

* Event Horizon *

Volume 2 Issue 11

October 1995

Editorial

I would like to begin this first issue for me as editor, by praising the efforts of Stephen Scheeler and Patricia Marsh who were the editors for the first and second years of our publication. I do this not because it is a tradition but because I truly believe they did an excellent job. I know that I will have to work hard to maintain the standards that they set.

I have been reading the newsletters of some other clubs with the intention of gleaning new ideas. It didn't take me very long to notice two important things. First, the current format of this newsletter is second to none. The second, and perhaps most important point is that what has made our newsletter so good is the quality and diversity of articles that have been submitted by the various members of our club. This month's issue contains many fine articles once again.

I would like to encourage our other members to submit articles to Event Horizon or at least give some suggestions for topics that may have been neglected.

We have three articles this month that are related to our September Star Party that was held at the York Soaring Association airfield. To those who have never been to a star party before, I highly recommend that you attend our next one in the spring of 1996. You do NOT have to own a telescope since everyone fortunate enough to own one is more than willing to share the view. Also, even if the weather is bad we all still have a great time.

Stewart Attlesey
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HAMILTON AMATEUR ASTRONOMERS

Chair's Report

Well, this is it. After a year of fame, glory, yea verily, POWER, I'm facing the harsh reality of ordinary life. Can I handle it? Time will tell.

Meanwhile, I have one more bite at the cherry -- one more "Chair's Report" -- and I have a LOT to say!

Firstly, I want to tell you ALL what a great year it's been, and to thank you ALL for being so helpful, so cheerful, so, well, WONDERFUL! Sure, stars and planets are important to the HAA, but it's the PEOPLE who make it work. I have really enjoyed every aspect of this past year, and I have especially enjoyed working with you.

I also want to thank the Guest Speakers for giving us all some very stimulating and informative evenings. In any given lecture series, you expect one

or two duds, but I don't think we had any! My thanks extends to the HAA members who recommended most of this year's Speakers.

My profound thanks goes to McMaster University, which has been so generous and welcoming in providing us with a carpeted, furnished (and computerized!) room adjacent to the William J. McCallion Planetarium, as well as the use of the Planetarium itself for our public outreach-cum-fundraising planetarium shows.

And finally, I want to thank especially my Councillors and Group Leaders. If I have been a good Chair, it is because of the support and guidance of my Councillors; the old adage of a general being only as good as his troops is just as true when applied to Chairs and Councillors. It's been said that a woman has to work twice as hard as a man in order to be considered as good as a man (I'm only quoting); if that's so, then **Anne Tekatch** should be measured as being worth at least 2 or 3 men. It would be an understatement to call her my "Right Arm". That being said, my "Left Arm" was **Doug Welch**. Even though he was all over the globe due to his research leave (California, Australia, South Africa ...), he was instrumental in

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establishing our home page on the World Wide Web and in liaising with McMaster University. **Trish Marsh** kept us (and the rest of the world via the Web) informed of all our comings and goings by doing the onerous job of editing the *Event Horizon*. Thanks to Trish, the *EH* is an attractive publication which gives the HAA a very high profile. **Bill Tekatch** (Cosmology Group); **Jim Winger** (Telescope Making Group); **Nina Snaith**, **Raechel Carson**, **Rosa Assalone**, and **Patty Baetsen** (HAJA); and **Ev Butterworth** (Observing Group) fulfilled their difficult and time-consuming tasks so dependably that I never had to worry about those portfolios. The "Invisible" workers -- those who work diligently for the HAA at jobs of which the general membership is basically unaware -- have done wonders, too! **Stewart Attlesey** (Recorder), **Barb Wight** (Treasurer), **Charles Baetsen** (Vice-Chair), and **Rob Roy** (Councillor and Obtainer-of-Many-Observing-Sites!) did magnificent, if unlauded, jobs!

In addition to their recognized jobs, my Councillors also gave me excellent advice -- not always in the same direction in which I had been headed before receiving it! -- but which was genuinely appreciated and which was certainly beneficial to the HAA. Thank you, Solomons all!

Some of the year's highlights (for me, anyway) were the following:

- the establishment of HAJA as a viable astronomical organization for young people in the Hamilton area;
- the development of the HAA home page on the World Wide Web, which has given us international exposure;
- the ongoing fiscal success of the HAA, which culminated in the purchase of a savings bond for a "rainy day";
- a 50% increase in membership in just one year.

In addition, we have re-established relations with the Hamilton Centre, established links with the North York Astronomical Association, and hosted (and enjoyed) a successful annual star party.

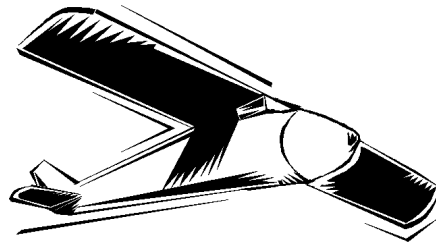
"So", you ask, "why is he doing the Grand Imperial Stool thing only once?"

I hesitate to remind you that I am

in my second half-century (does that sound better as "third quarter-century"?). Since I firmly believe that an organization as young as the HAA needs equally young blood to keep things vibrant and exciting, my impending decrepitude could be a consideration. The other thing that a new organization needs is fresh ideas. A steady influx of bright and enthusiastic leaders will keep those ideas rolling. Anyway, having the HAA become just an institutionalized version of Uncle Grant's Vision of the Cosmos gives me nightmares!

