

**Regulus**  
**R.A.S.C. Kingston Centre Newsletter**  
**1989-08/89-09 Edition**

The deadline for this issue came and went, without a single article for this issue. I was prepared to let this issue become a victim of the summer, until Terry Dickinson phoned with an article for the Charleston Lake Star Party 89-08-09. Fortunately, an article from Walter MacDonald showed up in time to make this issue more than one page long.

I took on the job of editor for this newsletter, not the entire journalistic staff. This letter is supposed to reflect the views of the entire Centre. It is not supposed to be the Mark Kaye show. The deadline for the next issue is 89-09-15. If there are not any articles for this coming edition, then the newsletter will not appear.

Voyager 2 has added another satellite to its discovery repertoire. It orbits in a circular path over the equator of Neptune with a radius of 117,000km and a period of 1.13 days. Presently it is called 1989N1 and is between 200km and 640km in diameter. This new satellite has got scientists baffled. Triton and Nereid move in highly inclined orbits. Moreover, Triton goes around the planet backwards, (retrograde) while Nereid swings in and out from Neptune, in an eccentric orbit. Planetary scientists were convinced that Triton must have been captured by Neptune after both objects formed. Such an event would have disrupted any existing moon in a regular orbit, yet there is 1989N1. This suggests that Triton may be a native of Neptune. If so, theorists need to find some other mechanism besides capture to explain why Triton goes around Neptune the wrong way.

Periodic comet Brorsen-Metcalf is presently gracing the early morning skies. Right now it is so faint and sparse, that what you see depends on how you view it. Generally it seems the comet appears larger as you switch to lower powers. Estimated magnitudes range from 8 to 10. Hopefully, comet Brorsen-Metcalf will be a fine sight by late next August and into September as it gets to near naked eye brightness. Right now the comet is in Pisces, moving toward Triangulum and it is best seen in the south-east before dawn. It will gradually move into Lynx and then on into Leo late in September. (More details in "Sky Calendar".)

A new supernova, 1989M, in spiral galaxy M58 can be seen in a moderate sized telescope. It is presently at about magnitude 12. The new star was discovered on June 28th by Soviet scientists, and lies to the north-west of the nucleus.

**Agenda for the next Centre meetings are:**

**89-08-11: Hamilton's Mike Jefferson: Buying a Telescope**  
**89-09-08: Tentative topic: Neptune Fly-by Video Tapes**

Hope that we have a good turnout and generate some good observational reports. Meetings are at 20:00 EDT at Queens, Macintosh-Corry, room D-214. Deadline for next issue: 09-15. Any articles from anyone will be considered, and letters to the editor about any relevant topic will be greatly appreciated.

Send them to:

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## **The 1989 Charleston Lake Star Party**

This summer, the annual Charleston Lake Star Party will be held on Wednesday evening, August ninth at Charleston Lake Provincial Park. (10 km north of Lansdowne, midway between Kingston and Brockville.) This public star party attracted over 400 hundred people in 1987/88, the two previous years it was held. It was clear both years. The idea of a stargazing evening for the public originated with park officials who asked me to be an astronomical tour guide for the event. The star party begins at dusk with a half-hour talk and slide show in the park amphitheatre. Then everyone walks a few hundred metres to the telescope site for viewing of Saturn, the Moon and anything else the telescope operators wish to show.

In the previous two years there were four or five telescopes available. Marty McConnel, Larry Manuel and Hein Van Asperen, among others have offered their assistance. I could not handle such a crowd myself! Last year we stayed till after midnight and watched Mars. Detail on the red planet was excellent, though I remember only a few diehards were left to see it at its best. Earlier, Saturn and M13 were a treat. This year I am trying to arrange for a small honourarium for telescope operators and I certainly appreciate the help I have had so far. Anyone reading this is welcome to come and bring their telescope. We need all the assistance we can get. There are sometimes lines of 70 or more people at each scope. Furthermore, this is a reasonably good site. I thought mosquitos would be bad, but so far they have not been a problem. The crowds are gone by about 23:15 and we turn from telescope operators to telescope users for the next hour or so.

If you are interested in bringing your telescope, there is no need to contact me, or the park. Just show up at the gate around 20:00. Tell the guard you are there as a telescope operator for the star party and you will be admitted free, and given directions to the site. Because this is a park that people pay to enter, the audience wants to be there and everyone seems to have a good time. I have been very impressed with the quality of questions, and the level of interest in general at this event.

**Terry Dickinson**

## **My First Six Months With a 44cm Dobsonian**

On Friday, January 27, 1989 my observing horizons were expanded greatly, and a dream was finally realized. This was the day I purchased a used Coulter 44cm Dobsonian. No longer would I have to use my averted vision to the limit in order to detect more deep sky objects, or would I long for better, brighter views of familiar deep sky sights. Now all my observing wants would be fulfilled. Of course, with such progress, there are some new problems created too. As I have found in using other large telescopes, there is an initial adjustment period during which you make a number of discoveries about the new instrument and how it works. (or does not work!) The following are some of my discoveries, the good and the not so good, along with some observations made during my first six months with the new scope.

