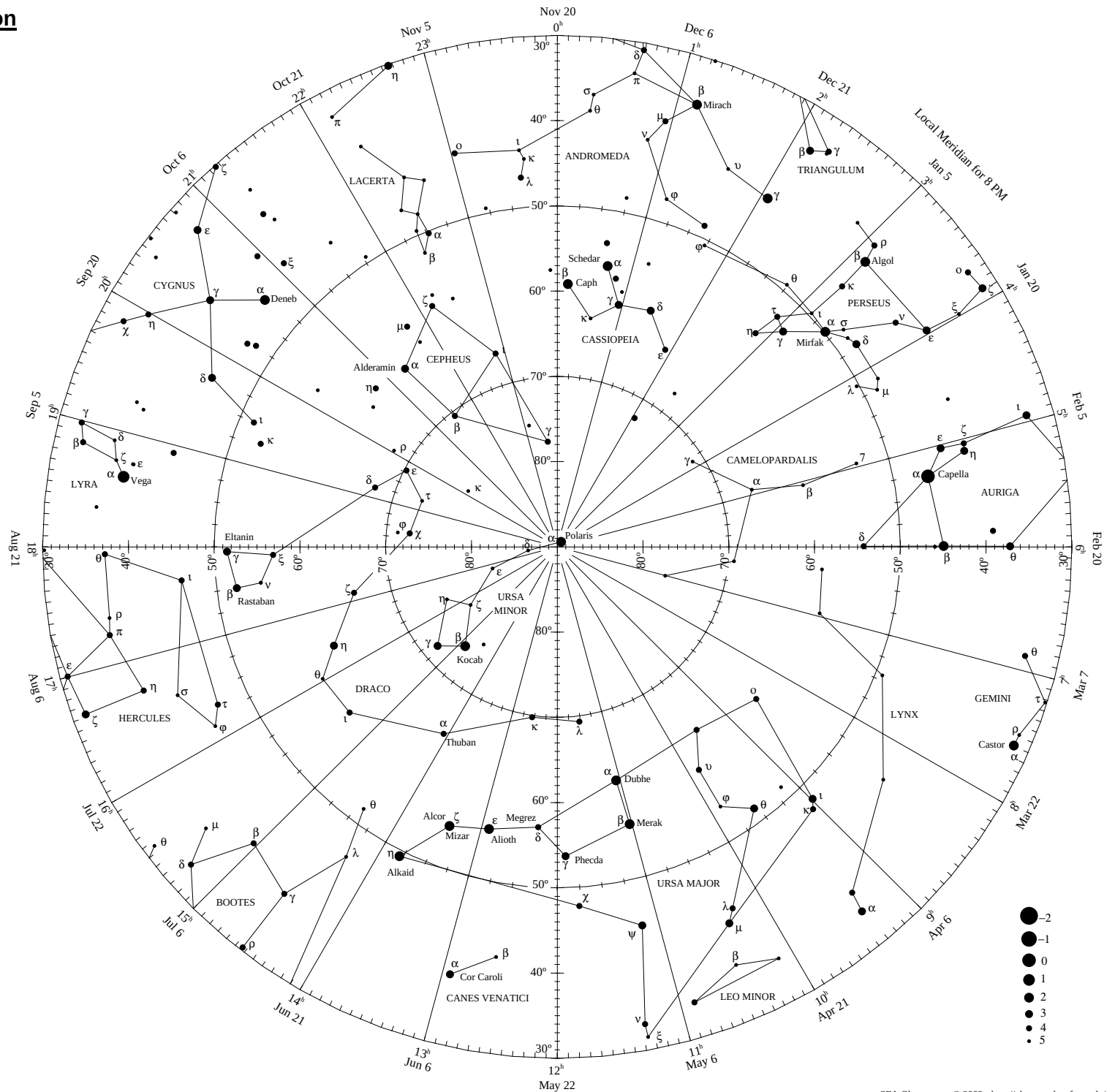
