



EDITORIAL

The McLaughlin Planetarium...

The planetarium building is ready for occupancy, and workmen are now beginning to install carpeting and furniture. The Jena Instrument Co. (East German Zeiss") has delivered the planetarium instrument and within weeks a crew will arrive from Germany to begin the job of installation. Dr. King says that as a result of some recent delays the best opening date that he can hope for is late October, with mid-November more probable.

I would judge that the success of the planetarium for years to come hinges upon the impact of the opening and the early response of the public and the press. It is very much in our interests that the planetarium should be a continuing success, and the purpose of this short piece is to encourage everyone to keep abreast of developments and to talk the planetarium up at every opportunity. I have been surprised to find that a number of well-informed Torontonians don't know that a Planetarium is being built.

This is not a small planetarium. The star theatre is about 75 feet in diameter, 50 per cent bigger in floor space than our big dome. It is about the same size as the famous Hayden in New York and yet it seats only 360 compared to the Hayden's 800. The answer to that discrepancy is that the McLaughlin's chairs are much bigger - with neck rests, arm rests and lots of leg room. In the back of every third seat is a loud-speaker which will carry the voice of the lecturer.

The Curator we all know - Dr. Henry C. King, formerly Curator of the London Planetarium, well known as an authority on the history of astronomy, author of a number of books, including the definitive work, "The History of the Telescope", and a part-time member of the teaching staff in our Department. Dr. King's colleagues include: Assistant Curators, Mr. Norman Green and Tom Clarke; Curatorial Assistants, Terry Dickinson and John Ballantine; part-time lecturers, "Fitz" Fitzgerald, Archie Ostrander, Vern Ramsay and Jim Kemp, all prominent in the Toronto Centre of the R.A.S.C.; Chief Technician Ernst Nielsen; Technicians Lothar Kistritz, John McGill, Tom Fehr; part-time graphic artist, Zig Kucharski; Secretary Jennifer Surridge; and a librarian, assistant librarian and receptionist, still to be appointed.

These staff members have been on duty for periods of upwards to a year, and they haven't been idle. Dr. King insists that the standards of visual presentation must be of surpassing quality, and he and his colleagues have designed models and displays and dioramas and planned their lay-out in the 6000 square feet of floor space set aside for this purpose on the second floor (beneath the star theatre and in the north wing). They have assembled a collection of over 1000 35-mm slides, some purchased, some copied, many made from original art work designed to illustrate particular points, and most of them in colour. The star theatre will commence operation with 40 slide projectors, and provision is made for eventual increase to 150. Two of the projectors (and three to come) have motorized zooms with a 10:1 ratio.

Dr. King is aiming at full control of visual displays and sound effects and music by the lecturer instead of the more usual "on cue" cooperation of an operator in the control room. He says it makes for a smoother show, though he admits that it requires greater concentration on the part of the lecturer.

One of the features of the Planetarium which is of particular interest to us is the arrangement which Dr. King has worked out with the R.A.S.C. The Toronto Centre will have a fine little office complete with furnishings and telephone on the main floor. They will also have the use of the very fine 181-seat auditorium for regular meetings, and they will have a well-equipped optical workshop. All this is rent-free, and in return they will supervise the making of amateur telescopes - a task which will be no burden to Jesse Ketchum and his enthusiastic group of telescope makers. The Toronto Centre, already vigorous, seems slated for even bigger and better things.

Dr. King is most anxious to provide our department with teaching assistance for our classes. He has put forward to Dr. MacRae a plan for demonstrations along such lines as the celestial sphere, time, navigation, sky orientation, and the southern sky. These could be on Mondays (the one day on which the Planetarium is to be closed to the public) and probably also on Friday mornings. Properly arranged and competently done, these demonstrations could be of tremendous value in our teaching program.

A well done planetarium demonstration can be the experience of a lifetime. The first one I ever saw was at the Adler in 1934. The lecturer was the late Philip Fox, a competent astronomer and a superb showman. He talked on "The Calendar", and he used the planetarium instrument as a musical director would use his orchestra. At the end of his talk, he slowly increased the volume of the dawn music as he paled the stars with the coming of twilight. When finally he brought the music to a crescendo as the sun came up over the eastern horizon and he wished us a cheery Good Morning, I literally didn't know for ten or twenty seconds where I was or what all those people were doing there.

