



STARS Constellations





STARS - Constellations

Overview

A few bright stars associated with every constellation have been named by different cultures.

European and Arabic culture names were assigned by early Roman, Babylonian, Greek, Sumerian, and Arab astronomers.

Other cultures, such as Native American and Chinese, have their own names for the same stars.

The inconsistency of star names necessitated the development of a more systematic method of nomenclature, or naming.

We now use brightness as the criterion to label stars within any given constellation.

The star with the brightest apparent magnitude in each constellation is named “alpha,” followed by the possessive form of the Latin name for the constellation; the second brightest, “beta,” the third brightest, “gamma,” and so on down through the Greek alphabet. For example, “Capella” has a scientific name of “alpha Aurigae”, “ α Aurigae,” or “ α Aur” (“Aur” being the abbreviation for Auriga).



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Since there are more stars in a constellation than letters in the Greek alphabet, several different naming systems take over after the last Greek letter is used.

To the right are the possessive forms and abbreviations for the constellations and the Greek alphabet for reference in naming the stars within the constellations.

CONSTELLATIONS

| Name | Possessive Form | Abbreviation |
|------------|-----------------|--------------|
| Auriga | Aurigae | Aur |
| Cassiopeia | Cassiopeiae | Cas |
| Cepheus | Cephei | Cep |
| Cygnus | Cygni | Cyg |
| Ursa Major | Ursa Majoris | UMa |

GREEK ALPHABET

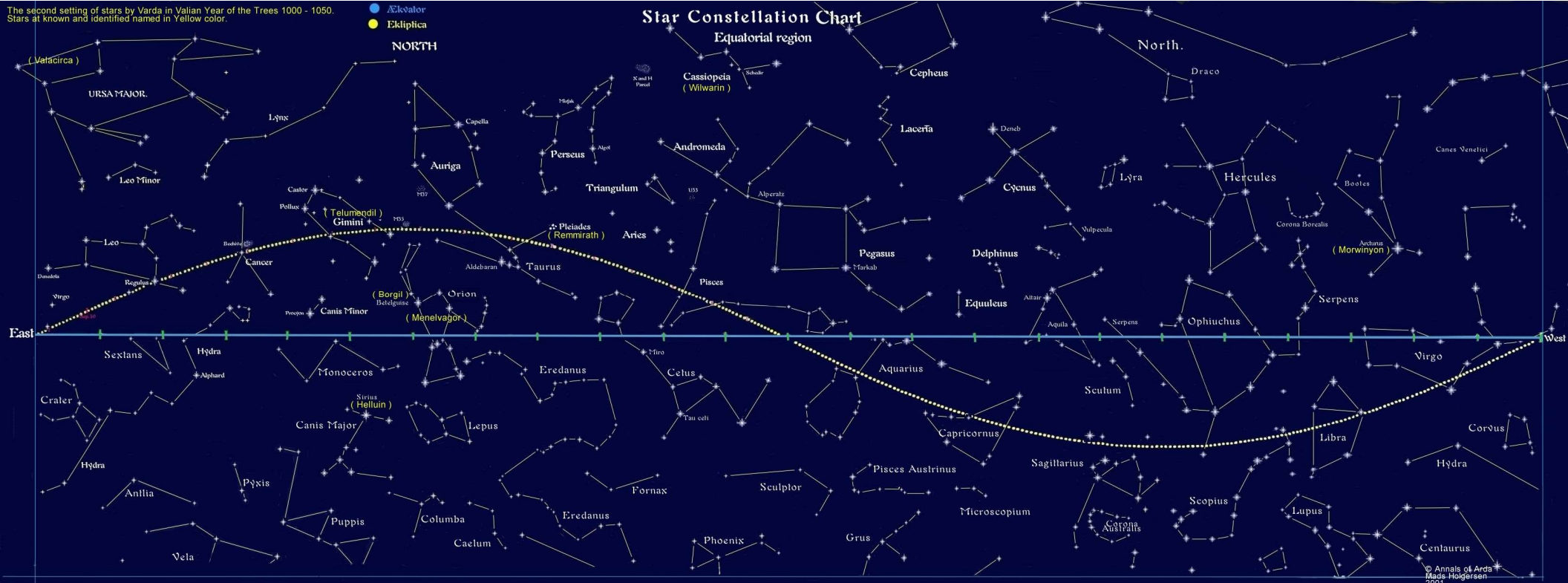
| | | | |
|-----------|----------|-----------|-----------|
| α alpha | η eta | ν nu | τ tau |
| β beta | θ theta | ξ xi | υ upsilon |
| γ gamma | ι iota | ο omicron | φ phi |
| δ delta | κ kappa | π pi | χ chi |
| ε epsilon | λ lambda | ρ rho | ψ psi |
| ζ zeta | μ mu | σ sigma | ω omega |



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Constellations

The second setting of stars by Varda in Valian Year of the Trees 1000 - 1050. Stars at known and identified named in Yellow color.

