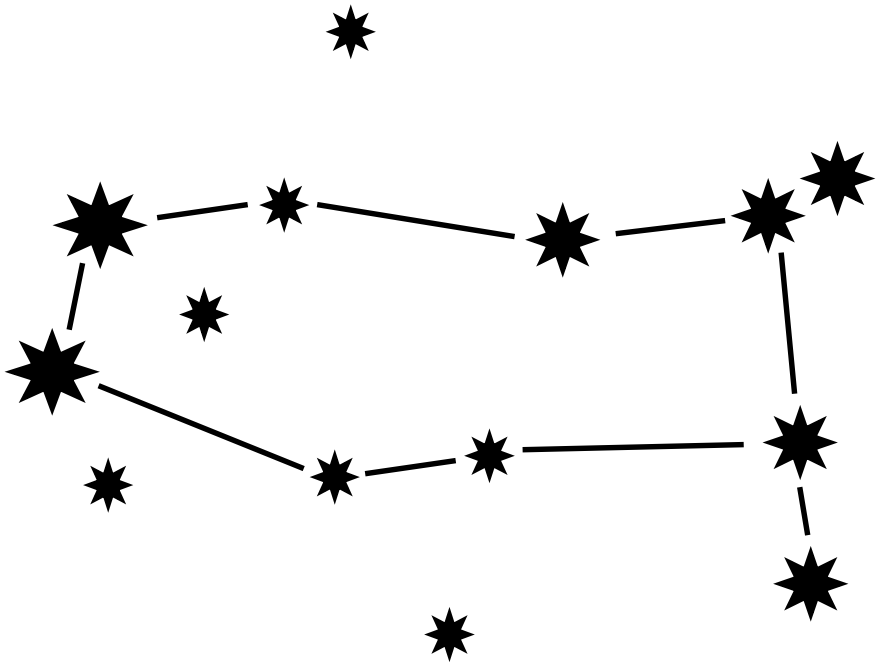
Constellation Close-Up: Gemini

James Appleton

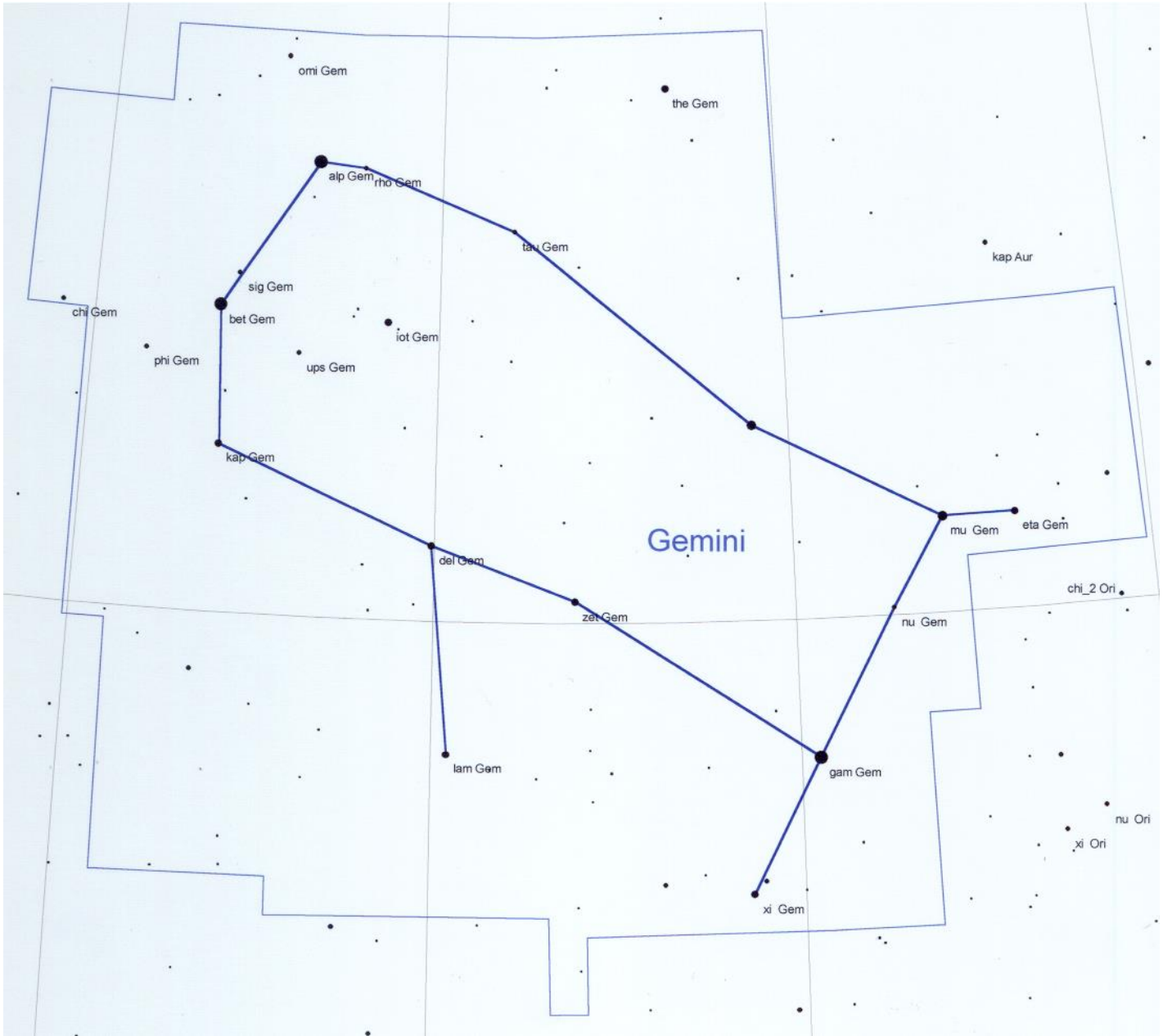


Discussion Topics

- Introduction to Gemini
- Overview of main features
- Castor & Pollux
- Double Stars
- M35
- NGC2392
- Small Telescopes Observing Night