"So long, and thanks for all the fish!"

Grant Dixon
Chair
e-mail: "dixon@dogwood.
physics.mcmaster.ca"



York Soaring Star Party

Ev and I drove through a pristine sunset to become the tardiest participants in the HAA September Star Party at Arthur. Originally intending to sleep in the back of my little pickup truck, I had to reconsider this option when I offered Ev a ride and our combined cold weather gear all but filled the available cargo hold.

The scene upon arrival was one that few have the opportunity to behold. The soaring field has a flat 360 degree horizon broken only by a few trees a

kilometre or more away from the runway. Telescopes setup near the hangar were silhouetted against the sky and looked for all the world like a small stand of conifers in the transitional arctic taiga.

(tai|ga {ti ge} n.[[Russ]] a type of transitional plant community that is located between the arctic tundra and the boreal coniferous forests, having scattered trees. WEBSTER's)

Blessed with 6th magnitude skies, the Milky Way stretched from horizon to zenith to horizon. Dark lanes, spokes and filaments were easily discernible. We had brought Ev's 6 inch reflector, and an armload of binoculars, none of which we used that night. Instead we relied on the generosity of others who offered peeks through their equipment.

We were of some use however, as it seems that everyone but myself and Ev had neglected to bring coordinates for comets Hale-Bopp, Bradfield and De Vico which are now visible from our latitude.

All of the common telescope types were present as were the common mounts. There was something in the night sky for all types. Jupiter and Saturn were up for those wished to see the smallest details in Ann and Bill's beautiful 7 inch refractor. I spent a considerable amount of time looking for belts on Saturn and following the progress of several of its' many moons.

The ease of use of Dobsonian reflectors let many of us flitter around from one M-object to the next. L-X 200's are now a permanent fixture at star parties and I am in considerable awe of the technology. Once set up, they can track down the untrackable, ready to catch that fleeting glimpse through breaks in scattered cloud cover keeping Lou busy when the rest of us may be forced to retire.

I have to put Stewart's leviathan in a different category than the other Dobsonian reflectors. A truly beautiful piece of craftsmanship, his 20 inch Obsession demands a little more enthusiasm and care, something that I am

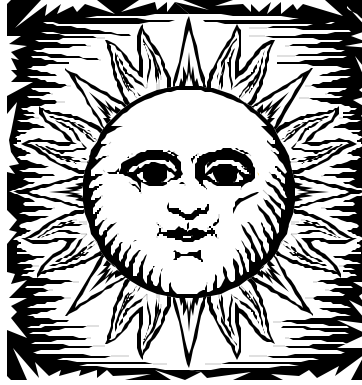
sure Stewart has plenty of. Transportation to a site might be something of an expedition. Those who do not have vehicles with 'cavernous' interiors might consider a trailer instead of some complimentary eyepieces. But what is spent in logistics is well worth the effort. The view is nothing less than magnificent. Ann describes the Veil Nebula, (NGC6960), as a 'religious experience'.

My first look at comet Hale-Bopp was in the Obsession and not all that impressive because it was so low in the muck near the horizon. If Doug had not put it right in the middle of the eyepiece for me, I doubt I would even have seen it. I was not prepared for my first view of the Veil with an OIII filter. Words fail me here, so let me best describe the view as something that prompted me to from now on carry a copy of Burnham's whenever there is a chance of Stewart's Obsession being on site.

Raechel, Nina and Rosa seem to have become one amorphous mass, with parts being interchangeable, and whether all three, two or merely one are present, they shall always be in my mind, one single entity known collectively as 'THE GIRLS'. 'THE GIRLS' seem to me like they are having a blast!

The night seemed to draw to a close when the telescope 'THE GIRLS' were using dewed, or perhaps even ICED over. Those who had heating elements incorporated into their telescope designs may have persevered much longer, but the seeing had deteriorated as ground fog began to build up and some cloud cover threatened to obscure all but the zenith.

The order of retreat is always to me a curious thing. As the night progresses, telescopes and owners one by one evanesce in the darkness. Small Dob reflectors can disappear almost in the blink of an eye. If engaged in a celestial encounter, one never can tell if your closest viewing neighbour hasn't just grasped this opportunity to capitulate. The larger and more elaborate systems are quite different, often a spectacle to witness.



There are things so serious that you can only joke about them...

Heisenberg

Exciting New Year for HAJA

Last month, the Hamilton Amateur Junior Astronomers (HAJA) had their first meeting of the new season. It was a success thanks to the terrific planetarium show by Grant. This year we have many exciting new plans for the group so for those of you who weren't there, read on and find out why you and your children won't want to miss another meeting!!

This year we will be holding monthly meetings and, as always, non-members are welcome so tell your friends!! There is a change in the day of the meeting. Starting this month and for the rest of the year we will be meeting on the third TUESDAY of the month rather than the third Monday. Check the Calendar of Events for the dates and topics of future meetings.

Some of the plans we have for this year include: telescope making, a junior newsletter, certificates of achievement, and a HAJA logo contest. At the last meeting, we asked the kids to bring their logo contest entries to the October meeting. The only restriction on the entry is that it must incorporate the initials HAJA or the full words Hamilton

Amateur Junior Astronomers. The entries will be judged at the October council meeting and the winner will be announced at the November HAJA meeting.

