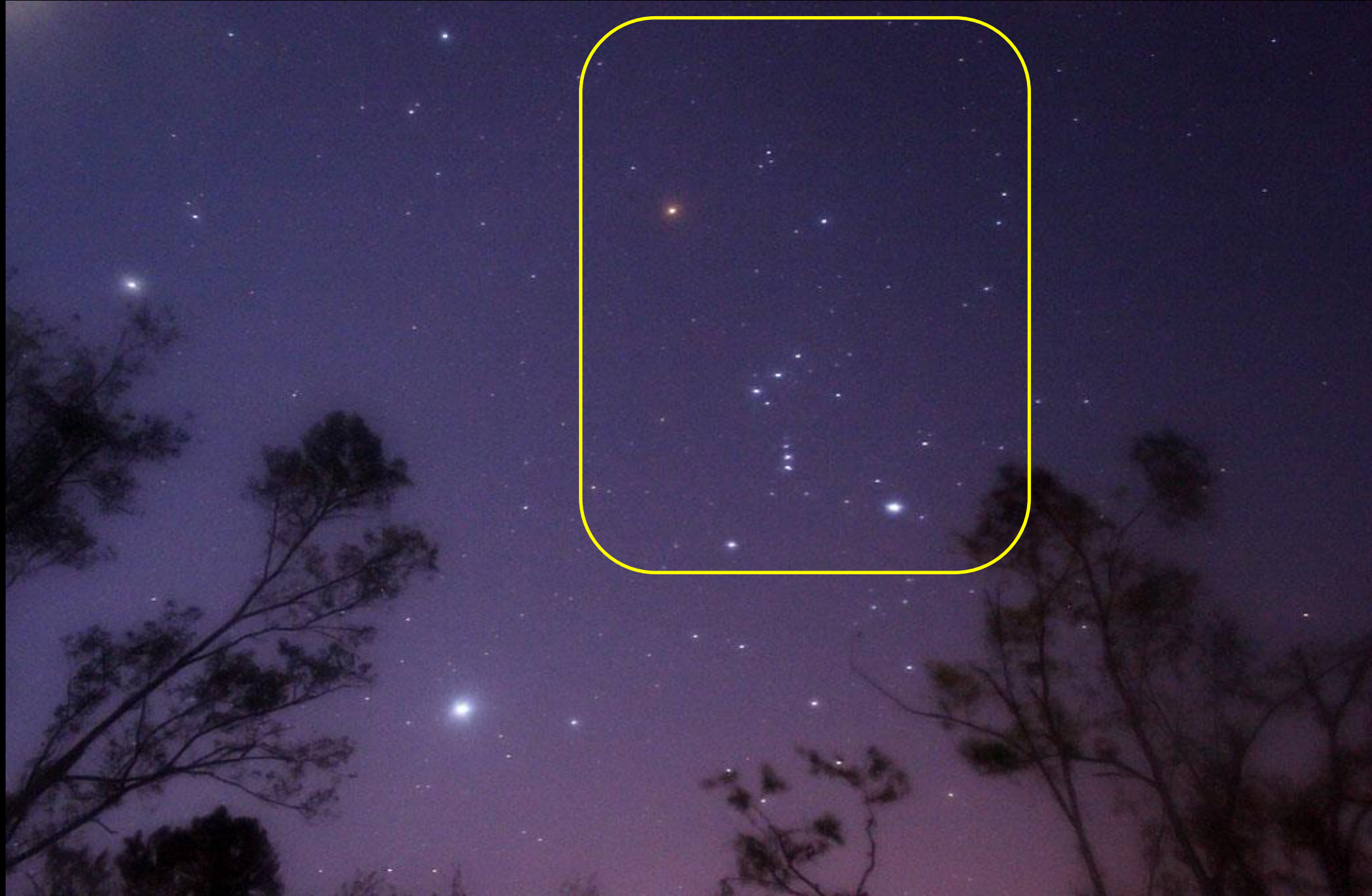


The Orion Constellation

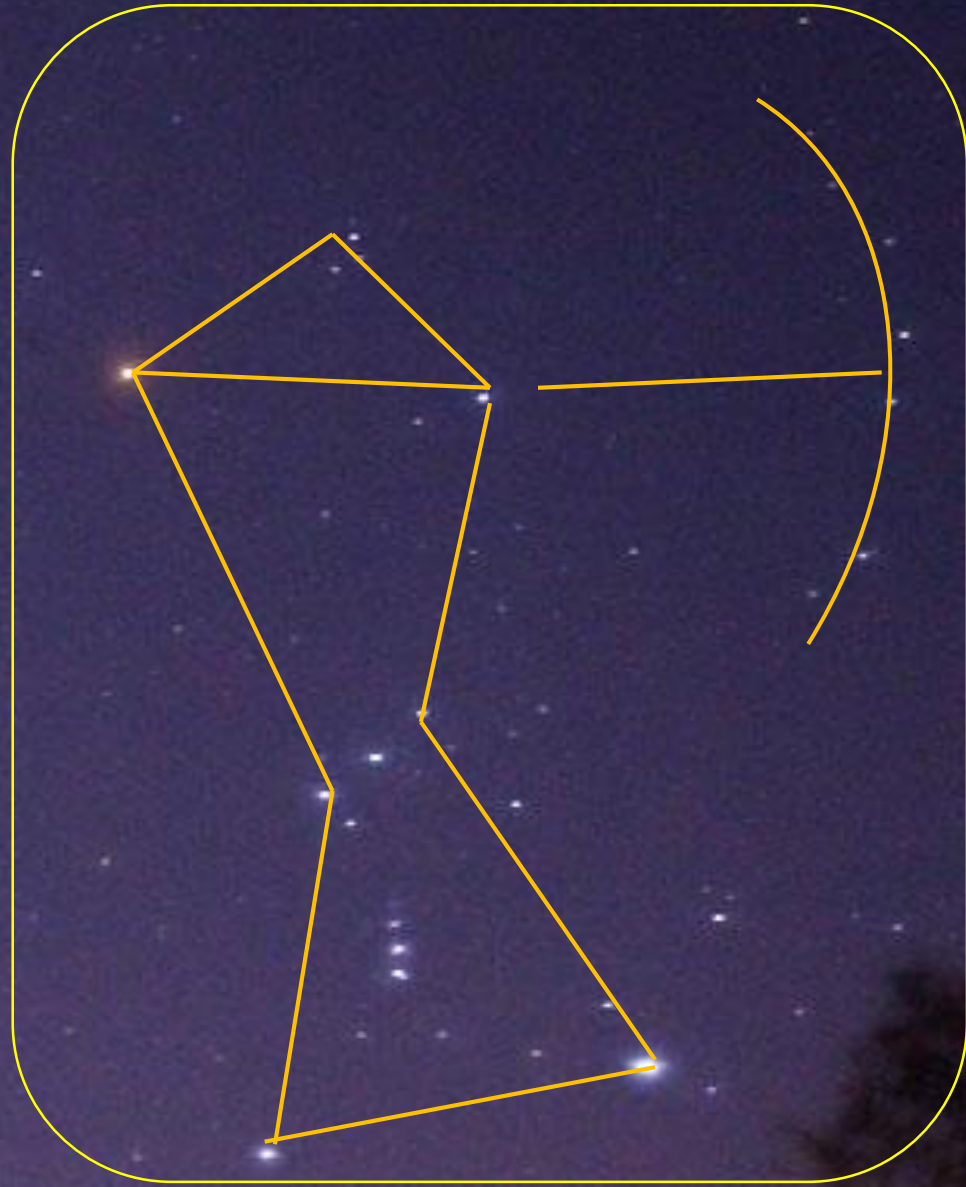
Meriem El Yajouri and Hassane Darhmaoui

NAEC Morocco

Lampedusa, 4-8 July, 2022







تسمية الجبار

اسمته العرب بالجوزاء والجبار
وأسمته الإغريق بالصيد (ترجمة Orion)
عند الكلدانيين كان اسمه الجبار العملاق
وعند السومريين الراعي الأمين في السماء
وأسماه الفراعنة هورس إله الشمس
الصغير



صدره الجبار وهو الجوزا على ما تترك في الميسمان



الجبار

يسمى المرزم وهو المرزم اولى لانه يقدم اليه الاحمر ويسمى الشعة المنقوسه التي
 الكه وهي الساج عشر الى الحامس والعشر ناع الجوزا ودوات الجوزا القيصا م
 صدره الجبار وهو الجوزا على ما تترك في الميسمان



