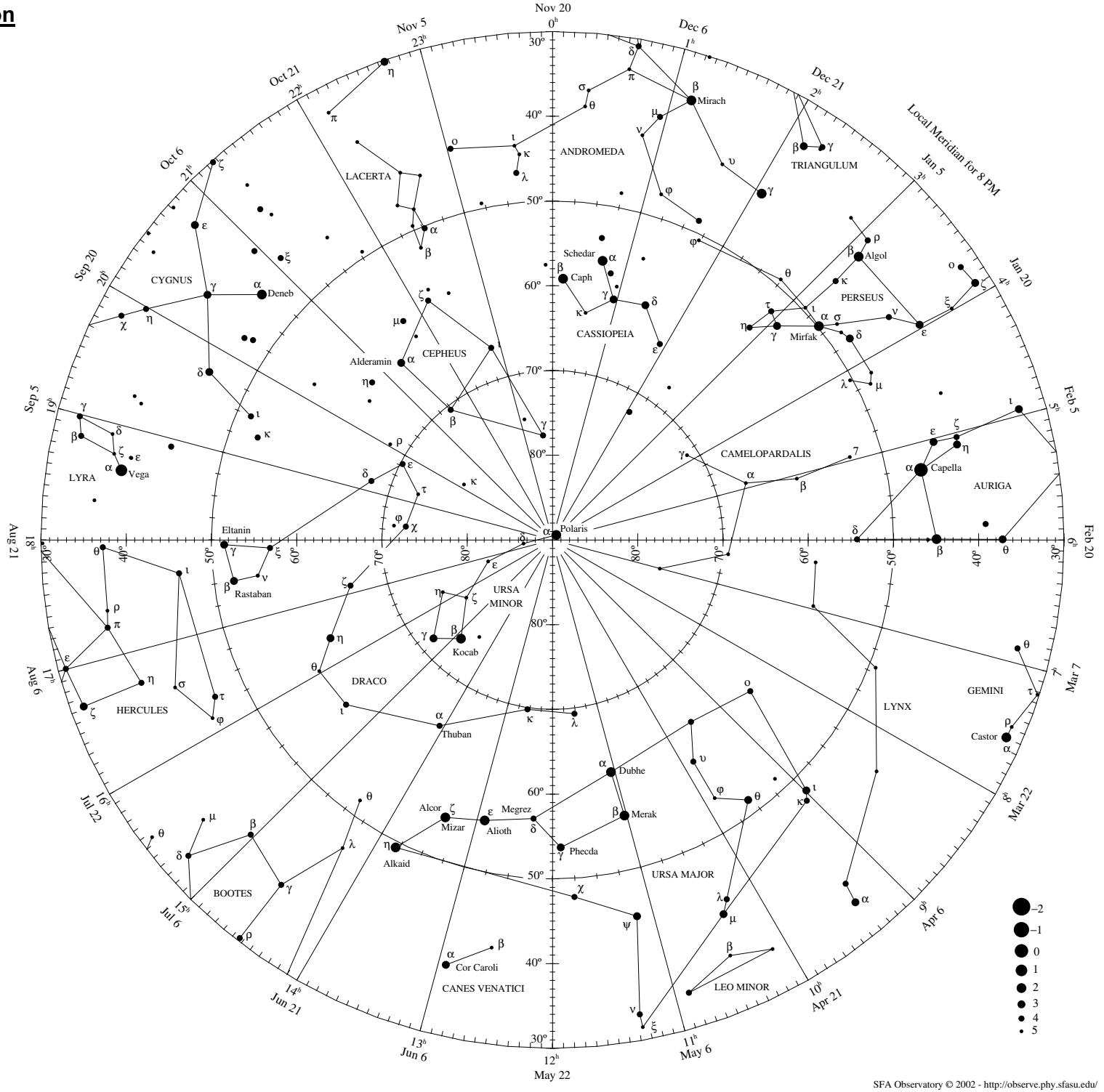