This month we will be launching a junior newsletter. It will be one page (both sides) and will contain contributions from the children, including the new HAJA logo. We hope to have stories, drawings, puzzles, etc from the kids. We will provide trivia, information about upcoming events, and simple maps of prominent objects that they can look for. The children will be encouraged to bring work completed in school in addition to that created specifically for the newsletter.

One of the most exciting activities we have planned for this year is telescope making. We hope to assist the children to make a 6" reflector that will belong to HAJA when completed. The children will be able to grind the mirror, decorate the tube, and contribute as much as possible to the construction of this telescope. Patty will begin the process with an introduction to the parts of a telescope at this month's meeting.

We have introduced the idea of certificates of achievement to the children in order to encourage them to be as actively involved in astronomy as they can be. Each child will receive a personalized, official "Certificate of Astronomical Achievements" on which we will attach a new star for every new achievement. For example, the winner of the logo contest will receive a star. Other activities that we would like to reward are: finding a difficult (relative to the child's ability) object in the sky; drawing a picture of an object that they observed; or giving a short talk to the group (like show-and-tell in school).

The meeting this month is on Tuesday October 17th at 7:00 PM at McMaster University, Burke Science Building Rm B148. The topic is "What are Asteroids Anyway?" Each meeting will start with a talk and a related demonstration by Rosa, Nina and myself followed by a hands-on activity for the children. The official meeting will end

with a telescope making session or a planetarium show. If it is a clear night, we will do some observing after the meeting.

Some of you may have noticed the topic for the November meeting in the Calendar of Events. The topic happens to be "In Search of Extraterrestrial Life." I would like to mention (just for the record) that this topic was given to us by one of the children and was not stolen from the Cosmology Discussion Group. (However, we may steal some of the information discussed at the November Cosmology meeting.) At the September HAJA meeting, we asked the kids what they would be interested in learning about and they were bursting with ideas. We'll have enough topics to run into the next century !!

Hope to see you at the next meeting.

Raechel Carson

3 0 8 - 8 0 4 1

HAA Sweatshirts

We've put in our order for the sweatshirts and I've been told they should be available for the October general meeting. If you put in an order for one, don't forget to bring your c h e q u e b o o k .

Adult sizes up to XL are \$23. each including taxes. Size XXL sweatshirts are \$26.

Of the 25 shirts we've ordered, 17 are spoken for. If you want to reserve one of the remaining 8 (sizes L & XL only), c a l l m e .

A n n T e k a t c h

Comet Misconceptions

These days, it seems that every time we turn around, there's a thrilling new cometary event for us to train our telescopes on. It's almost as if the coming retinue of bright comets is seeking to outdo Shoemaker-Levy's spectacular impact of last July. Though we're understandably excited by this show, our ancestors would have been horrified. Indeed, this flurry of cometary activity in the last years of the old millennium might still convince the more superstitious that we're in for, as the rustics put it, "a whole mess o' trouble."

Despite recent advances in our understanding of these celestial wanderers, comets have had a difficult time shaking their reputation as harbingers of famine, war, pestilence, and other malevolent horsemen. Historically they have been almost universally regarded as ill omens. In fact, more societies in human history have sanctioned incest than believed comets were lucky. The only exception that readily comes to mind are the !Kung people of Namibia; latter-day hunter-gatherers who believe that a comet in the sky heralds good fortune.

Other cultures have not been so optimistic. The Chinese, known for their meticulous observations, have left such fabulous relics as the Mawangdui silk, a textbook of 29 different cometary forms that describes the disasters associated with each. Although compiled sometime around 300 B.C., the knowledge it encompasses is believed to date as far back as 1500 B.C. Noted astronomer Li Ch'un Feng had this to say on the subject of "broom s t a r s " :

Comets are vile stars. Every time they appear in the south, something happens to wipe out the old and establish the new. Also, when comets appear, whales die. ...When a comet appears in the constellation Hydra, there is war and some conspire to overthrow



the emperor. Fish and salt are expensive. The emperor dies. Rice also becomes expensive. There is no emperor in the country. The people hate life and don't even want to speak of it.

Many historians believe that the Aztec ruler Montezuma II's sighting of a comet in 1519 caused him to believe his reign was at an end and to surrender to Cortes without much of a struggle, thus allowing a party of 400 Europeans to overwhelm a vast civilization of several million. Similarly, the visit of Halley's comet in the year 66 A.D. was taken to foretell the destruction of Jerusalem.

The first tentative steps in understanding comets were made by the Greeks. Though they also linked comets with disaster (dis-astra, or "against the stars"), Democritus thought that comets were produced when one "star" passed near to another. Given our present knowledge of the Oort cloud and the subtle gravitational tugs that can precipitate a cometary event, he seems to have been on the right track. More so, anyway, than Aristotle, who postulated that since the heavens were pristine and unchanging, comets were merely atmospheric phenomena. This view was not challenged until 1577, when Tycho Brahe collaborated with other astronomers across Europe. Separately, they observed the great comet of that year and upon comparing their measurements, found none of the parallax that would surely be evident had comets in fact been as close as Aristotle predicted.

Why is it that so many diverse cultures have agreed on the unwholesome nature of comets? It is

difficult to say. However, Carl Sagan has noted that since human history has not been unduly happy, "...any comet at any time viewed from anywhere on Earth is assured of some tragedy for which it can be held accountable."