الجوزاء

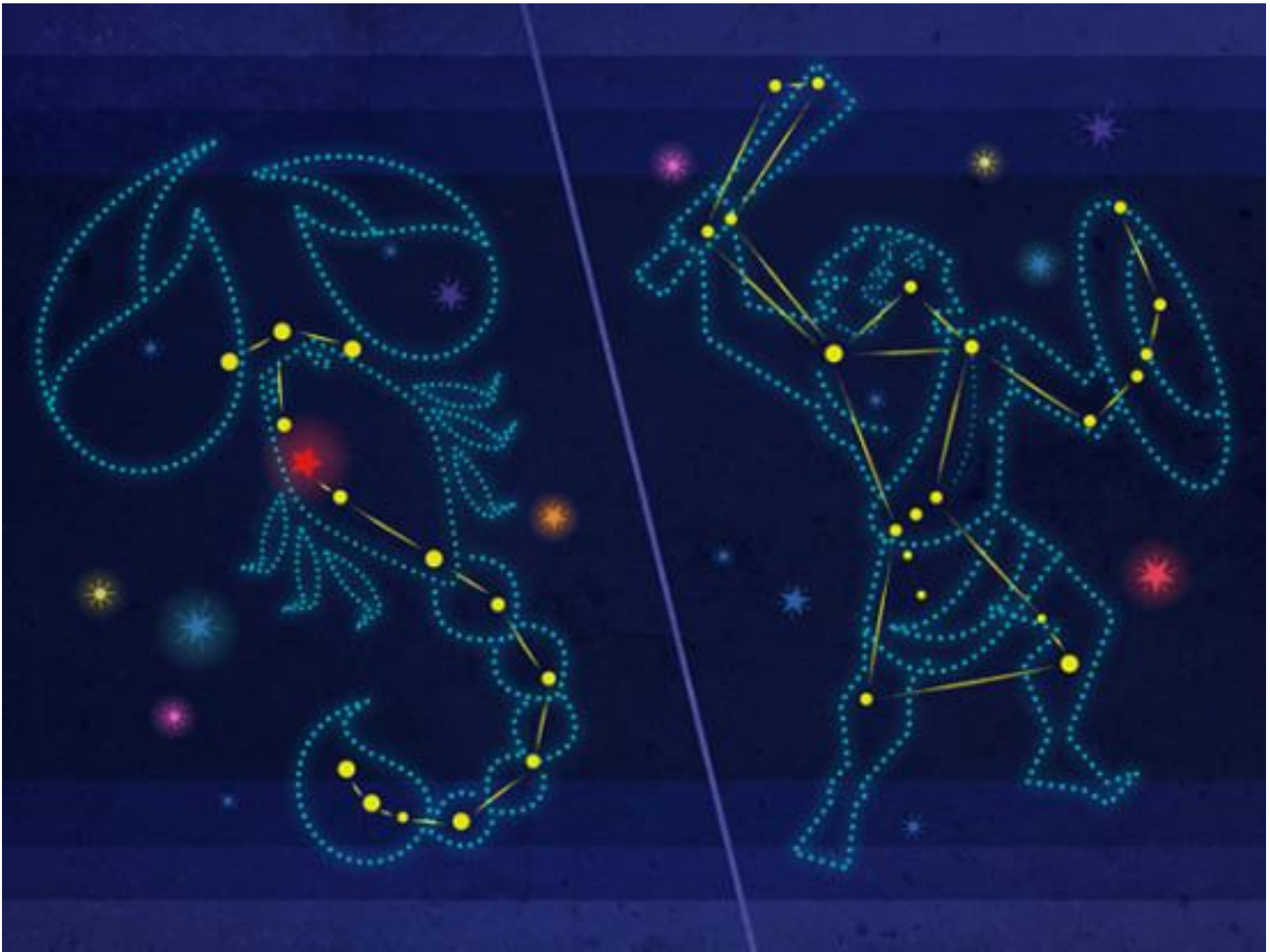
الأسطورة اليونانية

أوريون هو ابن الاله نبتون من
يوريال ملكة الامازون المشهورة
بالصيد وقد ورث عن امه
مهاراتها في الصيد وأصبح
متكبرا على غيره من الرجال
وعقابا له ارسلت له الاله عقربا
لدغته في قدمه فمات فرفعته
ديانا اله الصيد الى السماء
ووضعتة بموضع لا يرى
العقرب فيه

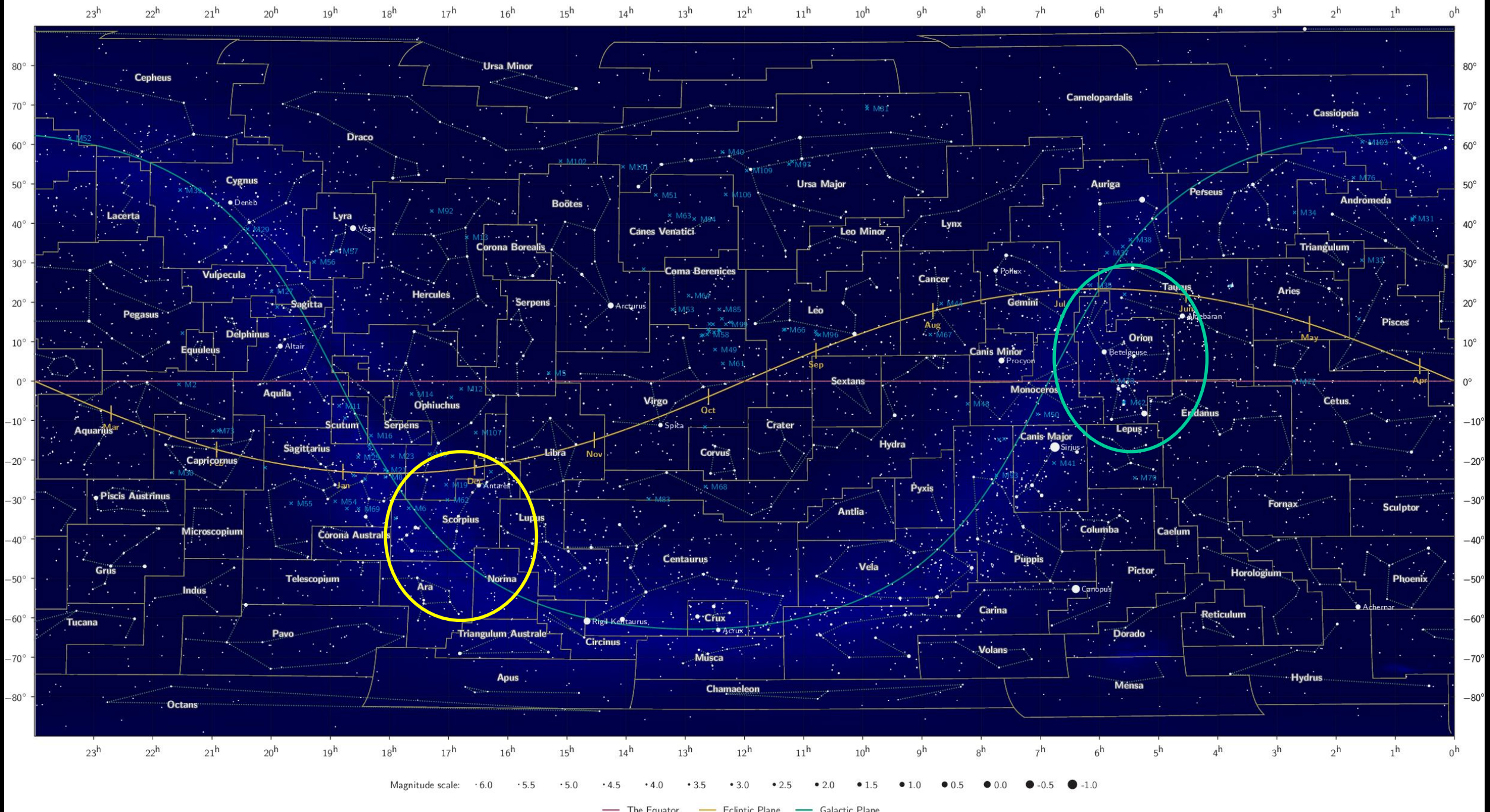


Greek Mythology

Orion is the son of the god Neptune of Euryal, the queen of the Amazon, famous for hunting. He inherited from his mother her hunting skills and became arrogant over other men. As a punishment, the god sent him a scorpion that sting him in the foot, and he died. Diana, the god of hunting, raised him to heaven and placed him in a place where the scorpion could not be seen.



