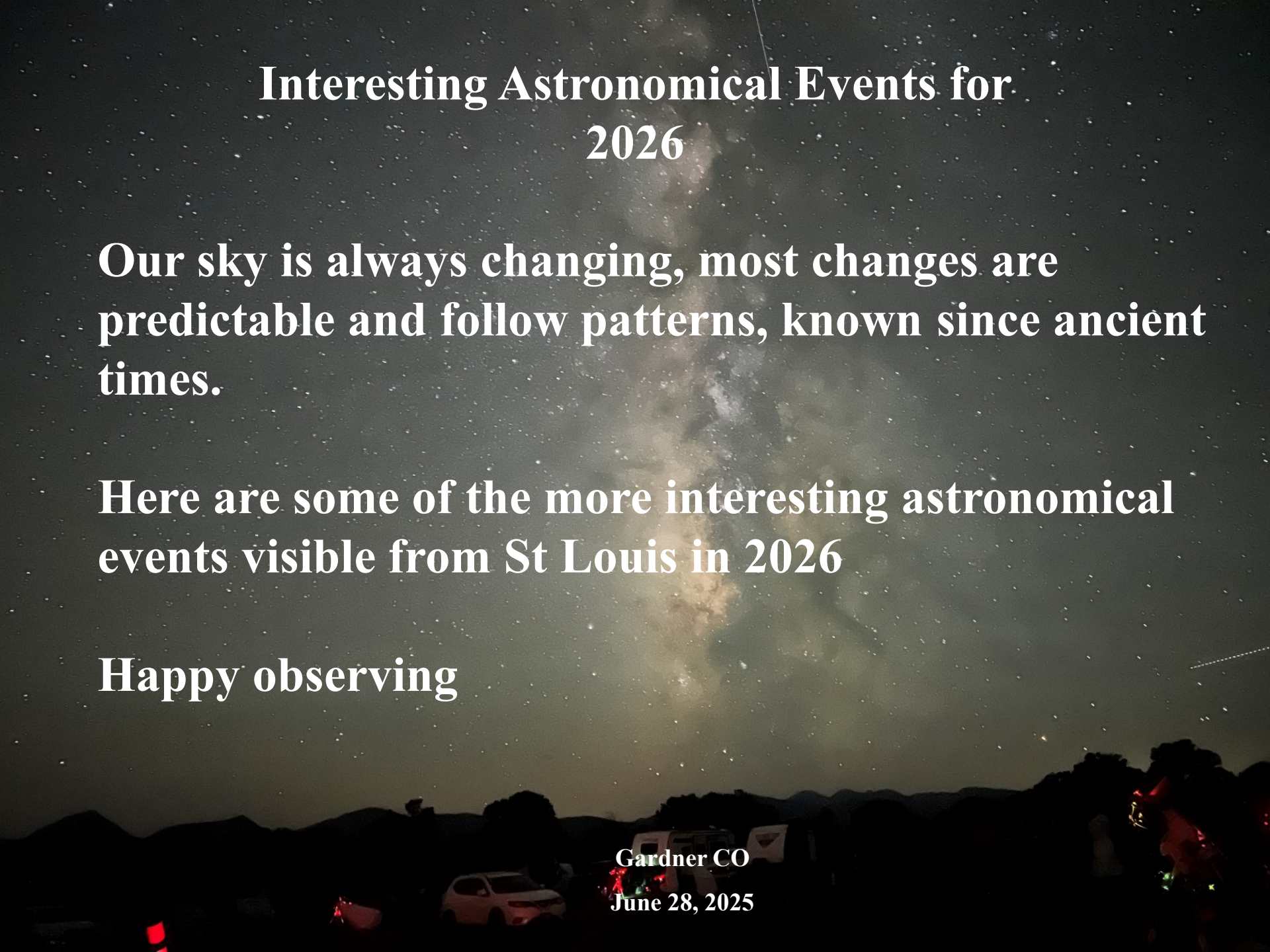


Interesting Astronomical Events for 2026

Our sky is always changing, most changes are predictable and follow patterns, known since ancient times.

Here are some of the more interesting astronomical events visible from St Louis in 2026

Happy observing

Gardner CO

June 28, 2025

Full Moon Events 2026

Largest Full Moons of 2026 (SuperMoon)

Jan 3 : diameter: 33.1’; 360,000km

Nov 24 diameter: 33.5’; 356,200km

Dec 23: diameter: 33.9’; 352,800km

Smallest Full Moons of 2026 (MicroMoon)

May 31: diameter: 29.4’; 406,600km

June 29: diameter: 29.5’; 405,000km

Definitions used at timeanddate.com:

- **Supermoon: A Full Moon that occurs when the center of the Moon is less than 360,000 kilometers from the center of Earth.**
- **Micromoon: A Full Moon that takes place when the center of the Moon is farther than 405,000 kilometers (ca. 251,655 miles) from the center of Earth.**

Image below shows the apparent size difference between largest and smallest dates