After spending last Friday morning with Dr. King in the fine new McLaughlin building I have high hopes that the people of Toronto are also going to experience this kind of spell binding.

## STRICTLY PROFESSIONAL

### The 74-inch

The big dome has been getting an interior paint job during the past month, and it is not finished yet. This is the first thorough, scrape-off, two-coat job that the dome has had in 33 years. It has been accomplished without loss of observing time - thanks to Gerry Longworth's vigilance and assistance.

Dr. Hogg had the Newtonian on the 74-inch from June 19 to 21 and from two good nights she and Linda Poole got 43 plates of globular clusters.

Mr. Peter King of Edwards High Vacuum visited the Observatory on June 7, and made suggestions for the improvement of our aluminizing equipment and technique.

Stanley Jeffers is making preparations for trials of the Carnegie image tube. We are awaiting delivery of a 50 KV power supply from England, and Dave Blyth has begun the fabrication of some of the high voltage connectors. We still have to decide on which of our present spectrographs (if either) we can try it. Meanwhile Dr. Jeffers is designing an electromagnetic focusing system to replace the permanent magnets; if this works it will ease the problem of adapting the tube to our spectrographs.

### The 16-inch Reflector

Dr. Hogg has started Peter Chen on a program of photography of the globular clusters with the 16-inch Boller and Chivens reflector on the Campus.

### Radio Astronomy

On May 30 - June 3 Dr. Roberts and Jack Winzer accompanied Chris Aikman to A.R.O. - partly to assist Chris with his observing run and partly to make some tests in preparation for a run at the end of the month. They are attempting to produce a television display of the radio emission from an extended source (e.g. HII region) - instead of the usual contour map. This follows a suggestion made by Jan Hogbom (Leiden) that such a display may reveal structures which are poorly portrayed in the usual contour mapping.

Drs. Anand, Seaquist and M. Bell (of NRC) have commenced a program to observe blue "stellar" objects at 2.85 cm. and 4.6 cm with the 150-foot radio telescope at A.R.O. Of particular interest are the so-called radio-quiet QSG's, since it is not known whether or not they are radio quiet at all wavelengths. So far none of the objects shows strong radio emission, but a few of them may be showing extended emission at very low flux levels.

Papers submitted during June

- S. van den Bergh                    A Preliminary Classification Scheme for  
Interstellar Clouds (for Vistas in Astronomy)
- S. van den Bergh and                UBV Photometry of Star Clusters in the  
G. L. Hagen                            Magellanic Clouds

June and July Seminars

- June 26                                Dr. Lloyd Higgs, N.R.C. "The Algonquin  
Colloquia                              Radio Observatory Acquisition System"  
11:00 A.M., Room 1422, McLennan Labs.  
"Radio Emission from Planetary Nebulae"  
4:00 P.M. D.D.O.
- July 3                                    Nancy Ramage, "More About Mira Stars"  
"Countdown"                            Peter Jackson, "Radio Luminosity Function  
of Galaxies"
- July 10                                  Chalmers Hardenbergh, "Infrared Astronomical  
"Countdown"                            Observations"  
Chris Aikman, "Herbig - Haro Objects"
- July 17                                  Fred Hickok "X-Ray Astronomy"  
"Countdown"                            Orest Dubas
- July 24                                  David Fort, "Structure of M17"  
"Countdown"                            Dr. Anand, "The Oscillations of Magnetic  
Stars"
- July 31                                  Dr. Seaquist, "The Nature of Galactic Spurs"  
David Goodenough, "A Bigger Bubble".

The June Institute was a great success according to the comments of our visitors and in our assessment. The weather was excellent except during the outing to visit the Observatory and enjoy the hospitality of Dr. and Mrs. MacRae; for that occasion nature gave us a demonstration of atmospheric instability to illustrate some of Dr. Spiegel's points. The dinner at the Faculty Club was MC'd by Dr. Fernie and enlivened by some frivolous remarks by Drs. Schücking and Spiegel. Much credit and many thanks are due Dr. Anand and to Drs. Roeder and Seaquist who helped him in the organization and operation of the Institute.

COMINGS AND GOINGS

Mrs. Lehmann has returned from her holiday tour of England and Scotland. She saw Bill Sherwood at the Royal Observatory Edinburgh but didn't have time to call on Vicki at home.

Miss Northcott is away in the U.K. and due home on June 30. She and her young cousin, Mary Buck, are travelling about England and Scotland by car.

