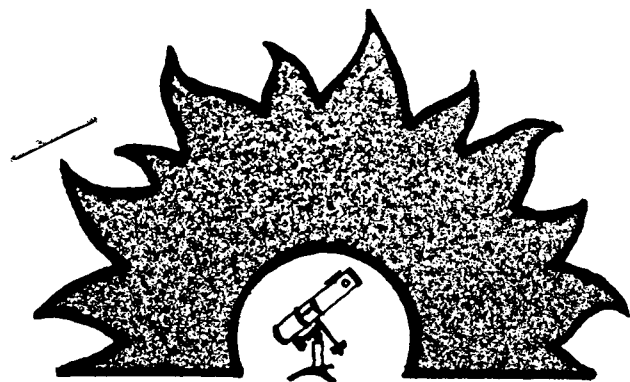




PASTIMES

PHOENIX ASTRONOMICAL SOCIETY -- FOUNDED 1948

Phoenix Astronomical Society Board 1987-1988

President	Dick Wasson	279-0394
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Director	Herman Andreasen	997-8757
Editor	Keith Parizek	996-1013

If you have any contributions to make to the Pastimes newsletter, send it to the editor before the end of the first week of the month. All material should be typed and in final format stage for inclusion in the newsletter.

OCTOBER MEETING

October 23 at Room C-103, Phoenix College 8:00 P.M.

Dr. Robert Strom of the Department of Planetary Sciences of the University of Arizona will present an illustrated lecture on the outer planets and their evolution. Dr. Strom will bring some of the fantastic photos taken by our satellites which should make for a memorable evening. Dr. Strom is internationally known and we are honored to have a man of his reputation lecture to our club. Please bring anyone who is interested in seeing some incredible pictures.

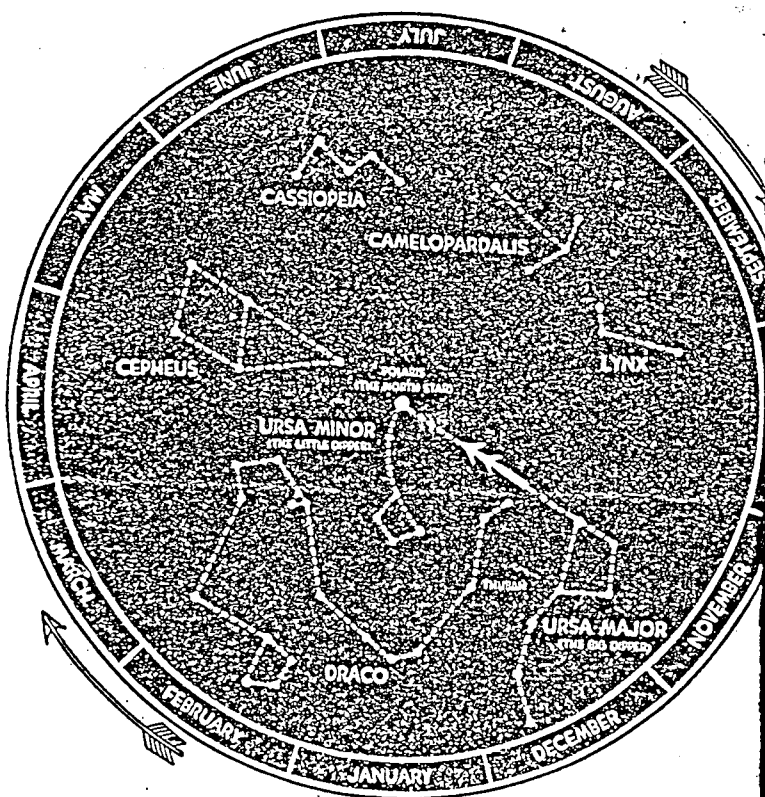
MEMBERSHIP DUES ARE DUE NOW

Please pay your dues to Ann Curtiss immediately so she can pay for the Sky and Telescope subscriptions by November. Otherwise your magazine will be delayed.

*** The Isolated Stars ***

Stars, to the human eye, appear to crowd the clear night skies, but they are actually separated by enormous distances. In fact, only about 1 part in 100 million of the volume of space is filled with stars. If our Sun were represented by a basketball in New York City, then on the same scale the solar system would have a diameter of not quite 2 miles, and the next star would be a basketball about 5,000 miles away in Honolulu, Hawaii.

From Jerry Maurer



THE CLOCK IN THE SKY

Read months from bottom of chart starting with January.

Note: Put a piece of paper behind this page and prick the pattern of the star groups into it. Take this out with you at night when you study the stars. Place the pattern, correctly adjusted, over a flashlight so that the light shines through the pin holes. Holding this above you will help you to identify constellations.

A Clock Which Never Needs Winding

There is a huge clock up in the sky which tells the seasons, the months, and the hours of the night. The center of its dial is the North Star (see page 4). The Big Dipper is the marker or hand.

Once every 24 hours it makes a complete circle of the northern sky. But because a day, according to star time, is 23 hours and 56 minutes, our star clock gains four minutes every day. Thus, at the end of a month, it is two hours ahead of regular clocks. For this reason star positions are noticeably changed at the end of each month. Time is told by them in the following manner.

Place your chart in front of you so that the month of the year is directly under the dot marked "North Star." Note that in its regular position the chart shows star positions for January of any year at 8:00 P. M. To find February positions, turn the chart in the direction of the arrow until the center of the segment marked "February" is directly under the North Star. Do the same for March and April. Note how the Big Dipper climbs the eastern horizon in spring, crosses the sky above the North Star in summer, drops in the west in autumn, then crosses beneath the North Star in winter. You can tell the months and the seasons by the position of the Dipper.

If you want to know the positions of the stars for any time of night, turn the chart until you find the right month. This will give the positions for 8:00 P. M. At 10:00 P. M. or two hours later, the stars will have swung around to the position they will occupy at 8:00 P. M. in the next month. Turn the chart to the next month, therefore, and get your reading for 10:00 P. M., to the next for 12:00 P. M., etc.

Now check the positions of stars in the northern sky with your chart. In a few nights you will master the movements of this wonderful star clock and will be able to tell the hour of the night and the month of the year by the stars.

On the pages following, stars in certain charts are numbered to aid in finding the constellations. The numbers are sometimes in sequence, sometimes according to order of brightness.