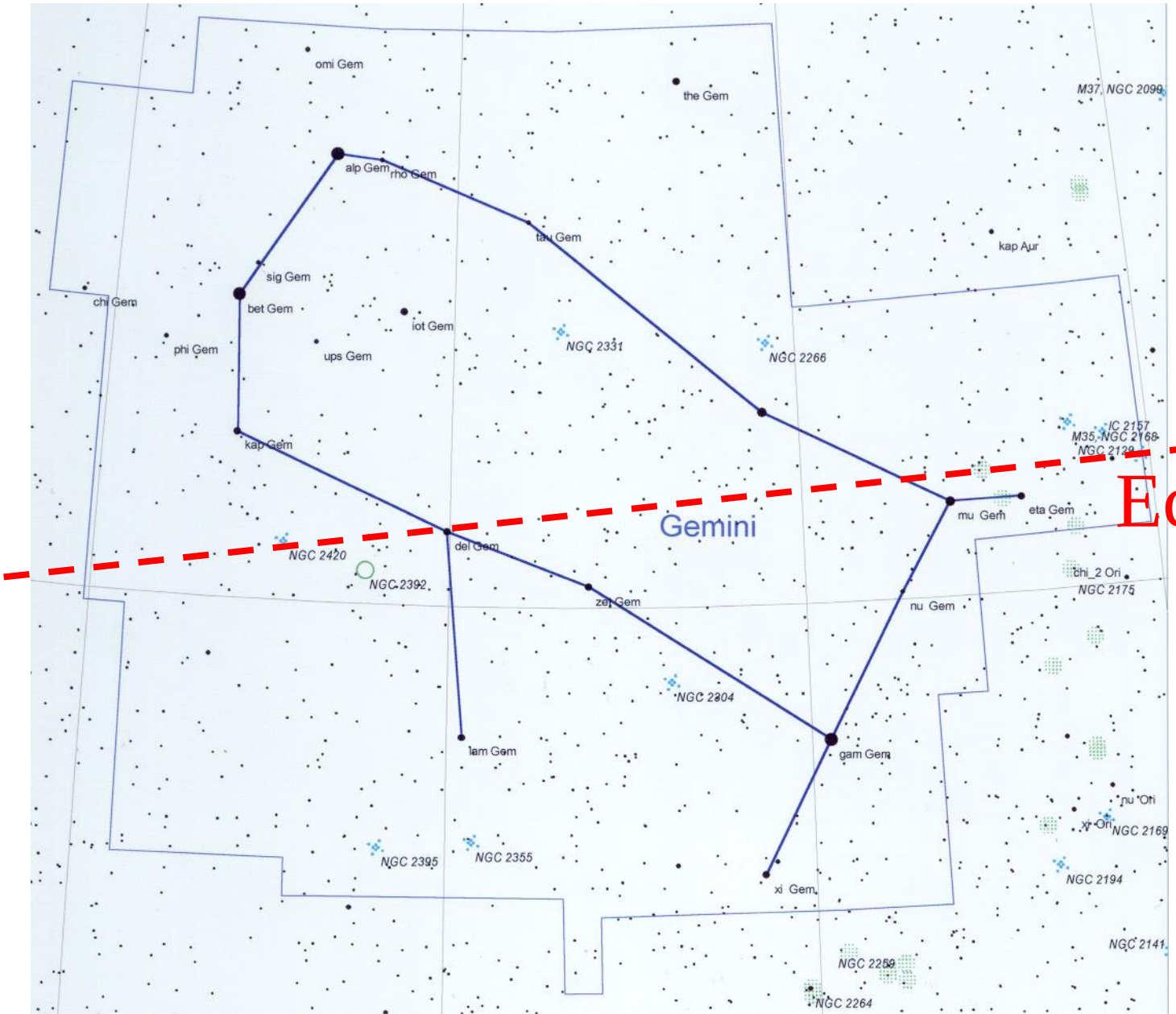
Introduction to Gemini

Gemini – Stars to mag 6.0

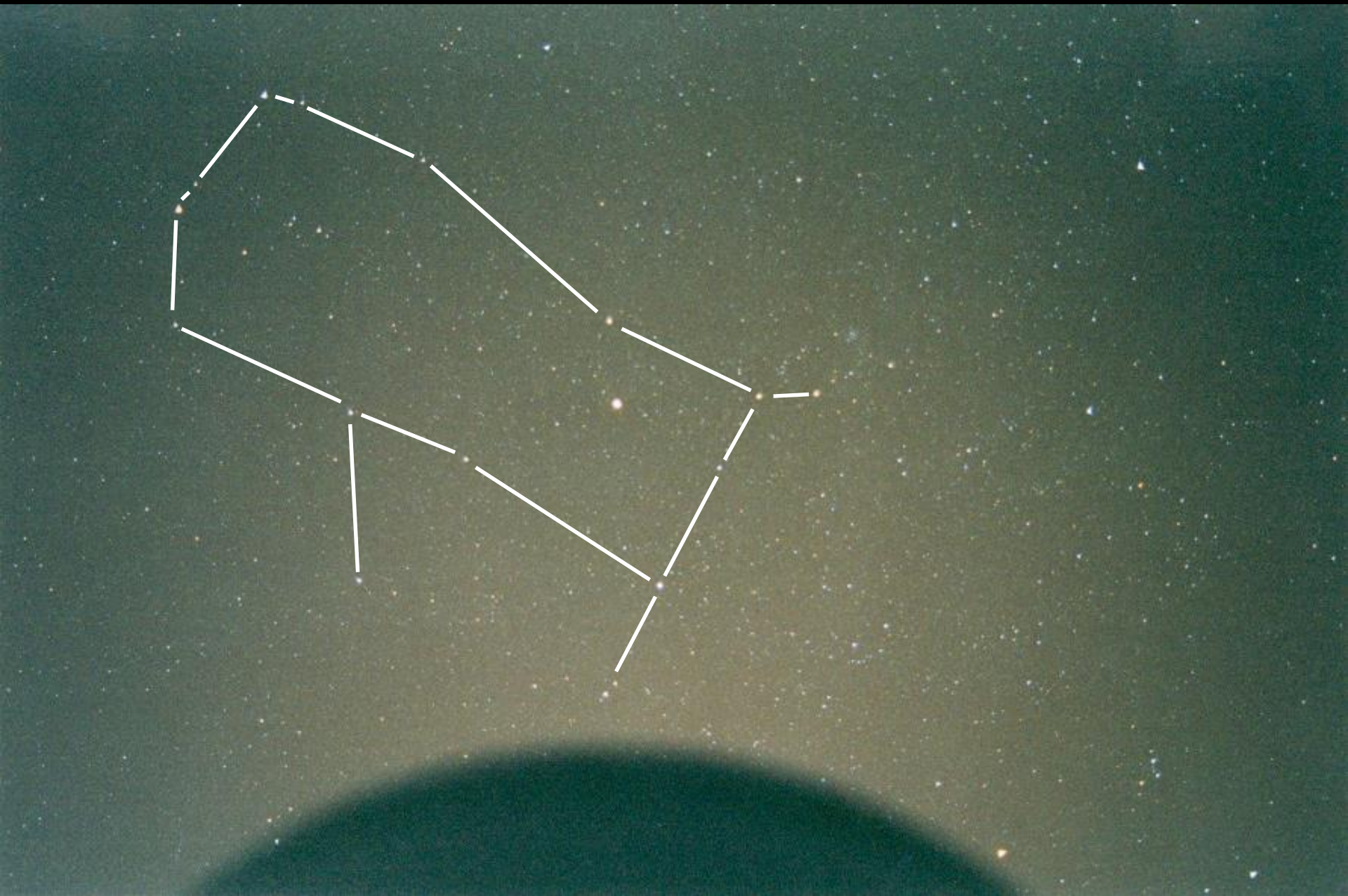


Overview of Main Features

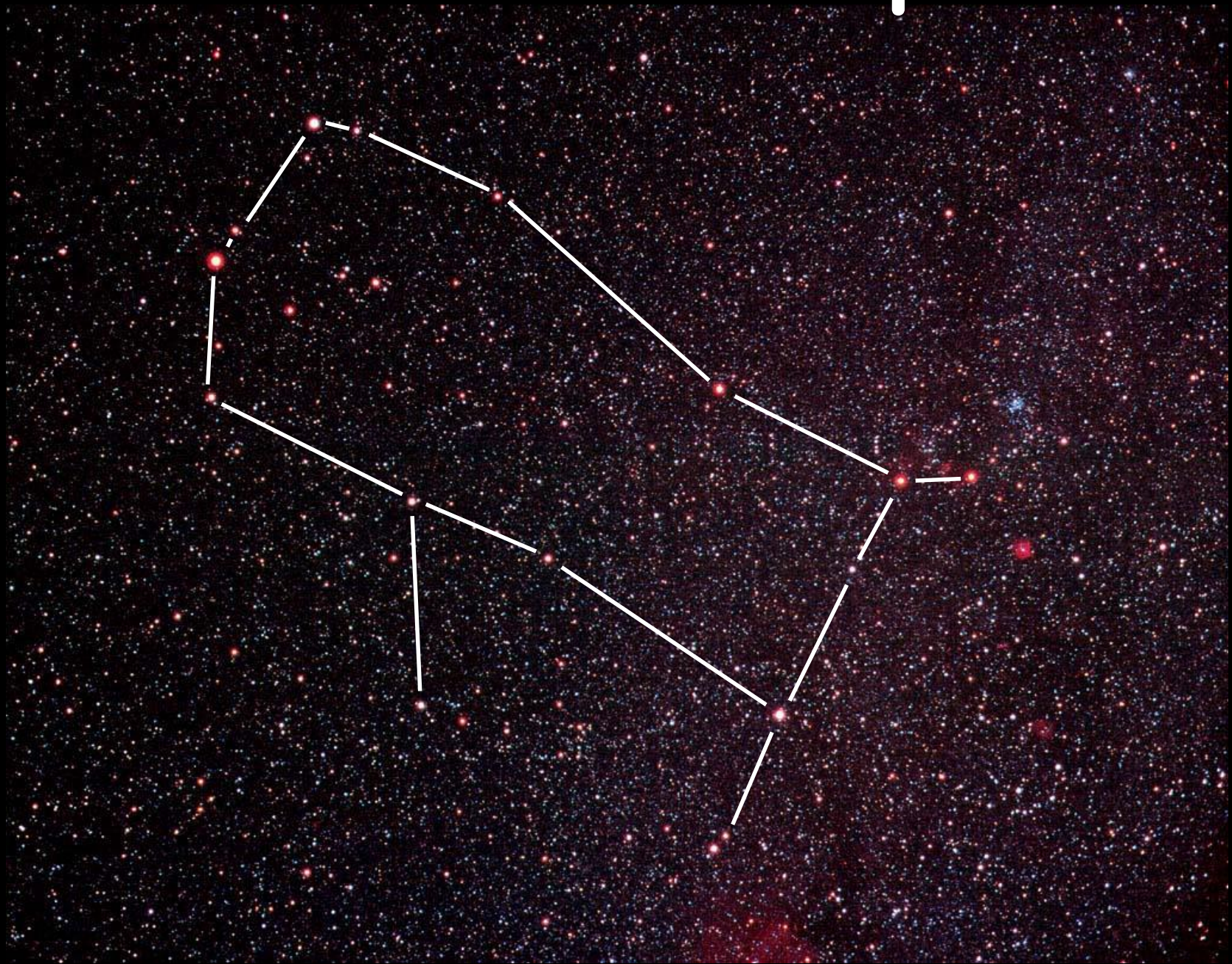
Gemini – Stars to mag 8.0



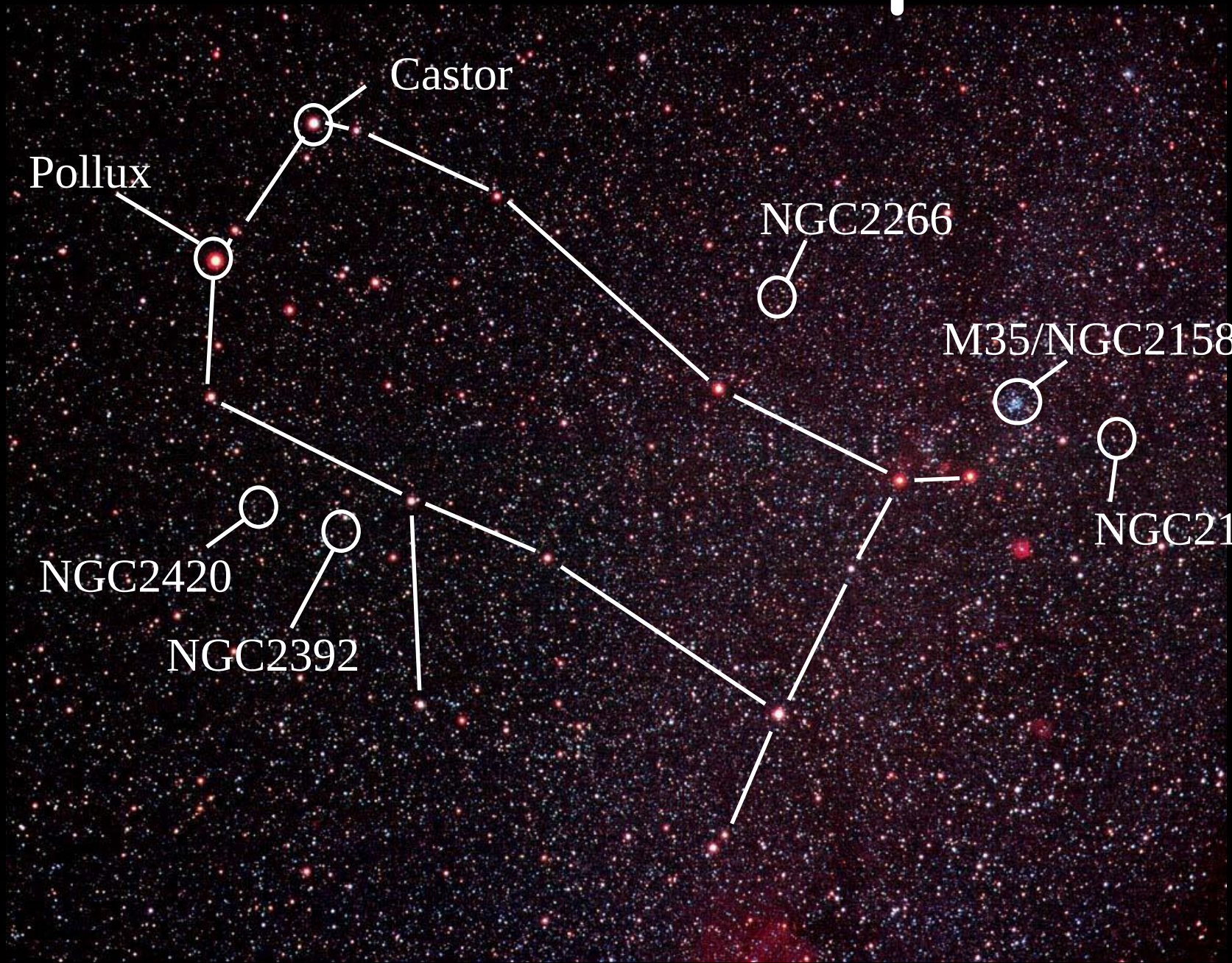
Gemini - 2 min Exposure



