# **Touching History**

Jack Bennett - a link to the past

by Neville Young

### INTRODUCTION

- Trace a line through South African astronomy History
- Illustrate the link Jack Bennett forms in the chain
- Explain the role everyone of us plays in creating history

### South Africa has played a strong role in the story of astronomy

- We are situated in the southern hemisphere
- Southern extremity needed to be sailed around
- Scientists were finding out more about the world
- European weather is not noted for its clear skies
- The push to southern Africa brought a long line of brilliant, dedicated, hardworking people here.

### **Father Guy Tachard**

- 1685
- French Jesuit priest
- Aimed to determine the longitude of the Cape



### Peter Kolbe

- 1705 1710
- Sent by a patron in Germany
- Specific intention to study the natural history of the Cape
- As well as to determine is geographical position.

### Abbe Nicolas Louis de la Caille (1713 - 1761)

- 1751-1753
- Determine if the southern hemisphere was also slightly flattened at the poles
- Named constellations Horologium, Sculptor, Fornax, Reticulum, Telescopium, Octans
- Mensa named after our own Table
   Mountain
- Measurements surprisingly showed that southern hemisphere was actually round and not oblate as the northern hemisphere was.

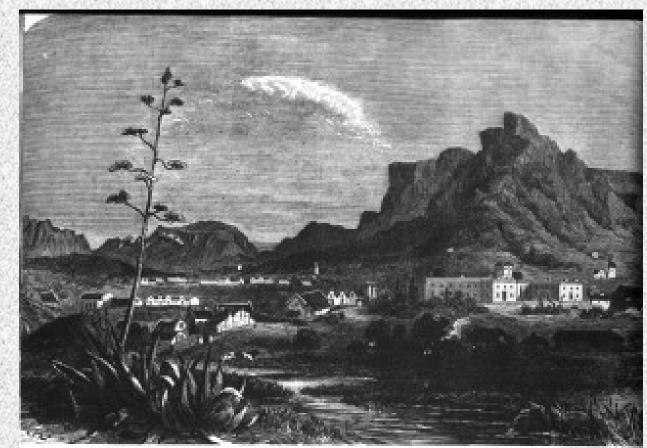


### Rev Fearon Fallows (1789 - 1831)

- 1820 1831
- First Cape Astronomer appointed by the Board of Longitude
- Built the Royal Cape Observatory at its original site near the foot of Devils Peak.
- Aimed to improve on the theory of refraction and to compile a new catalogue of the southern stars
- Buried in the observatory grounds at age 42

### Thomas Henderson (1779 - 1844)

- Dismal Swamp
- 1832 1833
- Made 5000
   observations of
   southern star
   positions
- Observed a transit of Mercury



The Royal Observatory, Cape Town, in 1965.

- Courtey of Africant Museum, Johannesburg

### Sir Thomas Maclear (1794 - 1879)

- 1833 1870
- Medical doctor by profession and an astronomer only by inclination
- Land surveys, magnetic, meteorological and tidal observations
- Remeasure southern
   hemisphere shape
- Town of Maclear and its district were named after him





The Herschel Monument during building operations at the Grove Primary School, Claremont. - Dr Patrick Moore

### **Edward Stone**

- 1870 1879
- Viewed a total solar eclipse in Namaqualand
- Transit of Venus.

### David Gill (1843 - 1914)

- 1879 1907
- Comet appeared in 1882
- 1st wide field guided astrophoto

- Completed catalog including nearly 500,000 southern stars
- Father of wide field astrophotography

# Gill's 1906 Support Staff

Every astronomer had had assistance in collecting data and processing data.

