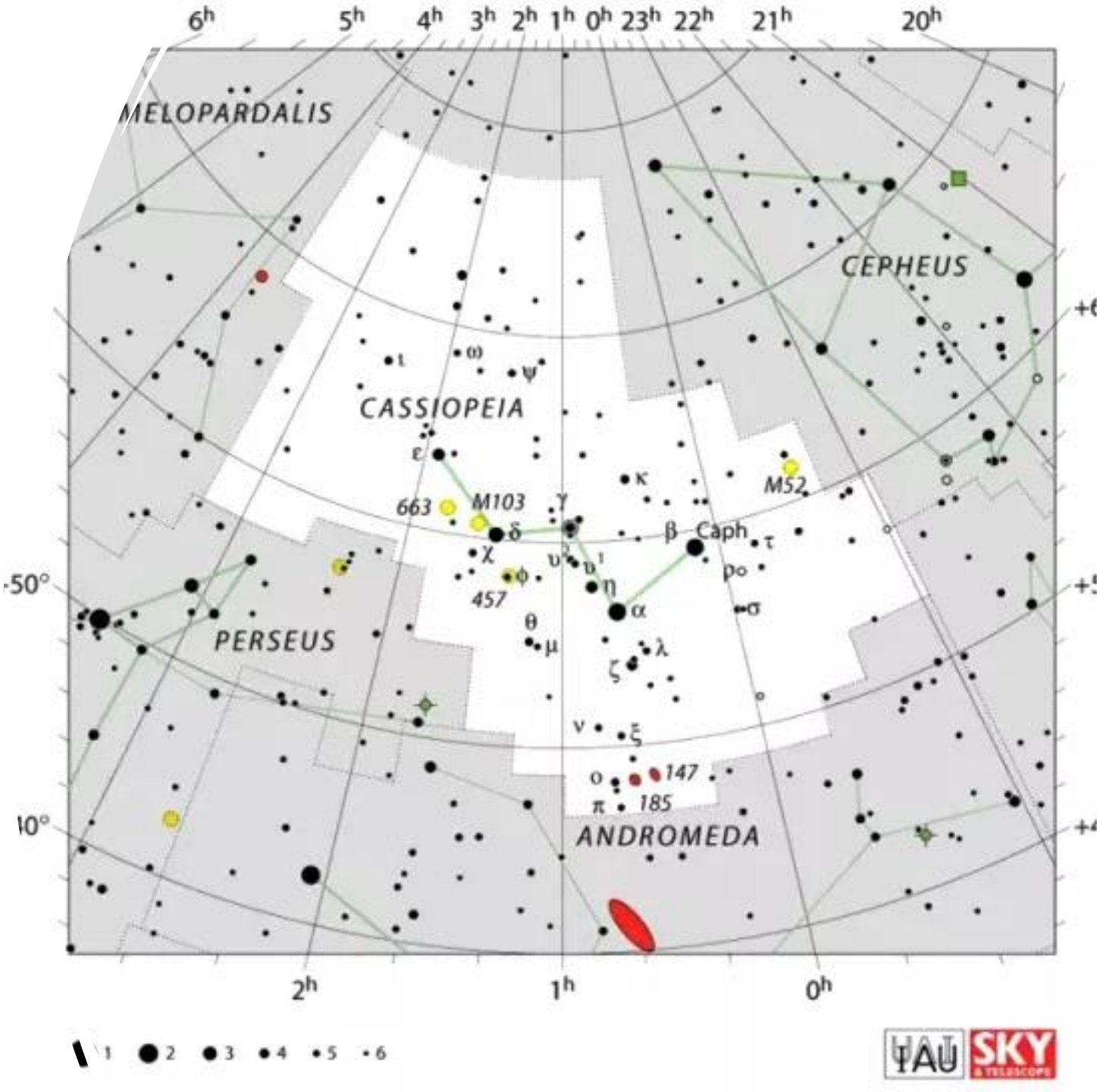
Binocular and Small Telescope Observing October 2024 by Andrew Lohfink

Cassiopeia Constellation

- Cassiopeia is easily recognised by the distinctive “W” or “M” asterism and is high in the eastern sky at present

