Name:_____Country: _____

Observational Exam – 1st attempt

1 – Estimate the field of view of this telescope, using 10mm Plöss eyepiece and ***star chart-1***, showing nearby region of open cluster NGC 6231. Star chart 1 shows two angular distances. Use them as reference. Express your answer in arc minutes and tenths of it.

2 – Use ***star chart-2*** to estimate the magnitude of the missing star, shown as a cross, inside NGC 6231. Use the magnitude of other stars as reference.
Note: To avoid confusion between decimal dots and real stars, dots where supressed. So, magnitude 60 corresponds to magnitude 6.0. Give your answer using one decimal figure and 0.1 precision.

3 – Point your telescope to the binary star ε **- Trianguli Australis** using ***star chart-3*** as a guide. That pair components are magnitude 4.1 and 9.3 separated by 82". Choose the best option for the correct color of each star:

Brighter: White/blue ( ) Yellow ( ) Red ( )

Dimmer: White/blue ( ) Yellow ( ) Red ( )

4 – Identify objects pointed by the evaluator as Open Cluster **(OC)**, Globular Cluster **(GC)**, Emission Nebulae **(EN)** or Planetary Nebulae **(PN)**.

Object 1 ( ) Object 3 ( )

Object 2 ( ): Object 4 ( )

5 – Use your green laser pointer to spot the stars Antares, Vega, Altair and Peacock. Also point to the constellation Corona Australis.

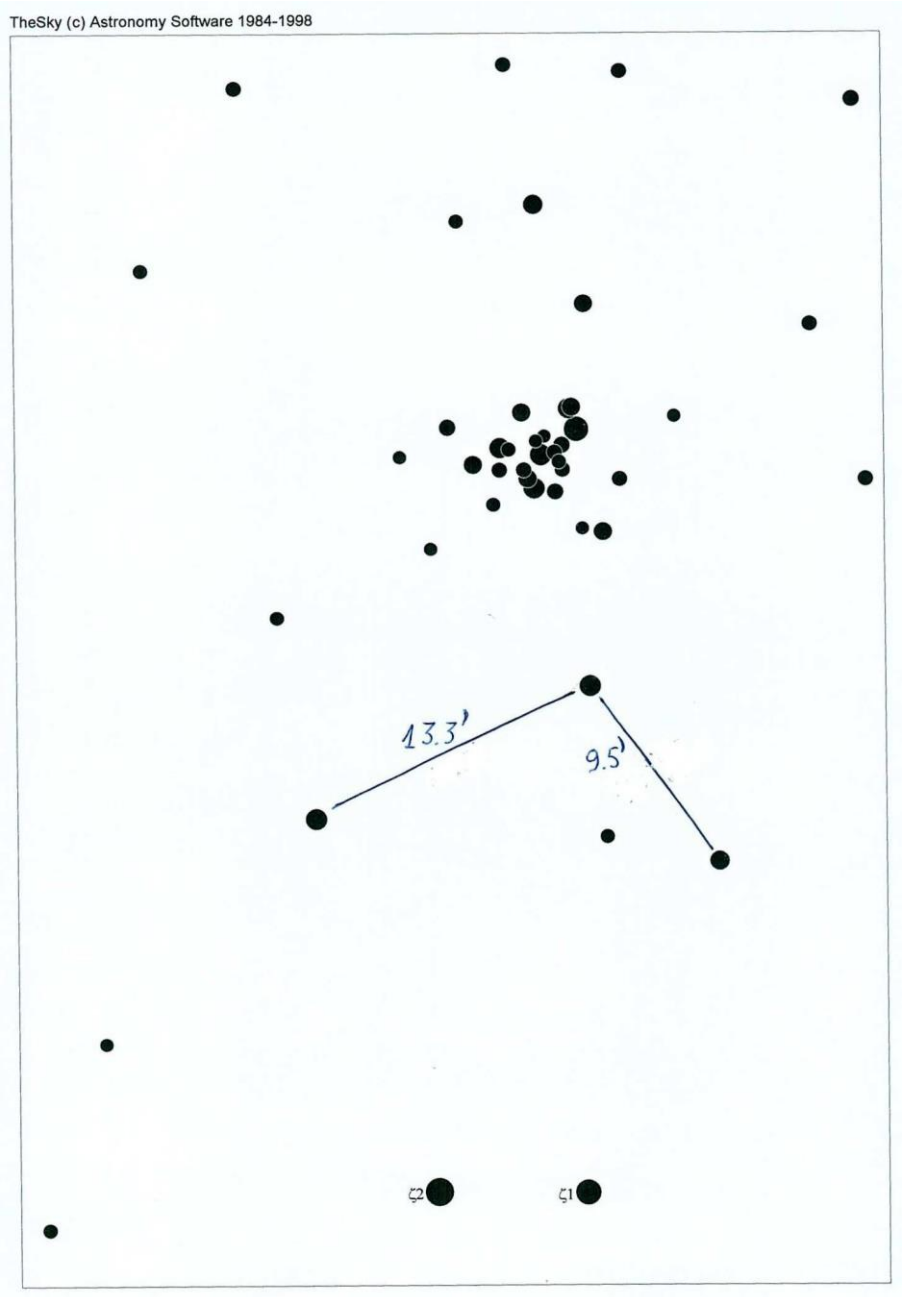
<u>Material needed for each student</u>:

