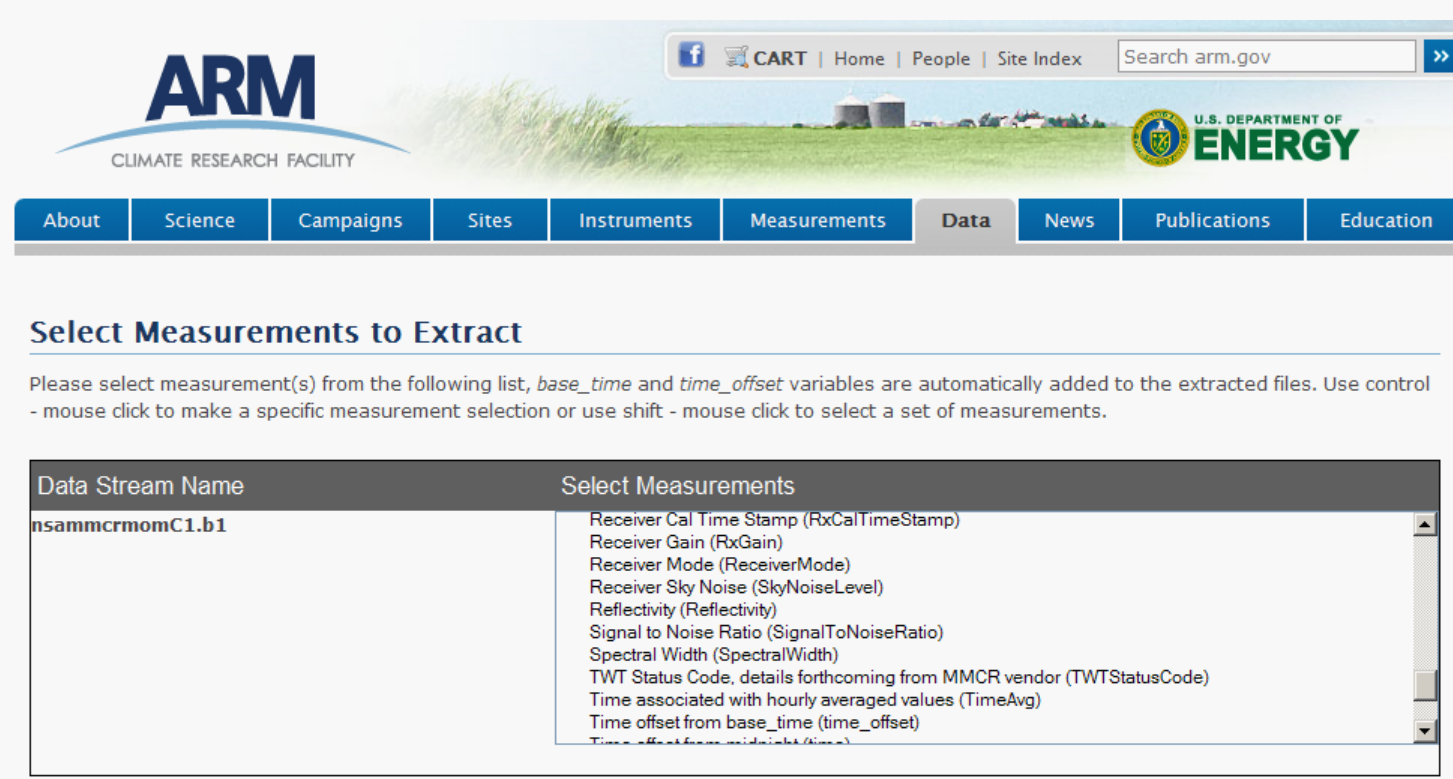


Objectives

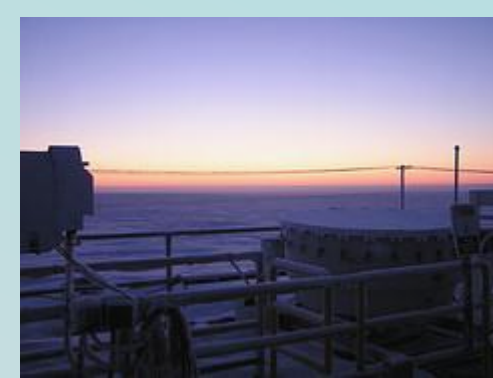
- Allow users to order and download specific measurements, without requiring them to download an entire data stream
- Allow advanced selection criteria in choosing measurements of interest

