
HAMILTON AMATEUR ASTRONOMERS

❖ Event Horizon ❖

Volume 1 Issue 1

November 1993

Editorial

Welcome to the first issue of **Event Horizon**, the publication of the Hamilton Amateur Astronomers. It is with great surprise that I find my name at the end of this article. To begin with I have never done anything in the way of publishing beyond simple WordPerfect documents. Before this newsletter I had thought that "WYSIWYG" was something sold as a hair replacement on late night T.V., "justification" was something you gave for making a decision and "font" was a word not used in polite circles. With my newly enriched vocabulary I charge headlong into the world of desktop publishing.

I would like to welcome everyone to this new club and newsletter, yet other articles do that. I would also like to mention all of the work that has been going on, but again, that purpose is served in other articles. Seeing that everything is covered in the articles, I would like to make a request. You guessed it, for articles. Any articles, serious articles about projects you've done, humorous articles, scientific articles, diagrams, anything. Mail, hand deliver or dictate any manuscripts, drawings or scribbles to the address below. I can accept text from any major word processor, (just be sure to tell me which one you used) or any density of 5½ or 3¼ inch disks, and, yes, even handwriting.

Furthermore if you have a good idea for a logo that you'd like to see appear on this page, show it to me. Also, tell me what you think about the layout of the newsletter. (I would just love to

**HAMILTON
AMATEUR
ASTRONOMERS** *

The proposed logo

spend another couple hours burning my eyes out in front of the computer re-adjusting the format.) Seriously, however, it is very simple to change it and I would welcome any suggestions. This first issue is similar to the Hubble Constant; it can be changed to suit the needs of those using it.

Stephen Sheeler
121 Haddon Ave. S.
Hamilton, ON
L8S 1X7

Chair's Report: The Soul of a New Machine

It is a great pleasure to welcome you to the first issue of **Event Horizon**, the newsletter of the Hamilton Amateur Astronomers. Even though many of you will see this article for the first time at the November meeting, October has been full of activity organizational and otherwise.

Let me say a few words about the purpose and principles of the HAA.

First and foremost, we are 'dedicated to the enjoyment of astronomy'. Our goals include frequent meetings and observing activities. We have already scheduled a Public Star Party at the Dundas Valley Conservation Authority on November 20, 1993 (details elsewhere in this issue). We hope that you, too, will be interested in coming out - there will be plenty of telescopes and plenty of objects to see, weather-permitting! Secondly, we have an active public education programme. Most weeknight evenings, there are scout or guide shows being given at the W.J. McCallion Planetarium by our members. If you are interested in being trained and helping out, please contact Grant Dixon.

Our philosophy is that it should not cost the moon and stars to belong to an astronomy club. We feel that a low entrance membership fee (primarily to support printing and distribution of the newsletter) is all that is required. Other fees or contributions are at your discretion. We believe that young members are the lifeblood of any group and therefore we intend to make sure that such members can always afford membership.

Where possible, we hope to be a group driven by the enthusiasm of our

Inside This Issue

- | | |
|---|--|
| <input type="checkbox"/> EDITORIAL | <input type="checkbox"/> ALGOL ~ AN AUTUMN TREAT FOR OBSERVERS |
| <input type="checkbox"/> CHAIR'S REPORT | <input type="checkbox"/> PUBLIC EDUCATION—STAR PARTY |
| <input type="checkbox"/> THE SKY WAS FALLING | <input type="checkbox"/> EVENTS |
| <input type="checkbox"/> WELCOME ONE, WELCOME ALL | <input type="checkbox"/> YOUR ARTICLE TITLE HERE |
-
-

members. If you have an idea, please bring it forward. If you have a question, please ask. The experience of our members is extensive and there is an excellent chance that we can help or provide useful advice.

Finally, let me thank the members of our Board who have done so much in so little time. They are listed below:

Grant Dixon – 2nd Chair
 Patricia Marsh - Secretary
 Barb Wight –Treasurer
 Stephen Sheeler – Editor
 Patricia Baetsen –Recorder
 Charles Baetsen – Director
 Ann Tekatch – Director
 Stewart Attersley – Director
 Nancy Morgan – Director

Our philosophy is that it should not cost the moon and stars to belong to an astronomy club.