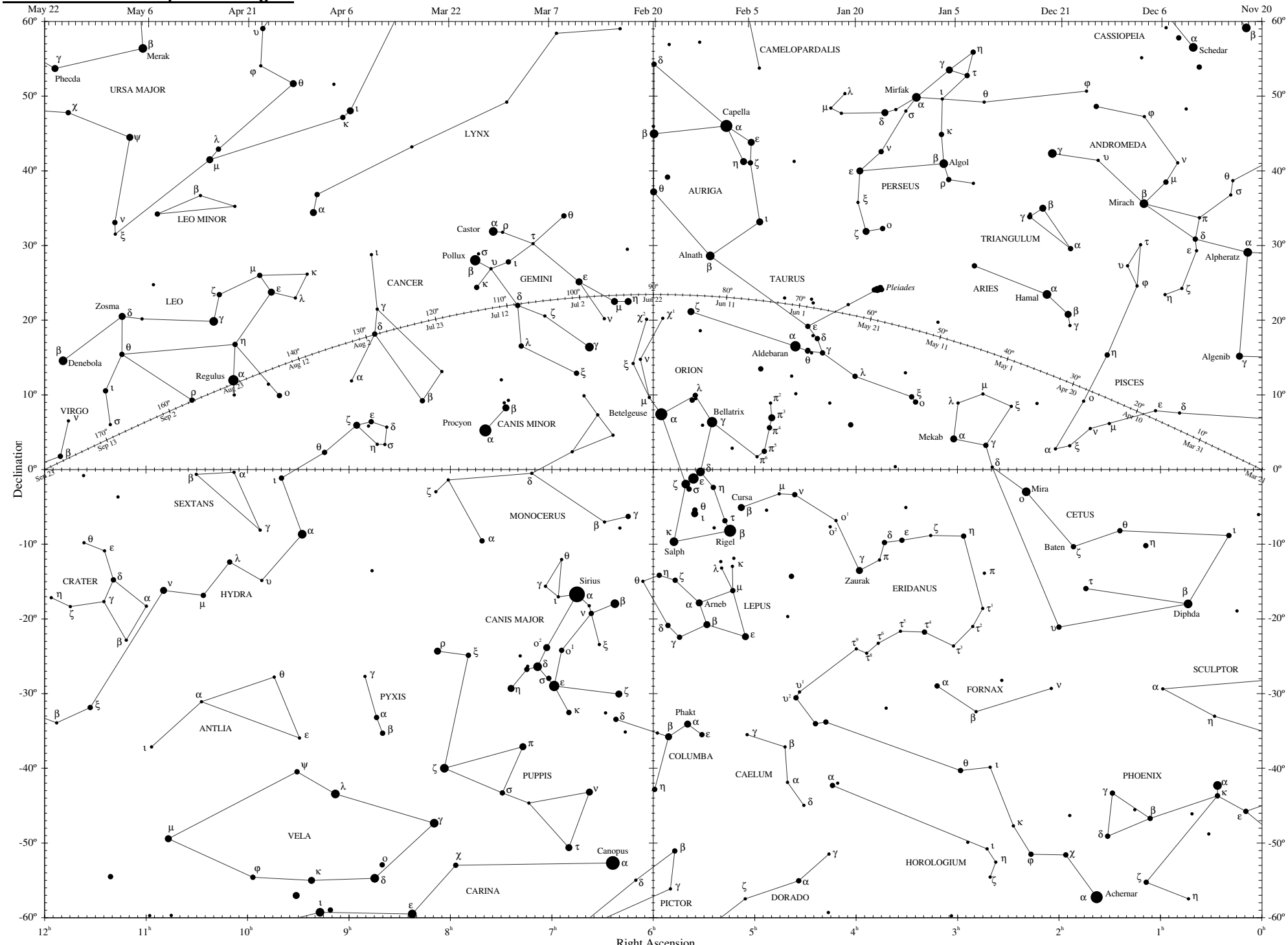
SFA Star Chart 1 - Northern Region

