

Fig. 1. Diagram of coded aperture imaging system with modular detector. A shadowgram from any one source is only partially sampled.

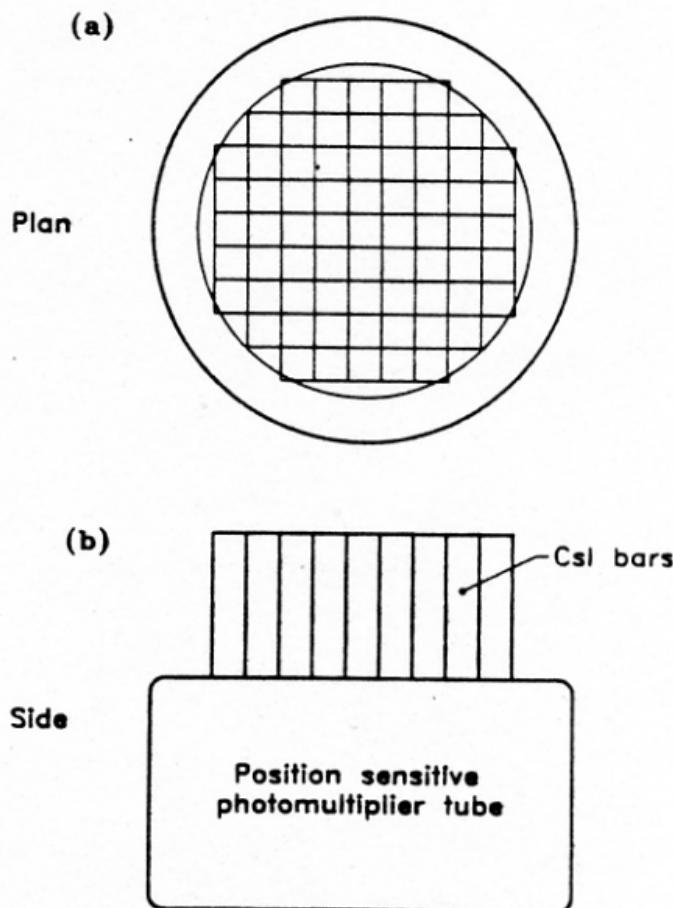
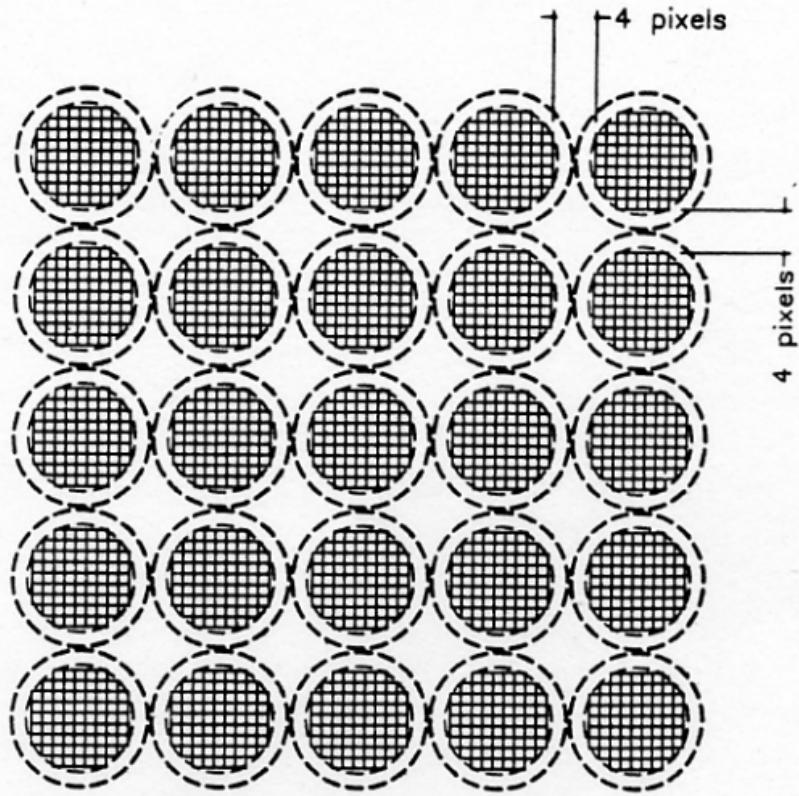


Fig. 2. Schematic diagram of a single detector unit (a) plan view (b) side view.



