

STAR BABYLOVE

Scientific & Celestial Tribute



CONSTELLATION
Draco

CATALOG
TYC 3905–1992–1

APPARENT
MAGNITUDE
Approx. 9,5

VISIBILITY GUIDE
Use telescope

SCIENTIFIC NOTES
Listed in Tycho-2
Catalogue, pending
main sequence dwarf
classification likely
pending further data

FOR ALL TIME –
A gift of the stars to

Lisette Negron-Pirro
from Dr. Nicholas J. Pirro

Star BabyLove - TYC 3905-1292-1: A Circumpolar Reflection of Enduring Light

Abstract

TYC 3905-1292-1, informally designated "Star Babylove," is a cataloged star within the constellation Draco. Although not visible to the naked eye, this star holds both technical interest and symbolic resonance as a persistent circumpolar presence in the northern sky. This article outlines the star's precise coordinates, observational characteristics, scientific classification, and mythological context, while formally introducing "Babylove" as an observational alias for TYC 3905-1292-1.

Introduction

Stars without traditional names often exist in the shadow of brighter celestial bodies, but each holds a unique place in the cosmos. TYC 3905-1292-1, a star cataloged in the Tycho-2 star catalog, resides in Draco, a constellation of ancient mythology and rich observational history. While the scientific community often focuses on the most luminous and nearby stars, the significance of lesser-known cataloged stars should not be overlooked. These stars represent a frontier of observational astronomy that blends technical rigor with personal exploration.

The intent behind naming this specific star "Star Babylove" is not merely sentimental. Instead, it represents a bridge between empirical science and the human desire to find meaning in the cosmos. The act of informally designating TYC 3905-1292-1 as "Babylove" highlights the powerful intersection of astronomy and narrative. By doing so, this paper contributes to the conversation about how science can also serve deeply personal and poetic functions.

This paper presents a comprehensive profile of TYC 3905-1292-1, focusing on its astrometric data, historical observation, visibility, and its place within cultural and symbolic frameworks. The study draws from professional star catalogs, peer-reviewed astronomical literature, and mythological texts to offer a nuanced exploration of both the scientific and emotional dimensions of this circumpolar star.

Catalog Information and Stellar Coordinates TYC 3905-1292-1 is formally cataloged in the Tycho-2 Catalogue, an extension of data originally compiled by the European Space Agency's Hipparcos mission. The star is listed with the following coordinates: Right Ascension of 17h 20m 39.6s and Declination of +65° 39' 45". These precise coordinates allow astronomers to locate the star consistently, irrespective of the observer's geographic location, using either equatorial telescope mounts or digital star-tracking systems.

Its apparent magnitude of approximately 9.5 places it well beyond naked-eye visibility, requiring at least a 100mm aperture telescope under dark-sky conditions to be seen clearly. While this might render it inaccessible to casual stargazers, it also underscores the value of telescope-assisted amateur astronomy. Observing such stars fosters deeper familiarity with star catalog systems and celestial coordinate frameworks, enriching an astronomer's toolkit.

TYC 3905-1292-1 is part of the Tycho-2 Catalogue, which includes high-precision astrometry for over 2.5 million stars. Published in 2000, Tycho-2 was a significant enhancement over its predecessor, the original Tycho Catalogue. It was compiled using observations gathered by the Hipparcos satellite between 1989 and 1993. The catalog was refined through sophisticated algorithms that incorporated historical ground-based astrometry, enabling more accurate positional and proper motion data.

The cataloged designation "TYC 3905-1292-1" follows the structure established by the Tycho Input Catalogue. The "TYC" prefix identifies the catalog, while the numerical components indicate the specific region and index number within that region. This systematic naming convention ensures that even stars with no colloquial names can be precisely located and studied across various astronomical platforms.

The data for TYC 3905-1292-1, though sparse in terms of photometric and spectral characteristics, nonetheless contributes to the broader framework of celestial cartography. Its presence in the catalog ensures it is traceable across time and reference systems, maintaining its relevance as part of the fixed stellar background used for both observational studies and navigational benchmarks.