Extract Using Data Browser



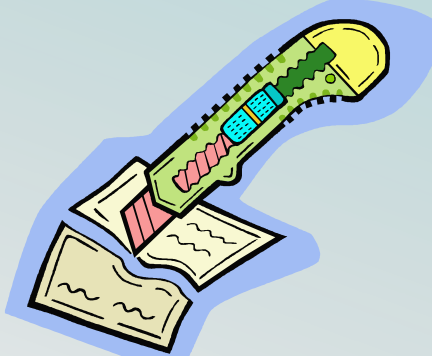
400 MB per day – Full Radar File

```
netcdf nsamcromC1.b1
dimensions:
  time = UNLIMITED; // (54795 currently)
  mode = 10;
  namelength = 64;
  heights = 234;
  Hourly = 24;
```



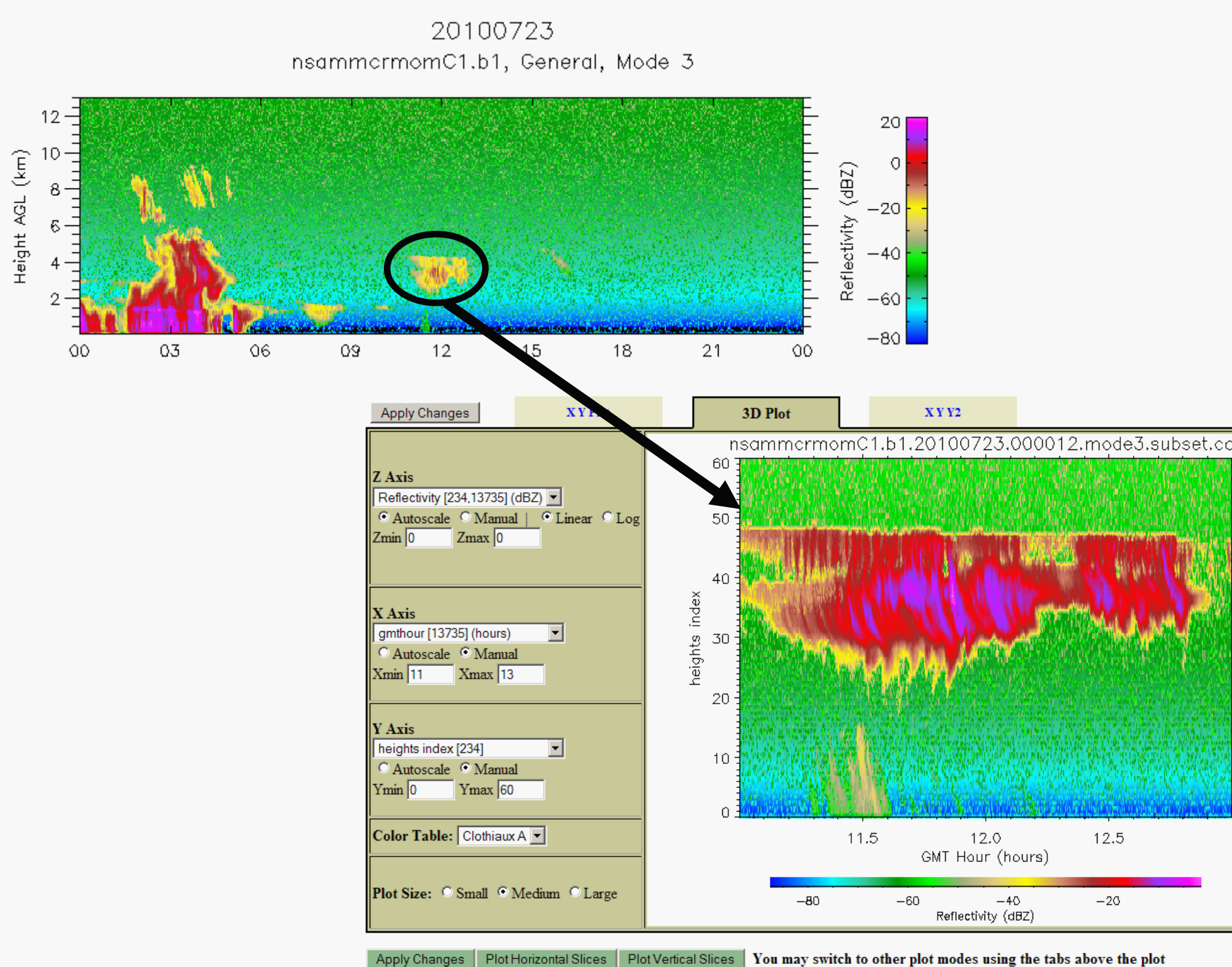
12 MB per day - Custom File
 97% reduction!

