R E G U L U S

THE NEWSLETTER OF THE

ROYAL ASTRONOMICAL SOCIETY OF CANADA - KINGSTON CENTRE

JUNE, 1980

A MEMORABLE MEETING

On Thursday, May 29th, 1980, members of the Kingston Centre had a chance to attend one of our meetings which those who did will likely not forget for a long, long time -- a chance to hear our Honorary President, Dr. A. V. Douglas, report on her trip to India for the February eclipse. Her two-week trip to the great Asian sub-continent was a fascinating and enviable experience, but it was a real thrill for the rest of us when she shared with us the highlights of that memorable venture.

Dr. Douglas not only told us of the awesome spectacle of the three and a half minutes of totality on the high, central Indian plateau but also gave us a feeling for the places she visited with their culture, setting, and historic importance. The group of American astronomers, of which she was a part, flew from New York to London and on to Bombay on the west coast of India. There she described seeing the magnificent seventh-century bas-relief statuary on Elephanta Island in the great harbour, and later touring the Tata Institute For Scientific Research -- an institution named after one of India's scientific pioneers.

After travelling by air to the central city of Hyderabad, the group saw the mighty eleventh-century fortress of Golconda which stands nearby and had a chance to become acquainted with the variety of sights to be seen in this city. From there on the day of the eclipse it was a three-hour drive to the south-west over the flat, very hot countryside to the little village near the central line that would provide a vantage point for about fifty astronomers who were filled with anticipation at the onset of nature's great spectacle. There was a picnic lunch in a local hostel and at three o'clock the moments of totality were approaching fast. Here are Dr. Douglas's words describing the setting:

"Magnificence! Cloudless sky from horizon to horizon! Very flat all around and pale blue sky flooded with sunlight! Terribly hot!"

"The shadow was not nearly as dark as at the previous occasions when I have seen an eclipse. (Three times I stood under a cloud at the critical moment and once I saw it magnificently when the darkness was really impressive. The onrush of the darkness! This time it was not as dark.) The time of totality was about 3:30. The diamond ring effect! That was magnificent! There evidently was a very deep valley on the edge of the moon, and a terrific glow came through, and then the chromospheric light, the flash spectrum, showed up as a ring and two or three seconds later the moon moved right over and there we were with a perfect corona-but very, very symmetrical. Nobody could see a single trace of the red hydrogen glow of a prominence. We had about three and a half minutes of totality and the watch just galloped over those three and a half minutes; it went twice its normal rate-that's the psychological effect you get."

Many of us who heard that last sentence could certainly agree as we recalled the precious seconds of totality in Manitoba in '79. It was like reliving them to hear of a similar experience-this time almost half way around the earth.

We heard of the superstitions that still hold sway in many parts of India and of how members of the group found that women in the village at the centre of the path of totality had gone into the Hindu temple out of fear, thus missing nature's great and rare spectacle. On the other hand we also heard of several kinds of experiments done by Indian and American astronomers in an effort to advance man's understanding of nature. There were radio experiments, and spectroscopic experiments, and even one involving bees and their reactions to totality.

To have a member of our centre talk to us about seeing the total eclipse of 1980 was an honour, but to have as prominent a person as Dr. Douglas tell us about the "total experience" of the trip was a rare distinction for our small group. There are very few people who travelled to the path of totality both for the 1932 and for the 1980 eclipses and it was a remarkable person who shared with us her latest memorable experience. To Dr. Douglas we say that you are an inspiration and we feel honoured and are very grateful.

FOR YOUR COMPENDIUM OF ESOTERIC FACTS

Do you know that there is one minor meteor shower that has four names? This minor shower is in June from the 27th to the 30th with the peak occurring on the 29th. The shower is known variously as the June Draconids, the June Bootids, the Iota Draconids, or the Pons-Winnecke meteors. The last name is sometimes used because the shower is derived from the comet of the same name, a comet that was seen on its last visit in 1976.

REPORTS AND OTHER ITEMS

1. This spring has been a big disappointment for Aurora-watchers in this area. However the past month brought one Aurora. On Sunday May 11th, I saw and photographed an Aurora. It was not a spectacular display or anything to match displays of the past two summers but at least it was an Aurora.