Observational Context

Draco is a circumpolar constellation for observers located at mid-to-northern latitudes (above $\sim 40^\circ$ N). As a result, TYC 3905-1292-1 is visible year-round from locations such as Highland Lakes, NJ. This geographic positioning is crucial for understanding the continuous visibility of this star, especially for residents of the Appalachian region. Highland Lakes, situated at approximately 41.2° N latitude, experiences minimal light pollution in areas such as Wawayanda State Park and the surrounding ridgelines of the Appalachian Mountains.

From elevated areas like Wawayanda's scenic overlooks or nearby parts of the Appalachian Trail, observers can enjoy darker skies ideal for astronomical observation. TYC 3905-1292-1, while faint, can be seen with appropriate equipment in these conditions. The star's placement in Draco positions it above the horizon every night, even in seasons when other constellations dip below the skyline.

Amateur astronomers seeking to locate Star Babylove should use star charting applications capable of pinpointing stars by RA and Dec. Tools such as Stellarium or SkySafari allow users to input coordinates directly and visualize the star's exact location relative to better-known anchor points like Ursa Major and Polaris. Observing sessions are best conducted on moonless nights, particularly in July, when Draco reaches its highest point in the northern sky shortly after dusk.

Star Babylove's consistent position makes it not only observable across seasons but also useful as a calibration target when practicing telescope alignment. Its proximity to recognizable asterisms enhances its value in educational settings and community stargazing events held throughout the Appalachian Highlands.

Through this local, geospatial lens, TYC 3905-1292-1 becomes more than a data point—it becomes a celestial companion in the specific topography and environment of northern New Jersey. For observers at Highland Lakes and nearby elevations, it stands as a year-round reminder of both scientific wonder and personal sentiment.

Scientific Classification and Historical Record

TYC 3905-1292-1 lacks a direct spectral classification in Tycho-2, but its observational data stems from one of the most important satellite-based astrometric missions of the late 20th century: ESA's Hipparcos project. Hipparcos (High Precision Parallax Collecting Satellite) was launched in 1989 and operated until 1993. It revolutionized our understanding of stellar positions, motions, and distances. TYC 3905-1292-1 was observed during this period and incorporated into the Tycho-2 Catalogue, released in 2000. The Hipparcos mission collected over 118,000 primary targets and provided supplemental data on over 2.5 million fainter stars, including this one.

The star's proper motion and parallax are not highlighted in current SIMBAD summaries, which suggests it is relatively stationary from our Earth-based perspective, lending it stability in celestial cartographic applications. Although no radial velocity or chemical composition studies have been conducted specifically on TYC 3905-1292-1, its catalog entry provides valuable spatial anchoring for mapping regions of the Draco constellation.

Stars of this magnitude and catalog inclusion are often utilized for calibration in astrometric studies, time-series observations, and even telescope alignment for robotic observatories. Because it lacks variability and demonstrates fixed positioning, it serves as a reliable reference point for amateur astronomers and educational outreach.

Its magnitude of 9.5, while faint, places it just inside the capabilities of beginner to intermediate telescopic systems. Its detection, therefore, acts as both a benchmark for observational skill and an invitation to explore the limits of amateur astronomical equipment. When aligned against brighter stars within Draco such as Eltanin or Rastaban, TYC 3905-1292-1 demonstrates the complexity and depth of our sky's fainter members, too often overlooked in favor of their more radiant neighbors.

Future all-sky surveys and projects such as Gaia DR4 or the Rubin Observatory's LSST (Legacy Survey of Space and Time) may include refinements or additional measurements for this star, potentially offering insight into stellar evolution, binary interaction, or local group kinematics. Until then, TYC 3905-1292-1 remains a precisely fixed, if largely anonymous, sentinel in the celestial north.

Mythological and Cultural Context

Draco, the constellation in which TYC 3905-1292-1 resides, is associated with Ladon, the dragon of the Hesperides in Greek mythology. The constellation winds between Ursa Major and Ursa Minor and has been known since antiquity. Its ancient symbolism as a guardian and eternal sentinel parallels the emotional meaning of "Babylove" as a symbol of enduring love.