Apogee Moon
Jan 15, 2014
406,532 km

Perigee Moon
Nov 13, 2016
350,853 km

No telescope Required

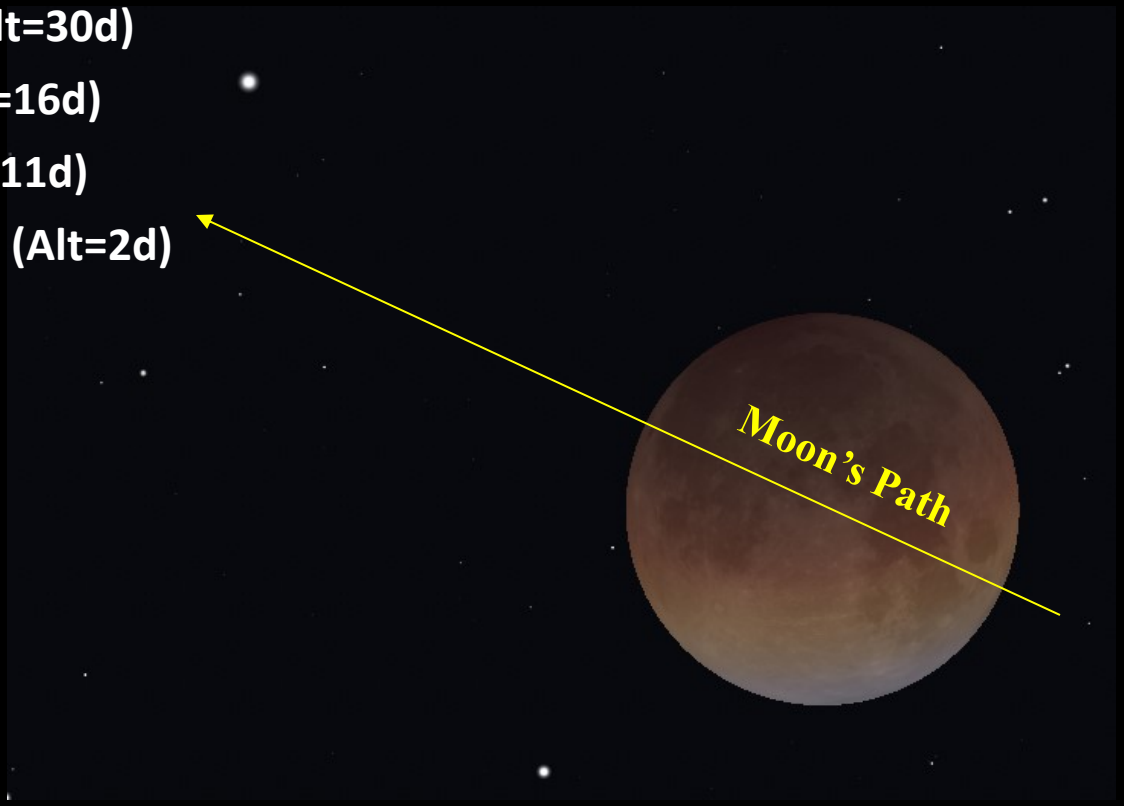
Canon DSLR FL=300mm

Total Lunar Eclipse
March 3, 2026

Make sure you have a good western horizon for viewing this eclipse

Illustration of Total Phase

- **02:45am Moon enters Earth's penumbra (Alt=40degrees)**
- **03:50 Partial eclipse begins. (Alt=30d)**
- **05:05 Total eclipse begins. (Alt=16d)**
- **05:34 Midpoint of eclipse (Alt=11d)**
- **06:03 Moon Total eclipse ends. (Alt=2d)**
- **06:30 Moon set**



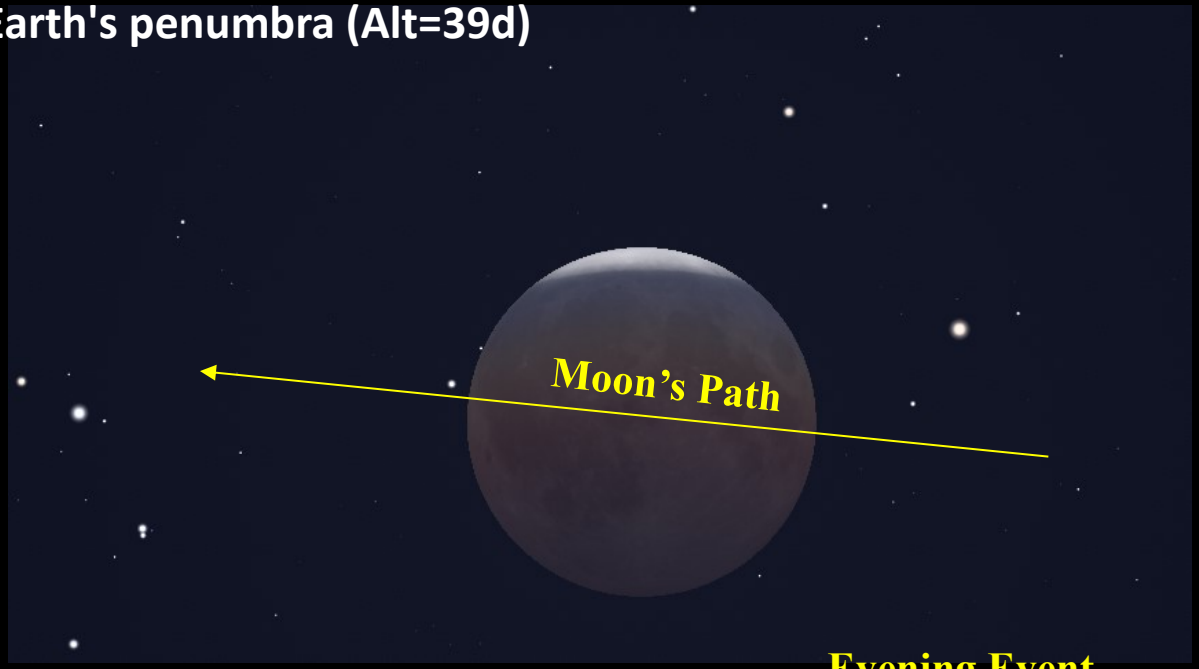
Eclipse Sim by Stellarium

Morning Event

Partial Lunar Eclipse
August 27, 2026

Illustration of Total Phase

- **20:25pm Moon enters Earth's penumbra (Alt=12d)**
- **21:35pm Partial eclipse begins. (Alt=22d)**
- **23:14pm Greatest eclipse (Alt=36d)**
- **00:53am Partial eclipse ends. (Alt=41d)**
- **02:02am Moon leaves the Earth's penumbra (Alt=39d)**



