Planetarium Test

Note: total points will be scaled up from 20 to 75

PROBLEM 1

1.(Maximum value 4.0 points)

According to the nomenclature of the International Astronomical Union, write in full or abbreviated form the zodiacal constellations that are partially and completely above the horizon line.

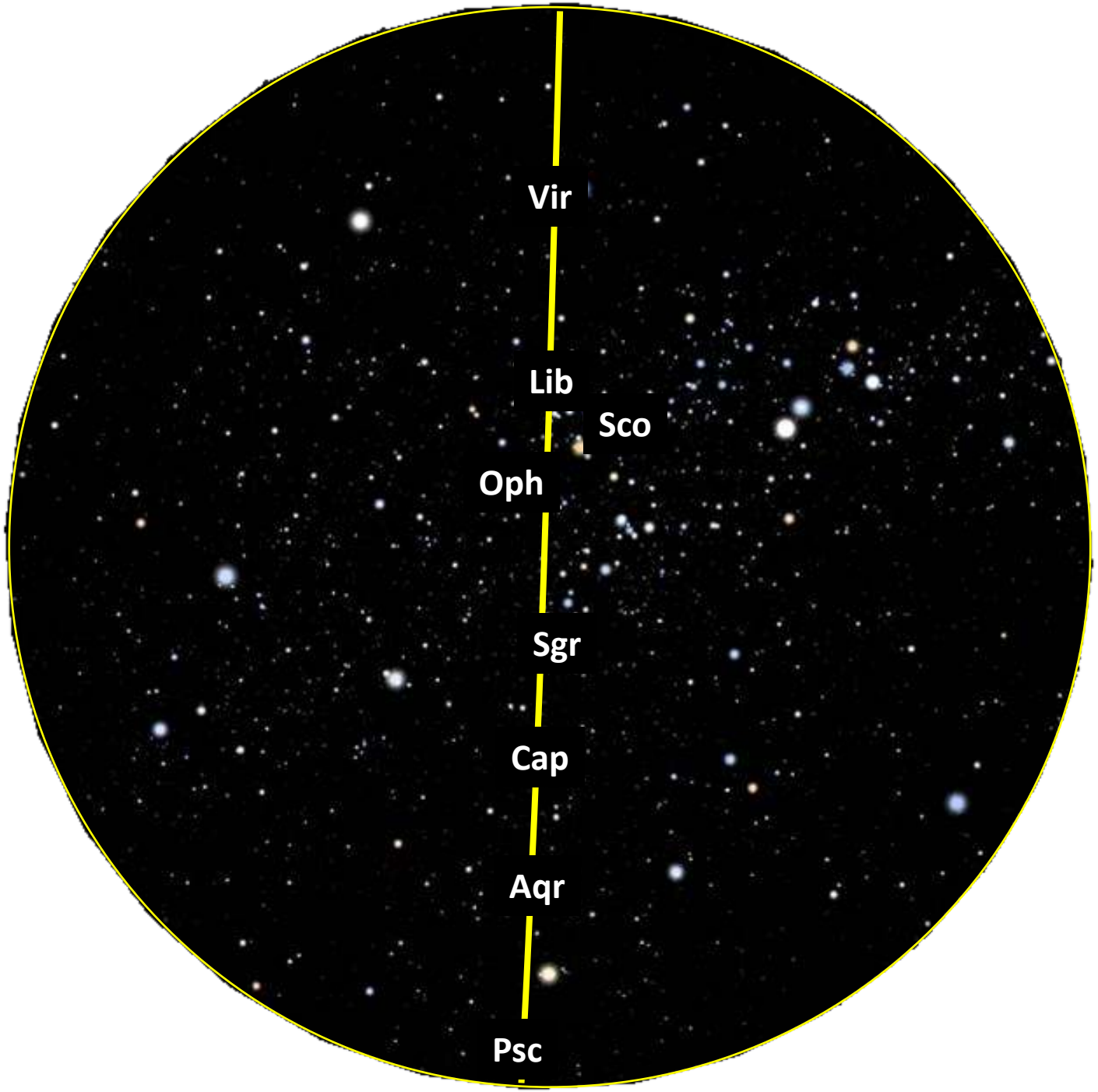
Correct answer value = add 0.5 point each
Error value = remove 0.8 point for each constellation that is mentioned wrongly.



WRITTEN ANSWER IN FULL:	ABREVIATED WRITTEN ANSWER:
Pisces	Psc
Aquarius	Aqr
Capricornus	Cap
Sagittarius	Sgr
Ophiuchus	Oph
Scorpius	Sco
Libra	Lib
Virgo	Vir

Correct answer value = add 0.5 point each

Error value = remove 0.8 point for each constellation that is mentioned wrongly.


Vir
Lib
Sco
Oph
Sgr
Cap
Aqr
Psc

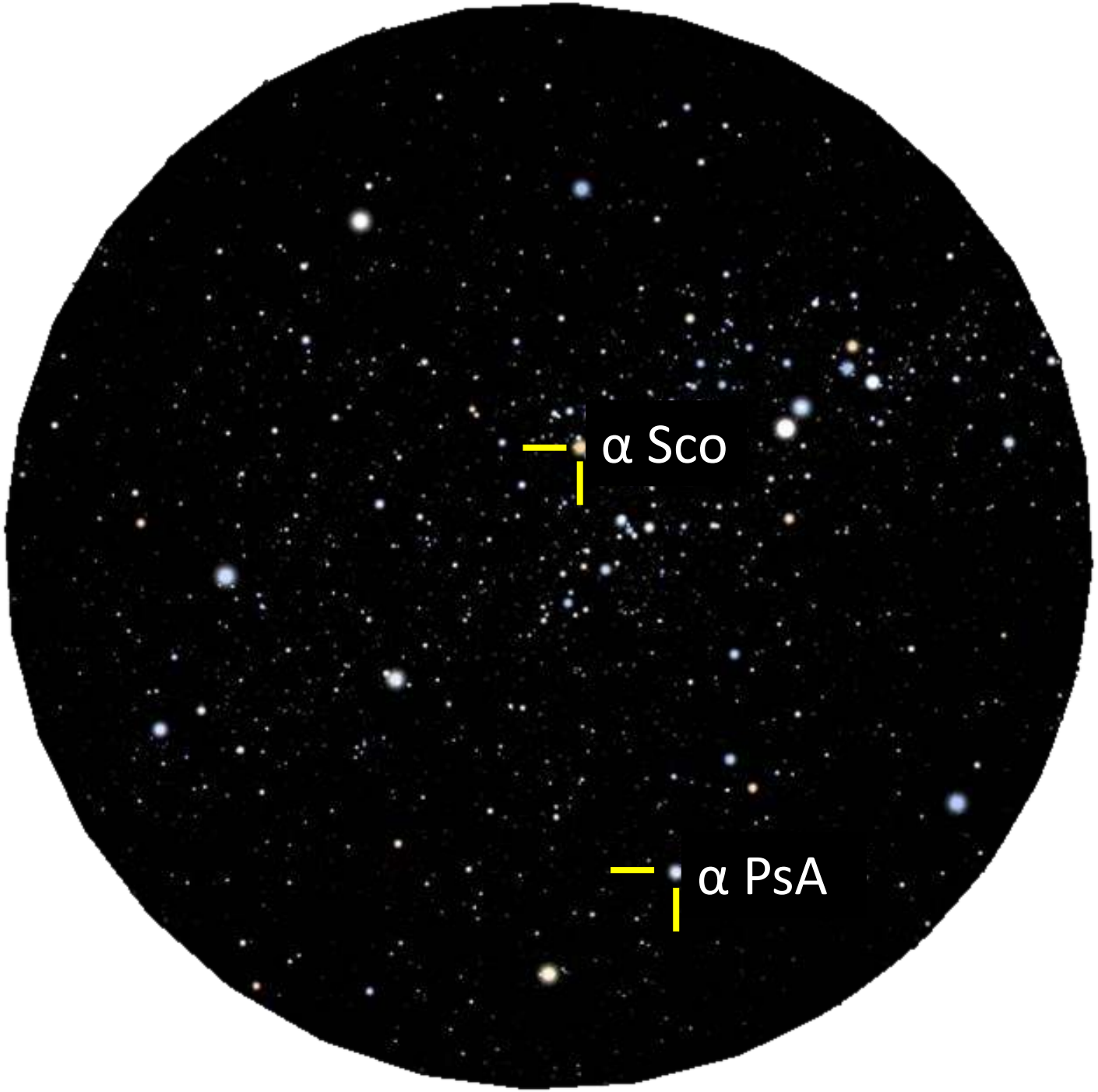
2. (Maximum value 4.0 points)

