

Second World War and recovery, moving into new realms like radio astronomy, his internationalism, trips abroad, the establishment of a major radio facility in Australia, all interspersed with the growth to maturity of his family.

Readers of this journal will probably be familiar with the Springer style. Massive, expensive tomes bound mainly for libraries. Very light copy-editing and too many typos. Yet this work was evidently a labour of love for the author, a former Oort student deeply devoted to his mentor and his legacy. No doubt, it offers invaluable insights and documentation which will be welcomed by specialists.

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## Hipparchus in French

*Hipparque de Nicée et l'astronomie en Grèce ancienne*. Germaine Aujac (Leo S. Olschki Editore, Florence, 2020). Pp. xiv + 121. 30 €. ISBN 9788822266893.

Only one treatise of the renowned Greek astronomer and mathematician Hipparchus is extant: a polemical tract exposing the technical mistakes contained in Aratus's widely read didactical poem *Phaenomena*. These mistakes concern the description of the constellations and the list of risings and settings simultaneous to the risings of the zodiacal constellations. Hipparchus punctiliously corrects the mistakes in his "commentary" comprised of three "books." Book I deals with the description of the constellations. Book II reviews Aratus's list of simultaneous risings and settings and goes on (from *Comm.* II.4 on) with Hipparchus's own list of constellations that rise and set at the latitude of Rhodes, first the constellations north of the ecliptic, then (in Book III) those south of the ecliptic, and finally the 12 zodiacal constellations. In each case, the degrees of the ecliptic that rise (set) and culminate simultaneously with the given constellation are provided, as well as the stars that culminate simultaneously with it, and the rising-time of the constellation. The last chapter of Book III identifies the stars that lie on the border of each of the 24 time zones.

Of course, Hipparchus's polemical target cannot be Aratus, whose simple and concise style he praises (*Comm.* I.1.4). Hipparchus expressly states that the poet was incompetent in astronomical matters and that he simply adapted Eudoxus's findings, expounded in the latter's (now lost) treatises *The Mirror* and *Phaenomena*. According to Hipparchus, no one before him uncovered and amended the mistakes contained in Aratus's poem, not even a recent and seemingly competent commentator such as Attalus – who becomes his second polemical target.

Modern scholarship has not neglected Hipparchus's treatise. A masterly state-of-the-art of its astronomical contents was outlined in Neugebauer's *HAMA*, within a general assessment of Hipparchus's scientific output, which we only know – with the sole exception of the *Commentary* – thanks to secondary sources. More recent scholarship has contributed further; but 45 years after the publication of *HAMA*, a fresh survey would have been welcome. This might also have given occasion for looking at Hipparchus's commentary from the (technical) perspective of ancient textual criticism, since he formulates quite clearly the principle of shared errors in assessing filiations between texts (*Comm.* I.2.6 and I.3.1), he questions the philological principles Attalus adopted in editing the poem (I.3.3), he explains the grammatical and prosodical reasons for adopting a specific reading (II.3.32), he repeatedly refers to manuscripts of the poem he checked (I.4.9, I.9.1, II.3.9, II.3.32), and he quotes his opponents in a way that might be tendentious and that we may partly check.

Nothing of the sort will be found in Germaine Aujac's book, which contains a 10-page introduction obviously made of cut-and-pasted second-hand pieces of information, a complete French translation of the *Commentary*, 30 pages of extracts from Books I and II of Strabo's *Geography* and from Ptolemy's *Almagest* where Hipparchus is mentioned, five plates illustrating the Farnese Atlas, the constellations, and a specific point of descriptive geography, a 10-item bibliography that mainly comprises standard editions and translations of Aratus, Hipparchus, and Ptolemy – and that's all. No commentary, no index. Spare notes comprise the scholarly apparatus; in them, we are told twice who were Eratosthenes, Callippus, and Meton; five times that Arcturus is the brightest star of Boötes; three times that the river originating from Orion is Eridan; five times what is the meaning of "leading" and "following" if applied to the motion of heavenly bodies; just once – but once too many – that the Earth's shadow is responsible for the phases of the Moon (n. 27 on p. 27); and once, towards the end of the book, who was Hipparchus (n. 7 on p. 90). The translation is fairly accurate but it suffers slightly and intermittently from the widespread habit of French translators of putting the text "en bon français," which usually amounts to overcharging it with rhetorical bombast. Passages where the translation is misleading or inaccurate are at *Comm.* I.9.4 (the rendering "tables" is unwarranted), II.1.19 (mathematicians "de l'Antiquité" cannot work), II.2.24 (a perfect tense translated as a future in a self-reference to the work on simultaneous risings), and III.5.7 (here as elsewhere, inconsistent translation of "leading" and "following"). The book is useless for any scholarly purpose; French-reading people (a German translation faces Manitius's critical edition) may wish to use it to get quickly acquainted with Hipparchus's treatise.

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