

## Reginald Purdon de Kock – Extraordinary Variable Star Observer

*I.S. Glass*

### Introduction

Reginald Purdon de Kock (born 1902 July 2) was one of South Africa's most prolific amateur astronomers. Up to the time of his death in 1980, he had reported no fewer than 160,777 observations of variable stars to the AAVSO (American Association of Variable Star Observers), their all-time record. In addition, he had been the discoverer of Comet de Kock, 1941c. Like the proverbial old soldier, he just faded away and his passing went almost unnoticed. He was not accorded an obituary in MNASSA at the time, as other famous South African amateur astronomers had been. This article is an attempt to preserve his memory and make up partially for the omission.

### Birth and Early Years

His father, Purdon Power de Kock, was born in Colesburg, Cape Colony, in 1875 and was educated at Diocesan College, Rondebosch. In 1901 he married



*R.P. de Kock in old age*

Laura Philcox of Worcester and in 1902 Reginald, or Rex as he was usually known, was born. Two brothers, John Louis and Alan, born in 1908 and 1912 respectively, completed the family. Both brothers were educated at "Bishops" like their father, but this was not possible in the case of Rex. Unfortunately, he received rather serious injuries at birth which caused his left eye to be almost useless and his left arm to have no proper feeling in it. Also, in his early years he suffered from fainting spells and fits, although these ceased as he grew up. He received no formal schooling but was instead sent to a tutor at George, a Mr Stander. He stayed there until he moved with his family to Worcester, where his father was appointed manager of Barclay's Bank. Apparently he obtained a post in the bank at one stage, but this was unsuccessful and lasted only for a short while. While at Worcester, the family knew the artist Hugo Naude who may have

taught Rex to paint, a hobby which remained with him throughout his life.

### Interest in Astronomy

Little is known of his activities during the next few years. He joined

the Astronomical Society during the 1924-25 session while still living in Worcester. There is no actual record of when he bought his first telescope, but in 1958 he said that he had been observing for 26 years. From this we know that by 1932 he had become an active amateur astronomer. The first occurrence of his name in the Annual Reports of the Variable Star Section of ASSA was in 1934. The fact of his having joined the Section was then mentioned and it was stated that he "is already doing good work". Apparently, this was his main activity until 1941, when he discovered his comet and the Royal Observatory invited him to become a member of their staff.

### **Career at the Royal Observatory**

De Kock joined the Observatory staff as a "supernumerary computer" on 1st September, 1941. The term "computer" meant someone whose job was to carry out computational work associated with the reduction of observations or the preparation of tables. Electronic computers were unknown in those days and only simple mechanical calculating machines were in use. The only "memory" was in the form of a peg board for repeatedly pressing the same keys! Crelle's multiplication tables were familiar to all. However, "computers" were used as general assistants also, and de Kock had other tasks such as taking the daily photographs of the sun and developing them. Processing the large plates was not easy for him with his disability. He would go to the Observatory at weekends even when it was cloudy in order not to miss an opportunity for doing this work and was exceedingly proud of the fact that, on the average, the sun had been photographed on 340 days of the year. In 1949, only 5 days were too dull for an observation to be made. In 1951, he became a "local male computer" and in 1954 he was finally made an "established male computer". In 1962, at the age of 60, he should have retired but was kept on, subject to his health remaining satisfactory. His retirement took place in 1967.

### **Amateur Activities of de Kock**

Although professionally involved with astronomy during the daytime, de Kock worked assiduously at night as an amateur. Much of his time was spent at the 6-inch Grubb refractor which is now used on open nights.

De Kock's comet was 1941c, although it was apparently discovered by him at Paarl, using his 3-inch altazimuth refractor, before the earliest observations of 1941a and 1941b. He found it in the field of one of his variable stars. It was first photographed at the Royal Observatory on 20th January and named Comet de Kock.