**Fig. 3. Square packed detector configuration. Inter-module  
gap = 4 pixels.**

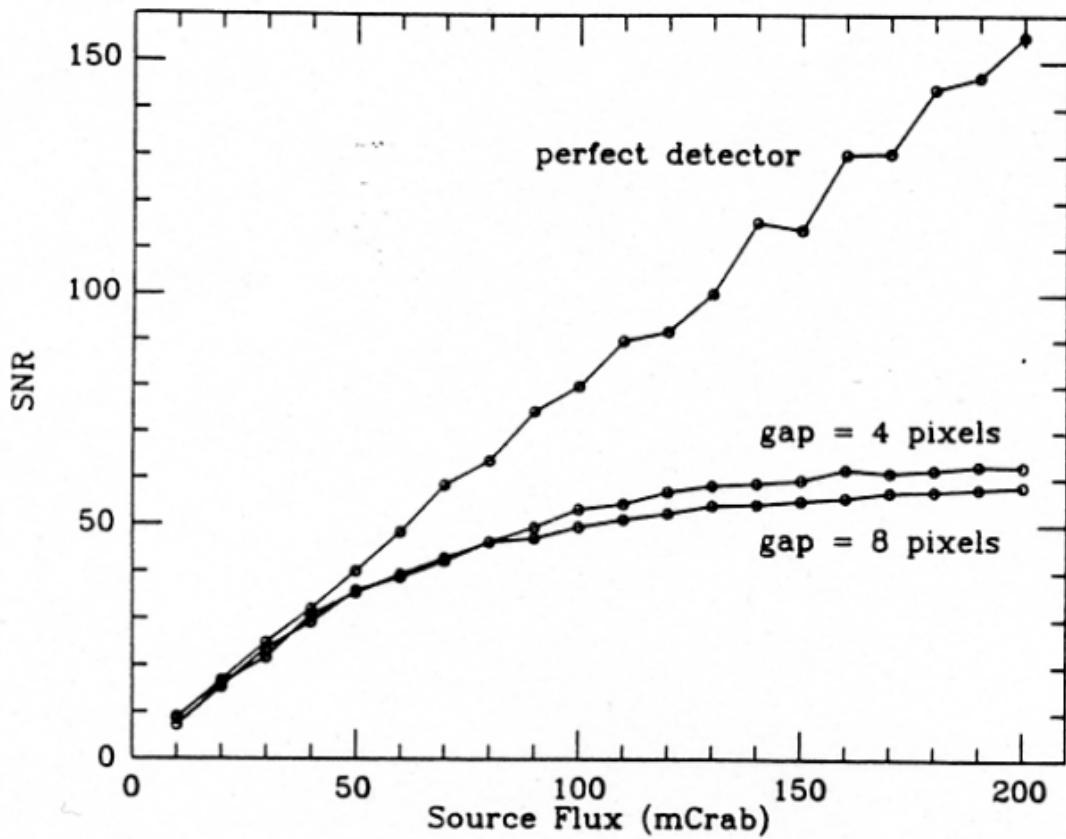


Fig. 4. Results of SNR versus source flux for both detectors.