-Doug Welch

Thanks to Ann Tekatch who has kindly donated liability insurance for our first year. Charles set up our post office box. Barb set up our bank account. Ann fought the horrors of government bureaucracy for various forms, and lived to tell the tail. Patricia Marsh reserved the spectator Auditorium for the 1994 year. And so on, and so on...

I will keep you up-to-date on the contributions of members as the months go by. I hope that you will keep us up-to-date on how we are doing in meeting your astronomical needs!

Doug Welch

Which is more useful, the Sun or the Moon? The Moon is the more useful since it gives us light during the night, when it is dark whereas the Sun shines only in the daytime, when it is light anyway.

-George Gamow

The Sky is Falling

A recent news item from an International Astronomical Union (IAU) Circular will come as no surprise to a group of HAA members who were present at Rob Dick's observatory near Ottawa. Even casually observing we estimated a rate of what seemed like one meteor a minute. One spectacular event was a pair of meteors, which appeared at the same time and were nearly equal in brightness and velocity. Below is reprinted that circular from the IAU.

ORIONID METEORS 1993

P Brown, University of Western Ontario, writes: "Unusually high activity has been reported from visual and photographic observers in Germany and the Netherlands of the Orionid meteor stream prior to its regular maximum. According to the International Meteor Organization (IMO), the regular maximum was predicted for Oct. 21.7 UT, while the outburst was recorded in the 2-hr interval centered around Oct. 18.1, with observers reporting uncorrected hourly rates of 25/hr. This corresponds to zenith hourly rates approaching 35/hr, some 3-4 times the regular activity of the Orionids at this solar longitude. The maximum Orionid ZHR over the past few years, according to the IMO, is about 20."



<< The Moon (Filler) >>

Welcome One, Welcome All

First of all let me welcome all members to the Hamilton Amateur Astronomer's Club. I'd like to extend the sincere wish that everyone makes his/her goals become a reality and in so doing achieve a pride in themselves and their club. Also, take the time to make other amateurs aware of your successes and failures (for there is learning in this also). Learning is best accomplished by the sharing of information both by beginners and the knowledgeable. Each can help the other, through questions, answers and discussion. Share your experiences with other members either by social gatherings, meeting presentations or by submitting your thoughts by article via the **EVENT HORIZON**.

I have been involved in astronomy for five years now and have gained a great deal of insight from not knowing that the planets could be seen with the naked eye, to learning the constellations, to Jovian Mutual Events, using and understanding telescopes, observing tips, etc., etc.

A FAMILY'S PERSPECTIVE

This is my first article submission to the **EVENT HORIZON** and this time around I would like to introduce my three children for the first time as members. Sarah Catherine, 10, Danny, 9, and my little guy Jimmy, 5. When I told them they were full-fledged members I had to endure this long horrendous shout of glee in tri-sound (almost like quad, only worse). They have had some exposure to astronomy through myself and some of my observing friends, but this will be a new venture for them.

When I asked them what they expected to get out of their membership, they didn't quite know what membership was. Hence a discussion. When all was said, I asked them again and these are the things that mattered to them the most. I tried very hard not to give them answers but to think about this themselves and come up with their own needs.

Sarah Catharine wants to have kid's learning meetings, to explore M objects, the sun, using telescopes etc.. She also feels a newsletter for kid's with their articles, drawings and games would be fun. Also, a library of children's astronomy books to make reading about astronomy more interesting and easy to learn. Meeting new friends was on the top of the list. Sarah Catherine is a social butterfly and likes kids of all ages. Membership to Sarah Catherine means that there are a lot of people, not just yourself who are involved and committed to helping their club.

Danny wants to learn how to find clusters like M44, the Beehive, which he once found just panning around near Jupiter through binoculars. He also wants to continue with his solar drawings and would like to start on planets. He would like to have a place to go to. And most of all he wants to make new friends his own age. His other high priority is following people around asking questions and helping hold things for people who build or fix things. The meaning of membership to Danny is supporting the club, helping it stay around for a long time.

Jimmy, my little 5 year old just wants to look through the telescope at Jupiter and the sun. He also enjoyed tremendously the Perseid Meteor Shower, lying on the ground with his pillow and sleeping bag into the wee hours of the morning. He has been out with us for the last two years.

I, Mom want to continue having a good time with the heavens, the nights and days, and observing with friends at a site, anywhere my friends are. Also I hope always to have the enthusiasm to show new people around, show them objects through the telescope and teach through friendly casual conversations, be it one on one, a class, or a group of the curious.

