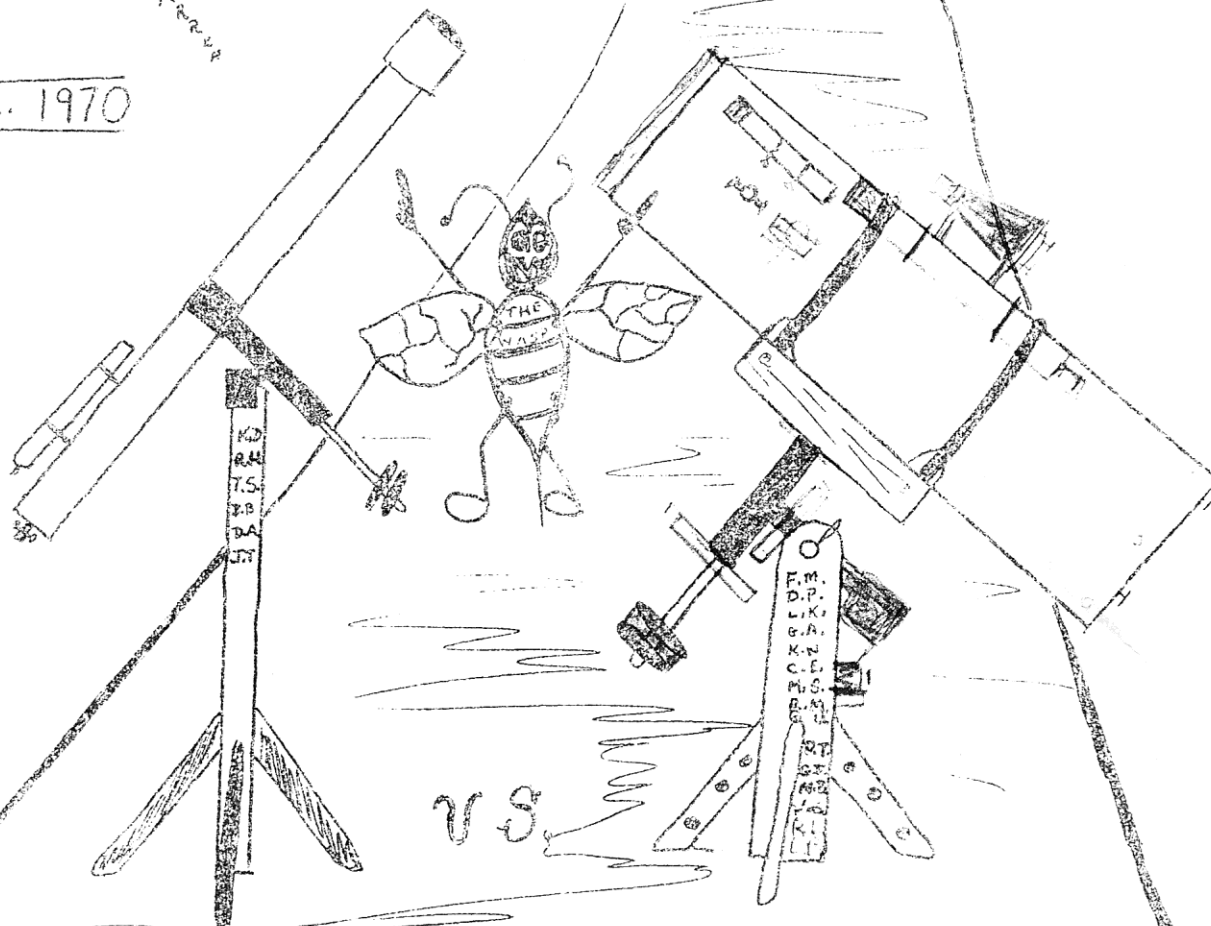


The Wasp

IV. - DEC. 1970



Editor:
Frank
McCullough

November - December - January

MEETING SCHEDULE

First Thursday - MESSIER CLUB - Frank McCullough - 778-6022

Second Thursday - ASTROPHOTOGRAPHY CLUB - Larry Kalinowski - 776-9720

Third Thursday - GENERAL MEETING - Warren Lincoln High School

AURIGA: THE CYGNUS OF THE WINTER SKY

by Tim Skonieczny

If you have ever viewed Cygnus through binoculars or an R.F.T. you probably consider it the finest summer-fall constellation because of its Milky Way richness, ghostly gaseous nebula, and its star rich clusters. Unfortunately, it can only be viewed for a half of the night, making morning observation impossible. If you are a