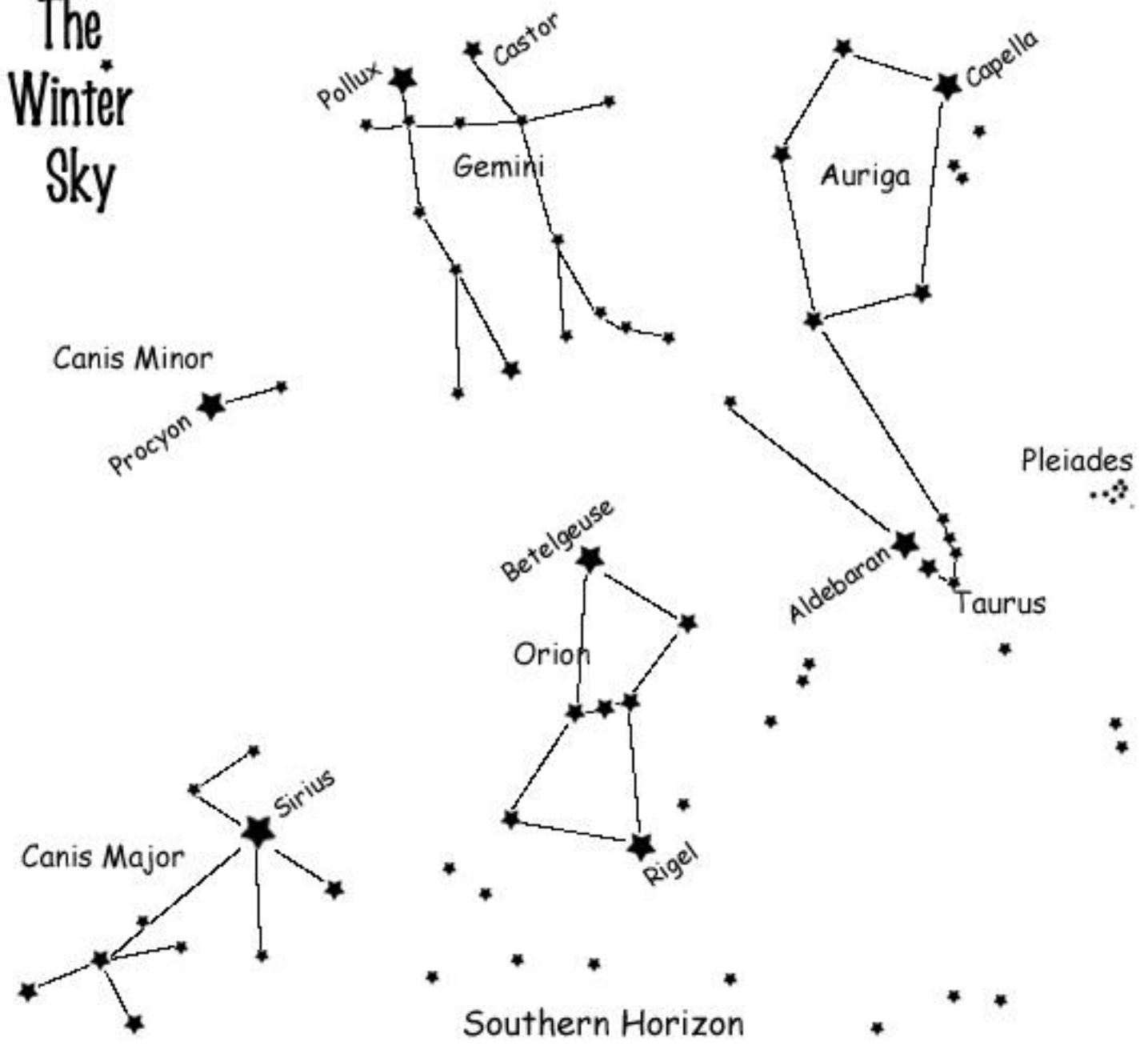


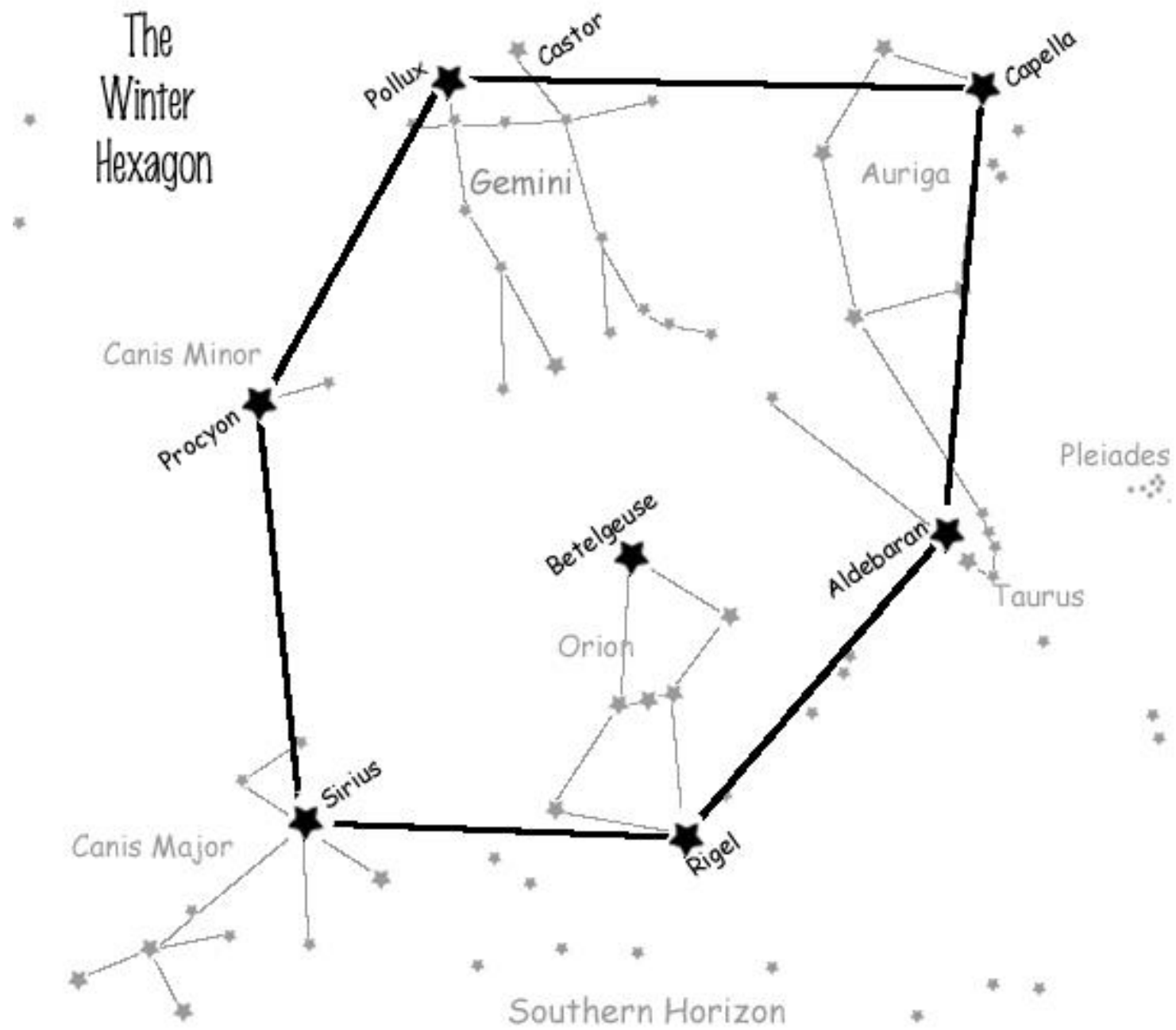


Magnitude scale: 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5 -1.0

— The Equator — Ecliptic Plane — Galactic Plane

The Winter Sky





A star map of the constellation Orion, showing its characteristic belt and sword. The stars are labeled with their names in white text. The background is a dark field of stars, with the constellation's stars being more prominent.

