

**THREE AAVSO LEADERS:
DE KOCK, FERNALD, AND PELTIER**

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Abstract

The AAVSO has been blessed with leaders who have been exemplars for the organization, providing leadership in both a formal organizational sense and by setting the example through performance as observers. Reginald P. de Kock, Cyrus F. Fernald, and Leslie C. Peltier, the three leading AAVSO observers in the first seventy-five years of the AAVSO's history, illustrate this tradition which is being carried on by contemporary observers. Brief biographical sketches and descriptions of these three leaders are presented to show how they contributed to the AAVSO, each in his own personal way.

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1. Introduction

On the AAVSO's seventy-fifth anniversary it seems appropriate to honor the memory of the three top observers in the history of the organization, Reginald P. de Kock, Cyrus F. Fernald, and Leslie C. Peltier. Each had a passion for the night skies, and a burning desire to make a contribution to that branch of astronomy that bonds us all together today as members of AAVSO.

We should reflect for a moment on the meaning of being a leader. Most individuals who accept formal leadership roles in a volunteer organization come to recognize that their ability to inspire and motivate performance by direction has natural limits. A volunteer organization must also have visible exemplars, members who contribute to the leadership of the organization by the example of their own performance.

The AAVSO has been blessed with leaders who have exhibited both essential characteristics, that is, individuals who take charge, and equally important, who set the pace by example. Most of the individuals who rank in the list of the top 20 AAVSO observers have been exemplars in the best sense, serving on the council and as officers, while also contributing heavily of their personal time to scientific observation, developing charts and atlases, interpreting results, and in so many other ways. And so, it is in recognition of this great contribution by all of these leaders that this paper highlights three leaders of the past.

2. Leslie Peltier

Leslie Peltier was born into a close family on a small farm near Delphos, Ohio. As a child he had an intense interest in the natural sciences. As recounted in his autobiography **Starlight Nights** he was inspired to study astronomy by viewing the Pleiades through the kitchen window. He set out to learn the names of all the bright stars. By 1916 he had done this and had also earned enough money to purchase a two-inch collapsable telescope by picking 900 quarts of strawberries.

Peltier's first variable star observation with the strawberry refractor was R Leo on March 1, 1918. He quickly established himself as a serious observer. Later in 1918 he was accepted into AAVSO

membership. An exception was necessary, in that he did not have the minimum aperture three-inch telescope that was required in those days. Also in 1918, Peltier made an independent discovery of Nova Aquilae. That was an auspicious first year for the young observer.

The AAVSO staff at Harvard soon came to appreciate his observing interests and skills. In 1919 the AAVSO loaned Peltier the Mogeys four-inch refractor to extend his variable star observing to fainter stars. By 1923 his reputation was such that Princeton University, through the AAVSO, loaned Peltier a six-inch Fitz rich field refractor. It was an ideal instrument for variable star observing as well as comet sweeping, and was his main telescope for most of the rest of his life.

The year 1933 was a banner year in the life of Leslie Peltier. He was already established as an astronomer of world wide reputation when he married Dorothy Nihiser that year. Another major event in 1933 was Peltier's observation of RS Ophiuchi rising to maximum. This recurrent nova had not been observed near maximum since 1899. And finally, 1933 was also the year that Peltier discovered the first comet for which he was credited as the solo discoverer. In total he made independent discoveries of twelve comets, of which three are credited as solo discoveries.

Some years later, in 1959, Miami of Ohio University loaned Peltier its 12-inch Alvin Clark refractor. Peltier then shifted to observing the fainter "inner sanctum" stars, those fainter than 14th magnitude. With this telescope Peltier could see stars down to magnitude 16 on clear nights. One of the more interesting sidelines he adopted with the Clark refractor was timing the eclipses of U Geminorum at minimum. In limiting his work to the more difficult observations Peltier made interesting choice of quality and scientific value over mere numbers of observations, a good measure of his values and in the best tradition of an amateur scientist.

Peltier attended the 1936 AAVSO fall meeting at Harvard to accept the AAVSO Merit Award. It was at this meeting that Harlow Shapley introduced him as one of the world's greatest astronomers. He was elected an Honorary Member of the AAVSO in the early 1950's. That was the occasion of his second participation in an AAVSO meeting. But Peltier was a quiet, shy individual who only attended three AAVSO meetings in his life, including one that was held near his hometown so that he could not escape attending. That meeting took place in 1968, on Peltier's 50th anniversary as an AAVSO Observer.

Peltier was also honored by other groups. He was awarded the Astronomical Society of the Pacific's Donohue Medal, the Bruce Blair Award from the Western Amateur Astronomers, and an Honorary Doctor of Science Degree was conferred on him by Bowling Green State University. In addition, a mountain in California, the site of the Ford Observatory, was named for Peltier.