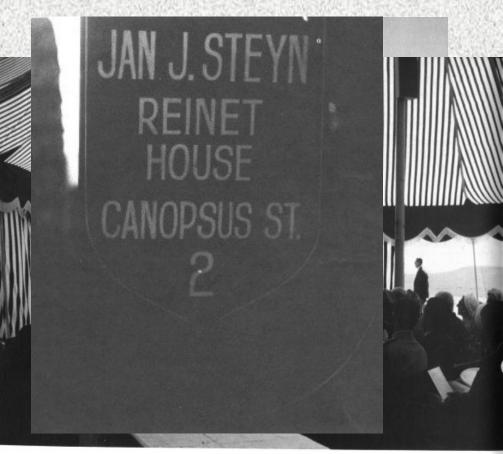
Some used their wives to help

## **The 20th Century**

- 1906 1923 Sydney Samuel Hough ("huff") completed much of Gill's work
- 1923 1933 Spencer Jones rephotograhed Gill's sky and determined the proper motion of 40 000 stars
- 1933 1950 John Jackson tenure stifled by the war years with half his labour force up north destroying brains instead of developing them.
- 1950 -1968 Richard Hugh Stoy was the last majesty's astronomer at Cape of Good Hope. He chose the site in Pretoria for the Radcliffe Observatory
- 1969 1973 G A Harding Officer in Charge

### **Sutherland Observatory**

- 1972 Sir Richard Woolley - Director of Combined South African Observatories. Soon afterwards Sutherland Observatory was opened
- Pretoria Radcliffe
   Observatory instruments
   were moved down to
   Sutherland too



The Official Opening of the Sutherland Observatory, 15 March, 1973. Mrs Margaret Thatcher, Minister of Education and Science in the British Conservative Government, addresses the congregation.

- Jack Bennett

### The Age of Satellites

- Superpower race into space
- CSIR and Roy Smith and Moonwatch Program



### **Jack Bennett and Moonwatch**

#### 45947

• 27th June 1957 REGISTRATION FORM FOR MOONWATCH OBSERVERS.

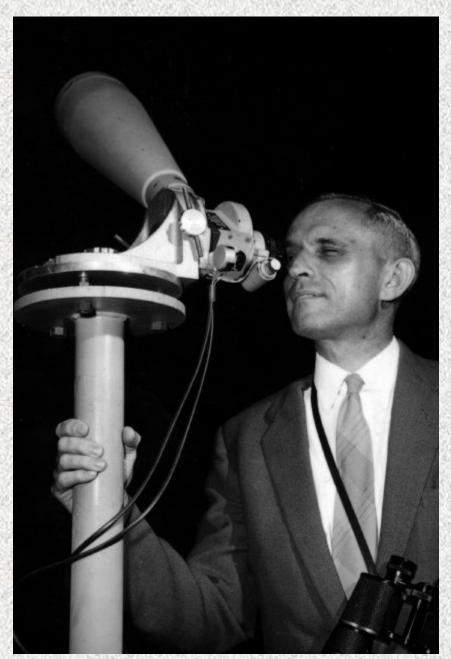
HAVE YOU HAD ANY EXPERSINCE IN THE OBSERVATION OF THE WIGHT SKY WITH TELESCOPES OR BINOCULARS. They with both

 Moonwatch site moved from Radcliffe to Jack's house

thenno 27/6/1957

### John Caister Bennett

- Born in Estcourt Natal in 1914
- Mother British and father from Tasmania
- Buyer for the Transvaal
   Provincial Administration
- From a naked eye viewpoint, he knew the night sky very well
- Eye for detail



## **His Telescopes**

- Ordered a 3" refractor from Japan in 1960
- Bought a 10" Celestron





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#### ABOUT US

The Woodlands Observatory is run by Phillip Pudney, who is a 14 year-old student at Pulteney Grammar School, Adelaide, South Australia. Observing is done from Phillip's backyard, and he often runs viewing nights for classes at his school. At the observatory, there is a 10" Schmidt-Cassegrain computerised Meade LX200 f/10 and a 4" Tasco refractor.