Meissa

Bellatrix

Bételgeuse

Mintaka

Alnilam

Alnitak

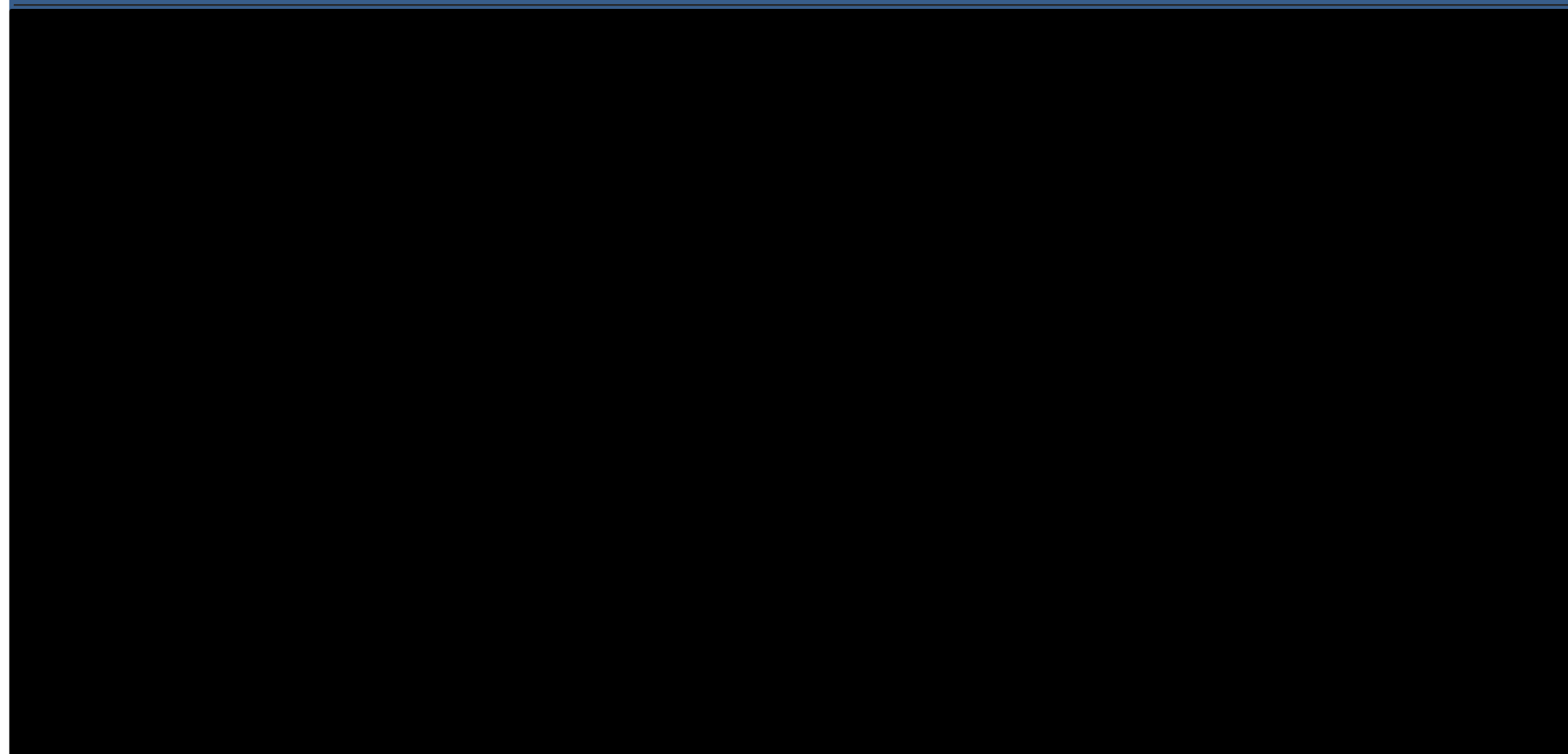
Saiph

Rigel

Meissa

Bellatrix

Bételgeuse



Names of Orion stars

Meissa : الميسان

Bételgeuse : إيط الجوزاء

Bellatrix : latin name - warior



Alnilam

Mintaka

Alnitak

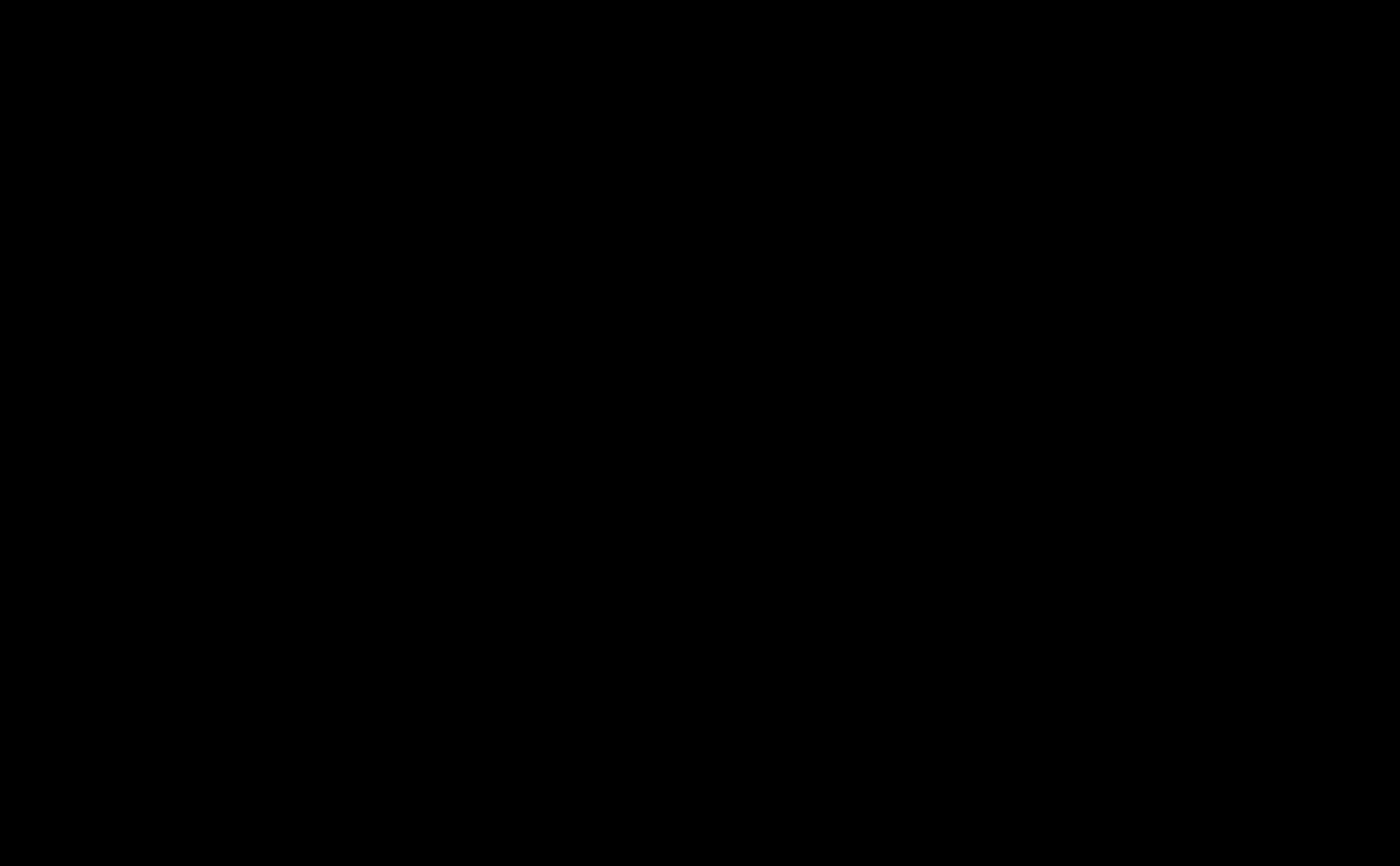
Names of Orion stars

The Jewell belt

Alnitak : النطاق

Alnilam : النظام

Mintaka : المنطقة



Saiph

Rigel

Names of Orion stars

Saiph : السيف

Rigel : رجل الجوزاء



Colors of Stars!

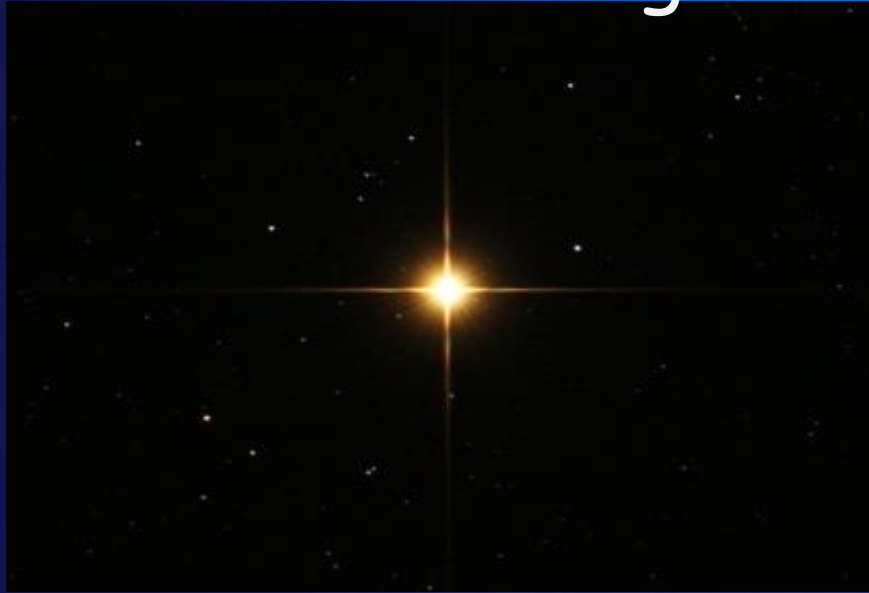




Why stars have
different colors?



Old stars are
less hot and are
red or orange



Betelgeuse
3600 °C

Younger stars are
hotter and have Blue
and white color



Rigel
12 000 °C



Stars have different
sizes!