Employing the Bayer designation, based on the provided coordinates, identify and name the requested stars with magnitudes less than 1.3.

a) Azimuth: 254º23'; Altitude: 68º 22’
Answer: α Sco
Correct value = 2.0 points

b) Azimuth: 113º24’; Altitude: 24º30’
Answer: α Psa
correct value = 2.0 points




α Sco
α PsA

3. (Maximum value 2.0 points)
Observing the projected sky, answer:

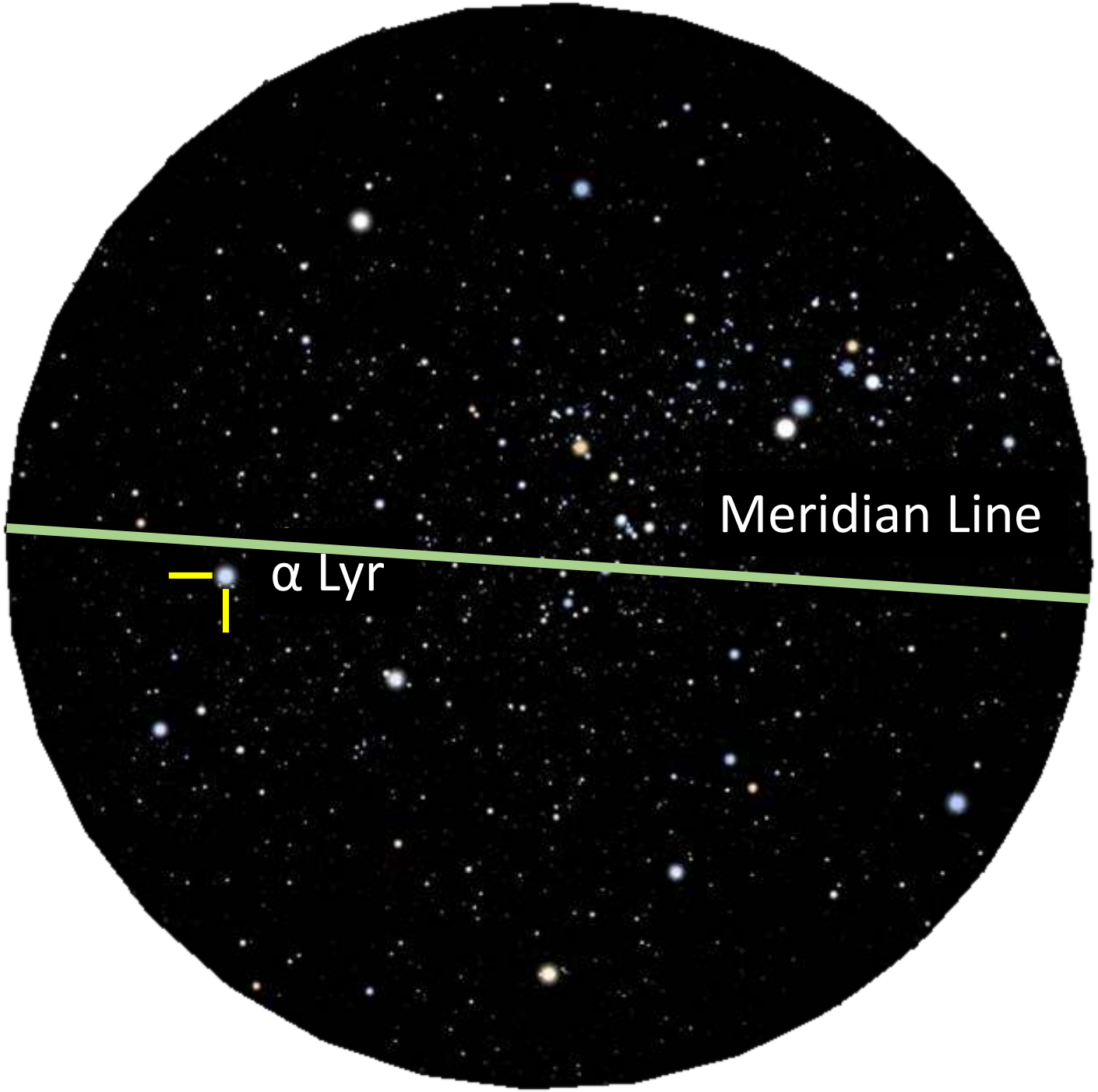
a) There is an alpha star, close to the celestial meridian line and which belongs to the boreal constellation. Using Bayer's designation, what is the name of this star?