Now that many of us see these phenomena in a more scientific light, it is tempting to laugh at these ancient beliefs. But we must remember that not all aspects of cometary superstition were bad. Fear of these "hairy stars" spurred kings and emperors to commission grand observatories. There wasn't a decent court without a well-heeled astronomer to warn it of impending doom. Then again, perhaps it wasn't all glory. The stress of immanent execution for failing to predict a cometary appearance might well have made the job less than fun.

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1996 RASC Observer's Handbook

We have ordered 30 handbooks for sale to HAA members at the low, low price of \$11.25. These sell for over \$18 (including taxes) retail.

We hope to have the handbooks for the November meeting. If you want to reserve a copy, be sure to call me. They usually go fast!

Ann Tekatch 575-5433

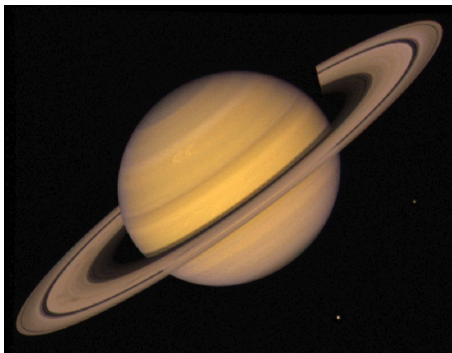
My Visit to Saturn

Customer Appreciation Night, that is. On the evening of Saturday, September 9, Saturn hosted a gala at the Starlite Drive-in, treating its local customers to goodies and a showing of the movie Apollo 13. I still don't understand this. They already HAD these customers. They should have invited everybody else, no?

They thought it would be neat to have a few telescopes there, as well. Our members were scared off by the rumour that only Saturn cars would be allowed through the gates. I already had Saturnian friends invite me to sit in their car to watch the movie. I took my LX200 just in case.

Sure enough, on arrival, I was told that I could bring my telescope in, but not my Toyota. "Fine!" I said. "It's my scope AND my car, or nothing!" They finally relented and I ended up parking and setting up beside the screen, not far from the new models they brought to show off. I was amused by the number of people who came over to see the unusual looking Saturn. My very shiny, new-looking Camry had fooled some of them. The salesmen were neither fooled nor amused.

I set up the scope in daylight, before the movie. Quite a number of people came over to look and ask questions. After explaining such things as the 64K object library and moving the scope around via joystick, the most



common comment and question were, "Wow! How much does one of these cost?"

I hadn't seen 'Apollo 13' before this. The movie was quite good. The 'seeing' as we astros would term it, was terrible. Don't buy a Saturn for viewing movies from the back seat at a drive-in. You may want to do something else in the back seat at a drive-in, but watch a movie- NOT! Every joint in my body ached from crouching and twisting, trying to see the whole screen. Our club's 6'+ Stewart would have seen only feet and have broken his back, to boot.

After the movie, there was the usual mad dash to get out first or second or third. A couple of dozen stayed behind to look at the skies. In between isolated clouds, we had to look at Saturn, of course. The rings were visible, but very far off their maximum tilt, as you know. John Q. Public was still impressed with the view. My friend really made an impression when he informed them that we currently believe the rings are only about 100 meters thick. "That's less than from here over to there," he pointed out.

The one-day-after-full-moon moon was so bright that it required stacked lunar and orange filters for a comfortable view. The highlight for me was handing the joystick to a mid teenager to let him take a 'drive' around the surface of the moon. According to his expletives, (a big word for a teenager, I know) I'm sure he thought it was cool.

I also enjoyed having the crowd look up at the star just above Vega. "What do you see?" Then, we moved to the scope at about 80x. "Wow, I can see two stars, now!" I switched to about 150x. "I think I can see four little tiny ones." After everyone had a chance to look, they were told this was one of the most famous multiple star systems, epsilon Lyrae.

Although small, the crowd was most enthusiastic and impressed. A rock steady, tracking scope helps, of course. I

kept flashing (my HAA Tshirt) and plugging my association with the club. I had forgotten to take brochures- drat. The kids were the most fun. Maybe we'll see some of them as future members. Hey, you never know.

R o b R o y



M14
in
Ophiucus

The Phantom of the York Soaring Association

In the long, dark hall of McMaster's General Sciences building, Rosa waited anxiously for the news . . . had Ann made the big decision? The arrival of Raechel and Nina did not bring an answer. Ann had not yet exploited all of her weather contacts.

At 3:30, under clear skies, Ann took the plunge and postponed the event. The reasons? The predictions were at best fifty percent clear skies, high winds and low temperatures. The departure was delayed until the next day.

Shortly before 2 PM on Saturday, Nina arrived in the Volvo, every door bursting due to the excess of camping gear, expecting Raechel and

Rosa to fit their supplies in the cracks. (Rosa enjoyed a comfortable journey on the roof). We were asked if we were leaving for a night or two weeks.

Upon arrival at the York Soaring Association we found the Tekatchs beside their HEATED trailer, Ann with her paid witnesses lined up. They swore, cheques in pocket, that in Arthur it had poured rain all night, despite the clear skies over Hamilton.

This time our fire drew praise (due to the low ambient temperature) and there were no deprecating remarks about cooking without a stove. After finishing our tin foil meal (Raechel insists that hers was purposely charred) we headed to the barn to wash the dishes. After a brief tangle with the fuse box, we found the light switch on the other wall and scrubbed the dishes sparkling clean. Nina pulled the plug on the soapy dish water and it drained away without a sound. Rosa and Raechel, halfway out the door turned to see Nina peering in a puzzled manner at the sink. A moment later she exclaimed, "Where's my J-cloth? Where's my J-cloth?!?" Where else could it have been but down the drain. Raechel reacted to the crisis in a calm, collected manner and deftly turned on the taps full force to prevent lodging of the J-cloth in the pipes.

