R E G U L U S

THE NEWSLETTER OF THE

ROYAL ASTRONOMICAL SOCIETY OF CANADA - KINGSTON CENTRE

AUGUST, 1979

A TALKING TELESCOPE

For most astronomers, the name, Mintaka, means one thing - the name of the bright star, δ Orionis, the westernmost and first-rising of the three stars in the Belt of Orion. For members of the Kingston Centre, however, the name now clearly means something much more. It is also a "star" in the field of astronomical instruments, a telescope that in a short lifetime has won fame and acclaim.

Mintaka is the name given by David Levy to the newest member of his very large family of telescopes. It could be described in many ways. Probably unique in the world, it incorporates several unusual ideas. Basically it is a four-inch folded Unitron refractor designed and built by David and Constantine Papacosmos of Montreal. Using a system of light-bending by means of two optically-excellent plane mirrors placed between the four-inch objective and the eyepiece unit, the system gives an arrangement whereby the observer faces in the opposite direction to the object being observed. Alignment simply involves looking through the finder scope which looks back toward the eyepiece end of the tube and is conveniently located near the eyepiece. The light-folding arrangement is inside a compact cabinet, beautifully designed and a reminder of the speakers of fine stereo sound systems. This compact cabinet fits on a base which provides the system with an alt-azimuth mount. This means that the whole system can be transported in two pieces. It is far more compact and convenient than most four-inch refractor systems. In addition to these distinct advantages, the telescope affords convenience and ease of viewing - in fact, it is a delight to use. Incredible as it may sound to users of many telescopes, a vast area of the sky can be viewed from sitting in a comfortable chair.

Now a word on what makes this a really unusual instrument! Inside the cabinet is a tape-recorder which plays voice recordings and music and the quality of reproduction here rivals that of the optical system (it it is possible even to be a rival to that optical system.) In effect it is a talking telescope. The audio system has fine potential. It can be used to prerecord for an observer a list of objects he wishes to observe on a certain night and he can have a list with positions and descriptions of each read off to him as he finds them. Meanwhile classical music wafts through the air around the observer maintaining his spirits, adding to the ease of his observing session. (David claims the music does not affect the optics of the system!) (Imagine the future potential if there is ever found to be a type of music both pleasing to man and frightening to mosquitoes!)

The whole system is not just a showcase of unusual ideas, not just a beautiful curiosity. It is a genuine telescope which does in extremely fine fashion what telescopes are supposed to do. On the occasion when members of our Centre had a chance to use the Talking Telescope, its performance was nothing short of amazing, and a tribute to the work done by Constantine and David. The view of the lunar craters was simply superb, remarkably clear and defined at every power we used and that ranged from relatively low to extremely high power. All of that was under conditions that were less than perfect because of atmospheric haze and light pollution. The optical system, in other words, is outstanding.

Mintaka, the talking telescope, was entered at Stellafane last month in the refractor category and it won third prize. As I observed the lunar craters on the occasion just mentioned, I kept thinking to myself, "If only the judges at Stellafane had had the chance to observe through this instrument!" I thought it surely would have won an even higher prize. However, winning at Stellafane says it all. It is an outstanding telescope. As Walter Scott Houston said, "When you win at Steflafane, you don't need to win anywhere else."

The talking telescope has provided us with a milestone, for it is the first time a member of our centre has entered and has won at Stellafane. For a remarkable accomplishment, congratulations to David and Constantine.

THE MALL DISPLAY

The Kingston Centre's mall display at the Kingston Shopping Centre on Saturday, August 4th was an excellent success. It was a chance for members of the centre to display their instruments, astrophotography, and other resources, and to talk to the public about their projects end interests.

There was considerable interest in the Centre's new 10" reflector and in David's Talking Telescope which just a week before had been a prize-winner at Stellafane. Other attractions were the astrophotography displays such as Leo's eclipse photos and auroral shots and Leslie's Deep Sky Objects. Four of the photos were used in constructing two games which many people stopped to play. One of them involved locating on a lunar map the areas shown in two of Leo's lunar crater photos and the other was the challenge of locating the planet Pluto (the faint object which moved) in two of Leslie's recent photographs. It was a real challenge but many enjoyed the fun of trying to spot the remote planet.

There were few dull moments between 9:00 a.m. and 5:00 p.m. as a steady stream of people stopped to talk about everything from comets to black holes, and what we did when we observed and how we did it. There were numerous explanations of how a Newtonian reflector works and how a folded refractor (the Talking Telescope) operates but for an answer in the case of the latter, the inquirer merely had to listen to the beautifully-done recording which the instrument itself provided. Information about our Society was provided in a three-page handout Which explained the purpose and activities of centres and the advantages of belonging to one of them. We hope to acquire a few new members as a result of the effort.