morning observer and still want to view the splendors of Cygnus, you have only two alternatives: 1) give up the idea completely, 2) search for a constellation similar to Cygnus that can be viewed. Most likely, you will chose the latter alternative, but a question immediately arises, "What constellation should I view?" General constellations vaguely appear similar to Cygnus, but only one can truly compare, Auriga.

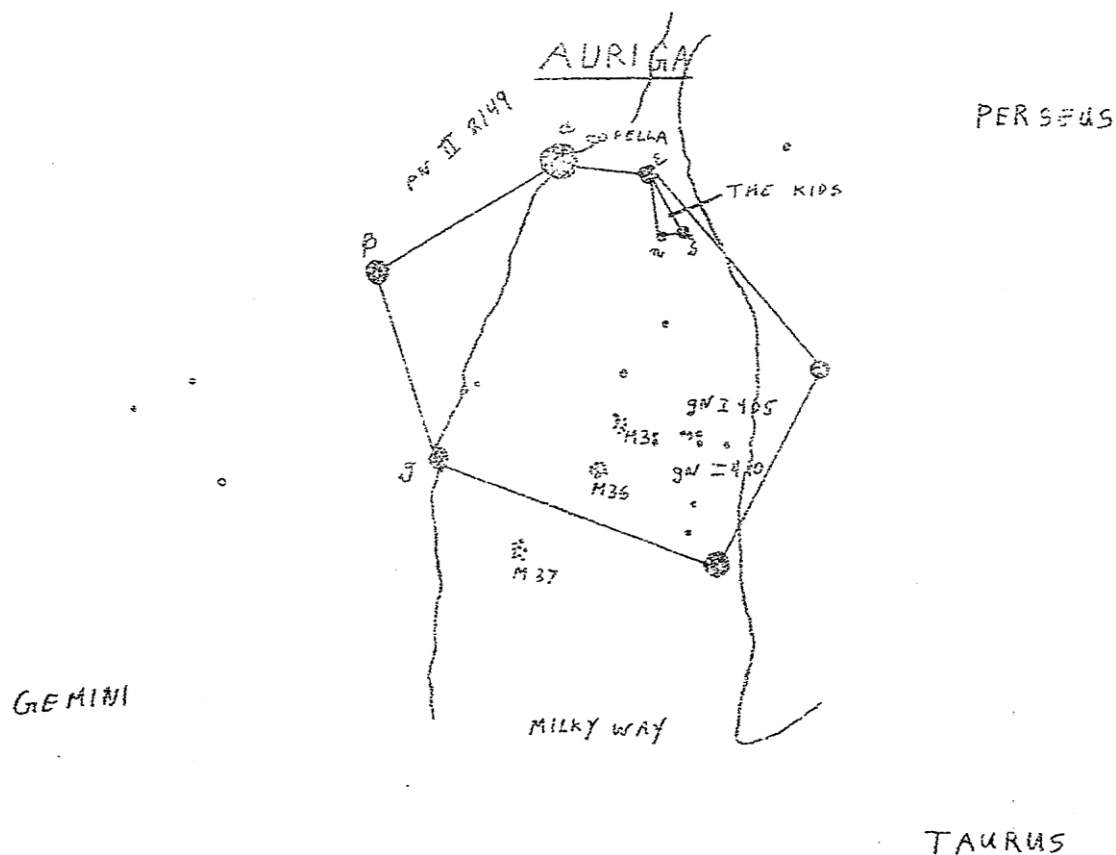
Auriga is a very easy constellation to recognize. Simply look north-east about 2 hours after sundown and you will notice an extremely bright reddish star of the first magnitude, Capella. This star, the sixth brightest, forms the highest point of Auriga's pentagon.