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
HOROLOGIUM - Clock
HYDRA - Sea Serpent
HYDRUS - Water Snake
INDUS - Indian

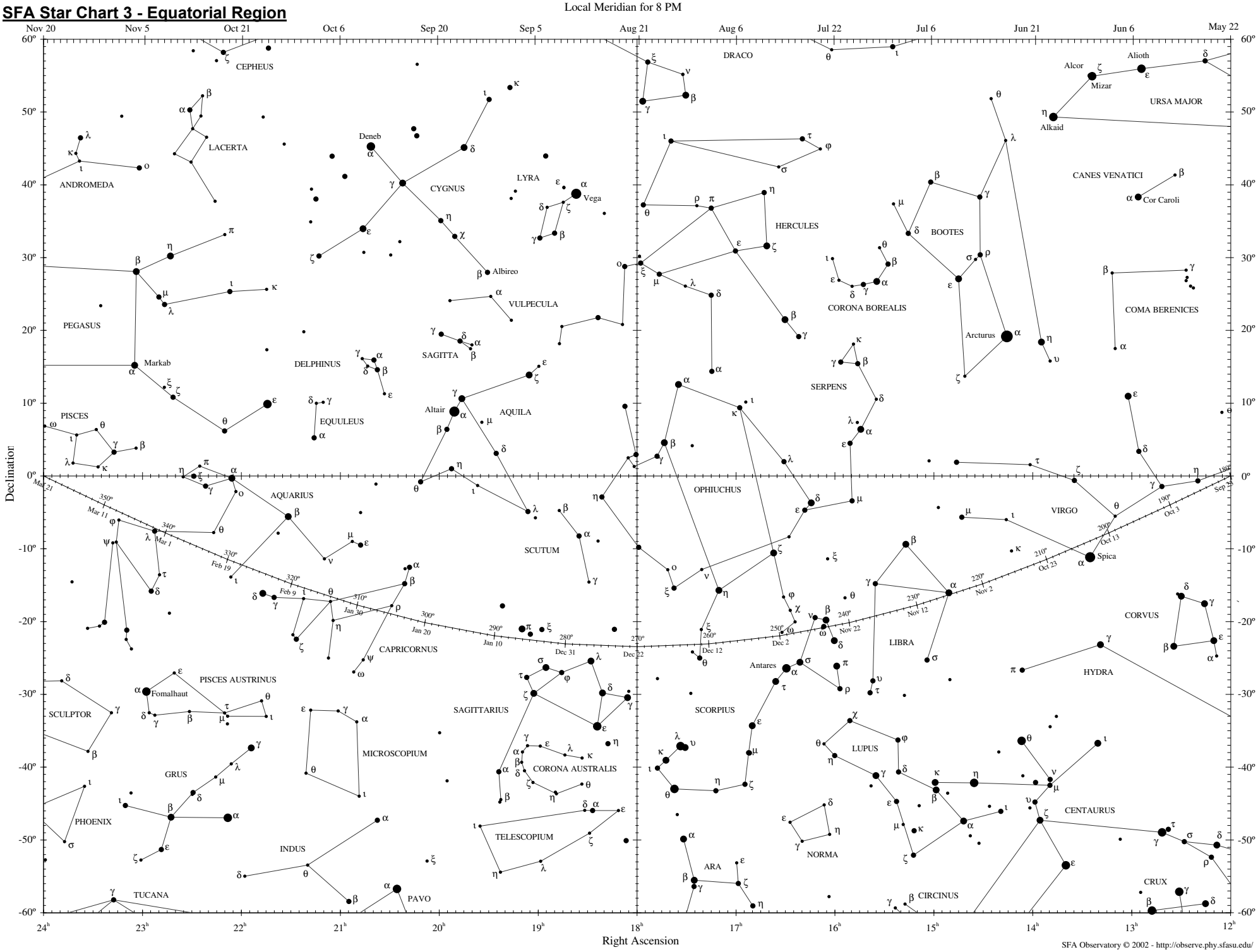


SFA Star Chart 2 - Equatorial Region

Local Meridian for 8 PM

