator > ifile ofile Vertial Meridional avarage Vertical minimum Vertimax Vertical minimum Vertimax Vertical maximum Vertical maximum Vertical mean Vertical sum Vertical werage Vertical avarage Vertical avarage Vertical avarage Vertical avarage Vertical avarage Vertical sum Vertical mean Vertic				
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vertmean vertical mean vertary vertical mean vertary vertical average vertstd vertical standard deviation Syntax coperator > ifile ofile yeasmin yeasman Multi-year seasonally minimum yeasman multi-year seasonally maximum yeasman yeasawg Multi-year seasonally maximum yeasman yeasawg Multi-year seasonally maximum yeasawg Multi-year seasonally mean yeasavg Multi-year seasonally mean weasawg yeasatd Multi-year seasonally mean Multi-year seasonally maximum Multi-year seasonally mean Multi-year seasonally maximum Mult	vertmax	Vertical maximum	ymonmean	Multi-year monthly mean
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			-	
Syntax < operator > ifile ofile Syntax < operator > ,grid ifile ofile				
	Syntax	<pre>< operator > ifile ofile</pre>	Syntax	<pre>< operator >,grid ifile ofile</pre>

remap	SCRIP grid remapping
Syntax	remap,grid,weights ifile ofile
interpolate	PINGO grid interpolation
intgridbil	Bilinear grid interpolation
Syntax	<pre>< operator > , grid ifile ofile</pre>
ml2pl	Model to pressure level interpolation
Syntax	ml2pl,plevels ifile ofile
ml2hl	Model to height level interpolation
Syntax	ml2hl, hlevels ifile ofile
inttime	Time interpolation
Syntax	inttime,date,time[,inc] ifile ofile
intyear	Year interpolation
Syntax	intyear, years ifile1 ifile2 oprefix
V	, , , , , , , , , , , , , , , , , , ,

Transformation

sp2gp		Spectral to gridpoint
sp2gpl		Spectral to gridpoint linear
gp2sp		Gridpoint to spectral
gp2spl		Gridpoint to spectral linear
	Syntax	< operator > ifile ofile
sp2sp		Spectral to spectral
	Syntax	${ m sp2sp}, trunc \; { m ifile} \; { m ofile}$
uv2dv		** 1 ** 1 1 1
uv2av		U and V wind to divergence and vorticity
dv2uv		U and V wind to divergence and vorticity Divergence and vorticity to U and V wind
	Syntax	

Formatted I/O

input	ASCII input
Syntax	input,grid ofile
inputsrv	SERVICE input
inputext	EXTRA input
Syntax	< operator > ofile
output	ASCII output
Syntax	output ifiles
outputf	Formatted output
Syntax	outputf, format, nelem ifiles
outputint	Integer output
outputsrv	SERVICE output
outputext	EXTRA output
Syntax	< operator > ifiles

Miscellaneous

Miscenaneous	•
timsort	Sort over the time
Syntax	timsort ifile ofile
const	Create a constant field
Syntax	const,const,grid ofile
random	Create field with random values
Syntax	random,grid ofile
vardup	Duplicate variables
Syntax	vardup ifile ofile
varmul	Multiply variables
Syntax	varmul,nmul ifile ofile
gradsdes	GrADS data descriptor file
gradsdes2	GrADS data descriptor file (version 2 map)
Syntax	$< operator > ext{ifile}$
rotuvb	Backward rotation
Syntax	${f rotuvb}, u, v,$ ifile ofile
mastrfu	Mass stream function
Syntax	mastrfu ifile ofile