NCSS subset parameters table

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Parameter Name	Required	Constraints	Description / possible values	default
var	yes	Variables must be in the dataset description. **Only requests on variables with same vertical levels are supported**	Name of variables, separated by ',' (comma).	
latitude	no	Must be within the data. Note the lat/lon bounding box declared in the dataset description is an approximated rectangle to the actual lat/lon boundaries so there may be valid points within the data but ouside of the declared bounding box in the dataset description. If latitude is provided longitude must be provided too	In Grid As Point requests latitude of the point	
longitude	no	Must be within the data. Note the lat/lon bounding box declared in the dataset description is an approximated rectangle to the actual lat/lon boundaries so there may be valid points within the data but ouside of the declared bounding box in the dataset description. If longitude is provided latitude must be provided too	In Grid As Point requests longitude of the point	
north	no	lat/lon bounding box must have north > south	Used to define a lat/lon bounding box. **Bounding box must have all 4 parameters: north, south, east and west**	If no bounding box is specified returns the whole grid
south	no	lat/lon bounding box must have north > south	Used to define a lat/lon bounding box. **Bounding box must have all 4 parameters: north, south, east and west**	If no bounding box is specified returns the whole grid
east	no	lat/lon bounding box must have east > west; if crossing 180 meridian, use east boundary > 180	Used to define a bounding box. **Bounding box must have all 4 parameters: north, south, east and west**	If no bounding box is specified returns the whole grid
west	no	lat/lon bounding box must have east > west; if crossing 180 meridian, use east boundary > 180	Used to define a bounding box. **Bounding box must have all 4 parameters: north, south, east and west**	If no bounding box is specified returns the whole grid
minx	no	projection bounding box must have minx < maxx	Used to define a projection bounding box. **Bounding box must have all 4 parameters: minx, miny, maxx, maxy**	If no bounding box is specified returns the whole grid
maxx	no	projection bounding box must have minx < maxx	Used to define a projection bounding box. **Bounding box must have all 4 parameters: minx, miny, maxx, maxy**	If no bounding box is specified returns the whole grid
miny	no	projection bounding box must have miny < maxy	Used to define a projection bounding box. **Bounding box must have all 4 parameters: minx, miny, maxx, maxy**	If no bounding box is specified returns the whole grid
maxy	no	projection bounding box must have miny < maxy	Used to define a projection bounding box. **Bounding box must have all 4 parameters: minx, miny, maxx, maxy**	If no bounding box is specified returns the whole grid
time	no	Must be a time within the dataset time range	Time as a W3C date or "present". The time slice closest to the requested time is returned	If no time or time range is provided returns the closest to the current time
time_start	no	The provided time range must intersect the dataset time range	Used to specify the starting time of a time range. Time as a W3C date or "present". **Two of time_start, time_end, time_duration must be present to define a valid time range**.	If no time or time range is provided returns the closest to the current time
time_end	no	The provided time range must intersect the dataset time range	Used to specify the ending time of a time range. Time as a W3C date or "present". **Two of time_start, time_end, time_duration must be present to define a valid time range**.	If no time or time range is provided returns the closest to the current time
time_duration	no	The provided time range must intersect the dataset time range	Used to specify the time duration of a time range. Duration as a W3C time duration. **Two of time_start, time_end, time_duration must be present to define a valid time range**.	If no time or time range is provided returns the closest to the current time
temporal	no	Must be equal to "all" to have effect	Shorthand to request all the available time range	If no time or time range is provided returns the closest to the current time
timeStride	no	Only for grid requests	Take only every nth time in the available series	1
horStride	no	Only for grid requests	Take only every nth point (both x and y)	1
vertCoord	no	Requested variables must have the same vertical levels otherwise ambiguous results are likely. The specified vertical level must lie within the declared range in the dataset description if not the response will contain NaN values		If the requested variables have vertical levels, all the vertical levels will be returned
accept	no	Accepted values for grid request are netCDF and for grid as point requests csv, xml, netCDF	Used to specify the returned format. Supported formats are netCDF for grid requests and csv, xml and netcdf for grid as point	Grid requests netcdf, Grid as point requests csv