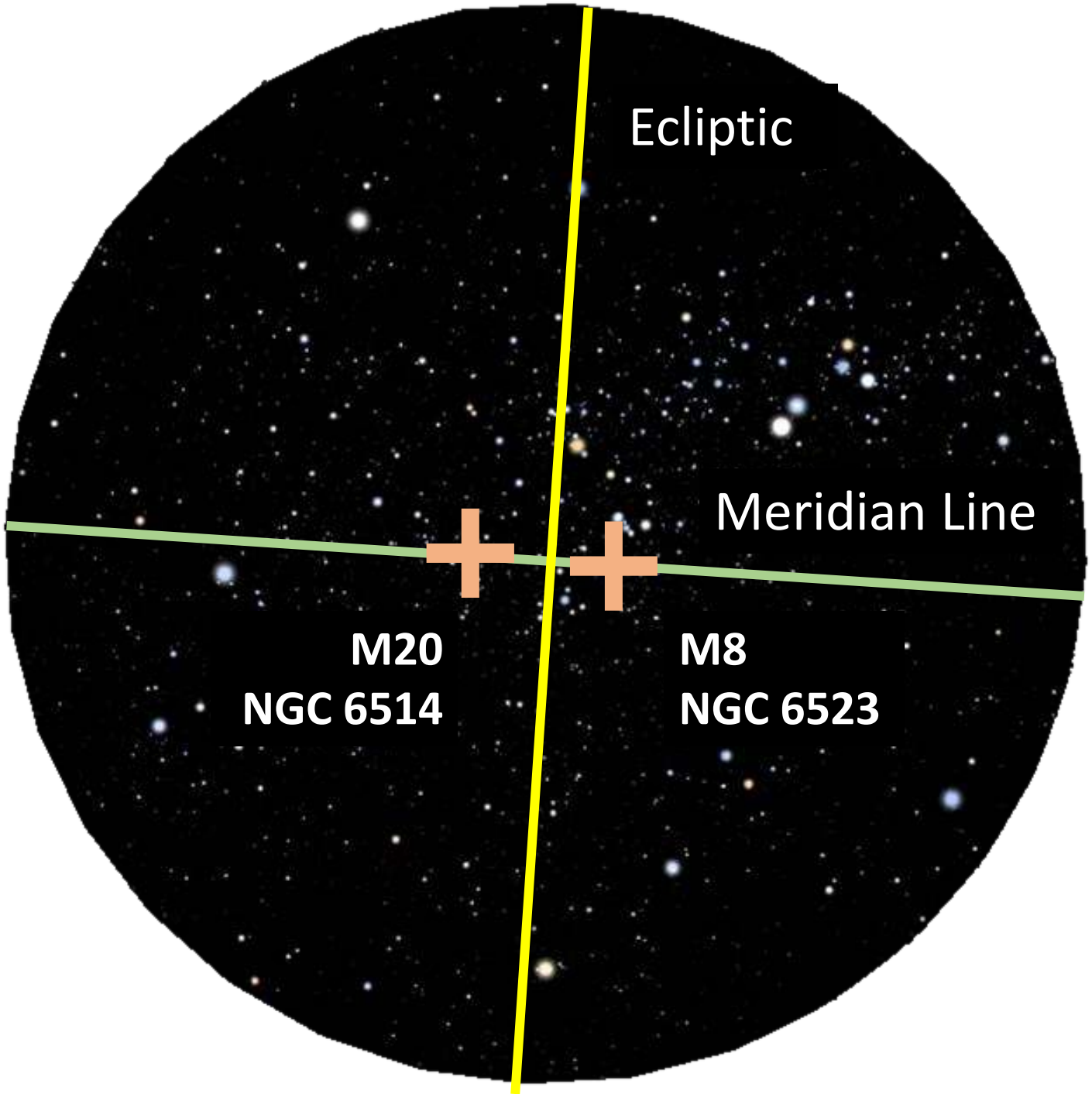
Answer: α Lyr (correct value = 1.0 point)

b) Using one of the nomenclatures from Messier's Catalog, or New General Catalogue, which nebula is located at the intersection between the Celestial Meridian Line and the Ecliptic?

Answer: M8 or NGC 6523 or M20 or NGC 6514 (correct value = 1.0 point)
Any of the answers cited is correct




