Michiel Daniel Overbeek, 1920–2001

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Abstract Michiel Daniel Overbeek was a most prolific variable star observer: he contributed 287,240 visual observations to the AAVSO from 1951 to 2001. An appreciation of his life and his record of achievement as a variable star astronomer is given here.

1. Introduction

Michiel Daniel "Danie" Overbeek—a long-time AAVSO member, the AAVSO's most prolific observer, and a dear friend of the AAVSO and the authors—passed away on July 19, 2001. Danie—also known by his observing initials as "OB" to anyone who has ever worked with his data—began observing variable stars on August 22, 1951, with the Mira variable, W Pav, when he was 31 years old. During his lifetime he contributed 287,240 visual observations to the AAVSO International Database—far more than any other observer in the history of the Association. The variable star he observed most often (3,837 observations) was VW Hyi, the brightest dwarf nova in the southern hemisphere. Danie often provided AAVSO Headquarters with observations that were vital and critical in scheduling astronomical satellite observing runs, including those of the Hubble Space Telescope. Many of the AAVSO southern hemisphere program stars owe a large portion of their light curves to Danie's persistence and dedication in observing variable stars.

2. Early years

Born in 1920, Danie grew up in the small country town of Ermelo in the Transvaal, South Africa, some 200km east of Johannesburg. In 1939 Danie enrolled in a Mining and Metallurgy program at the University of the Witwatersrand. Danie served in the South African Air Force during World War II—he was awarded the Africa Star with Oak Leaf in 1943 and was mentioned in Dispatches. After the war he joined the South African Airways and South African Railways where he worked in civil engineering research, instrument making, training, maintenance, and administration.

Danie's astronomical interest started at a very young age. When he heard his grandfather identify Mars, he was so intrigued with the fact that heavenly bodies have names that he started to read all the astronomy books he could lay his hands on. When he was about 15 he made his first telescope from a reading glass and a pocket microscope. Danie was encouraged to observe variable stars by the famous South African sculptor and AAVSO observer Peter Kirchhoff. In 1951 he constructed a 6-inch Newtonian telescope and started observing occultations and variable stars. This led in 1953 to the building of a 12.5-inch Dall-Kirkham Cassegrain reflector, which became his main astronomical observing tool for more than 47 years.

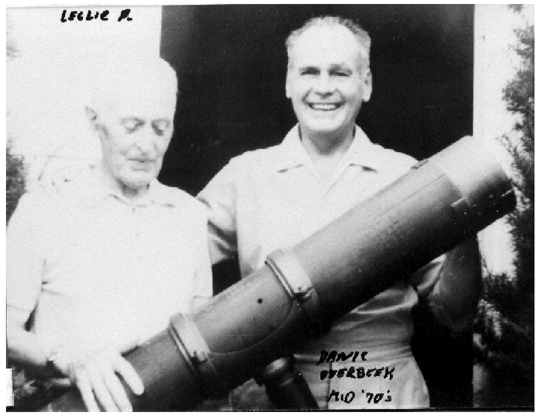

Figure 1. Danie Overbeek (at right) with Leslie Peltier, in the mid-1970s. *AAVSO Archives.*

In 1945 he married Jean, an old school girlfriend. They raised four children: two boys and two girls. In 1958 he earned a B.Sc. from the University of South Africa. Around 1966 he withdrew from his active astronomical observing to tend to family matters—this astronomical hibernation lasted for about 6 years. His love of the night sky was rekindled when he re-read Leslie Peltier's *Starlight Nights*.

3. The "professional" amateur astronomer

From 1977 to 1980 Danie was posted in New York City which gave him and Jean the opportunity to attend astronomical meetings in the area including those of the Amateur Astronomers of New York, Fairfield County, Union College, and the AAVSO (Figure 1). He went to occultation events as far north as Montreal and as far south as Ciudad Bolivar in Venezuela.

In 1981—with the guidance of Casper Hossfield, the AAVSO Sudden Ionospheric Disturbances (SID) recorder at the time—Danie started SID/SES recording for the AAVSO Solar Division, and built various receivers over the years to monitor the Sun's activities. Danie was the first amateur astronomer to detect the effects of a Gamma-Ray Burst related to a supernova in 1998, using a SID/SES receiver that he had constructed. He was truly a gifted instrument builder. During 1981 he built a magnetometer and monitored the earth's magnetic field for almost 20 years. Later in 1990, he built a seismograph and monitored the Earth's seismic activity on a continuous basis.