2. By the latter part of May the volcanic ash and dust from Mount St. Helen's volcanic eruption had reached southern Ontario and it was easy to see the unusual colour of the moon and the sun at the time of sunset. The moon was unusually reddish from May 20th to May 24th and sunset on May 21st was extremely reddish and fairly red for a few evenings thereafter.

3. Observing Mercury has been a thrill during the last week of May. I may not have been the first member of our centre to observe the fleeting planet but I did see it on four out of six evenings from May 26th to May 31st. Doug and perhaps one or two others saw it on Sunday. I observed it on Monday, Tuesday, and Wednesday and on the latter two dates studied it through the telescope for a considerable while before it set. By Wednesday it could be spotted easily with the naked eye, as it climbed very rapidly up into the night sky. On Saturday it was easy to spot within a couple of degrees of Venus which is still bright in the west though not as bright as it was a few weeks ago. As Mercury moves further out from the sun toward Greatest Eastern Elongation on June 14th, it should be possible to see it a good many times this month. Let's record our observations and see who can spot it most often during the month of June. That it could be seen so often in the last week of May was a tribute to the excellent cooperation received from the weatherman.

4. It can be done! I did it! By the end of May it was possible to see all the planets of antiquity without moving one's head. The five planets visible to the naked eye were all arranged along the ecliptic in such proximity that it was possible to see them by just moving one's eyes. They are certainly much closer than they usually are. Try that little experiment but do

it soon-before Venus moves over to the other side of the sun. It crosses over on June 15, the date of inferior conjunction.

5. Besides watching the planets and their movements this month, especially the very rapid movement of Mercury and Mars, be sure to observe the beautiful configurations of Moon and planets as the crescent and waxing moon between June 17th and June 20th moves past the bright "heavenly wanderers" and the stars Regulus and Denebola. Occultations may not be visible from your area but you may still see some very interesting configurations of celestial objects.

6. Neptune is at opposition this month at about the time of new moon. If your plans call for trying to find or observe Neptune at any time this year, then now is the time to do it. Opposition is on June 12th at 3^{hr} U.T. The planet is in southern Ophiuchus, 29.263 astronomical units from the earth. Its magnitude is +7.7 and you should use a map such as the one in the Observer's Handbook on page 92 to find it. Remember that since January 1979, Neptune has been the outermost planet of our solar system.

7. Three other dates to remember this month are as follows. At mid-northern latitudes, earliest sunrise of the year occurs on June 13th. The summer solstice occurs on June 21st. Also at mid-northern latitudes, latest sunset occurs on June 27th.

8. Several of the unattached members of the R.A.S.C. who have recently joined our society and who live in this region of Ontario have been contacted by letter and invited to join our group if they wish. Whether they come from Belleville, Peterborough, Colborne, McArthur's Mills, or any part of Eastern Ontario, they are welcome to attend our meetings or join our activities at any time they care to do so.

9. I have just received a card from Sue Rugelis of the Syracuse Astronomical Society, and she informs us that they are still working on a date for a proposed visit to the Holleford Meteorite Crater. We look forward to seeing the Syracuse group.

Again, let's see if we can get a group to go to the Summer Seminar in July in Syracuse.

10. We look forward to having the Kingston Centre represented by a couple of people, at least, at the General Assembly in Halifax the last weekend of this month. We hope that the meeting of July 10th can feature slides and reports of what happened at the G.A.

11. We are sorry to learn that two stalwart members, Enrico Kindl and Doug Baker, plan to leave the Kingston area in about a month, with one going east and one heading to Western Canada. Edmonton Centre can look forward to receiving Doug, a very enthusiastic observer who possesses some good observing equipment. Since Enrico is going only to Montreal we hope he maintains an interest in the Kingston Centre and often comes back to visit us.

12. It was good to see some new faces at the last meeting in May. We hope that Mr. and Mrs. Fitzpatrick enjoyed the group and can come back whenever they wish and as often as they like. Marg has also been at previous meetings. We welcome Elaine Harvey and invite her also to join our group. An interest in our fascinating science is all that is needed for anyone to join.

