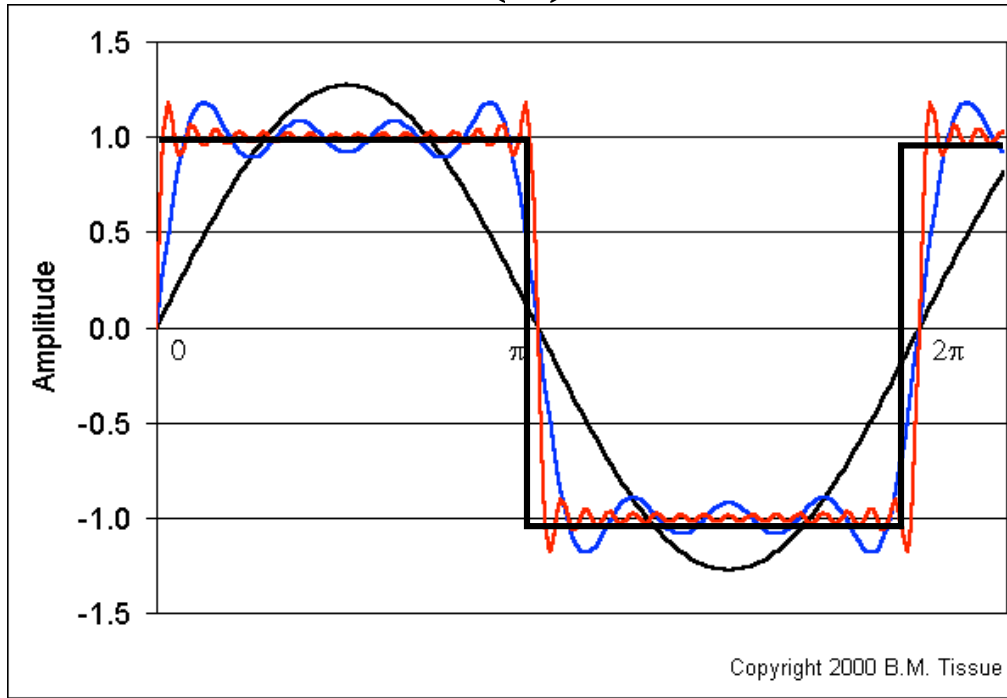
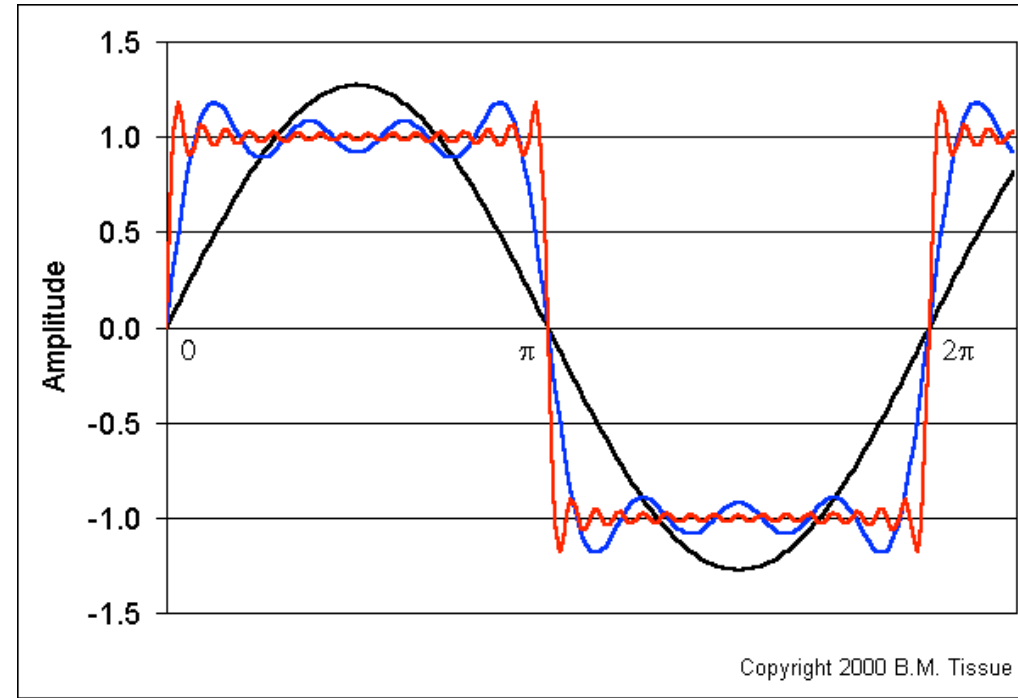


