

MARCEL GILLES JOZEF MINNAERT
1893-1970

Marcel Gilles Jozef Minnaert was born on 12 February 1893 in Bruges, the son of Jozefina van Overberge and Jozef Minnaert, both teachers at local normal schools and both liberal and interested in Flemish causes. In 1902 the family moved to Ghent, where Jozef Minnaert died that same year. Marcel went to secondary school (Athenaeum) in Ghent and had a workshop and laboratory. In 1910 he entered the University of Ghent to study natural sciences, with biology as his main subject, but he also took examinations in subjects such as the history of art. He received his doctorate in 1914 on a dissertation entitled *Contributions à la photobiologie quantitative*.

Since his early years, Minnaert had been active in Flemish causes, and during his university years he worked actively to turn the University of Ghent into a Dutch-speaking university. At the beginning of the First World War, he was part of a small group of Flemish-minded intellectuals who began publishing *De Bestuurlijke Scheiding*, in which they militated for an administrative partition of Belgium between a French-speaking Walloon, and a Dutch-speaking Flemish part. Within the various groups to which he belonged, Minnaert always cautioned against too strong an orientation to Germany and advocated, rather, close contacts with the Netherlands. When, in 1915-16 he spent a year at Leiden to improve his knowledge of mathematics and physics, in the hospitality circle around Ehrenfest he came into contact with Dirk Struik and D. Coster, convinced socialists who introduced Minnaert to Marxism. Under the German occupation, he was given a teaching appointment in physics at the now Dutch-speaking University of Ghent, and he introduced innovations in teaching. But as the Allied troops moved north and the German troops retreated, in 1918, the Flemish movement disintegrated and Minnaert and his mother fled to the Netherlands.

Because of his prior work on photobiology, Minnaert was interested in the developing field of solar photometry, which was being developed by Pannekoek at Amsterdam and Julius at Utrecht. Julius appointed him observer at the University of Utrecht's Physics Laboratory, where he had recently installed a solar spectrograph for doing spectrophotometric research on the Sun's spectrum. Upon Julius's death, in 1924, Minnaert was put in charge of solar research at Utrecht, and the following year he took his doctorate on a dis-

sertation entitled *Onregelmatige straalkromming* (Irregular Refraction of Light Rays). Minnaert took part in a number of solar-eclipse expeditions, and became known especially for his work during the eclipse of 1927 in Lapland, during which photometric work was first done on the flash spectrum. His research was focused especially on the origin of Fraunhofer lines. In 1933 Minnaert was naturalized, and in 1937 he became director of the Utrecht Observatory and professor of astronomy. In that year he declined the offer of a professorship at the University of Chicago and the Yerkes Observatory. His photometric work on the Sun culminated in the *Photometric Atlas of the Solar Spectrum*, published in 1940, which has remained a standard source. As a result of his increasing international reputation, Minnaert became active in the International Astronomical Union and served as chairman of its commission on the Sun and on the exchange of astronomers.

Minnaert always remained interested in wider didactic issues and amateur science. It was for this latter audience that he wrote his three-volume *The natuurkunde van 't vrije veld* (The Physics of the Open Field), a book that became very popular in the Netherlands, but also in translation in other countries. In the meantime, Minnaert's political leanings remained openly Left, and whereas in the First World War his aspirations had been attractive to the Germans, in the Second World War the reverse was the case. When the Jewish faculty members of the University of Utrecht were barred from entry to university buildings, Minnaert delivered a stinging public lecture in the University's auditorium. As a result, from 1942 to 1944, he was detained in a camp. After the end of the war, Minnaert resumed his position at Utrecht and for several years acted as extraordinary professor of astrophysics at Leiden. In 1949, he published an anthology of poems on astronomical subjects, *Dichters over sterren*.

Minnaert was a member of the Royal Netherlands Academy of Arts and Sciences as well as a number of foreign academies. He received the gold medal of the Royal Astronomical Society in 1947 and the Gold Bruce Medal of the Astronomical Society of the Pacific in 1951. He was part of the committee of the Royal Netherlands Academy of Arts and Sciences charged with the publication of the works of Simon Stevin. But he remained controversial in his politics. As the Cold War developed, Minnaert joined the movement for a Third Way, and after delivering a political lecture on this subject in

Antwerp, in 1953, he was put across the Dutch border by the Belgian police.

After his retirement, in 1963, Minnaert remained active. In 1969 he published *Practical Work in Elementary Astronomy*, an English description of the practical exercises he had introduced into the astronomy curriculum at the University of Utrecht. He died on 26 October 1970.

Primary works

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Secondary sources

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[A.v.H.]