13. Terry Pithrook from Toronto, now working at Fort Henry is now a regular member of our group and we hope he can continue with us for a long while.

14. Here is a schedule of dates of upcoming meetings. They simply continue at two-week intervals:

June 12th	Oct. 2nd
June 26th	Oct. 16th
July 10th	Oct. 30th
July 24th	Nov. 13th
Aug. 7th	Nov. 27th
Aug. 21st	Dec. 11th
Sept. 4th	
Sept. 18th	

All start at 8:00 p.m.

Remember they are held in Room 222 in Ellis Hall which is on University Avenue on the Queen's University campus.

Please bring some astrophotography, slides or prints, to the meetings if you have any to show.

CLEAR SKIES AND GOOD OBSERVING!

Leo Enright

P.S. I have asked Angelika, our President, to include with this newsletter copies of some of her drawings of recent sunspot observations which she made on several consecutive days. I hope you enjoy seeing them.

These observations were ma[illegible] w[illegible] a 60 mm telescope and a 12.5 mm
e[illegible]ece, at about 16:00 Eastern Da[illegible]ght Time, from Thursday, May 22
to Thursday, 29 inclusive.

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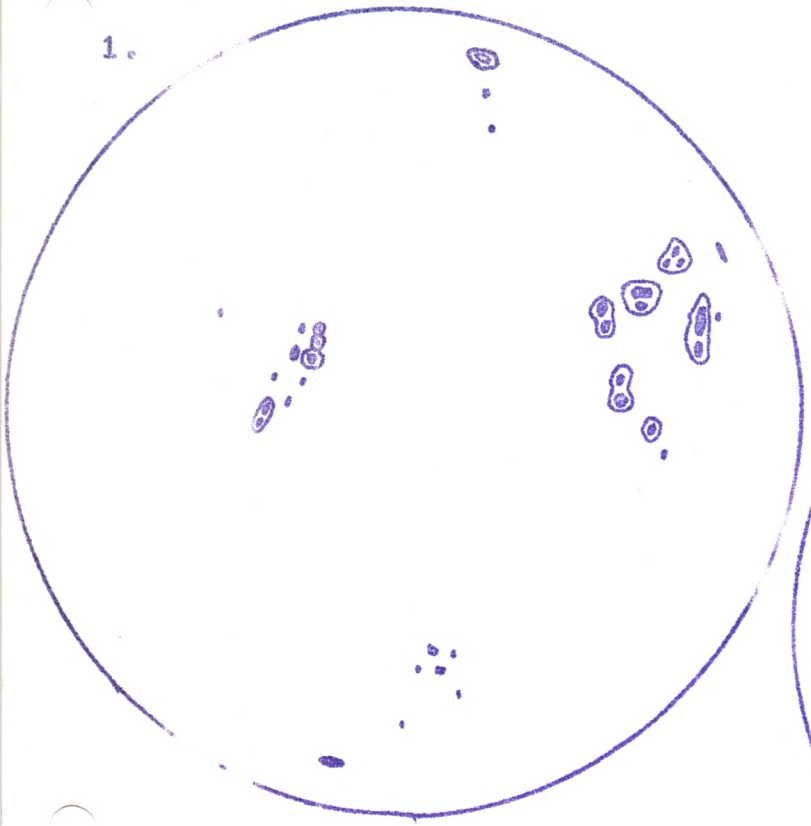