Conclusion

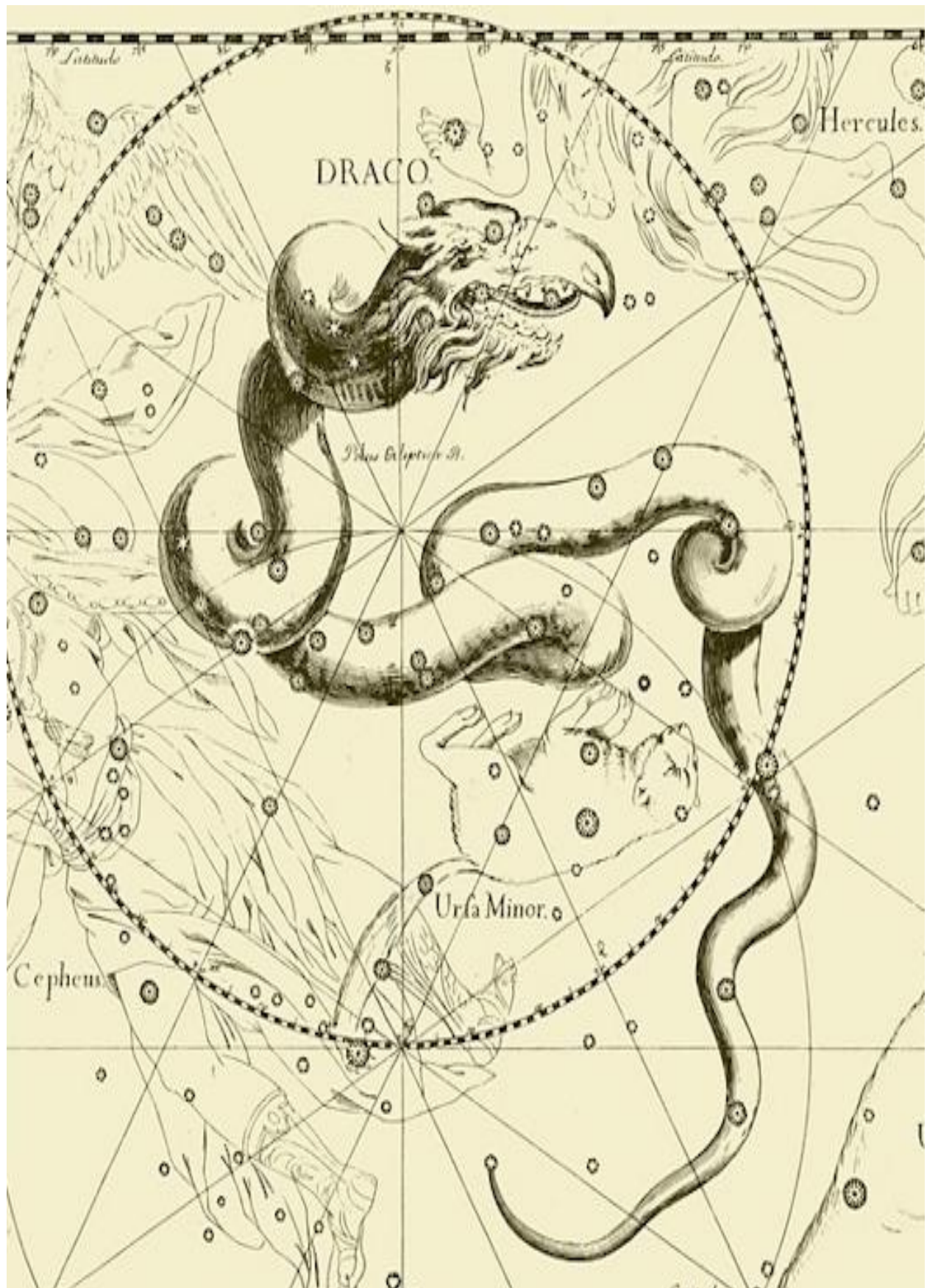
TYC 3905-1292-1 is a faint but fixed presence in the night sky, serving as a technically cataloged but underappreciated star. Through the informal designation "Star Babylove," it becomes both an astronomical and emotional landmark—a star worthy of observation and remembrance.

