MRTWeb: Enhanced MODIS data discovery and delivery services from the LP DAAC

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U.S. Department of the Interior
U.S. Geological Survey

Overview

- Background
  - MRTWeb Purpose and Approach
  - MRTWeb Development
- Early Look with Two Use Cases
  - Create Regional Mosaic
  - Subset Area from Time Series
- Schedule and User Feedback

MRTWeb – Purpose and Approach

Purpose: Reduce data usability barriers related to the MODIS standard tile format by performing remote, user-specified processing

One Approach

Search & Order MODIS tiles

Download individual tiles in standard format

Conduct user-specified, local processing to create application-ready MODIS data

Use MODIS data

MRTWeb Approach

Select MODIS tiles

Specify processing options

Initiate and monitor remote processing job

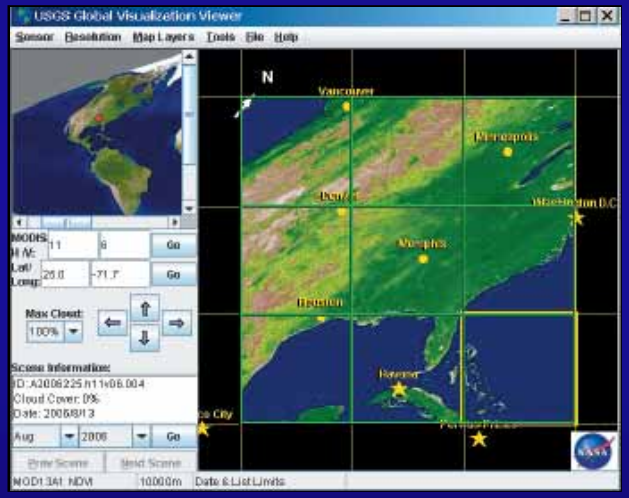
Download application – ready MODIS data

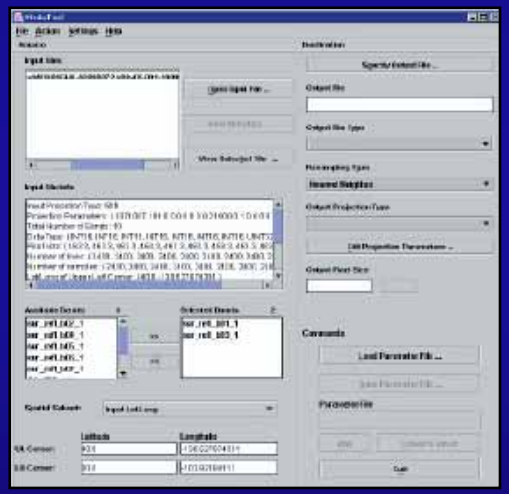
Use MODIS data

MRTWeb - Development

Rapid development adapts and integrates two existing LP DAAC – USGS/EROS technologies to create MRTWeb

GloVis (Selection Interface) + **MRT (Processing Tool)**





Mosaic tiles
Subset an area from a tile, mosaic, or time series
Eliminate unwanted bands or layers
Define projection
Set resampling options
Choose file format

Rapidly visualize tiles within map context
Navigate through time and space
Select tiles of interest for processing

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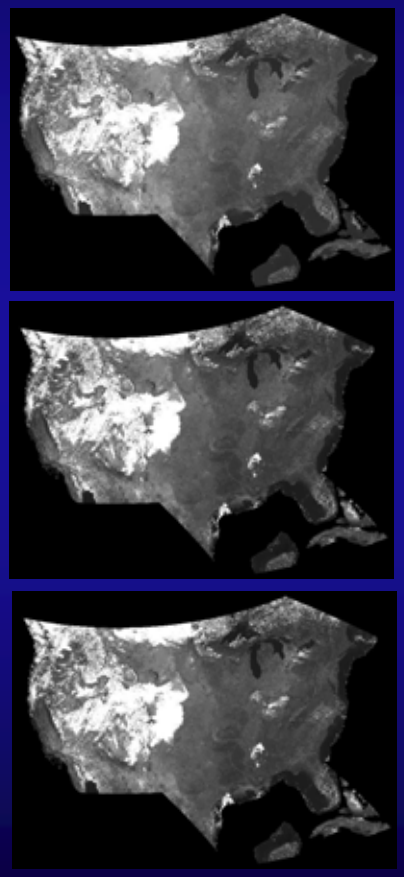
MRTWeb – Early Look with Use Cases