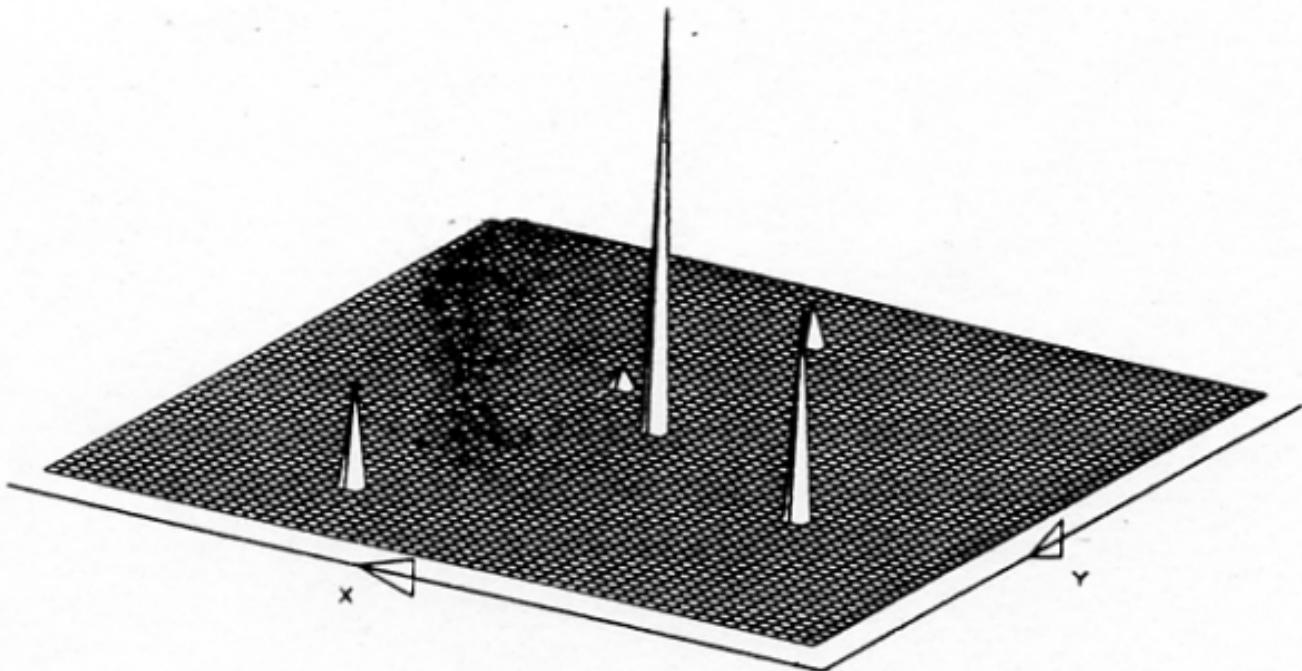
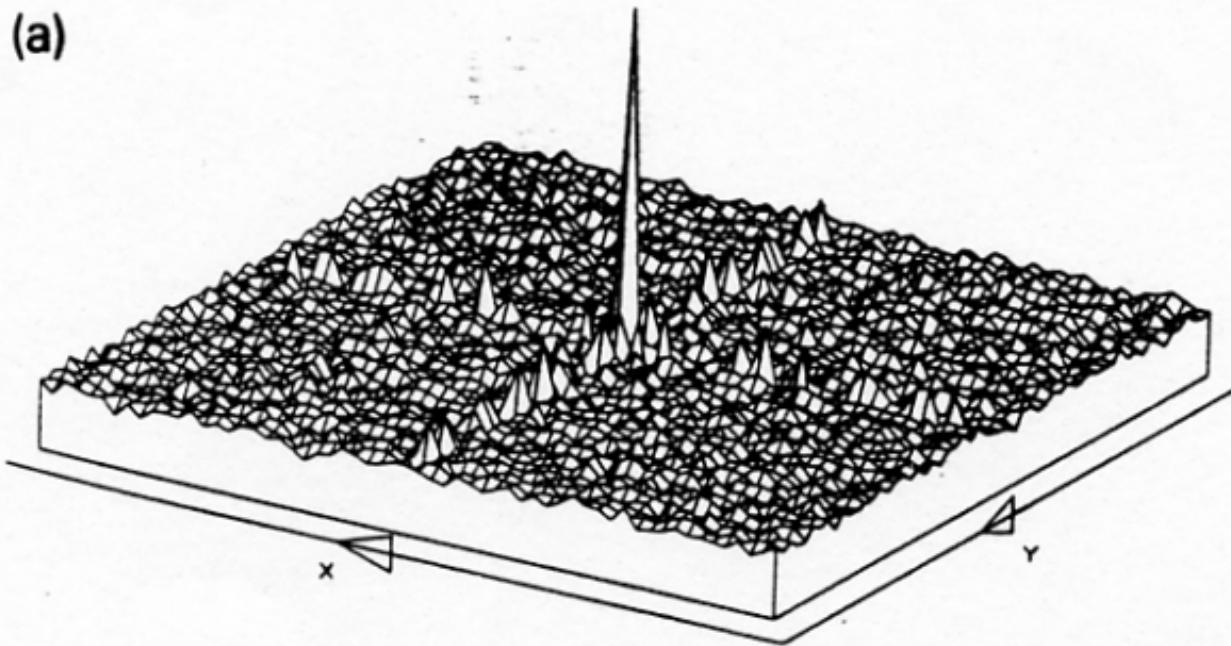


Fig. 6. The simulated scene for the observation of five point sources in the fully coded FOV. The peak heights are in relation to the corresponding source flux values.