Eclipse Sim by Stellarium

Other Moon Events 2026

V

No favorable events in 2026

Lunar-X on the Moon (Start Times)

- March 25– 3:44pm Alt=49° (daytime event)
- May 23– 4:44pm Alt=44° (daytime event)
- July 21– 2:05pm Alt=1° (daytime event)
- Nov 16– 1:01pm Alt=5° (daytime event)

X

Lunar V also seen at same Sun angles

Yellow=Favorable Moon Conditions are always near First Quarter phase

Telescope Required

2026 Meteor Showers

- January 3 Quadrantids; ZHR=40 (FM)
- April 22 Lyrids; ZHR=20 (FQ-1day)
- May 6 Eta Aquarids; ZHR=60 (FM+5days)
- July 30 Delta Aquarids; ZHR=20 (FM+2days)
- Aug 13 Perseids; ZHR=60 (NM)
- Oct 21 Orionids; ZHR=20 (FQ+3days)
- Nov 17 Leonids; ZHR=20 (FQ)
- Dec 13 Geminids; ZHR=120 (FQ-2days)

No telescope Required

Yellow=Favorable Moon Conditions are before Full Moon(FM) and closest to New Moon (NM)

Planet Oppositions 2026

- Venus SC – Jan 6
- Venus GEE – Aug 14 (dia=24.2 arc-sec)
- Venus IC – Oct 23
- Mars – No Opposition in 2026
- Jupiter – Jan 10 (dia =45.6 arc-sec)
- Saturn – Oct 4 (dia=19.3 arc-sec)
- Uranus – Nov 25 (dia=3.8 arc-sec)
- Neptune – Sep 25 (dia=2.4 arc-sec)

Yellow=Favorable Conditions

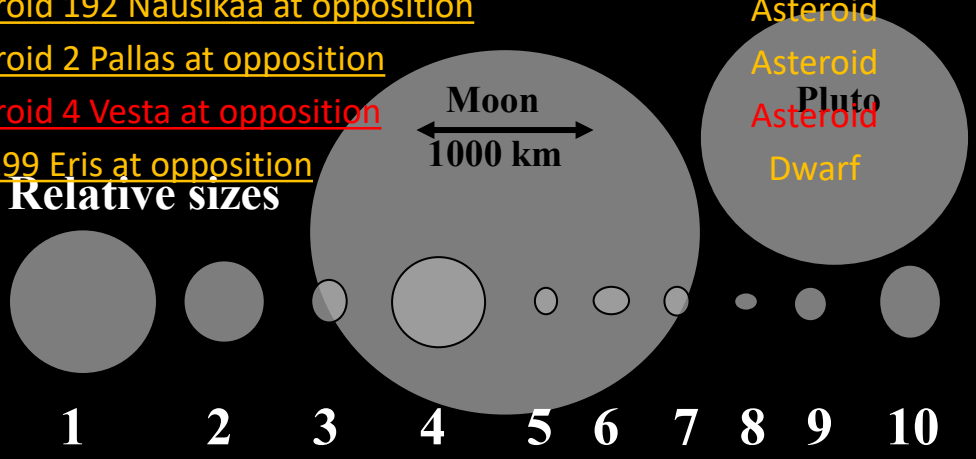
SC= Superior Conjunction

IC= Inferior Conjunction

GEE= Greatest Elongation East

Asteroid/Dwarf Planet Oppositions 2026

Mon	Day	Event	Object	notes
1	2	Asteroid 40 Harmonia at opposition	Asteroid	mag=9.0
1	23	Asteroid 44 Nysa at opposition	Asteroid	mag=8.6
2	27	Asteroid 7 Iris at opposition	Asteroid	mag=8.9
3	21	Asteroid 20 Massalia at opposition	Asteroid	mag=9.0
4	1	136472 Makemake at opposition	Dwarf	mag=17.0
4	23	136108 Haumea at opposition	Dwarf	mag=17.2
5	28	Asteroid 29 Amphitrite at opposition	Asteroid	mag=9.7
6	15	Asteroid 14 Irene at opposition	Asteroid	mag=9.3
7	9	Asteroid 18 Melpomene at opposition	Asteroid	mag=8.9
7	9	Asteroid 8 Flora at opposition	Asteroid	mag=8.9
7	26	Asteroid 3 Juno at opposition	Asteroid	mag=9.1
7	27	134340 Pluto at opposition	Dwarf	mag=15.0
7	28	Asteroid 324 Bamberga at opposition	Asteroid	mag=9.4
8	28	Asteroid 9 Metis at opposition	Asteroid	mag=9.3
9	30	Asteroid 192 Nausikaa at opposition	Asteroid	mag=8.4
10	4	Asteroid 2 Pallas at opposition	Asteroid	mag=8.2
10	13	Asteroid 4 Vesta at opposition	Asteroid	mag=6.5
10	18	136199 Eris at opposition	Dwarf	mag=18.6



Pluto's next perihelion will not happen until November 2238!