A brief inspection of the plumbing system, however, revealed no chance of blockage. There was a rubber hose running from the sink to the back of the barn and out through the wall. There were several theories as to how deeply the end of the hose was buried outside the barn, but true to our scientific training, we had to observe the scene for ourselves. A foot behind the barn the hose ended abruptly above ground. There, at the mouth, in the undergrowth was an entity. At this time those of you who were quietly setting up your telescopes in a distant field would have heard mirror-shattering shrieks of laughter. Rosa bravely speared the suspicious matter with a stick and held it aloft. It was a J-cloth - but was it ours . . . ?

After an exhausting night of

dew-impaired observing some of us gathered around the camp fire to warm ourselves before retiring to our ice-cold sleeping bags. The question was raised, where the tent of a certain person was located. (To preserve his anonymity we will call him the Phantom.) Raechel said, "The Phantom set up his tent a mere foot from ours, on my side. Why do you ask?" The group broke into uncontrollable fits of laughter. Someone revealed that when the Phantom sleeps, the Earth shakes with his snores.

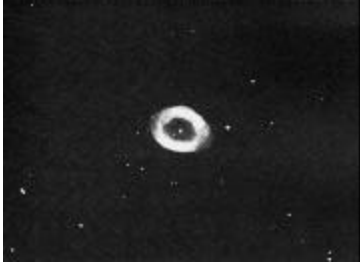
When we finally approached the tent, we discovered that the report was true. The rhythm of the snores was emulated by the sides of his tent. Once in our cold sleeping bags, to the accompaniment of the neighbouring snores, we started telling the deep secrets of our hidden pasts. Eventually we fell asleep. Nina awoke in the morning to find Rosa snugly wrapped in all the blankets, and Raechel rigid with cold on the other side of a tent encased in ice. While thawing Raechel by the fire were were struck by some of the Phantom's comments and realized that the snores were a calculated performance, and in fact the Phantom had heard every word we had said. Unnerved we packed up and left the scene immediately.

The blackmail notes have already started to arrive...

Rosa Assalone
Raechel Carson
Nina Snaitth



M0 in France



M57 in Lyra

The Ring Confusion

You've Been Away Too Long
Barry...

In September Bob Botts bought a 6" F/15 Refracting Telescope from Barry Sherman. Many of us have had the privilege of gazing through it while in Barry's possession and know its performance value is excellent. Bob now can look forward to the same rich experience.

Sunday Sept. 16/95, a beautiful sunny afternoon, saw Barry and myself at the observatory (Bob was away) putting up this scope on the pier it once occupied before. As always it was entertaining to watch Dr. Scope do his magic. The following night, Bob being home now and anxious to see his new acquisition, found himself, myself, Barry and also Colin Haig at the site. We all had a good night and Bob is thrilled with his scope. All being to satisfaction for now, we took a breather inside and caught up...

Meanwhile, Colin, a fairly new member spent a good 45 minutes struggling with the 17" scope and located the "Ring" M57 in Lyra. He was most triumphant over his accomplishment and wanted us all to have a look at the 'RING'. Great! We all marched out to have a look. Barry promptly slewed the scope around to face Saturn. Poor Colin's mouth hit the floor. The expression on his face was aghast. I said not to worry, Barry could put it back in 2 seconds flat. Bob suggested putting the O III filter on to see the 'RING' to which Barry replied.

"An O III filter on the Ring. Well, why not? Something different." Suddenly Bob and I realized that Barry was confused. Colin was still standing in the same spot, his mouth still on the ground. Barry was looking at the wrong 'RING'.

Finally Barry realized what the problem with the picture was, and without further ado, looked at both the 'RING' of Saturn and the 'RING' of Lyra. Colin will find the 'RING' of Lyra again and it will be easier next time (Trust me).

Barry,,, It's good to see you out observing and you've been away too long. Welcome back.

Ev Butterworth

How Cold Was It? Our Dark Sky Camping Weekend!

Our very first autumn star party was a success in spite of overnight temperatures dipping to -3 Celsius.

The weekend got off to a bad start with blustery winds and rain Friday night. I managed to get hold of most everyone and warn them of the Environment Canada forecast for that evening and we postponed the start of the weekend to Saturday night. As luck would have it, Friday night was exceptionally clear in Hamilton.

After hearing the forecast minimum temperature was to be -3, I really didn't expect many people to want to stay overnight at the York Soaring Association. I was really impressed when the majority of those who came out did stay and camp for the night! I think they deserve recognition: Lou & Oksana, Doug Welch, Nina Snaith, Rosa Assalone, Raechel Carson, Stewart

Attlesey, Brian Carr, and especially Charles & Patti Baetsen with their 3 month old daughter, Hypatia! (Maybe we should rename the little darling "Hypothermia"?) Way to go guys!! (Bill and I don't count among these brave campers. We wimped out and turned the furnace on in our trailer!) We were joined for evening observing by Grant Dixon, Ev Butterworth, Bob Botts and Juliana Light.