$f(x)$



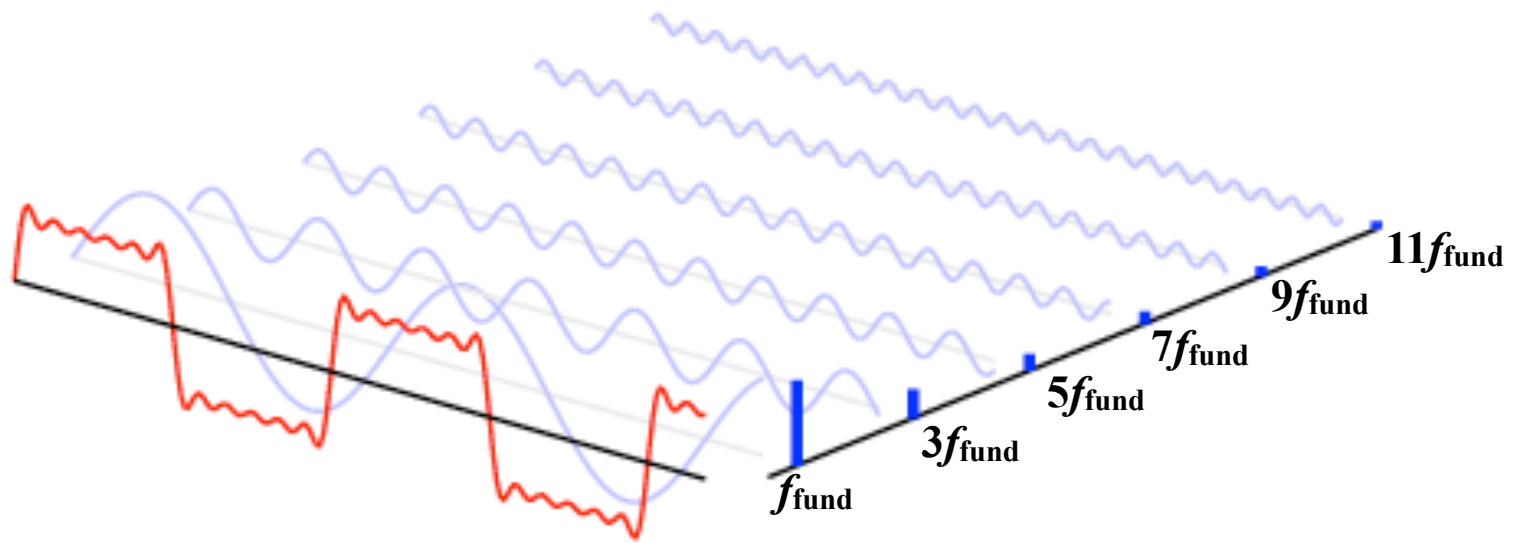
Fourier series



Represent as sinusoids of increasing frequency.

F(S):

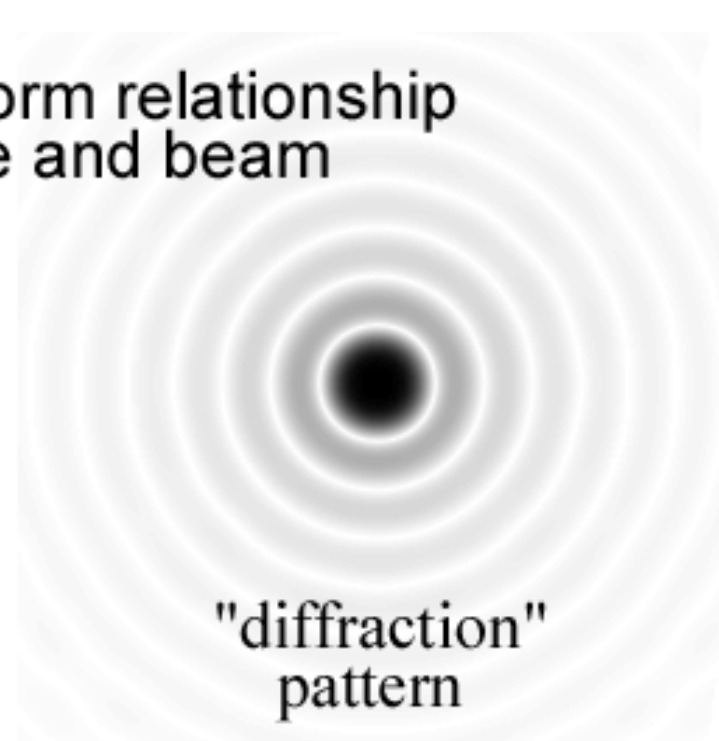
What is power distribution across frequencies?