Dr. Roberts attended a conference on "Rapidly Pulsating Radio Sources" at the Goddard Institute for Space Studies in New York on May 20 and 21. He also spent June 17 and 18 visiting radio astronomers in the Departments of Physics and Electrical Engineering and gave a talk on "The Circular Polarization of Synchrotron Radiation and the Strength of the Magnetic Fields in Radio Sources".

Dr. van den Bergh left by motor for Pasadena on June 23, expecting to take about 8 days for the trip and to see Yellowstone Park en route. Dr. Maarten Schmidt will be teaching him the ropes on the 200-inch during July in preparation for his first solo run in August. Mrs. van den Bergh and the children will be leaving for Pasadena by air late in July to take up California housekeeping for a year. Peter's only comfort at leaving his friends in Richmond Hill is the fact that NHL hockey tickets are easier to come by in Los Angeles than in Toronto.

Dr. Schmitt is spending the last two weeks in June at his old base, Michigan, where he has the opportunity to survey the Michigan Schmidt objective-prism plates taken in Chile. He is looking for CN stars to supplement his survey of these stars in the northern hemisphere.

Dr. MacRae attended the meeting of the Royal Society of Canada at the University of Calgary on June 3 - 6.

Peter Hagen, recently returned from his photometric observing session at Kitt Peak, reports good success. He observed on 20 nights, only one of which was incomplete, and had only five cloudy nights. The Observatory authorities kindly assigned him extra time on the 36-inch telescope. All the equipment worked well at all times, including the paper tape read-out. Thus all observations will be computer reduced - a great saving of time.

Peter estimates that in this one month he was able to accomplish as much observing as he could expect to obtain in a whole summer with unlimited access to a telescope.

David DuPuy has also returned from his Kitt Peak observing session and it is understood that this too was successful.

#### APPOINTMENTS

Dr. Fernie has been appointed to a three-year term on the A.A.S.'s Committee on Education, replacing Mrs. Hogg who has served during the last triennium.

Mrs. Ruth Coombes has been appointed as Research Assistant in the Department, effectively replacing Mrs. Jenny Grasty.

### SUMMER ASSISTANTS

Reporting as summer assistants since our last listing were the following:

B.Sc., U. of T.,

Jack Winzey and Jim Clarke, a graduate of McGill, both of whom are enrolling as graduate students and both working for Dr. Roberts for the summer.

Dieter Brückner, a graduate of Memorial University, and an enrollee in Graduate Studies who is working for Dr. Heard for the summer.

### ALUMNUS

From Dr. Theo Schmidt-Kaler of Ruhr-Universität Bochum's Astronomisches Institut in Bonn we hear that George Mitchell (Ph.D. 1967) will give a talk at Bonn on July 5.

### VISITORS

Dr. Chuichi Kakuta of the International Latitude Observatory of Migusawa, Japan visited the Observatory on June 11.

Dr. Th. Schmidt-Kaler of Bonn is expected to visit the Observatory for a few days at the end of June and will be assigned two nights on the 74-inch.

Mr. W. E. Gillis, President of the St. Louis (Mo) Astronomical Society visited the Observatory on June 25.

### TRANSPORTATION

The Observatory has purchased a white Renault sedan with automatic transmission for transportation of summer assistants and observers to and from the city. The Plymouth station wagon will be kept at the Observatory for more rugged tasks. Driver Jim Newton is getting the hang of the Renault, although he still occasionally turns off the lights when preparing to make a turn. It seems that the French (they are a funny race!) insist on putting the light switch where the turn signal lever ought to be.

### ARRIVAL

Dr. Robert Garrison (newly appointed as Assistant Professor) and family are expected to arrive in Toronto on June 28.

PERSONAL AND MISCELLANEOUS

Another Wedding.

Carl Bignell was married on June 22 to June van Patter in Aylmer, Ontario.

Mrs. Hogg entertained President and Mrs. Bissell (who are still at Harvard) at her home in Dunstable, Mass, on May 23. Dr. and Mrs. Bissell and Zephyr, the poodle, arrived in the morning and spent the day chatting on the porch and walking in the woods and exploring Mrs. Hogg's 40 acres in her Jeep.

Greg Fahlman is attending the Brandeis summer school at Waltham, Mass. for the period June 18 - July 5.

Dave Goodenough was successful in his Ph.D. general examination on June 4.