

Ileana Chinnici; Antonella Gasperini. *Alle origini dell'astrofisica italiana: Il carteggio Secchi-Tacchini 1861–1877.* 496 pp., illus., bibl., index. Florence: Fondazione “Giorgio Ronchi,” 2013. (Paper.)

The main core of this book (pp. 55–468) is the diplomatic transcription of the correspondence between Angelo Secchi and Pietro Tacchini, from 1861, soon after the unification of Italy, up to 1877, a few months before Secchi's death. Each letter is accompanied by a copy of an original image; twenty-eight more pictures and photographs further enrich this work. A previous publication of the letters sent by Tacchini to Secchi that are now kept in the archive of the Pontifical Gregorian University (Letizia Buffoni *et al.*, eds., *Pietro Tacchini: Lettere al Padre Angelo Secchi [1861–1877]* [Univ. Studi di Milano; Pontificia Univ. Gregoriana, 2000]) is now completed by this work, which is sponsored by the National Astrophysics Institute, the Vatican Observatory, and the Pontifical Gregorian University. Thanks to their research in the historical archive of the Arcetri Observatory, Ileana Chinnici and Antonella Gasperini can now offer the unpublished part of the scientific correspondence under consideration with a revised edition of the whole set of letters. An apparatus of short footnotes gives historical details about scientists, natural phenomena, historical facts, and bibliographical references.

Two short introductory essays address a few historiographical issues. The first deals with the impact of New Astronomy and the role played by Secchi and Tacchini in founding astrophysical research in Italy. The second briefly describes the archival history of the correspondence. Two biographical sketches and a chronological list of the letters follow these essays. At the end of the book we find an appendix listing the main lines of the sun spectrum, an updated bibliography, and four indexes of proper names, geographical locations, celestial bodies, and illustrations.

Angelo Secchi (1818–1878), a Jesuit astronomer, is known for his studies in solar physics and stellar spectroscopy. Between 1863 and 1877 he developed one of the first spectral classifications of the stars in five classes, later used by the Harvard Observatory. He was also interested in geodesy, meteorology, and oceanography.

Pietro Tacchini (1838–1905)—astronomer, meteorologist, and seismologist—played a leading role in Italian astrophysics. From 1865 on,

he studied solar physics and organized scientific expeditions the world over to analyze the solar spectrum during total eclipses. He published one of the first classifications of solar protuberances. In 1871 he founded the Society of the Italian Spectroscopists (today's Italian Astronomical Society), whose *Memoires*, published from 1872, are the oldest astrophysical journal in the world.

The correspondence between Secchi and Tacchini is therefore mostly devoted to astrophysics—or, as it was called at the time, New Astronomy—and, in particular, to solar physics. The reader interested in the history of astronomy can follow the first steps of solar astrophysics—and not only in Italy—with all the new organizational, observational, and theoretical problems faced at the time. The editors (pp. 12–13) are not willing to discuss whether the impact of spectroscopy in astronomy should be considered a scientific revolution. They invite the reader to think about four themes: the change from the impossibility to the possibility of knowing the physical and chemical nature of celestial bodies; the evolution of telescopes, now combined with spectroscopes and spectrographs; the enrichment of the astronomical vocabulary; and the split between the traditional mathematical astronomers and the new physical, laboratory astronomers. We can note that astrophysics did not replace classical astronomy. Common issues in the two kinds of astronomy were very few (e.g., the measurement of the velocity of stars): it is therefore difficult, if indeed possible at all, to apply Thomas Kuhn's ideas, such as that of incommensurability, to this case.

The importance of *Alle origini dell'astrofisica italiana* as a source of plentiful information for the history of astronomy in the 1860s and 1870s should not be underestimated. The role played by research and institutional aspects of Italian astrophysics in inspiring and orienting later American astrophysics can be analyzed in more detail once we have a better understanding of the history of early astrophysics in an international context. A major weakness of this book is that it is entirely in Italian. The presence of at least a thematic classification of the letters in English would have been most welcome. An English translation of the whole volume would be most helpful in diffusing its contents.

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Alice L. Conklin. *In the Museum of Man: Race, Anthropology, and Empire in France, 1850–1950.*