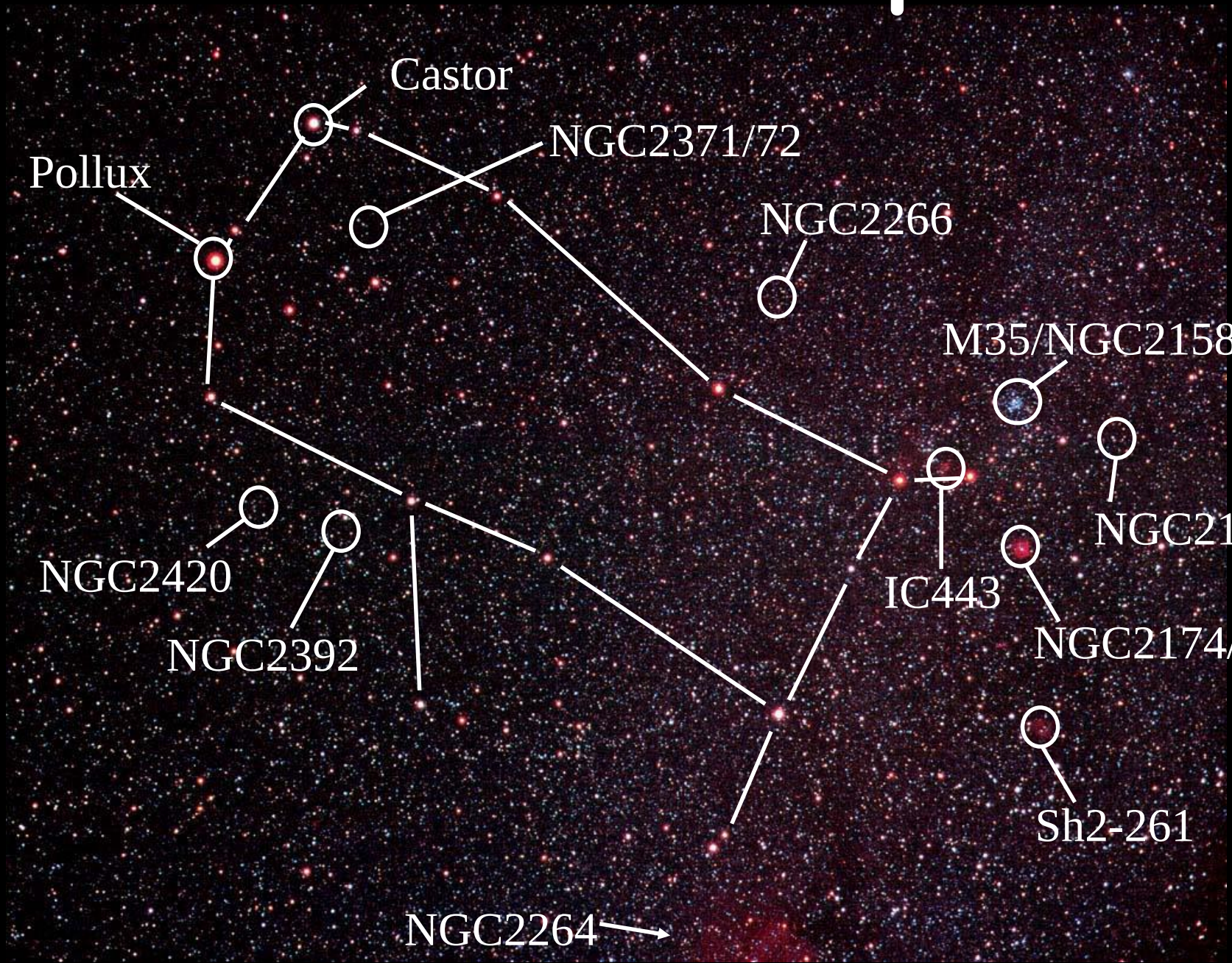
Gemini - 10 min Exposure



Gemini – 10 min Exposure



Gemini – 10 min Exposure

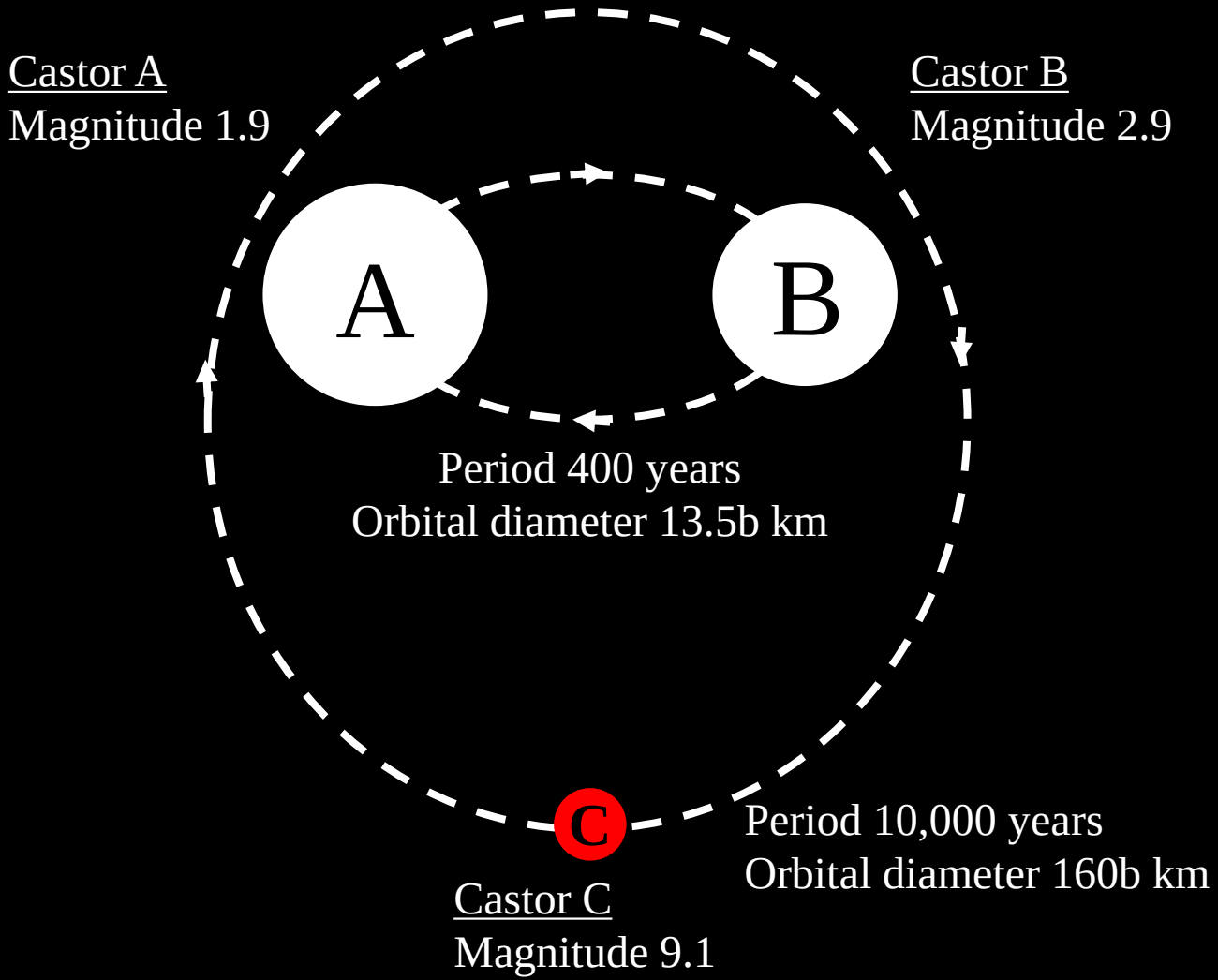


Castor & Pollux

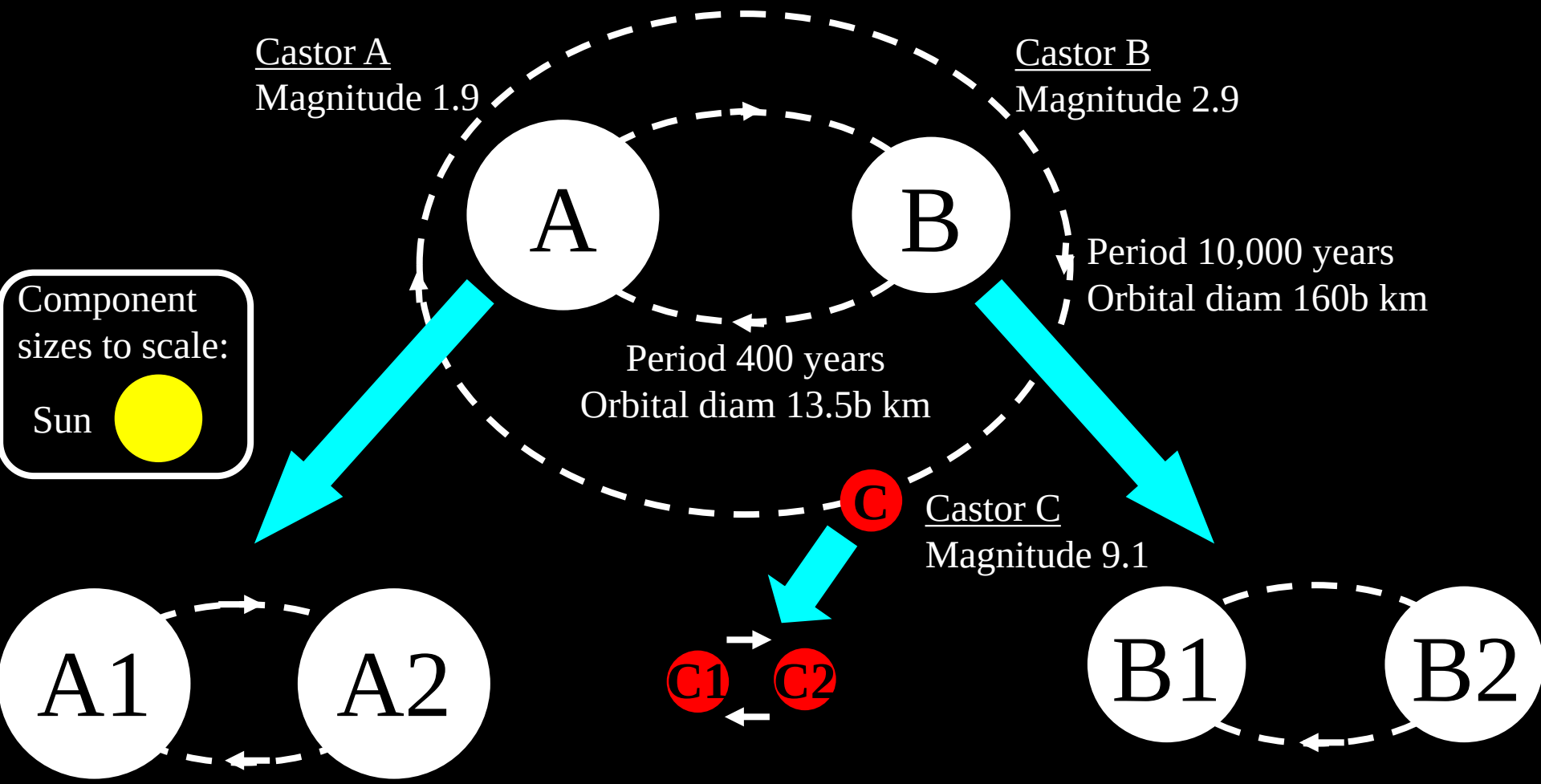
Castor & Pollux

Components of Castor

Combined magnitude of all components is 1.6