Use Case #1 – Create Regional Mosaic



- MYD09A1 – Aqua MODIS 8-Day Surface Reflectance Composite
- Space - 12 tiles covering CONUS
- Time – December 19-26, 2006
- Eliminate all but bands 1, 3, and 4
- Reproject to Lambert Azimuthal Equal Area
- Download data in GeoTIFF format

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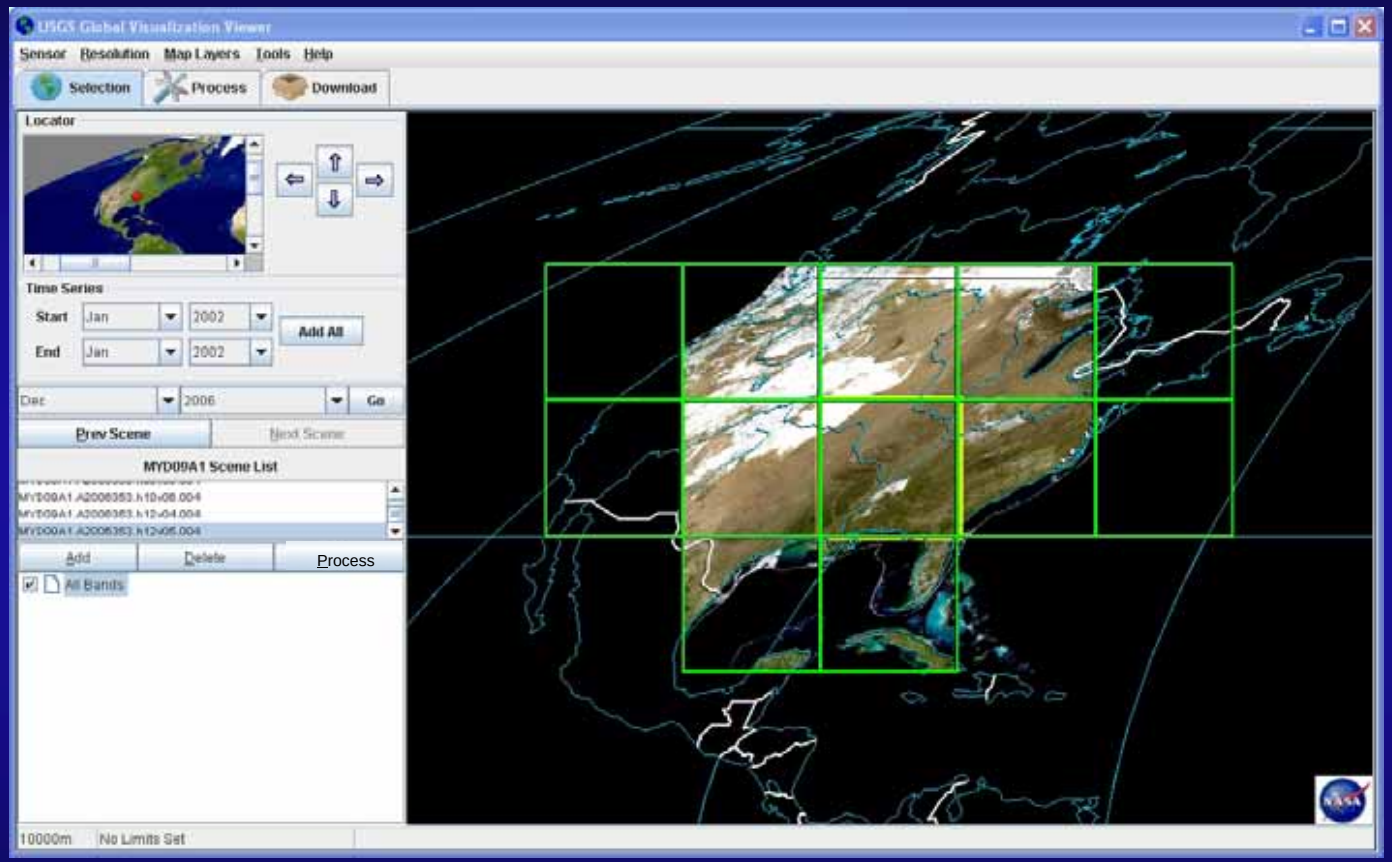
MRTWeb – Create Regional Mosaic