(a)



(b)

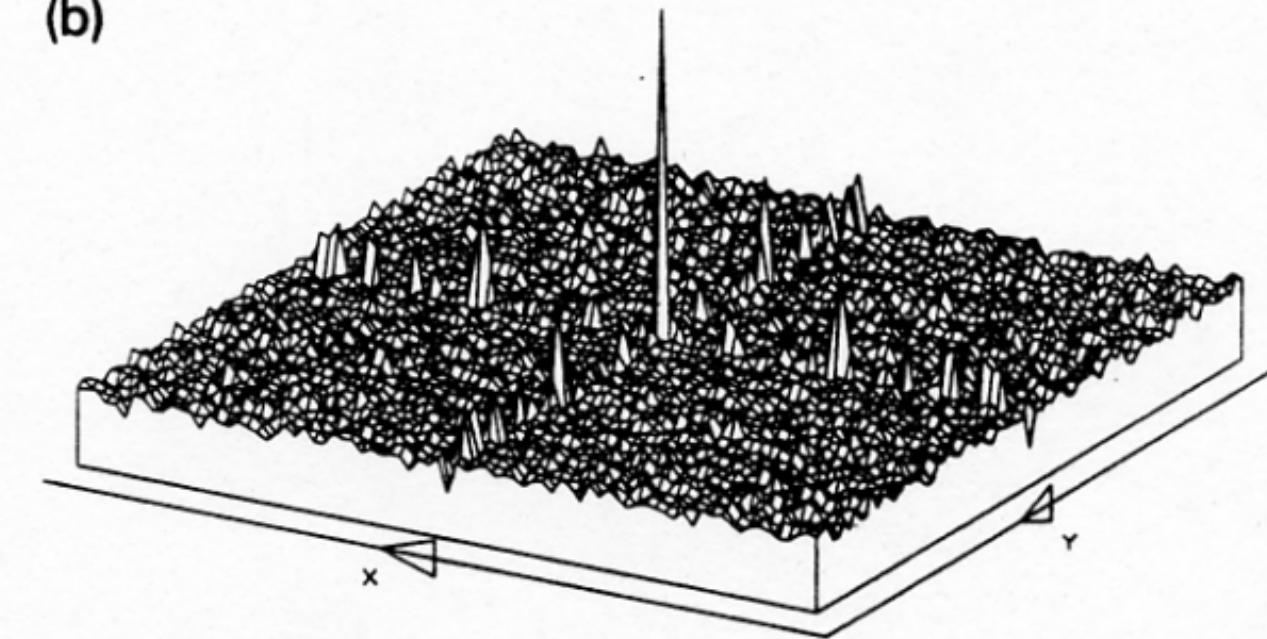
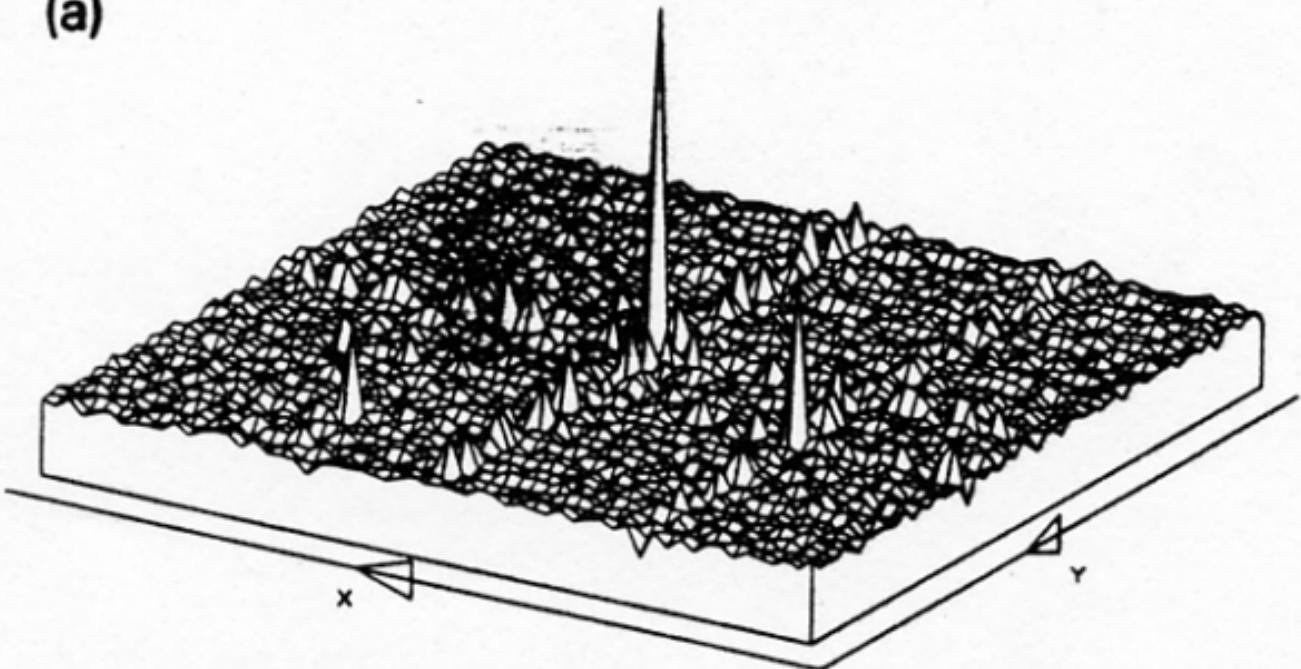