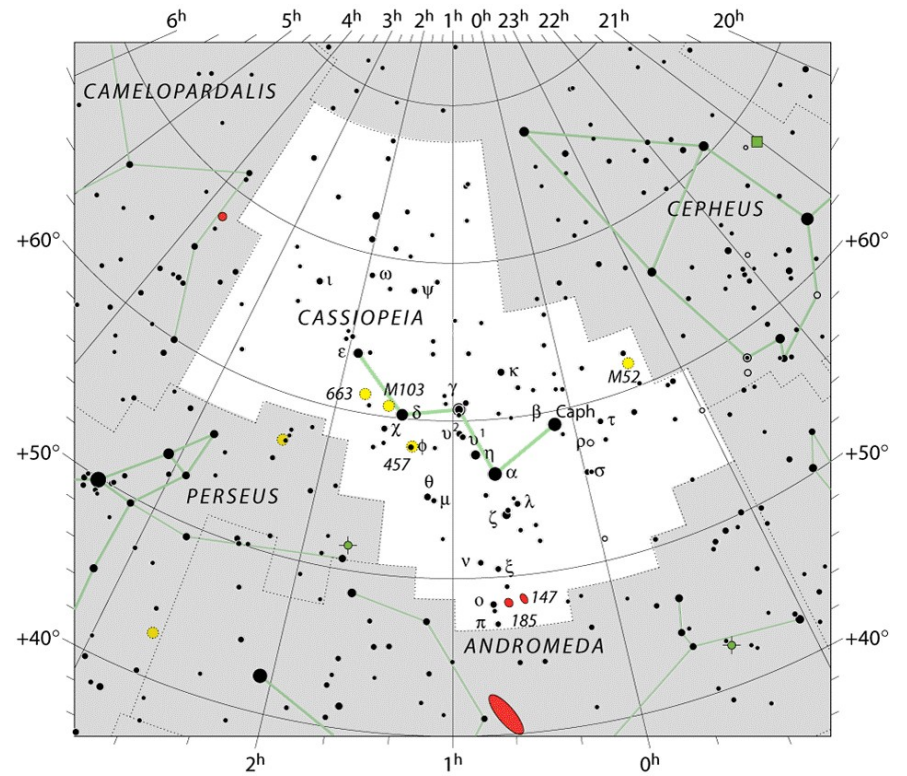
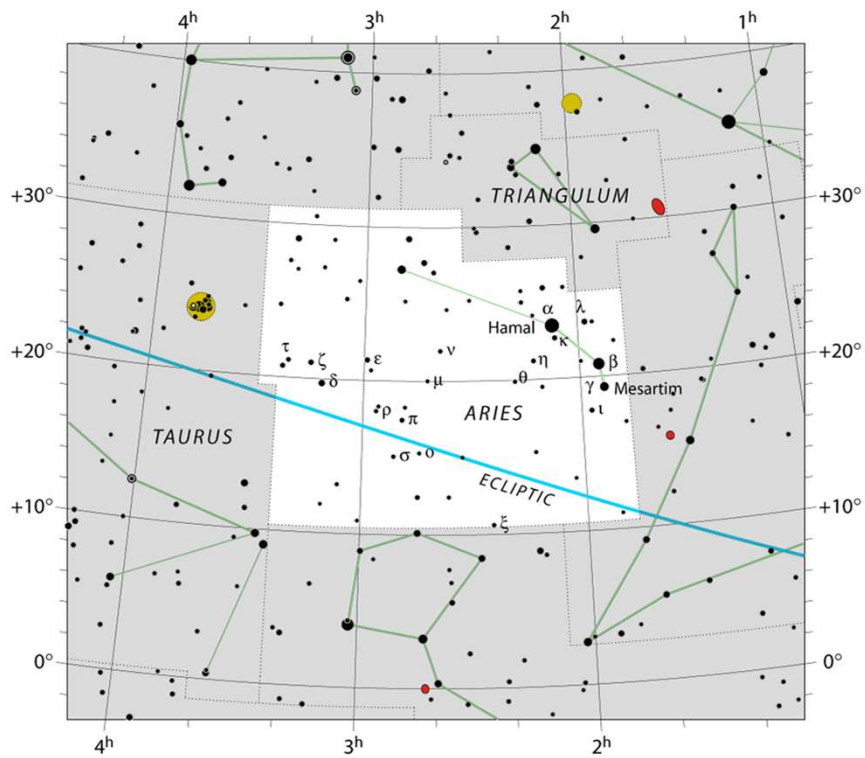