Although you can only appreciate Auriga's true beauty on a good night away from the city, its three best objects-of-interest can be easily viewed anywhere. They are M 36, M 37, and M 38. These three sixth magnitude star clusters form a straight line, with M 36 in the middle. They are easily located as shown on the map.

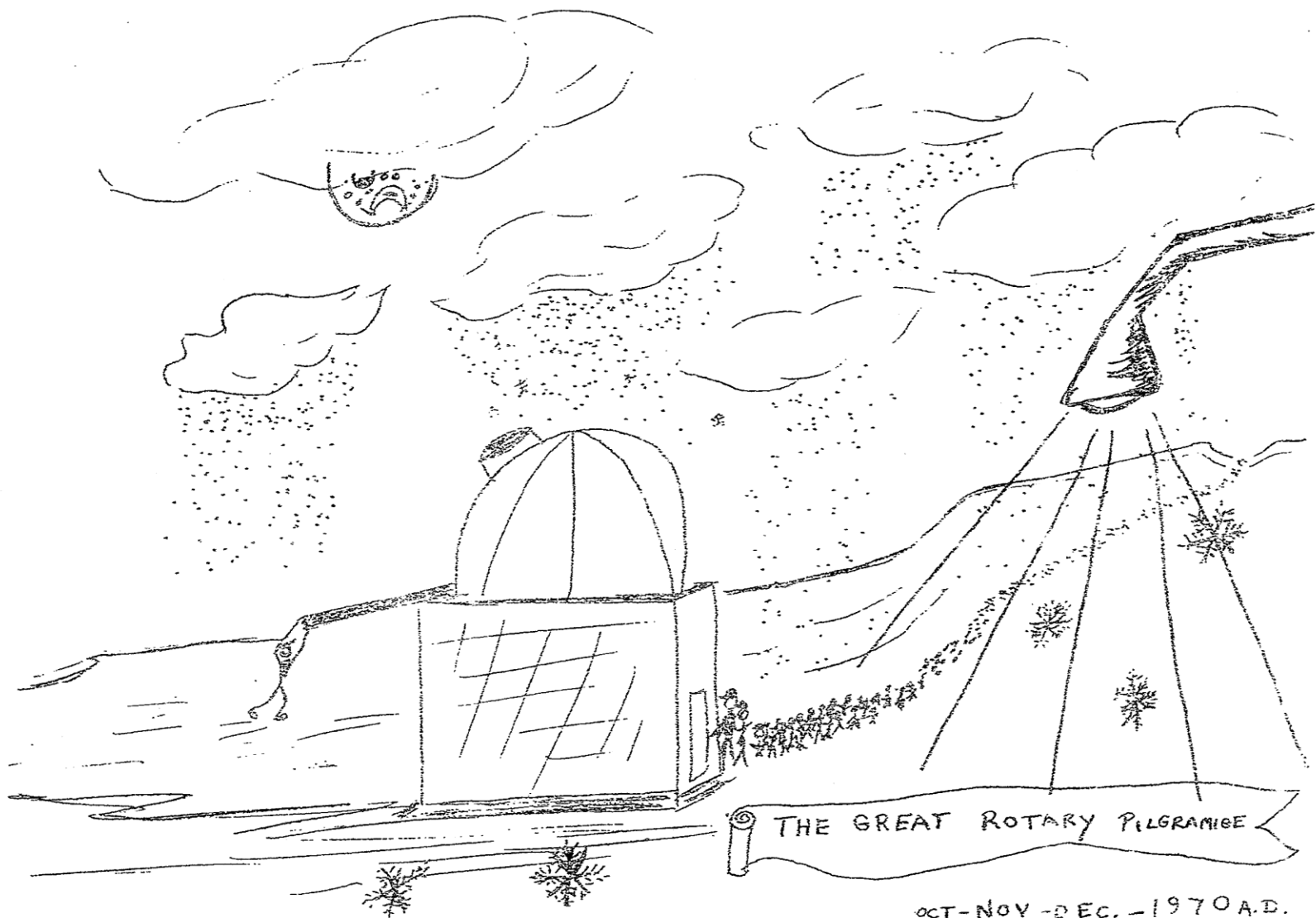
Messier only found three objects in Auriga, but Dreyer found many more. PN II 2149 is a tenth magnitude planetary of small size. GN I 410 is a star cluster embedded in nebulosity. GN I 405 is extremely faint along with GN I 410, but they are beautiful on long exposure photographs.

