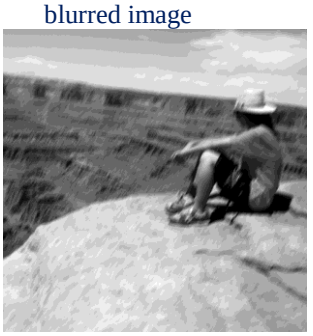
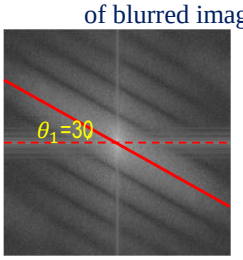
Alternative solution based on mathematic model for linear-motion degradation; parameters a and b are 'guessed' by trial and error with motion direction of -30° with respect to x-axis

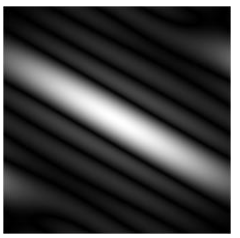
Log Fourier magnitude spectrum of blurred image

Linear-motion blurred image






motion direction: -30°

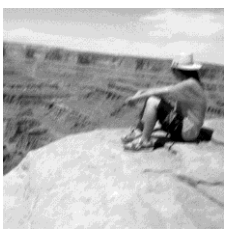


← Log Fourier magnitude spectrum of degradation function



To find the best selection of parameter *a* → Align and compare the 1D scanned Fourier spectra of blurred image and linear-motion mathematic model

blurred image g(x,y)



Degradation function:

$$k = \pi[(u-256)a + (v-256)b]$$

$$H(u,v) = \frac{T}{k}\sin(k)e^{-jk}$$

Where $T = 1$ $a = -0.015$, $b = \left|\frac{a}{\tan(\theta \times \pi/180)}\right|$

Log Fourier spectrum of G(u,v)

Log Fourier magnitude spectrum of degradation function

One dimension signal of $H(u,v)$

One dimension signal of $G(u,v)$