Select

Product
Tiles / Dates
Bands



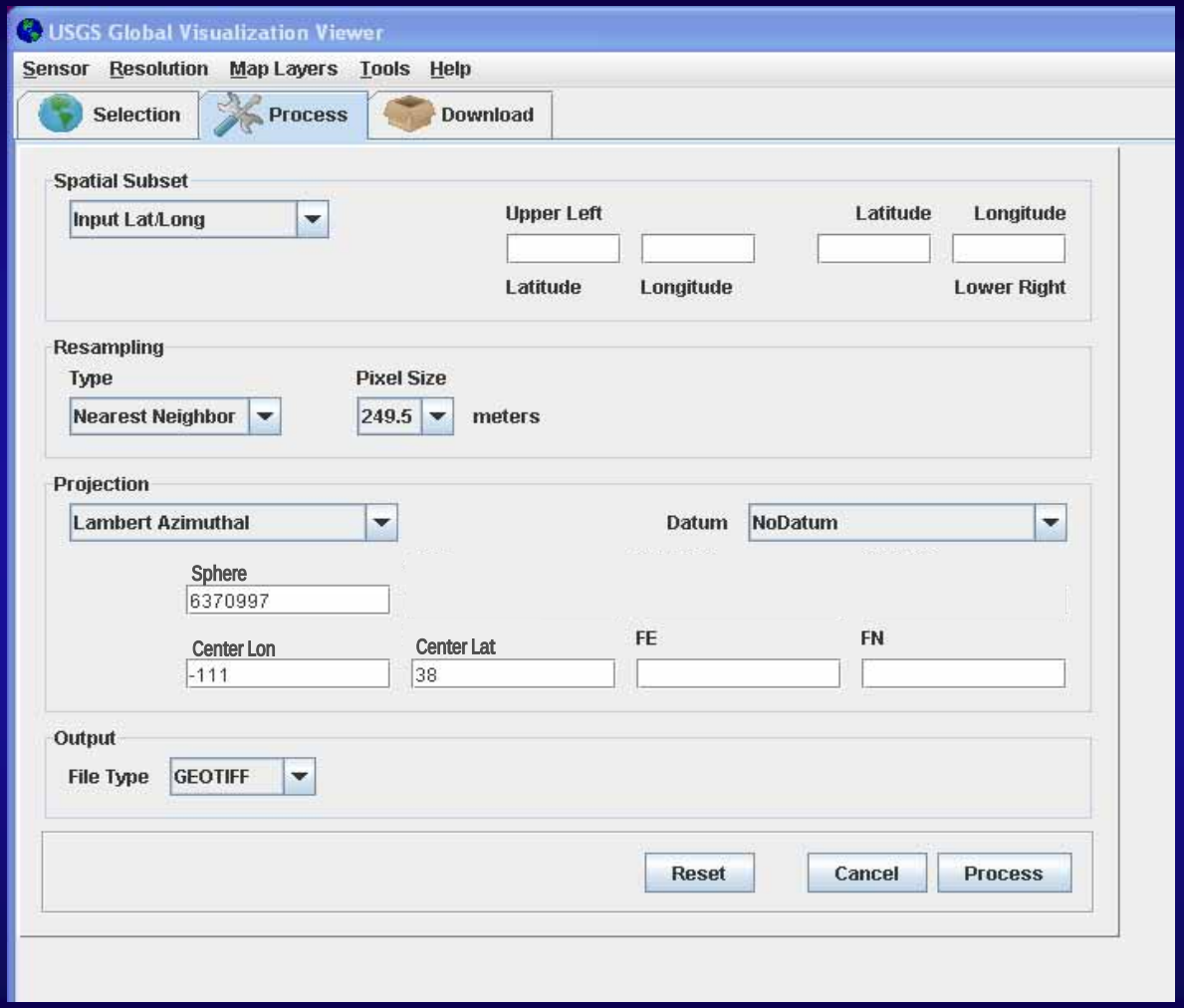
Continue

to Process Tab

MRTWeb – Create Regional Mosaic

Specify processing options…

Continue to Download Tab…



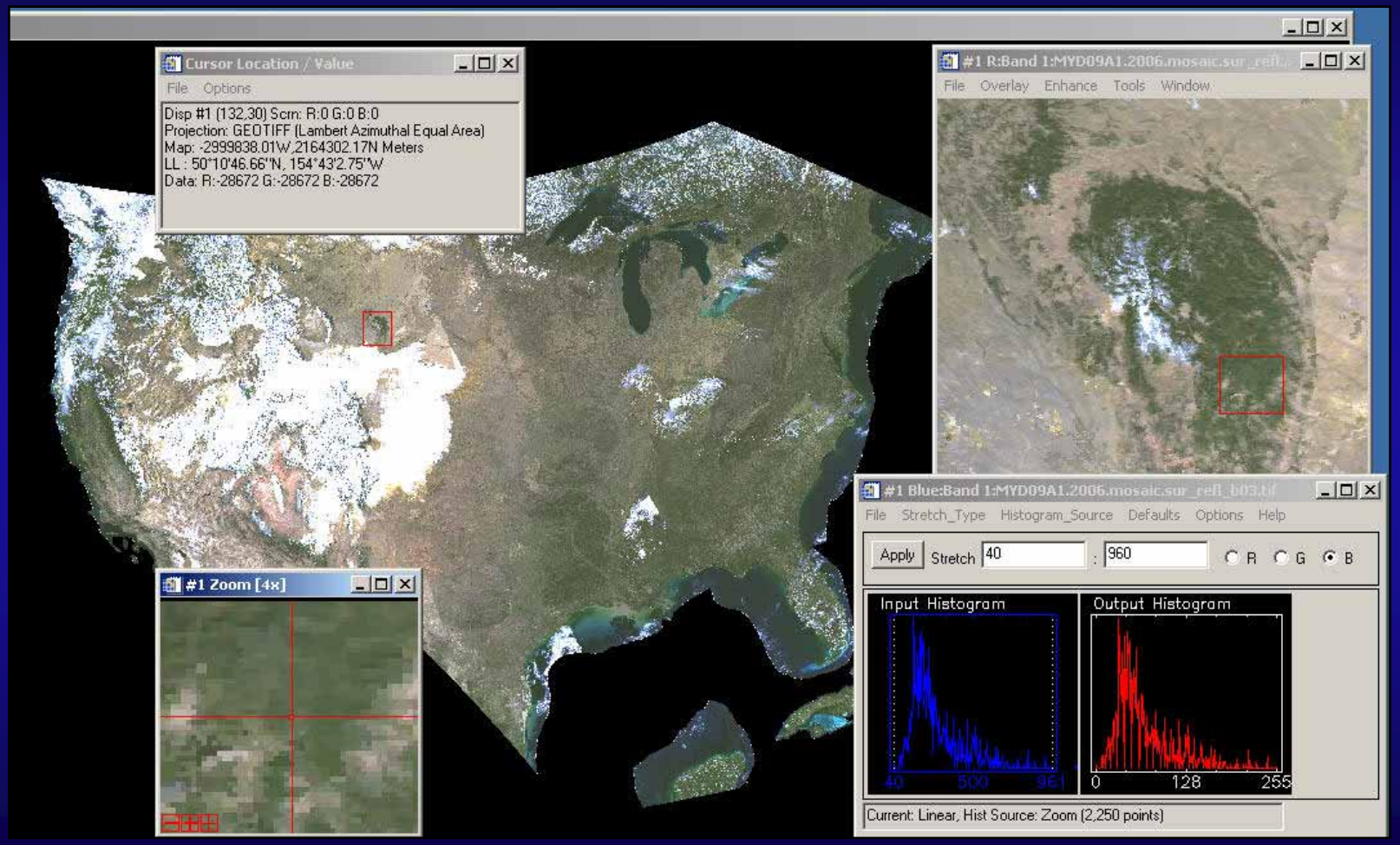
MRTWeb – Create Regional Mosaic

Download Features (any use case)

- After accepting options, MRTWeb will initiate the processing job
- On the Download Tab you will be able to see the status of the processing as it occurs
- When the processing is finished you will be able to download your processed data
- You won't need to stay logged into MRTWeb, you will be able to exit your browser and come back later to retrieve your finished data

MRTWeb – Create Regional Mosaic

Use MODIS Data



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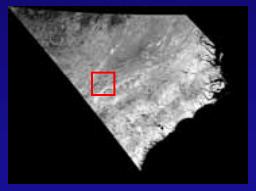
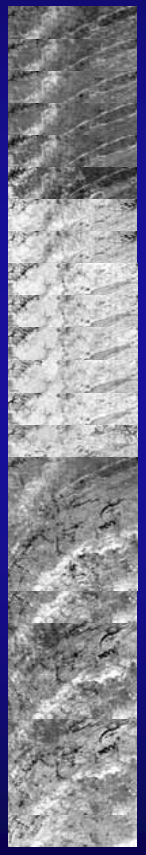
MRTWeb – Early Look with Use Cases