The Annual "Reports of His Majesty's Astronomer at the Cape of Good Hope to the Secretary of the Admiralty" mention de Kock's work almost every year until 1964 when they ceased as a result of the transfer of the Observatory to the Science Research Council. His variable star observations numbered 2773 in 1942 and appear to have reached a maximum of 6961 in 1952. In 1946 it was mentioned that he made 4328 observations of 121 long-period variables, and that his plan was to observe each star every 5th night. His observations were forwarded to the American Association of Variable Star Observers, who in that year made him an Honorary Member. In 1948, he prepared a note on RR Tel, a mira which brightened from being consistently below 12th mag to 7th mag. This star, and de Kock's light curve of it, has been of great interest to astronomers almost ever since. It is classified as a slow nova and the development of its spectrum was followed in great detail by the late Dr A.D. Thackeray at

the Radcliffe Observatory. Even today it is often the subject of research papers.

De Kock was the Director of the Variable Star Section of ASSA from 1948 until 1975 when M.D. Overbeek took over. He was still making the majority of all the reported variable star observations until the 1970-1971 year, although he was down to 1245 by then.

De Kock was a familiar figure to many visitors to the Royal Observatory on open nights when he officiated at the 6-inch telescope.

### Awards

In 1942, de Kock received the 183rd Donohoe Comet Medal of the Astronomical Society of the Pacific.

In 1957 he received the Jackson-Gwilt Medal and Gift of the Royal Astronomical Society. This medal, which is given at intervals of not less than three years, was awarded to de Kock for his systematic observations of variable stars over the previous 20 years.

At the 50th anniversary meeting of the American Society of Variable Star Observers on October 14, 1961, the 15th Merit Award of the Society was given to Reginald Purdon de Kock "whose constant vigilance of the morning and evening sky resulted in an invaluable contribution of over 100,000 observations of Variable Stars in the Southern Sky".

### Personal Life

Rex was exceedingly reticent by nature and formed few close friendships. One of these few was with a musician, Colin Taylor, who was a gifted pianist and composer. Music was a constant interest and Rex regularly attended the Thursday night concerts of the Cape Town Symphony Orchestra. He also had a fine collection of classical records.

He was a vigorous walker and in the space of an hour used to go to Observatory station, catch the train to Rosebank, have his lunch at his boarding house and return! Among his favourite places were the slopes of Devil's Peak and Table Mountain and, on occasion, he would go by train to Muizenberg in order to walk for miles along the beach. He was unable, because of his physical disabilities, to drive a car, and frequently walked 3 or 4 km to or from the Observatory in the early hours of the morning when the train service was suspended. The writer of this note first met him whilst walking to the train, but Rex had little small talk and was not easy to chat to. As he got older, Rex became careless when crossing streets, quite forgetting that his left eye could only see straight ahead and, as a result, he was knocked down on several occasions, luckily without catastrophic consequences.

Cricket was another hobby. He was a member of the Western Province Cricket Club and went to watch every Saturday during the Summer season.

De Kock was unworldly and unassuming. He cared little for money or possessions, except those pertaining to his hobbies. He never traded on his disabilities. He never told his family much about his work, so that when he died, they had no idea of the reputation he had in astronomical circles.

The writer remembers working on one occasion in the McClean laboratory when an obviously agitated de Kock came in, almost in tears that someone had wrecked the 6-inch telescope. In fact, the lens had disappeared, a mystery that has never been resolved. Luckily another one of similar diameter and focal length was found and, after some modifications to the telescope, instal-

led.

By 1978, de Kock's health was failing and he was obliged to give up his observations. He had to leave his lodging in Mowbray to move to an old age home in Kloof Street, Cape Town, where he died on the 20th July, 1980. Colleagues at the Observatory only learned of his death through a small article in the newspaper.

### Acknowledgments

I would like to thank Mr Tom Williams, President of the AAVSO, and Mrs Marie Peddle, who was commissioned by him, for permission to use information she has accumulated as the basis of this article. In addition, Mr J. Churms and Dr A.W.J. Cousins kindly read the manuscript and supplied some extra facts.

South African Astronomical Observatory,  
PO Box 9,  
Observatory 7935.

## ERRATA

Strömgren uvby Photometry of E Region Stars by A.W.J. Cousins,  
MNASSA 44, 54, 1985.

p.57	E6.96	for 2.900	put 3.900
58	E7.46	0.334	0.234
	E8.72	4.718	6.718
59	E9.72	8.607	5.607

Secondary Standards for Strömgren Photometry in the E Regions by A.W.J. Cousins, MNASSA 45, 103, 1986.

p.106	E7.46	for 0.285	put 0.191
	"	0.756	0.958
	E7.85	0.090	0.091