

## Roy Smith (1930 – 2013)

by Greg Roberts

Roy Duchesne Fairbridge Smith was born on 26 April 1930 in Kraaipan, Mafikeng where he grew up on a farm. He matriculated from Pretoria Boys High School and started work as a scientific assistant at the CSIR's National Physical Laboratory (NPRL) in 1948. Here he was involved (amongst other things) in the development and maintenance of the National Measuring Standards (NMS) of Mass, Pressure and Length.



During the 1950s Roy became a familiar face at the Radcliffe Observatory through ASSA meetings. He used to store his 10-inch telescope (mirror made and signed, "Calver '02") in Mike Feast's garden. The Director of Radcliffe Observatory, Dr Andrew D Thackeray, asked if he would assist at Radcliffe, earning some extra pocket-money. On occasions Roy assisted Dr Wesselink, usually up to midnight and sometimes all night over weekends! Since he could start-up and operate the 74-inch Radcliffe telescope, he was asked to help American astronomer, Dr Tom Gehrels, during his 3-week visit to the observatory in July 1956.

In early 1957 the CSIR approached the ASSA amateurs for optical satellite tracking. Thackeray gave Roy permission to set up a tracking station at Radcliffe. He took three weeks leave to assemble about 15 telescopes based on the Union Observatory design and spent a lot of energy establishing the Radcliffe Moonwatch station. When Sputnik 1 was launched in Oct 1957, some visual observations were made by Roy and the Radcliffe astronomer, Joe Churms, who took some photographs. In 1969 Roy used a 12-inch reflector, set up at the Moonwatch site at Radcliffe by the Pretoria branch of ASSA, to track Apollo 11

## obituary

out to a distance of 160 000 km, on its way to the Moon.

Early in 1958 Pretoria Moonwatch was supplied with five Apogee telescopes of which four were set-up in Jack Bennett's backyard, from where Pretoria Moonwatch operated. They did very well, totalling about 190 observing sessions during the IGY (International Geophysical Year). The fifth Apogee was mounted by Roy on the Baker-Nunn camera to replace the very small 2-inch aperture finder telescope, enabling the observers to see the satellites they were tracking with the camera.

The CSIR had promised the Smithsonian Astrophysical Observatory a South African observer for the Baker-Nunn camera which they operated at Olifanstfontein during the IGY. They seconded Roy there in March 1958 where he worked with Dr RC Cameron (station manager) and Claude Knuckles who were the American staff during the IGY. Roy usually observed the evening passes, whilst Claude, who lived closer to the camera, did the early morning ones until December 1958.

At the end of the IGY, the CSIR requested Roy to set up a permanent station to ensure that optical tracking would continue. In 1959 a Moonwatch station was set up on top of a building in the CSIR grounds from where they operated until about 1964.

In June 1961 Roy resigned from the CSIR and returned to work at the Baker-Nunn camera until May 1964. In June 1964 he returned to work at the NMS after receiving a request/invitation from the CSIR/NPRL to do so. From July 1961 until 1964, the CSIR station had been run by LN Martins who had worked with Roy in the NPRL. On Roy's return to the CSIR this station got closed as Louw Martins had moved to the Cape. Until the official closure of the Moonwatch programme in 1975, Jack Bennett and Roy continued visual tracking alone at Moonwatch stations Riviera and Murrayfield. Although Roy officially retired in 1990, he continued working under contract in the Light Standards Section until early 1994.

Roy did some car rallying in his younger days, the old Lourenco Marques Rally. He also enjoyed motorbikes but gave it all up after his children were born.

Roy was a long term member of the Astronomical Society of Southern Africa from about 1954 to 2007 and was a Fellow of the Royal Astronomical Society, elected in May 1974, proposed by Thackeray.

Roy was married to Margaret Anwyl Smith for 55 years. She passed away five years before him. He passed away on 19 June 2013 and is survived by two daughters, Moira Sellers and Gillian Fouche and three grandchildren, Justin Christie (26), Kayla Christie (25) and Kieran Fouche (13).

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## colloquia

mass of  $4.6 \times 10^8 M$  is derived, 40% more than what was detected by VLA observations. The observationally motivated pseudo-isothermal dark matter (DM) halo model can reproduce very well the observed rotation curve while the cosmologically motivated NFW DM model gives a much poorer fit to the data. While having a more accurate gas distribution has reduced the discrepancy between the observed RC and the MODified Newtonian Dynamics (MOND) models, this is done at the expense of having to use unrealistic mass-to-light ratios and/or very large values for the universal constant  $a_0$ . Different distances or HI content cannot reconcile MOND with the observed kinematics, in view of the small errors on those two quantities. This result for NGC 3109 continues to pose a serious challenge to the MOND theory.

### AIMS

#### Title: **New Views of Mercury from MESSENGER**

Speaker: Prof Catherine Johnson, Participating Scientist on the MESSENGER  
Venue: African Institute for Mathematical Sciences, 6 Melrose Road, Muizenberg  
Date: 14 May 2013

Time: 19:00

Abstract: In March 2011, MESSENGER became the first spacecraft ever to orbit Mercury, the innermost planet in our solar system. Over the past two years the spacecraft has collected, and relayed to Earth, a wealth of new data about this planet including images of the surface, and measurements of topography, gravity, magnetic field and composition. I will summarize some of our findings about this enigmatic planet and some of the challenges of getting to, and operating at, Mercury. ☆

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#### **Roy's daughter Moira had this to say:**

Besides my Dad's astronomical hobby and his metrological career, there is not too much of interest as he led a very simple and humble life. His brilliant mind and extensive general knowledge is going to be sorely missed by us all.

He lived for his heaven and stars so it formed an integral part of our upbringing too! My sister and I have many memories of being dragged out to the telescope to observe something.

Jack Bennett was my godfather, although he passed away when I was still young so I don't remember too much besides the excitement of looking at Comet Bennett.

We will be very happy for him to be remembered and know that, as much as he hated attention and drama, he would be immensely proud to be remembered in the astronomical world which was his love and passion. ☆