Red flashlight, green laser pointer, chair, table, pencil, rubber and clipboard.

Name:_____ Country: _____

Observational Exam – 1st attempt

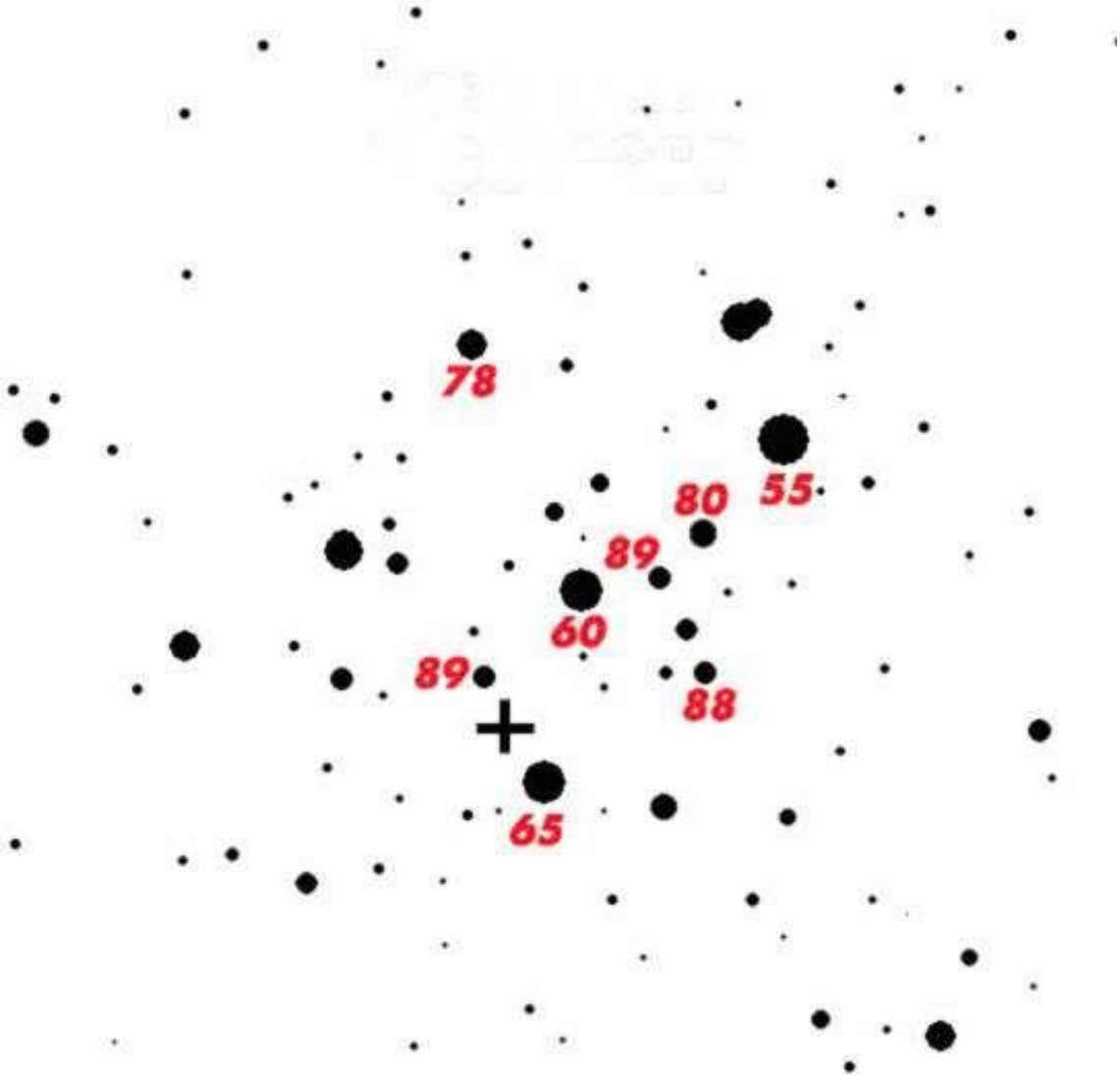
Chart 1 – NGC 6231 Field of view



Name:_____ Country: _____

Observational Exam – 1st attempt

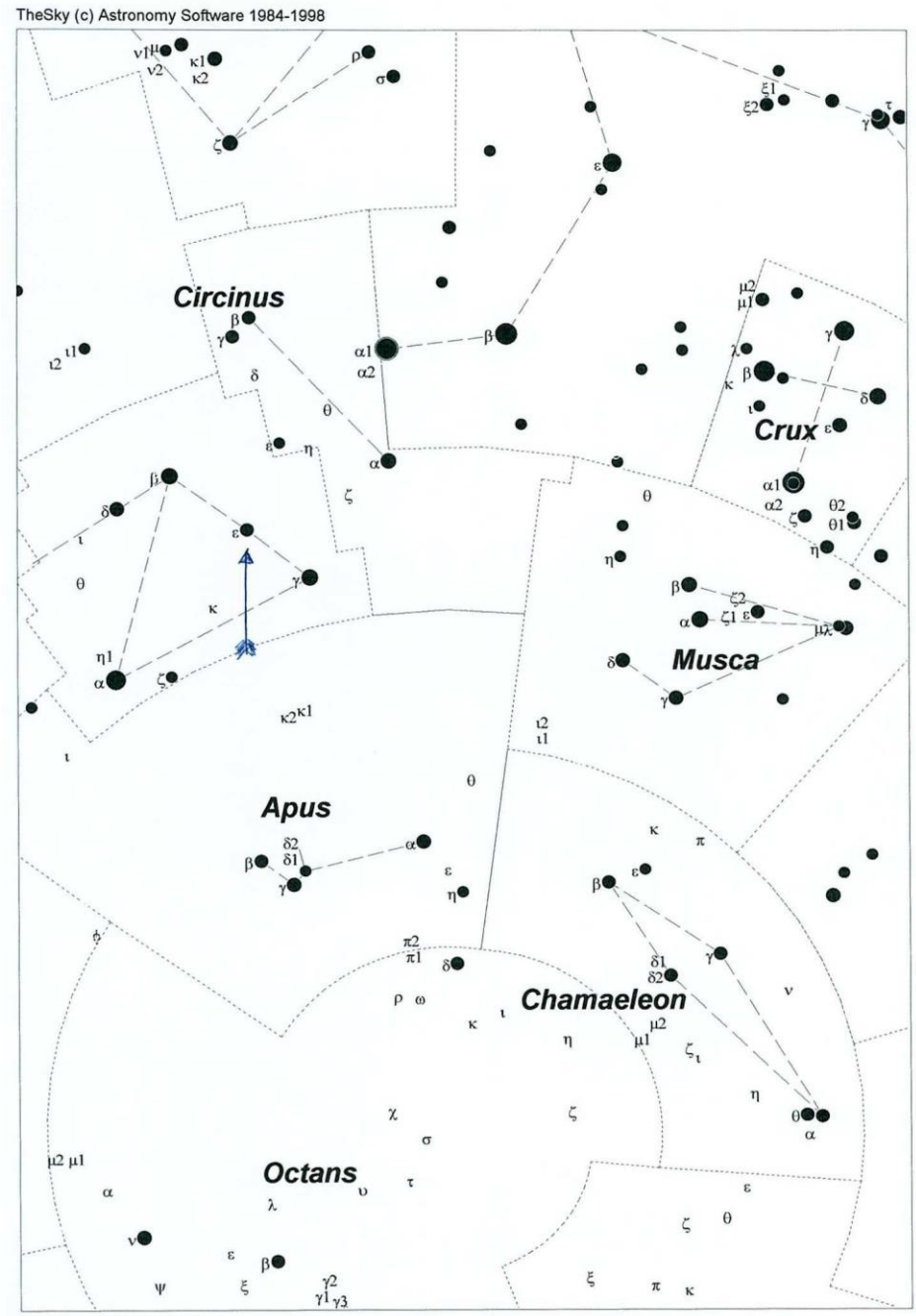
Chart 2 – NGC 6231



Name:_____ Country: _____

Observational Exam – 1st attempt

Chart 3 - □ Trianguli Australis location



Name: _____ Country: _____

Observational Exam – 2nd attempt

1 – Use your green laser pointer to aim at 3 zodiacal constellations of your choice.

2 – Point to β and ν scorpii (**star chart-4**), two binary stars. Use 2x Barlow + 10mm eyepiece to determine the main difference on both stars, besides differences in distance between the components and magnitude.

3 – Point your telescope to the star SAO 209318 (**star chart-5**). Pay attention to a small nebulous patch close to that star. Use your 10mm or 10mm + 2x Barlow to estimate the distance between the star and the nebulous patch, in arc minutes. (coordinates to SAO 209318 are RA: 17h50m51s and Dec: -37°02'). Express your answer using 0.5' precision, knowing that field of view of the 10mm eyepiece on this telescope is 24 arcminutes or 0.4º.

4 – Point your telescope to the binary star Albireo (β-Cygni) using **star chart-6** as guide. That pair components are magnitude 3.2 and 4.7 separeted by 34.8" (2010). Choose the best option for the correct color of each star:

Brighter: White ( ) blue ( ) Yellow ( ) Red ( )

Dimmer: White ( ) blue ( ) Yellow ( ) Red ( )

5 – Identify objects pointed by the evaluator as Open Cluster (**OC**), Globular Cluster (**GC**), Emission Nebulae (**EN**) or Planetary Nebulae (**PN**).

