Set of histograms referenced as "Optical diffr[action] from array of various number of objects"

Contributors

Fuller, Watson, 1935-

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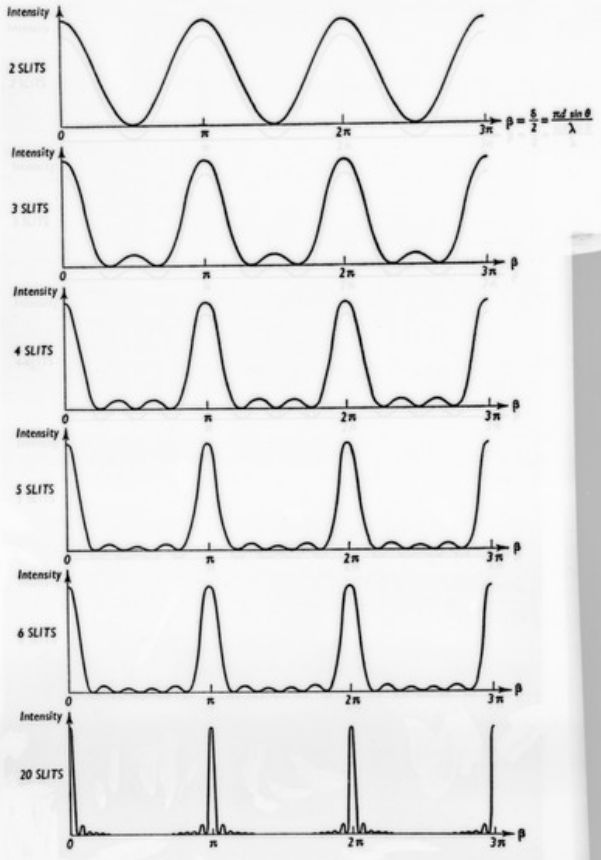
and the corresponding value of $d\theta$ is half the angular width of the maximum. Since $d(\sin\theta)=\cos\theta\, d\theta$ one has

$$d\theta = \frac{\lambda}{Nd\cos\theta} \quad . \quad . \quad . \quad (12\text{–}2)$$



Intensity distributions with narrow slits.

adjacent principal maxima.

Between these various minima lie $(N-2)$ in number and their intens complete intensity distributions for the scale being adjusted to make th Photographs of the patterns are sho finite width were used and, as will slow variation of intensity across th of Fig. 12–3 are contained within a proved in the case of two slits (see 8th, 12th, etc., orders are missing gratings were three times as wide a

In Fig. 12–3 and Plate II, the s cases and it is seen at once that, as p in the same places for all values o Other results derived above $(N-1)$ minima and $(N-2$ maxima. It can also be seen become much weaker (see § is very large and most of th

When N is large, the m patterns of increasing N is *stant*. This corresponds to the effect of increasing the n (12–2) then show that as N spaced but retain the same *of the principal maxima dep* upon the number of lines diffracting elements.

12–2. Intensity Distributio

The separation of the f approximates to Nd. It w when $\cos\theta \doteq 1$, the angular widt that of the central maximum for the overall width of the grating. secondary maxima also approac complete grating. The reason fo vibration polygon for a large valu this will approximate, in gener corresponding to the single apert minima. For example, at the ce