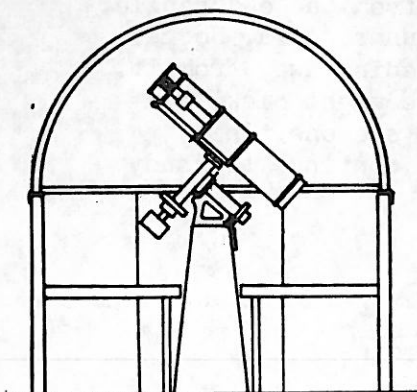


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BUFFALO ASTRONOMICAL ASSOCIATION INC.  
BUFFALO MUSEUM OF SCIENCE  
HUMBOLDT PARKWAY  
BUFFALO NEW YORK 14211



# Spectrum

NOVEMBER 1968

NOVEMBER MEETING: For our third meeting (November 8, 1968, at 8:00 PM (EST)) we are very happy to welcome our own president, Dr. Fred W. Price, who will give an illustrated talk entitled "The Norman J. Lockyer OBservatory." Sir Norman Lockyer (1836 - 1920) was one of the pioneers of solar physics who in 1879 established the South Kensington Observatory as the world's first observatory devoted entirely to the study of the Sun. Dr. Price, on his recent visit to England, toured the Norman Lockyer Observatory and brought back some pictures of it and its instruments. This should be a very interesting lecture by one of Lockyer's countrymen, our own distinguished FRED PRICE. WELCOME!

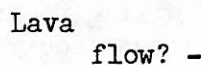
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\* BARKER'S QUADRANGLE IN MARE CRISIUM. \* By Dale Hankin.

The lunar region of the Mare Crisium is of interest to the observer in that its floor is covered by many interesting light spots and streaks. In 1912, an English amateur Robert Barker found a prominent quadrangle made up of light spots and streaks which had apparently escaped the attention of his predecessors. He was using his 12.5-inch flector with a power of 175 X. Today the quadrangle can be seen in a 3-inch refractor at 50 X (John Riggs Jr. has seen it with his 2.4-inch refractor at 27 X). After reading about this feature we decided to draw up a chart of it. For this and other observing problems John Riggs, Mike Keller and myself formed the Lunar Observing Program or L.O.P. We obtained a drawing of the quadrangle made by Patrick Moore in 1948 with his 3-inch refractor. This we had printed into blank outlines which we could use as a guide in our observations. Our telescopes were all reflectors of 6 inches aperture. The first observations took place in July of 1967, and these convinced us that the outlines were very inaccurate; after four days of careful observations we produced our own outline which we had printed, so that our first real work began the following month (August, 1967).

Now after many months of observations we have seen some very interesting features which do not appear on H. P. Wilkins' 300-inch Lunar Map or which have not been reported by other observers. The myriad detail which is visible in Mare Crisium would keep anyone busy drawing for quite a while. We have recorded many rilles, light spots, dark bands, craterlets, and domes. To describe all of these markings would occupy too much space, so that I will mention only a few.

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NOTICE: The Observing Section, dormant for some time, will meet on November 15, 1968, at 7:30 PM (EST) in Room 302 in the Museum. Although most of the former members were interested in the Moon, we shall welcome anyone who is doing any kind of observing. \* \* \* With regard to Barker's Quadrangle, we have it on good authority that Dr. Price has studied this feature for some time and hope that he may eventually publish something about it in these pages. This feature is located near the southern shores of Mare Crisium.

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On August 29, 1968, the Canadian government announced cancellation of the projected Queen Elizabeth II telescope - a 150-inch reflector - due to what can only be described as a very myopic economy move. The dominant role which both

Canada and the United States have played in the development of modern astronomy was due to the fact that both countries have had in the past men with an appreciation of the significance of the large reflector in astrophysics. The United States is continuing this role with the 200-inch at Mt. Palomar, the Kitt Peak National Observatory, the 120-inch Lick reflector, the Cerro Tololo Observatory and other ventures. Several European countries have joined forces to construct a large telescope in Chile; England has recently put into service the 98-inch Sir Isaac Newton reflector and she is cooperating with the Australians in establishing an observatory down under; Russia is building several large instruments, one to go to Cerro Robles near the U.S. southern station in Chile - in each of these cases the respective governments are footing large portions of the bill, as they necessarily must since the large private endowments are fairly a thing of the past.