At the moment, all of the objects in the "Bennett Catalogue" are being photographed and will soon be submitted to the Astronomical Society of Southern Africa (ASSA) so that Phillip can obtain the Bennett Certificate. The "Bennett Catalogue" was compiled by the ASSA member Jack Bennett, who discovered two comets from his backyard using a 5" telescope.

If you would like to know more about South Australia, here is a link to: South Australian Web Home Page



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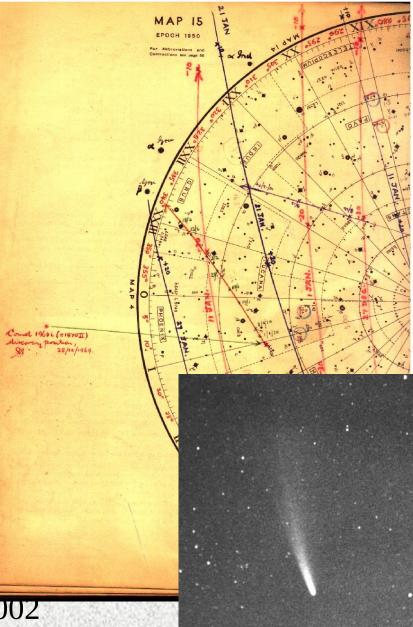
### **His 1st Comet**



#### Touching History - ASSA Symposium 2002

#### Discovery position of Comet Bennett II (Comet 1969i)

An extract from his Norton's Star Atlas 1954



### **Supernova Discovery**

- July 16th 1968, while searching for comets
- Discovered in M83.
- No-one else alive at the time had ever discovered a supernova in another galaxy by naked-eye observation. The last such feat was achieved in 1885.

### **President of ASSA**

- 1969 before he had discovered his first comet he was elected as President of the association.
- Director of the Meteor and Comet section a position which he held until 1985. (A certain similarity with another member of the Pretoria Center Tim Cooper, now serving his year as President of the society.)
- 1970 awarded the Gill Medal by the ASSA for his services and achievements.

### **Touching History**



## Pickering Nova Award

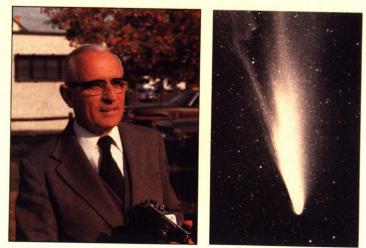
 AAVSO recognised Jack's discovery of his supernova by awarding him the Pickering Nova Award in 1976. **Comet Digest** 

L AST YEAR the astronomical community lost two of the 20th century's best-known amateurs with the deaths of John C. Bennett and Minoru Honda. Each was an elder statesman of observational astronomy in his country, and each was a successful comet hunter and nova discoverer. The following information on Bennett's life was provided by Jose Campos, while that for Honda came from Ichiro Hasegawa.

#### JOHN CAISTER BENNETT

Born in South Africa in 1914, Bennett was a government employee who lived in Pretoria for many years before his death on May 30, 1990. He attributed his lifelong interest in astronomy to his mother, who pointed out the planets and constellations following evening church services when he was a child.

Although he pursued astronomy for more than a half century, Bennett never owned a large telescope. His favorite instrument was a 5-inch 21x telescope obtained in the early 1960's. In 1964 he embarked on a program of comet seeking, during which time he compiled a list of Southern Hemisphere objects that appeared cometlike in small telescopes. It was published in the *Monthly Notices* of



In 1976, comet and nova discoverer John C. Bennett visited the *Sky & Telescope* offices where Dennis Milon snapped his photograph. The April, 1970, apparition of Bennett's comet was recorded by California astrophotographer Alan McClure.

the Royal Astronomical Society of South Africa in 1969. Bennett added a supplement in 1974.

