
Zbl 0987.01005

Kepler, Johannes (Donahue, William H.; Densmore, Dana)
Optics. Paralipomena to Witelo & optical part of astronomy. Transl. from 1604 German original and with an introduction by William H. Donahue. With a preface by Dana Densmore and Donahue. (English)
Santa Fe, NM: Green Lion Press. xv, 459 p. (2000).

This book is the first complete translation of Kepler's work on optics from 1604 (a French translation of the first half, the Paralipomena, was published in 1980). It is made very conscientiously so as to render all levels of the original work, from the scientific substance to the various aspects of the style in which it is written. The volume itself does not specify the language of the original. The precision of the rendition of the substance may be illustrated by a characteristic example: where a translator caring less about minor anachronisms might have spoken of a time interval of one second, Donahue has one second part of hourly time (p. 337). The stylistic precision goes so far as to shift when possible to French where Kepler inserts a Greek phrase in his Latin, and gives a good impression of Kepler's humour and self-irony as well as of the aggressiveness of Renaissance rhetoric (milder in Kepler than in many other figures). The text also reproduces Kepler's original margin notes, pagination, and index. Donahue's own notes primarily [aim] at clarifying obscurities and providing references to sources which, though perhaps familiar in Kepler's days, are obscure to us, and not at discussing his views beyond the need for clarification this being too much to burden a translation with (p. xvi). The artwork of the volume is beyond reproach.
The volume is highly welcome. The secondary literature may allow us to see Kepler's treatise as the culmination of the medieval perspectiva tradition and/or as the beginning of modern optics; it may describe Kepler's discovery of the retina as the place where the visual image is formed, his analysis of refraction in the atmosphere, of eclipse phenomena, and of the camera obscura. It will never, as does this translation, convey a satisfactory impression of the coherent totality of Kepler's thought, and thus, for instance, not allow that this thought be seen as a key witness of (and key contributor to) the transition between the ontologies and epistemologies of the outgoing sixteenth century (where Gilbert links Kepler to an unmentioned Bruno) and those of the seventeenth. Nor is it likely to reveal to which extent Kepler's famous replacement of a traditional more physical branch of the mathematical sciences (the traditional Aristotelian characterization of astronomy) by a new, namely physical, astronomy is paralleled by and related to his transformation of optics.

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Classification :
∗01A45 Mathematics in the 17th century
01A75 Collected or selected works
78-03 Historical (optics, electromagnetic theory)