Fig. 5. Images of 100 m Crab source (a) four pixel gap (b) eight pixel gap.

(a)



(b)

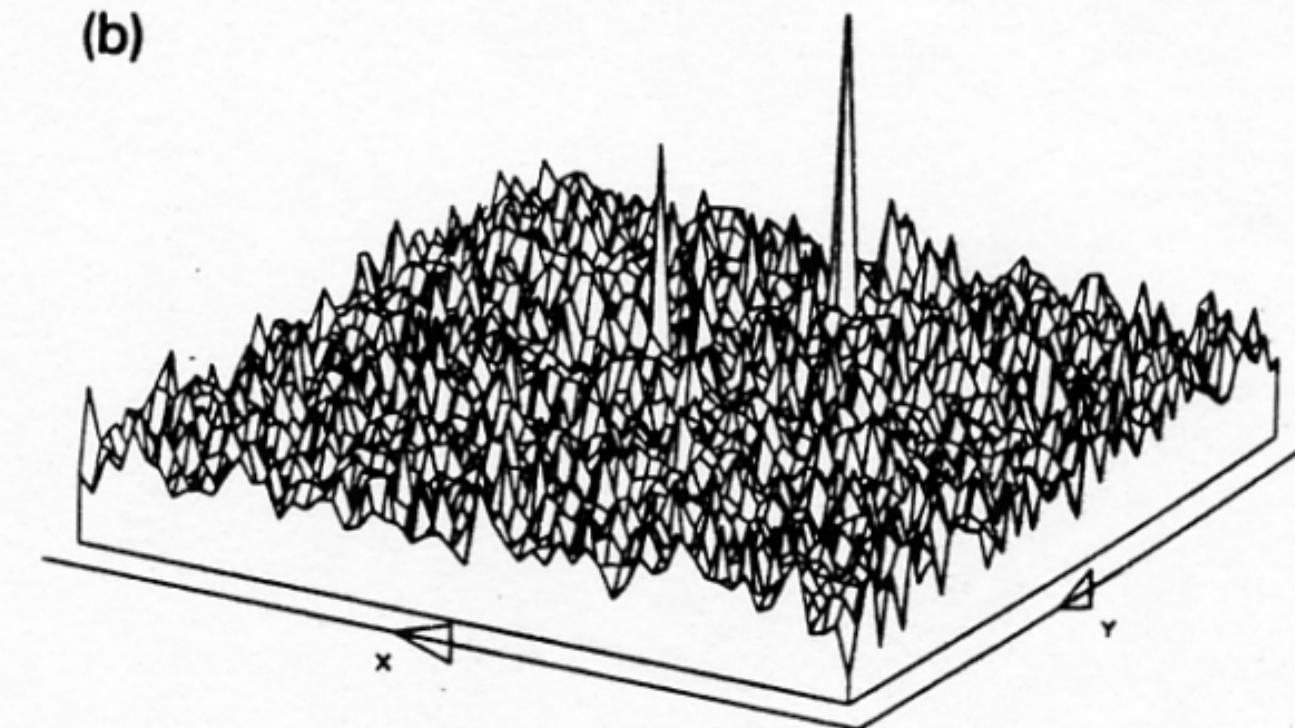


Fig. 7. Deconvolved images using a four pixel inter-module gap detector (a) all five sources (b) sources D and E only.