While sweeping for comets on July 16, 1968, he discovered a 9th-magnitude supernova in the galaxy M83. It was the first visual discovery of a supernova by an amateur since 1885. Once in February, 1966, and again in March, 1968, he spotted possible comets, but the objects were

(Please turn to page 670)

#### (Continued from page 666)

never confirmed. The find he made on December 28, 1969, however, was quite different. Initially a dim comet, it ultimately rose to zero magnitude and sported a  $30^{\circ}$  tail. Comet Bennett, 1970 II, was considered by many to be the finest comet to appear in the second half of the 20th century.

In November, 1974, he found another comet, also extraordinary — but for quite another reason. Although fairly bright at discovery, Comet 1974 XV slowly dissipated and vanished. It remains the bestpated case of a now well-established class of transient comets.

Bennett received many awards during his life, including the Merlin Medal of the British Astronomical Association and the Pickering Nova Award of the American Association of Variable Star Observers. In 1989 asteroid 4093 Bennett was named in his honor. A humble and somewhat shy individual, Bennett was a bit uncomfortable with the attention he received for his achievements. However, none could say there was a man more deserving of the recognition.

### Travelled to USA to collect his award and met Brian Marsden at the Sky and Telescope offices

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Sky & Telescope June 1991

### **Merlin Medal**

• Further recognition came from the Comet Section of the British Astronomical Association who presented to him the Merlin Medal for his two comet discoveries.

### Honorary Master of Science

• Early association with Prof David Block

 1986 Witwatersrand University awarded MSc to Jack

#### Touching History - ASSA Symposi

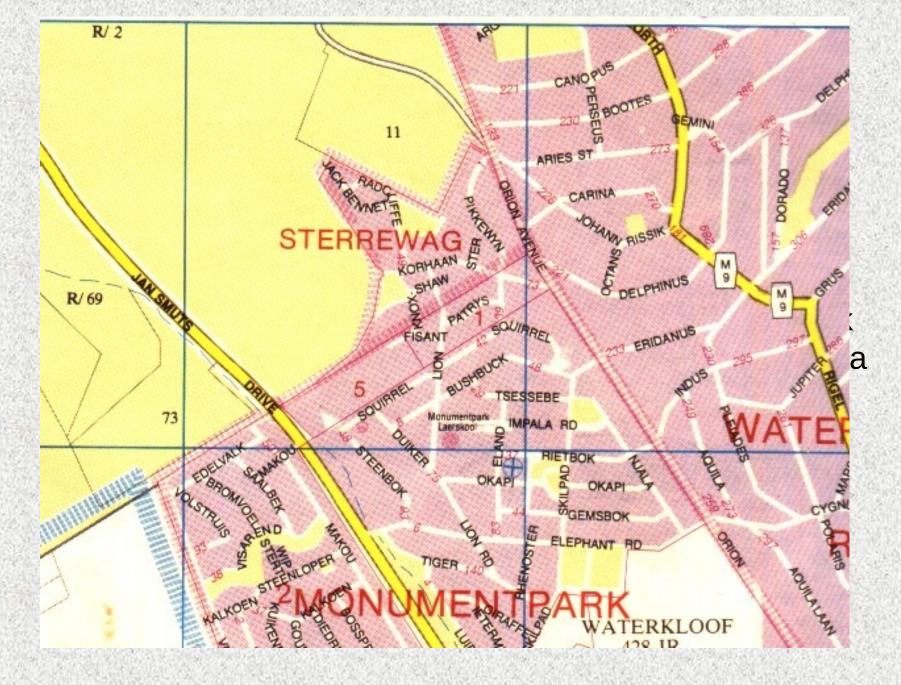
# Honour for SA comet spotter

JOHANNESBURG. — The University of the Witwatersrand will today confer an honorary degree of master of science on the only South African to have two comets named after him, the director of the Comet and Meteor Section of the Astronomical Society of South Africa, Mr John Caister Bennett.

In an announcement yesterday, the university said Mr Bennett (76), a former president of the SA Astronomical Society, sighted in 1969 what is believed to be the comet with the biggest head.