Antares

قلب العقرب



يد الجوزاء
ويُسمى خطأ أيضاً إبط الجوزاء

Betelgeuse



الدبران



Aldebaran

رجل



Rigel

السماك
الرامح

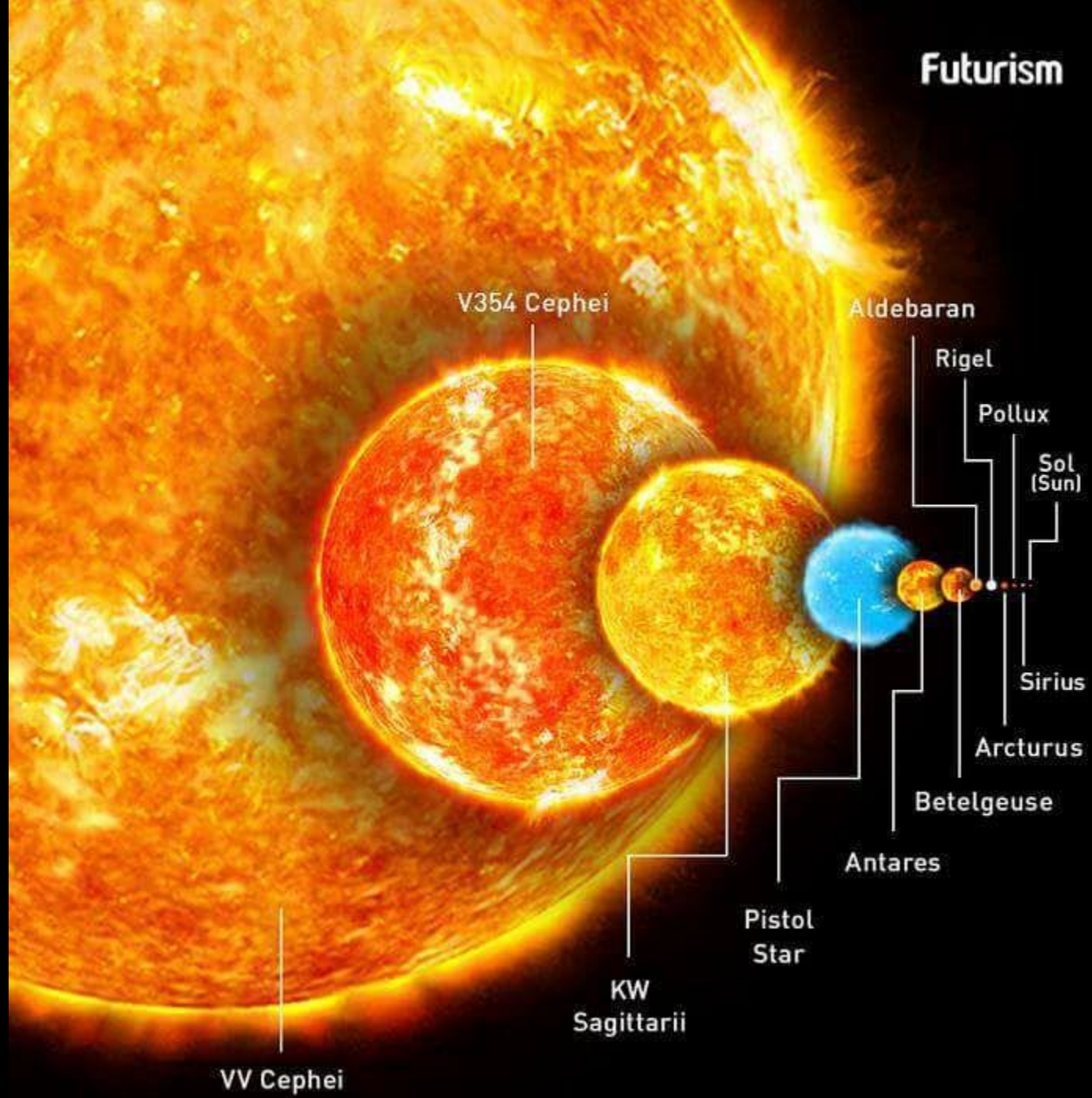


Arcturus



الشمس
Sun

Futurism



Stars have different sizes
when they're born



Dwarf/Yellow
Sun



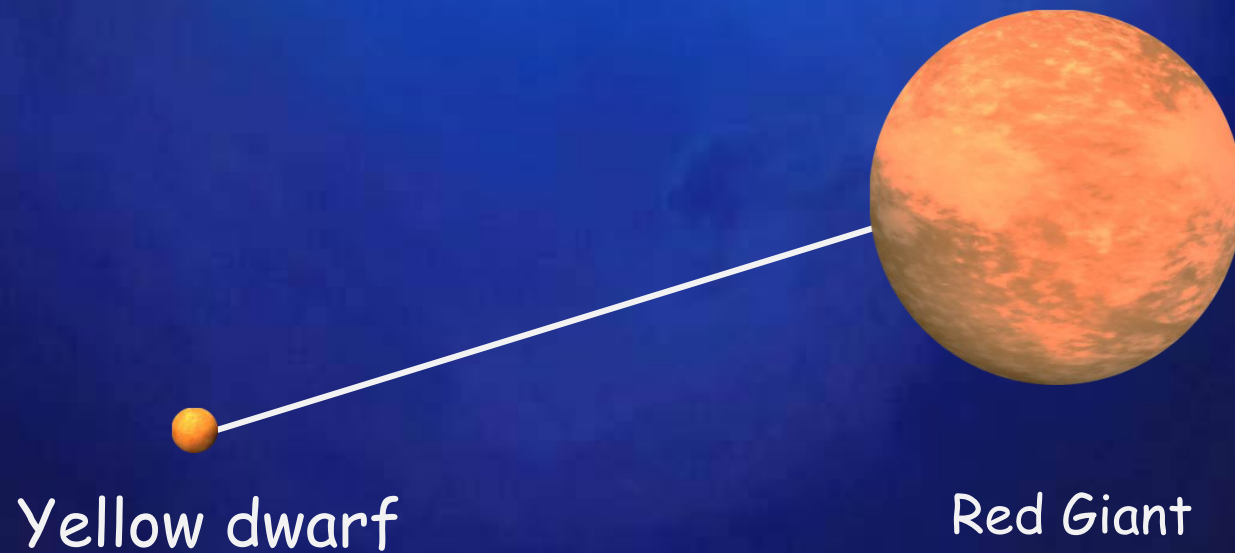
Giant/Blue - white



Super Giant/ Blue

They grow when they get older

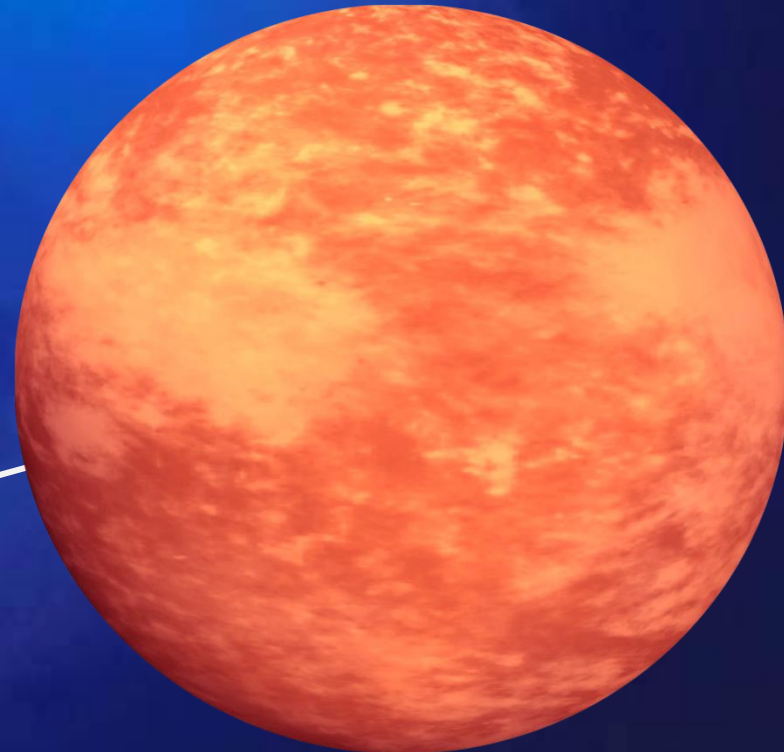
Life time: billions of years