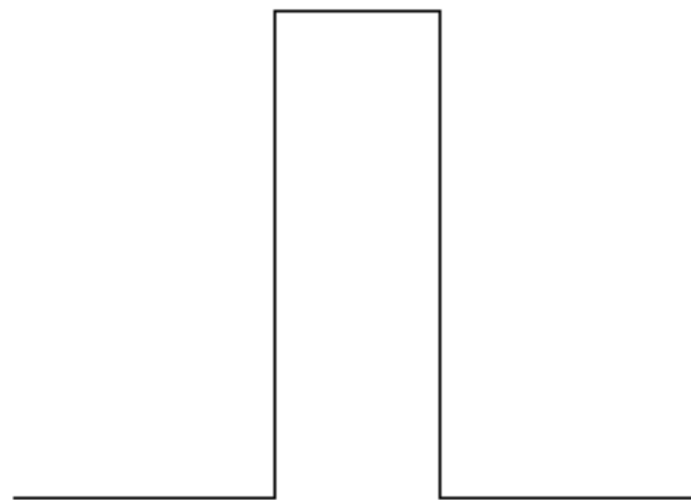
Fourier Transform relationship of aperture and beam



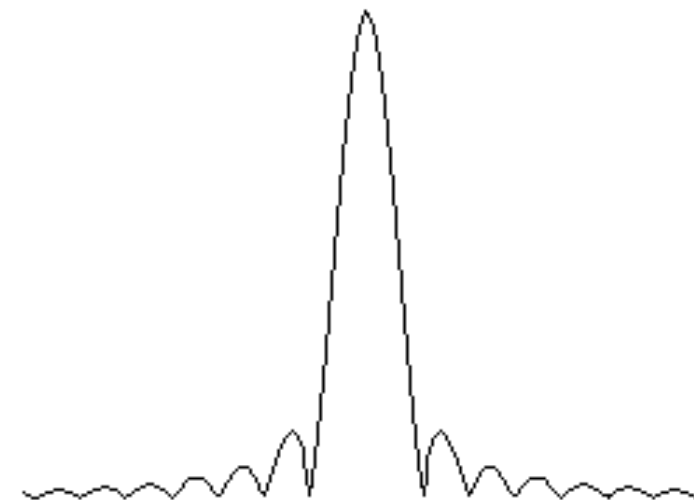
circular
aperture



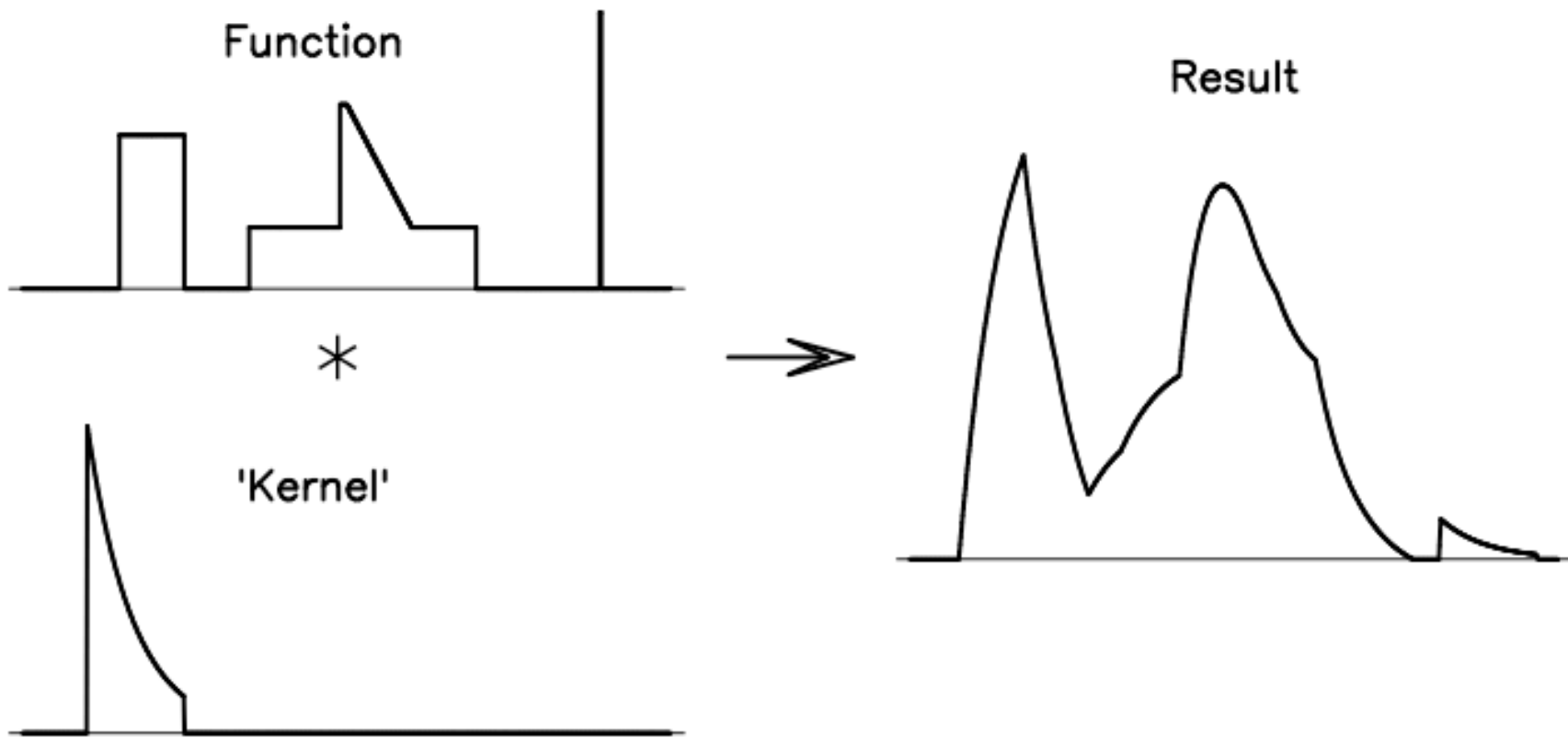
