matter and form of presentation, he cannot help enjoying the clearness, consistency, and cogency with which the author presents his case from cover to cover.

KURT LAVES.

Cours d'Astronomie. Première Partie: Astronomie théorique. By H. ANDOYER. Paris, Librairie Scientifique A. Hermann, 1906. 222 pp.

AFTER a rather prolonged lull in the publication of text-books on spherical and practical astronomy we are now about to to receive from the press two treatises on the same subject, the one by Professor W. Foerster, the former eminent director of the observatory of Berlin, the other by Professor Andoyer, the well-known scholar of the Paris observatory. The first parts of both treatises have just left the press. A review of Professor Foerster's book has been published in the *Astrophysical Journal.* In giving a short outline of Professer Andoyer's book in a journal devoted to mathematical science, an effort is made to bring out those points primarly which are of interest to mathematicians. Chauvenet's two large volumes on spherical astronomy are too voluminous to lend themselves easily to the needs of a mathematician who tries to inform himself about the application made in astronomy of a certain mathematical theorem he is interested in. Andoyer's book is much more adapted for such purposes. After an introductory chapter concerning spherical trigonometry and a short deviation into spheroidal trigonometry to the extent to which this is needed for elementary geodesic questions, the author gives in the next seven chapters a rather condensed account of refraction, parallax and aberration. Before the theory of precession and nutation is taken up, the reader is initiated in Chapter IX into the more elementary notions of celestial mechanics. This is necessary since the apparent position of a planet, after it has been corrected for refraction, parallax, and aberration, will yet have to be freed from the disturbing influences of the neighboring bodies. To quote but one example: in the definition of apparent solar time, the center of the earth is pulled out of its elliptic path by the various members of the solar system. These perturbations of the individual members must be brought into tables so that for a given value of the time the amount of pull due to each individual member can be properly added to the position of the earth in the elliptic path. Now since the