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Constellation Maps



● 2 ● 3 ● 4 ● 5 ● 6



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● 1 ● 2 ● 3 ● 4 ● 5 ● 6

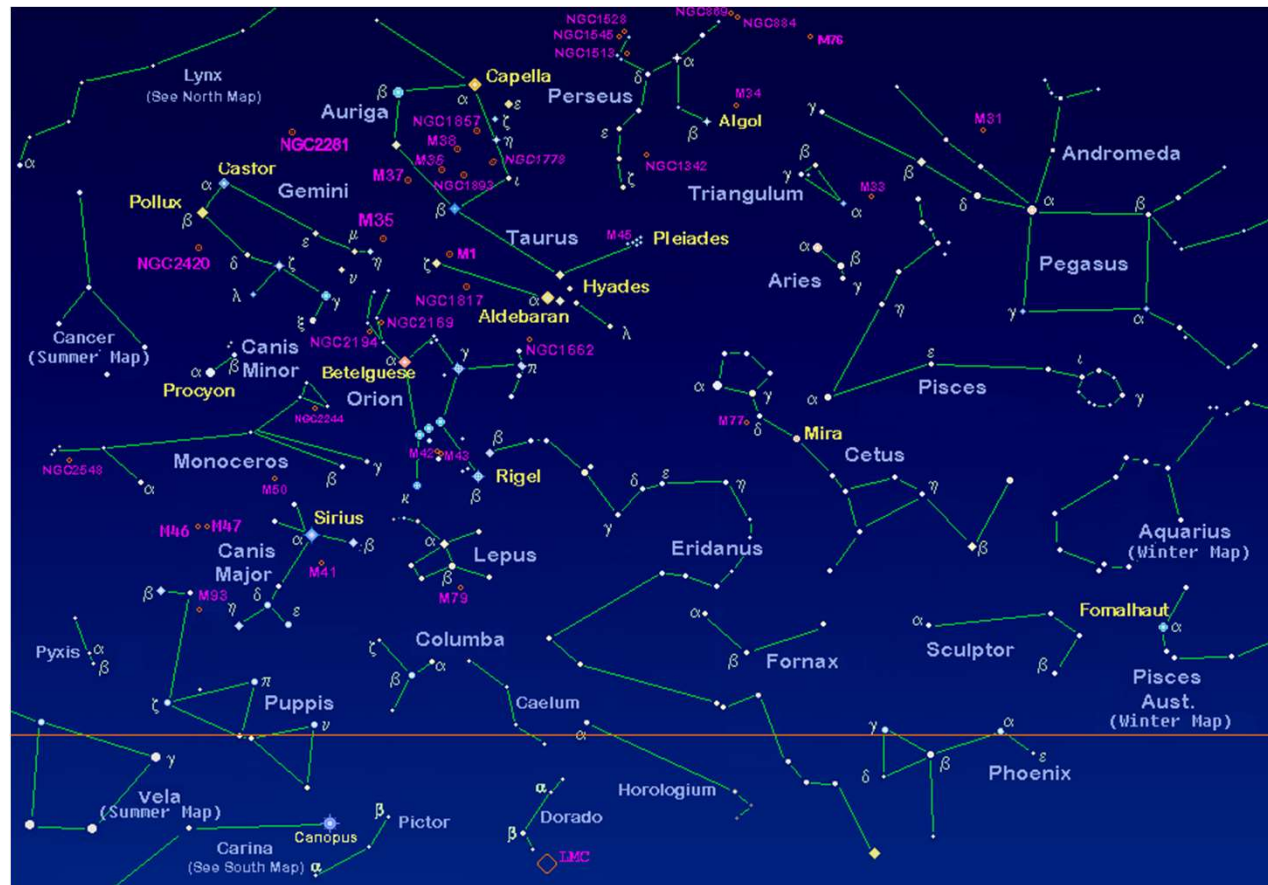




STARS - Constellations

Constellations Today

- Today there are 88 constellations
- Historical uses:
 - Cultural
 - Navigation
 - Story telling
 - Artistic
- Appear to move across sky due to Earth's rotation
- Sun and Planets follow a path across the constellations called The Ecliptic
- From these constellations, the brightest stars were given names



