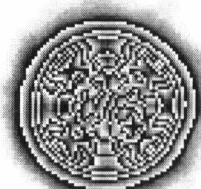
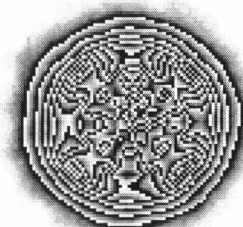


Photocathode gap effect

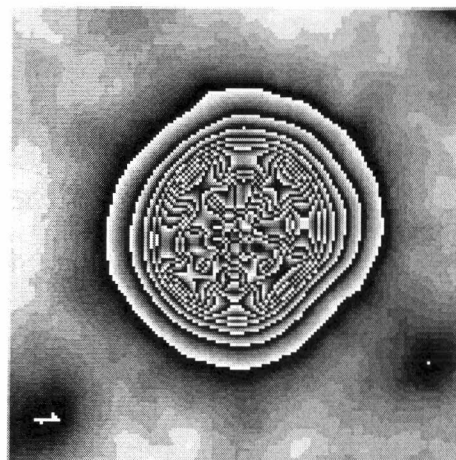
XMM Primary detector



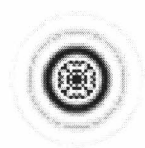
at 4600Å



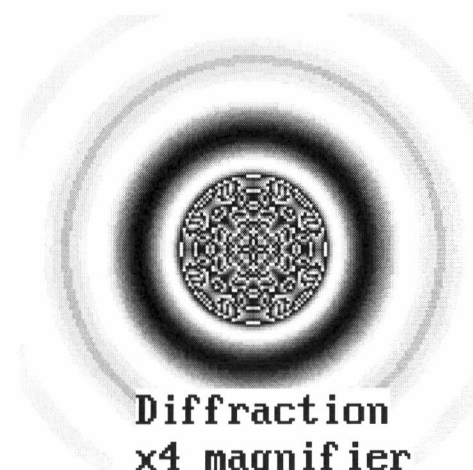
at 3500Å (estimated)