The comet became visible to the naked eye in March 1970 and was named the Bennett 1970 II. Sighted from Mr Bennett's Pretoria home, the comet was in the constellation Tucana and was surrounded by a 21-million kilometre-wide hydrogen cloud.

In November 1974, the announcement says, Mr Bennett found a comet in Hydra in the morning sky, which was named Bennett 1974 XV. Had Mr Bennett reported his 1964 and 1965 sightings to the Comet Headquarters in the US, those would also have been named after him. — Sapa.



### **John Caister Bennett**

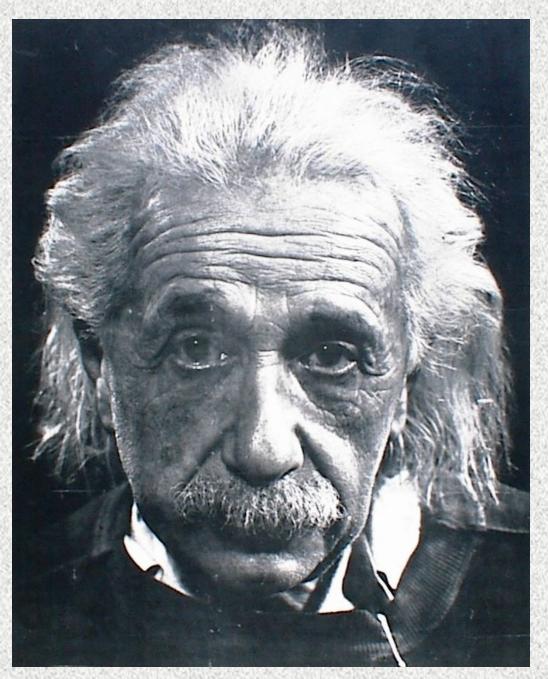
### (1914-1990)



### A Link in the Chain

- Former member of this very society
- Jack's 1970 comet is the logo on the Pretoria Centre newsletter
- We are linked through Jack to this astronomical chain of special people who have contributed to astronomy
- Patrick Moore has captured Jack on video tape

### Albert Einstein



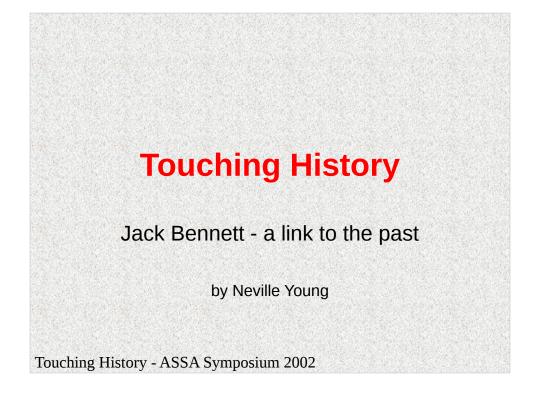
### Ernest Rutherford

### **Our Personal Roles**

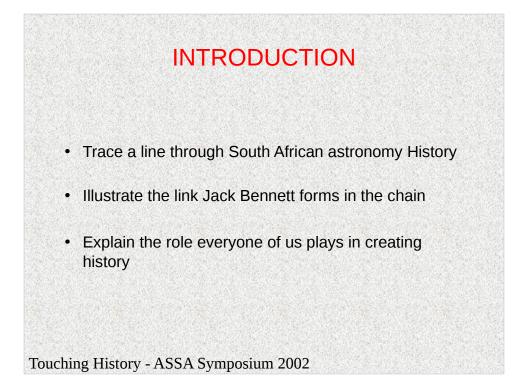
- We all contribute to astronomy in our own particular ways -
  - by being interested,
  - by attending centre meetings,
  - by attending this symposium,
  - by being a member of this society,
  - by reading astronomy books and magazines,
- we all make the science of astronomy worthwhile for those at the forefront.
- This society has been and will surely again be the breeding ground for another Bennett, Block, Gill or Herschel.