Danie was a phenomenal observer. The co-author (J.A.M.) remembers fondly her visit with Danie in 1995 and his astonishing variable star observing techniques (Figures 2 and 3). On a clear night—of which there were not many where he lived in Edenvale, near Johannesburg—as soon as it got dark, he would climb the steep ladder to his small observatory on the flat roof of his study and get the one-piece

Figure 2. The Overbeek observatory: access by ladder only. *AAVSO photo by Janet A. Mattei.*

roof opened within minutes. (Handrails were only recently added to the ladder at the insistence of Danie's family and friends.) His Cassegrain telescope was very compact, with large setting circles that enabled him to find a particular variable within seconds. His observing sessions were very well-planned. His finder charts and observing materials were arranged in two boxes depending on the frequency of observations the variable star needed. One box was for all those variables that needed his nightly attention and the other for long period variables where weekly observations would suffice. Once his observatory roof was opened and he was ready to observe, not one minute would be wasted. He knew the variable star fields very well and could move from one variable star to the other within minutes. He had built a special Julian Day clock, so as soon as the brightness estimate was made he would get the Julian day and the decimal(s) of the day immediately from his special JD clock. During J.A.M.'s visit he very graciously helped her to make several southern variable star observations with him, and he faxed the observations to AAVSO Headquarters the next morning. Later he admitted that J.A.M. slowed his observing considerably that night but he was honored to help her observe. The morning following his observing he would immediately enter the data into his computer. If there were some special stars to alert the astronomical community about, he would do that right away. He was truly a "professional" observer.

Danie's contribution to astronomy in South Africa and around the world was enormous. He was a mentor and a friend to all who were interested in doing serious astronomical observing. He encouraged observers all around the world and especially in all corners of Southern Africa. He developed special techniques for observing grazing occultations, total lunar occultations, and minor planet

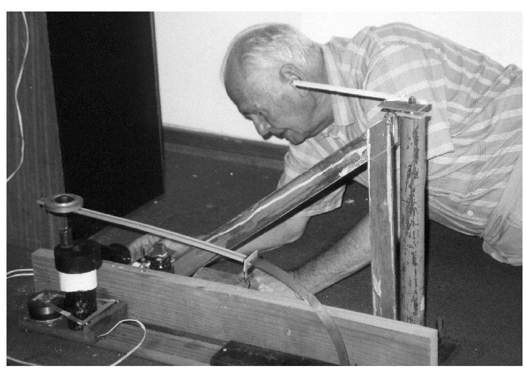

Figure 3. Danie making adjustments to his home-built seismograph. *AAVSO photo by Janet A. Mattei.*

occultations, and passed this skill on to other observers. For many years, he served as the director of the Variable Star Section, and later of the Occultation Section, of Astronomical Society of Southern Africa (ASSA).

4. Honors and awards

Danie received many honors for his astronomical achievements. He served as chairman of the Johannesburg Centre of the ASSA in 1956, and as President of the ASSA in 1961 and 1999. It is a rare accomplishment for someone to be elected President more than once. He was elected an honorary life member of both the ASSA and the Johannesburg Centre. The ASSA bestowed on him their highest honor in 1984 when he was awarded the Gill Medal. The Astronomical Society of the Pacific presented him with their Amateur Achievement Award in 1996. The Minor Planet Centre announced in November 2000 that minor planet 5038 had been named *Overbeek* in his honor.

Figure 4. A proud recipient of the 1994 AAVSO Director's Award.

The AAVSO's 26th Merit Award was presented to Danie in 1986 "...in recognition of his dedicated devotion to observing variable stars in the southern sky...resulting in over 70,000 observations of variable stars, his excellent guidance of many variable star observers in South Africa, and his valuable service on the AAVSO Council."

Danie was the recipient of three AAVSO Observer Awards: the first in 1994 for making over 100,000, another in 1997 for making over 200,000, and the third in 1999 for making over 250,000 visual observations of variable stars. He was the first recipient of the AAVSO Director's Award in 1994 for his vital contributions to variable star research (Figure 4). Danie is sorely missed as a gifted observer and personally as a friend and mentor.

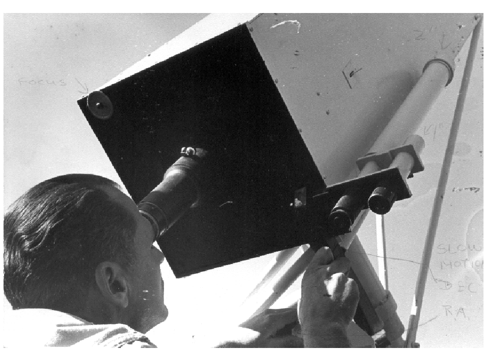

Figure 5. Danie Overbeek at his 12½" refractor, August 12, 1964. *AAVSO Archives, Margaret W. Mayall Collection.*