

KVAS NITE SKY July 16 - August 2010

MOON PHASES, EDT: 7/18 1st Q 6:11 AM, 7/25 Full 9:37 PM,
8/3 L. Q 12:57 AM, 8/9 New 11:08 PM, 8/16 1st Q 2:14 PM, 8/24 Full 1:05 PM

7/11 Solar Eclipse in South Pacific

8/11 Dusk, Mars 2° below Saturn in West with bright Venus 8° to right & slightly below.

8/8-9 Venus passes 3° below Saturn with Venus & Mars trio in 5° binoc viewing field, between & below constellations Virgo & Leo.

8/11 After sunset Mercury is barely visible in West but it's 2° above thin waxing moon.

8/11-12 Night, Perseid Shower peaks but random meteors can be seen all month as well as the weaker meteor showers Delta Aquarids & Kappa Cygnids.

8/26 11 PM Moon is about 9° above Jupiter / Uranus (with 2° separation) in SW Pisces. Also an excellent time to enjoy Jupiter, our largest planet & brightest planet next to the Moon and Venus (rarely Mars).

In August Neptune rises around sunset between Capricorn & Aquarius & Pluto continues to be near Asterism Mizar between Sag. & Oph.

8/31 Don't miss the Pleiades open cluster's return after midnight about 7° left of waxing moon.

CONSTELLATIONS OF THE MONTH

Cygnus (SIG-nus) The Swan - ancient mythology

Lyra (LYE-rah) The Lyre - ancient mythology

Sagitta (sa-TIT-ah) - The Arrow - ancient legend

Volpucula (vul-PECK-you-lah) The Fox - invented by Johannes Hevelius around 1660.

Aquila (uh-KWL-lah) The Eagle - ancient mythology

B. R. Ogilvie
7/5/10

Milky Way

Nova Cygni 1975; reached mag. 1.8 (Lum. = 500,000) Aug. 30 that year; the brightest nova since 1942, faded to 5th mag. in less than a week

M39
Open cluster; best seen in binocs 800 ly
About 7 ly wide; noted by Aristotle about 325 B.C. as hazy patch

NGC7000
North America Nebula; visible in binocs on darkest nights; large and faint but shaped like its name

61.
Easy double for small scopes
A = 5.4; B = 6.0
Sep. = 29"
First star whose distance accurately determined (1840)
11.1 ly
Lum.: A = 0.07; B = 0.04

α Deneb
1.5
1,600 ly
Lum. = 60,000
Dia. = 60
Mass = 30

Triple for binocs:
one orange, two blue; easy
A = 4.0; B = 5.1;
C = 7.1

0²
4.0

0¹
3.8

16 Cyg
4.5
Tight pair; each 6th mag.; for binocs; easy in scopes

R
Variable; 4.1 to 5.0;
Period = 46 days

The Double-Double is double in binocs; both 5th mag.; 3.5" apart; each of those is a double in scopes over 3 inches; all are part of a single stellar system 160 ly
Pairs are 1/4 ly apart

25 ly
Lum. = 58
Dia. = 5
Mass = 3
Vega will be North Star in 12,000 A.D.

CYGNUS
Very rich zone of the Milky Way for binocs

M29
Weak binocular cluster; difficult to distinguish from rich stellar background

Cygnus star chain; nice 2-degree arc obvious in binocs

LYRA

Wide binocular double
A = 4.5; B = 5.5
Sep. = 10"

M57
Ring Nebula; bright donut in scopes
1,400 ly
Dia. = 1 1/2 ly

Eclipsing; variat 3.4 to 4.3
Period = 12.9 d
Lum.: A = 3,000
B = 1,000
Dia.: A = 19; B = Stars almost in contact with each other

NGC6992
Veil Nebula in two curving components; faintly seen in small scopes at lowest power; NGC6992 brighter

NGC6960
Remnants of a supernova explosion 30,000 years ago
1,500 ly
Dia. = 60 ly

NGC6940
6th-mag. binocular open
Dumbbell Nebula; 7th mag; brightest of the so-called planetary nebulas—shells puffed off by dying stars; oval fuzz 8" wide in small scopes
900 ly; 2 ly wide

β Albireo
5.1
Wonderful double for small scopes; orange and blue
A = 3.1; B = 5.1; Sep. = 35"
385 ly
Lum.: A = 760; B = 120
Optical double; not a binary

Brooch's Cluster "The Coathanger"; easy in binocs

- ① Glob. cluster m21 scy
- ③ Open clust. m39 cyg
- ① Galaxies
- ③ emission Nebula
- ③ NGC 6960 & 6992 Veil (supernova)
- ③ NGC 7000 N. Amer. Cyg energy from supernova
- ② Planetary Neb. m27 vul Dumbell
- ③ M57 Ring Lyr.
- ③ multiple star combinations

Telescopic double
A = 4.5; B = 5.5; Sep. = 10"
101 ly

M71
Globular cluster; small and faint in scopes
18,000 ly
One of smallest globulars

SAGITTA VULPECULA

γ
3.5

δ
3.8

α
4.4

β
4.4

Rotates in only 6 hours; likely egg-shaped
16.8 ly
Lum. = 9
Dia. = 1.6

γ Tarazed
2.7
460 ly

α Altair
0.8

β
3.7
45 ly

AQUILA

ζ
3.0
83 ly

DELPHINUS

θ
3.2
285 ly

η
3.9

δ
3.4
50 ly

λ
3.4

BR0
7/5/10