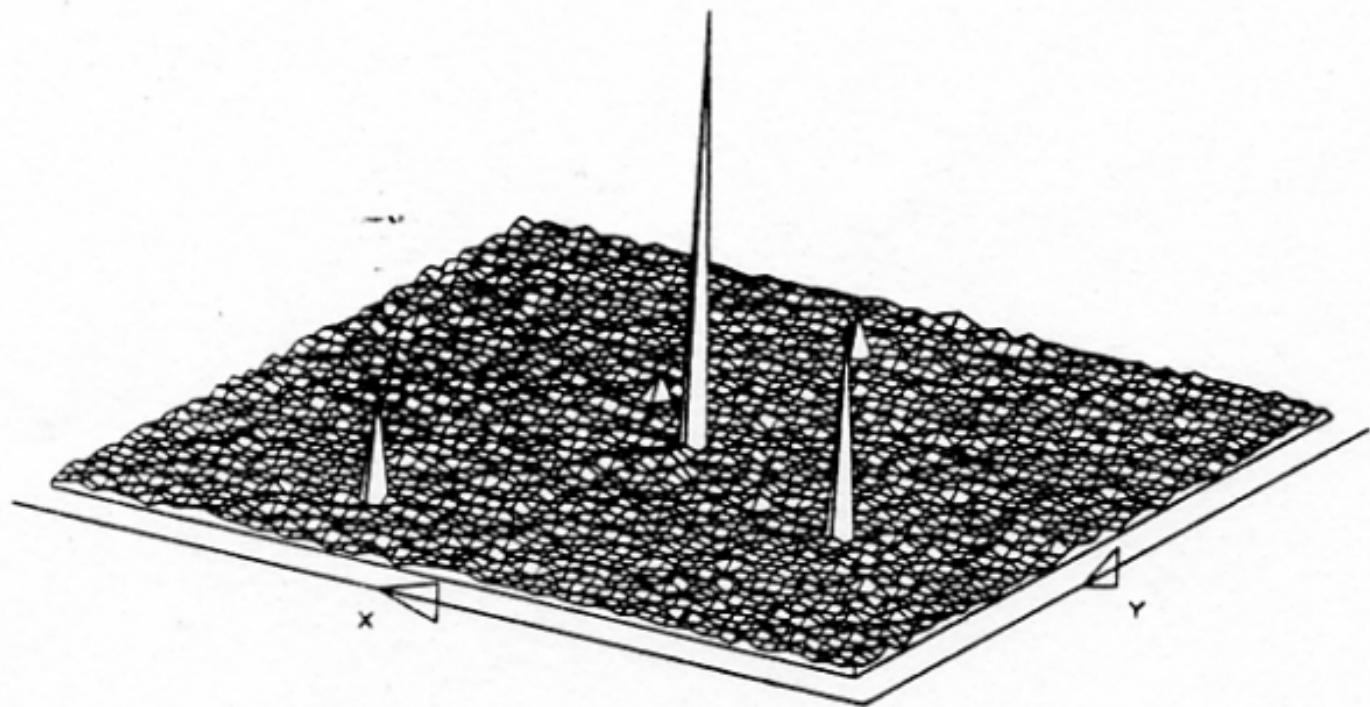


Fig. 8. Reconstructed image with four pixel gap detector after application of iterative image processing.