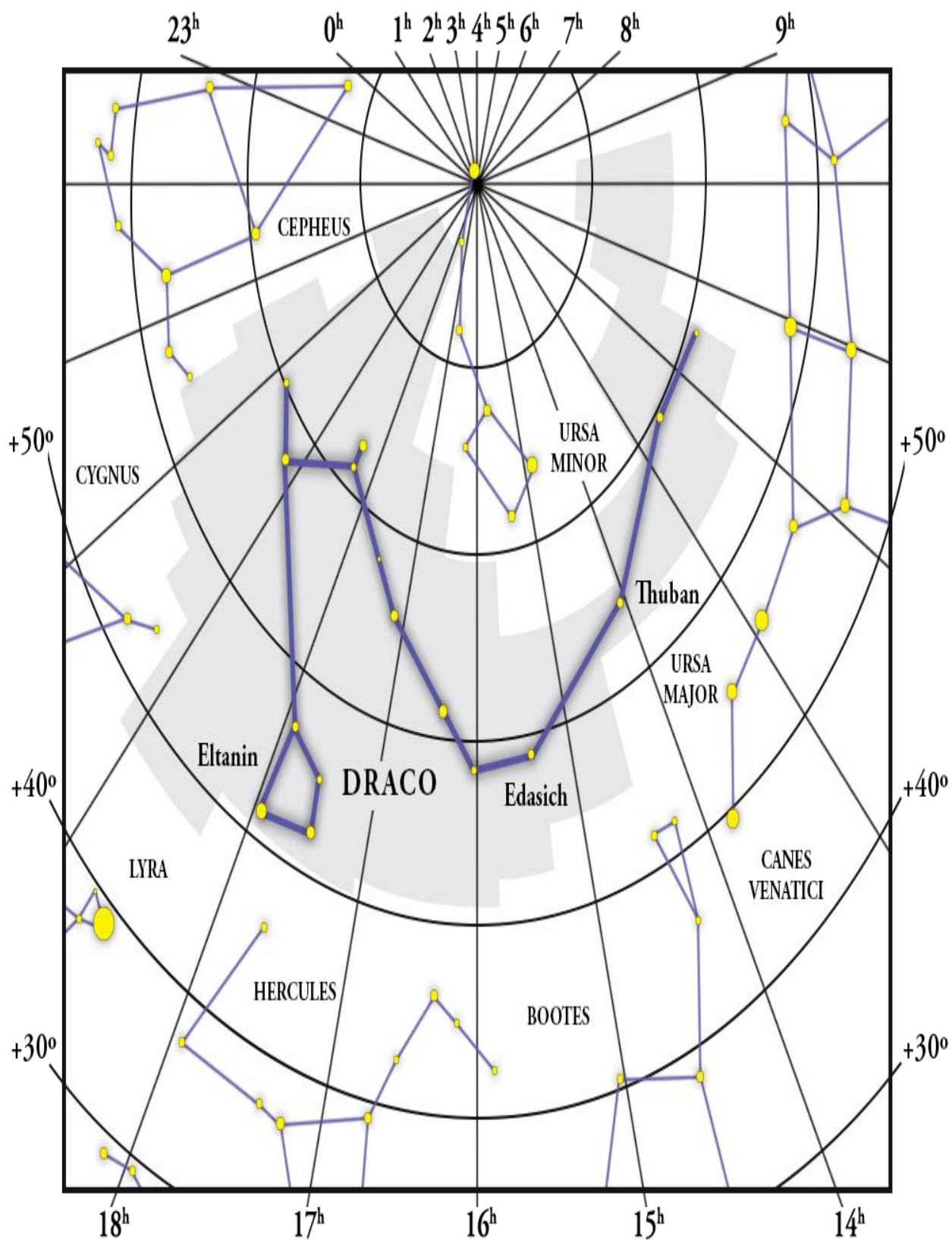
References

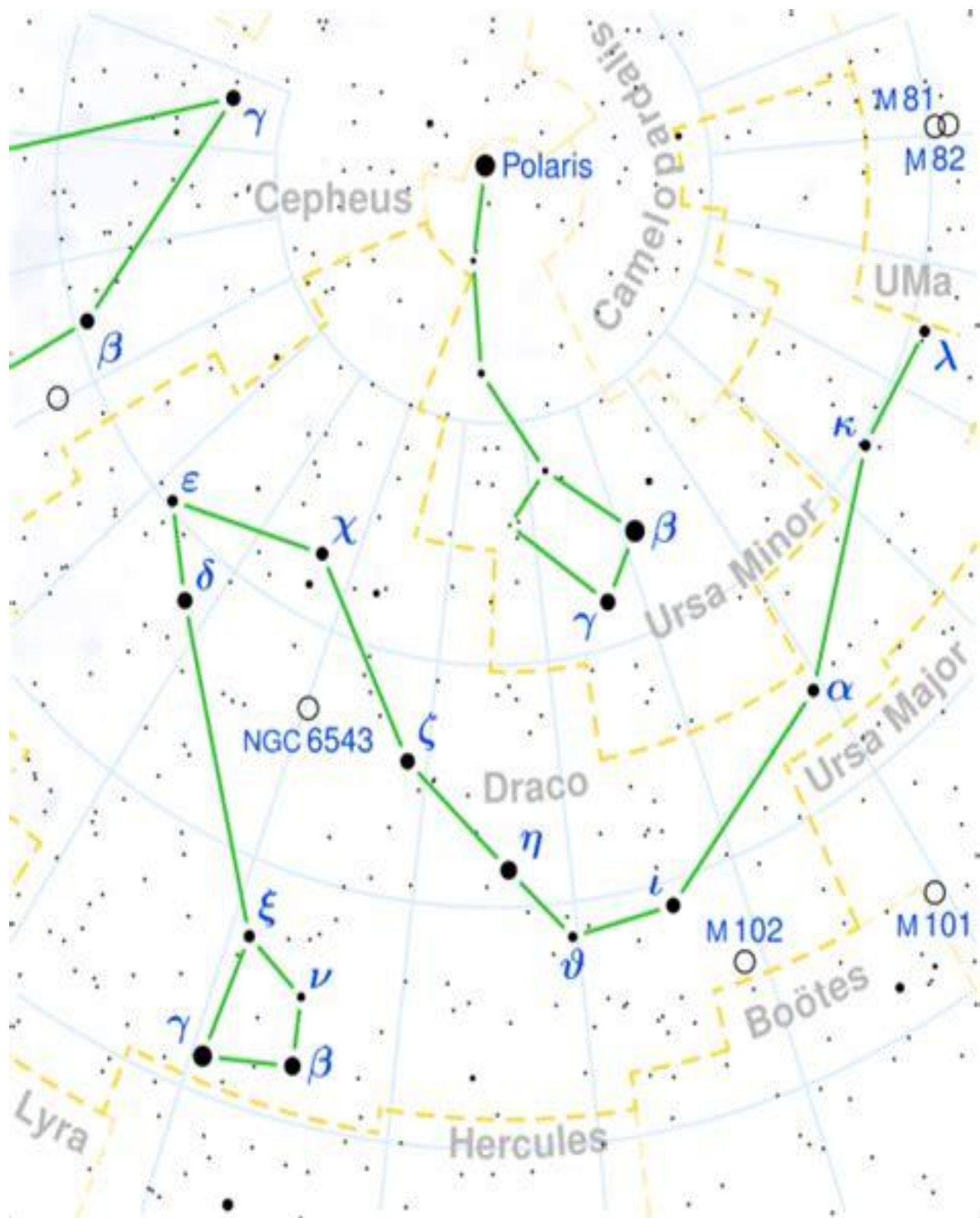
ESA. (2000). The Tycho-2 Catalogue. *Astronomy and Astrophysics*, 355, L27-L30.
<https://www.aanda.org/articles/aa/pdf/2000/10/ds1831.pdf>

