

weight

keys:	[from]	<code><number></code>	source picture
	[to]	<code><number></code>	output picture
	with	<code><number></code>	1-D picture defining radial function
	position	<code><x>,<y></code>	position from which distance to pixels is measured
options:	add		add function of radius

Use **weight** to multiply a picture by an arbitrary function of distance from a given point – a *radial* function. You supply this function in a 1-D picture. You can also add the radial function, instead of multiplying. (If you want to multiply by a function with a simple mathematical form, use the **calculate** command instead).

Examples

```
weight 50 with 3 to 51
```

This command uses the 1-D picture 3 to define a function of radius by which picture 50 is multiplied to form picture 51.

```
weight 1 with 2 add
```

This command adds to picture 1 the radial function defined in 1-D picture 2.

```
fourier 1 2; ps to 3; section; display; xwires graph to 4
weight 2 with 4; image
```

This sequence of commands applies a hand-drawn Fourier transform filter to picture 1.

Description

weight multiplies source pixels that are distance r from the origin, or from another position you specify using the **position** key. The source pixels are multiplied (increased) by the value of the 1-D picture at position r (linearly interpolated if necessary). The 1-D picture does not need to have the same size as the source: the rightmost pixel is treated as repeated indefinitely if necessary, and pixels left of the origin are simply ignored.

Notes

multi-layer pictures:	faulted
forms used internally:	complex
see also:	calculate

weight

Defaults and Ranges

keys/options	defaults	range
[from]	current picture, held in the variable <i>select</i>	valid picture number
[to]	source picture	valid picture number
with	picture 999	valid picture number
position	position 0,0	within bounds of picture (integers)
add	multiplied by radial function	