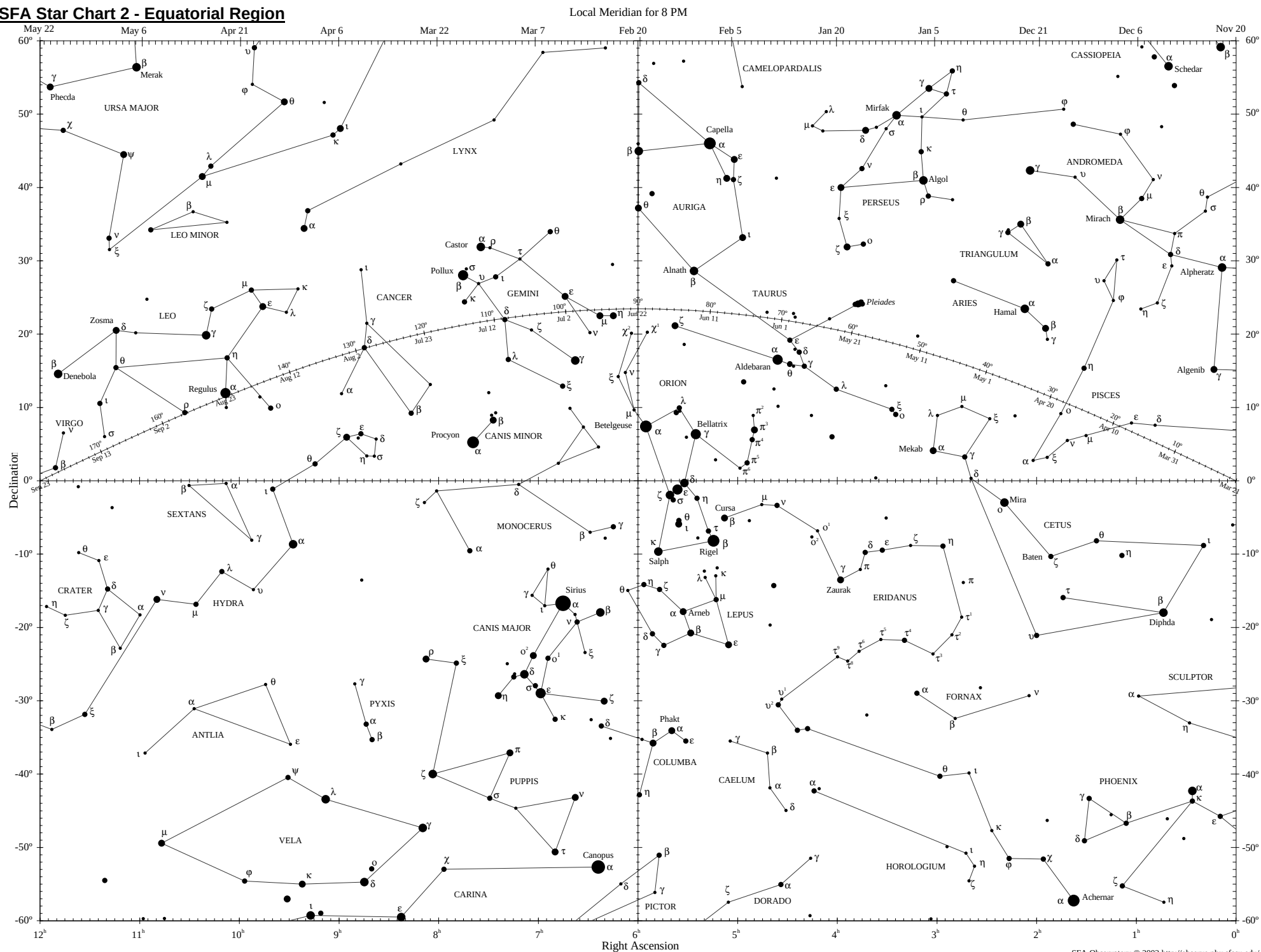