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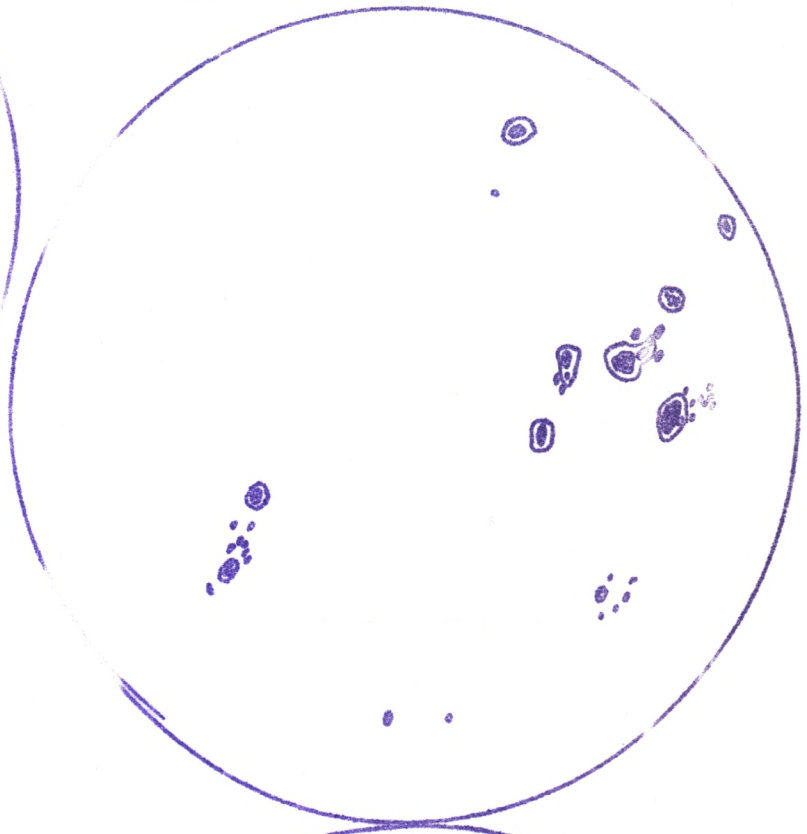

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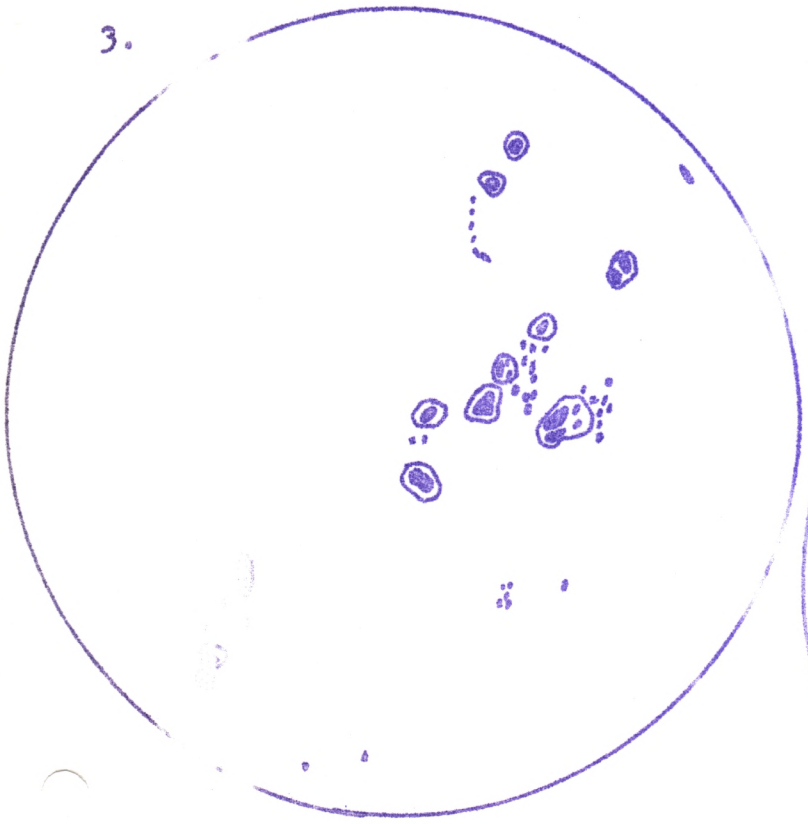