Auriga abounds in double and variable stars. Capella is one of them, but it is only a spectroscopic double. ϵ Aur is an eclipsing variable of an extremely long period of 27 years. ζ Aur also has a long period of $2 \frac{2}{3}$ years.

A small asterism appears in Auriga, commonly called The Kids. It is composed of ϵ , ζ , and η Aur and is by far not a spectacular asterism such as the Pleiades or the belt of Orion.



* Taken from Hallwag Star Atlas



CAMP ROTARY

NEWS

TELESCOPES - PART I

by T.D.S.

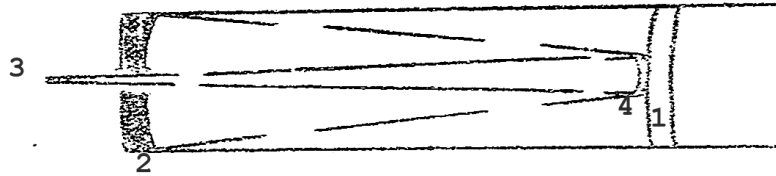
The refracting and reflecting telescopes are undoubtedly the two best telescopes for the amateur astronomer, both to build or to buy. Nevertheless, they are not the only telescopes available. Slight variations in either of the two types of basic telescopes are really not changes in the optical principal, so cannot be considered extremely different from their prototypes. We now come to the first major alteration in telescope design, the catadioptric telescope.

A catadioptric telescope consists of both a lens and a mirror, retaining the best characteristics from both. Again there are more variations, but the system I am going to basically explain is the Maksutov. This is a type of telescope for those who possess large expense accounts or are very gifted in telescope making. Essentially, it consists of:

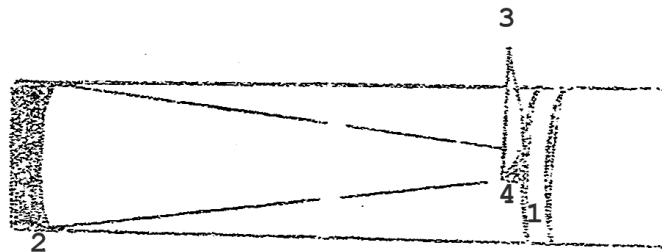
- 1) a spherical correcting lens with its convex side towards the interior of the telescope and the concave side towards the center
- 2) a spherical primary mirror
- 3) a secondary mirror which is variable

The telescope can be used in two ways: either as a Newtonian with a flat diagonal mirror sending the focal point to the eyepiece at the top of the telescope, or as a Cassegrainean with a convex hyperbola secondary mirror which increases the focal length of the telescope as it sends the focal point to the eyepiece In the back of the mirror.

A)



B)



The Maksutov telescope has many advantages over either the reflector or the refractor. It can have a tube only 18" long and yet have a 100" focal length. A mounting is not a difficult problem because of its compactness, and its optical parts are very sophisticated and unique.

For observing though, it is the ultimate telescope. It has a flat field and is free from coma and astigmatism. Since it is a closed optical system, there are no thermal effects. High magnification without confusing lens combinations is possible because of a long focal length it is capable of.