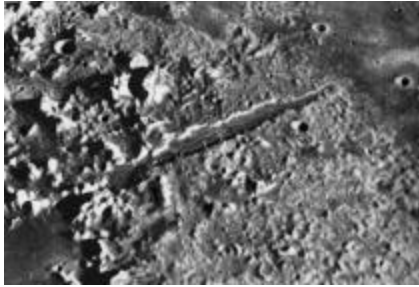
What an evening it turned out to be! The sky at sunset was crystal clear and the Milky Way soon popped out overhead. Grant and I could both see R Corona Borealis, naked-eye. This meant a limiting magnitude of at least 6! Many of the glider club members joined us for observing and, judging by the animated conversations and laughter I heard, they enjoyed themselves as much as we did. About midnight, heavy dew and thickening cloud shut us down for the night. Nina, Rosa & Raechel rushed back to the camping area and started a cheery fire where we could heat up hot chocolate, melt the soles of our boots and try and burn little holes in our winter parkas! This "observing" then continued until 3:30 a.m. By the way, if anyone knows why wood burns into cubic-shaped charcoal, please let us know. This question became a hotly debated topic around the fire. We also discovered that round pieces of plywood burn with funnel shaped flames.

The best thermals of the entire season made for EXCELLENT gliding the afternoon before our great observing session. Watching several beautiful and graceful gliders circling beneath the clouds is wonderful. Actually being in one of them is an experience so overwhelming that there are no words to describe it! I managed to sneak in two flights that magical afternoon. I'm hooked!

As Doug Welch put it (to the tune of the Robert Palmer song):
"...gonna hafta face it, you're addicted to lift".

Yes indeed!

Ann Tekatch



**Vallis Alpes,
180 Km long lunar valley
Near the Moon's north pole**

What's Your I.O.?

The weather is beginning to feel cooler. I've noticed this seems to be everyone's favourite season. I like the winter. It's a very comfortable temperature. There's often a slight breeze but I can still wear a T-shirt. Occasionally, I need a sweater. Here are the answers to last months tease and some new questions for you. Dig in.

- 1) False. Only a little over a hundred globulars are known in our Galaxy.
- 2) (a) Jupiter, with an equatorial diameter of over 141,000 Km.. (b) Pluto, whose diameter is now thought to be only about 2200 Km. appreciably smaller than Mercury and also smaller than several planetary satellites.
 - (c) Uranus.
 - (d) Jupiter; the main dipole field has a strength of about 4 gauss, as against 0.3 to 0.8 gauss at the surface of the Earth.
 - (e) Uranus.
- 3) Prominences, rising from the surface of the Sun. They are not flames, but masses of glowing hydrogen. With the naked eye they can be seen only during a total solar eclipse, though instruments based upon the principle of the spectroscope mean that they can be examined at any time.
- 4) Bees. The patterns had been incorporated in the columns outside the

main doors of the building, but when seen by one of the trustees were regarded as undignified; moreover, the bee was apparently about to sting a man on the nose - and this was taken to represent Charles T. Yerkes, the millionaire who had financed the Observatory, being stung for the money!

5) A period of 18 years, 11.3 days, after which the Earth, Sun and Moon return to almost the same relative positions. The Saros can be used to predict eclipses; it is usual for an eclipse to be followed by another eclipse 18 years, 11.3 days later. through the slight differences from one Saros to another mean that the eclipses are not identical. For example, the solar eclipse of 1927 was total over part of England, but the 'return' eclipse of 1945 was not.

6) Fraunhofer lines are dark lines in the spectrum of the Sun. They are named in honour of the German optician Josef Fraunhofer, who first studied them in detail in the years following 1814. The light from the Sun can be split up by means of a spectroscope. The bright surface produces a rainbow band (if a slit is used) from red at the short-wave end. Above the bright surface are cooler gases, and these gases produce the dark lines. Each line is due to some definite substance, and each substance has therefore its own 'trade-mark' which cannot be duplicated, so that we can tell which elements are present in the Sun. For example, two prominent dark lines in the yellow part of the spectrum can be due only to sodium.

- 1) For what do we best remember Bernhard Schmidt?
- 2) T/F Our Galaxy is spiral in form, with an overall diameter of approximately 100,000 light-years.
- 3) What exactly is a meteor radiant?
- 4) T/F Julian days are named in honour of Julius Caesar, who was responsible for an important reform of the calendar.
- 5) T/F The heliopause is the period of solar minimum, when spot-groups are rare. It lasts for about three years.
- 6) What is an occultation - and why are lunar occultations useful to astronomers?

Hope this will keep you occupied for a while. I have to tell you, I'm impressed

with how well you all know your trivia. Do I need to make this more challenging!!!

Io, Keeper of the Flame
Jupiter Co-ordinator

Starfest '95 Meteor Rival

On Sept. 29 at 9:31pm. EDT. five of us witnessed the greatest fireball. Colin Haig witnessed the flash as he pulled into the Observatory parking lot. But Lou and Ollie Darcie, Charles Baetsen, Bob Botts and myself saw the whole thing. It soared from the eastern sky, skimmed Delphinus just outside the Summer Triangle, and sunk into the south western sky, behind the trees, silhouetting them. We could see the meteor through the trees. The head was a brilliant blue/green (much like the fire-crackers that throw fire balls into the air and burst at the end) only much bigger and brighter. It lit up the parking lot like daylight and the Moon - only 5 days old - was setting and not an interference. The meteor didn't just leave a long illuminated trail, but rather a huge trail of blazing golden fire with boiling red flames on the outer edges. Truly the most spectacular fireball I've ever seen. We all stood there in utter awe and could not control our enthusiasm. It was the talk of the evening and we all went home elated.