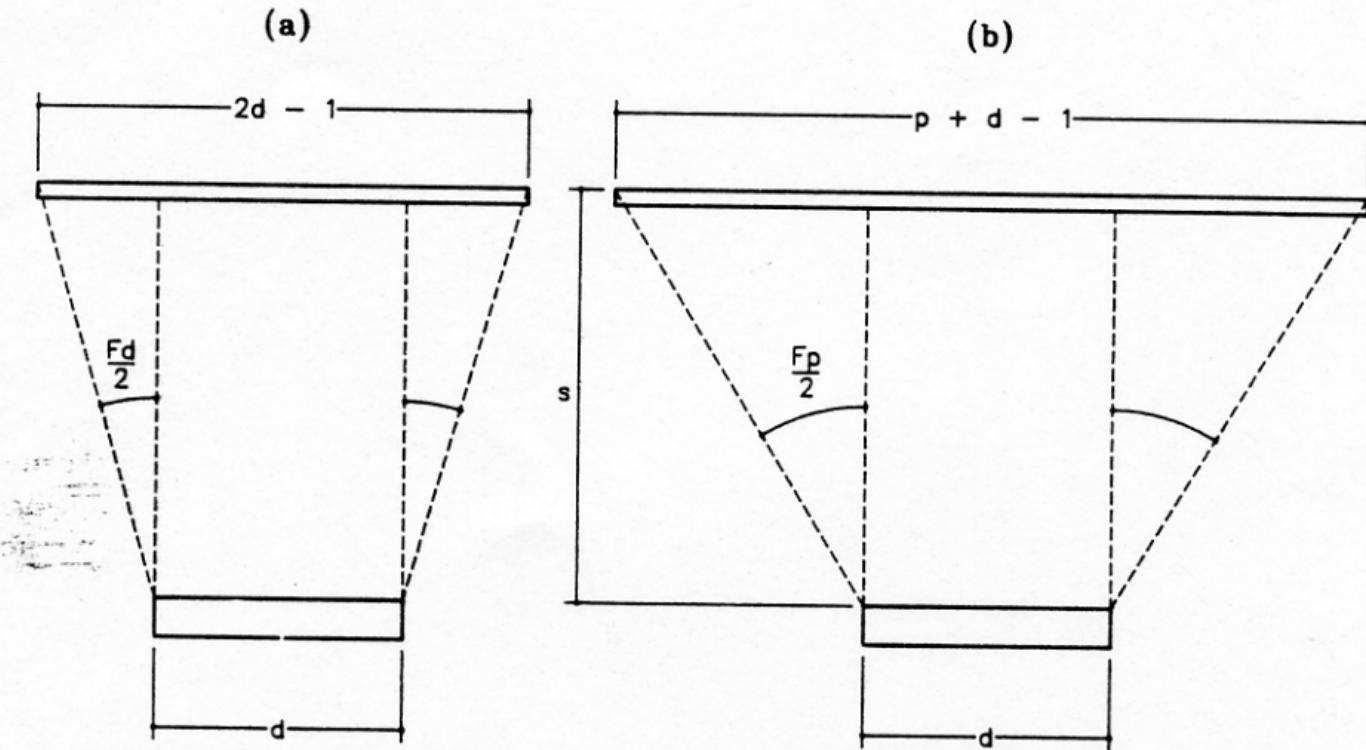
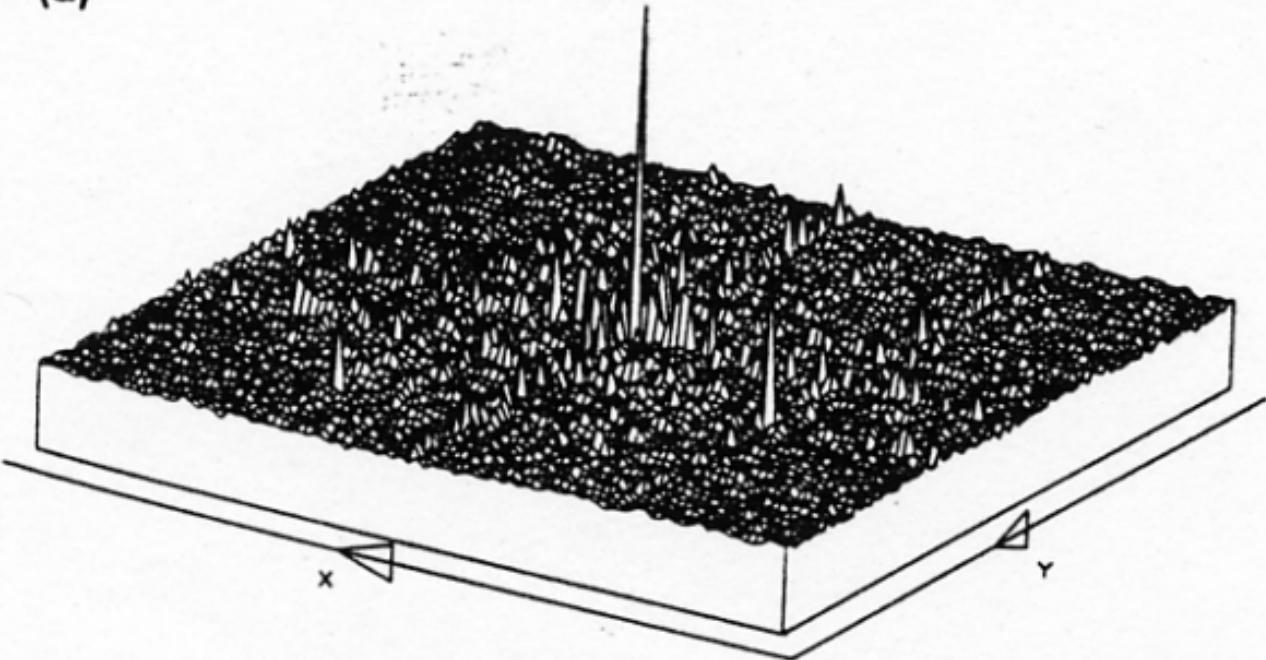