"diffraction"
pattern



cross-section
of aperture

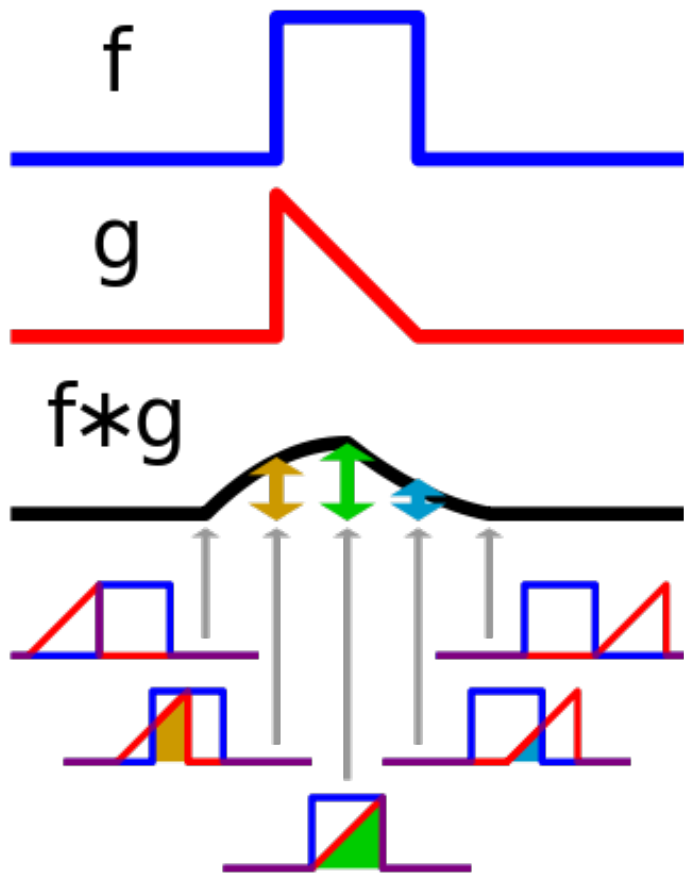


cross-section
of diffraction pattern

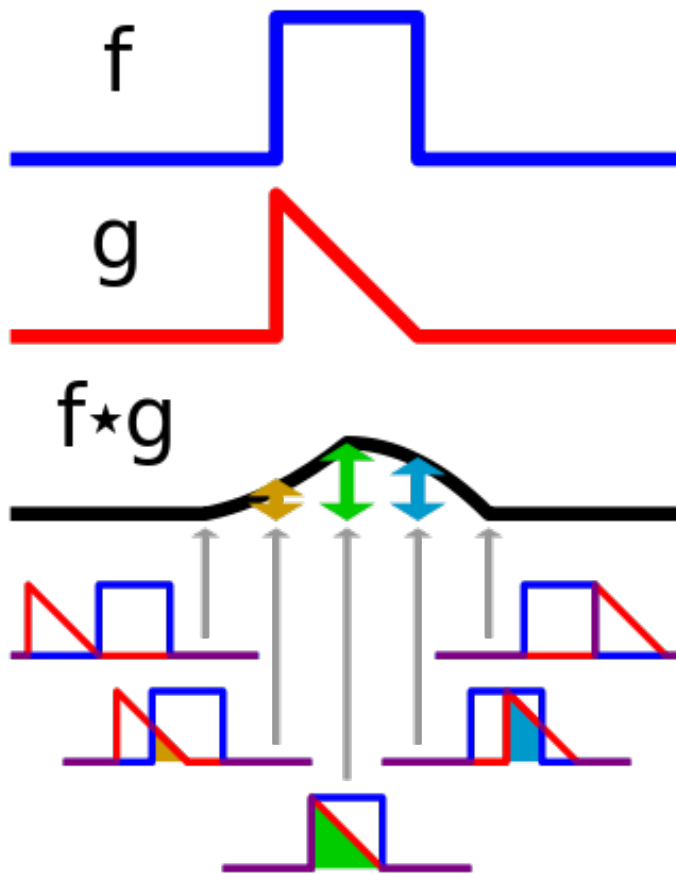