Use Case #2 – Subset Area from Time Series





- MOD13A1 – Terra MODIS 16-day Vegetation Indices
- Space – LAT/LON UL= 37, -85, LR = 35, -83
- Time – Calendar year 2006
- Subset an area from a one-year time series (n = 23)
- Eliminate all but NDVI (band 1)
- Reproject to Lambert Azimuthal Equal Area
- Download data in GeoTIFF format

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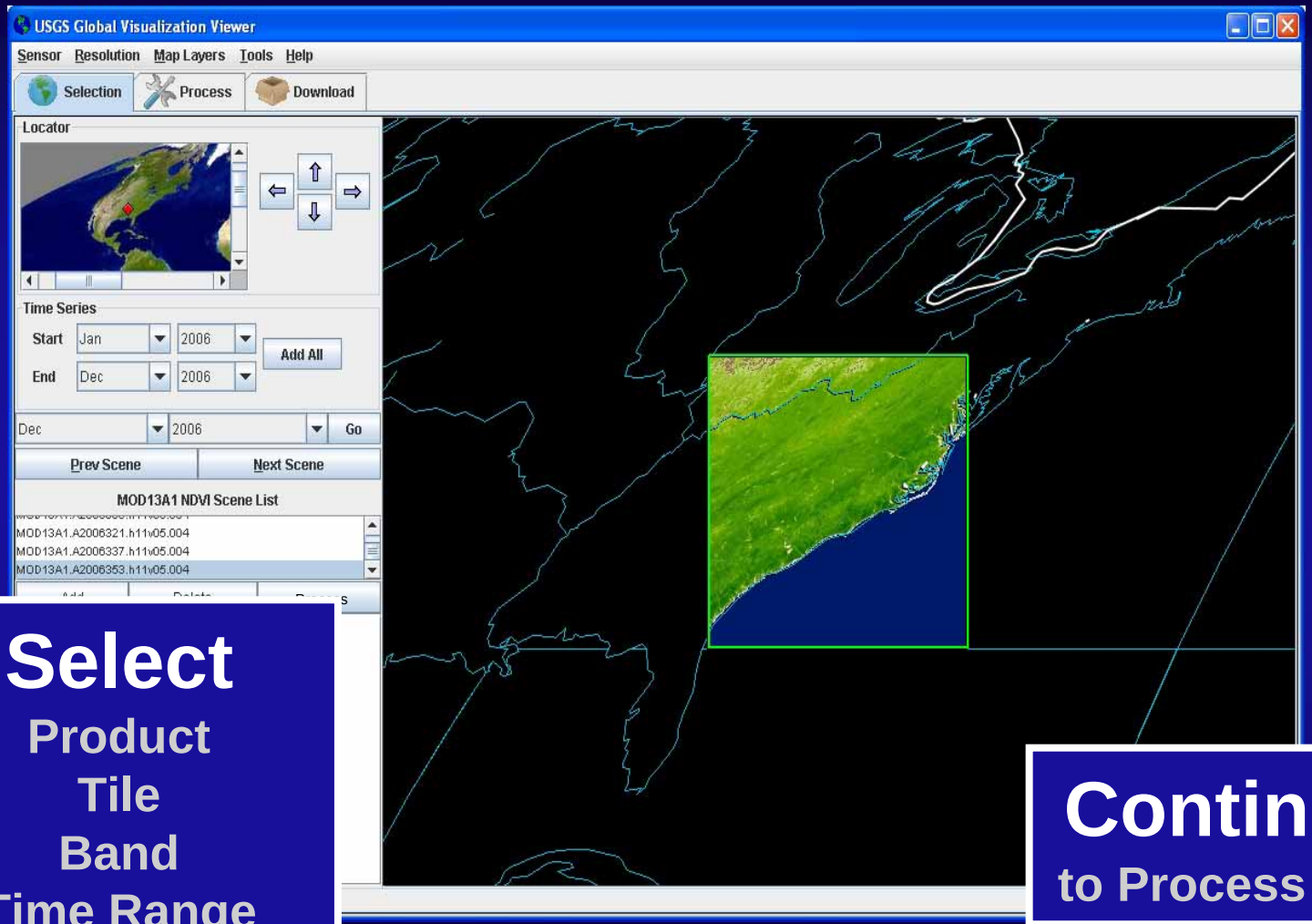
MRTWeb – Subset Area from Time Series