Dad, in our family, is not an astronomer, although he is the coefficient astronomer supporter extraordinaire. All he would like to see is for the rest of us enjoy our hobby and membership to the richest degree of each of our own desires.

As you can see, we each have our own reasons for belonging to this club. Each of you will have your reasons and there are as many reasons and aspirations as there are stars in the sky. With the love for the hobby and the pride we can take in our accomplishments, we already have a starlight, starbright future for the Hamilton Amateur Astronomer's Club.

Ev Butterworth

A man with a watch always knows the time. A man with two watches is never sure.

-Murphy's Laws of

Computers

Algol ~ An Autumn Treat for Observers

Not many celestial events are visible to the naked eye. Sure, the phases of the moon and motions of the planets against the stars can be enjoyed without optical aid, but to really appreciate them, you must observe on more than one night. For those observers whose schedule doesn't afford them the luxury of observing every clear night there is a celestial event that can be enjoyed over the course of just one night

One of the brighter stars in our autumn sky, Algol, (located in the constellation of Perseus), undergoes a marked change in brightness every 3 days. The change is quite noticeable over a span of about 5 hours and takes about 10 hours to complete. By comparing this star to others around it having measured, unchanging brightnesses, even inexperienced observers can note a change.

Algol is representative of a class of variable stars known as eclipsing binaries. It varies in brightness from a 'normal' of magnitude 2.2 to magnitude

Times of Algol's Minimum Magnitude

Date	Time
November 2	6:00 p.m. E.S.T.
November 19	10:53 p.m. E.S.T.
November 22	7:42 p.m. E.S.T.
December 10	12:36 p.m. E.S.T.
December 12	9:25 p.m. E.S.T.
December 15	6:14 p.m. E.S.T.

(Dates and times taken from the Royal Astronomical Society of Canada's Observer's Handbook 1993)

3.4. Algol isn't a single star, but rather 3 (or possibly more) stars in close orbit about one another. Two of the stars in this system orbit each other in our plane of sight so that they periodically eclipse one another. When the dimmer (and incidentally larger) of the pair comes between the brighter and our line of sight, the apparent brightness drops. This occurs about every 3 days. Considering that it takes Mercury about 88 days to orbit the Sun, the two eclipsing stars in the Algol system must be very close to orbit one another in just 3 days!

The name Algol comes from a name given the star by the Arabs: "Al Ra's al Ghul", meaning the 'demon's head'. To the Greeks and Romans, the star represented the Medusa head held by Perseus. According to Robert Burnham, ancient astrologers considered Algol to be "the most dangerous and unfortunate star in the heavens". Is it a coincidence that Algol is conveniently located for observing in the evening sky around the time of Halloween?!

I have listed below the dates and times when Algol will be at its dimmest (magnitude 3.4) and convenient for evening viewing. Observations taken every hour for a few hours before or after these times will clearly show the changing brightness of this "demon star".

Use the chart on the next page to locate Algol in the constellation Perseus.

To estimate the brightness of Algol, use the comparison stars shown on the chart on the next page. Numbers indicate the magnitude of comparison stars.

Ann Tekatch

Public Education

Want to spend a quiet night under the stars in a park? Well then, come to the Dundas Conservation Area's Trail Centre located off Governors Road, Highway 99, on Saturday November 20. We hope to show the wonders of the night sky to all who attend.

The park is ideal for "live" astronomy education. A building housing washrooms and a concession stand, is surrounded by a large open field. The lighting in the building hardly disrupts those outside. There is plenty of parking, which is conveniently separated from the field by trees.

So, if you are interested, bring yourselves, bring a friend, bring your knowledge and enthusiasm, and, if you have one, bring telescope. We will start at 7:00, and will close around midnight. The event will be canceled if bad weather should occur.

If your interested in giving us a call me a hand, call Stephen Sheeler, at 528-5385.