Components of Castor



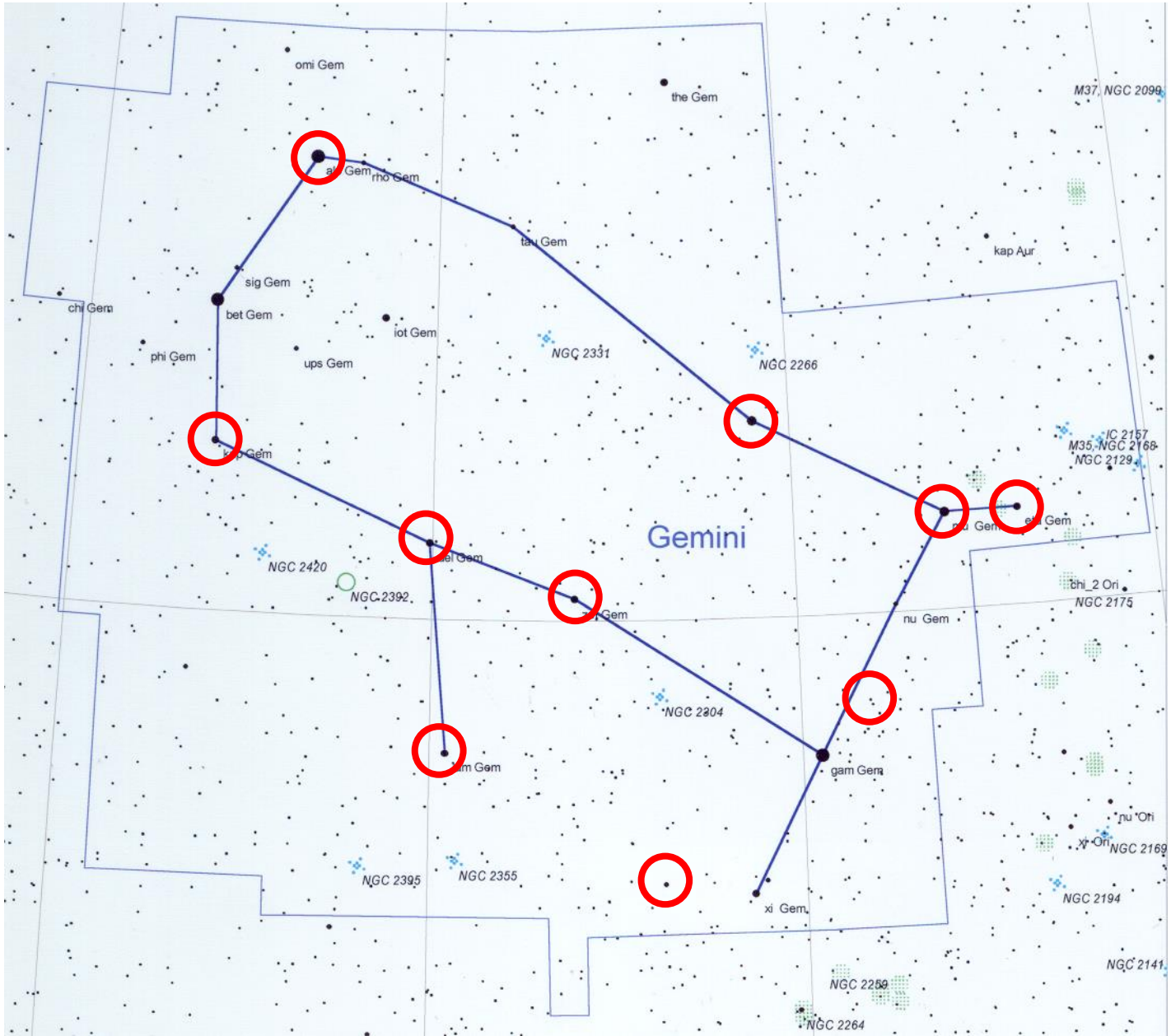
Two equal components,
Each 12x solar luminosity
Diameter 3m km
Separation 6.5m km
Period 9.2 days

Two components,
Diameters 1.0m & 1.1m km
Each 2.5% solar luminosity
Separation 2.5m km
Period 19.5 hrs

Two equal components,