NCSS Use Cases and Request Strings for Grid Requests

Single Variable Requests

Note that these single variable requests can be easily extended to multivariable request by simply passing a comma separated list of variables in the var= parameter. Please note that **only requests on variables with same vertical levels are supported**

Basic Request:

"Give me all of the data for the variable Temperature_pressure"

Most simple request: ?var=Temperature_pressure

var	Spatial	Coordinate	Horizontal Stride	Temporal	Temporal Stride	Vertical Coordinate
Temperature_pressure						
Temperature_pressure	not set	not set	1 - OR - not set	temporal=all - OR - time_start=YYYY-MM-DDThh:mm:ss.sTZD& time_end=YYYY-MM-DDThh:mm:ss.sTZD (Using full temporal bounds)	1 - OR - not set	not set

* blank cells indicates parameter is not set (i.e. horStride=) or is not included in request string

Single variable request within a lat/lon bounding box:

"Give me all of the data for the variable Temperature_pressure from the Global GFS model over the state of Colorado"

Most simple request: ?var=Temperature_pressure&north=41&west=-109.05&east=-102.05&south=37

var	Spatial	Coordinate	Horizontal Stride	Temporal	Temporal Stride	Vertical Coordinate
Temperature_pressure	north=41& west=-109.05& east=-102.05& south=37	not set				
Temperature_pressure	north=41& west=-109.05& east=-102.05& south=37		1 - OR - not set	temporal=all - OR - time_start=YYYY-MM-DDThh:mm:ss.sTZD& time_end=YYYY-MM-DDThh:mm:ss.sTZD (Using full temporal bounds)	1 - OR - not set	not set

Single variable request with an even horizontal stride across the entire grid:

"Give me the variable Temperature_pressure for every 5th data point on the grid (deltax = deltay = 5), on all vertical levels (if any exist)"
Most simple request: ?var=Temperature_pressure&horStride=5

var	Spatial	Horizontal Stride	Temporal	Temporal Stride	Vertical Coordinate
Temperature_pressure		5 [integer > 0]			
Temperature_pressure	not set - OR - north=90.0000& west=0.0000& east=-0.5000& south=-90.0000 (Using full grid bounds)	5 [integer > 0]	temporal=all - OR - time_start=YYYY-MM-DDThh:mm:ss.sTZD& time_end=YYYY-MM-DDThh:mm:ss.sTZD (Using full temporal bounds)	1 - OR - not set	not set

Single variable request with an even horizontal stride inside a bounding box:

"Give me every 5th data point in (deltas = deltay = 5), on all vertical levels (if any exist), from the Global GFS model over the state of Colorado"

Most simple request: ?var=Temperature_pressure&north=41&west=-109.05&east=-102.05&south=37&horStride=5

var	Spatial	Horizontal Stride	Temporal	Temporal Stride	Vertical Coordinate
Temperature_pressure	north=41& west=-109.05& east=-102.05& south=37	5 [integer > 0]			

Temperature_pressure	north=41& west=-109.05& east=-102.05& south=37	5 [integer > 0]	temporal=all - OR - time_start=YYYY-MM-DDThh:mm:ss.sTZD& time_end=YYYY-MM-DDThh:mm:ss.sTZD (Using full temporal bounds)	1 - OR - not set	not set

Single variable request with on a particular vertical level:

"Give me all of the data for the variable Temperature_pressure at 1000 mb"

Most simple request: ?var=Temperature_pressure&vertCoord=1000

var	Spatial	Horizontal Stride	Temporal	Temporal Stride	Vertical Coordinate
Temperature_pressure					1000*
Temperature_pressure	not set - OR - north=90.0000& west=0.0000& east=-0.5000& south=-90.0000 (Using full grid bounds)	1 - OR - not set	temporal=all - OR - time_start=YYYY-MM-DDThh:mm:ss.sTZD& time_end=YYYY-MM-DDThh:mm:ss.sTZD (Using full temporal bounds)	1 - OR - not set	vertical level (value must be in the same units used in the dataset)

* note that the vertical level value must be in the same units used in the dataset - in this example we assume millibars but you will need to check the dataset description to be sure.