Meridian Line
α Lyr


Ecliptic
Meridian Line
M20
NGC 6514
M8
NGC 6523

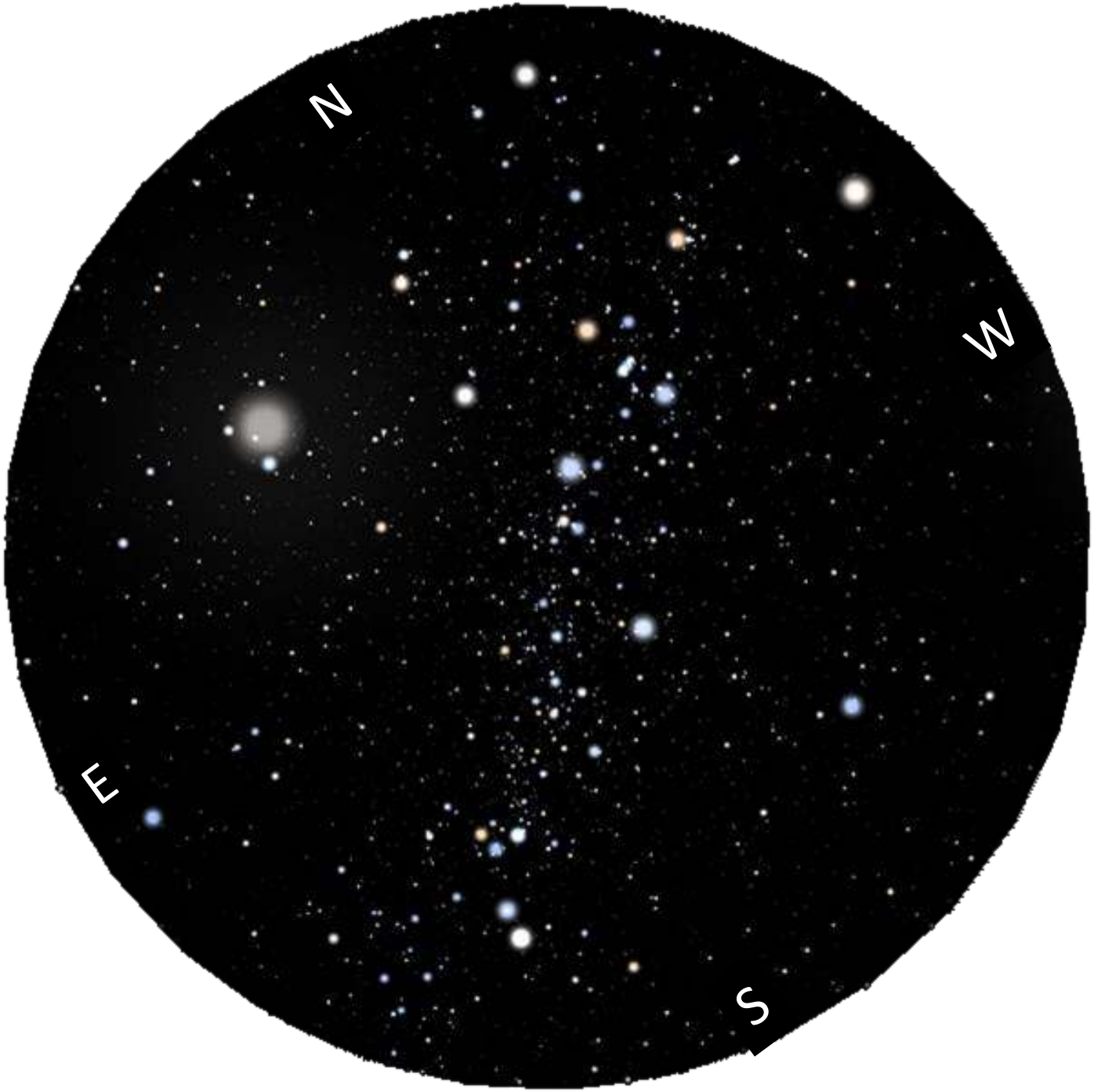
PROBLEM 2

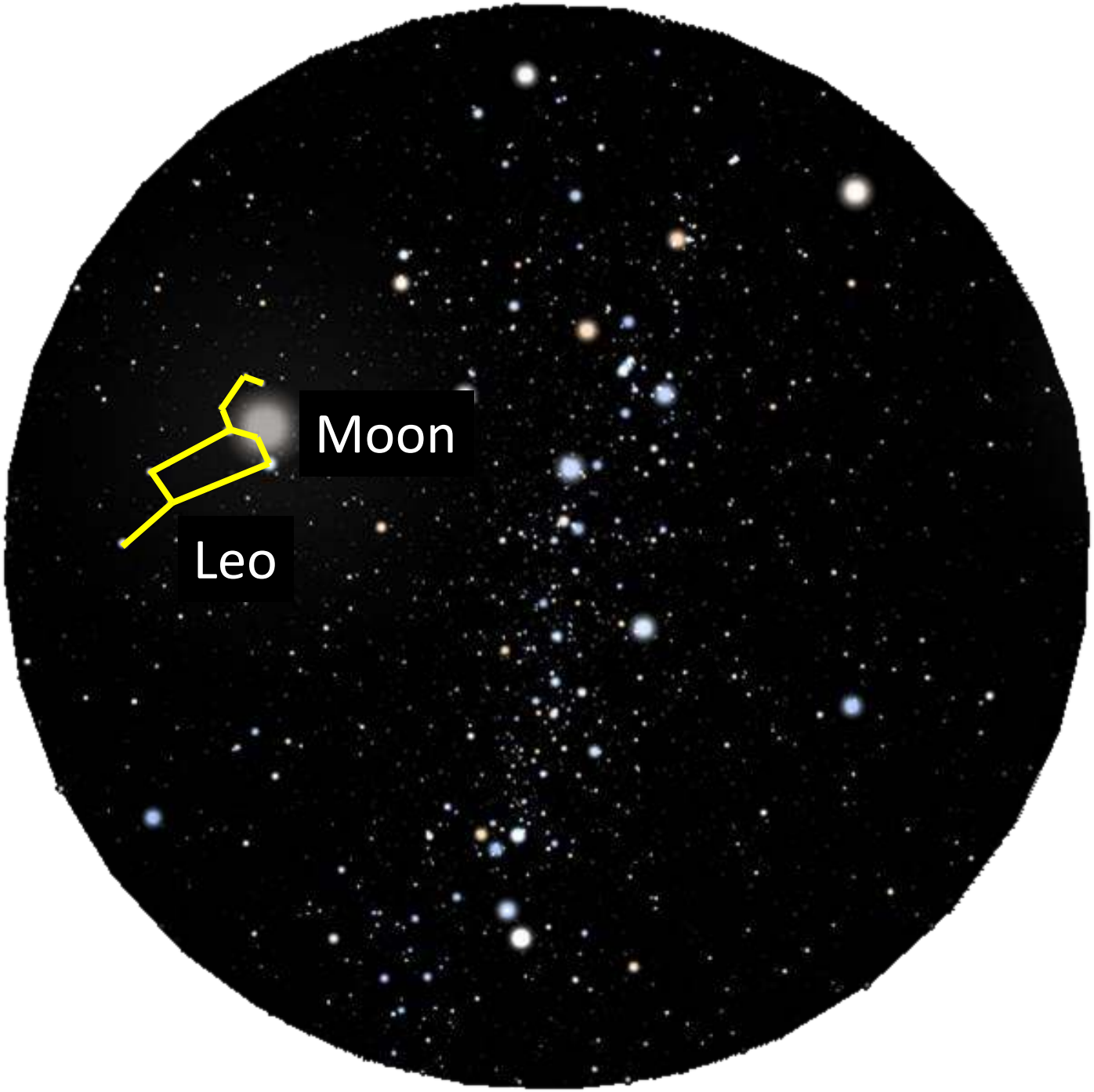
1. (Maximum value 4.0 points)