Fig. 9. Principle of FOV extension by using a larger unit pattern than normally allowed for a detector of size 47 elements ( $d = 93$ );  
 (a) usual system set up with 93 element aperture (b) increased FOV set up with unit pattern of 97 elements and a 143 element aperture ( $p = 97$ ).

(a)



(b)

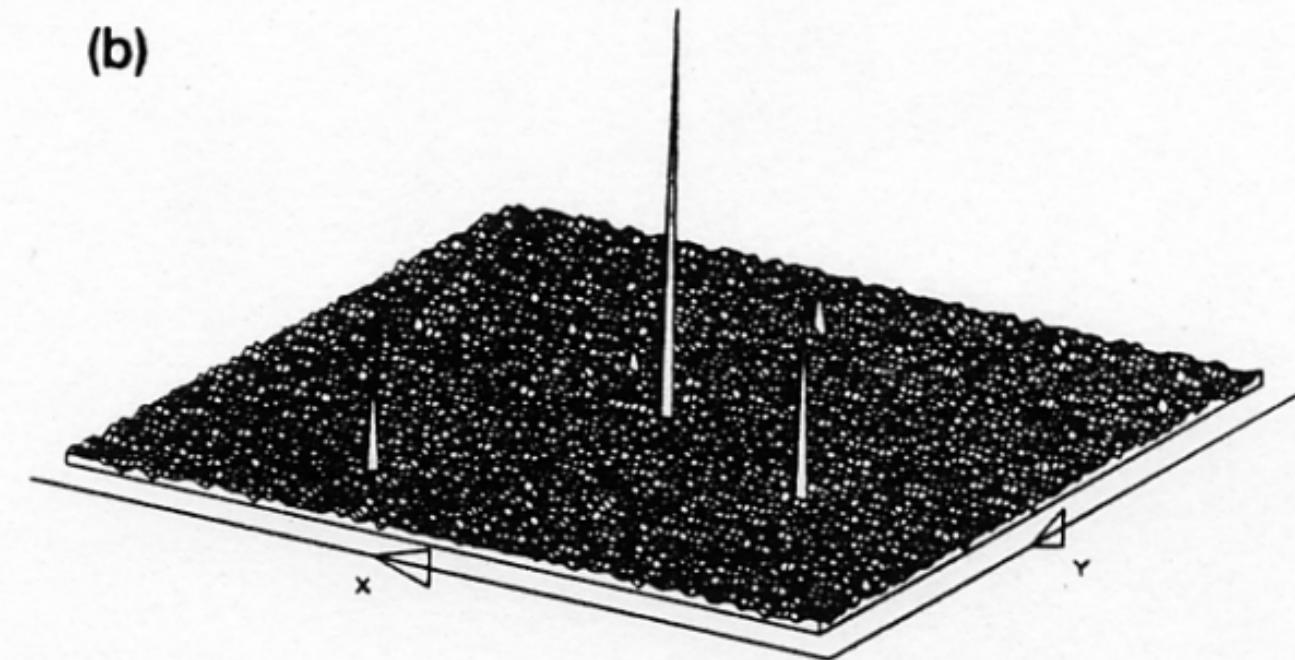


Fig. 10. Multiple source images of increased FOV system (a) standard deconvolution (b) use of image processing.