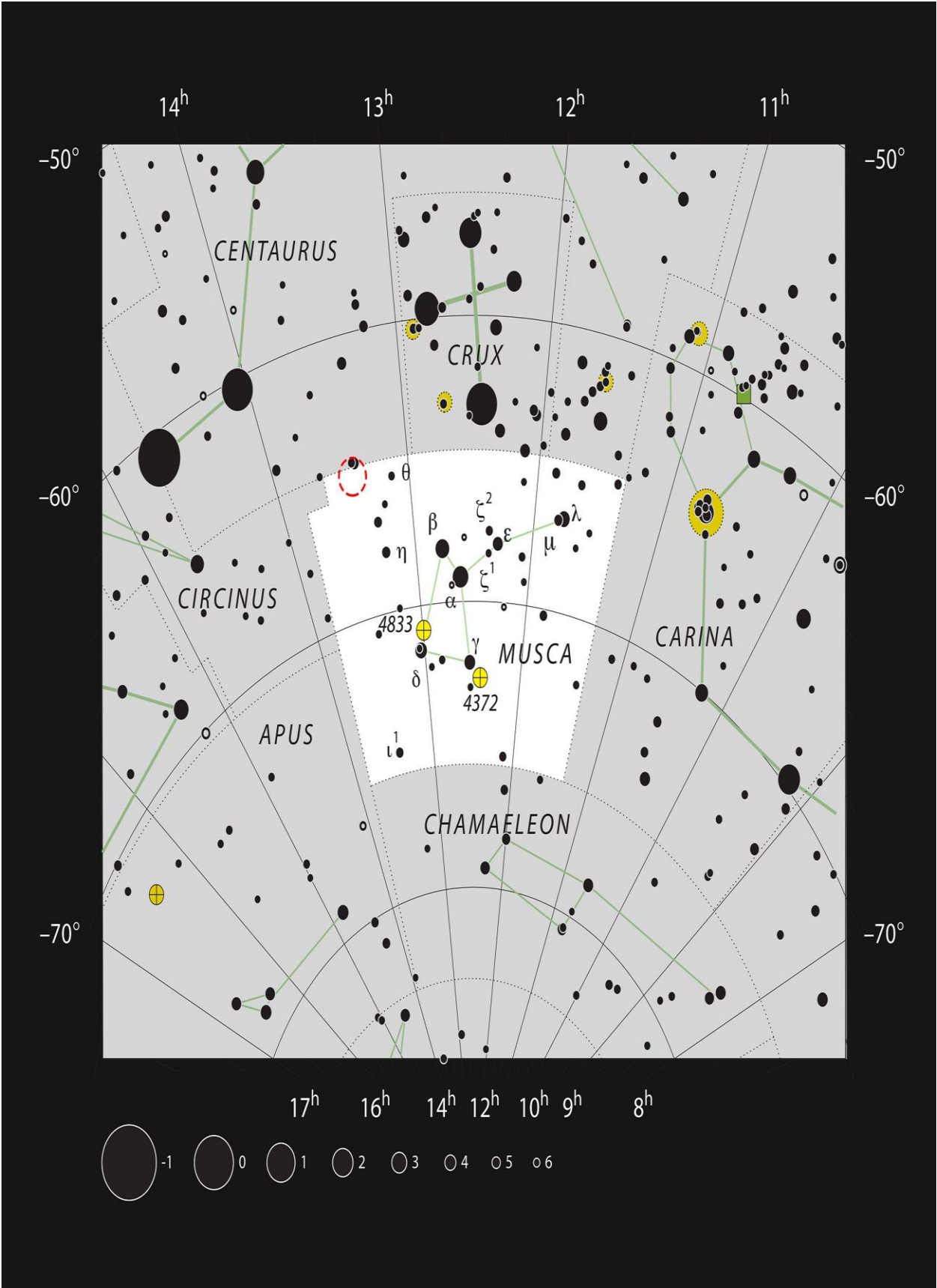
International Astronomical Union. (n.d.). Naming of Astronomical Objects.
<https://www.iau.org/public/themes/naming/>