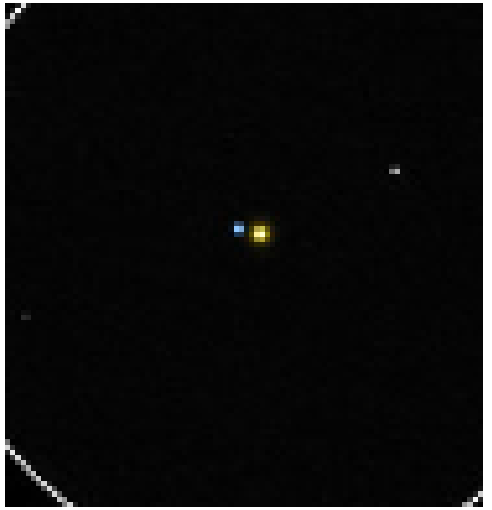


Eta Cas – a Double Star

- Achird is a naked eye star and easily found – use the star chart.
- With a separation of 11.6 arcseconds it needs magnifications above 30 to resolve.

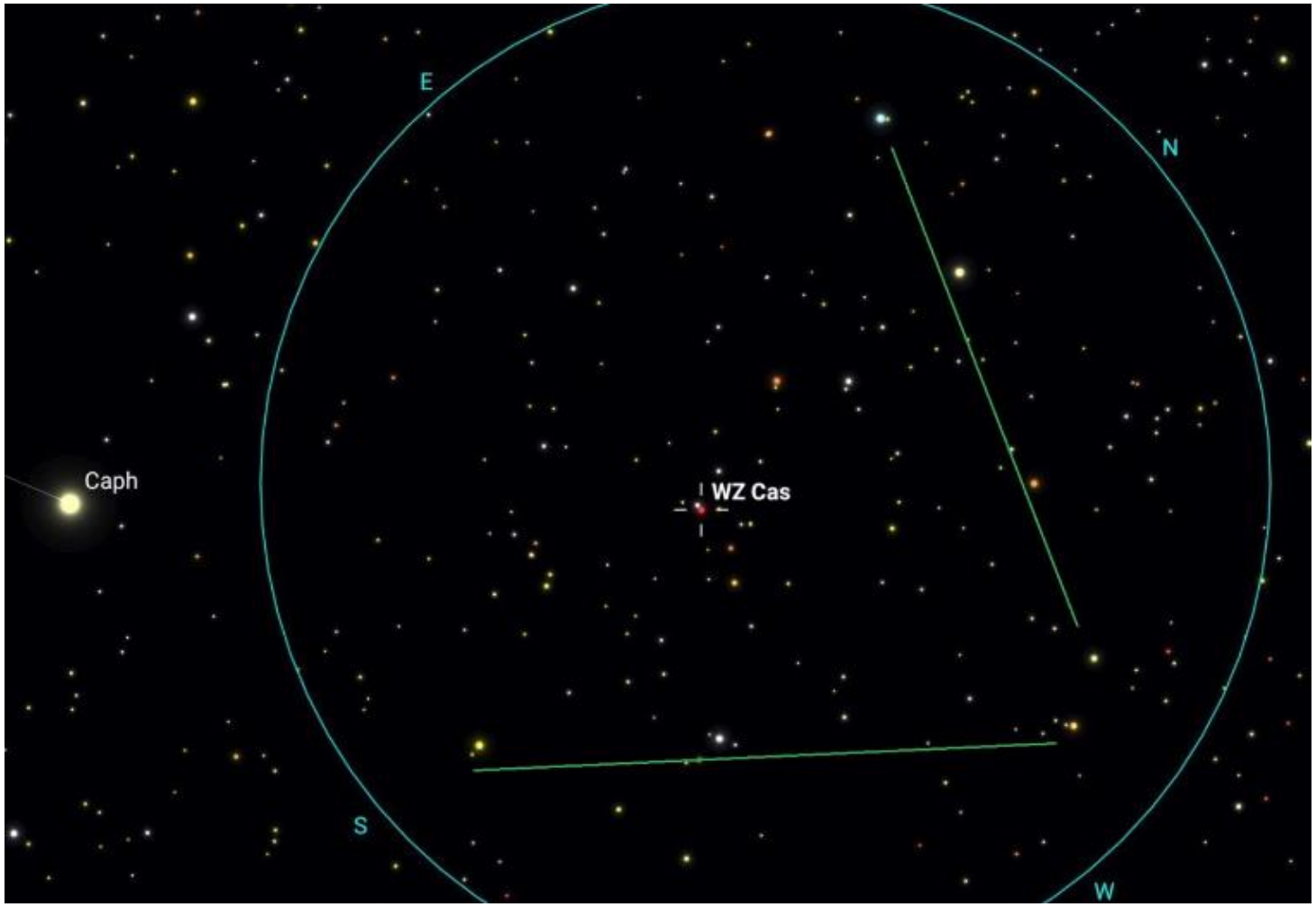
Eta Cass

- There is a large magnitude difference between the primary and secondary (3.44 & 7.44)
- It lies 19.5 light years away.
- There is a lovely colour difference of yellow and blue.



WZ Cass – An Unusual Double Star

- Extend a line from Alpha through Beta Cas for about the same distance and WZ Cas can be found.