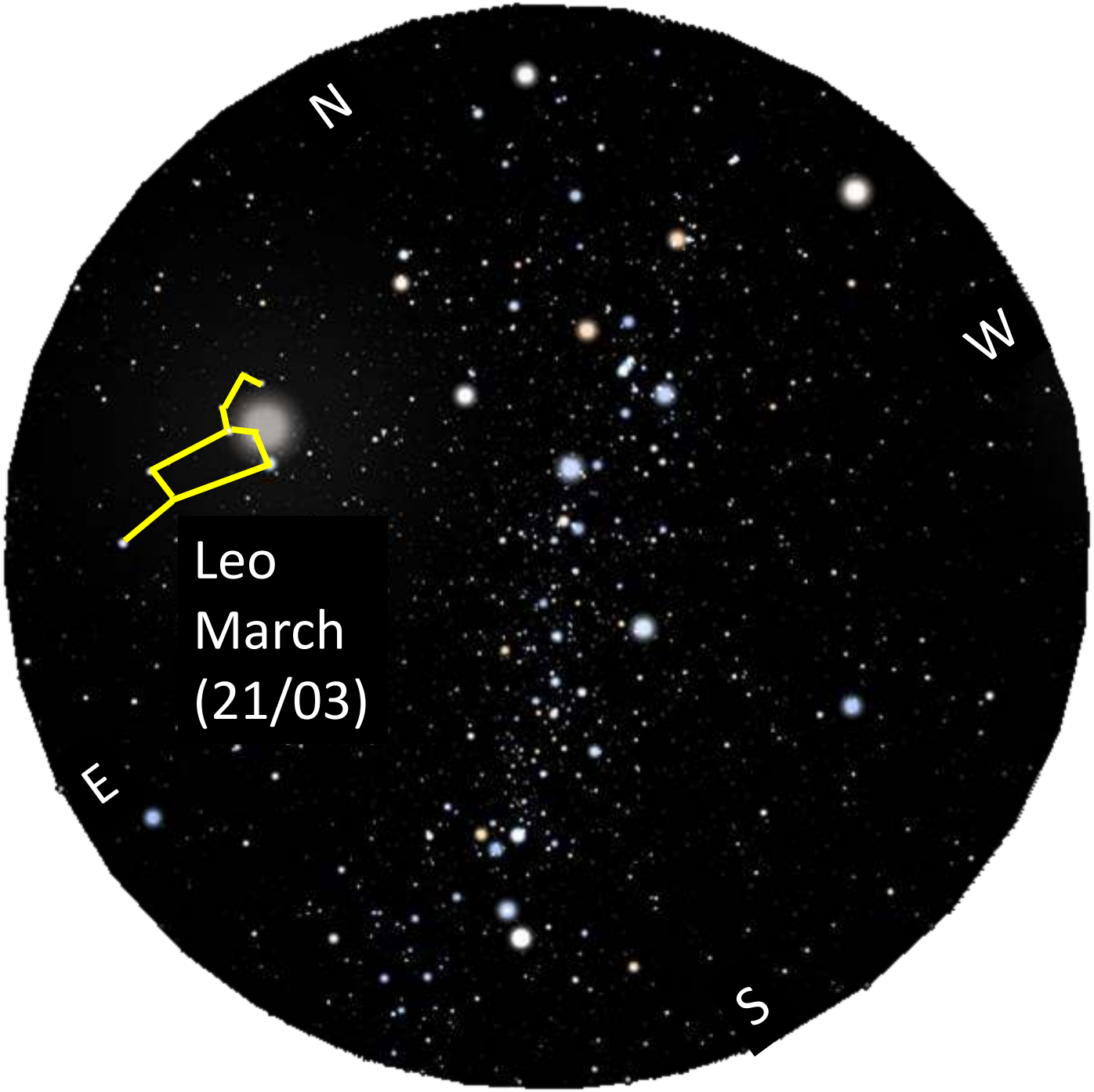
Observing the projected sky, answer:

a) Using the nomenclature of the International Astronomical Union, in which constellation is the Moon located?
Answer: Leo
Correct value = 2.0 points

b) Knowing that the Sun set 1 hour and 26 minutes ago in the projected sky, identify the current month.
Answer: March
Correct value = 2.0 points


N
W
E
S


Moon
Leo



Sun set 1 hour and 26 minutes ago in the projected sky

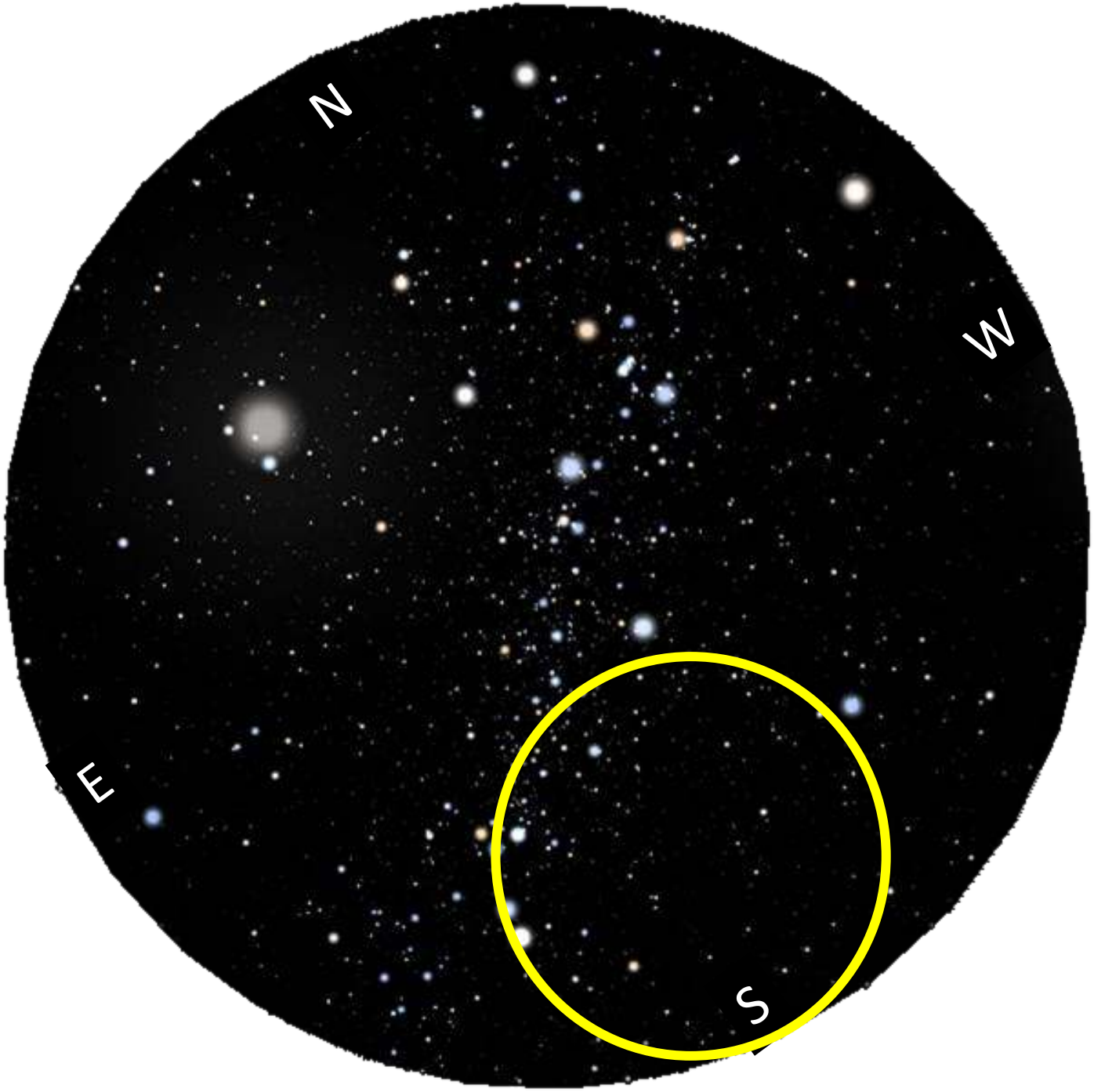
2. (1.0 point for each correct answer – Total 4.0 points)