Object 1 ( ) Object 3 ( )

Object 2 ( ): Object 4 ( )

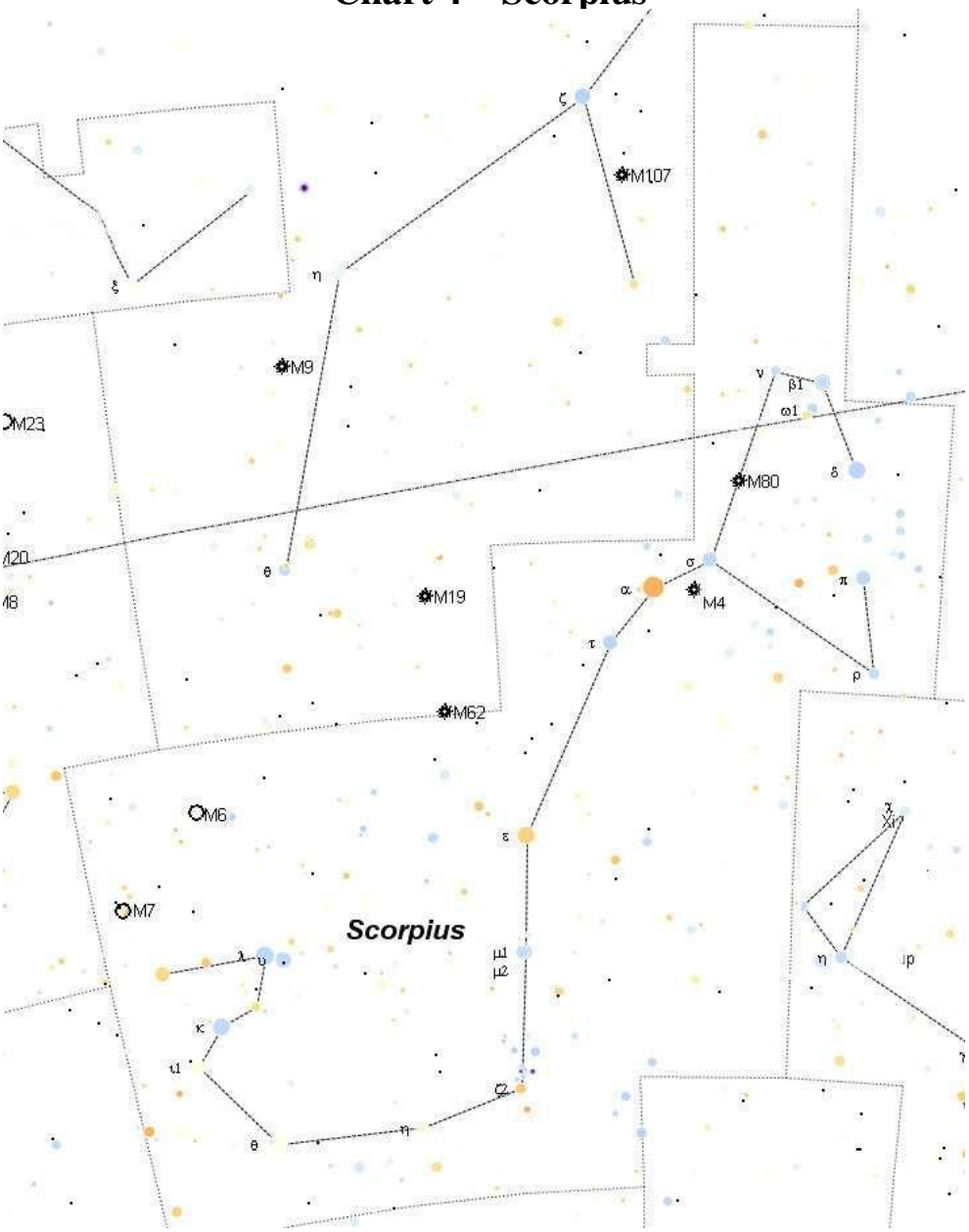
Material needed for each student:

Red flashlight, green laser pointer, chair, table, pencil, rubber and clipboard.