For the success of this event, our first mall display, we want to thank those who contributed photographs, Mike and Leo who organized it, and David, Doug and Denis who were also there for most or all of the day.

A PUBLIC STAR NIGHT

The Kingston Centre's first 1979 Public Star Night was held on Saturday August 4th at Richardson Park along Lake Ontario near the historic Murney Tower. There was some last-minute work to be done on the 10" telescope, and haze and some cloud made the conditions less than perfect but all the members who attended enjoyed the event and others to came to look through the telescopes were quite impressed by what could be seen. The 10" reflector was used on M57, the Ring Nebula, and on a few other objects, and the prize-winning talking telescope concentrated on the Moon with the superb results mentioned above.

One American tourist who was peering through a telescope for the very first time sat enthrolled and gazed at the lunar craters which were magnificently defined on the 12-day-old moon. What a fine way to be introduced to the night sky and to the use of a telescope!

In spite of the advertising, we would not claim a large turnout for our first star-night of the year, but we would say that those who came were more than pleased, that we were thrilled by our first chance to use the Talking Telescope, and that we look forward to inviting the public again to share an observing session.

FOR YOUR COMPENDIUM OF ESOTERIC FACTS

Here is another fact to add to your list of astronomical information. At the appropriate lull In the conversation of your next star party, ask your friends: "Do you know why Harlow Shapley, one of the great astronomers and scientific cosmologists of the century, started to study astronomy in the first place?"

Here is your fact. The answer is that Shapley, as he himself in later life often testified, arrived at university wishing to study something, he knew not what, and to make a choice, on going through the university calendar from the beginning, he at once hit on the word Astronomy starting with an "A". He did not bother going further.

(Imagine if it had been otherwise. If the word had started with any other letter, the science might never have had the outstanding services of the man who discovered the centre of our galaxy and did much more besides.)

REPORTS AND OTHER ITEMS

1. On Sunday August 5th, David, Lyte, Mike, and I were pleased to give a visitor a tour of the Holleford Crater. The visitor was Constantine Papacosmos who had been with David in Kingston for the Mall Display and the Star Night. We hope he enjoyed seeing this outstanding meteorite crater.
2. We sincerely congratulate Leslie Roberts on a remarkable achievement for an amateur astronomer. He photographed the planet, Pluto, twice On June 18th and June 24th and it is quite interesting to compare the movement of the object in the six-day period.
3. Please bring to the next meeting any of the photographs you may have been lucky enough to get of any of the members of the recent meteor showers. At this time of year there are numerous minor showers in addition to the Perseids, and I hope someone may be able to photograph at least one.
4. Best of luck to Doug in the use of his new camera. It is one that for several reasons is very well suited to astrophotography.
5. It was good to see, at the Mall Display and at the August 9th meeting, a centre member whom we have not seen before. John Mason comes all the way from R.R.#3, Brockville. We hope he can make it to more of our meetings.
6. The following items may be worthwhile projects for observation or photography in the coming month:
   (1) the Mars-Moon and Mercury-Moon conjunctions in the morning sky several days before the New Moon on August 22nd.
   (2) the Mercury-Jupiter conjunction just before sunrise on August 30th, although unless you have a near-perfect horizon it may be impossible to see

(3) the total eclipse of the moon in the early morning of September 6th. Try to catch the penumbral phase which begins at 4:21 E.D.T. and record at what time you can actually detect it. Record your twilight impressions of the onset of the total phase and the tine at which the moon sets or disappears front view at your location. Remember only a small amount of the total phase is even theoretically visible from this area before the Moon sets, and this is the last total lunar eclipse until almost 3 years from now. Therefore, be well prepared for it.

(4) the early morning lunar occultation of the bright star, Aldebaran, on September 12th. The Kingston area is fairly close to a graze for this bright star with the grazing line actually passing a little north of Ottawa and Montreal.

I hope you get to see at lease one or two of the above events.

7. Last moment flash as we go to press: David again provided hospitality in the Gatineau Hills for a group of astronomers - this time for the Perseid Weekend. They came from London, Niagara Falls, Montreal, and Kingston Centres, and it was a very pleasant gathering. The weather was not completely cooperative but a few Perselds were spotted. By the time we were completely clouded in, David was on the way to adding still another member to his family (See sentence 1 paragraph 2 of the first article) which now numbers thirty-seven and is still growing.

    The following night the skies were magnificently clear and the Perseids beautiful though not tremendously numerous. After my observing session, I was roused from sleep by a phone call from a person who had seen a fireball and some other type of strange phenomenon which he described as stars moving to the zenith. (??)

8. Second flash: David in the past week has completed his four thousandth recorded observing session. We congratulate him on this milestone.

Good Observing!

Leo