

Fall 2 2023 Notes  
WHAT YOU SEE, IS WHAT YOU GET

Star Names: There are many situations where names were used interchangeably with different meanings or cultural references. The Greek alphabet "brightness in the constellation" ratings, not perfect, but work better.

Aquarius: Water Bringer

Alpha, Beta, Gamma, Epsilon etc: shortened Arabic phrases with suffix *Sad*  $\cong$  "Lucky ones"?

Delta: *Skat* (official) or *Scheat* (confusion) = The Shin

Aries: Ram

Alpha: *Hamal* = Lamb

Beta: *Sharatan* (?)  $\cong$  "First" to touch Spring

Delta: *Botein* = Belly

Capricornus: Sea Goat (Boat) = Sumerian God *Enki* (a supposed *Anunnaki*)

Alpha & Delta *Algedi* (Kid) young goat, *Deneb Algedi* tail of young Goat

Beta: *Dabin* (from *Al Jabbah*) = Forehead

Gamma: *Nashira*, another word/phrase that included *Sad*; "Bringer of good tidings"?

Cetus: Sea monster (Kraken, Whale)

Alpha: *Menkar* = Jaws or snout; actually the second brightest; subject of Star Trek episode and movie

Omicron: *Mira* = Miracle or Amazing One; type star of a large class of long period variable stars; first star of this type observed; bright M Red Giant, 420 Lyrs away; no Arabic name found

Beta: *Diphda* (IAU official name); *Deneb Kaitos* (shortened phrase for tail) "second" frog; brightest star in constellation; topic of Nintendo game with Zeta (*Baten* (*Botein*)) = belly of whale

Pegasus: Horse, Winged Horse

Square {  
Delta: *Alpheratz*, shared with Andromeda (Alpha); Shoulder of horse  
Alpha: *Markab*, also refers to "shoulder"  
Beta: *Sheat* = Foreleg; borrowed from Aquarius; M Red Giant  
Gamma: *Algenib* loosely related to Wing (*Alja'nh*)  
Epsilon: *Enif* = Nose

Piscis Austrinus: Southern Fish, "First" Frog

Alpha: *Fomahaut*, Mouth

Pisces (Borealis): Northern Fishes; no really bright or remarkable stars

Review Galaxies categories:

Quasars: usually old, center outshines inner stars; usually Elliptical

Seyfert: far away, bright center region but can see inner stars; can be Elliptical or Spiral

Active Galactic Nuclei (AGN): Bright center due to massive black hole actively consuming stars, etc.

Black Hole: a very dense mass of collapsed stars, etc.; usually referred to as a Singularity

Super Massive Black Hole (SMBH): large, massive Singularity; thousands to billions of Solar Masses.

NEWS:

JWST + Hubble confirm the Hubble universe expansion constant using objects in Galaxy NGC 5584  
Classification of Halo Globular Clusters.

Vera Rubin observatory (LSST: Legacy Survey of Space and Time) in Cerro Pachó, Chile using the AI software ASTRONOMALY will gather 20 terabytes every night that's "32 trillion observations of 20 billion galaxies."

Astronomers are now referring to ANY Globular Star Cluster above/below the central bulge region of a galaxy as a HALO Cluster; clusters or other type of cluster-like structures are referred to with terms such as Galactic Fossils, Bulge Globular Clusters or Globular Cluster Fragments.