"The 17" (as I call it) has a large red tube 51cm in diameter and 188cm in length, which rest on a 70cm square rocker box. The tube assembly weighs 64kg, the box 41kg, and the mirror 13kg. The 17 weighs in at a hefty 118kg total. The focuser is of the 3cm variety and there is no finderscope. (I use the hex bolt at the top of the tube!) The entire telescope was mounted on three wheels by the previous owner and this allows the scope to be moved around on smooth, level surfaces by only one person. Unfortunately, such surfaces rarely occur in nature, so this is not of any use in the field. This was my first discovery about The 17. Without such a surface, it becomes a two person telescope.

Initially, I took The 17 back home to Oshawa so it would be close at hand, and so I could roll it in and out of the garage and up and down the driveway as required, totally unassisted. Strangely enough, although it looks gigantic indoors, once it is rolled outside it looks rather small! The f4.5 focal ratio gives a focal length of 200cm, the same as my C8. The quality of the images in The 17 is quite good in spite of some of the stories I have heard about similar scopes.

The skies the first night home were clear until about 23:30. I rolled The 17 half way down the driveway. Within an hour the mirror and scope had thermally equalized with their surroundings. Despite the light pollution (Oshawa, population 150,000) those first views were still very good! M42/3 were blue-green in colour, with abundant mottling clearly visible. Details were also visible in M81/2, which were brighter and more extensive than in my C8. M44, in Cancer, showed several colourful binaries I do not recall seeing before. Sirius, quite simply, should be left until after deep sky observing is finished!

I used The 17 on a total of three nights in Oshawa. By this time the initial excitement was beginning to wear off and I longed to unleash its full potential under a dark sky. So on April 8th, with a clear Saturday night looking imminent, (how about that for a change!) and with Doug Clapp and Randy Hendriks going out to observe, (they could help me move The 17) I decided to take the scope to the family farm 25km north-east of Belleville. I also took along my C8 in order to facilitate direct comparison of the performance of the two scopes.

Although Orion was sinking in the west, the Zeta Orionis Nebula was easily visible in The 17, but not in the C8. M42/3 was even more beautiful with the dark sky. Many objects seen in The 17 were eye-popping, to say the least. It was like starting the hobby all over again! In Leo, M65/6 were great. M65 was noticeably larger than M66 which appeared to have "wings" running off it. (spiral arms!)

All of the detail in M65/5 was especially impressive since both of them were visible in the same field of view. A dust lane could be seen in nearby NGC6328 and the supernova in M66 was just visible. NGC2371 in Gemini showed some mottling.

Just as nebulae and galaxies were breathtakingly transformed by The 17, so were globular clusters. To say that M13 was a knock-out is an understatement! My views of M13 were the most incredible I have ever had. Nicely resolved, each individual in this incredible blizzard of stars, stood out plainly with direct vision. It was like looking at a Palomar photograph. M92 was very good, again showing lots of resolved stars and M5, in Serpens, was excellent. When looking at the brighter globulars in The 17, I got the feeling that if I cranked up the magnification a little, I would be able to see the other side of them! M22 was well resolved and gave the impression of having a "sheet" of stars draped in front of a more distant and condensed core, an interesting effect. I finished the night going through Sagittarius and Scorpius and being amazed by the views that were afforded by The 17. One in particular, the Trifid Nebula, was outstanding, with the trisection practically jumping at one. All in all, it was a very exciting night. Throughout all of this observing, I slowly acquired a feel for how to use this telescope. Having used the 33cm Coultter, I initially thought that The 17 would be easy to use. While this is largely true, (if you will pardon the expression) the sheer size and weight of The 17 make it somewhat harder to handle. For one thing, you cannot put your arms around it and push. (unless you have very long arms!) Neither can you push as hard if you are standing on a ladder, as it turns out, the scope is a wee bit tipsy in certain orientations, due to the three wheel setup. Fortunately, this is only a problem near the zenith. By using a sturdy ladder and gripping diametrically opposite sides of the top of the tube, The 17 can be muscled around. A better way still is to have someone on the ground do the steering. Of course the latter only works when you are not alone.

Well, I could go on and on about the wonders opened up to me by The 17, but I will wrap it up with just a couple more. On the Canada Day weekend, I had The 17 out again with Paul Markov. (who helped me move it!) M110 was astonishing in its extent and of course M31 was amazing. as I was expecting by then) But my most recent big thrill came when I checked out NGC7331 in Pegasus. Immediately next to it were four galaxies, three of them easily visible. If you compare the charts for NGC7331 in SkyAtlas, and Uranometria, you will get an idea of the difference between the Universe as seen by a 20cm scope and that seen by a 44cm, and exciting difference! So what is to become of my C8? It will continue in active service for many years to come. I have yet to exhaust its photographic potential and it is better suited for lunar, solar and planetary observation. This is an interesting situation, the merits of the C8 and The 17 are mutually exclusive! Therefore, just as Leslie Peltier divided his time equally between his 15cm and 30cm scopes, I will divide mine evenly between the C8 and The 17. At least until I can get a 74cm...