- Extracting:
- General Mode Reflectivity
 - Height and Time arrays



After Extraction

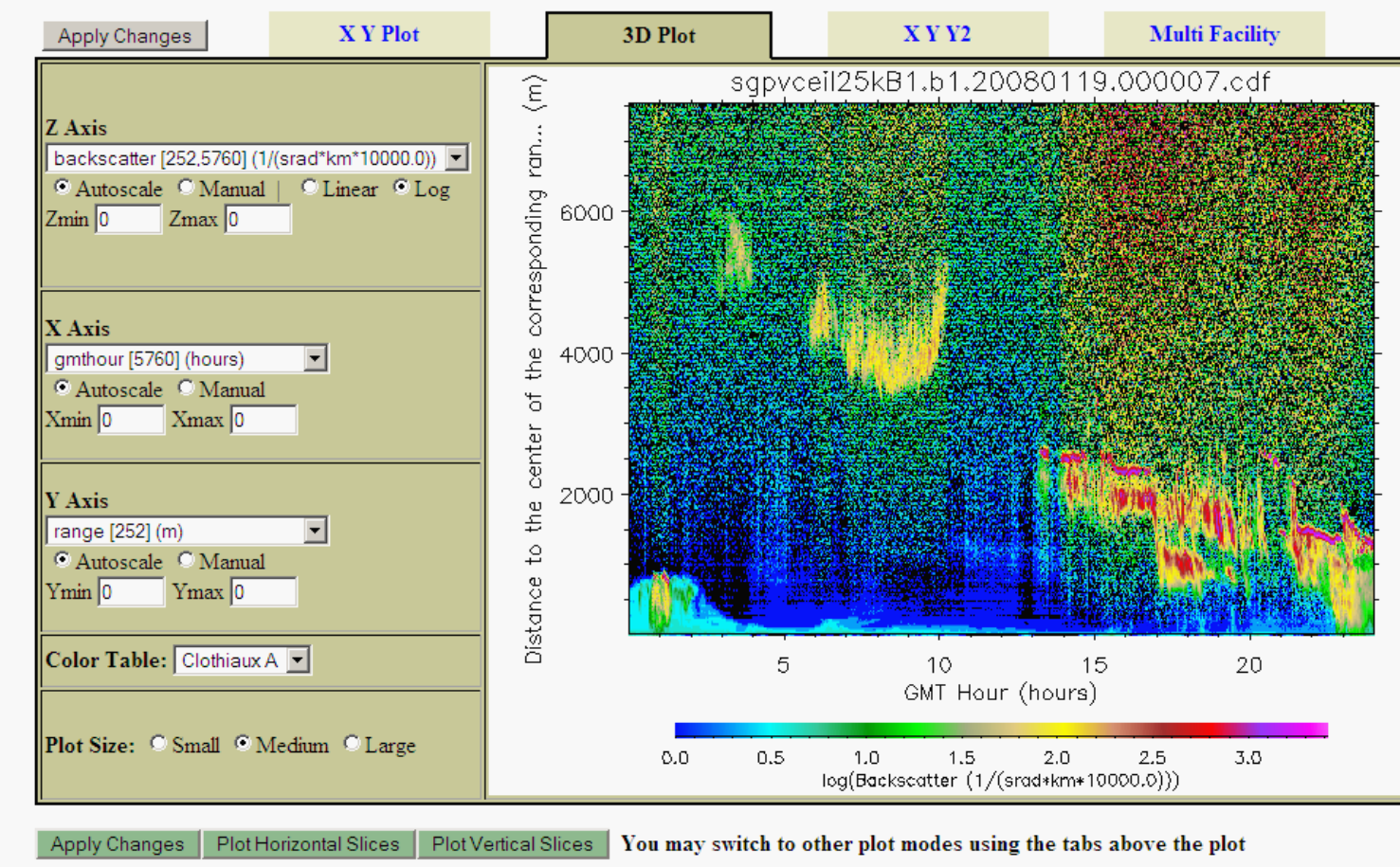
- Easily plot and focus on region of interest using NCVweb
- Download much smaller files!