Life time: Hundred millions of years



Giant Blue/White

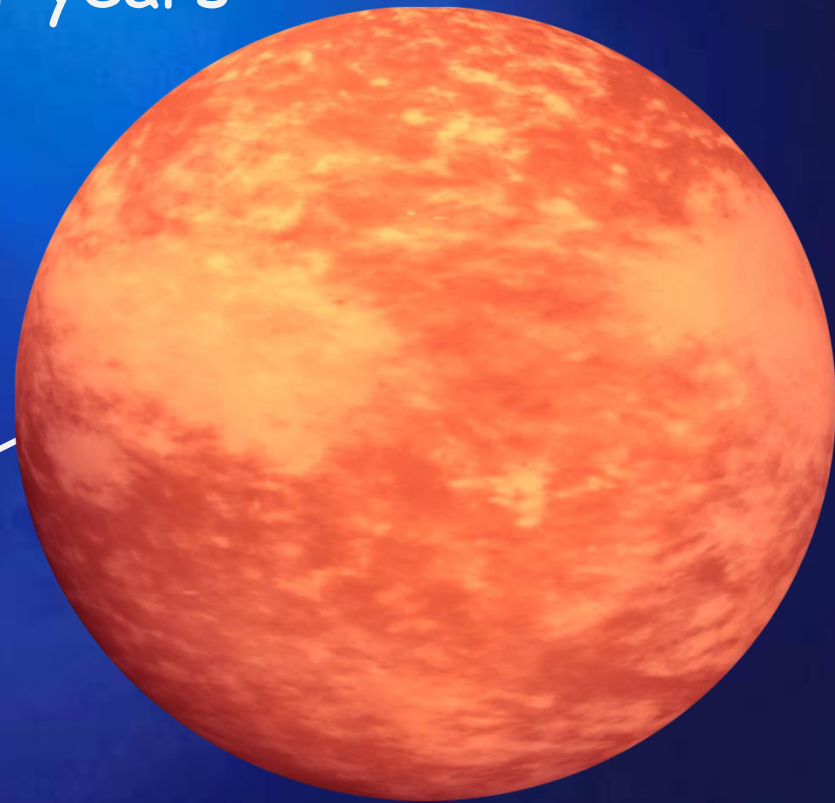


Super Géantes Rouges

Life time: ten millions of years

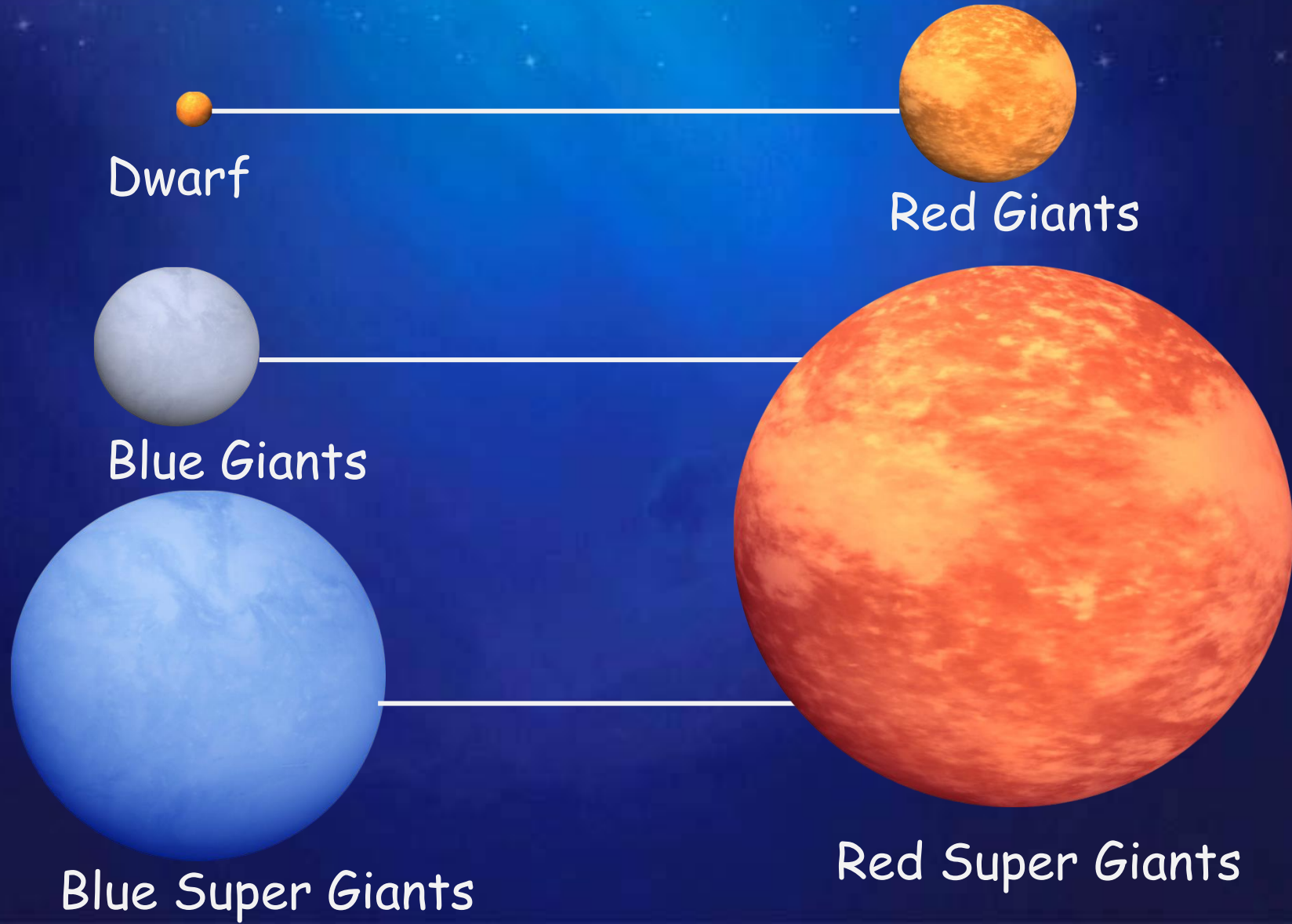


Blue Super Giant

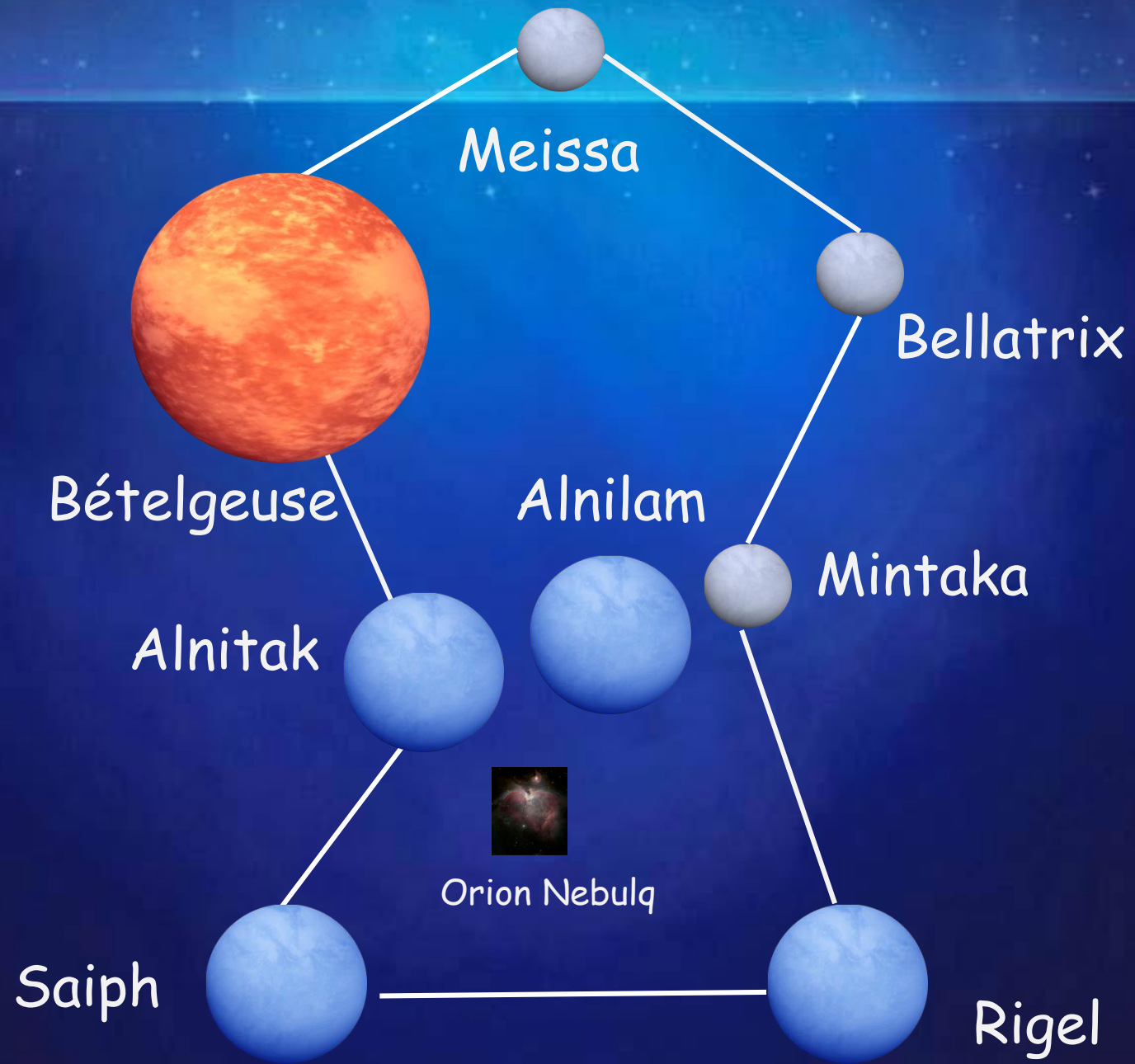


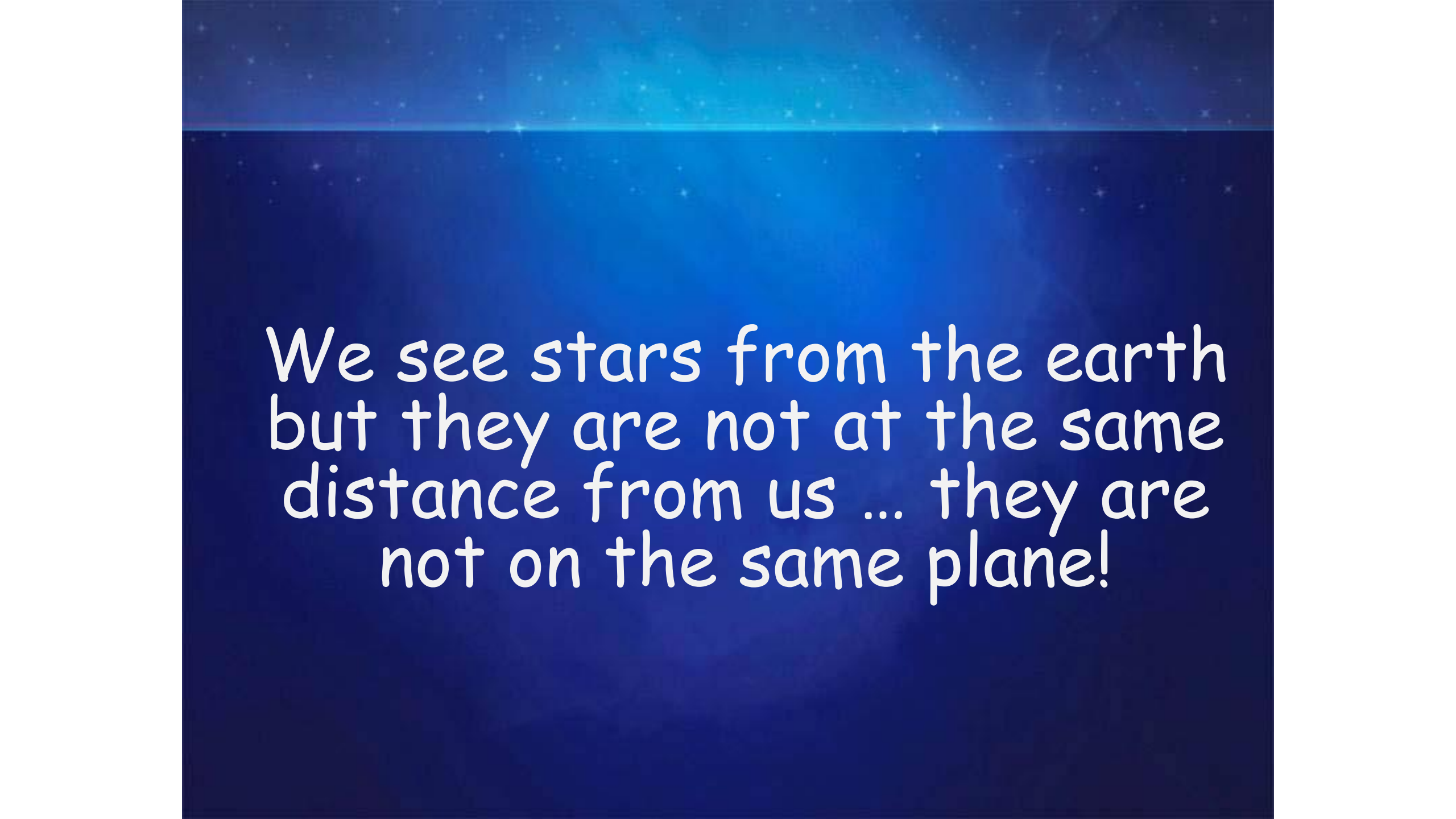
Red Super Giant

Summary :









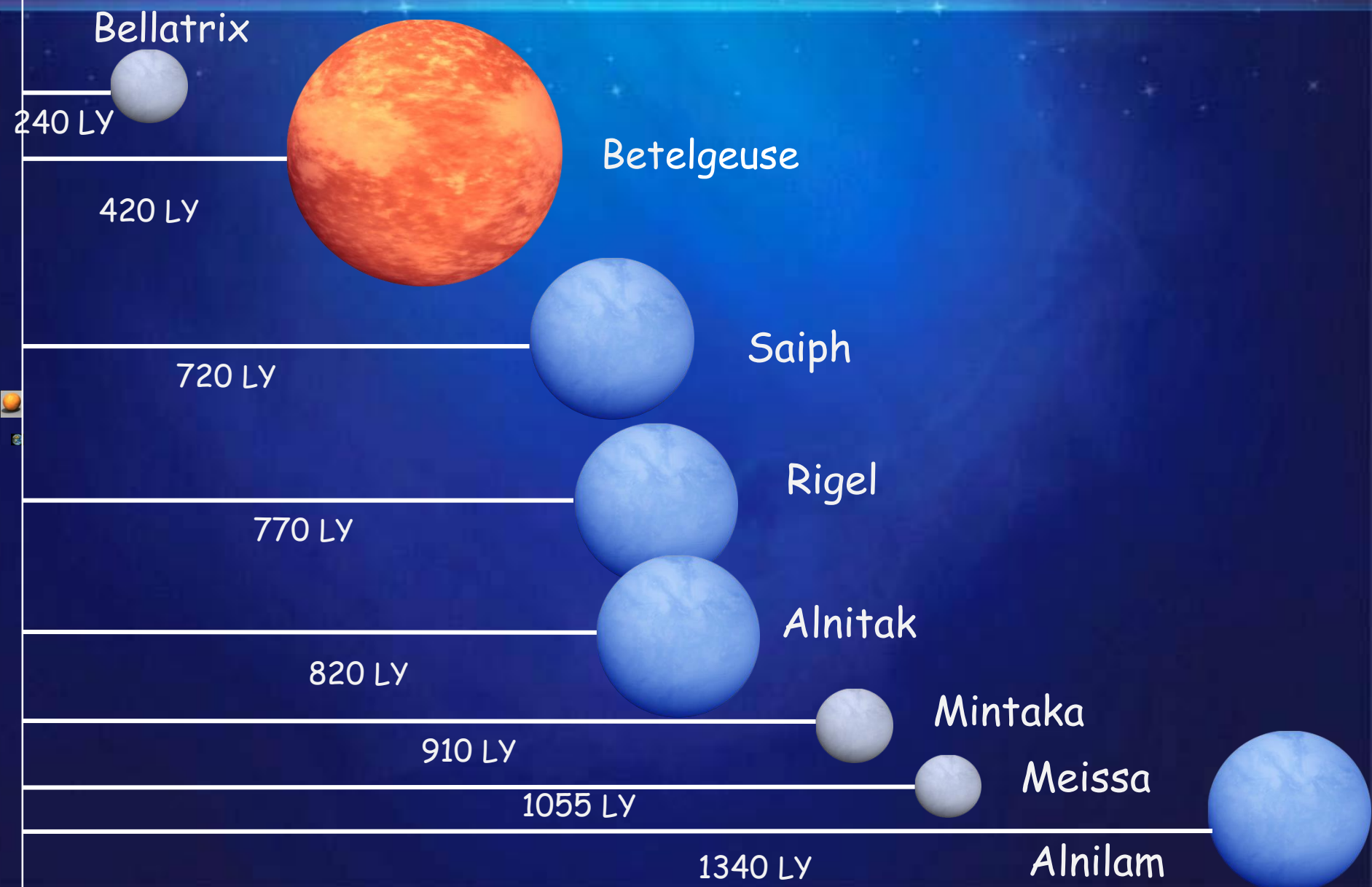
We see stars from the earth
but they are not at the same
distance from us ... they are
not on the same plane!