U-filter  
composit of LMC stars



Diffraction  
at 5500Å



Diffraction  
x4 magnifier



CCD pixel size

Fig. 1 Comparison of image spreading profiles highlighting wing part

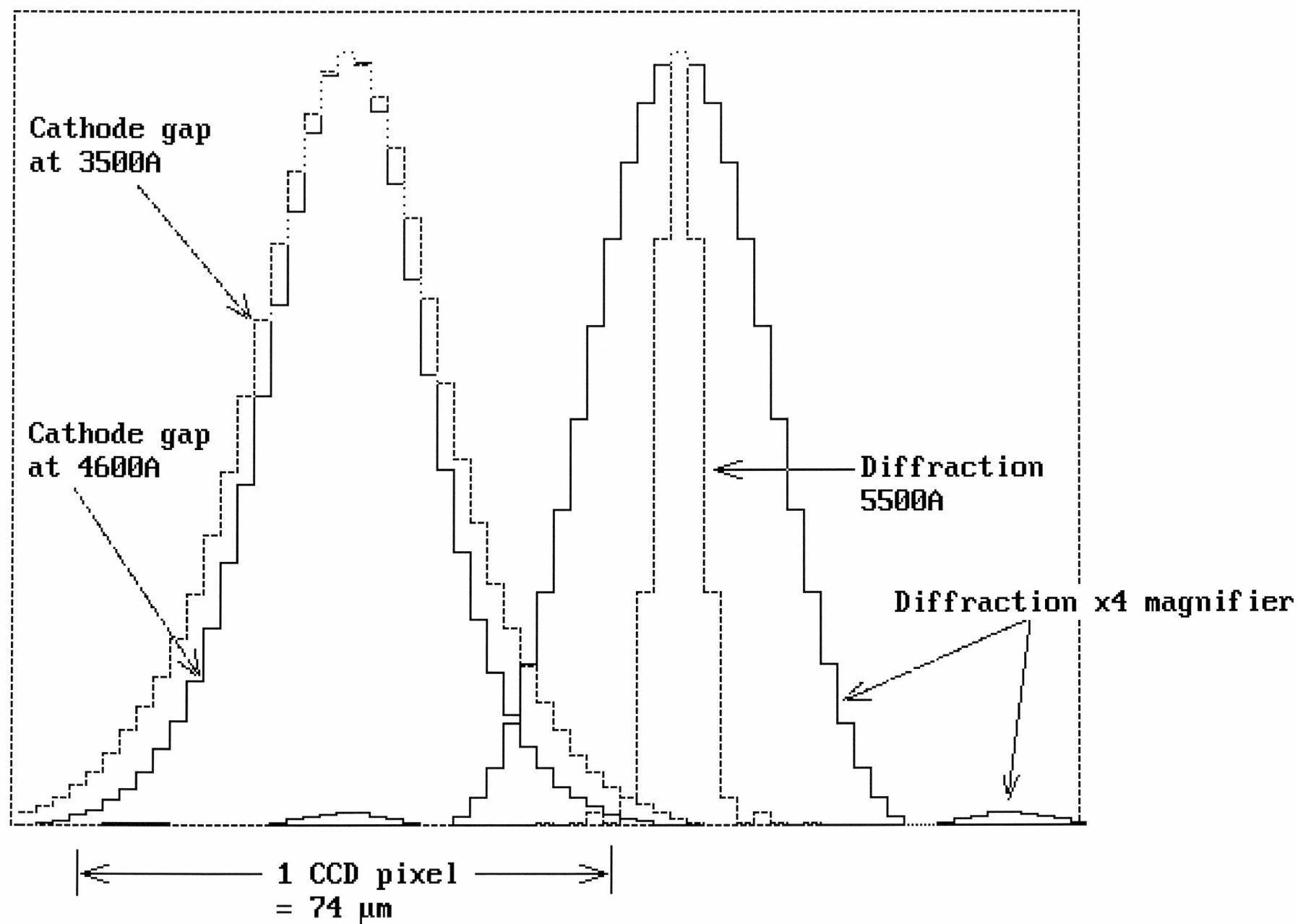


Fig. 2 Profile of photocathode gap effect and diffraction pattern

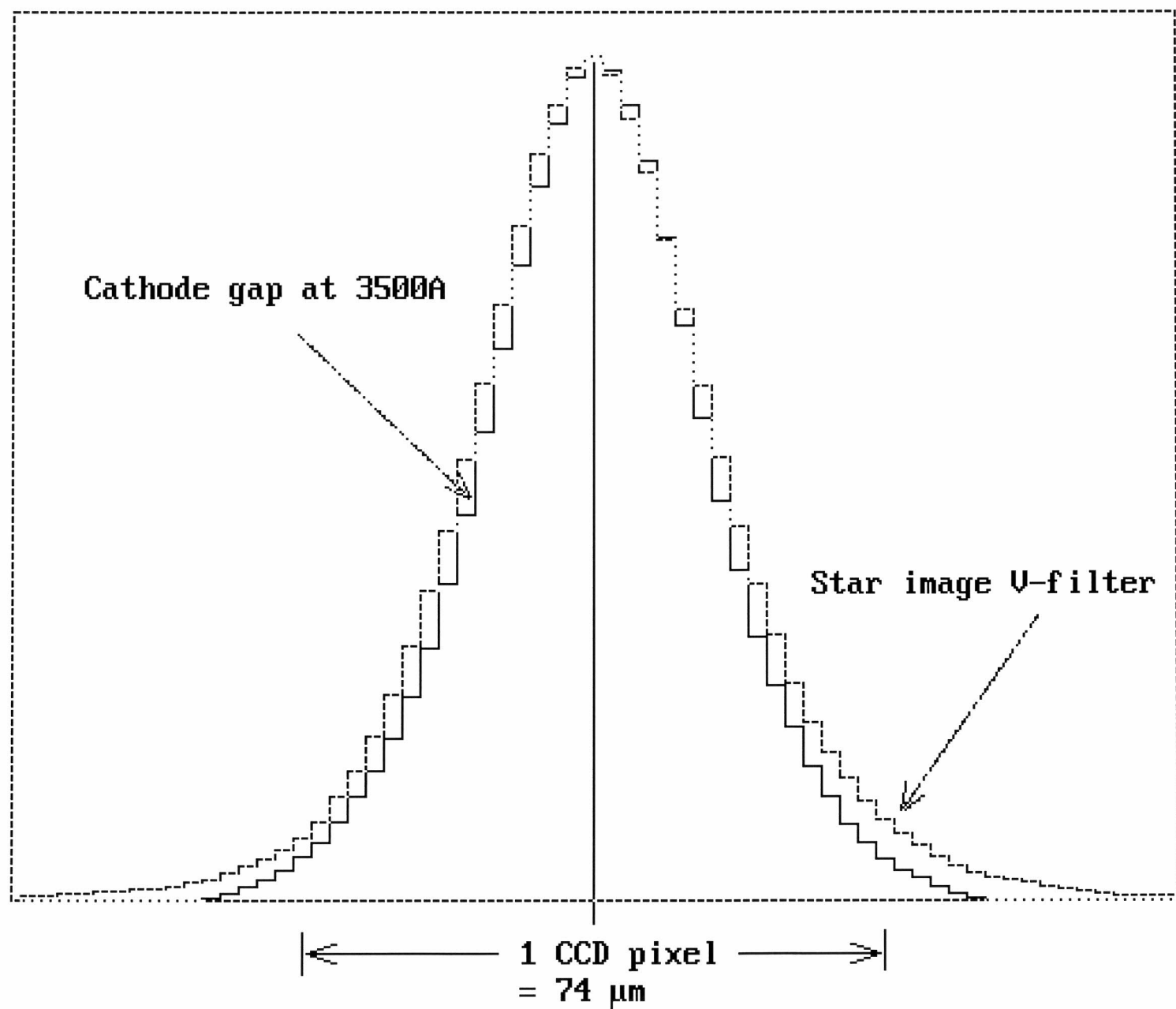


Fig 3 Profile of photocathode gap effect and star image at V-filter

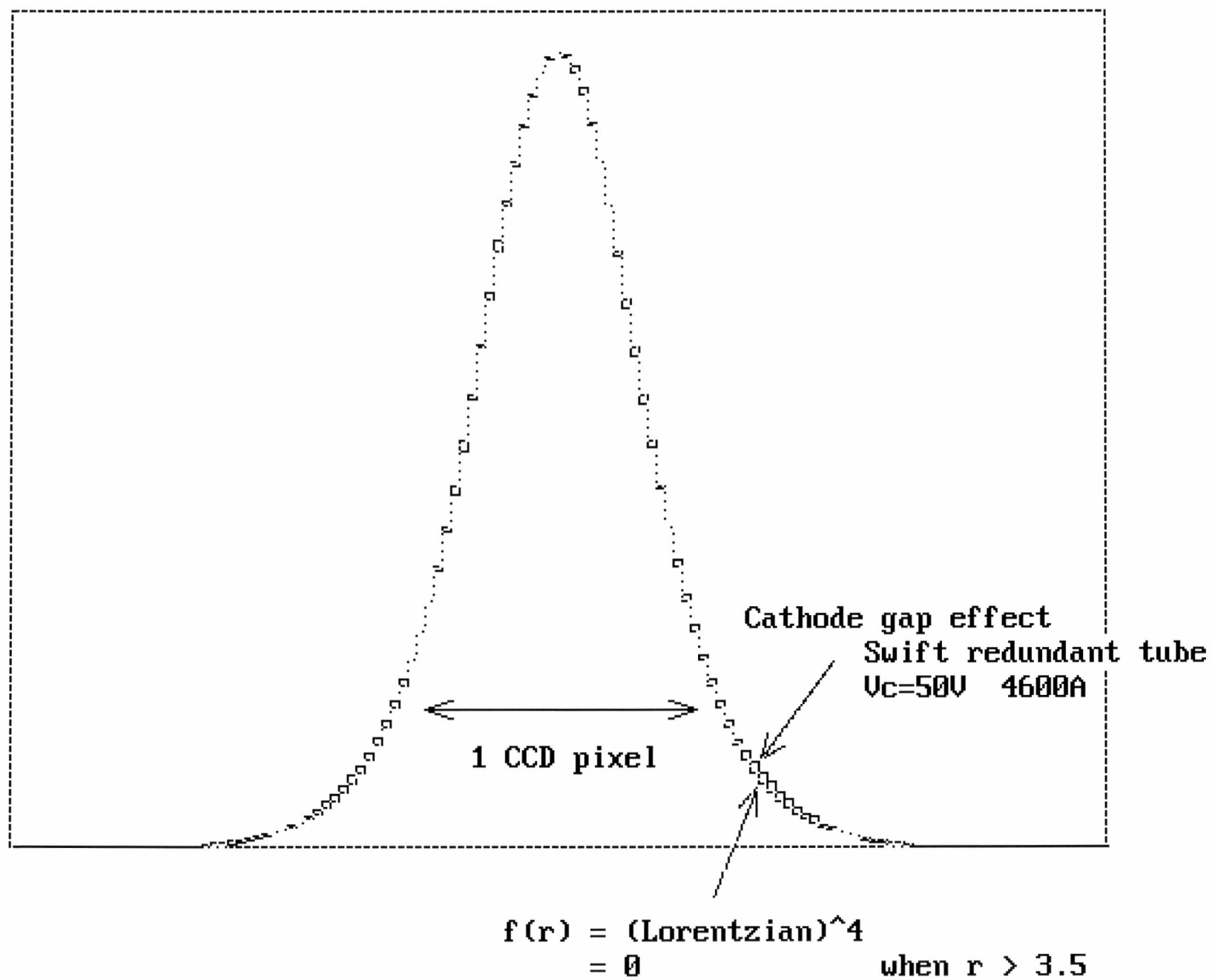