Each 6x solar luminosity
Diameter 2.2m km
Separation 5.0m km
Period 2.9 days

Double & Multiple Stars

Gemini – Double & Multiple Stars



Double & Multiple Stars

Star	Magnitudes	Sep (“)	Notes
Mu Gem	3.2, 9.4	122	Wide separation. Visible in binoculars.
Zeta Gem	3.8, 10.5, 8.0	87, 96	Wide separation. Visible in binoculars.
Epsilon Gem	3.0, 9.0	110	Wide separation. Visible in binoculars.
20 Gem	6.3, 6.9	20	Yellowish & bluish components – very pretty!
38 Gem	4.7, 7.7	5.2	White and white/yellow components
Castor	1.9, 2.9, 9.1	3.9, 70	Visible in small telescope
Kappa Gem	3.6, 8.1	7.1	Slightly easier than Delta Gem
Delta Gem	3.5, 8.2	5.8	Easier than lambda, since magnitudes closer
Lambda Gem	3.6, 10.7	9.6	Test for 75mm telescope, but large difference in magnitudes
Eta Gem	3.3, 8	1.6	Couldn’t split in 254mm telescope. Primary is variable. Companion discovered in 1881.

M35 & NGC2158

M35 - 1 min Exposure

M35 - Amateur Image

M35 - Professional Image

NGC2392 - The *Eskimo* or *Clown Face* Nebula

NGC2392 -Amateur Image

NGC2392 - Mount Palomar Image

Photograph in red light

NGC2392 -Hubble Image

NGC2392 -Hubble Image

Small Telescopes Observing Night

Mon 16 February, 8.00pm