Events

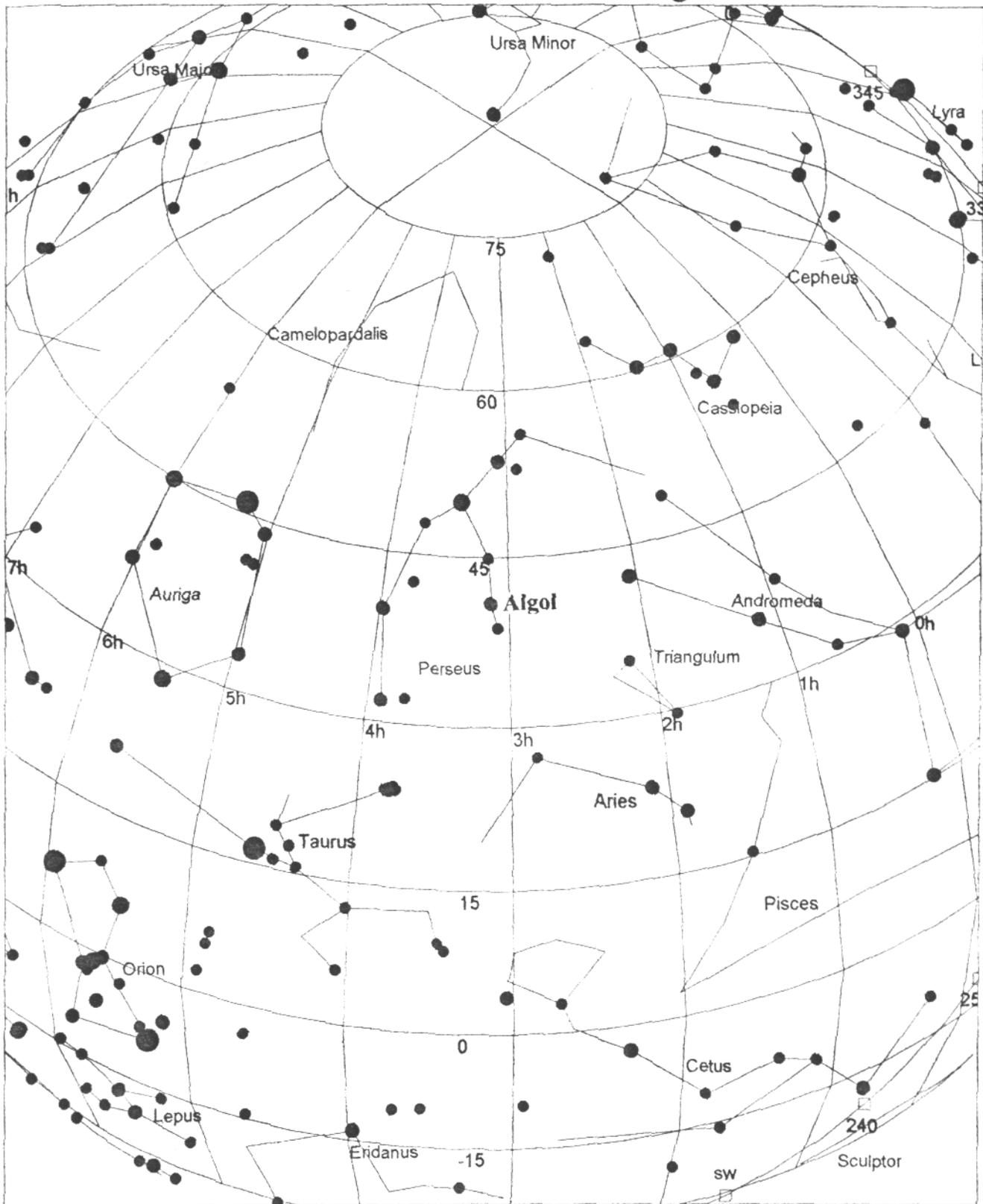
- ◆ November 20- Public Education in Conservation Authority's Trail Centre, Dundas, see previous article for details.
- ◆ November 28 - 29 - Total Lunar Eclipse. The umbral eclipse will begin around 11:30 p.m. A Joint Production of Mother Nature and Syzygy.
- ◆ December 2- R.A.S.C. Hamilton Centre meeting. Located in the McMaster Univer-

sity Medical Centre, room 1A4, 8:00 p.m. Open to public.

- ◆ December 10 - Next meeting of the Hamilton Amateur Astronomers. Located in the Burke Science Building, room B117, at 7:30 p.m. The speaker will be Gretchen Harris and she will be speaking about her work on the CFHT studying the globular clusters of other galaxies.
- ◆ January - Cosmology Group Meeting. Date to be announced. If you have a topic for discussion give Bill a call, 575-5433.
- ◆ ?? ?? ?? – Have an idea for a group project, social event or observing outing? If so, then arrange something and next month you'll see your event here. After all, this club is directed by its members.