For those who wish to look further into the Maksutov telescope, Sky and Telescope publishes a booklet on making a Maksutov telescope. The Questar Corporation produces a truly fine Maksutov telescope, probably the best, although there are several other firms that do so also.

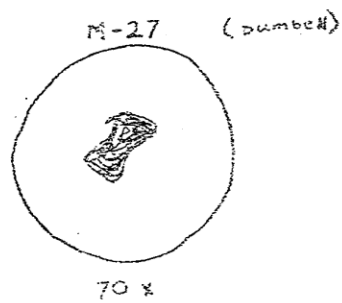
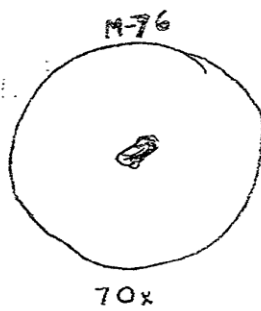
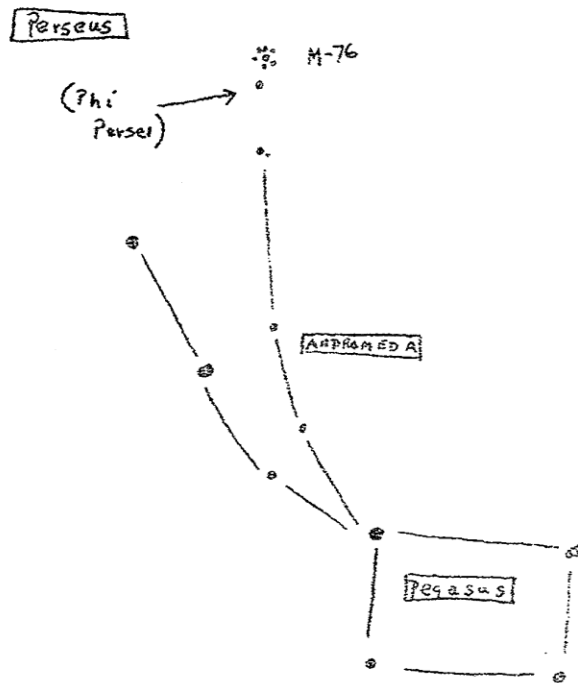
OBSERVATIONAL ASTRONOMY

On the morning of August 4th, 1970 at 2:30 a.m., I searched for M-76, a planetary nebula in Perseus. The sky was quite dark and the air was chilly. The temperature was around 55°. My observing site was located just off 13 Mile Road between Groesbeck Highway and Gratiot Avenue.

It is somewhat unbelievable, but the Milky Way on a good, clear night at 13 Mile Road is visible (as if you looked from 9, 10, or 11 Mile Roads, you're lucky if you can see the 1st magnitude stars). With this kind of a sky condition, it supported my eagerness to find this faint planetary which is listed as 12th magnitude. Now, don't let this magnitude scare you! I found it quite easily with a 6" reflector at 70x, and used 150x on it, yet it really didn't help matters any. It is supposed to look like a miniature dumbbell, which it did at times, but the shape seemed to appear, disappear, and then reappear. I could not visually hold the shape longer than 2 or 3 seconds.

It is well worth the try and a very easy object to locate. Its coordinates are R.A. 1 hour 39 min., Dec. 51° 19'. Look for the 4th magnitude star Phi Persei and look 1° north.