# **TOUCHING HISTORY**

By your membership of this society and your presence at this symposium, you are taking part in history; you are busy making history; you are .....TOUCHING HISTORY.



With comments made by Prof Brian Warner



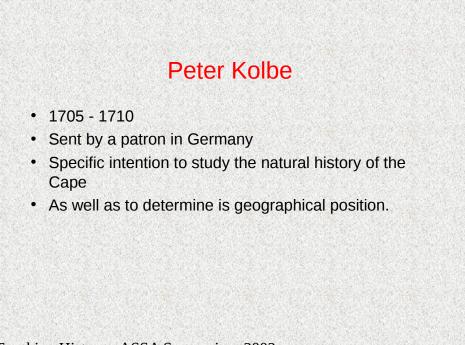
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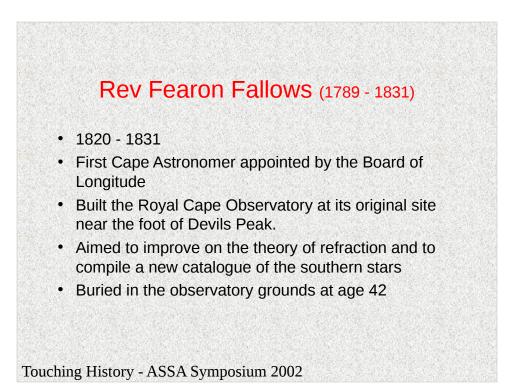




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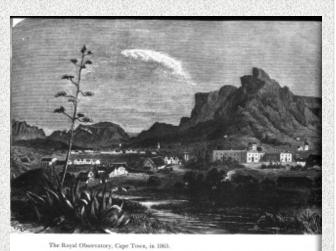
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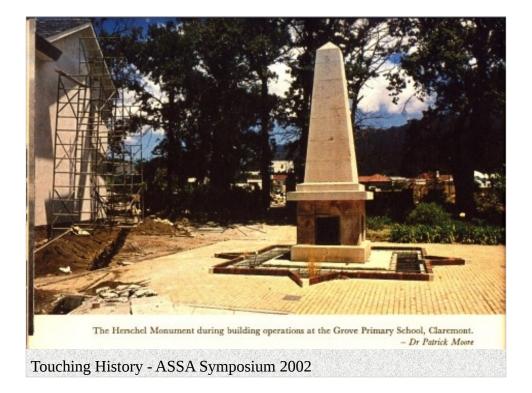


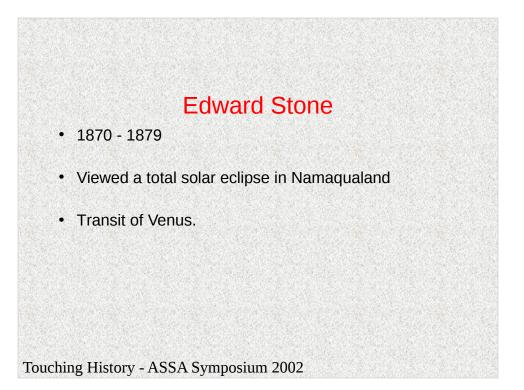
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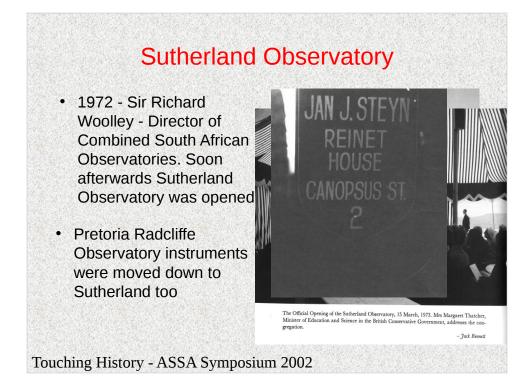
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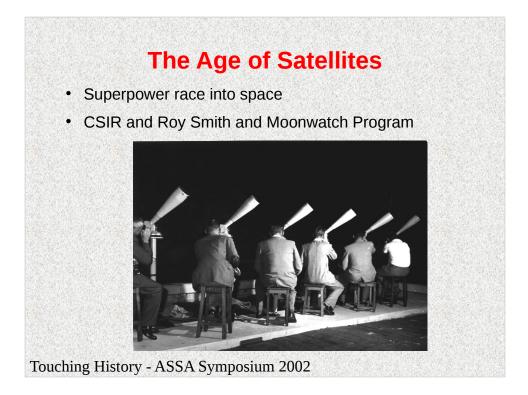




