Production of Furfural from Corn-cobs.—Furfural is a heterocyclic aldehyde which is used as a reagent to detect the presence of certain compounds such as indol and the bile acids. It is also used in the synthesis of certain dyes. Usually it is prepared by the distillation of bran with hydrochloric acid. F. B. LA FORGE (*Jour. Indus. Eng. Chem.*, 1921, xiii, 1024–1025) has devised a method for the production of this aldehyde by heating corn-cobs with water under pressure. The process is conducted at a temperature of 180° to 185° C. in an autoclave, which is provided with a condenser, through which the evolved vapors pass and are condensed, as the pressure is released. Several successive portions of corn-cobs may be extracted with the same portion of water; the insoluble residue of cellulose is removed from the autoclave before the next batch of cobs is added. Each batch is heated under pressure for 45 minutes. The solution obtained from the corn-cobs is heated in the autoclave for 15 minutes at the temperature stated; then the pressure is released; a volume of water equal to the volume of the condensed liquid is added to the contents of the autoclave; and the entire cycle is repeated several times. Furfural is present in, and is recovered from the condensed liquid. The yield of furfural is approximately 7.75 per cent. of the weight of the corn-cobs used. The process may be simplified by omission of the removal and saving of the cellulose; however, the latter is a valuable by-product.

J. S. H.

The Luminosity of the Night Sky.—CH. FABRY has a short article on this subject in *Scientia*. Newcomb was the first to draw attention to the matter, and said "The total quantity of light coming from the aggregate of stars may serve to control our theories of the universe. It seems possible to determine not only the total value of this emission, but also values from each part of the sky. The quantity should be considered as a constant basic value in astronomy." The problem is to determine the total emission and also the intrinsic emission of each area of the sky. Newcomb made a rude attempt in this direction.

Fabry says that, omitting some discordant results, the brilliancy of a given point in the sky seems to be constant. Different areas are not in agreement with each other, but the differences are less than might be supposed. In the Milky Way the most brilliant portions are about double the luminosity of the less brilliant. The general light of the sky is the influence that prevents us from seeing distinctly stars below the 6th magnitude. If the background was without luminosity, stars as low as the 8th magnitude could be seen. This source of the light cannot be referred to the stars which are individually indistinguishable. Several suggestions are offered as to the possible source of this general luminosity, but no experiments or observations on the subject are reported in the paper.

H. L.