SFA Star Chart 1 - Northern Region

ANDROMEDA - Daughter of Cepheus and Cassiopeia
 ANTLIA - Air Pumpe
 APUS - Bird of Paradise
 AQUILA - Eagle
 AQUARIUS - Water Carrier
 ARA - Altar
 ARIES - Ram
 AURIGA - Charioteer
 BOOTES - Herdsman
 CAELUM - Graving Tool
 CAMELOPARDALIS - Giraffe
 CAPRICORNUS - Sea Goat
 CARINA - Keel of the Ship Argo
 CASSIOPEIA - Ethiopian Queen on a Throne
 CENTAURUS - Half horse and half man
 CEPHEUS - Ethiopian King
 CETUS - Whale
 CHAMAELEON - Chameleon
 CIRCINUS - Compasses
 CANIS MAJOR - Larger Dog
 CANIS MINOR - Smaller Dog
 CANCER - Crab
 COLUMBA - Dove
 COMA BERENICES - Berenice's Hair
 CORONA AUSTRALIS - Southern Crown
 CORONA BOREALIS - Northern Crown
 CRATER - Cup
 CRUX - Cross
 CORVUS - Crow
 CANES VENATICI - Hunting Dogs
 CYGNUS - Swan
 DELPHINUS - Dolphin
 DORADO - Goldfish
 DRACO - Dragon
 EQUULEUS - Little Horse
 ERIDANUS - River
 FORNAX - Furnace
 GEMINI - Twins
 GRUS - Crane
 HERCULES - Hero
 HOROLOGIIUM - Clock
 HYDRA - Sea Serpent
 HYDRUS - Water Snake
 INDUS - Indian