**(reverse x axis for kernel,
slide it across function,
integrate over area of the two
functions multiplied)**

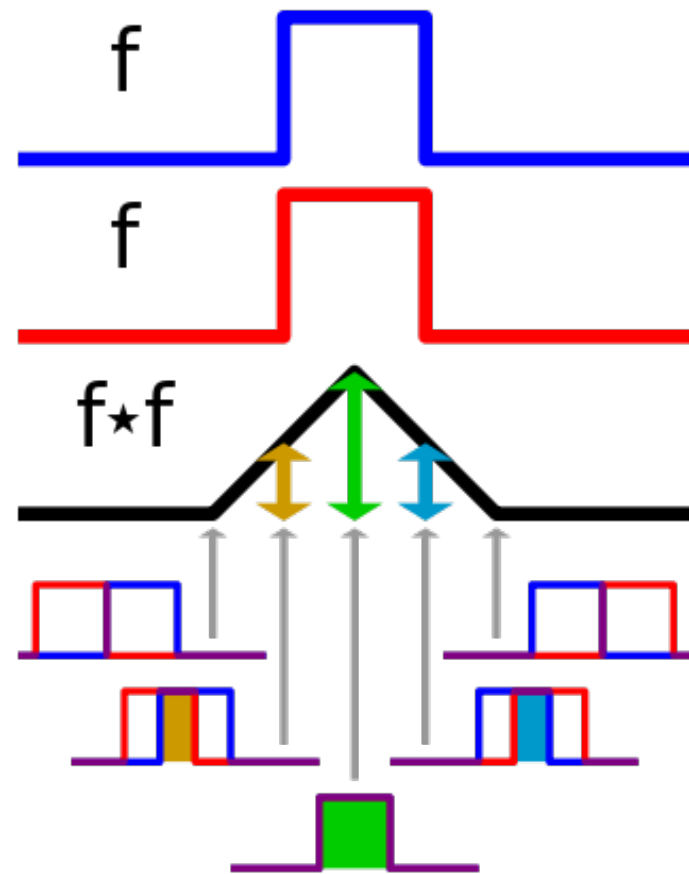
Convolution



Cross-correlation



