destripe

keys:	**[from]**	*<number>*	source picture
	[to]	*<number>*	output picture
	lines	*<number>*	destripe over the specified number of lines
	rsd	*<number>*	the reference standard deviation required for all sensors
	rmean	*<number>*	the reference mean required for all sensors
	layer	*<number>*	destripe the specified layer
options:	**mode**		destripe, taking into account the standard deviation of the sensors

The **destripe** command corrects an image for instrumentation errors, notably in images from the Landsat satellite, where the receiver has different characteristics on different lines. It destripes a source picture. Use this command in *Remote Sensing* applications.

Examples

```
destripe 1 2 line 6
```

This command destripes all bands (layers) of picture 1 using 6 line sensors and only correcting by the average value.

```
destripe 1 2 line 6 mode
```

As above but correct using the standard deviation also.

Description

You can destripe the source picture either by subtracting the mean value, or by using the standard deviation and mean of a reference line. The **lines** key specifies the number of lines over which destriping is to occur, for example, a *Landsat* image would require **lines 6** because of the way that its sensor is made. The **lines** key must have a value of at least 2. If you do not specify the **rsd** or **rmean** keys, the output picture is adjusted by the mean of a reference line (sensor):

$$x_{ni} = x_{oi} - (m_i - m_r)$$

where m_i is the mean of the current sensor and m_r is the mean of the reference sensor.

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If you specify the **mode** option the output picture is corrected by:

$$xni = \left(\frac{\sigma r}{\sigma i}\right) (xoi - mi) + mr$$

where:

- mi is the mean of the current sensor
- mr is the mean of the reference sensor
- σi is the standard deviation of the current sensor
- σr is the standard deviation of the reference sensor

If you assign values to the **rmean** key or to the **rsd** and **rmean** keys, these values are used as the reference values, rather than the values from one of the sensors.

If you do not specify a layer using the **layer** key, all layers of the picture are destriped and the output picture contains the same number of layers as the source picture.

Defaults and Ranges

keys/options	defaults	range
[from]	current picture, held in the variable *select*	valid picture number
[to]	source picture	valid picture number
lines	*none*	integer in range 2 to half size of the picture
rsd	derived from source picture	real number
rmean	derived from source picture	real number
layer	all layers	integer in range 1 to number of layers