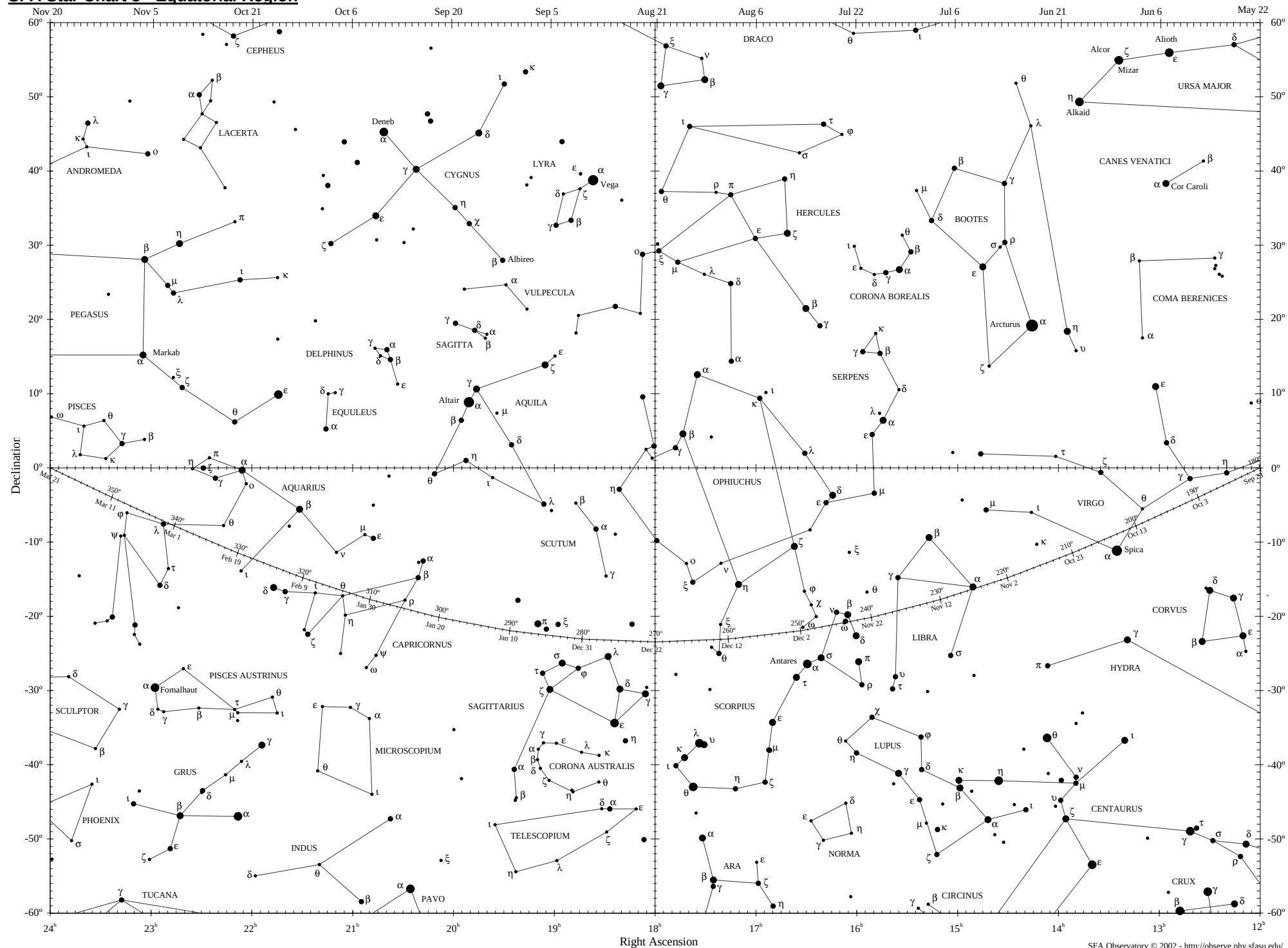


SFA Star Chart 2 - Equatorial Region



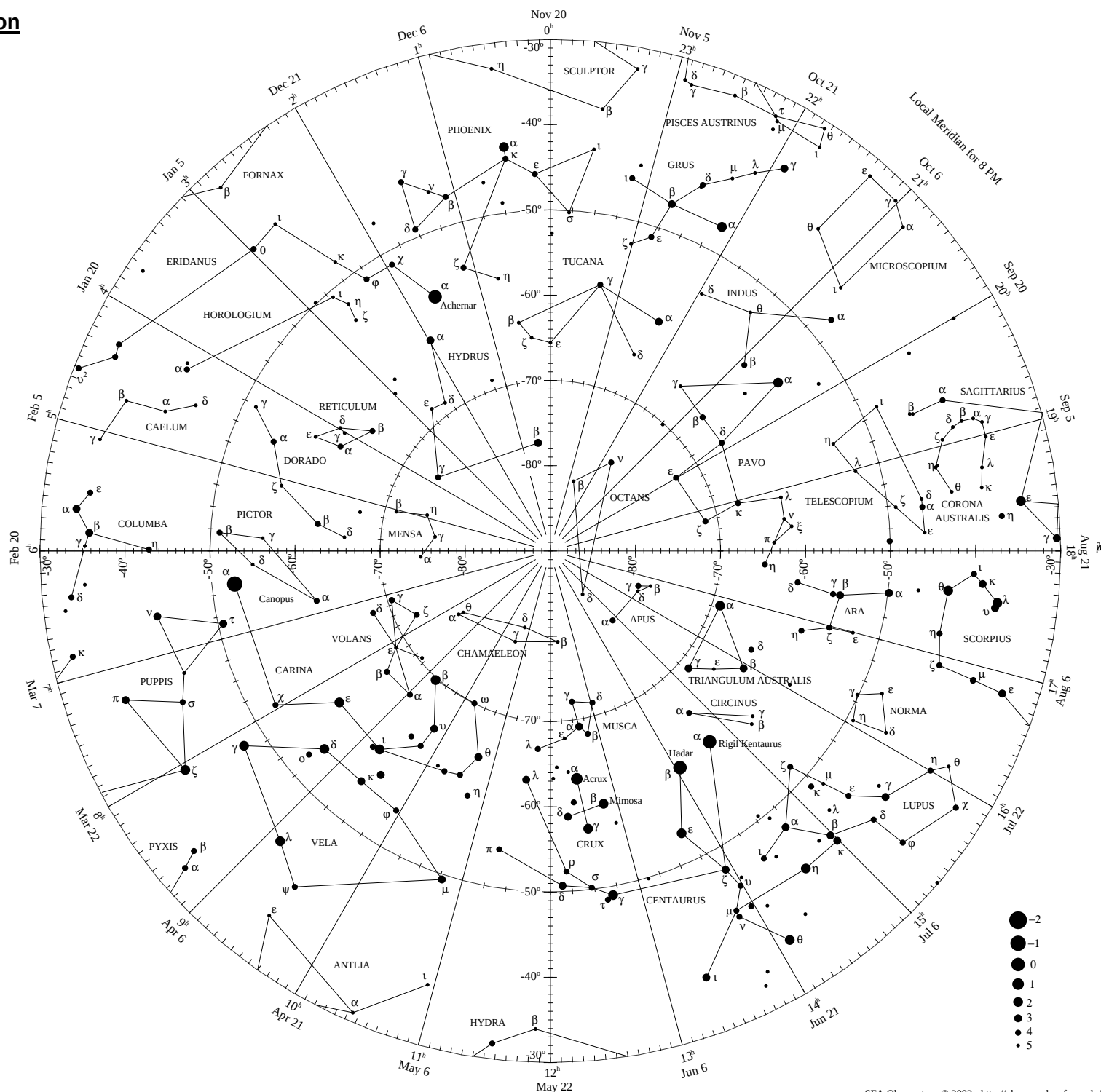
SFA Star Chart 3 - Equatorial Region

Local Meridian for 8 PM



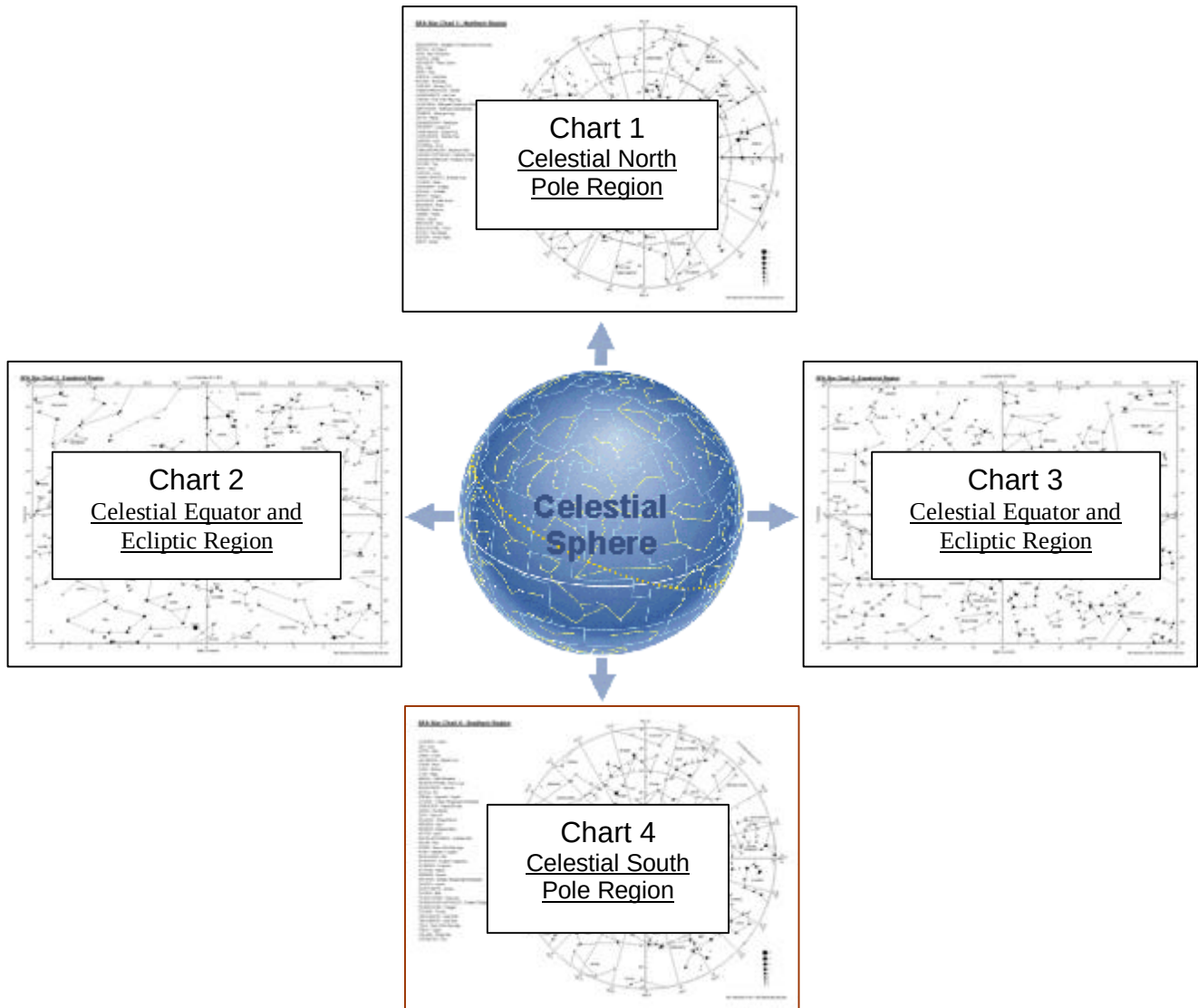
SFA Star Chart 4 - Southern Region

LACERTA - Lizard
 LEO - Lion
 LEPUS - Hare
 LIBRA - Scales
 LEO MINOR - Smaller Lion
 LUPUS - Wolf
 LYNX - Wildcat
 LYRA - Harp
 MENSA - Table Mountain
 MICROSCOPIUM - Microscope
 MONOCERUS - Unicorn
 MUSCA - Fly
 NORMA - Carpenter's Square
 OCTANS - Octant, Navigational Instrument
 OPHIUCHUS - Serpent Holder
 ORION - The Hunter
 PAVO - Peacock
 PEGASUS - Winged Horse
 PERSEUS - Hero
 PHOENIX - Mythical Bird