Select
Product
Tile
Band
Time Range

Continue
to Process Tab

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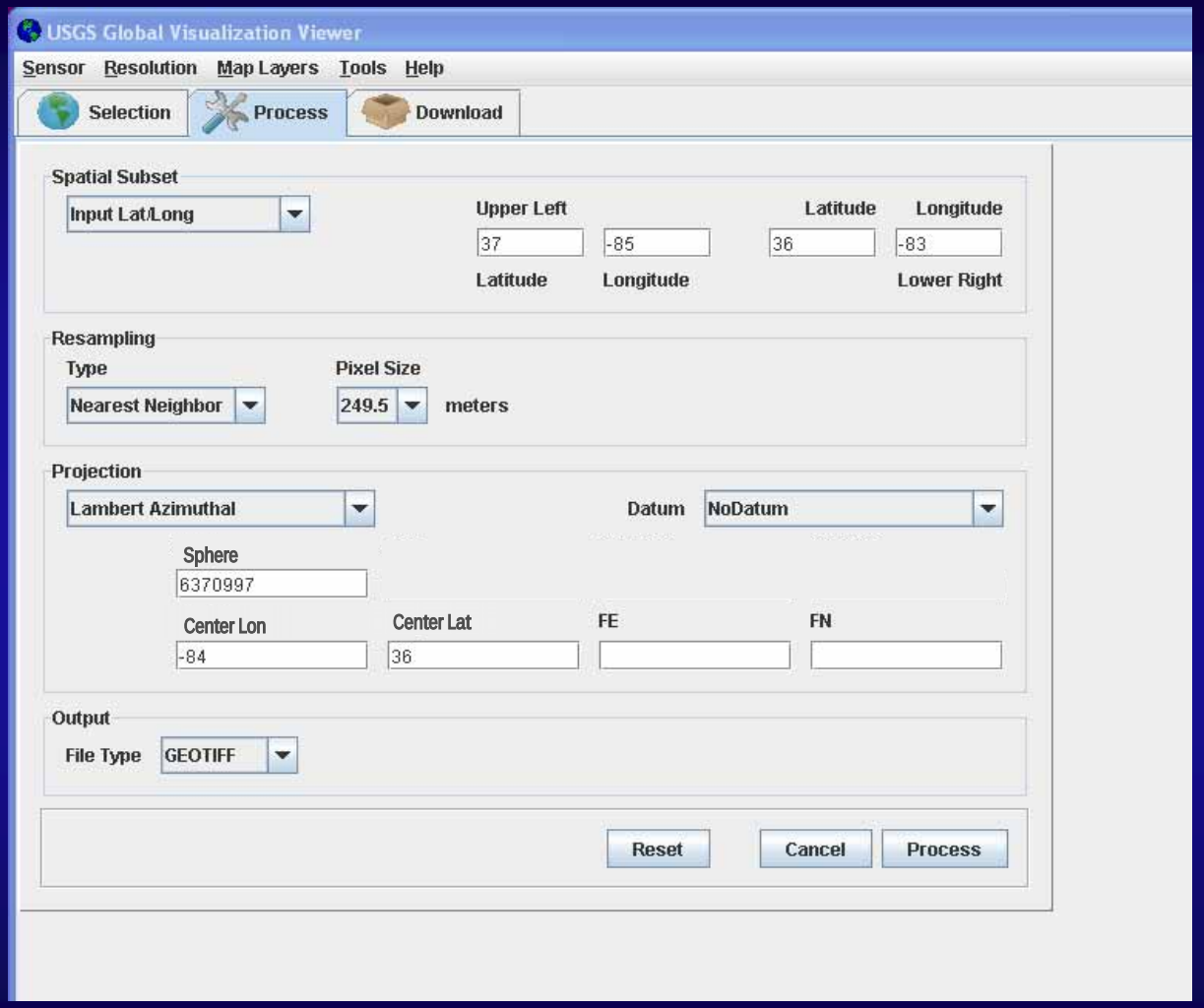
MRTWeb – Subset Area from Time Series