Planet Sizes for 2026

Relative sizes as seen thru telescope

Mercury

Venus

Mars

Jupiter

Saturn

Uranus

Neptune

Images from Stellarium

023-07-23 21:55:35 UTC-05:00

Mercury 2026

The next transit of Mercury across the Sun visible from STL will not occur until 5-7-2049

Mercury Evening Sky

- Mercury GEE – Feb 19 (dia=7.1”, mag= -0.6),
  Jun 15 (dia=8.2”, mag= +0.4), Oct 12 (dia=6.7”, mag= -0.1)

Mercury Morning Sky

- Mercury GWE – April 3 (dia=7.6”, mag= +0.2),
  Aug 2 (dia=7.6”, mag= 0.0), Nov 20 (dia=6.7”, mag= -0.6)
- IC – March 5, Jul 12, Nov 4
- SC - Jan 21, May 14, Aug 28

Images below show the apparent size difference between Jupiter date and Mercury

Yellow=Favorable Conditions

SC= Superior Conjunction

IC= Inferior Conjunction

GEE= Greatest Elongation East

Telescope Required

Mercury - GEE

Jupiter - Opp

Images from Stellarium

Venus 2026

- Venus SC – Jan 6
- Venus GEE – Aug 14 (dia=24.1 arc-sec, mag= -4.3)
- Venus IC – Oct 23 (59.5 arc-sec)
- Venus GWE – None in 2026

Images below show the apparent size difference between Jupiter and Venus

Yellow=Favorable Conditions
SC= Superior Conjunction
IC= Inferior Conjunction
GEE= Greatest Elongation East

Venus - Aug 14

Jupiter

Telescope Required

Images from Stellarium

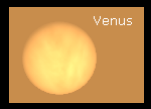
Crescent Venus 2026

Venus starts 2026 on far side of Sun. Then slowly draws closer to Earth. Venus appear larger and thinner crescent as it approaches Earth.

Venus - Oct 15

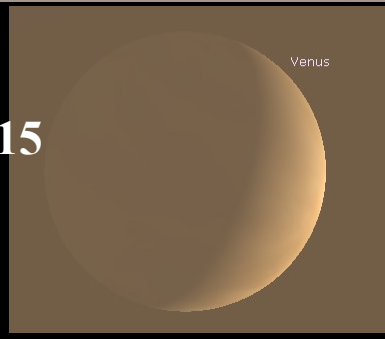
CAUTION do not point telescope at Sun.

Venus - Feb 15



Venus - March 15

Venus - Sep 15

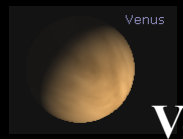


Venus - April 15

Venus - Aug 15

Venus - May 15

Venus - July 15



Venus - June 15

Telescope Required

Images from Stellarium

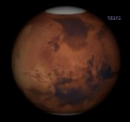
Mars 2026

- No opposition in 2026
- Jan 1 – 3.9 arc-seconds, too close to Sun to observe
- Conjunction with Sun – Jan 9
- June 1 – 4.3 arc-seconds, mag = +1.33 (morning object)
- Dec 1 – 8.0 arc-seconds, mag +0.5 (morning object)

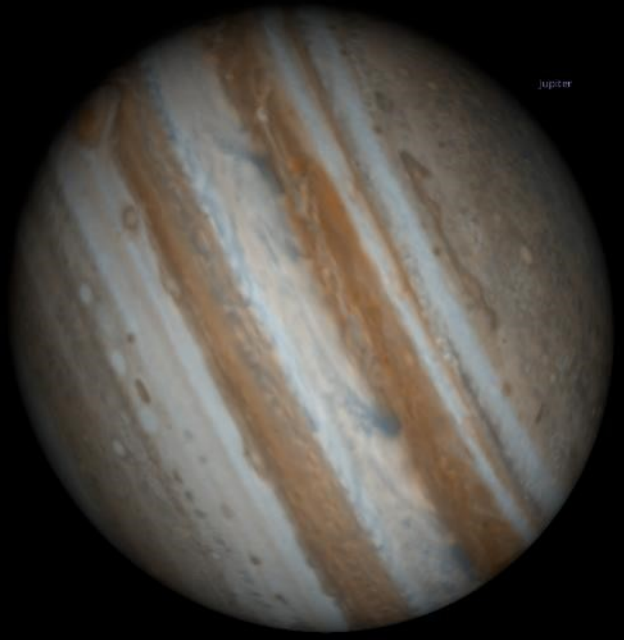
The next opposition for Mars will be 2-19-2027

Images below show the apparent size difference between Jupiter and Mars

Jan 1



Dec 1



Jupiter

Telescope Required

Images from Stellarium

Jupiter 2026

- Jan 10 – 45.6 arc-seconds, mag = -2.7 (opposition)
- July 29 - Conjunction with Sun
- Images below show the apparent size difference between January 10 and July 1

Diameter of Jupiter's moons on Jan 1st
Io = 1.2 arc-sec
Europa = 1.0 arc-sec
Ganymede 1.7 arc-sec
Callisto 1.57 arc-sec

Jan 10

July 1

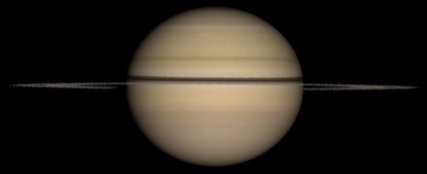
Telescope Required

Images from Stellarium

Saturn 2026

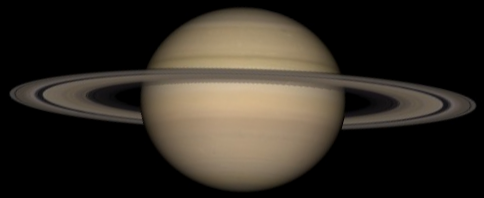
Saturn moves above 0-degree declination in March and does not go south of the celestial equator until Oct 2039

- March 3 – Conjunction with Sun
- Oct 4 - Saturn Opposition – 19.7 arc-seconds (45.3 arc-sec rings), mag = + 0.3
- Images below show the apparent size difference between January 1st and the opposition date. Planets appear largest near the opposition dates because they are closest to Earth at that time.