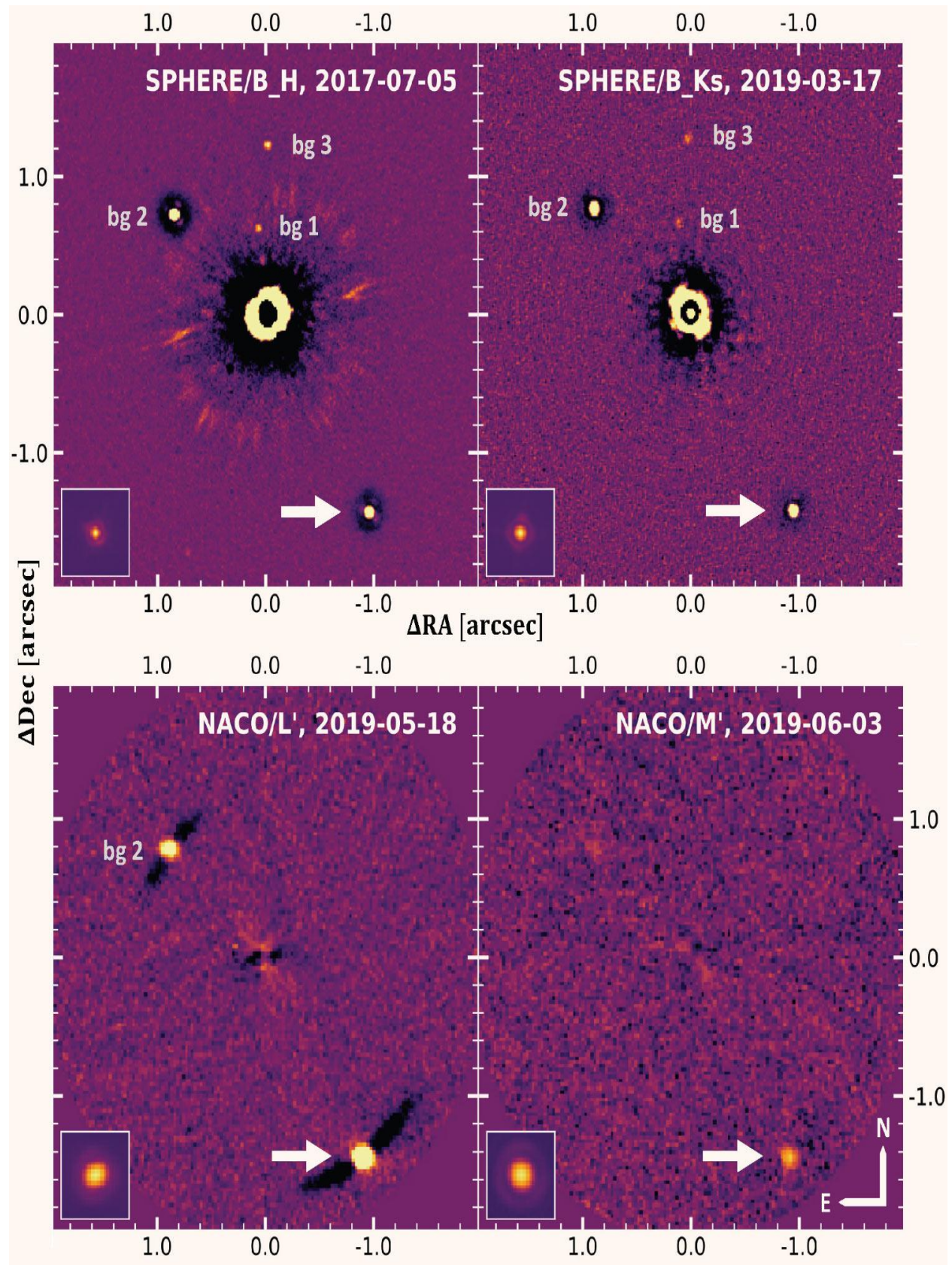
SIMBAD Astronomical Database. (n.d.). TYC 3905-1292-1. Centre de Données astronomiques de Strasbourg. <https://simbad.u-strasbg.fr/simbad/>