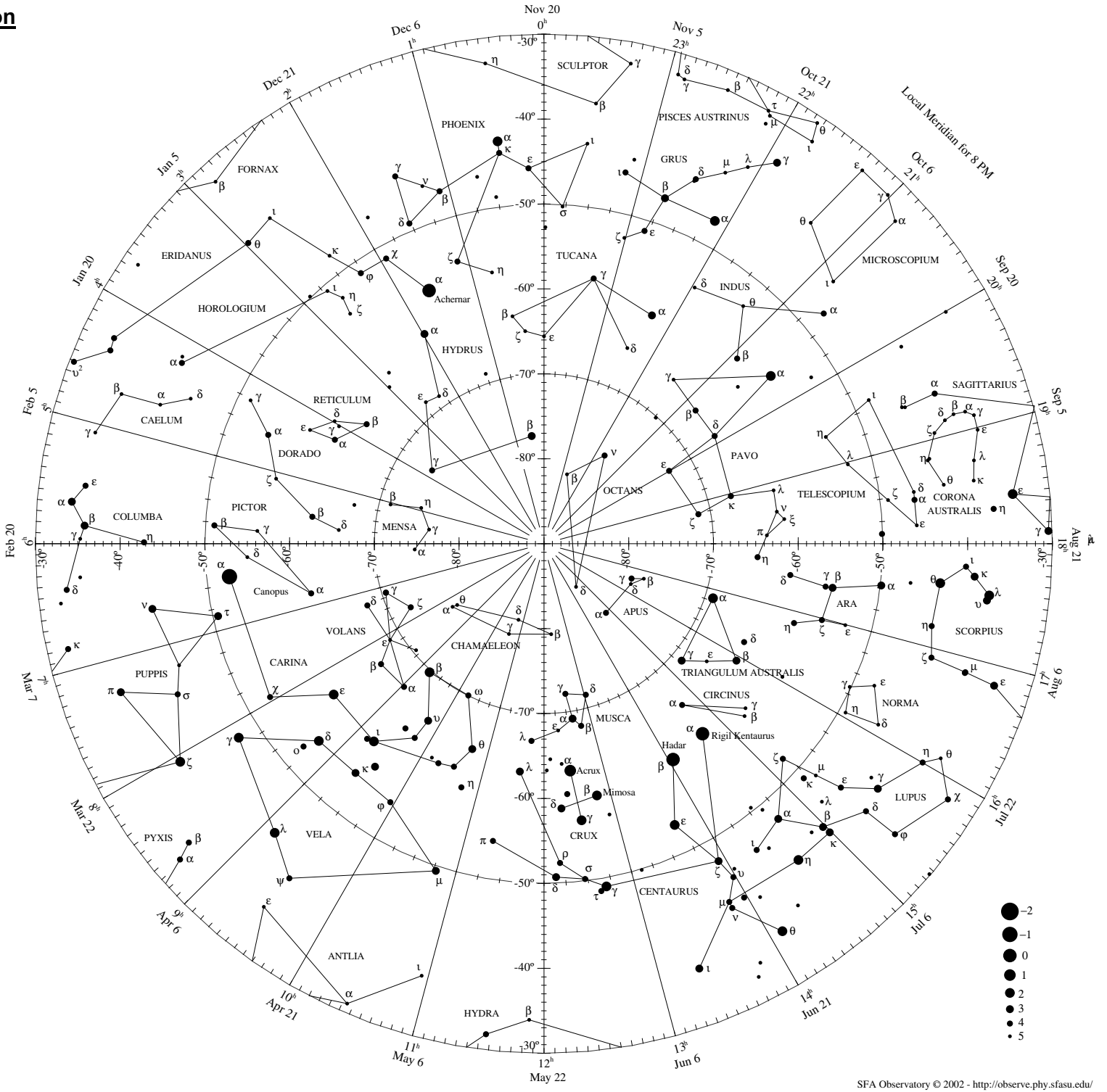


SFA Star Chart 3 - Equatorial Region



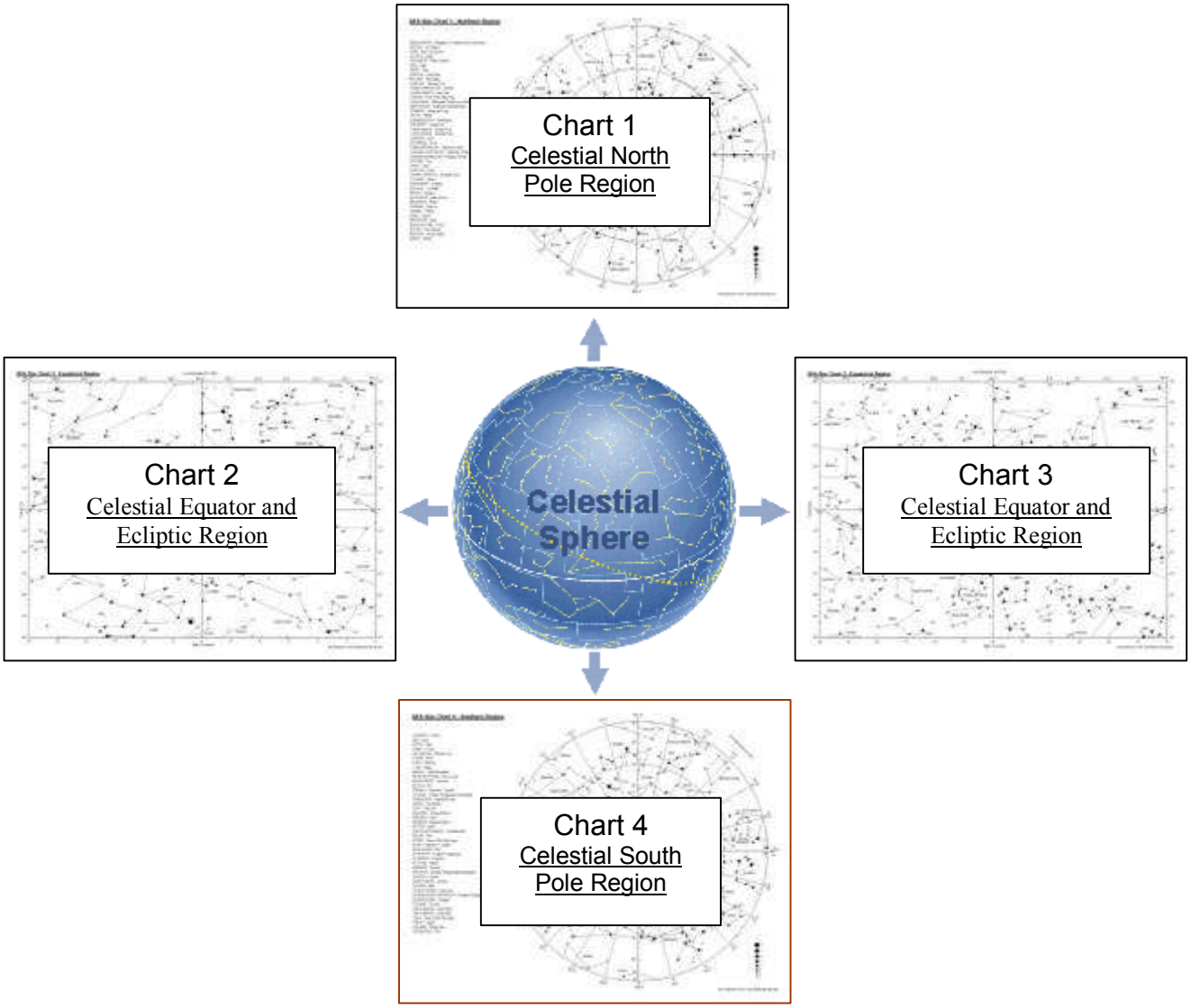
SFA Star Chart 4 - Southern Region

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 were 