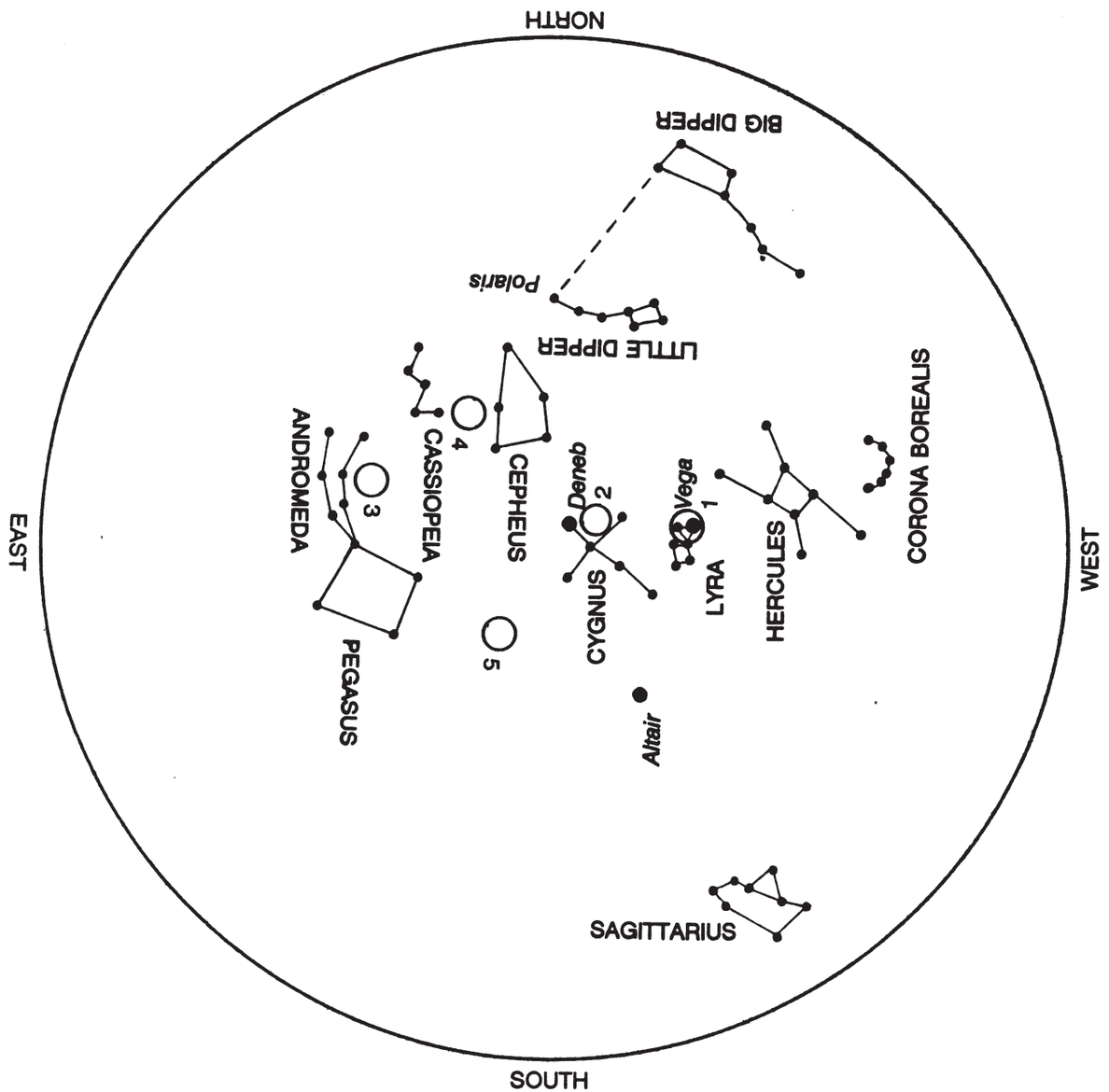
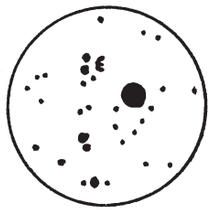
October (Approximately 8:00 p.m.)

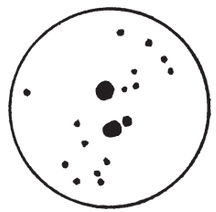


1. ϵ Lyra



Double Double Star in Lyra R.A. $18^h42.7^m$ Dec. 39°37'
With binoculars, a pair of stars can be seen. With a small telescope, each star in this pair becomes a double star, for a total of four stars. The two visible through binoculars are separated by 1.2 trillion miles, or three hundred times the distance between the Sun and Pluto. The pair lies approximately 180 ly from us.

2. Omicron Cygnus

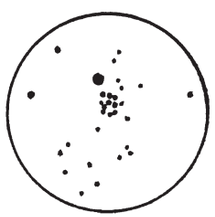


Double Double Star in Cygnus R.A. $20^h13.0^m$ Dec. 47°05'
Other names: Omicron-1 & Omicron-2 Cygni, 31 & 32
The two stars that form this double star system are each a double star but their companion stars are too faint to be seen with binoculars. The stars visible through the binoculars form an optical double. They look close together in the sky, but they are not bound together by gravity. Both stars in this system have a yellow-orange tint to them.

3. Andromeda galaxy

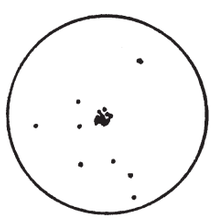
Spiral Galaxy in Andromeda R.A. $00^h40.0^m$ Dec. 41°00'
Other names: M31, NGC 224
The Andromeda galaxy is the most distant object that can be seen with the naked eye. At a distance of 2.2 million ly and a diameter of 180,000 ly, this galaxy appears as a fuzzy cigar with a brighter central region. The Andromeda galaxy contains over 300 billion stars.

4. M52



Open Cluster in Cassiopeia R.A. $23^h22.0^m$ Dec. 61°20'
Other name: NGC 7654
Draw a straight line through the two brightest stars of Cassiopeia (α through β) and keep going. You will run into this nice cluster. M52 is about 3000 ly away from us and about 10-15 ly in diameter. It contains 200 stars.

5. M15



Globular Cluster in Pegasus R.A. $21^h27.6^m$ Dec. 11°57'
Other name: NGC 7078
Although no individual stars can be seen through binoculars, you can observe a fuzzy, circular, cloud-like object. This cluster is approximately 39,000 ly away, 130 ly in diameter and contains about 100,000 stars. M15 has a very dense, compact central core, more so than any other globular cluster.