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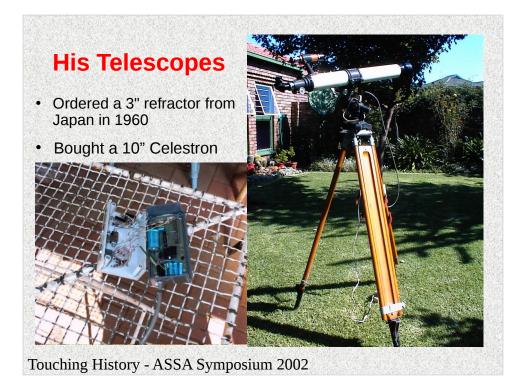


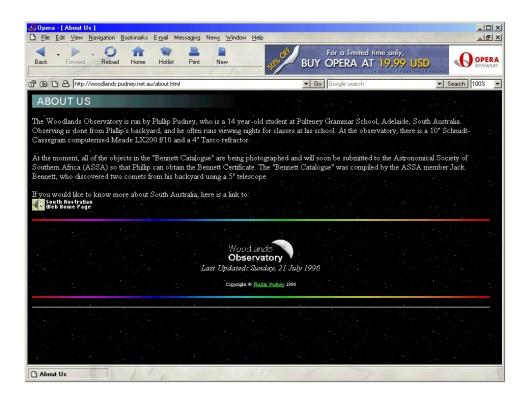
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	NUMBER OF OBSERVERS YOU CAN TRANSPORT
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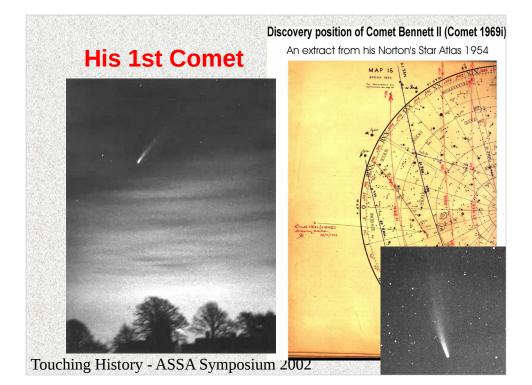
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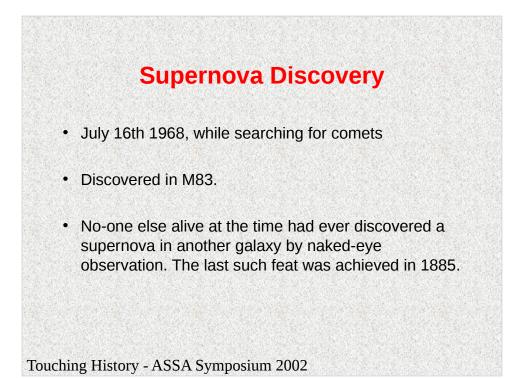
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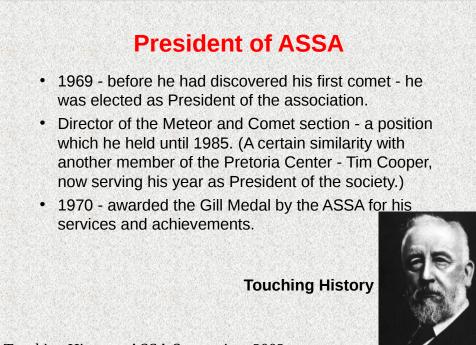