Custom NetCDF Extract Using NCVweb

Features

- Works with files already requested
- Works with single or multi-dimensional data fields
- Field-level and global attributes for the selected variables are retained
- Percentage of data is documented in global attributes
- Greatly reduces amount to download



Pick	Index	Variable Name	Dimensions	Units	Variable Long Name
<input type="checkbox"/>	0	base_time	[scalar]	seconds since 1970-1-1 00:00:00.000	Base time in Epoch
<input type="checkbox"/>	1	time_offset	[time=5760]	seconds since 2008-01-19 00:00:07.000	Time offset from base_time
<input type="checkbox"/>	2	time	[time=5760]	seconds since 2008-01-19 00:00:07.000	Time offset from midnight
<input type="checkbox"/>	3	range	[range=252]	m	Distance to the center of the corresponding range bin
<input type="checkbox"/>	4	detection_status	[time=5760]	integers	Detection status
<input type="checkbox"/>	5	status_flag	[time=5760]	integers	Calometer status indicator
<input type="checkbox"/>	6	lowest_cloud_base_height	[time=5760]	m	Lowest cloud base height detected
<input type="checkbox"/>	7	vertical_visibility	[time=5760]	m	Vertical visibility
<input type="checkbox"/>	8	second_lowest_cloud_base_height	[time=5760]	m	Second lowest cloud base height
<input type="checkbox"/>	9	altitude_of_highest_echo	[time=5760]	m	Altitude of highest echo
<input type="checkbox"/>	10	third_lowest_cloud_base_height	[time=5760]	m	Third lowest cloud base height
<input type="checkbox"/>	11	laser_pulse_energy	[time=5760]	%	Laser pulse energy
<input type="checkbox"/>	12	laser_temperature	[time=5760]	C	Laser temperature
<input type="checkbox"/>	13	recorder_status	[time=5760]	%	Recorder status
<input type="checkbox"/>	14	wind_speed	[time=5760]	m/s	Wind speed
<input type="checkbox"/>	15	wind_direction	[time=5760]	degrees	Wind direction
<input type="checkbox"/>	16	wind_speed_std_dev	[time=5760]	m/s	Standard deviation of wind speed
<input type="checkbox"/>	17	wind_direction_std_dev	[time=5760]	degrees	Standard deviation of wind direction
<input type="checkbox"/>	18	precipitation	[time=5760]	mm	Precipitation
<input type="checkbox"/>	19	precipitation_corrected	[time=5760]	mm	Corrected precipitation
<input type="checkbox"/>	20	day_of_year	[time=5760]	days	GMT Day of Year
<input type="checkbox"/>	21	hour_of_year	[time=5760]	hours	GMT Hour

```
netcdf sgpvcei125k1.b1.20080119.000007.subset {
dimensions:
  time = UNLIMITED; // (5760 currently)
variables:
  int base_time;
    base_time:string = "19-Jan-2008,0:00:07 GMT" ;
    base_time:long_name = "Base time in Epoch" ;
    base_time:units = "seconds since 1970-1-1 0:00:00 0:00" ;
  double time_offset(time);
    time_offset:long_name = "Time offset from base time" ;
    time_offset:units = "seconds since 2008-01-19 00:00:07 0:00" ;
  float first_cbh(time);
    first_cbh:long_name = "Lowest cloud base height detected." ;
    first_cbh:units = "m" ;
    first_cbh:valid_min = 0. f ;
    first_cbh:valid_max = 7620. f ;
    first_cbh:missing_value = -9999. f ;
    first_cbh:values = " If detection_status = 1, 2 or 3,\n",
    " lowest cloud base height measured.\n",
    " If detection_status = 4 this value\n",
    " will be stored as -9999 and a value\n",
    " for vertical visibility will be stored.\n",
    " If detection_status = 0 or 5, -9999 will\n",
    " be stored for this value and vertical visibility.\n",
    " (5 slashes were read from field)." ;
// global attributes:
  ingest_version = "process-ingest-voeil_ingest-8.1-0" ;
  libingest_version = "ds-dautil-ingest_lib-1.7-0" ;
  .NCV_extraction_from_file = "/data/datastream/sgp/sgpvcei125k1.b1/sgpvcei125k1.b1.20080119.000007.cdf" ;
  .NCV_extraction_timestamp = "Thu Feb 28 09:06:32 2008" ;
```