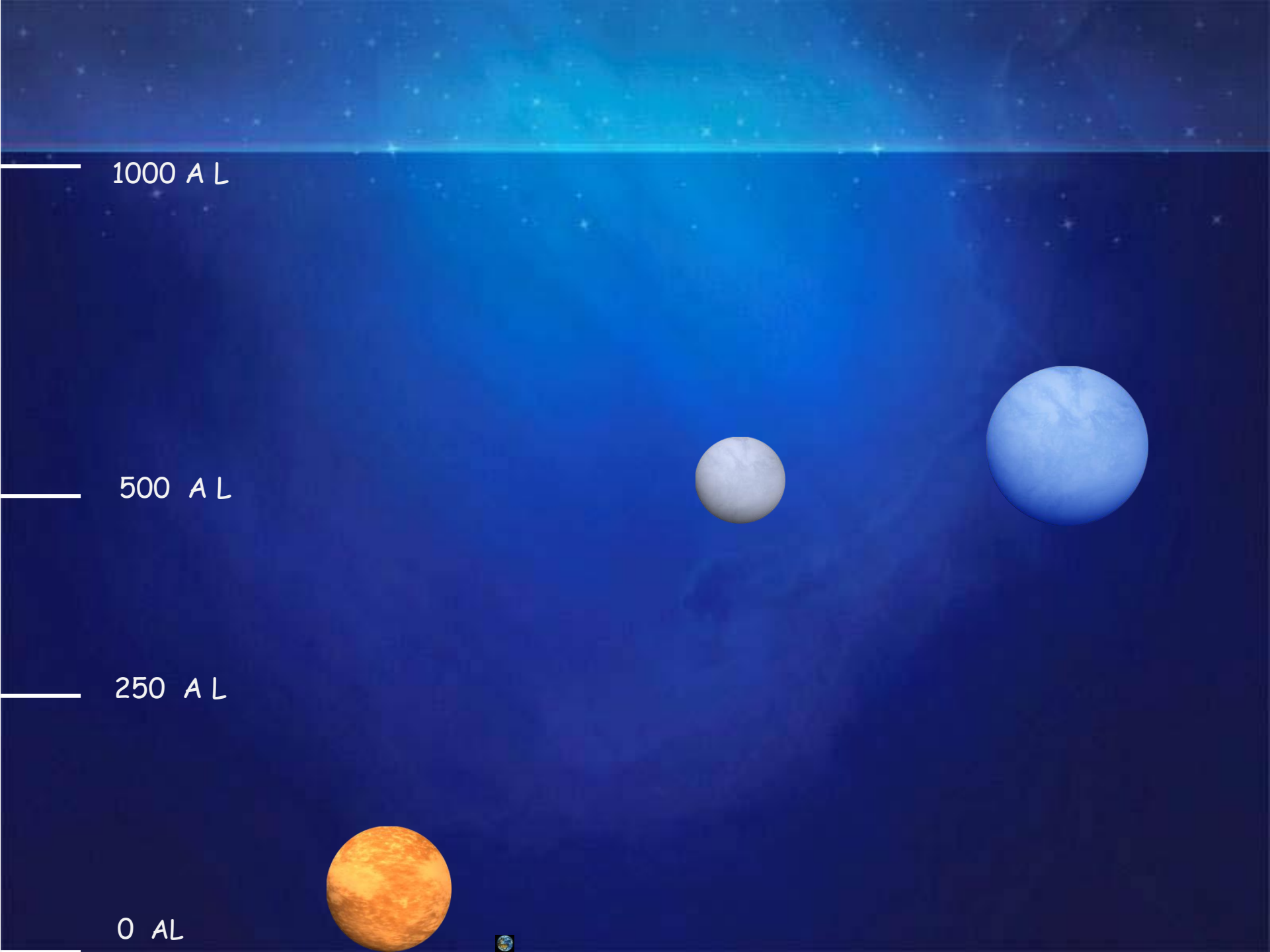


How do we calculate
distances in space?

We use Light year!

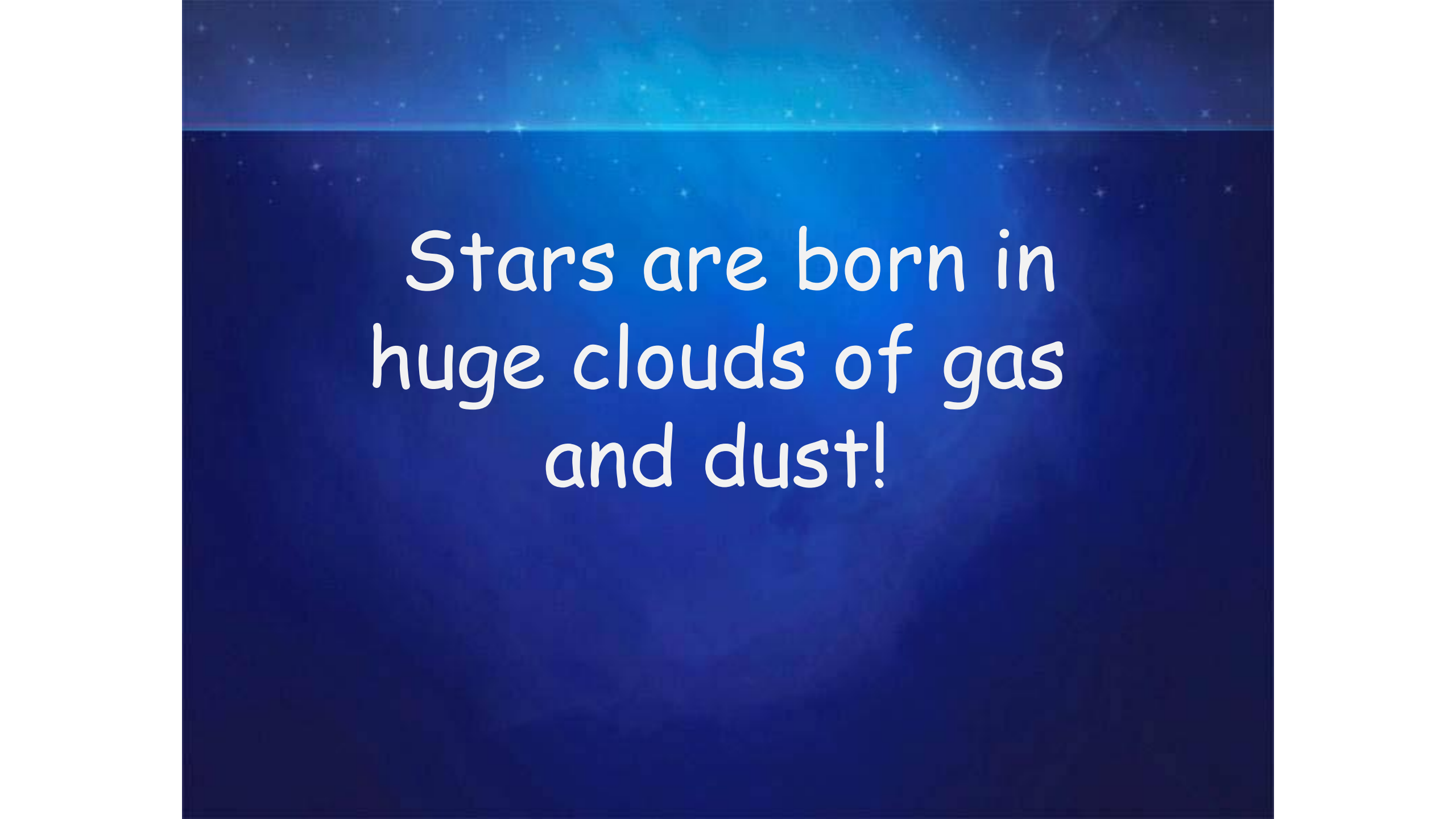
What is a light year?



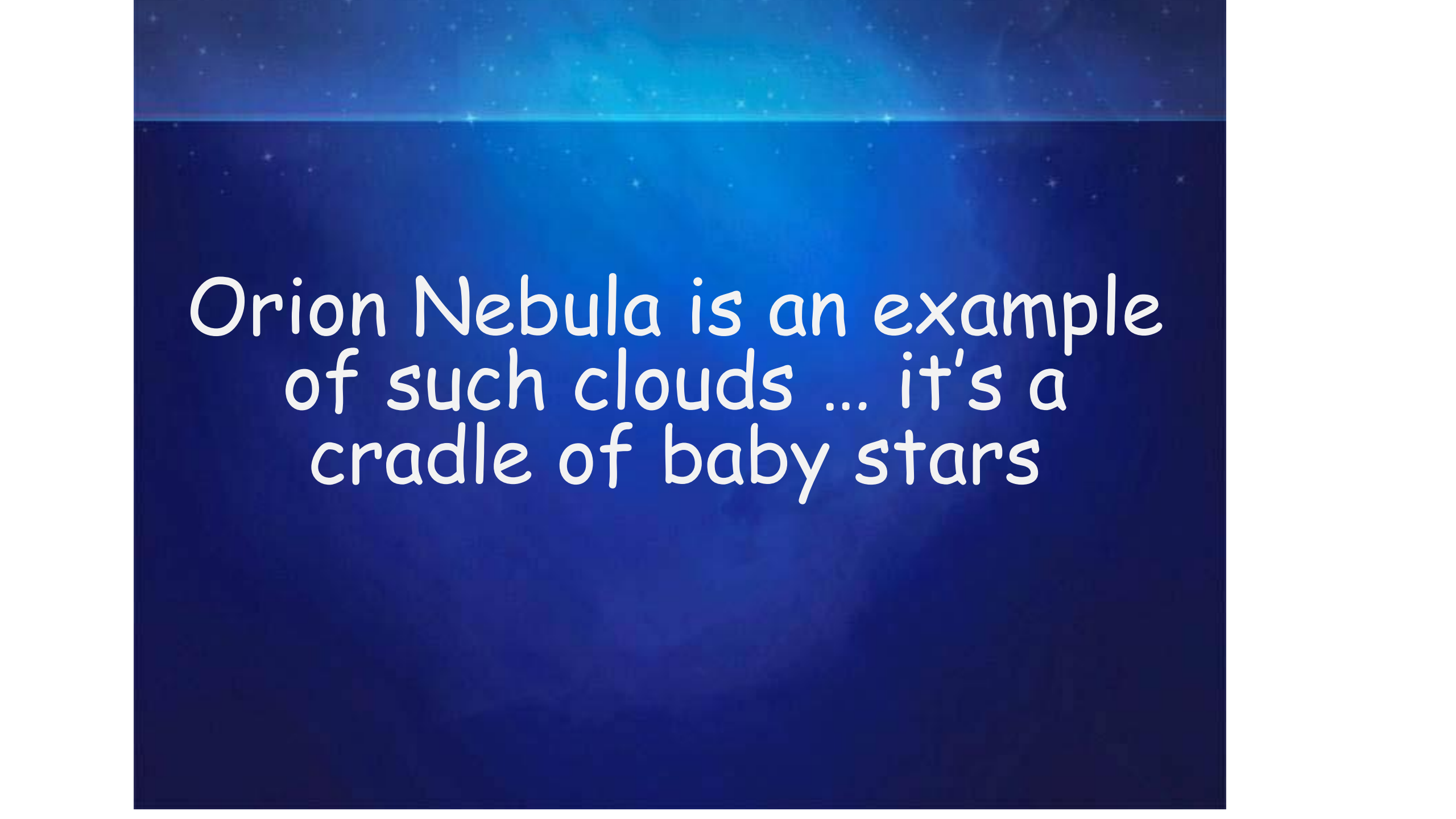


The background is a vertical gradient of blue, transitioning from a lighter, cyanish blue at the top to a deep, dark blue at the bottom. Scattered throughout the background are numerous small, white, star-like specks, giving it the appearance of a starry night sky or a nebula.

Where stars are born?



Stars are born in
huge clouds of gas
and dust!



