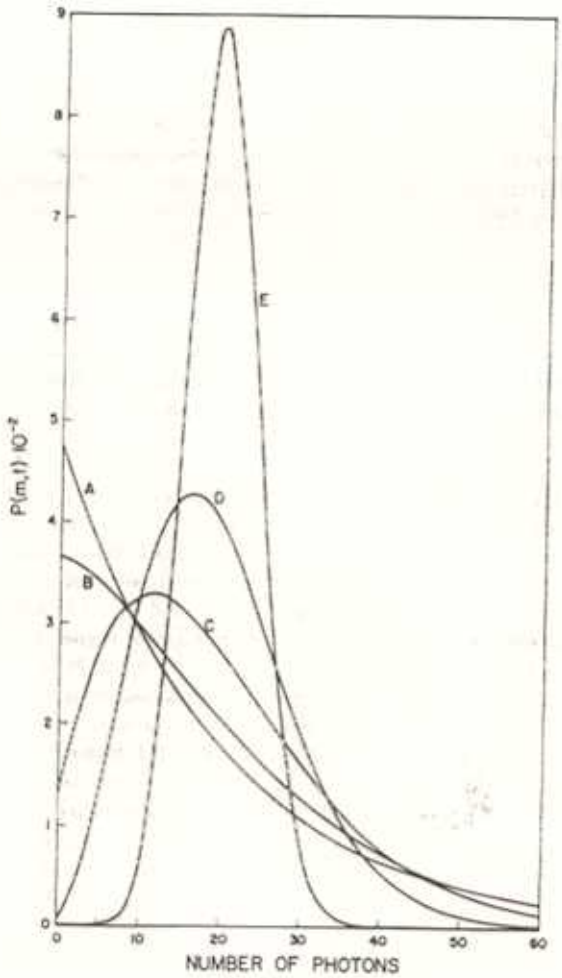

'ig. 1. Photon count distributions which would be measured in various superpositions of oherent (signal) and chaotic (noise) fields in a single mode. The total intensity of the eld is fixed for these cases so that the average number of photons counted is 20 for ich superposition. Curve A represents the distribution for a pure noise field, Eq. (35). ie other curves represent the distributions for fields in which the noise and signal comnents would separately contribute the following average photon numbers: Curve B, 10 m noise and 10 from the signal; Curve C, 5 and 15; Curve D, 2 and 18; Curve E, 0 d 20, respectively. All of these distributions may be expressed in terms of Laguerre lynomials multiplying the distribution of Eq. (35). Curve E, in particular, is a Poisson tribution.

R.