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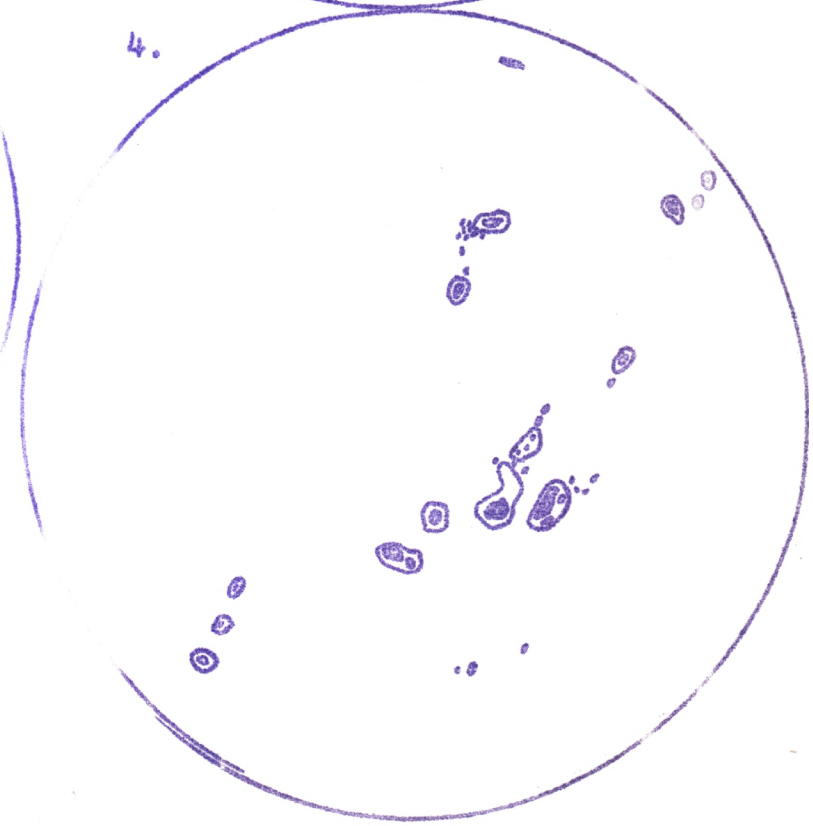

clear skies
and lots of
sunshine!
Angelika

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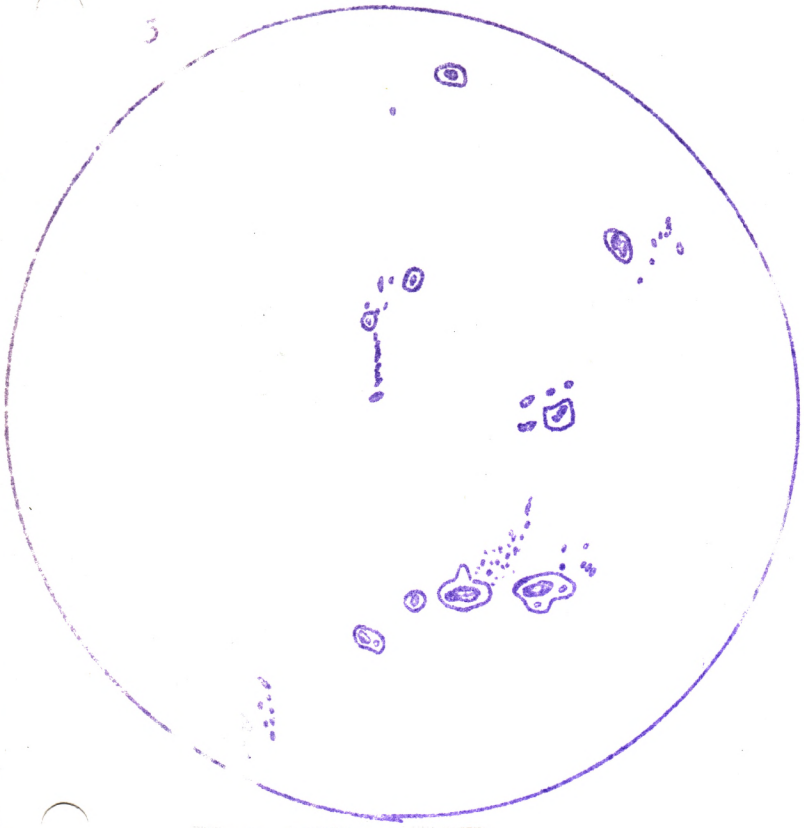