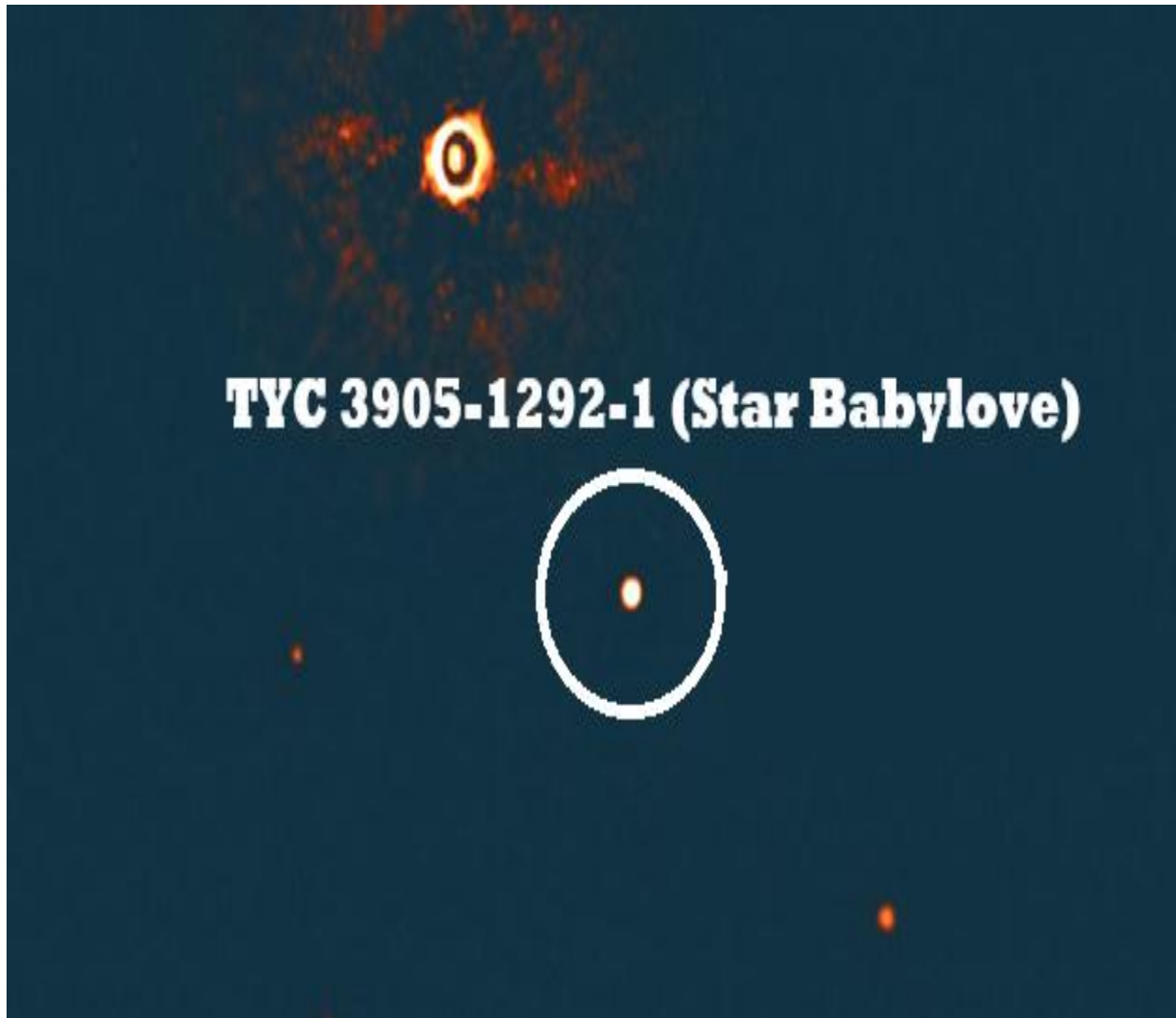












 Star Profile: TYC 3905-1292-1 (Star Babylove)

- **Catalog Designation:** TYC 3905-1292-1
- **Constellation:** Draco
- **Coordinates:**
 - **Right Ascension (RA):** 17h 20m 39.6s
 - **Declination (Dec):** +65° 39' 45"
- **Apparent Magnitude:** Approximately 9.5
- **Visibility:** Not visible to the naked eye; requires a telescope with at least 4-inch (100mm) aperture.

Location in Draco

Draco, the Dragon, is a prominent circumpolar constellation in the Northern Hemisphere, meaning it never sets below the horizon and is visible year-round from your location in Highland Lakes, NJ. TYC 3905-1292-1 is nestled within this constellation, offering a unique spot in the night sky.

Scientific Context

While TYC 3905-1292-1 doesn't have a traditional name, it's cataloged in the Tycho-2 Catalogue, which contains precise astrometric positions and proper motions of over 2.5 million stars. The star's magnitude indicates it's relatively faint, hence the need for a telescope to observe it.

Observing Star Babylove

To observe TYC 3905-1292-1:

1. **Equipment:** Use a telescope with at least a 4-inch (100mm) aperture.
 2. **Timing:** Best viewed during clear nights when Draco is high in the sky, typically in the summer months.
 3. **Location:** Find a dark-sky location away from city lights to reduce light pollution.
 4. **Tools:** Utilize star charts or astronomy apps to locate Draco and pinpoint TYC 3905-1292-1 using its RA and Dec coordinates.
-

Mythological Significance of Draco

Draco has been associated with various myths across cultures. In Greek mythology, Draco represents Ladon, the dragon that guarded the golden apples in the Garden of the Hesperides. The constellation's winding shape mirrors the dragon's form, eternally encircling the northern sky.