Although I didn't see the great fireball of Aug. 24/95, I believe that this particular one had to have rivalled it.

Ev Butterworth

Star-Studded Astronomical Christmas Idea!!!

You will have noticed elsewhere in the *Event Horizon* that **Terrance Dickinson** will be the Guest Speaker at our November meeting. He will be bringing some of his books along with him for after-speech sales, and has very generously offered to donate 10% of all sales of the evening back to the HAA. So bring your Christmas gift lists, and please your friends and family while you help the HAA! This is definitely a win-win



NGC4565 in Coma Berinices



Roman Around

Saturn (Greek - Cronus) was a very old Italian god. On one account, he was said to have come from Greece to Italy in very early times, when Jupiter dethroned him and hurled him from Olympus. He established himself on the Capitol, on the site of the future Rome, and founded a village there which bore the name of Saturnia. He was welcomed there by the god JANUS. The reign of Saturn over Latium (thus called because the god had hidden himself there; from the verb *latere*) was extremely prosperous. This was the GOLDEN AGE. Saturn taught people how to cultivate the ground. At this time the Italian population was composed of ABORIGINES, who owed their first laws to Saturn. He was depicted armed with a scythe and his name was associated with the invention of viticulture.

Another account states Saturn was a very ancient agricultural divinity of Latin and Roman origin; he was of the same rank as Janus and Jupiter. His name may be connected with *satur* (stuffed, gorged) or with *sator* (a sower); in either case he is synonymous with abundance. Saturn was a working god and a vine-grower. Under the name Stercutius he saw to the manuring of fields. He was associated with Ops, who was a personification of the earth's riches. Saturn was supposed to have been king of Italy during the golden age. Driven from the sky by Jupiter he hid himself in the country since called Latium, and indeed beneath the Capitol at Rome itself. His reign brought prosperity and abundance.

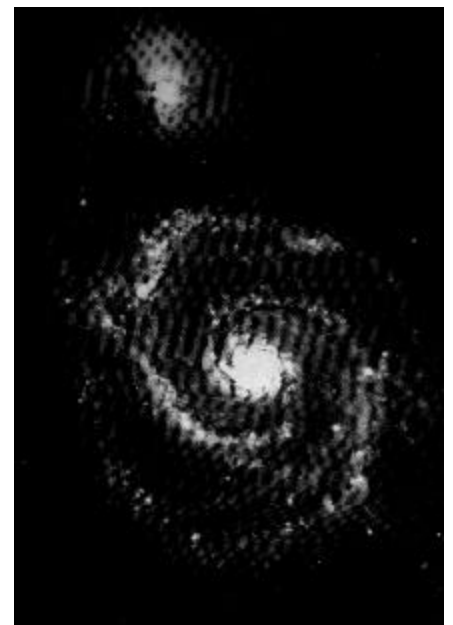
The days sacred to Saturn were the *Saturnalia*, the 17th of December through the 23rd, seven days. Originally they consisted of a series of unrestrained rural festivals. After the religious ceremony there was an immense feast; people even took the precaution of bathing in the morning in

order to remain all day at table. Encumbering togas were removed and they ate at ease in tunics. In memory of the golden age the masters served the slaves who, during the festivals, could say and do what they liked. There was a general suspension of public activity. Law courts did not sit, schools were closed, commercial and military operations were suspended. The Saturnalia assumed their real importance in 217 BC., a time when the defeat at Lake Trasimene, a prelude to the disaster of Cannae, caused a religious revival among the Romans.

In the temple of Saturn near the Capitol the State treasury was kept. The god's effigy was bound with woolen strips which prevented him from leaving Roman territory. His bands were untied during the Saturnalia.

In a painting from Pompeii Saturn is standing, his chest half bare, a sickle in his hand. On coins he carries a sickle or ears of corn.

Ev Butterworth



M51 in Canes Venatici

Upward Skybound

Fall is here and the leaves are falling. It seems to me I've been sweeping keys from our maple tree all summer. Now I have to rake! When will it end. I think I'll put my broom and rake aside for a while in order to take in the sun while its still not COLD. I also want to enjoy the nights.

FQ: Oct. 1 / FM: Oct. 8 / LQ: Oct. 16 /
NM: Oct. 24 / FQ: Oct. 30

Jupiter: in Scorpio is low in the southwest at sunset, and sets about 2 hours later. This is your last chance to catch the Jovian Satellites.

Saturn: in Aquarius, is high in the southeast at sunset, and sets late in the night. With the rings edge on, this is a prime opportunity to watch the satellites of Saturn. They are much more difficult to see than Jupiter's moons, but are easily visible right now. The mutual events (satellites occulting and eclipsing each other) are also visible. For details consult Astronomy Magazine pg. 73.

Observing Nights: Sat. Oct. 15/95 at the Binbrook Cons. Area.

This is my last article as your Observing Director. I would like to take this opportunity to thank everyone for their support over the last two years. Especially, Ann Tekatch, Trish Marsh, Sarah Catherine Butterworth, Bert Rhebergen, Bob Botts and Grant Dixon for helping out with workshops and bringing their enthusiasm. I sincerely hope you all enjoyed the observing nights (the ones that weren't cloudy) and both adult and Jovial Satellites workshops.