**Walter MacDonald**

### **Sky Calendar**

August and September are probably the two nicest months of the year for observing. The nights are beginning at a much more reasonable hour, unlike in June and July, but the conditions are still pleasant. The air is usually a bit drier as well.

I like the way the sky stays the same over the summer months due to the lateness of the twilight. In June, the sky is very much the same after dark as it is in August, because of the retreating day. And what a sight the sky is. The bright summer Milky Way hangs over head, and the easy summer triangle is a guide to the deep sky wonders held in the rich background. Just point your scope at the haze, and scan. It is hard not to find something of interest, be it an open cluster, a patch of nebulosity, or even some of the dark nebulas that almost trick the eye into not seeing them. Moving into the deep southern sky is a special summer treat, because, this is where the planets are.

This 89-08-16-00:24UT sees the start of a lunar eclipse. It has been a long time since the last one that was visible in this area. (Bets on rain, anyone?) Mercury, although well elongated on 08-29, will only be 13 degrees above the horizon. Still, if you have a good western horizon, it should be easy to spot right at sunset, especially in the 10 days before elongation. Venus on the other hand, has been an easy bright target for the last month, and will continue to get slightly easier. Of course, like Mercury, its stay above the horizon is brief. Start looking as soon after sunset as is possible. Mars is quickly being overtaken by the sun, and will be low in the west near Regulus, as August starts. In September the Sun will blot it out altogether. Jupiter is climbing into the morning sky, and will move higher and higher as the next two months progress, rising by midnight at the end of September. Saturn, Uranus, and Neptune are all grouped together against the rich background of Sagittarius, and won't set until after midnight. Vesta, while getting fainter, is still quite an easy target in Sagittarius, near M8.

Comet Brorsen-Metcalf will probably be the comet of 1989. It should reach magnitude 5.2 in late September, as it brightens rapidly through August. Not only that, it will be fairly well placed for observing for the next two months, before rapidly moving off into the southern skies. Look for it to move from Pisces, through Triangulum, Perseus, Auriga, where it will peak, and then down through Lynx, and into Leo by September's end. At its maximum brightness, (89-09-21) it will be very near Gamma Leo. (Algeiba) This comet is similar to Halley's comet, in terms of its orbit.

Do not forget the yearly display of the Persied meteors. This year the Moon is in its first quarter, so that by the time Perseus is well up in the sky, the Moon should not be a problem. The peak of the shower is 89-08-12, but this display usually spreads itself over quite a few days around this date. Hourly rates can be as high as 50, but over the last few years, there have not been that many. A comfortable chair, a warm blanket and a good friend make for a very pleasant evening. Just point your chairs toward the heavens in the general direction of Perseus (north-east), relax and enjoy. Hope that you have clear skies.

**MK**

### **Electronic News Notes**

Interest in Astronomy continues to grow on the local computer bulletin boards. The Trinet group has recently added, due to popular demand, an Astronomy Echo. The echo provides a forum for computer users to post information about their observations, ask questions about events, equipment and telescope design, and to chat about items of astronomical interest. Participation is from at least three continents. Some of the news about Neptune's new satellite is courtesy of this echo. It is an interesting compliment to the Science echo, which has a much broader base, but still has regular updates concerning the latest from NASA. These services are available to anyone with a computer and a modem for a small yearly membership fee.

I have not added to last months list of computer programs available. I have filled one request for programs and I hope that they are being put to good use. I am always on the lookout for any Public Domain, or Shareware programs of an Astronomical, or Scientific background. As programs are added to my collection, I will post the new titles.

As usual, this publication will be available in Electronic format. Call the voice number to arrange for transmission. Sending files over the phones is quite economical. If you are interested in any of the files listed last month, and have to call long distance, call on a weekend. Transmitting all of the files would sill be cheaper than using a Canada Post approved mailer, and paying for postage.

**MK**

### **Ramblings From the Editor**

The usually scheduled "From the Eyepiece" does not have enough material to make an appearance this issue. Although I have been doing sporadic viewing, June and July are far to buggy for extended observing, to say nothing of the time one has to wait up till to start. Look for this article to re-appear in the next edition. I regret to say that I missed the occultation by Saturn, of 28 Sagittarius, on July second. The event was not listed in the calendar part of the handbook, and I missed it in the section listing planetary occultations. To make matters worse, the June issue of Sky and Telescope did not arrive until 07-04, making it just a bit late for learning about the event. I apologize to all for not listing this in the last issue of Regulus, but now that I know where in the Handbook to look for these events, there are not any more to report.

**MK**

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**This newsletter does not necessarily voice the opinion of this Centre. The editor is responsible for all the views stated within.**

**Mark Kaye**