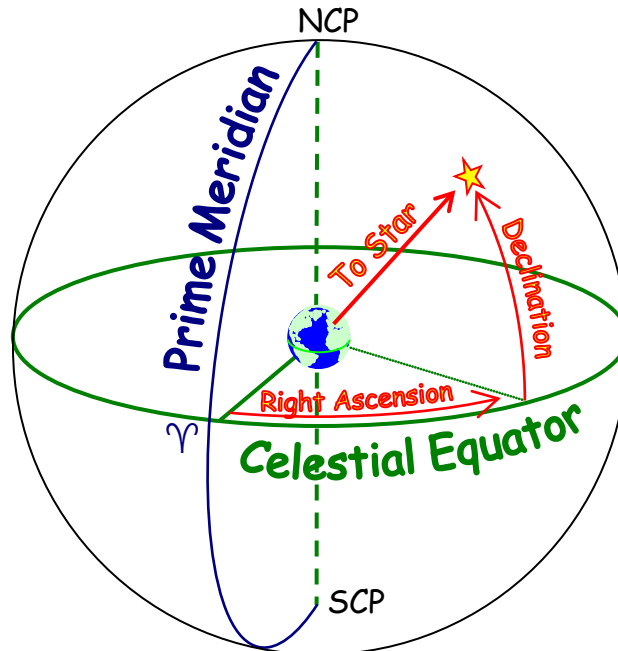# Celestial Coordinates

I. RIGHT ASCENSION AND DECLINATION

A way to locate a point on the sky is to use its right ascension and declination:

DECLINATION (Dec or d): Measures the angle north or south of the celestial equator $\pm$ 0º to 90º

Celestial Latitude ... parallels of declination

DEGREES, ARCMINUTES, ARCSECONDS: 0º 0' 0" to 90º 0' 0"

RIGHT ASCENSION (RA or a): Measures the angle east of the prime meridian from 0h to 24h

Celestial Longitude ... great circles of right ascension

HOURS, MINUTES, SECONDS: 0^h 0^m 0^s to 23^h 59^m 59^s

On your celestial globe
★ identify the **celestial equator** and find the **hours of right ascension** markings
★ identify the **prime meridian** and find the **degrees of declination** markings

[12]Using the RA and Dec markings, identify the stars located at the following coordinates. Use the *Peterson Field Guide* to confirm these and find the Bayer designation.

RA	DEC	STAR NAME	CONSTELLATION	BAYER DESIGNATION
6^h 45^m	– 16º 43'	Sirius	Canis Major	β CMa
18^h 37^m	+ 38º 47'			
5^h 15^m	– 8º 12'			
7^h 39^m	+ 5º 14'			
6^h 24^m	– 52º 41'			

Look up in Appendix 2 (in order of RA)

Phys 102 Astronomy   Name _____

[18]On BOTH charts from the Field Guide, use colored pencils to **highlight and label** the
• lines of 0^h, 6^h, 12^h and 18^h
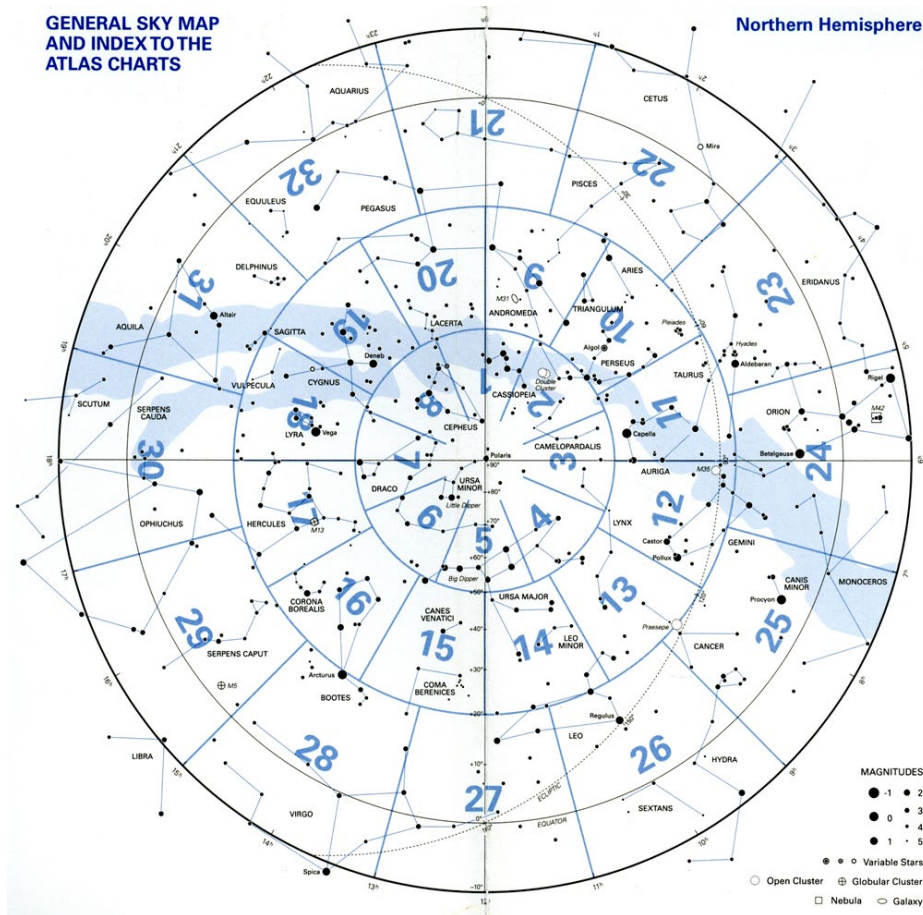• circles of 0°, +20°, +50°, -20°, and -50°.

[10]Also **highlight and label** the stars listed on the flip side of this sheet.

[4]In what constellation is the point 21^h, +20°? (Use the Atlas Chart, look at constellation boundaries!)

(Use your field guide to read the numbers since these are very small!)

GENERAL SKY MAP AND INDEX TO THE ATLAS CHARTS

Northern Hemisphere

Southern Hemisphere

GENERAL SKY MAP AND INDEX TO THE ATLAS CHARTS