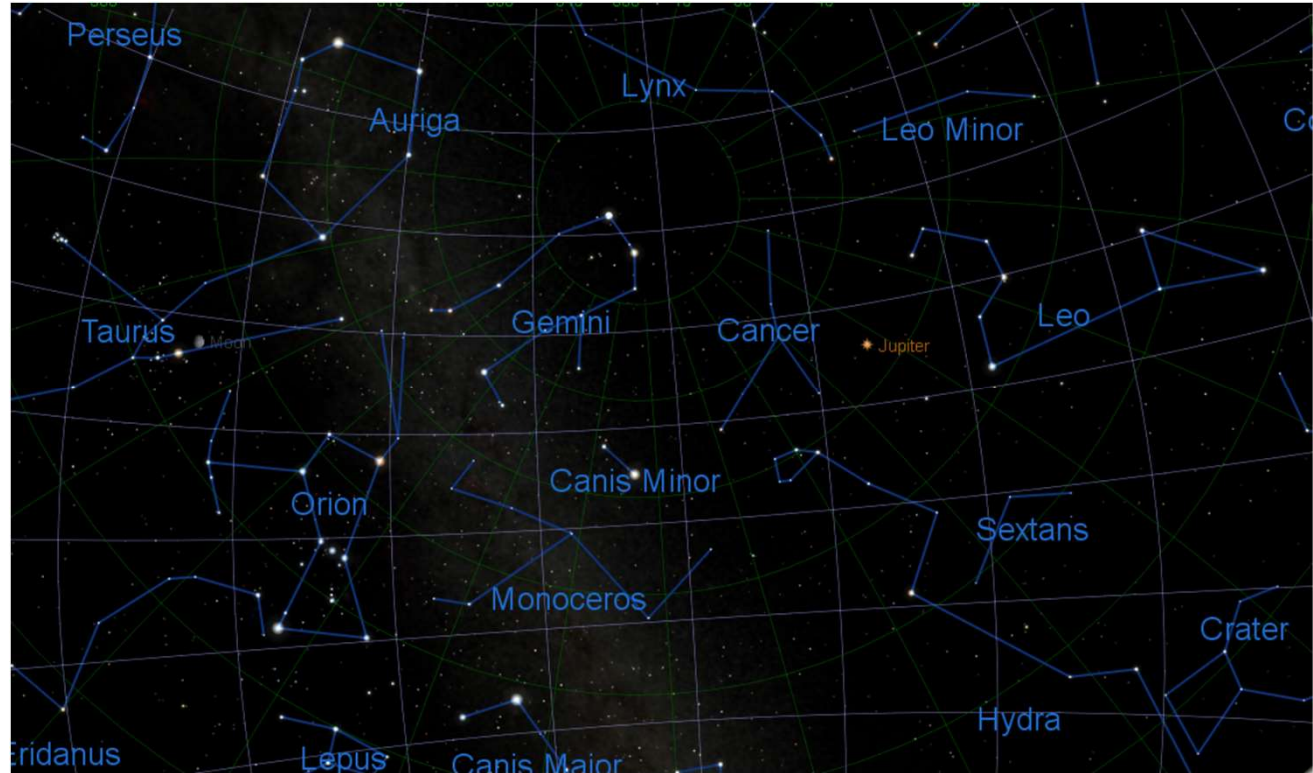
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Constellations: Why & How

- There isn't a physical reason for a particular constellation
- These are stars that happen to be in the same place in the sky
- Some have been constant between civilizations that had no contact with each other:
 - Ex. Orion, Scorpius