Fig. 4 Photocathode gap effect, profile fitting

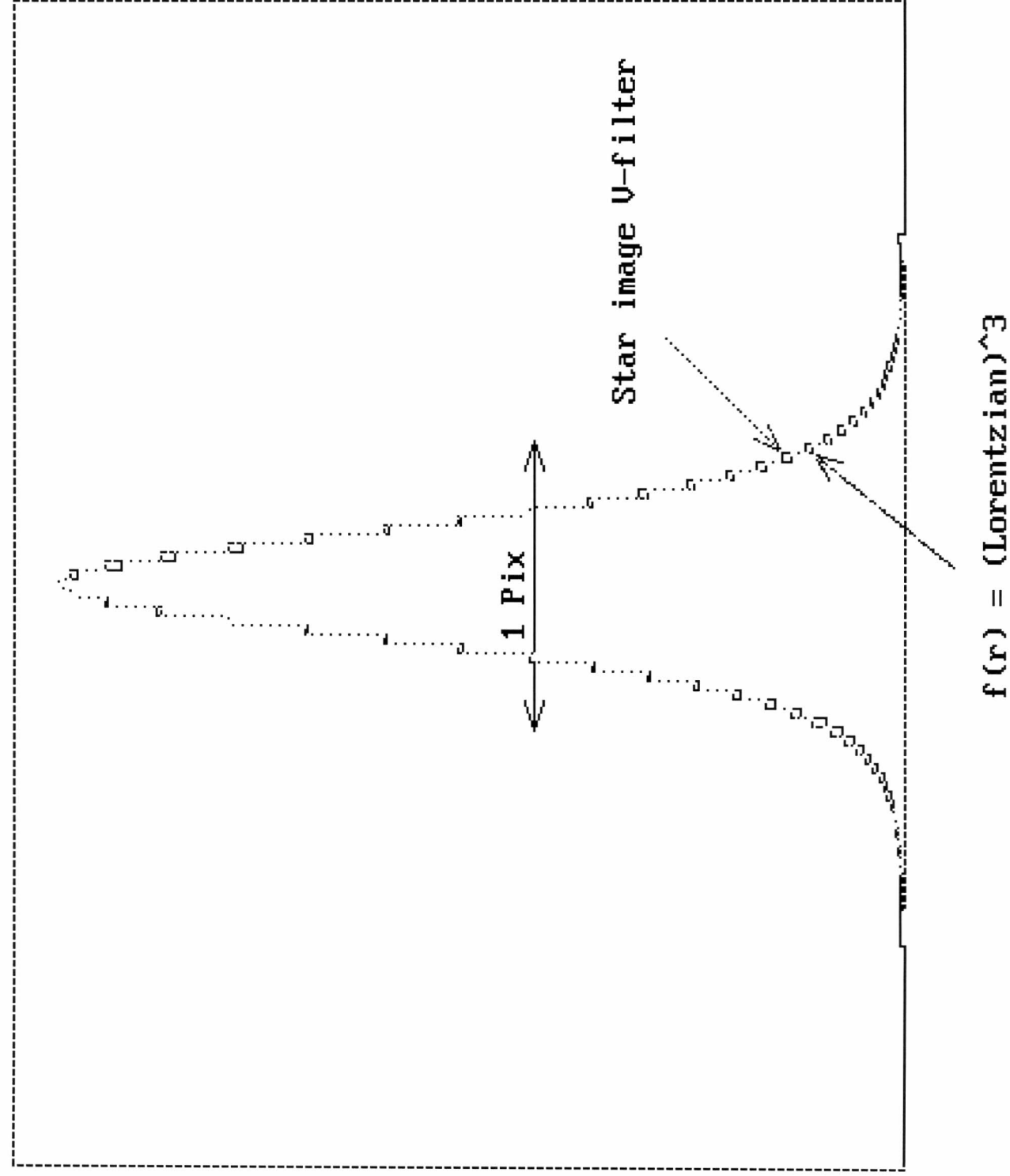


Fig. 5 Optical aberration effect function fitting

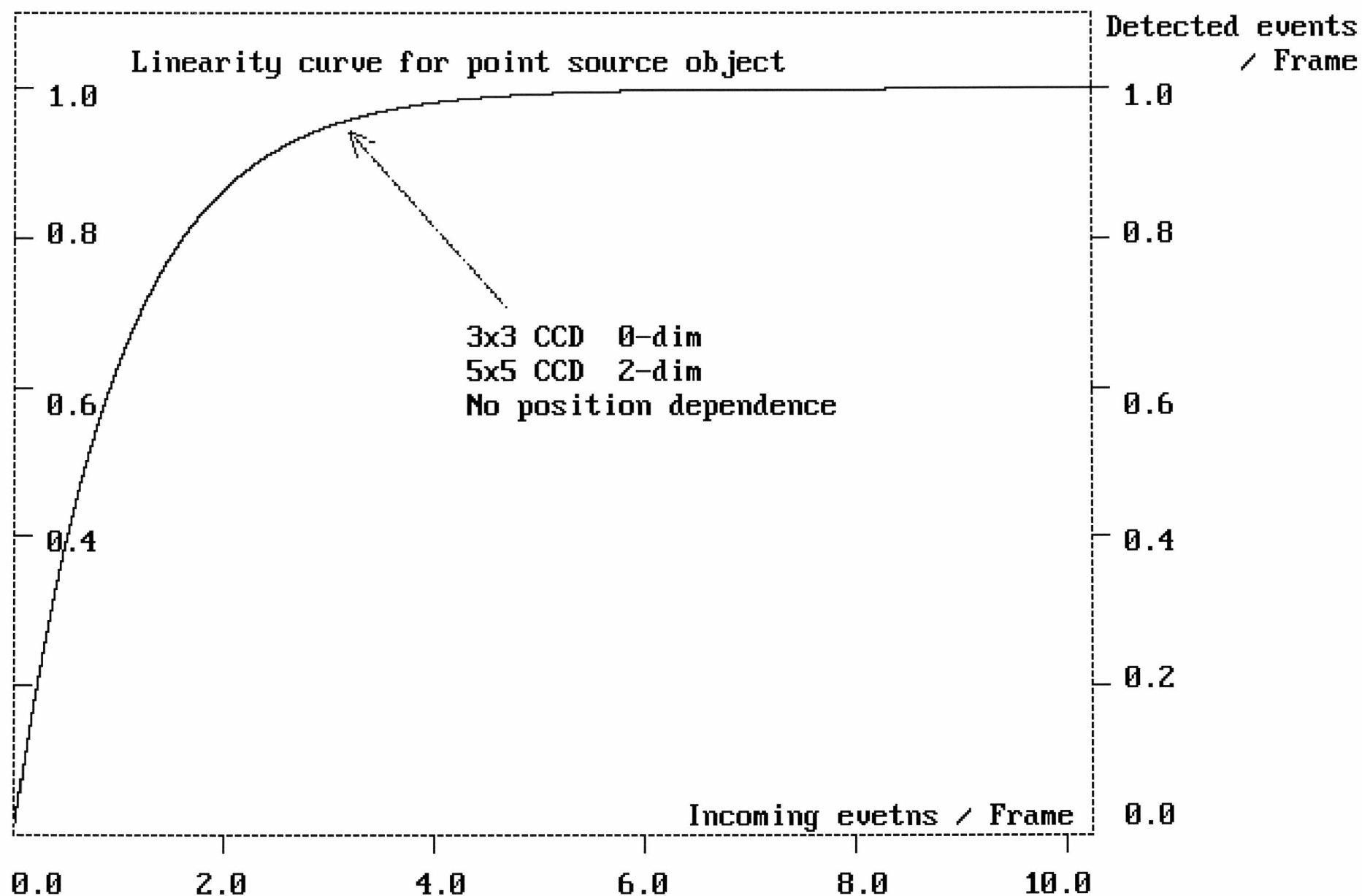


Fig. 6 Effect of diffraction pattern All light fall in 3x3 CCD array

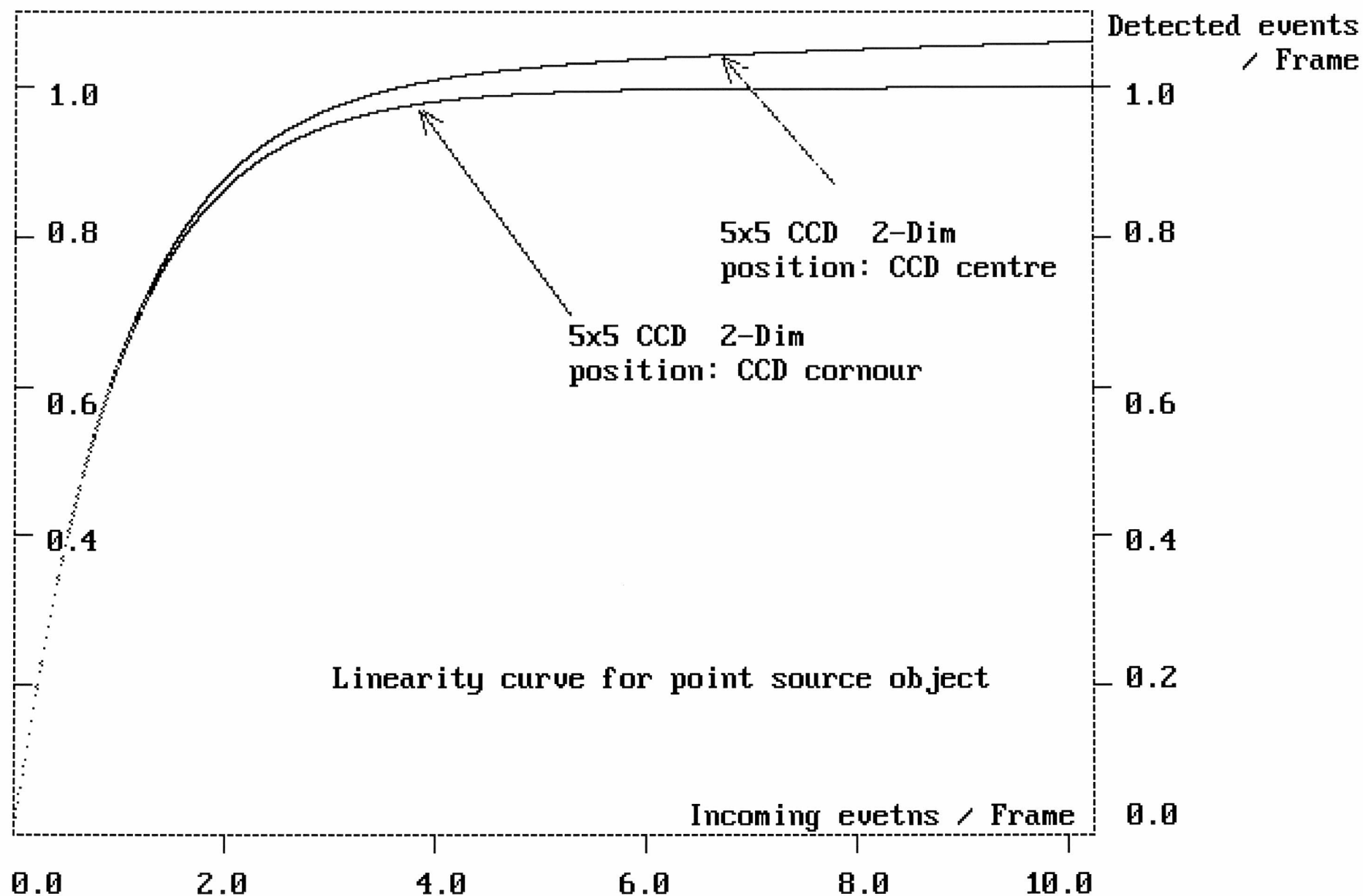


Fig. 7 Effect of diffraction pattern with x4 magnifier

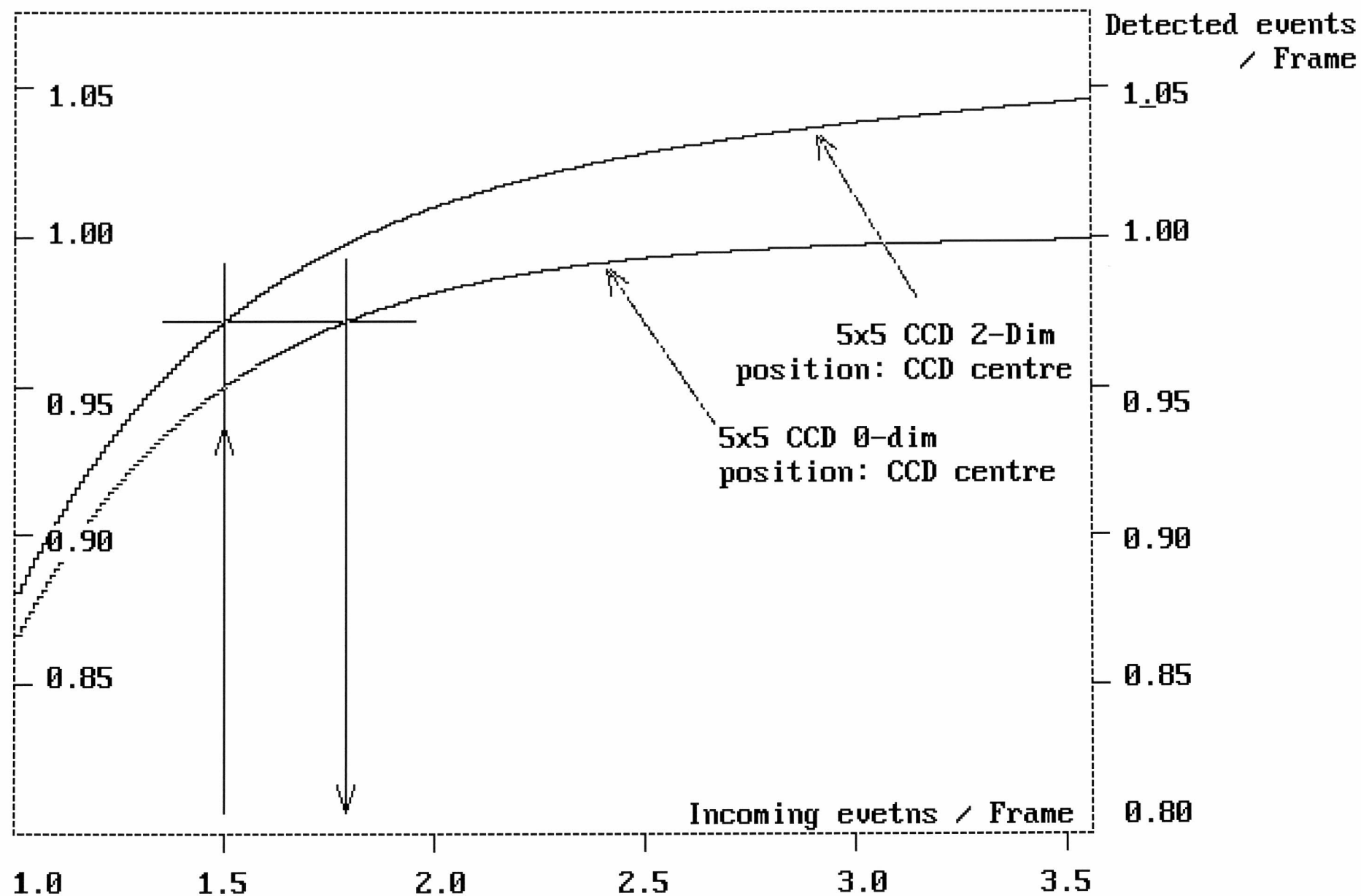


Fig. 8 Count rate conversion error, x4 Magnifier diffraction pattern