Specify Processing

Spatial Subset
Resampling
Projection
Output File Type



Continue

to Download Tab

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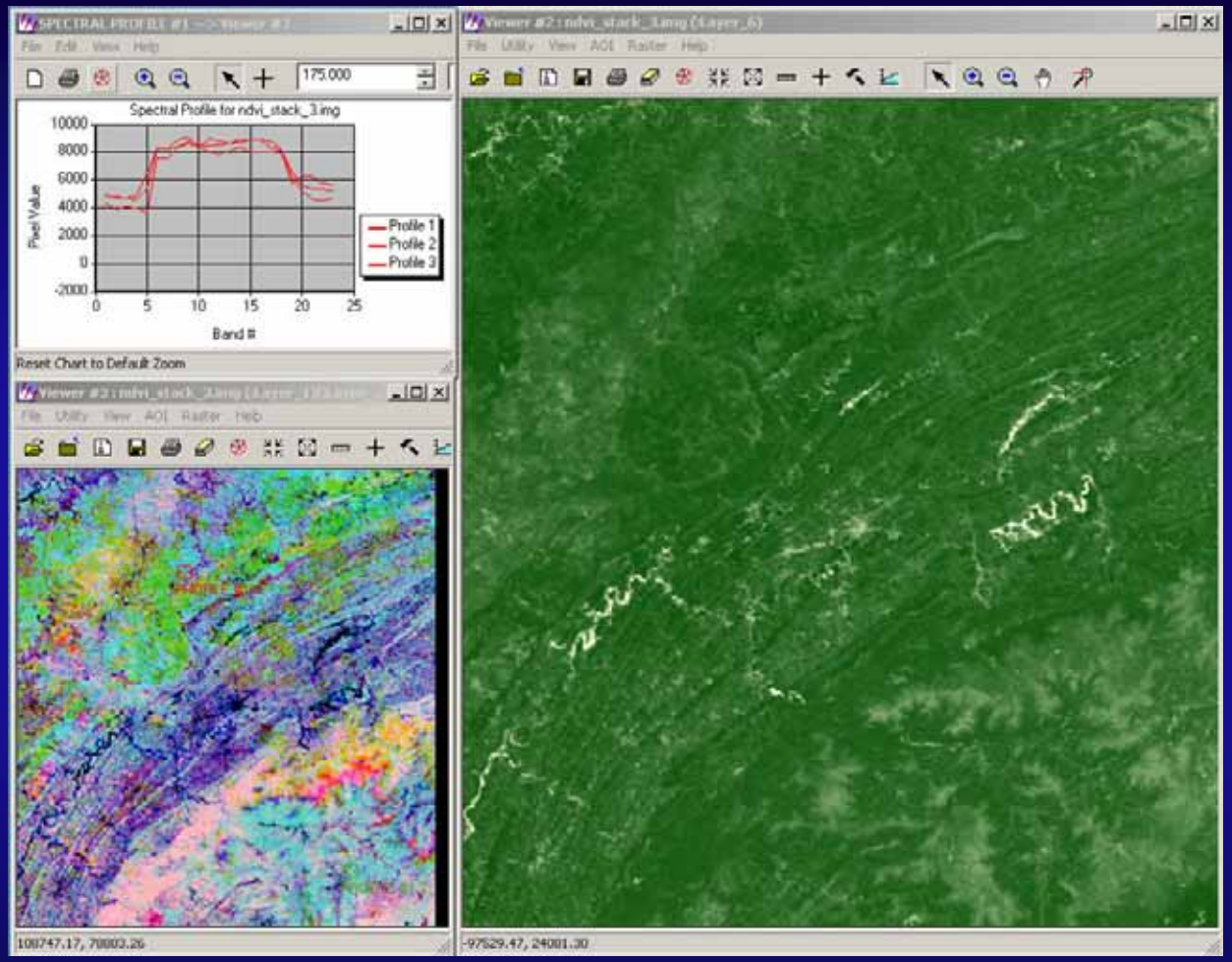
MRTWeb – Subset Area from Time Series

Download and Use

MODIS Data



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MRTWeb - Schedule and User Feedback

- Schedule
  - Currently adapting and integrating the interface and processing components
  - February – Internal testing
  - March - User testing & feedback period
  - UWG Demo
  - Subsequent public release
- User Feedback
  - Small group of Users / Use Cases
  - Currently recruiting

Questions?

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