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.

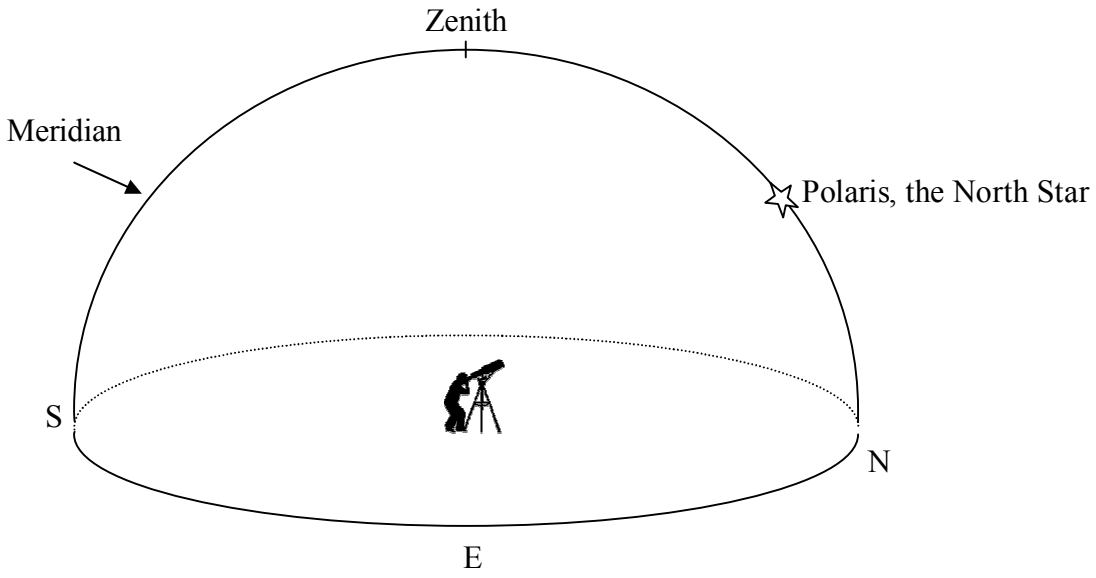
Procedure for using Chart 1:

(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 a 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.