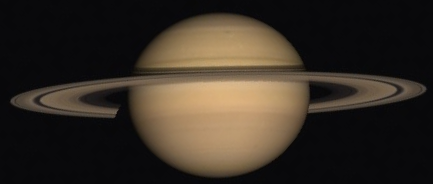
Jan 1

Ring Tilt +0.9 deg



Oct 4 (Opp)

Ring Tilt +7.5 deg



Dec 31

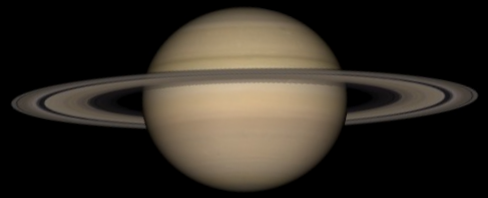
Ring Tilt +6.3deg

Telescope Required

Images from Stellarium

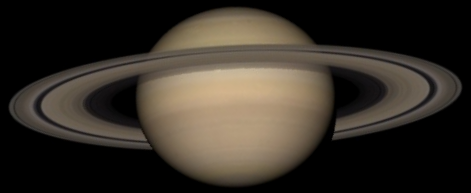
Saturn Ring Tilt 2026-2028

- 10-4-2026 (+7° 30’)

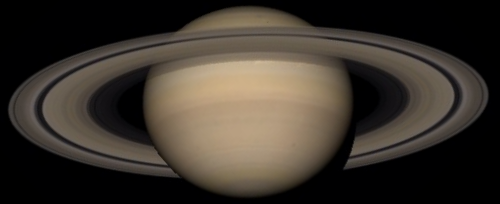


Saturn’s rings “open” and become easier to see starting in 2026. Saturn’s south pole is tilted towards Earth. Next winter solstice for Saturn is 2032.

- 10-4-2027 (+13° 20’)



- 10-4-2028 (+18° 32’)



Telescope Required

Images from Stellarium

Uranus 2026

- **May 22 – Conjunction with Sun**
- **Nov 25 - Uranus opposition, 3.8 arc-seconds, mag = + 5.62**
- **Uranus will be at declination +19 degree or higher until Oct. 2040**
- Images below show the apparent size difference between Jupiter date and Uranus' opposition. Planets appear largest near the opposition dates because they are closest to Earth at that time.

Jupiter (Opp)

Max diameter of Uranus for current orbit will occur in March 2051 when planet will appear 4.076" in diameter.

Uranus and its moons

Nov 25 (Opp)

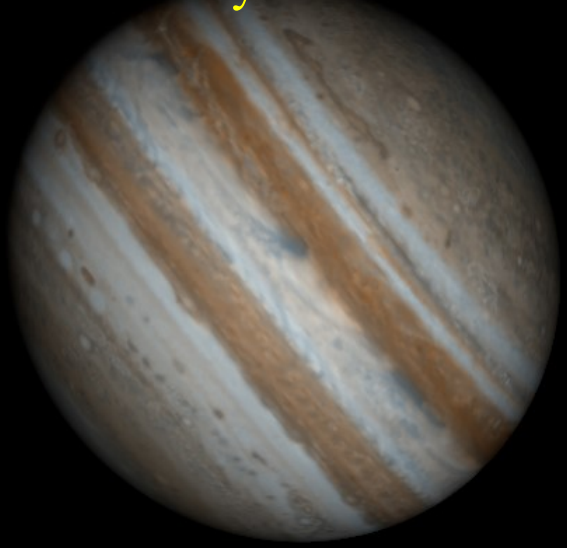
Telescope Required

Images from Stellarium

Neptune 2026

At opposition, Neptune is so far away it takes light 4 hours to reach Earth. Neptune's next perihelion is September 2042

- **Mar 3 – Conjunction with Sun**
- **Sep 25 - Neptune opposition, 2.4 arc-sec, mag = +7.8**
- Images below show the apparent size difference between Jupiter date and Neptune's opposition. Planets appear largest near the opposition dates because they are closest to Earth at that time.



Jupiter (Opp)