Name: _____Country: _____

Observational Exam – 2nd attempt

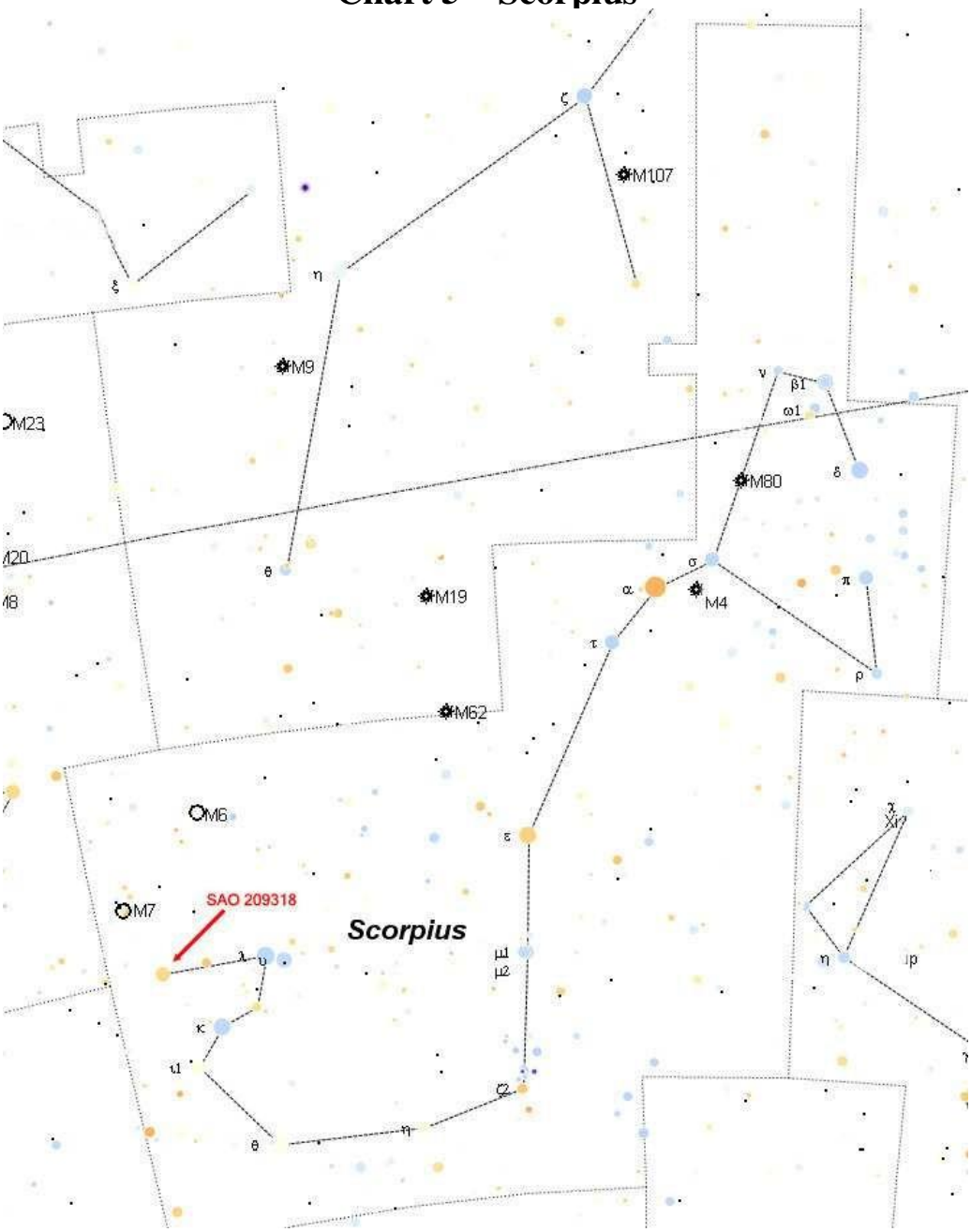
Chart 4 – Scorpius



Name: _____Country: _____

Observational Exam – 2nd attempt

Chart 5 – Scorpius



Name: _____Country: _____

Observational Exam – 2nd attempt

Chart 6 – Cygnus