- It lies in the centre of a lovely triangle of other doubles

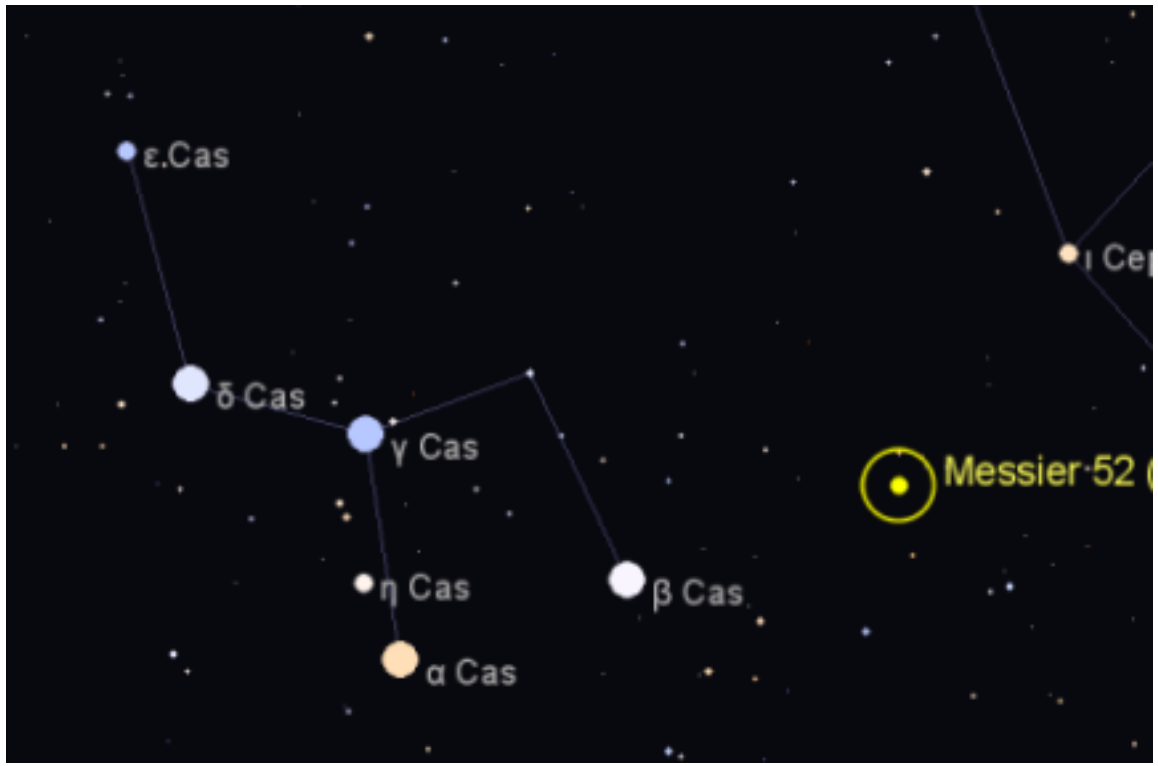


WZ Cas

- WZ Cas lies about 1,500 light years away.
- The primary is a variable carbon star with a delta magnitude of 6.3 – 8.8
- It has expanded to about 600 times the Sun's radius.
- The secondary lies 58 arcseconds away and is a beautiful blue colour.
- Look around WZ Cas for a trio of other doubles

Messier 52 – An Open Cluster

- Use the finder chart to locate M52.
- By extending a line from Beta Cas through WZ Cas the same distance will also locate the cluster.
- It is also known as the scorpion or salt and pepper cluster.