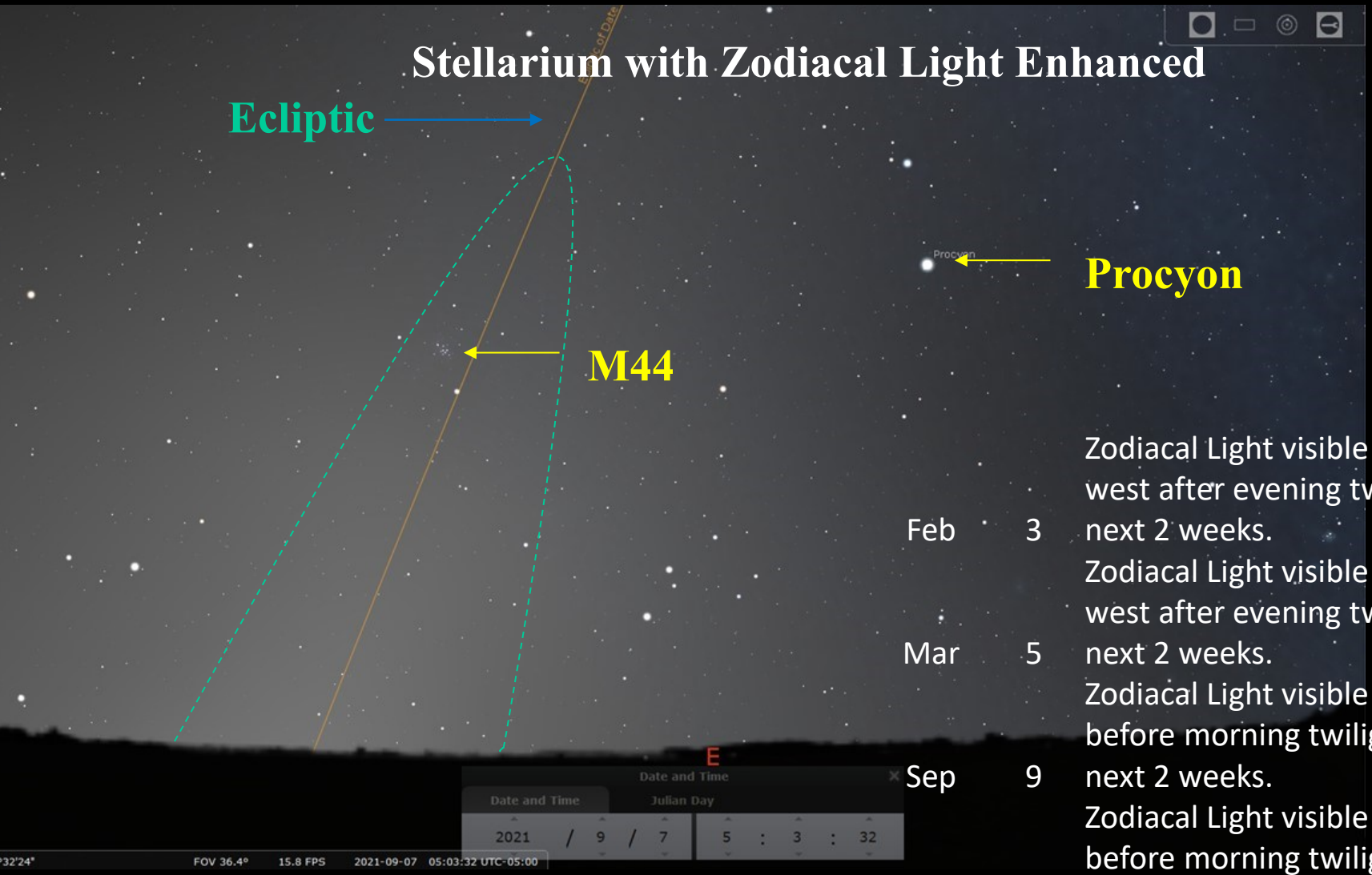
Neptune and its moon Triton

Sep 25 (Opp)