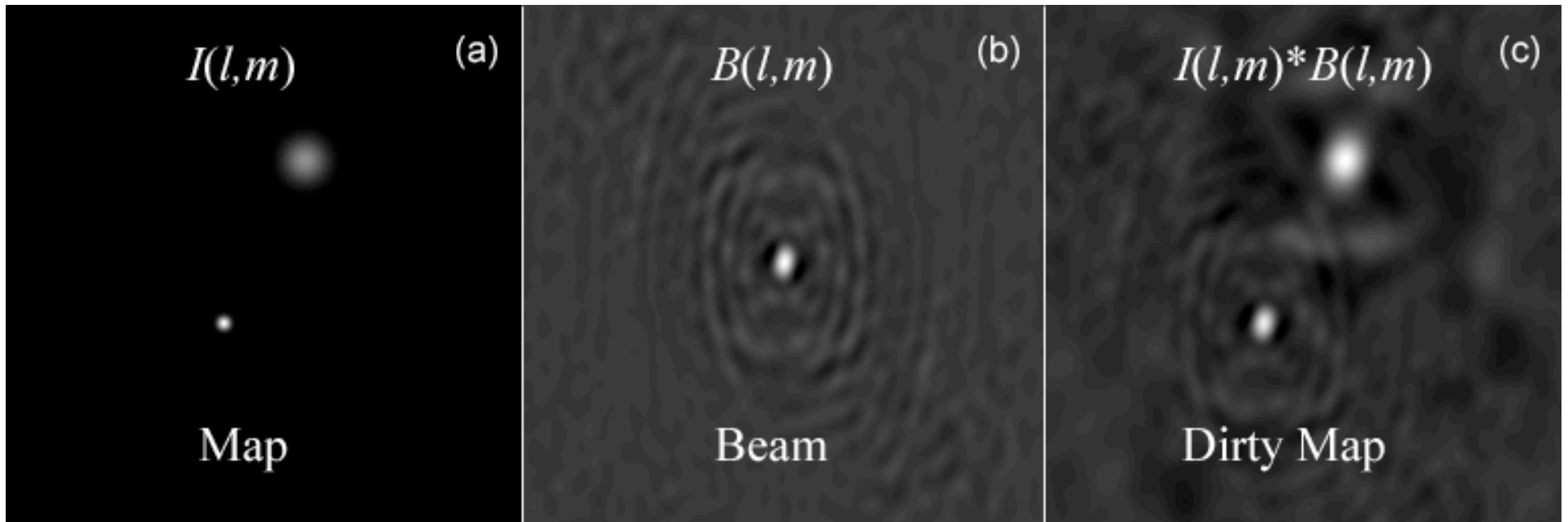
Autocorrelation



Function/signal,
 f

Kernel,
 g

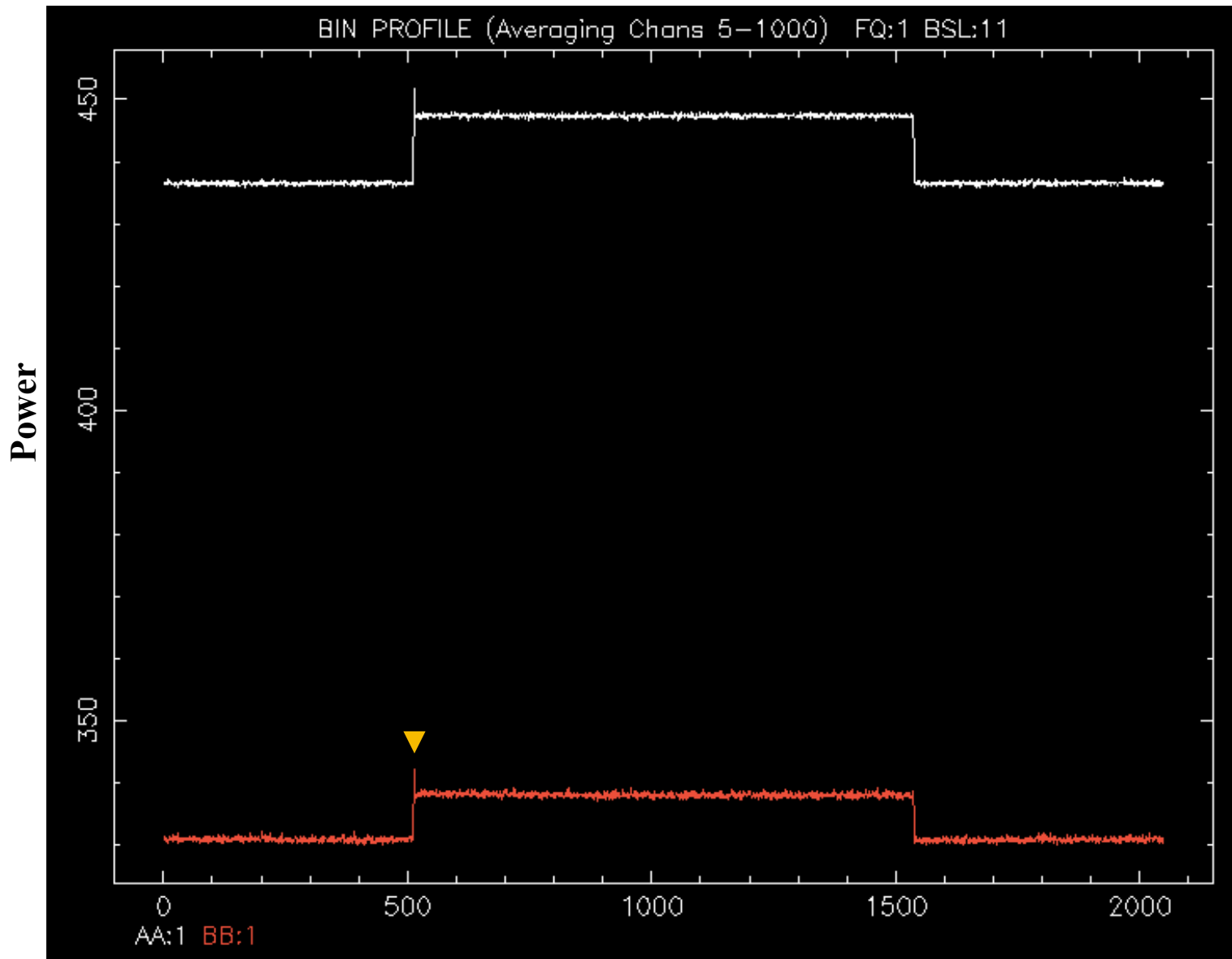
$f * g$



Response of some
interferometric telescope
to a signal.

