1. Record Nr. UNINA9910151858003321

Autore	Raynaud Dominique
Titolo	A Critical Edition of Ibn al-Haytham’s On the Shape of the Eclipse : The First Experimental Study of the Camera Obscura / / by Dominique Raynaud
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-47991-1
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XVIII, 305 p. 75 illus., 1 illus. in color.)
Collana	Sources and Studies in the History of Mathematics and Physical Sciences, , 2196-8810
Disciplina	510.9
Soggetti	Mathematics History Lasers Photonics History of Mathematical Sciences Optics, Lasers, Photonics, Optical Devices
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Acknowledgments -- Introduction -- 1. This Edition -- 2. Arabic Text and Translation -- 3. Ibn al-Haytham's Method -- 4. Ibn al-Haytham's Optical Analysis -- Appendix. A tentative Dating of On the Shape of the Eclipse -- References -- Index Nominum -- Index Rerum -- Arabic-English Glossary -- Table of Figures -- Plates.
Sommario/riassunto	This book provides the first critical edition of Ibn al-Haytham’s On the Shape of the Eclipse with English translation and commentary, which records the first scientific analysis of the camera obscura. On the Shape of the Eclipse includes pioneering research on the conditions of formation of the image, in a time deemed to be committed to aniconism. It also provides an early attempt to merge the two branches of Ancient optics—the theory of light and theory of vision. What perhaps most strongly characterizes this treatise is the close interaction of a geometric analysis of light and experimental reasoning. Ibn al-Haytham conducted his experiments in a systematic way by

varying all that could be changed: the shape and size of the aperture, the focal length of the camera obscura, the distance and shape of the celestial bodies. This way, he achieved a thorough understanding. This work represents a decisive step in both the history of optics and the application of the experimental method that was just as efficient in medieval Islam as today.