Telescope Required

Images from Stellarium

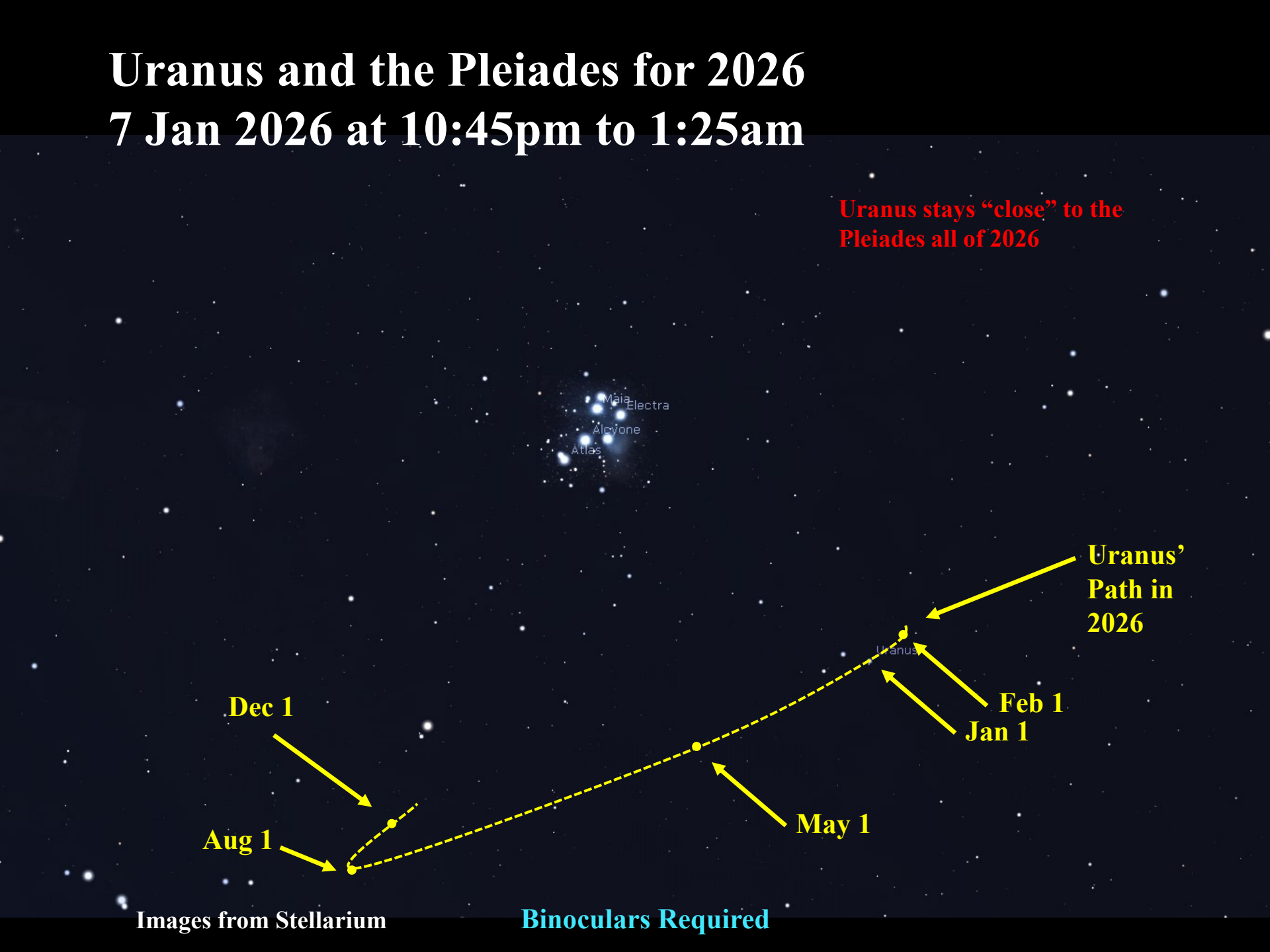
Stellarium with Zodiacal Light Enhanced



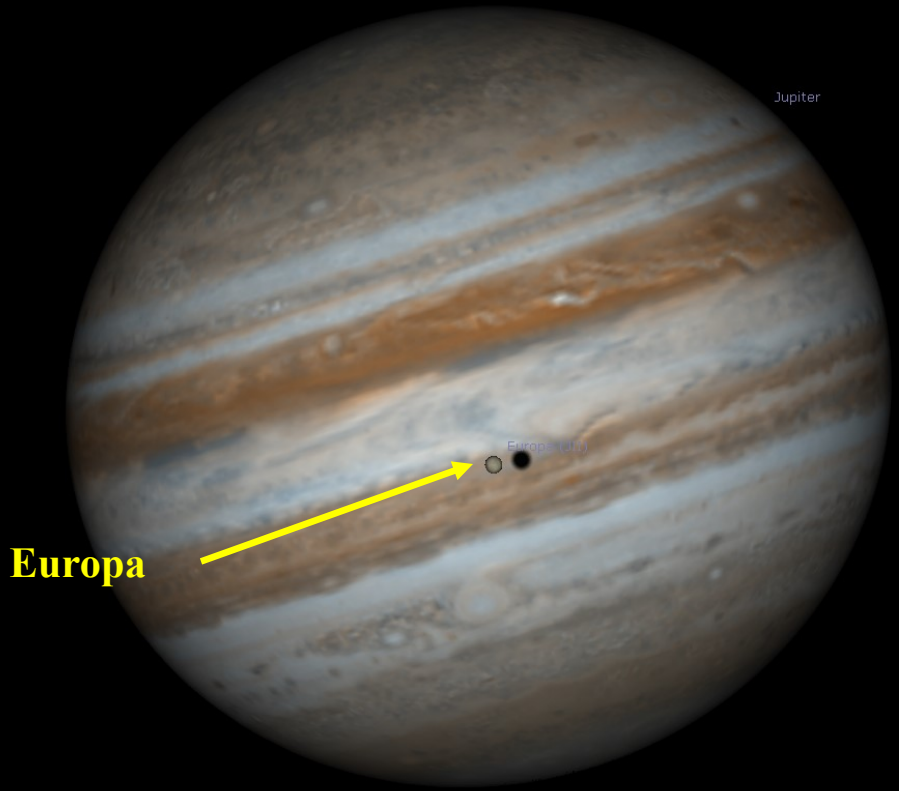
Procyon

Feb	3	Zodiacal Light visible in west after evening twilight next 2 weeks.
Mar	5	Zodiacal Light visible in west after evening twilight next 2 weeks.
Sep	9	Zodiacal Light visible in east before morning twilight next 2 weeks.
Oct	8	Zodiacal Light visible in east before morning twilight next 2 weeks.