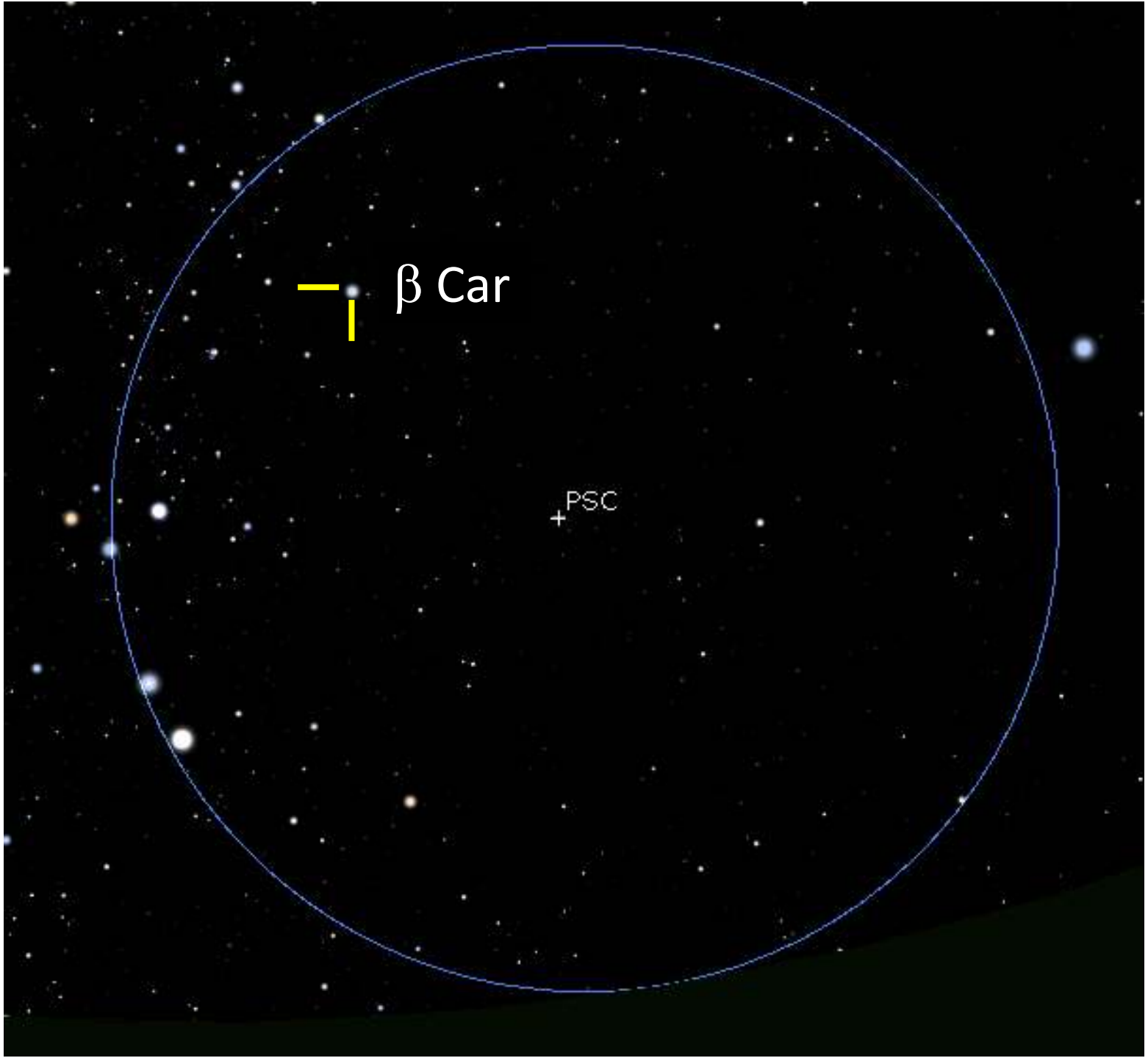
Mark the circumpolar stars with an X:
Answer:

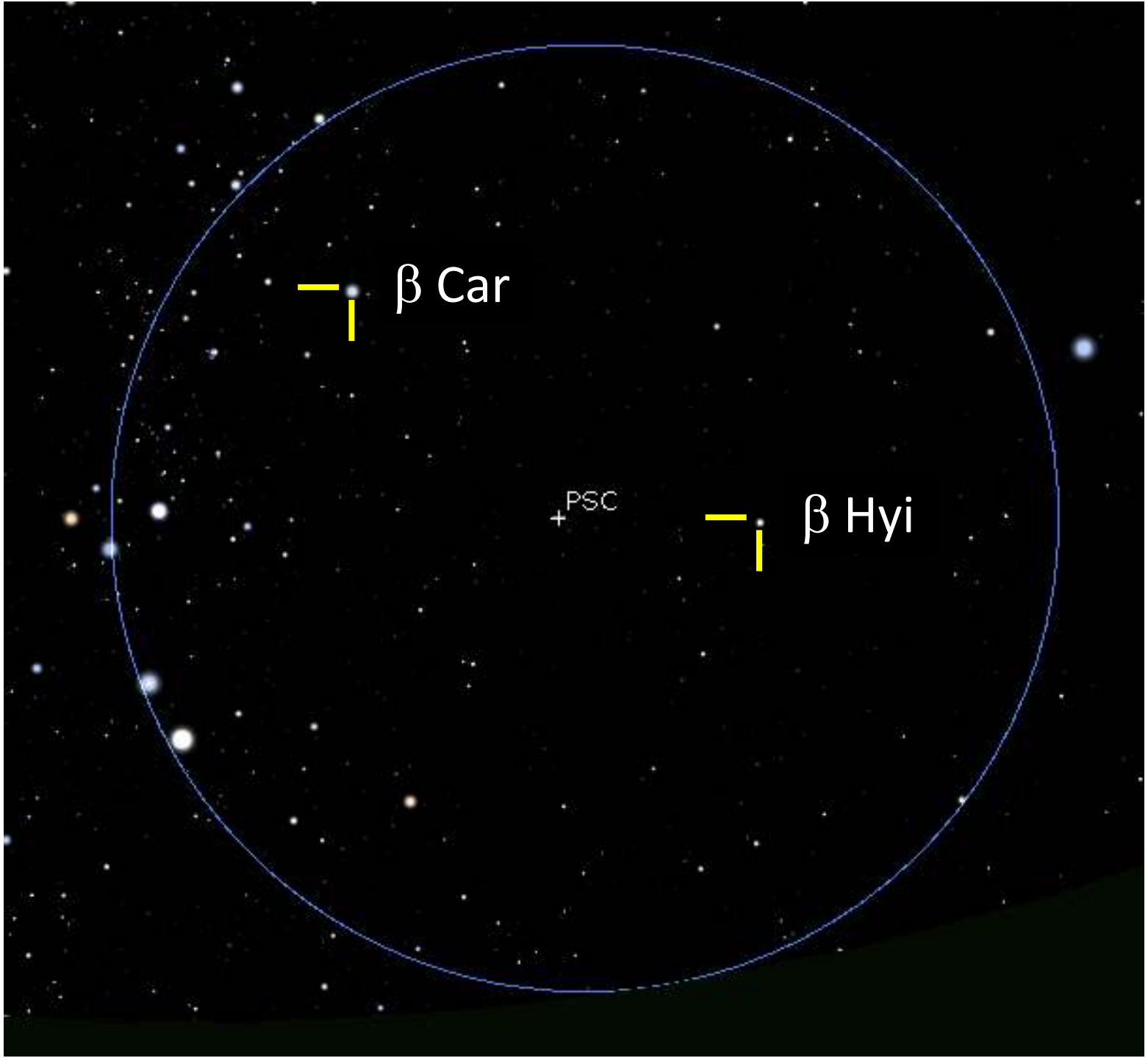
		β Hyi	β Pav
	β Car		υ Oct

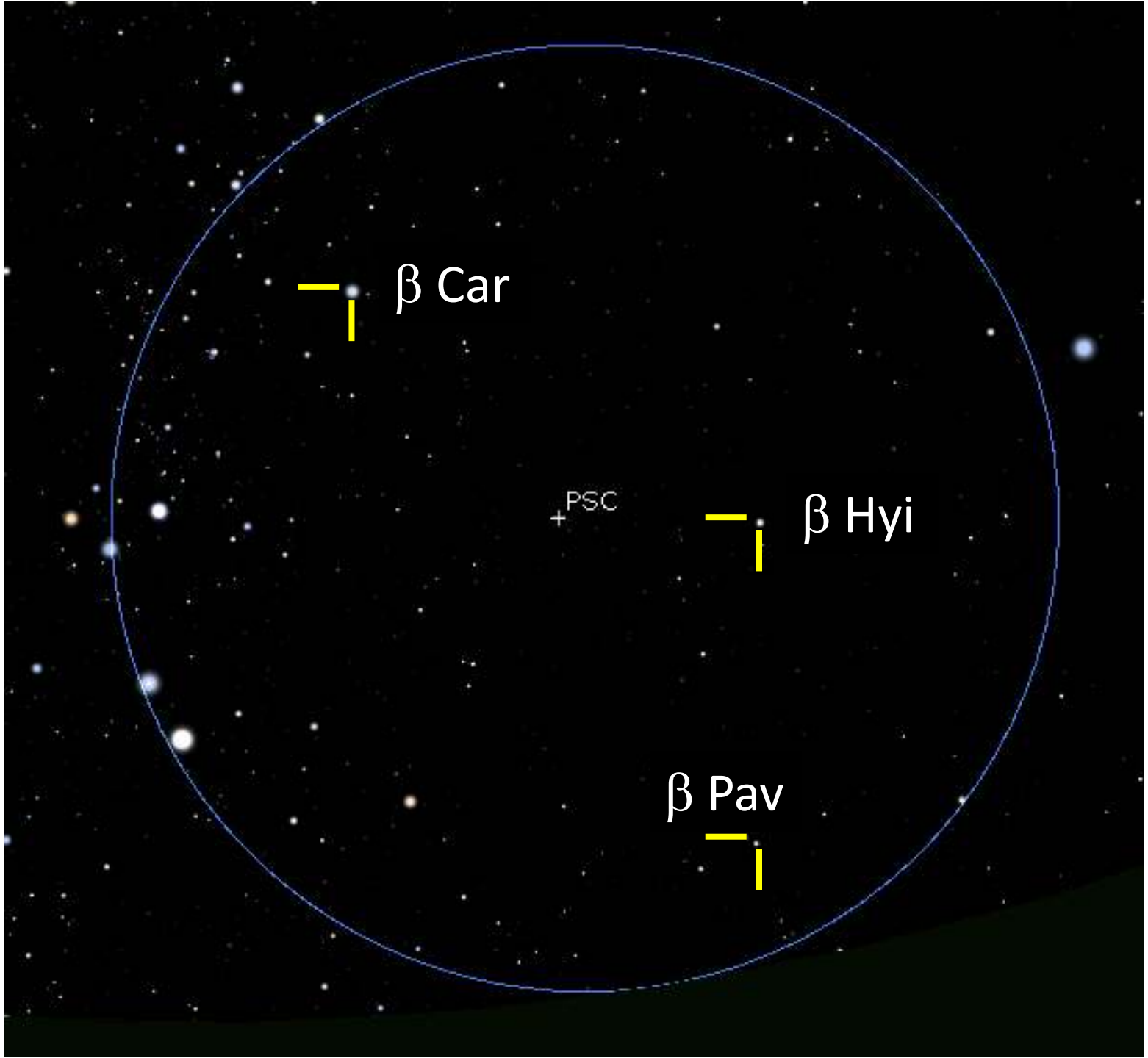
1.0 point for each correct answer

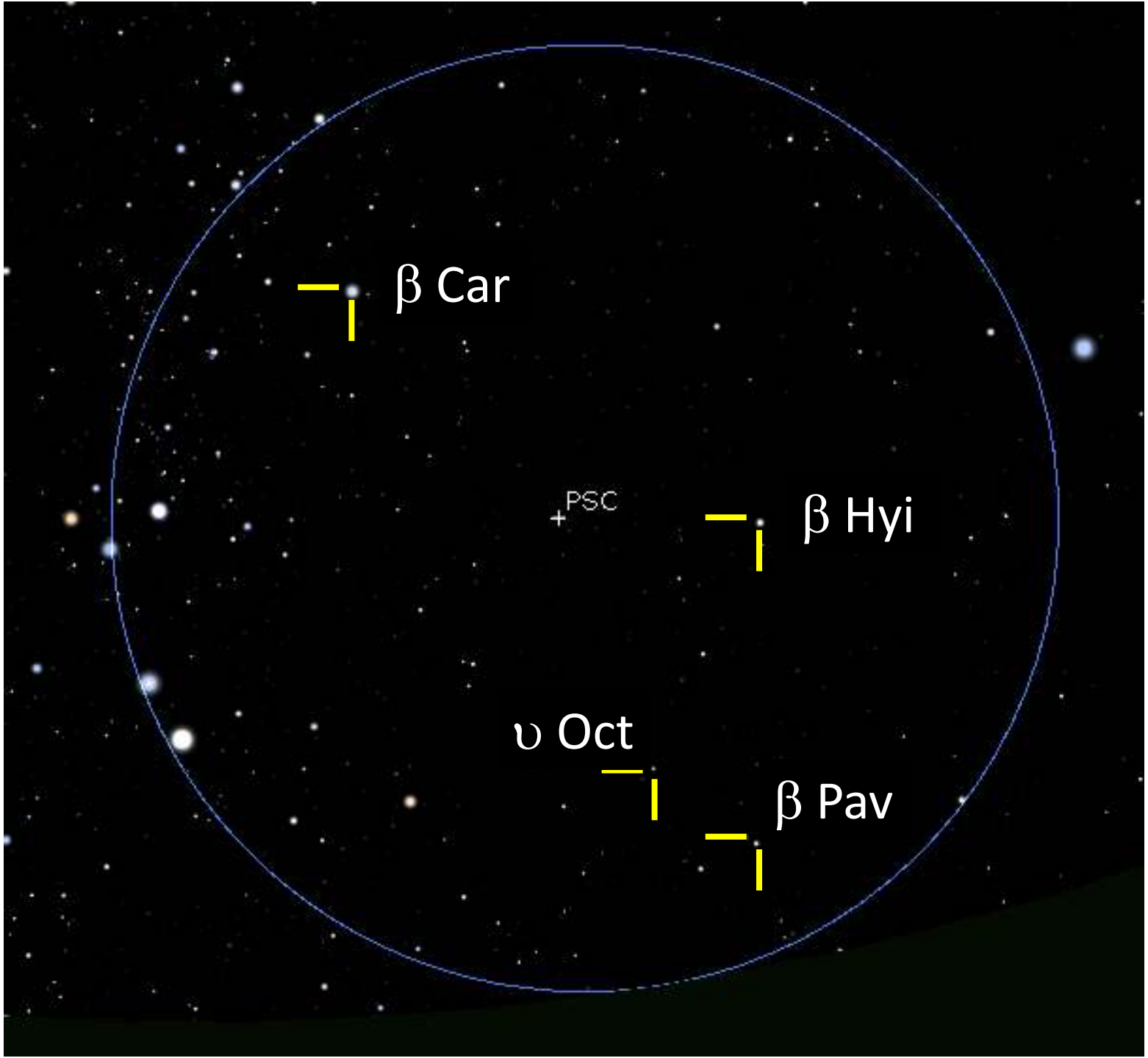



N
W
E
S


β Car
PSC


β Car
PSC
β Hyi


β Car
PSC
β Hyi
β Pav


β Car
PSC
β Hyi
υ Oct
β Pav

3. (1.0 point for each correct answer – Total 2.0 points)

A certain artificial satellite will pass through the celestial vault with the following coordinates:

Rise: Azimuth: 98º 47’ and; Altitude: 7º 31’
Maximum brightness: Azimuth: 2º 27’ and; Altitude: 54º 47’
Disappearance: Azimuth: 311º 19’ and; Altitude: 26º 47’

Using the references coordinates given above and the Bayer designation, write the name of the stars in the event of:

Maximum brightness:
Answer: α CMi
Correct value = 1.0 point

3. (1.0 point for each correct answer – Total 2.0 points)

A certain artificial satellite will pass through the celestial vault with the following coordinates:

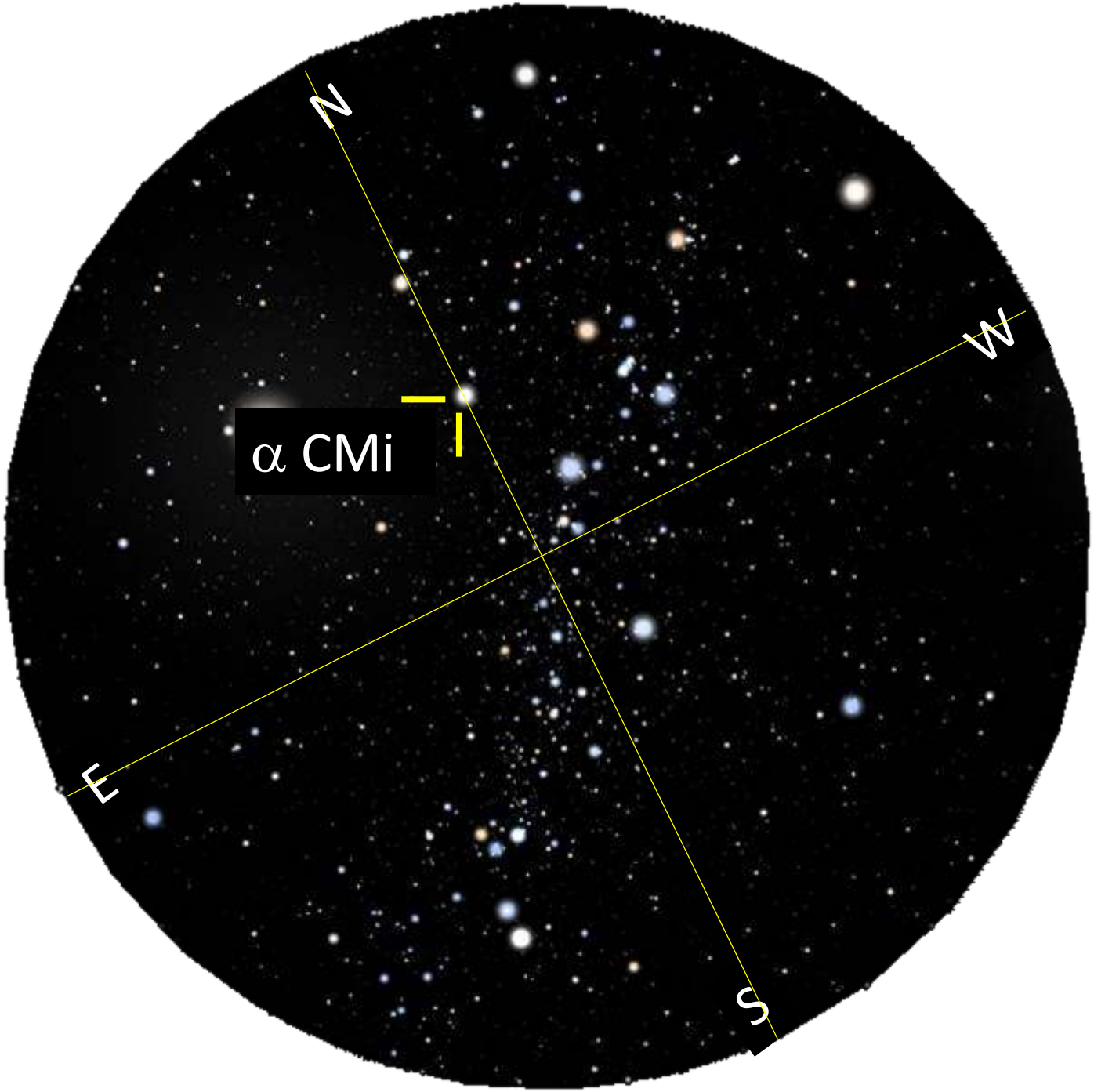
Rise: Azimuth: 98º 47’ and; Altitude: 7º 31’
Maximum brightness: Azimuth: 2º 27’ and; Altitude: 54º 47’
Disappearance: Azimuth: 311º 19’ and; Altitude: 26º 47’

Using the references coordinates given above and the Bayer designation, write the name of the stars in the event of:

Disappearance:
Answer: α Tau
Correct value = 1.0 point



Azimuth: 2º 27’
Height: 54º 47’





Azimuth: 311º 19’

Height: 26º 47’