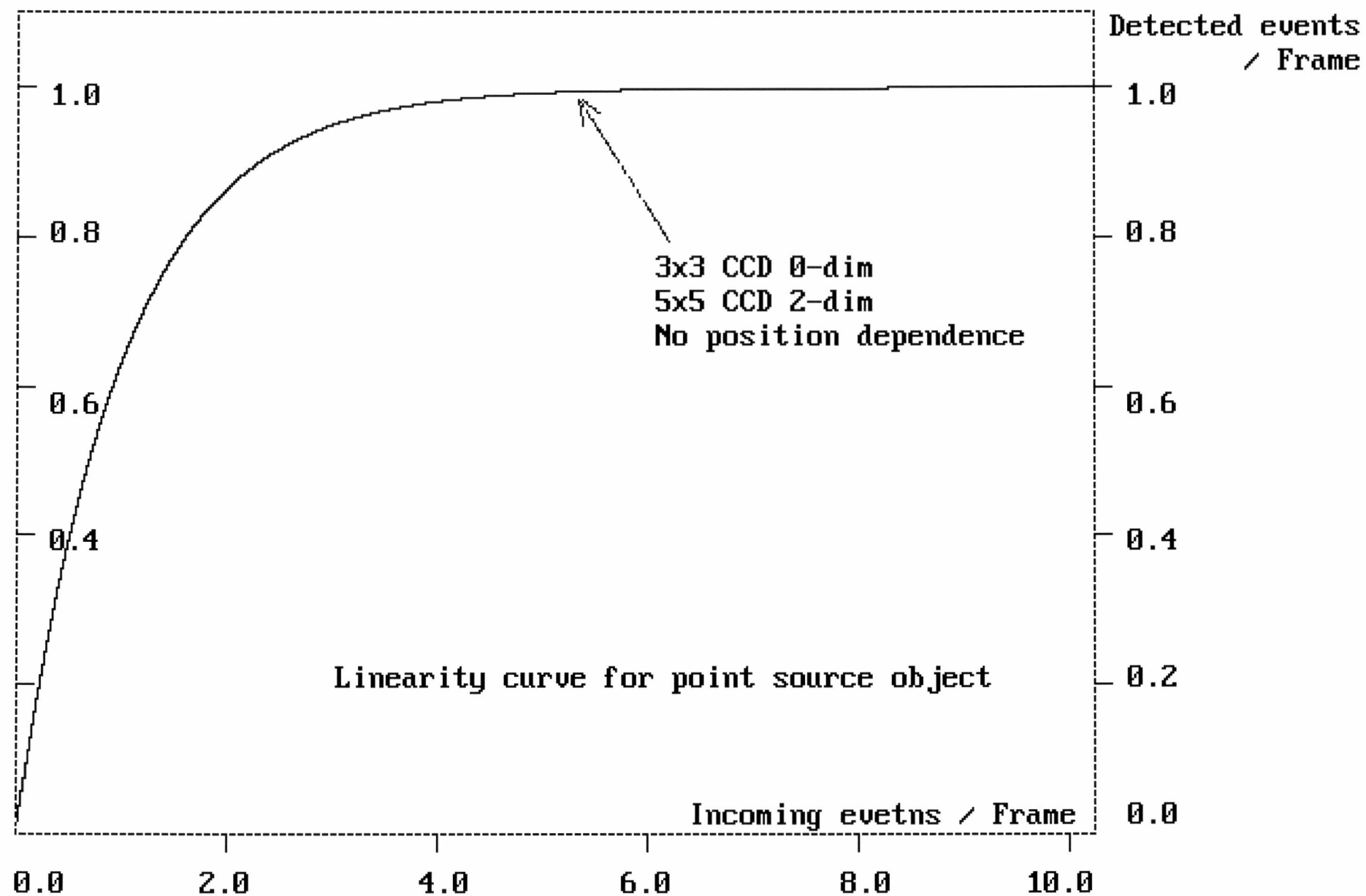


Fig. 9 Effect of photocathode gap FWHM=25um

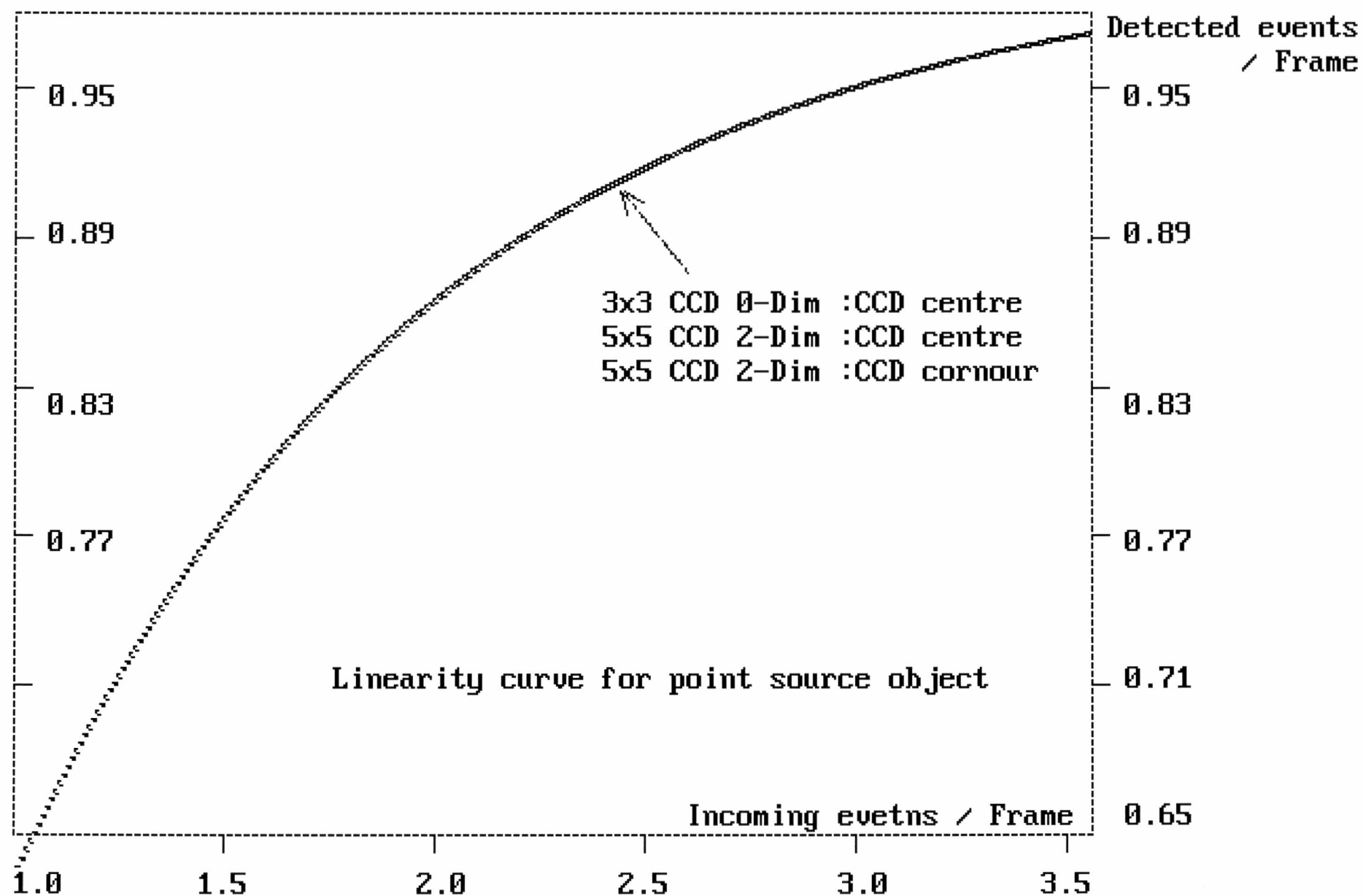


Fig. 10 Photocathode gap effect, FWHM=40um

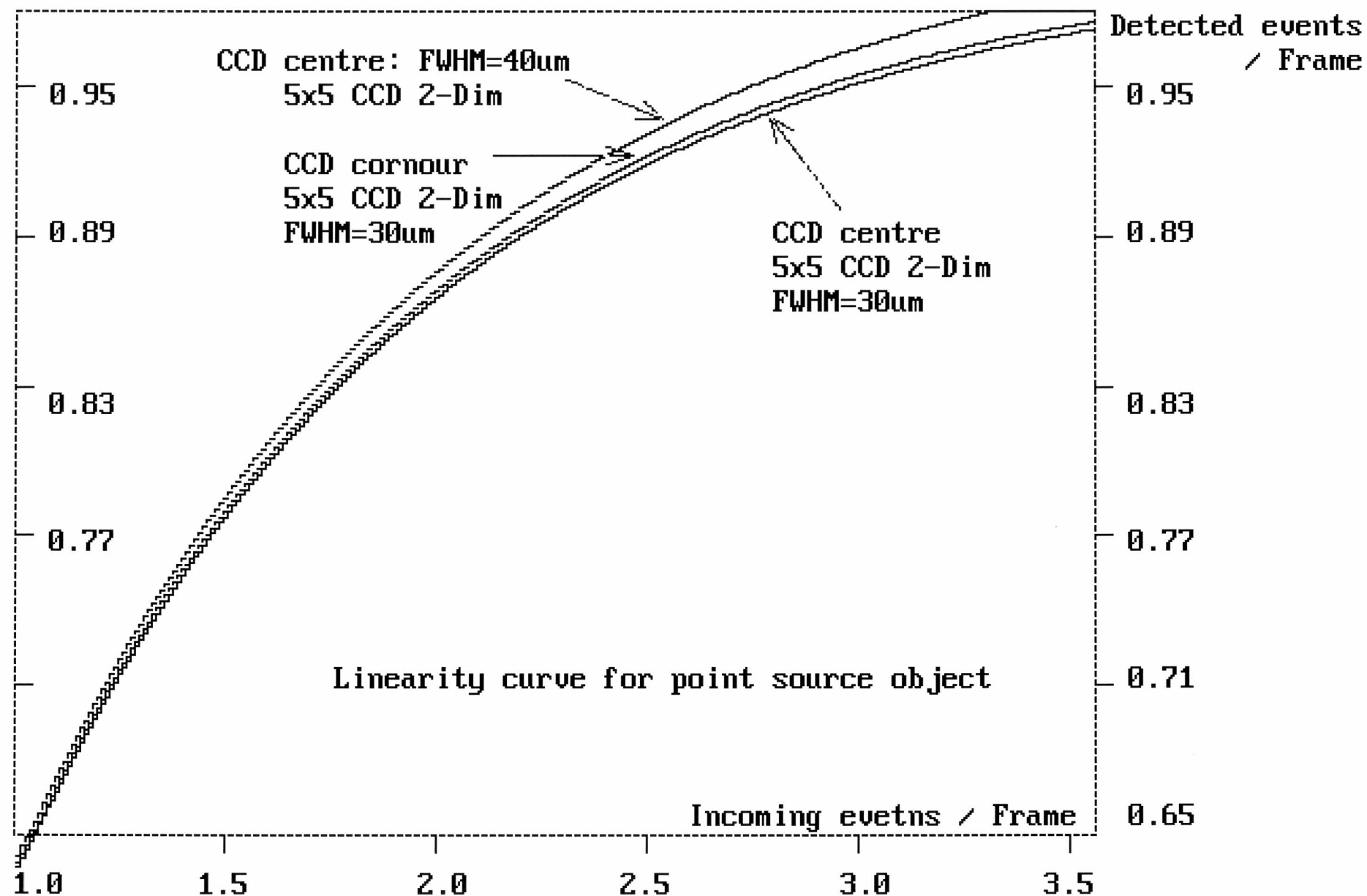


Fig. 11 Optical aberration effect FWHM=30um, 40um

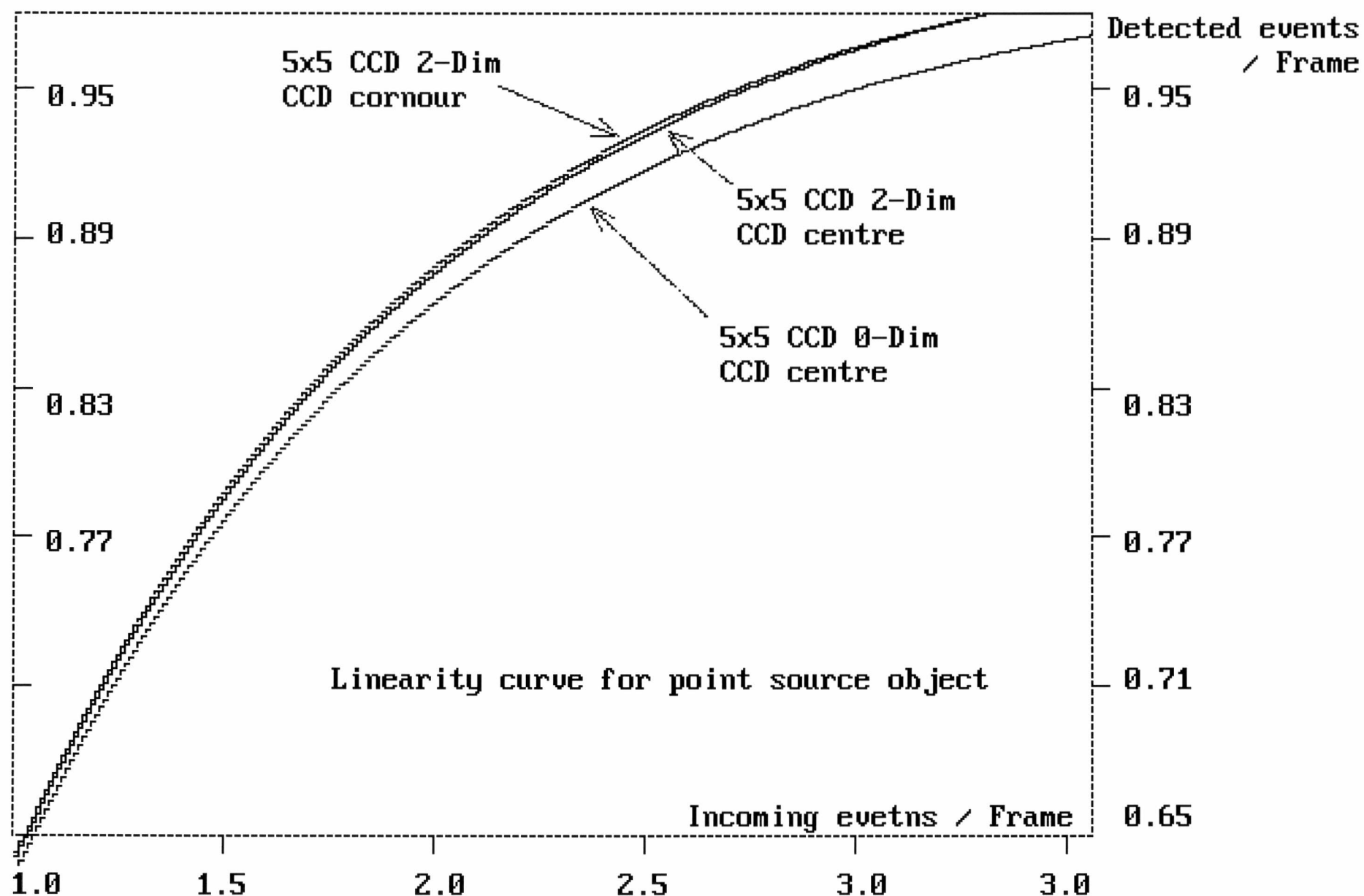


Fig. 12 Optical aberration effect, FWHM=40um

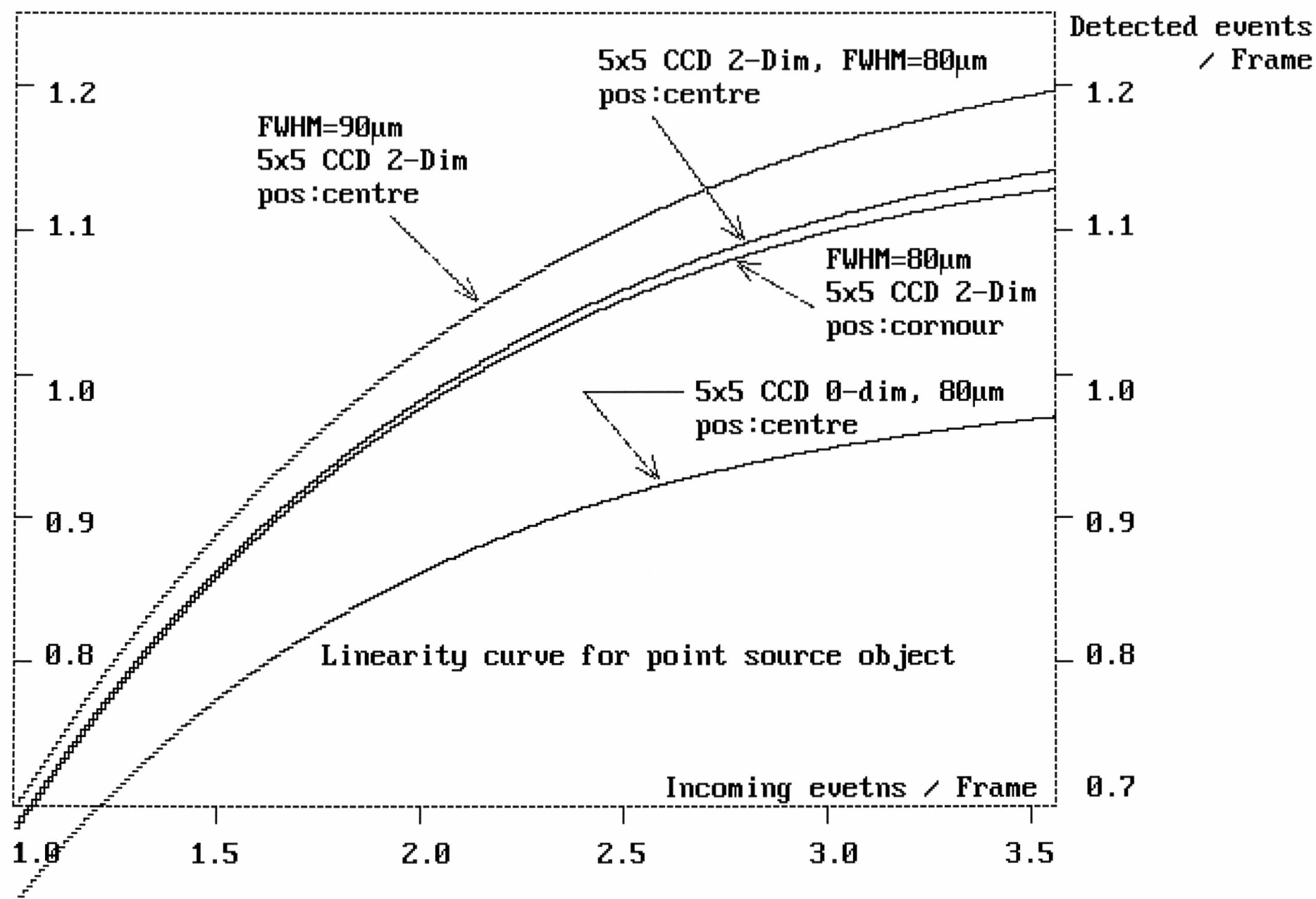


Fig. 13 Optical aberration effect, FWHM=80 $\mu$ m and 90 $\mu$ m x4 Magnifier