## Pickering Nova Award

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#### **Comet Digest**

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Sky & Telescope

**June 1991** 

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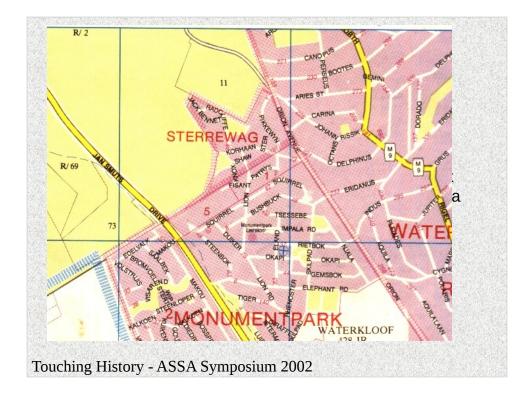
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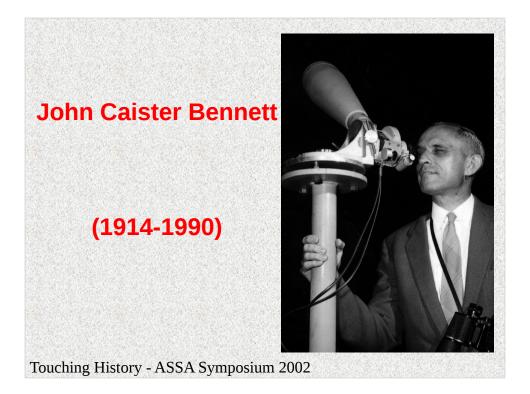
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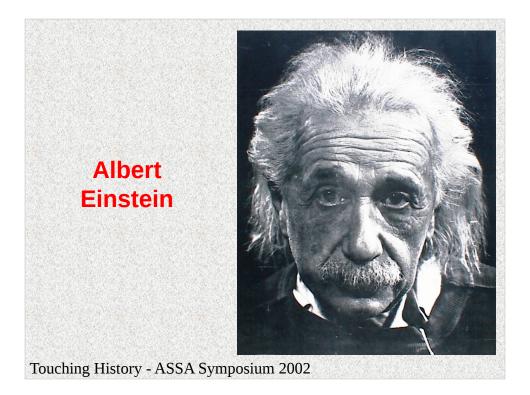
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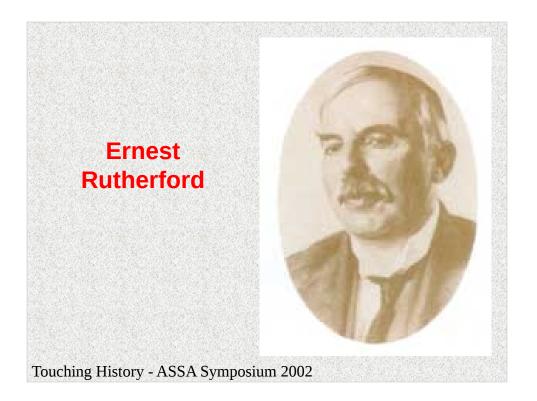




# A Link in the Chain

- Former member of this very society
- Jack's 1970 comet is the logo on the Pretoria Centre newsletter
- We are linked through Jack to this astronomical chain of special people who have contributed to astronomy
- Patrick Moore has captured Jack on video tape





### **Our Personal Roles**

- · We all contribute to astronomy in our own particular ways -
  - by being interested,
  - by attending centre meetings,
  - by attending this symposium,
  - by being a member of this society,
  - by reading astronomy books and magazines,
- we all make the science of astronomy worthwhile for those at the forefront.
- This society has been and will surely again be the breeding ground for another Bennett, Block, Gill or Herschel.

# **TOUCHING HISTORY**

By your membership of this society and your presence at this symposium, you are taking part in history; you are busy making history; you are .....TOUCHING HISTORY.