the observed frequencies correspond to the six possible symmetric and antisymmetric rotational oscillations of the two molecules present in the lattice cell.

The development of a zinc-amalgam lamp giving monochromatic radiations of high intensity free from disturbing satellites has enabled Dr. C. S. Venkateswaran to carry out spectro-interferometric investigations of great value on the scattering of light in gases, liquids and solids. The perfection of his experimental technique and the thoroughness of the research has enabled results to be obtained which are trustworthy, besides being of fundamental importance. The work has also been effectively followed up by Mrs. K. Sunanda Bai. Seven out of the fifteen papers in the symposium are devoted to the work of these authors. We reproduce in Fig. 2 an illustration from one of Venkateswaran's papers.

The work of Venkateswaran and Sunanda Bai shows clearly that the conclusions reached earlier by experimenters as well as theorists in this field need radical revision. The picture of the liquid state which now emerges presents little or no resemblance to that of a crystalline solid, the analogy being rather with the amorphous or glassy state. The more viscous the liquid or the lower its temperature, the more nearly does it approximate in its behaviour to a glassy solid. This statement, in fact, covers the experimental situation as revealed by the studies on the positions and intensities of the lines in the interferometer patterns, as well as their states of polarisation.

The so-called "internal" vibrations of the molecules which become manifest in light-scattering also receive attention in the paper of Nedungadi on naphthalene mentioned above. They form the principal theme of three studies with organic liquids contributed to the symposium by Venkateswaran and Pandya. Nedungadi's work shows clearly that the selection rules for these internal vibrations are determined primarily by the symmetry of the crystal in which the molecules are imbedded and only secondarily by the symmetry of the molecules themselves. It is also evident from the investigations that even in the liquid state, the vibrations of an individual molecule are strongly influenced by those of its neighbours.

Limitations of space permit only a brief mention of B. S. Satyanarayana's paper on the relation between fluorescence and light-scattering in uranyl salts. This is a preliminary report of a very promising investigation.

THE EFFECT OF CIRCULATION UPON THE WEIGHT OF METAL CURRENCY

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IN contrast to the physical sciences, the social sciences allow, even now, the detection of quite important effects with the aid of comparatively simple apparatus and a certain amount of knowledge of modern statistical technique. The historical evidence of the demand for currency shown by the loss of weight of coins still in active circulation comes under this head. The same methods may be applied to hoards deposited in ancient times and recovered intact, thus giving the foundations of numismatics as a science.

The normal law of weight distribution may be assumed to hold for a set of coins honestly minted to a fixed legal standard in large numbers. The population mean may be taken as the supposed legal weight, the variance could be estimated by taking the number of rejections at the mint beyond the fixed "legal remedy" by which the coin is allowed to differ from legal weight. Supposing the minted weight distribution to be represented by I in Fig. 1 (and ignoring the absorption of the coinage), the effect of circulation will be to lower the mean and to increase the variance, as in II. Further circulation changes the curve to III, where only the heavier half has been drawn. Deviations from normality will become more strongly marked and the currency will tend to disappear from circulation. While the general case can be brought under the "homogeneous random process"[1] which is so