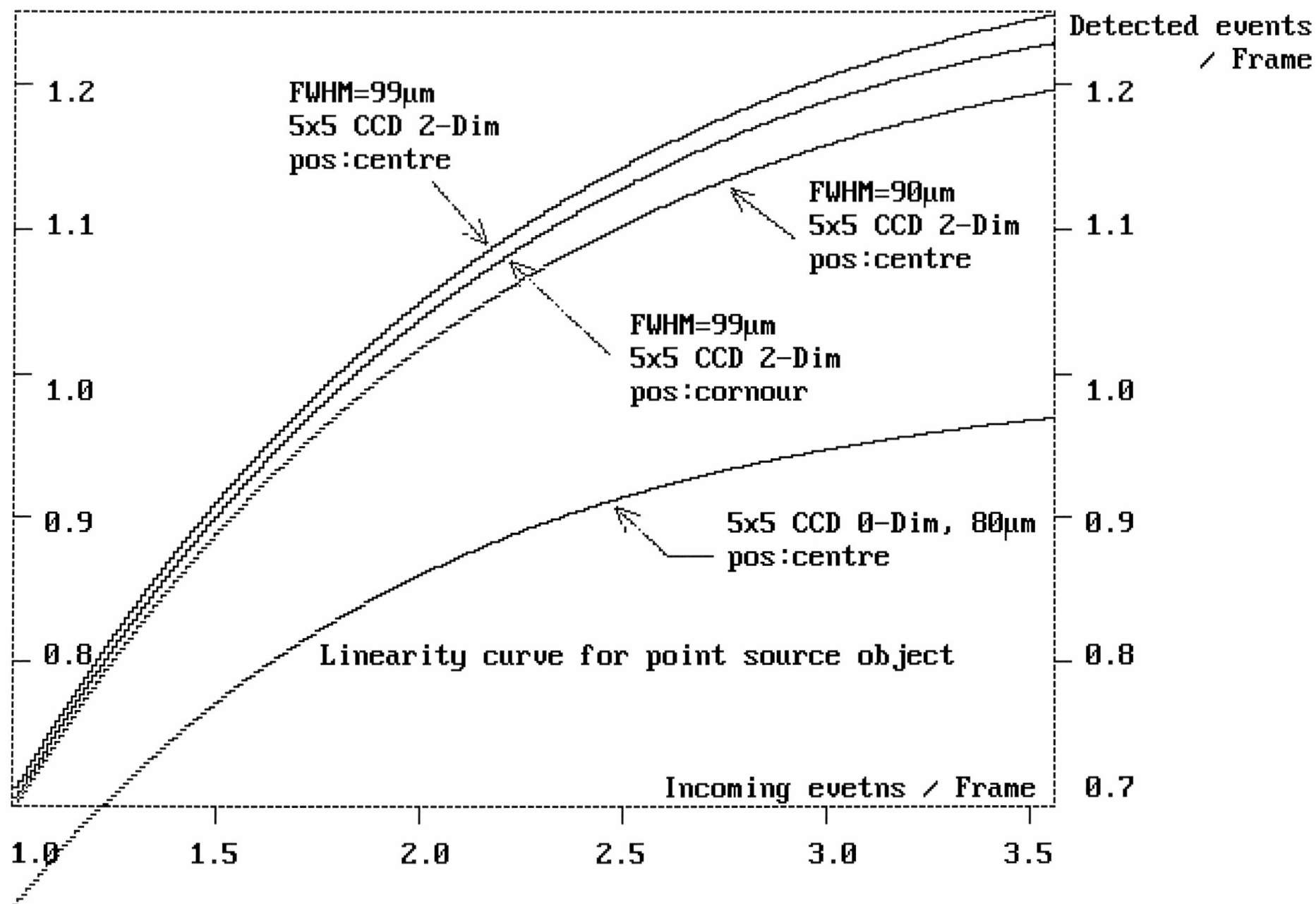


Fig. 14 Optical abberation effect, FWHM=99 $\mu$ m and 90 $\mu$ m x4 Magnifier

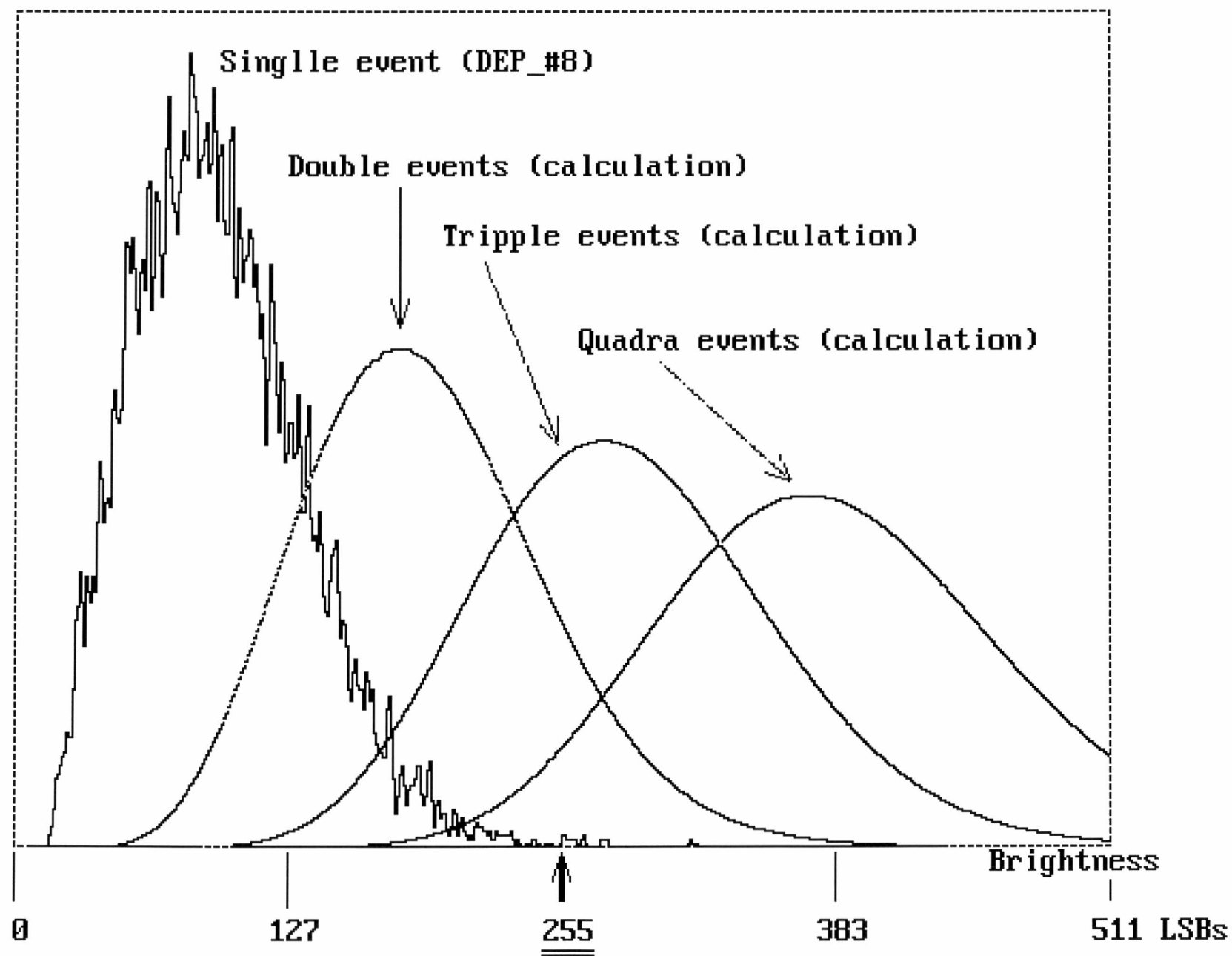


Fig. 15 Pulse height distributions for multiple events

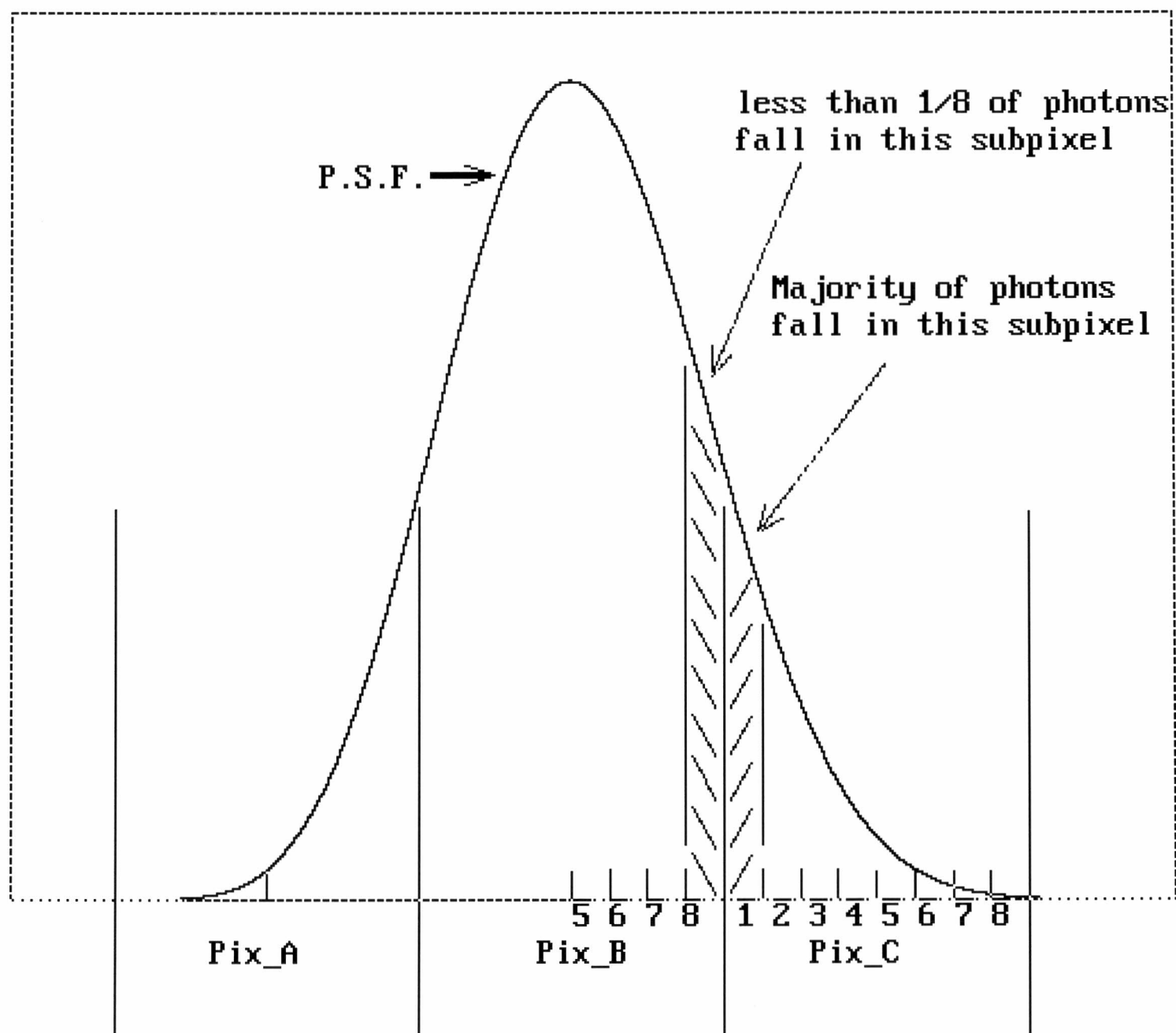


Fig. 16 Stealing a count from central CCD pixel



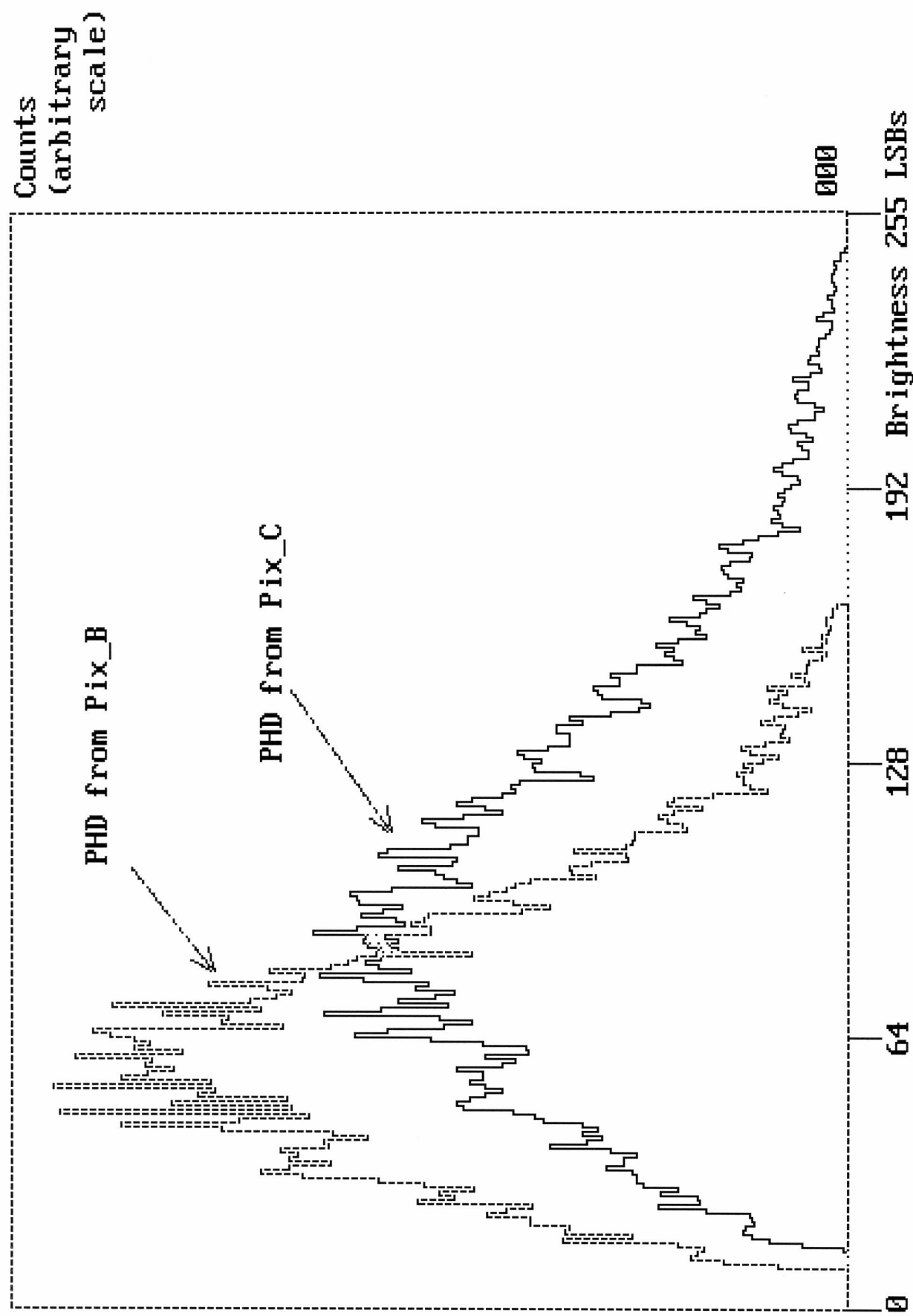


Fig. 17 Pulse height distributions when events fall in sub-2 of Pix\_C