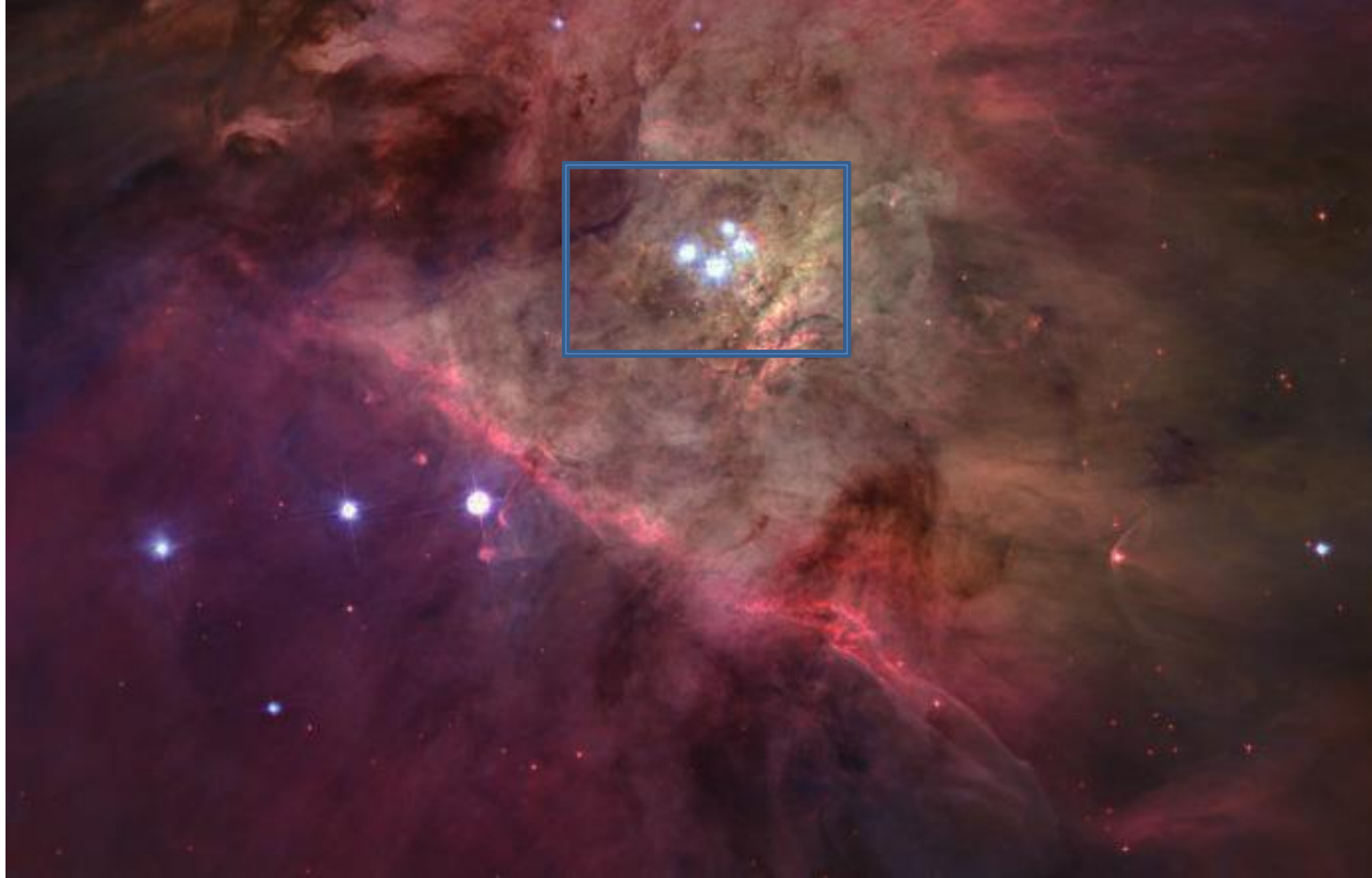
Orion Nebula is an example
of such clouds ... it's a
cradle of baby stars



Orion Nebula

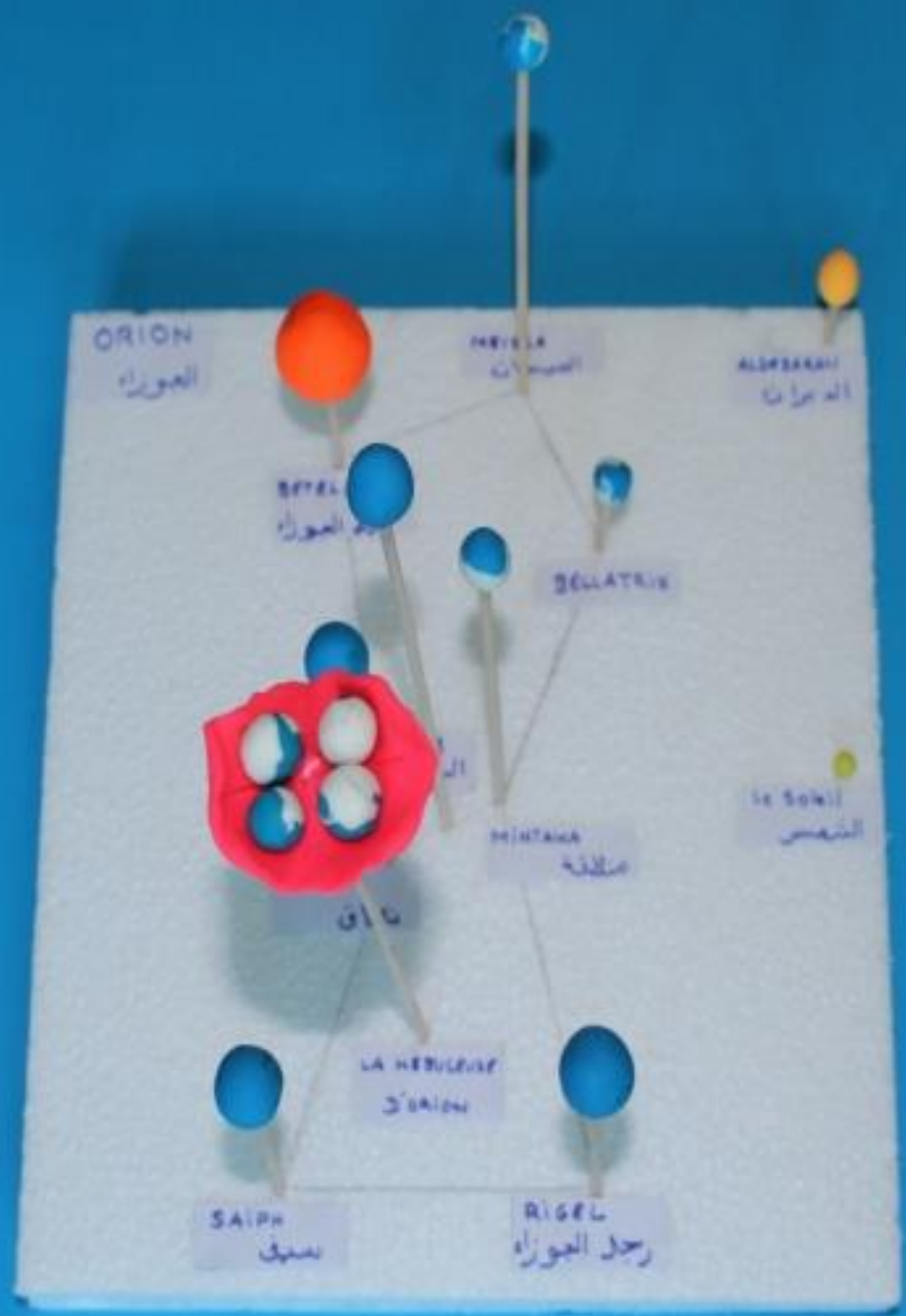








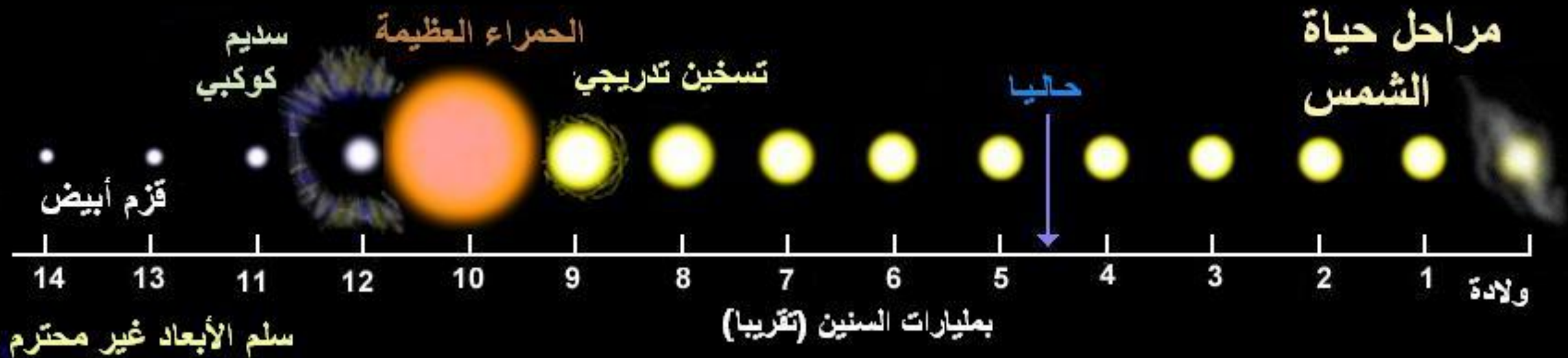
تجمع المعين
Trapezium
Star Cluster



Nature and distance of the stars of the constellation of Orion:

Stars	Nature	Distance from sun (Light Year)	Length of spike (cm) Scale: 1cm => 75 Light Year	Corresponding Diameter in cm - Dwarfs: 2 mm - Giant: 1 cm - Supergiants/ Orange: 1.5 cm - Supergiant/ Red-Orange : 3 cm
Meissa	Giant Blue/white	1055		
Betelgeuse	Supergiant/ Orange	420		
Bellatrix	Giant/ Blue-white	240		
Alnitak	Supergiant/ Blue	820		
Alnilam	Supergiant/ Blue	1340		
Mintaka	Giant Blue/White	910		
Saiph	Supergiant /Blue	720		
Rigel	Supergiant / Blue	770		
Aldebaran	Giant/ Orange	75		
Sun	Yellow Dwarf	0		

Nebula	Nature	Distance from sun (Light Year)	Length of spike (cm)	Corresponding Diameter
The Orion Nebula	Red Gas and dust Cloud	1500 Light Years		4 cm in diameter containing 4 young white-blue giants



شكراً

Thank you