Canada, when it established the Dominion Astrophysical Observatory in Victoria, B.C. in 1918, was leading the world, at least for a while, with the largest reflector in the 74-inch, which was joined by a virtual twin in 1936 at the David Dunlap Obs. at Richmond Hill near Toronto. Neither of these two large instruments are located in areas which enjoy ideal astronomical weather and skies. Yet Canadian astronomers put them to maximum use and thereby achieved a position of leadership in stellar and galactic research. The Dominion Astrophysical Observatory did an enormous amount of work with the spectra of stars, particularly superluminous O and B stars and radial velocities, while at David Dunlap the knowledge of globular clusters and variable stars in clusters was extended considerably. Canadian astronomers were among the few who did not need to come and work at American observatories because of a lack of adequate instrumentation at home - to the contrary, many astronomers came to Canada to study astronomy and use these large instruments.

Astronomy has changed tremendously in the past 20 years. The number of graduate students has mushroomed and will continue to do so in the future. Hence time available at large telescopes - the instruments, after all, which are necessary to answer really fundamental questions - is, to put it bluntly, totally inadequate, if not plain ridiculous. In particular large instruments are needed for the southern hemisphere where key objects like the Magellanic Clouds await exploration.

These problems of the present and future were clearly appreciated by Canadian astronomers. The idea of building a large, modern reflector in Canada originated with Drs. K. M. Petrie and A. McKellar, both of the Dominion Astrophysical Observatory and both now deceased. A proposal for the construction of a 150-inch was submitted to the Canadian Federal Government in March, 1962, and was approved by the Privy Council in September 1964. Mt. Kobau in southern British Columbia (alt. 6,200 ft.) located 7 miles north of the U.S. border was selected as the site for the proposed observatory. During the 1964 visit of Queen Elizabeth II, Canada's then Prime Minister Lester B. Pearson announced that the telescope would be named after Her Majesty to commemorate her visit. Approximately 1½ million dollars were spent in the site development, including a 12 mile road to Mt. Kobau. A fused quartz blank was ordered from Corning and delivered at a cost of about 1 million dollars. Design costs for the observatory and equipment for working the blank amounted to another 4½ million.

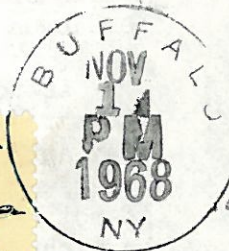
Meanwhile serious questions arose whether the atmospheric conditions around Mt. Kobau really justified erection of a large instrument. The Carnegie Foundation of Washington, D.C., approached the Canadian group and suggested cooperation in the establishment of a southern twin to Mt. Palomar, including a 200-inch, a 48-inch Schmidt, and a 60-inch photometric reflector. In 1968 a committee consisting of Drs. D. C. Rose (National Research Council of Canada), C. S. Beals (retired Dominion

Astronomer) and W. H. Wehlau (chairman, Astronomy Department, University of Western Ontario) was formed to consider alternatives, somewhat as follows: 1) complete Mt. Kobau; 2) Join forces with the Carnegie group but also complete Mt. Kobau; 3) Transfer Mt. Kobau to the southern hemisphere (that is, the instrumentation). The committee has as yet not finished its work - but the Canadian Government has already decided to cancel everything and sell the blank and other equipment. And in so doing it may well have signed the death-warrant of Canadian Astronomy. One may only hope that somehow the government's decision may be reversed. The distinguished role which Canadian Astronomy has played so far deserves a better future.

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IN MEMORIAM: JOHN RIGGS SR. Just before going to press we learned with deep sorrow of the death of Mr. John Riggs Sr., father of one of our more enthusiastic members and himself a member of the B.A.A. We are sorry that we know little about Mr. Riggs except that he always showed a deep interest in our group and in his son's enthusiasm for matters astronomical. We knew him as a quiet, kind gentleman, and our deepest sympathy is extended to his family.

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