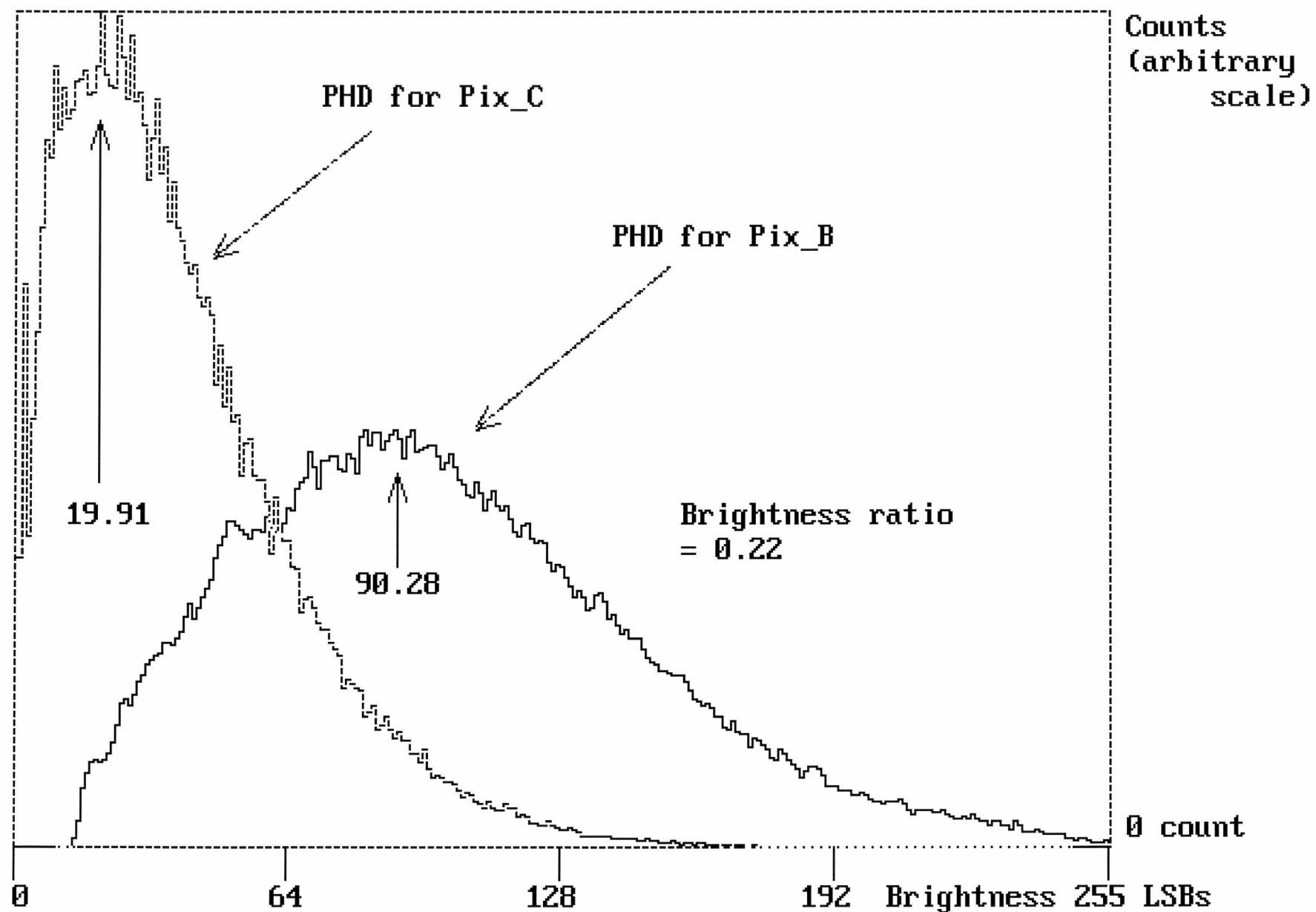


Fig. 18 Averaged pulse height distribution when events fall in Pix\_B

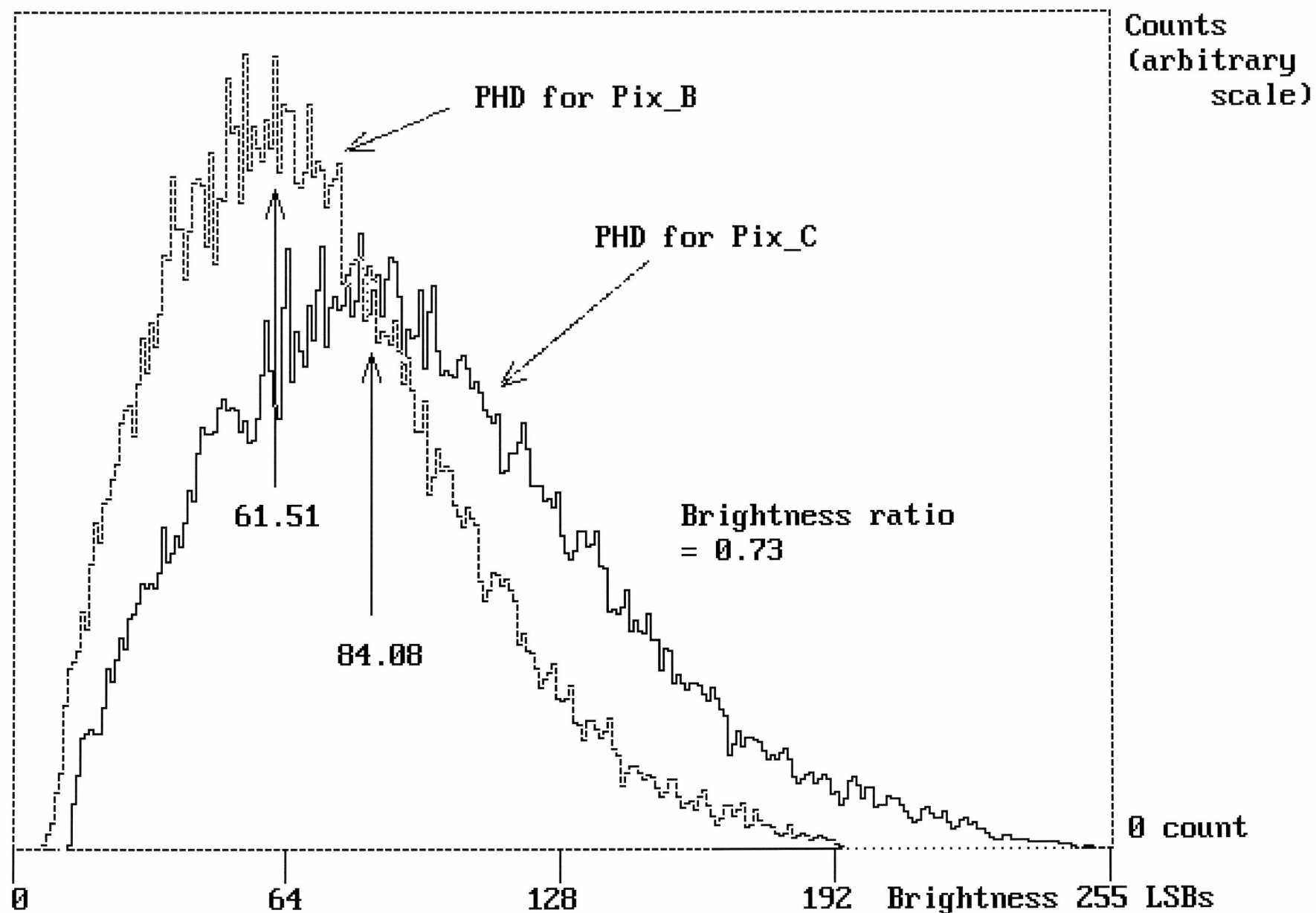


Fig. 19 Averaged pulse height distribution when events fall in Pix\_C

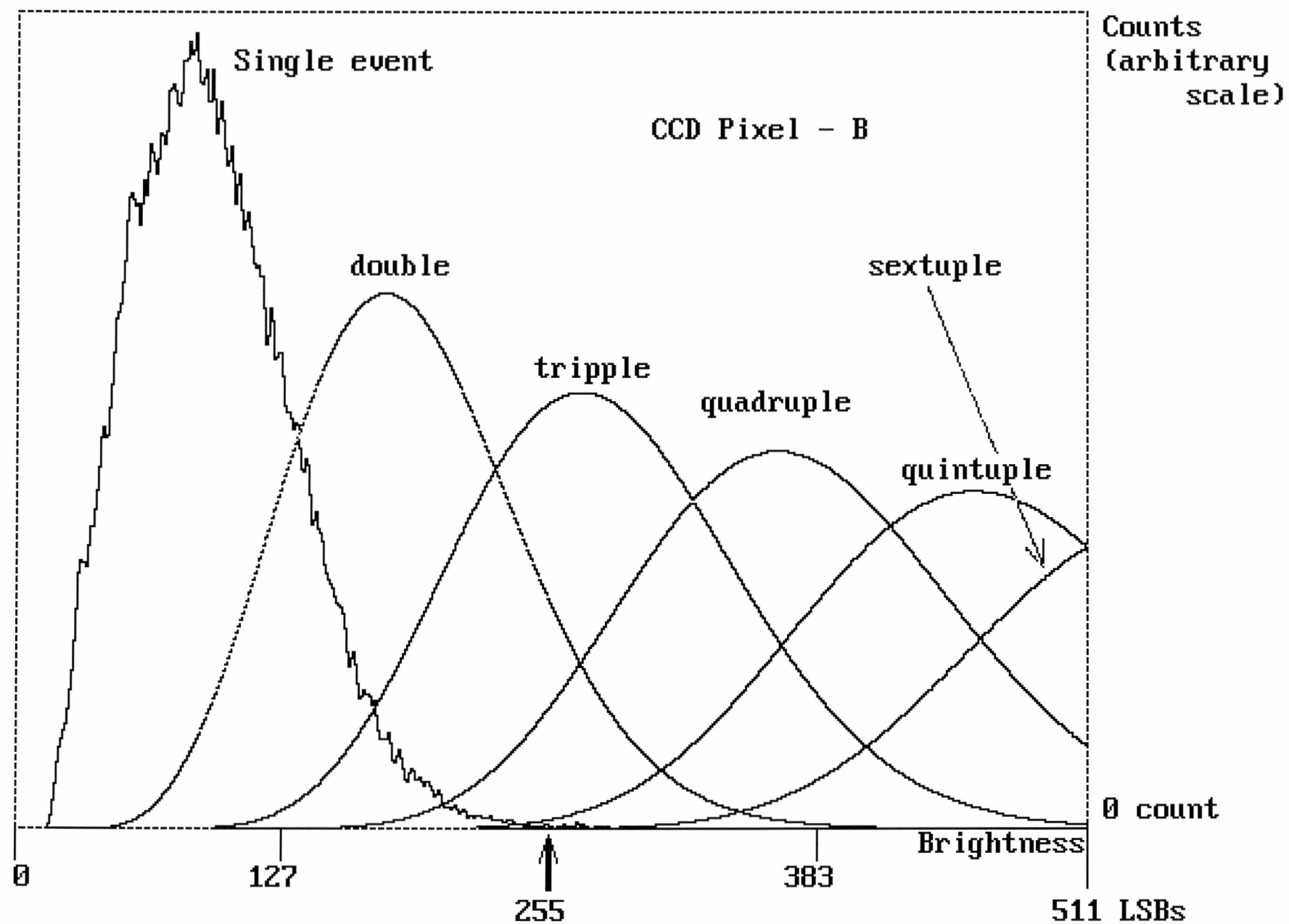


Fig. 20 Pulse height distributions of Pix\_B when events fall in Pix\_B

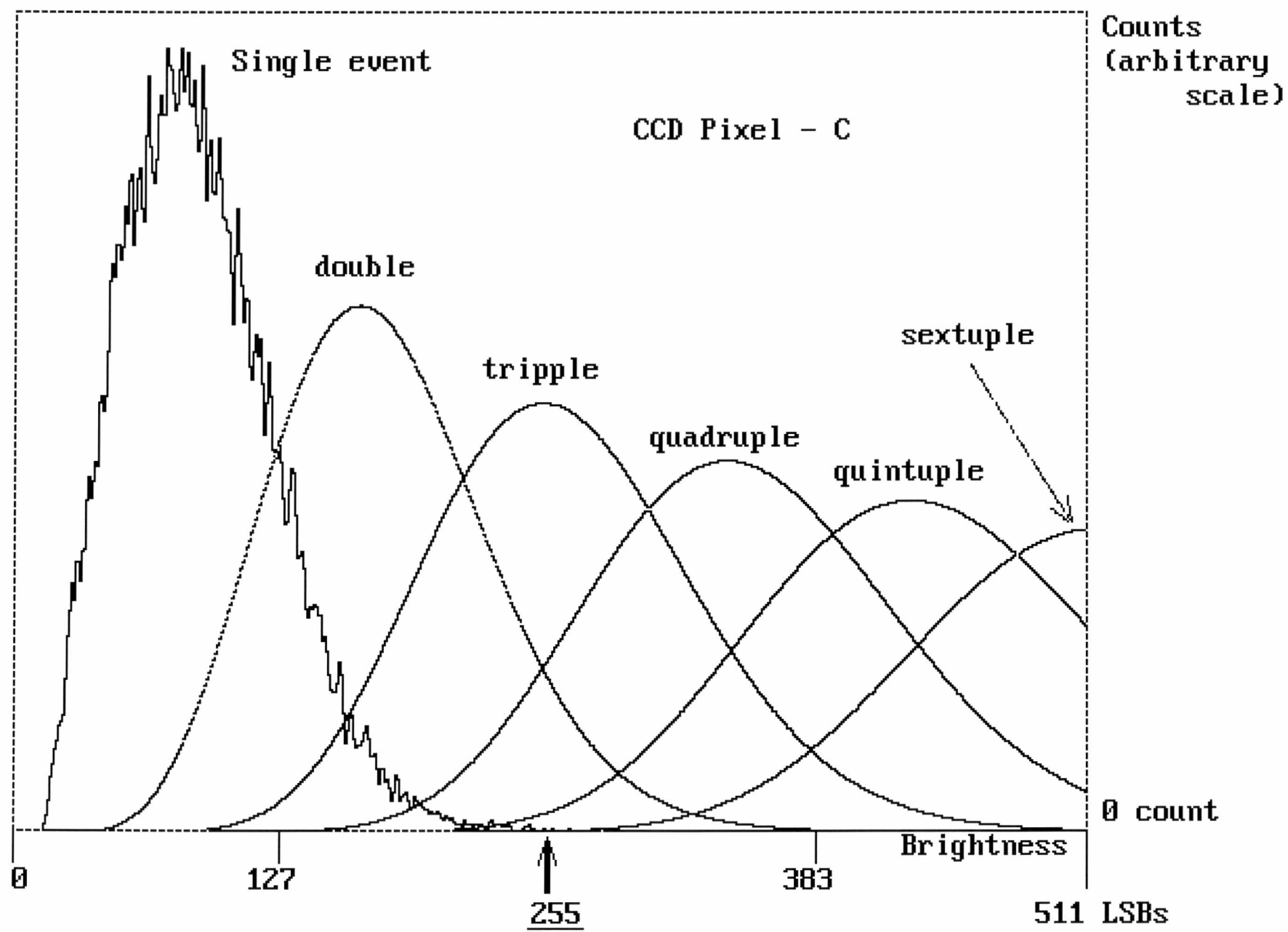


Fig. 21 Pulse height distributions of Pix\_C when events fall in Pix\_C