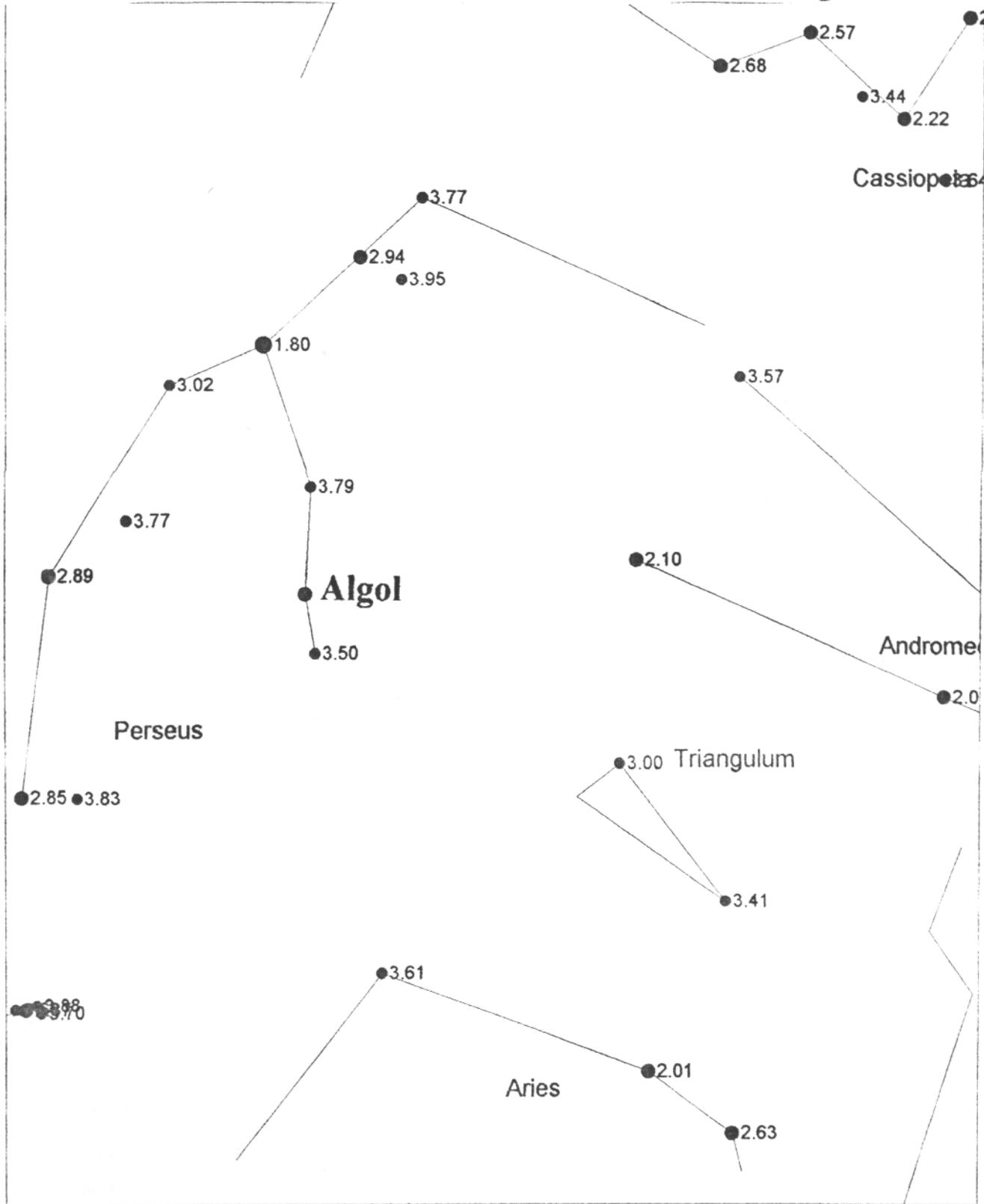


Use this Chart to Locate Algol



Stellar Magnitudes
-1 0 1 2 3 4 5 6

Use this Chart to Estimate the Magnitude of Algol



Stellar Magnitudes