Clear Skies,
Ev Butterworth, Observing Director,
632-0163

Dundas Valley Conservation Area

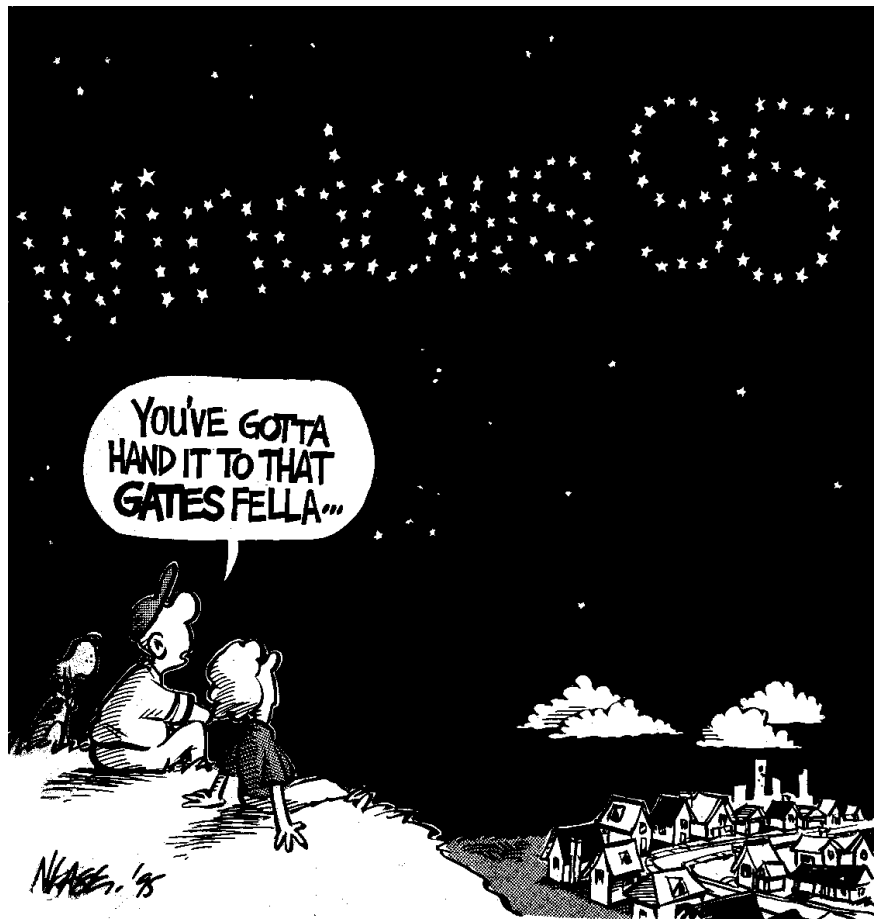
We have been invited to bring telescopes & binoculars to the Dundas Valley Conservation Area on Thursday, November 9 as part of a field trip being offered to McMaster students and employees. For our efforts, the HAA

receives a sizeable donation.

I need telescope and binocular owners to volunteer to come out and show off the night sky to these folks. You don't have to make a presentation or even say anything. You don't have to be an expert. The moon will almost be full, so if all you can find is the moon, you're in luck!

Here's your opportunity to show off your telescope and impress the public! Call me for more details.

A n n T e k a t c h
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For Sale

Single-axis Drive Corrector/
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synchronous motors plus
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welch@physics.mcmaster.ca
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(905) 524-0848 (evenings)

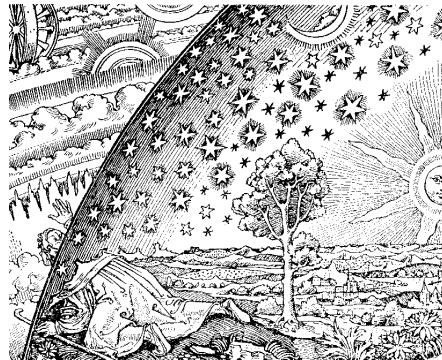
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Ann Tekatch
575-5433.



Editor's Address

*Please send articles, drawings,
pictures, comments and
suggestions to Stewart Attlesey:*

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*(I'm not kidding about the
address. I will be in Korea
until the end of November)*

*e-mail:
stewart@io.org*

**DEADLINE:
October 30, 1995**

CALENDAR OF EVENTS

- ◆ Sat. October 14, 1995 8:00 PM **OBSERVING SESSION**-Binbrook Conservation Area. Please call Ev Butterworth for details. Bring your friends
- ◆ Tues. October 17th at 7:00 PM **H.A.J.A. MEETING**- Mac Burke Science Building Rm B148
"What are Asteroids Anyway?"
For more information, contact Raechel Carson, at 308-8041
- ◆ Fri. October 20, 1995 7:30 PM **COUNCIL MEETING**- stay tuned for more details...
- ◆ Thurs. November 2, 1995 8:00 PM **ROYAL ASTRONOMICAL SOCIETY OF CANADA Hamilton Centre**-
General Meeting - McMaster University Medical Building Room 1A6
Everyone Welcome!!
- ◆ Fri. November 10, 1995 7:30 PM **H.A.A. GENERAL MEETING**- Spectator Auditorium - Bring your friends!!
This is a special meeting to celebrate our 2nd anniversary. Our speaker for the evening will be Terrance Dickenson.
- ◆ Tue. November 21st at 7:00 PM **H.A.J.A. MEETING**- Mac Burke Science Building Rm B148
"In Search of Extraterrestrial Life"
For more information, contact Raechel Carson, at 308-8041