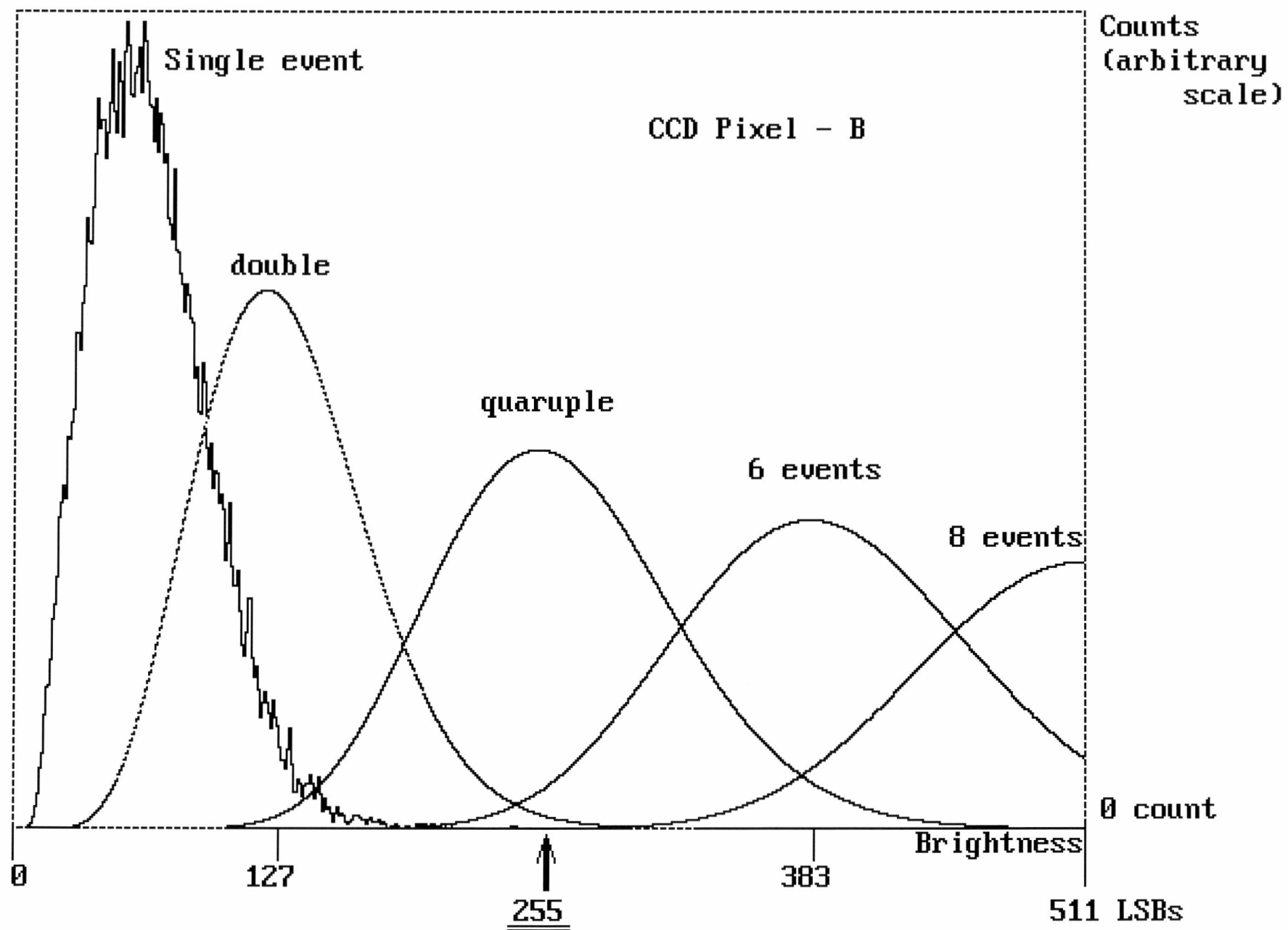


Fig. 22 Pulse height distributions of Pxi\_B when evetns fall in Pix\_C

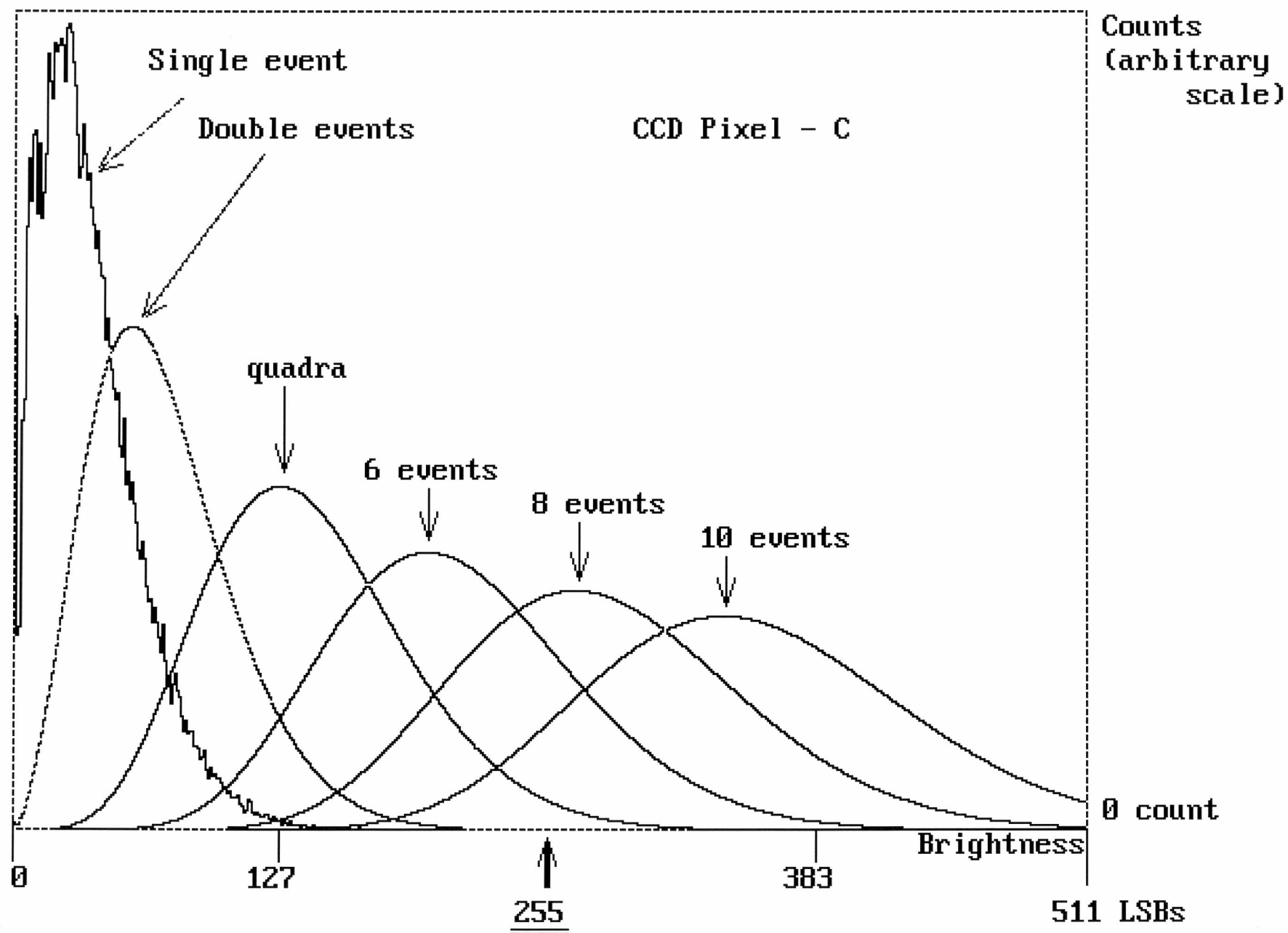


Fig. 23 Pulse height distributions of Pix\_C when events fall in Pix\_B

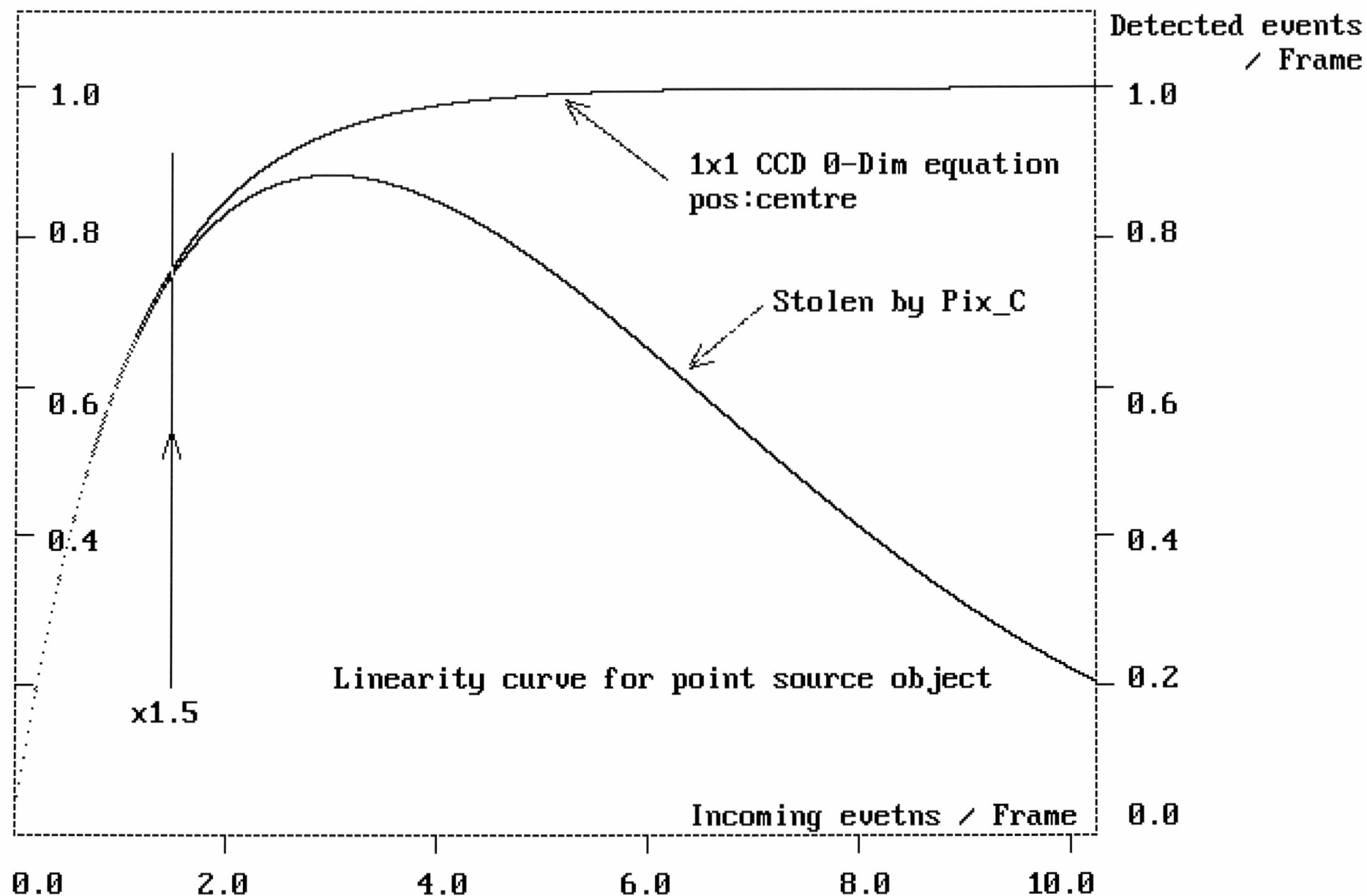


Fig. 24 1 CCD sampling with photocathode effect FWHM=40um



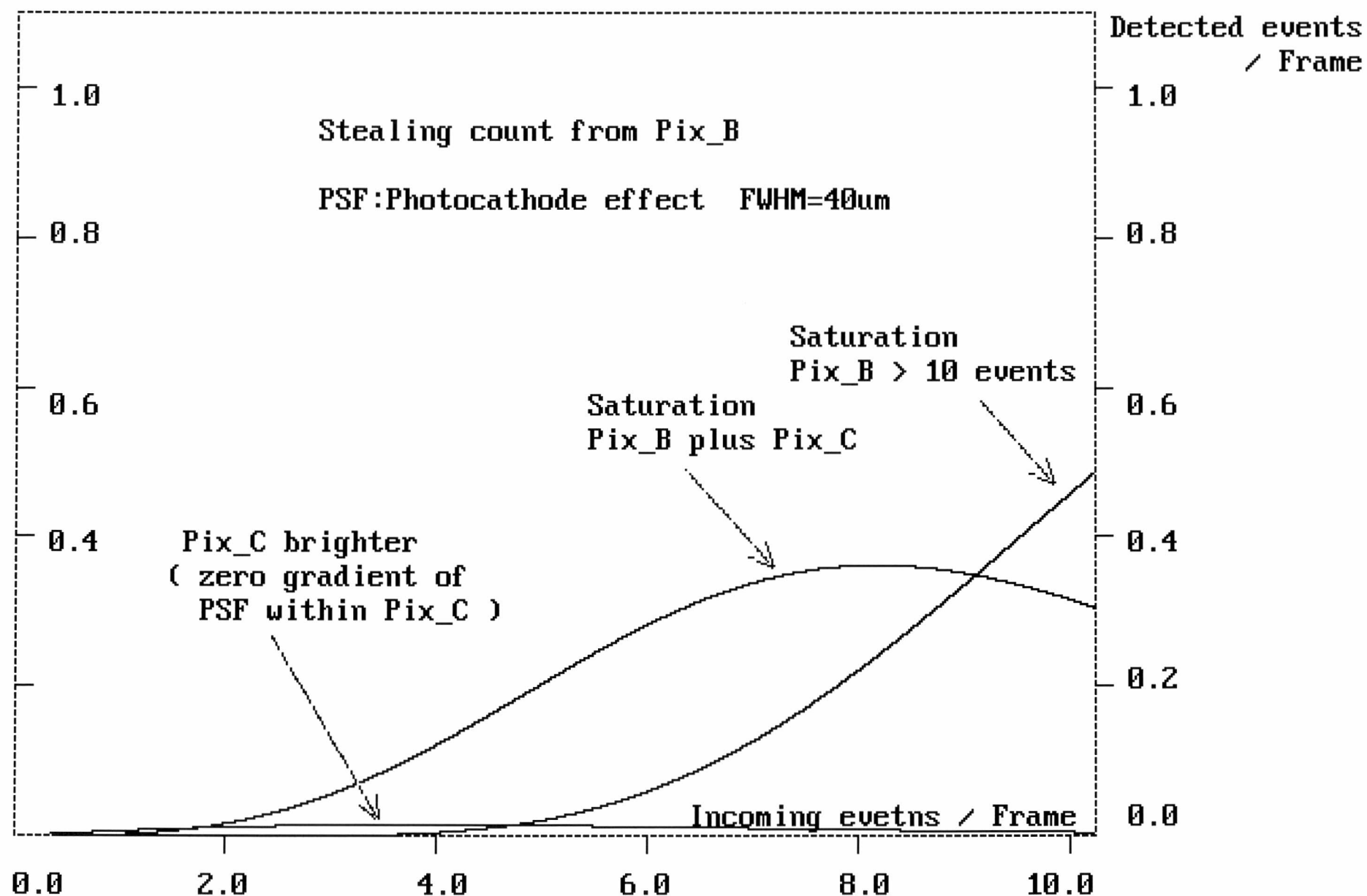


Fig. 25 Effect of individual mechanisms to steal counts.