Plans

Conditional Extraction

Select data based on values of other measurements, conditions, reports, or flags

Examples:

- Extract radiation data when solar zenith angle is small
- Extract radar data when clouds are present or rain detected
- Extract data for time periods when no data quality reports have been issued
- Extract data that passes specific data quality tests

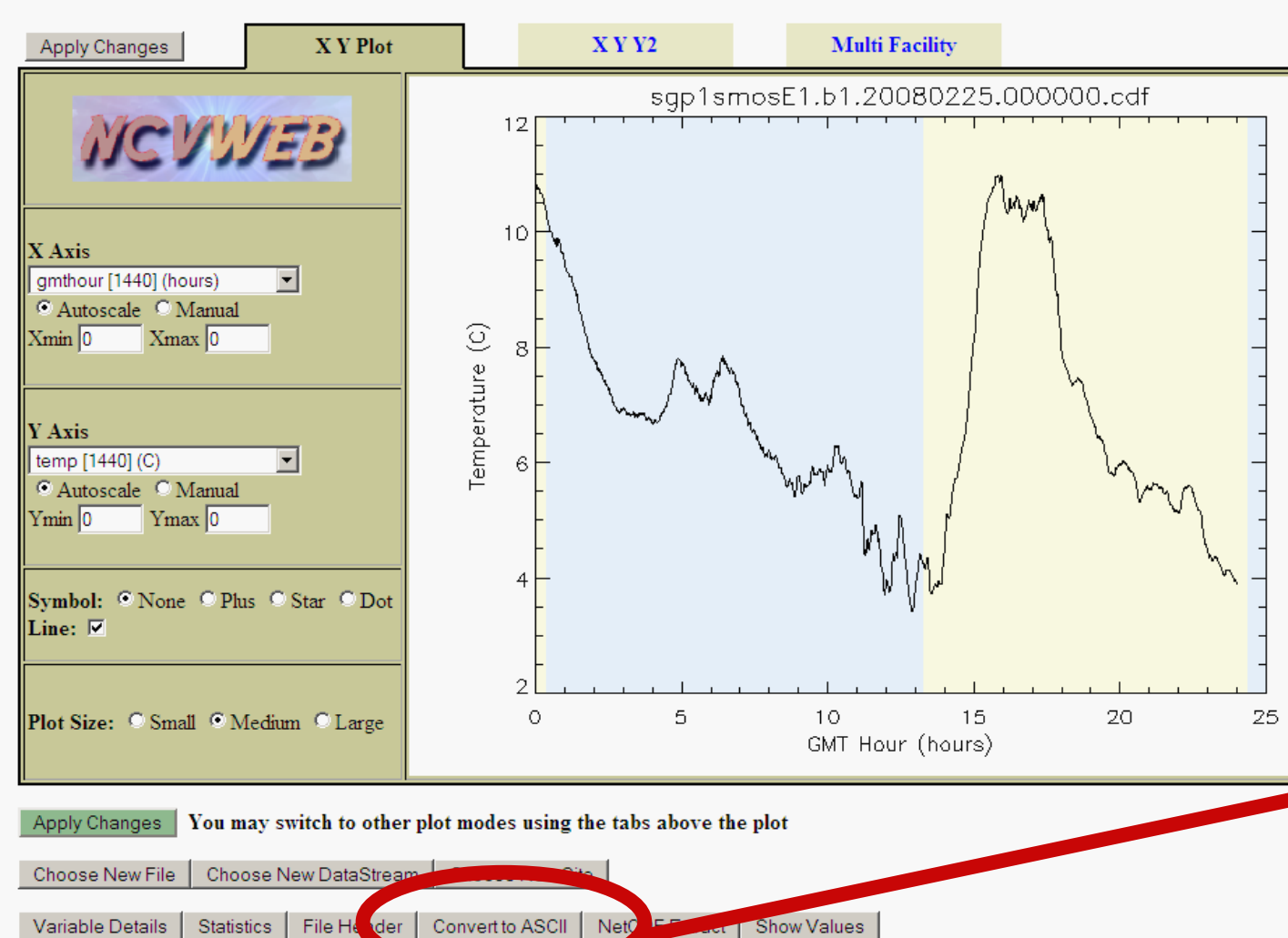
Enhanced Data Slices

Extract specific height, range, time, mode, or wavelength slices

Custom ASCII Extract Using NCVweb

Features

- Create one row per time record with as many variables (columns) as desired
- Create block output for variable sets having mismatched dimensions
- Send results to a spreadsheet or text file for further analysis and plotting
- Tool can remove records designated as missing
- Allows subsampling of results



Pick	Index	Variable Name	Dimensions	Units	Variable Long Name
<input type="checkbox"/>	1	time_offset	[time=1440]	seconds since 2008-02-24 23:05:00 0:00	Time offset from base_time
<input type="checkbox"/>	2	time	[time=1440]	seconds since 2008-02-25 00:00:00 0:00	Time offset from midnight
<input type="checkbox"/>	4	wspd	[time=1440]	m/s	Wind Speed
<input type="checkbox"/>	6	wspd_va	[time=1440]	m/s	Wind Speed (vector averaged)
<input type="checkbox"/>	8	wdir	[time=1440]	deg	Wind Direction
<input type="checkbox"/>	10	std_deg	[time=1440]	deg	Standard Deviation of wind direction
<input type="checkbox"/>	12	temp	[time=1440]	C	Temperature
<input type="checkbox"/>	14	rh	[time=1440]	%	Relative Humidity
<input type="checkbox"/>	16	vap_pres	[time=1440]	kPa	Vapor Pressure
<input type="checkbox"/>	18	bar_pres	[time=1440]	kPa	Barometric Pressure
<input type="checkbox"/>	20	precip	[time=1440]	mm	Precipitation Total
<input type="checkbox"/>	22	precip_corr	[time=1440]	mm	Corrected Total Precipitation
<input type="checkbox"/>	28	DOY	[time=1440]	days	GMT Day of Year
<input type="checkbox"/>	29	hour	[time=1440]	hours	GMT Hour