3. Cyrus Fernald

Cyrus Fernald's interest in astronomy apparently came from his early reading of Henry Norris Russell's writing in **The Scientific American**. He attempted to build his first telescope in 1932, but was not successful. Later that year Fernald and his father constructed an eight-inch reflector in a Springfield mounting. This became Fernald's main instrument for many years.

Astronomical seeing conditions at his home in Wilton, Maine, led Fernald to observe variable stars in preference to other astronomical objects. After reading about the AAVSO in **Popular Astronomy** Fernald

joined the AAVSO in 1937. He made his first observation in May of that year. By 1941 and for ten years thereafter he led the AAVSO in his annual total number of observations. By 1949 Fernald was, in Leslie Peltier's words, the "ace observer" for AAVSO, having accumulated some 50,000 observations. In that year alone he made 7,654 estimates.

On July 13, 1958, Fernald observed RS Ophiuchi at about 6th magnitude. This recurrent nova had been observed near normal at 12th magnitude on the previous evening by Leslie Peltier. The Fernald observation was only the second maximum of this recurrent nova since 1899, the first having been discovered by Peltier in 1933. Fernald rated this as his most important observation.

Fernald's interests went outside the field of variable star observing to that of other transient astronomical phenomena, and even extended to other natural sciences. He started observing the sun when Neil Heines formed the Solar Division of the AAVSO in 1945, and made over 8000 observations of the sun from 1945 to 1977. He also monitored two nova search fields, and reported many meteors observed in his telescope field.

Fernald served the AAVSO well over many years. He was elected President for two years, and served as Councilor and Auditor. Fernald was known for his dry Yankee wit. His wife Emily was his gracious and warm partner, and for many years they were regular participants at AAVSO meetings. The loss was felt very deeply by many AAVSO members when they both passed away in 1979 within a few months of each other.

4. Reginald de Kock

Reginald de Kock was, compared to Peltier and Fernald, practically unknown to the membership of AAVSO, as his achievements took place half-way around the world in South Africa. It is a tribute to de Kock's character that he overcame significant disabilities and became the leading observer in the AAVSO's seventy-five year history. De Kock had only limited use of his left arm and restricted peripheral vision in his left eye. He also suffered from petit mal seizures, the effects of which were more apparent in his youth than in later years. He apparently was unable to attend conventional schools but did receive considerable education from a private tutor.

De Kock purchased his first telescope, a three-inch refractor, in about 1931 and joined the AAVSO in 1934. By the end of that decade he was reporting observations at the rate of about 2,000 per year. In 1941 he discovered a comet while observing R Lupi with the three-inch refractor.

In 1941 de Kock was hired as a computer on the staff of the Royal Observatory at the Cape of Good Hope. It was wartime, and his employment was apparently occasioned by a shortage of help as well as his discovery of comet 1941 IV. He was responsible for the reduction of transit observations to yield mean star positions using a desk calculator, obtaining photographs of the sun with the heliograph on every clear weekday, and developing the plates.

While de Kock was a daytime employee at the Observatory, he continued his nightly observing as an amateur, reporting his observations to the AAVSO. He was given use of the six-inch refractor at the Observatory and made many observations with this instrument. His best year in the records I have was 1960, when he reported 7,762 observations.

De Kock served as Director of the Variable Star Section of the Astronomical Society of South Africa for many years. He retired from

this position in 1975 although he had stopped observing two years earlier.

David Evans described de Kock as "a very gentle man with a sly sense of humor." R. H. Stoy, former Director of the Cape Observatory summed up de Kock this way:

De Kock was always somewhat shy, reserved and retiring but not a recluse. He worked best on his own and at his own pace but he got on well with all the staff and they in turn regarded him with affectionate respect. For my own part I always thought of him as being one of the most contented, happiest persons that I knew.

In the late 1940's de Kock was elected an Honorary Member of AAVSO, an honor that had been accorded to only two amateur astronomers prior to that time. In 1957, the Royal Astronomical Society of London awarded de Kock their Jackson-Gwilt medal and gift for his systematic observation of variable stars over a period of more than 20 years. In 1962, AAVSO awarded de Kock their Merit Award, for his constant vigilance of the morning and evening sky and an invaluable contribution of over 100,000 observations.

5. Summary

These three top AAVSO observers have much in common, but differ in many interesting ways. All were shy, reserved, and retiring individuals. In addition to their shared love of the night sky and commitment to variable star astronomy, they exhibited common interest in the outdoors, other natural sciences, and classical music. They married late, if at all, which undoubtedly reflects the intensity of their preoccupation with astronomy in their younger years. Their collective leadership included the formal leader's role, but far more importantly, also the spiritual leadership and visible commitment as exemplars for the organization.

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