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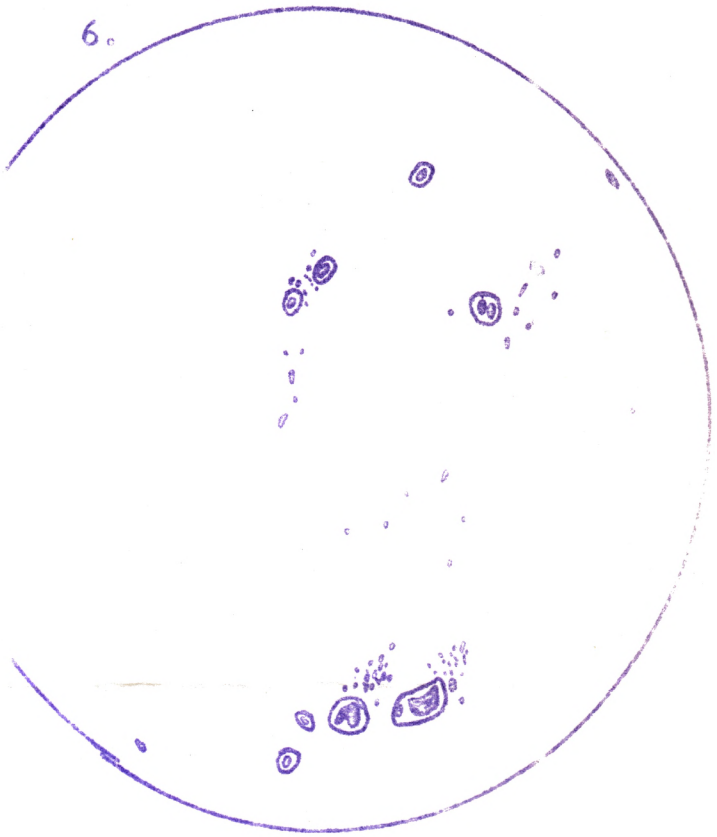

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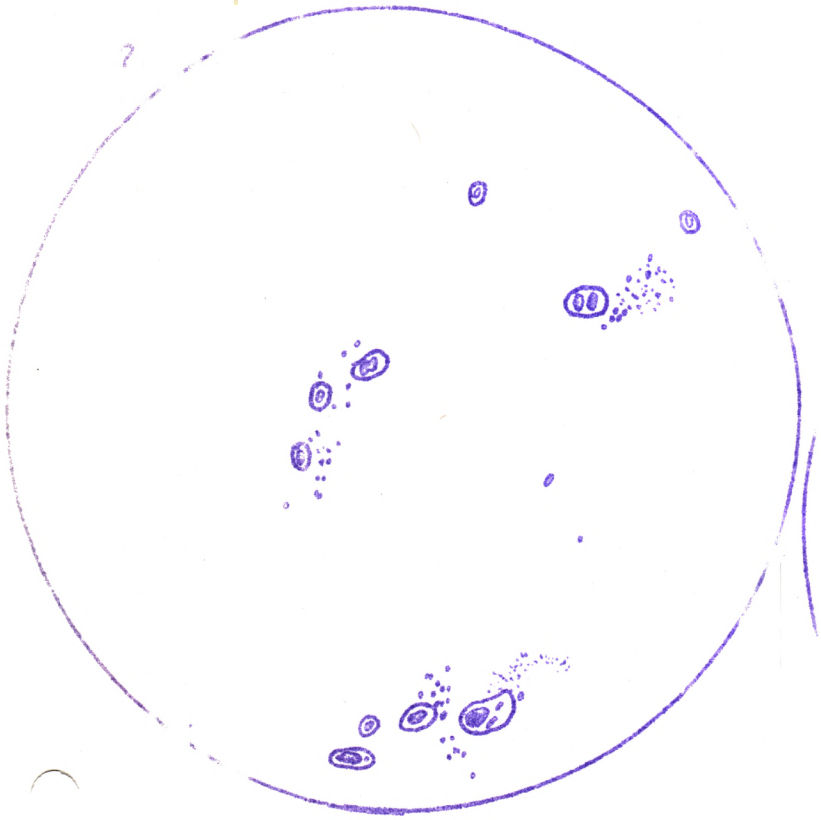

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