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Stellar Names

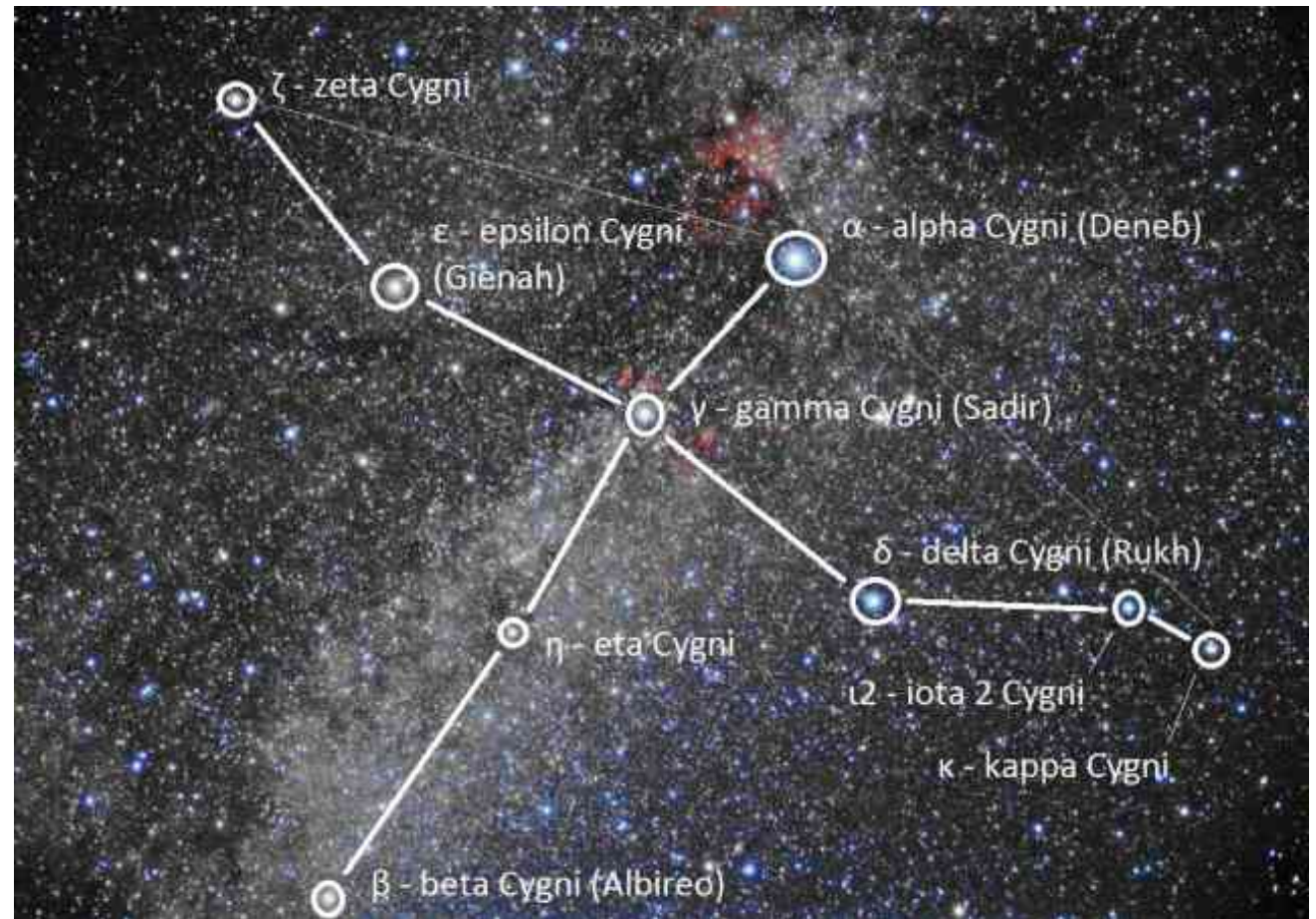
- Star Names: Brightest stars visible to the naked eye have all been given proper names.
- Mostly Arabic & Greek revealing the chain of transmission of the western astronomical tradition:
 - Mesopotamia – Classical Greece – Roman Empire – Islam – Renaissance Europe – Today
 - Most of the star names in the sky are Arabic
 - Arabic: Rigel, Alberio, Deneb
 - Greek: Sirius (dog star), Arcturus
 - Latin: Polaris, Spica

| | | |
|------------|----------------|-----------|
| Ursa Major | 80 UMa | Alcor |
| Taurus | η Tauri | Alcyone |
| Taurus | α Tauri | Aldebaran |



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Stellar Names Example



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Questions?