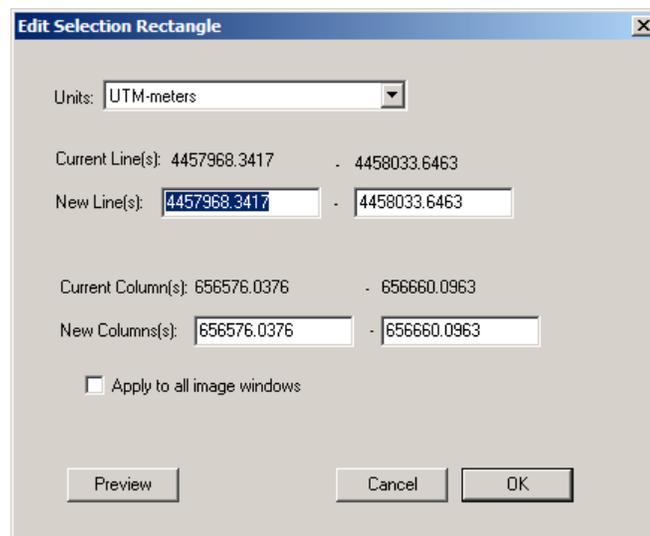


## MultiSpec Exercise: Selecting Areas and the Coordinate View

### Requirements: MultiSpec application and pampas\_XXX.img image files.

One can make selections of areas within an image using line-column, map or latitude-longitude units. The map and latitude-longitude units are only available for images where the required map projection information is available. Currently, MultiSpec can handle selections in latitude-longitude for image in geometric (latitude-longitude) and UTM, Transverse Mercator, Albers Conical Equal Area, Cylindrical Equal Area, Lambert Azimuthal Equal Area, Sinusoidal, Orthographic, Krovak and a few State Plane map projections.

7.1 One can use the **Edit->Selection Rectangle** menu item to do this.



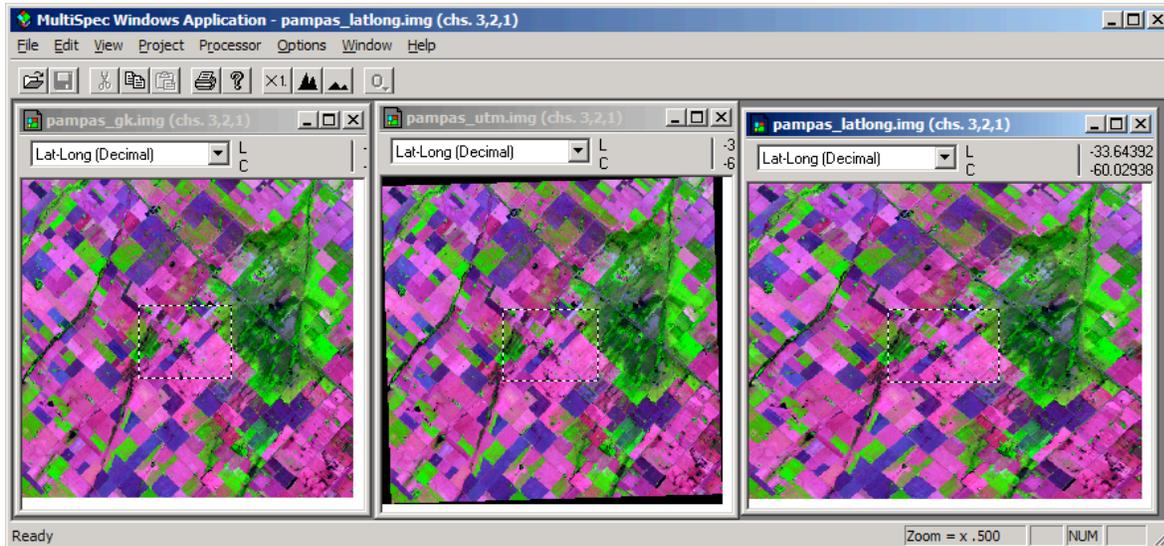
- A checkbox is available to allow one to apply the selection to all open image windows. If the selections are being made in line-column units one can turn off the option to take into account the start line and column of the images. If the units being used are map or latitude-longitude units then the same area will be defined as well as possible across all image windows even if the pixel sizes are different.

- A Preview button is available to apply the change for viewing before closing the dialog box.

7.2 Similar capability to the **Edit->Selection Rectangle** menu item above, is also available using the coordinate views of the images and the mouse cursor. If you make a selection in an image window with the coordinate view in lines/column units and hold the control key down when making selections, the same line and column selection will be made if possible in all open image windows. If one also holds the shift key down when doing this, any difference between the start line and column values will not be used.

If the coordinate view is in latitude-longitude units, the same latitude-longitude will be selected in all open image windows that contain the map projection information (which makes this possible). The same is true when selecting in map units of meters, etc.

The pampas\_gk.img (Transverse Mercator), pampas\_latlong.img (Latitude-Longitude) and pampas\_utm.img (UTM) files can be used to illustrate these features. The figure below illustrates the result of a latitude-longitude selection in one image that was copied to the other open image windows when the control key was used in making the selection.



Note that the rectangle in the right image has a different shape (wider) than the selections in the other two images because the pixels in this image file were mapped to latitude-longitude units and the pixels in the other two images were mapped to other projections.

## Concluding Remarks

There are many other operations that one can do with MultiSpec including several Reformatting processes. See other exercises or the MultiSpec Introduction at the MultiSpec web site for more information. The MultiSpec web site is: <http://dynamo.ecn.purdue.edu/~biehl/MultiSpec/>. Or contact Larry Biehl at [biehl@purdue.edu](mailto:biehl@purdue.edu) with questions.