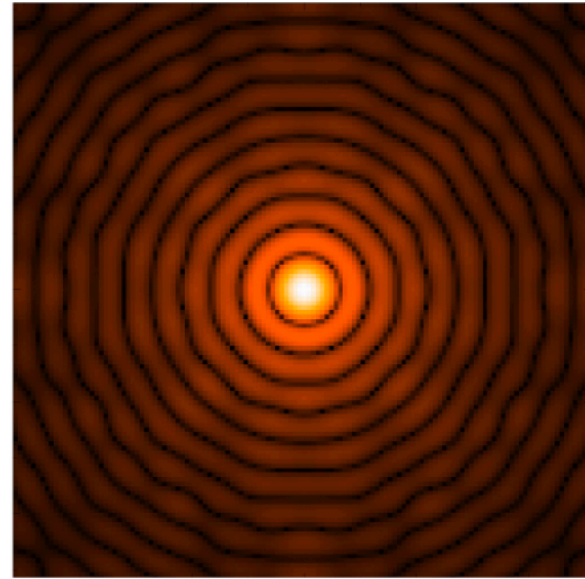
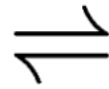


(Weak example): Parkes pulsed calibration signal.



Similar image plane effect

Disk



Bessel

Gibbs ringing: MRI