Messier 52

- The cluster has a magnitude of 6.9.
- It lies 4,600 light years away and has a radius of 9.5 light years.
- The orange giant is a chance line of sight and not part of the cluster.

Messier 103 Open Cluster

- Use the star chart to locate this open cluster.
- It has an unusual well defined triangular shape and a lovely orange giant to give some colour contrast

Messier 103

- This is a young cluster – about 20 million years old.
- It is 15 light years across and has about 172 member stars.
- See if you can pick out the distinctive shape.

NGC 663 – An Open Cluster

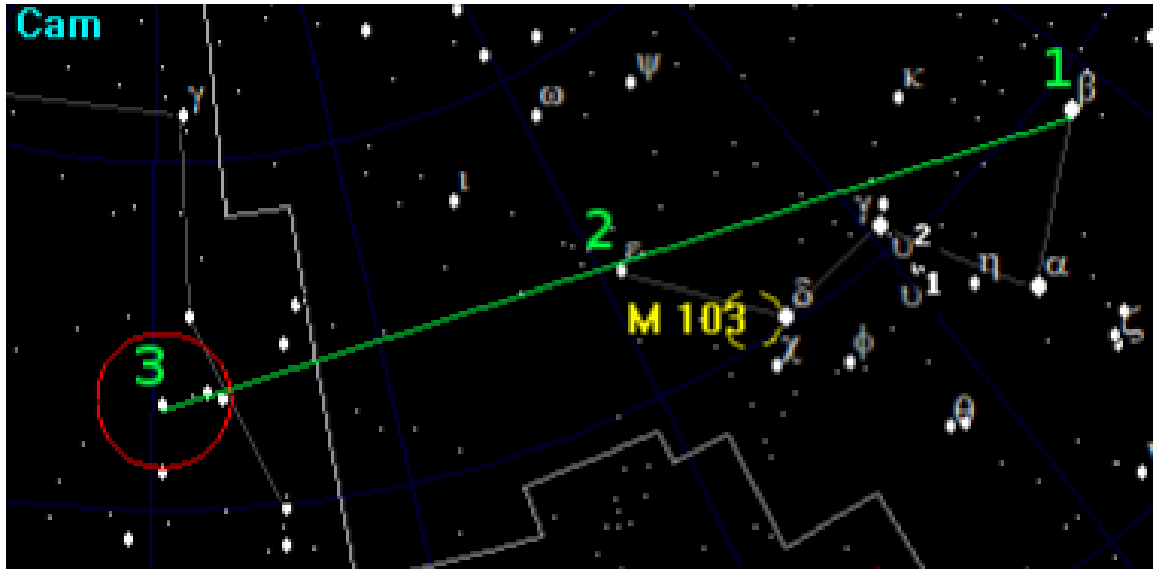
- Just to the east of M103 lies an often forgotten cluster- NGC 663.
- It has a magnitude of 7.1 and can be seen in binoculars but x30-50 magnifications are needed to resolve lots of stars.

NGC 663

- Notice the brilliant white hot stars.
- See if you can pick out a figure “8” asterism.
- It lies 6,850 light years away.
- It has an age of 20-25 million years and contains over 400 stars

Kemble's Cascade

- This famous binocular asterism lies in Camelopardalis but the key to finding it lies in Cassiopeia.
- Extend a line from Beta Cas through Epsilon Cas for the same distance to find the cascade.



Kemble’s Cascade

- Best seen through x17 binoculars and below the cascade contains a myriad of star colours and magnitudes.
- The chain of stars cascades into open cluster NGC 1502 which forms the “pool” into which the waterfall tumbles.

NGC 1502 – An Open Cluster

- NGC 1502 forms the pool of the cascade.
- A telescopic view of x50 and above will reveal a lovely tight cluster with lots of jewel like stars glistening in the black “water”.