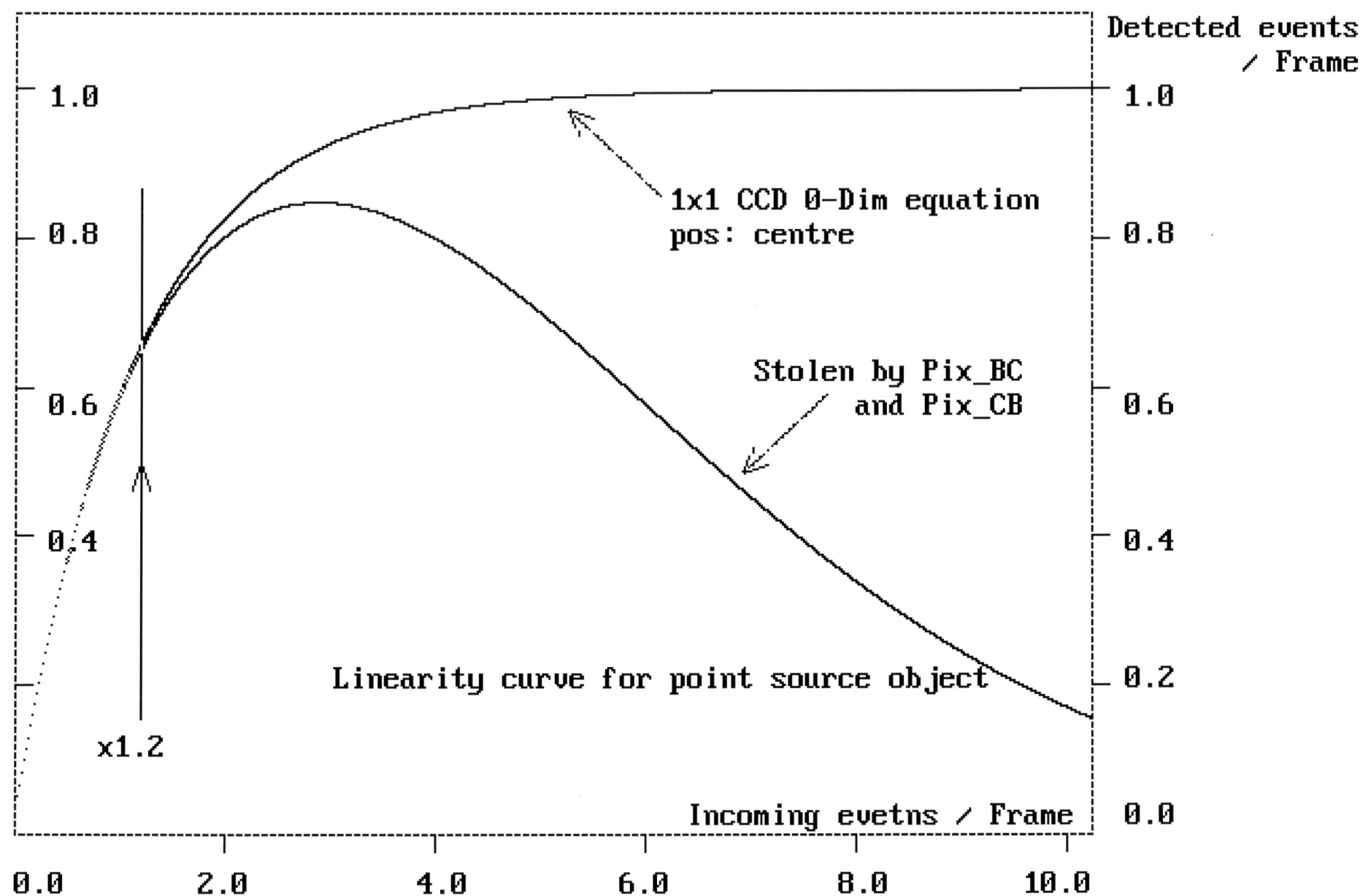


Fig. 26 1x1 CCD sampling with 3x3 PSF due to photocathode FWHM=40um

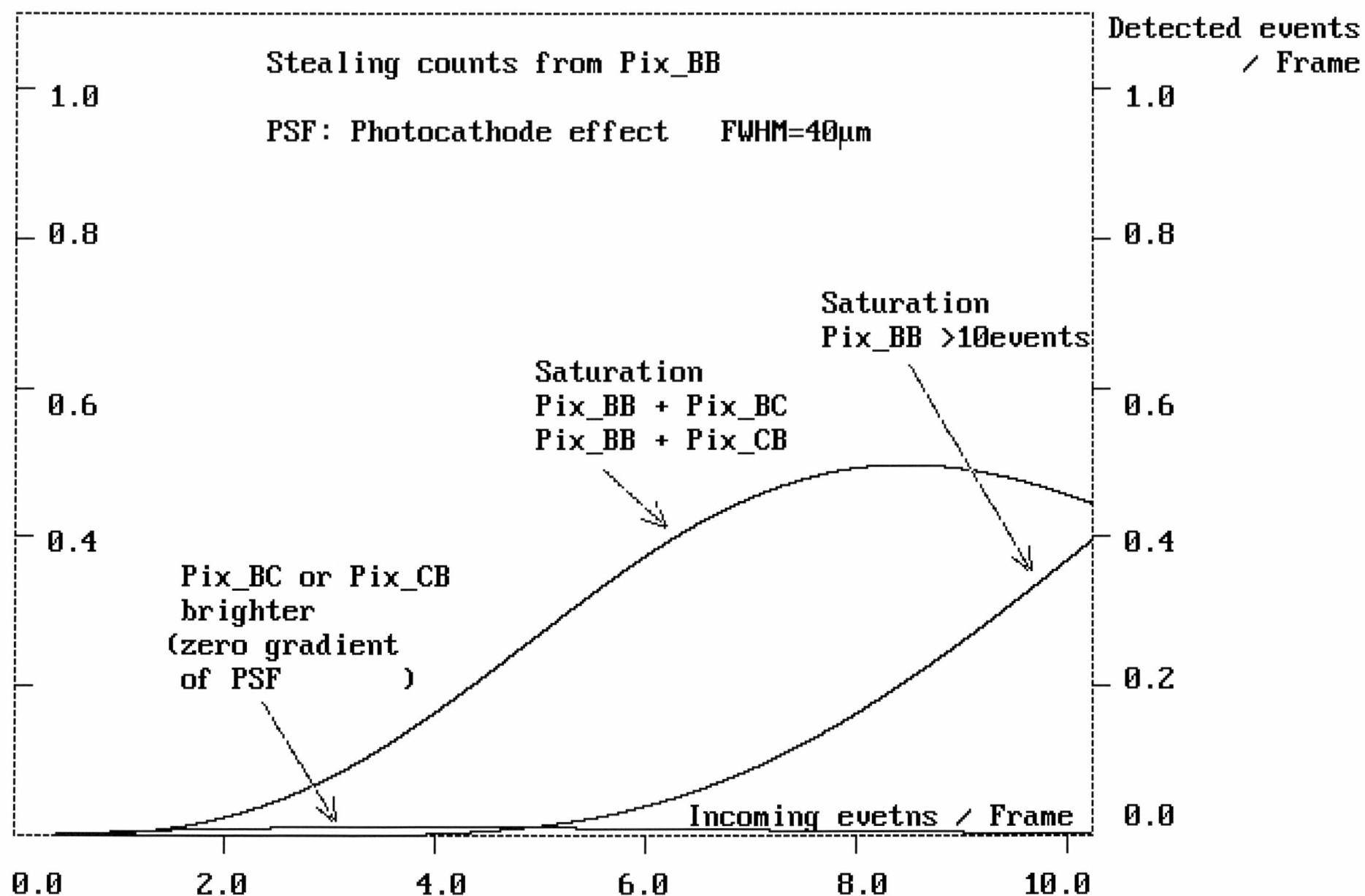


Fig. 27 Effect of individual mechanism to steal counts (2-dimension)

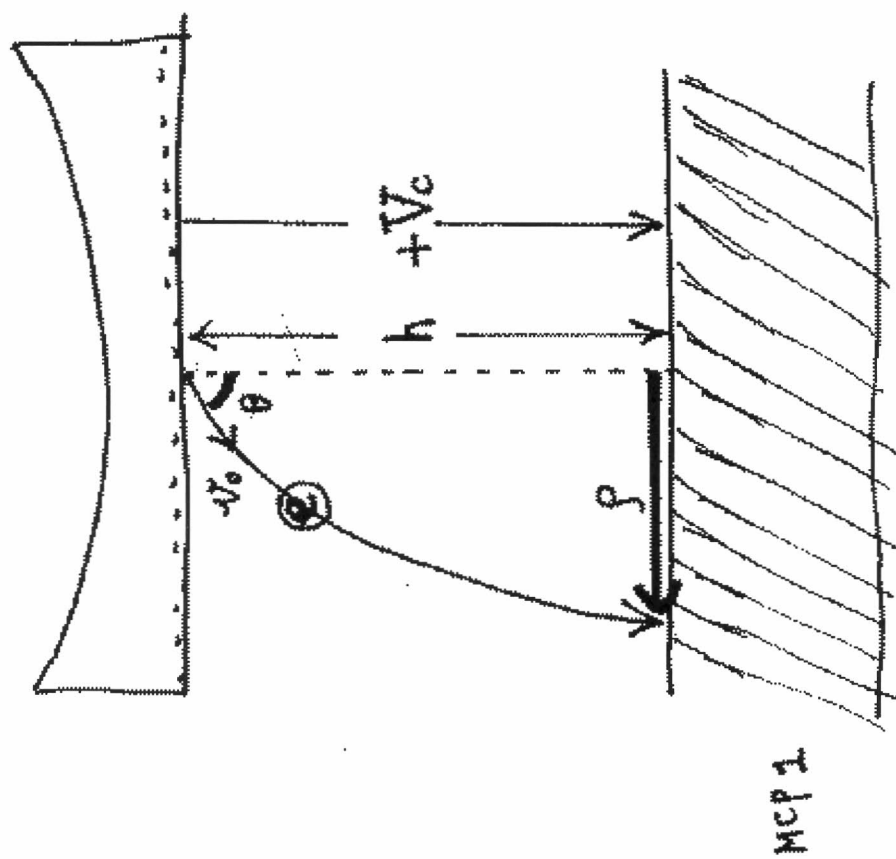
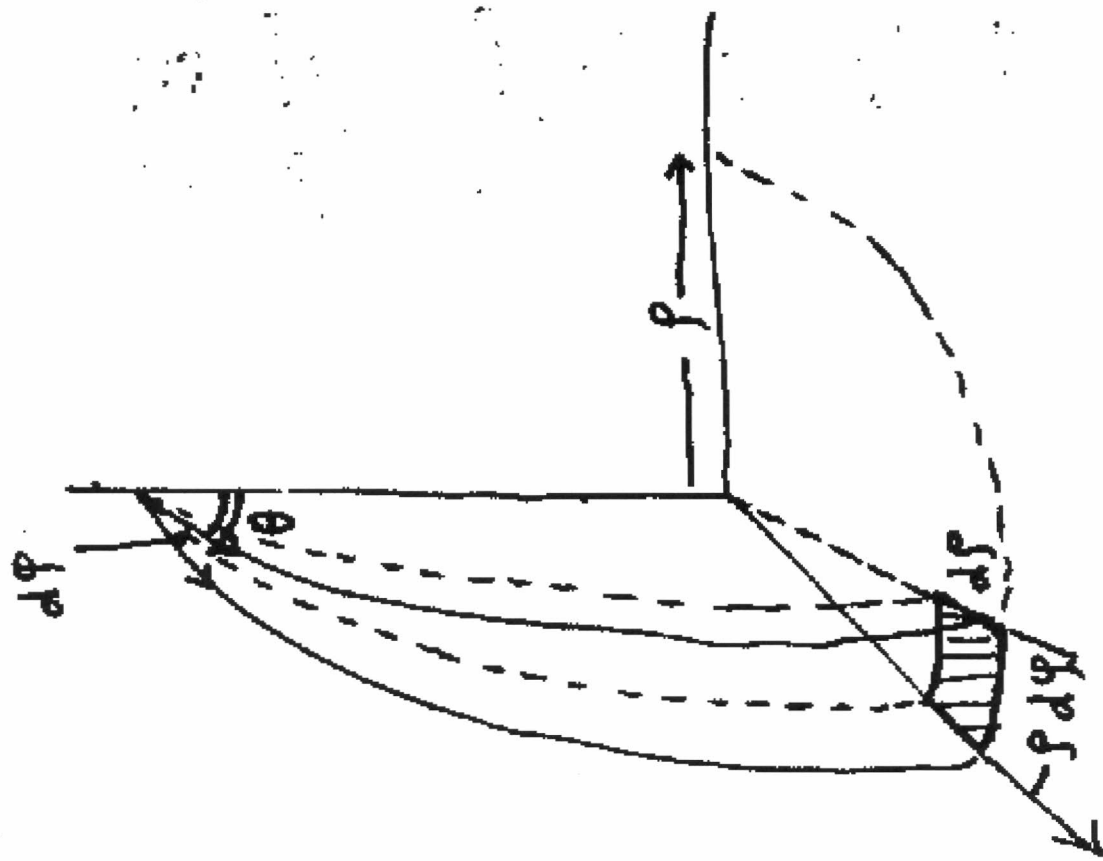


Fig. Ap 1