 PICTOR - Easel
 PISCES AUSTRINUS - Southern Fish
 PISCES - Fish
 PUPPIS - Stern of the Ship Argo
 PYXIS - Mariner's Compass
 RETICULUM - Net
 SCULPTOR - Sculptor's Apparatus
 SCORPIUS - Scorpion
 SCUTUM - Shield
 SERPENS - Serpent
 SEXTANS - Sextant, Navigational Instrument
 SAGITTA - Arrow
 SAGITTARIUS - Archer
 TAURUS - Bull
 TELESCOPIUM - Telescope
 TRIANGULUM AUSTRALIS - Southern Triangle
 TRIANGULUM - Triangle
 TUCANA - Toucan
 URSA MAJOR - Great Bear
 URSA MINOR - Little Bear
 VELA - Sails of the Ship Argo
 VIRGO - Virgin
 VOLANS - Flying Fish
 VULPECULA - Fox



Using the SFA Star Charts

The charts provided cover the entire celestial sphere. You will notice that there are regions where the charts overlap. For example, Perseus can be found on both Chart 1 and Chart 2.



The procedures outlined on the next page are for observers in the northern hemisphere. Chart 4 is not needed for these observers.

Right Ascension and Declination

The coordinates of stars and other objects on the celestial sphere are called right ascension and declination. These coordinates are similar to those used on Earth: longitude and latitude. Right ascension is measured in hours, declination is measured in degrees. You may notice that 24 hours of right ascension corresponds to 360 degrees, or simply that 1 hour of right ascension is 15 degrees.