By: Frank McCullough

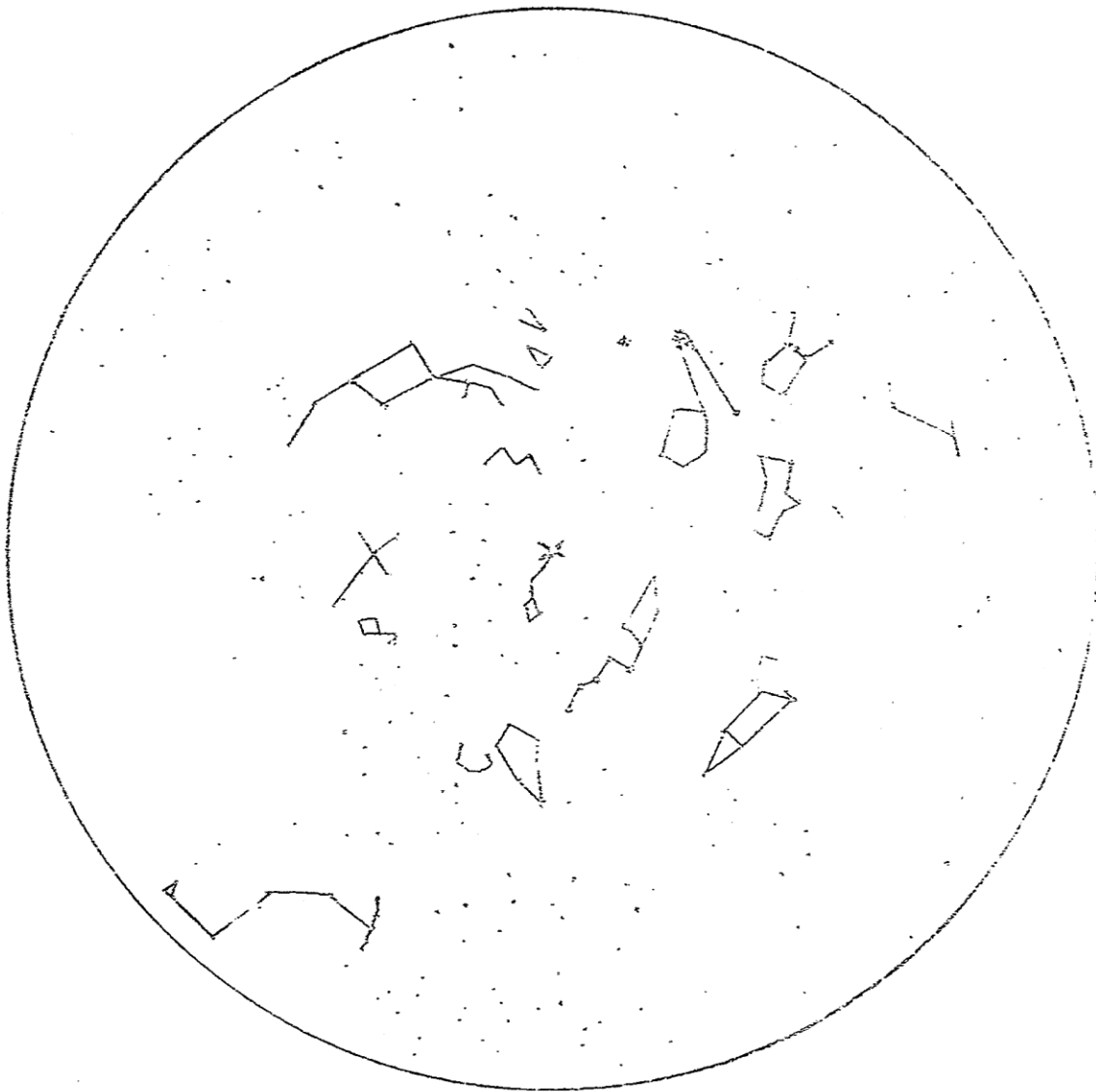


6" Reflector

(Comparison of the two so called look alikes: in size at 70x.)

The
end

METEOR WATCH - NOVEMBER THROUGH FEBRUARY



Use the chart above to plot any meteors you sight. Draw a line on the chart showing how the meteor traveled across the sky, its approximate magnitude, and date. Use the W.A.S. Star Chart for aid in locating positions on this map. The results will be placed on a large star chart for W.A.S. viewing. I strongly urge you to record your observations of meteors in order to make the official meteor map more complete.

TDS