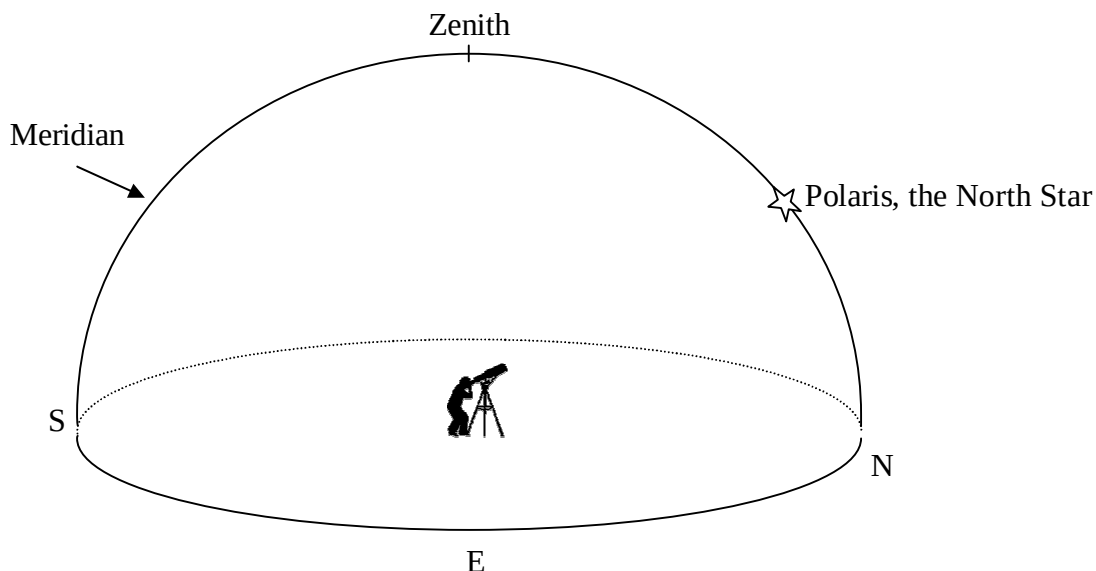
Procedure for using Chart 1:

- (1) Face North.
- (2) Find the meridian in the sky and on the Chart 1 using the date and time.
- (3) Find the field of view on the Chart 1 and compare the stars seen on the chart with those in the sky.

The meridian in the sky is an imaginary curve that passes through the north horizon, the north star, the point directly overhead (zenith), and the south horizon as shown below. Note that Polaris is *not* the brightest star in the sky. You can use Dubhe and Merak of Ursa Major as pointer stars to help you find Polaris.

The meridian on Chart 1 can be located using the date and time. The dates along outer edge of the Chart 1 represent the location of the meridian. If Chart 1 is oriented so that the date appears at the *top*, then a line passing through the date and Polaris is the meridian at 8:00pm local time. For every hour after 8:00pm the meridian moves to the clockwise by one hour of right ascension.

The field of view on the Chart 1 includes roughly all objects above the *north horizon line*. The north horizon line is a line perpendicular to the meridian on Chart 1 and intersects the meridian at a point 32° below Polaris. (Replace 32° with your latitude if you are not observing from the SFA Observatory.)



Procedure for using Charts 2 and 3:

- (1) Face South. Place Charts 2 and 3 side by side.
- (2) Find the meridian in the sky and on Chart 2 or 3 using the date and time.
- (3) Find the field of view on the Charts 2 and 3 and compare the stars seen on the chart with those in the sky.

The meridian on Charts 2 and 3 can be located using the date and time. The dates along the *top* axis of these charts represent the location of the meridian (a vertical line) at 8:00pm local time. For every hour after 8:00pm the meridian moves to the left by one hour of right ascension.

The field of view on these charts includes roughly all objects between a vertical line 6 hours of right ascension to the west (right) of the meridian and a vertical line 6 hours of right ascension to the east (left) of the meridian. These two vertical lines roughly represent the west and east horizon respectively.

The "sine" curve seen when these two charts are placed side by side is known as the *ecliptic* and represents the apparent path of the Sun. The dates along the ecliptic give the location of the Sun on the celestial sphere for the date of interest.