Uranus and the Pleiades for 2026
7 Jan 2026 at 10:45pm to 1:25am



Jupiter Europa and Shadow
7 Jan 2026 at 10:45pm to 1:25am

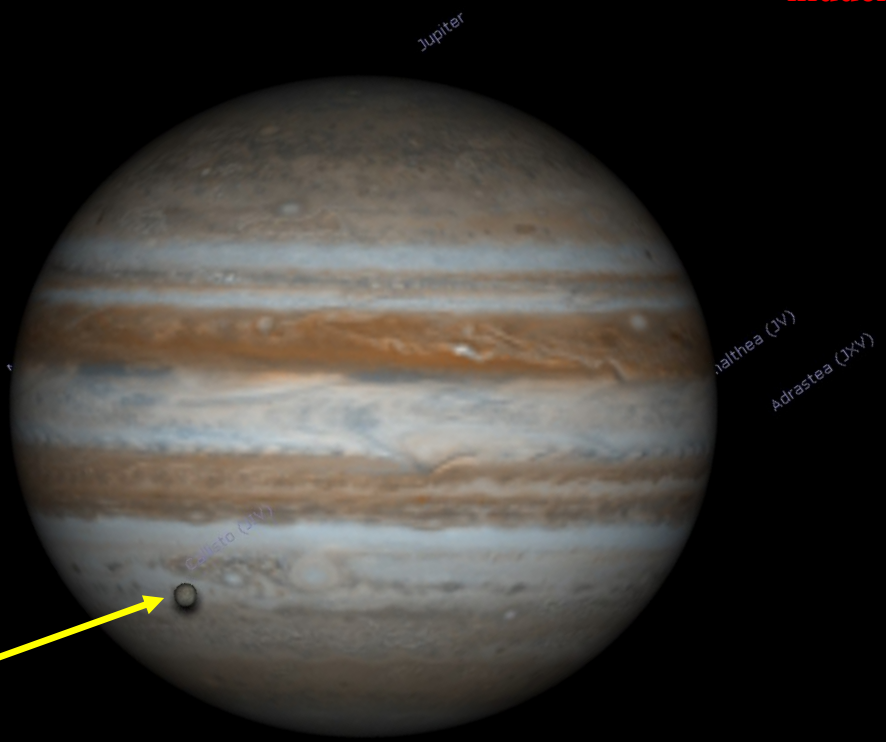


Images from Stellarium

Telescope Required

Jupiter Callisto and Shadow
10 Jan 2026 at 1:15am to 4:45am

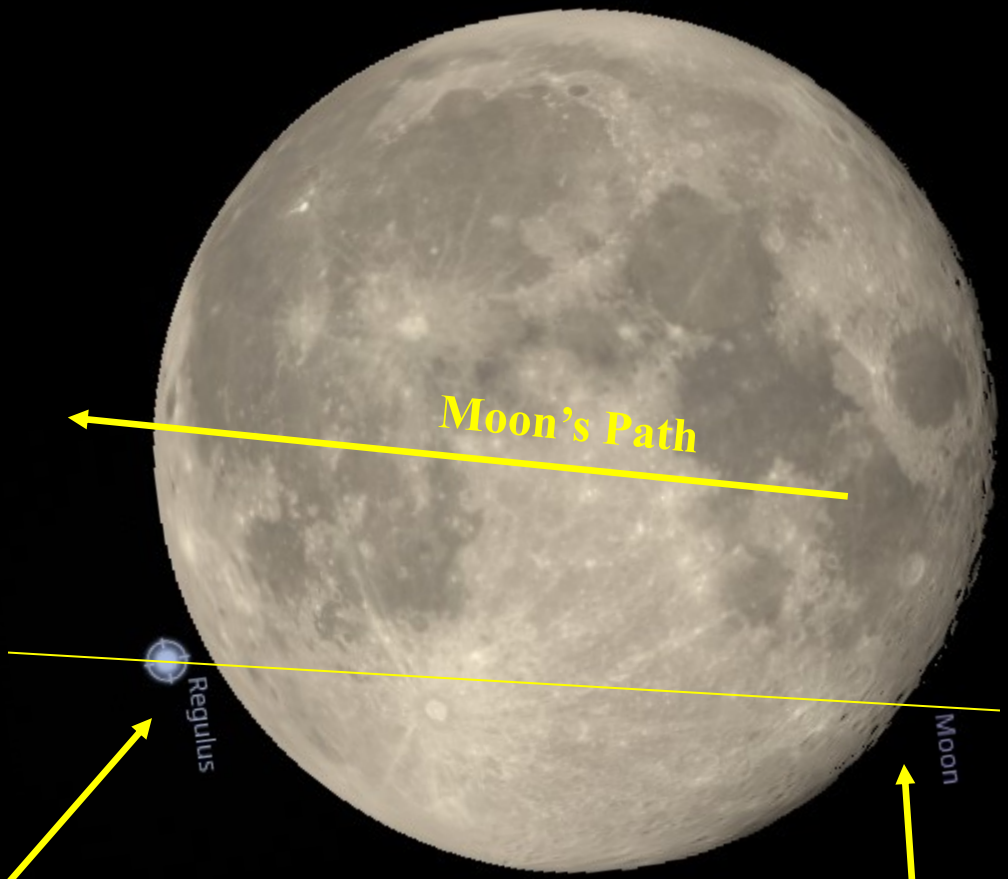
Callisto's umbral shadow almost hidden behind Callisto



Images from Stellarium

Telescope Required

Occultation of Regulus (Alpha Leo) by Moon. 2 Feb 2026



Disappear: 7:45pm
(alt=12deg, az=85deg)

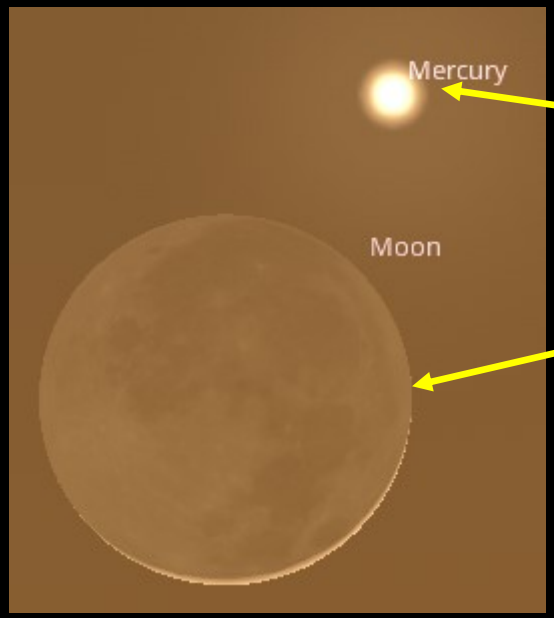
Reappear: 8:30pm
(alt=22deg, az=92deg)

Telescope Required

Images from Stellarium

Evening Event

Close approach of the Moon and Mercury
18 Feb 2026 at 6:15pm; Moon 10 degrees
Low on western horizon



Saturn

Mercury

Moon

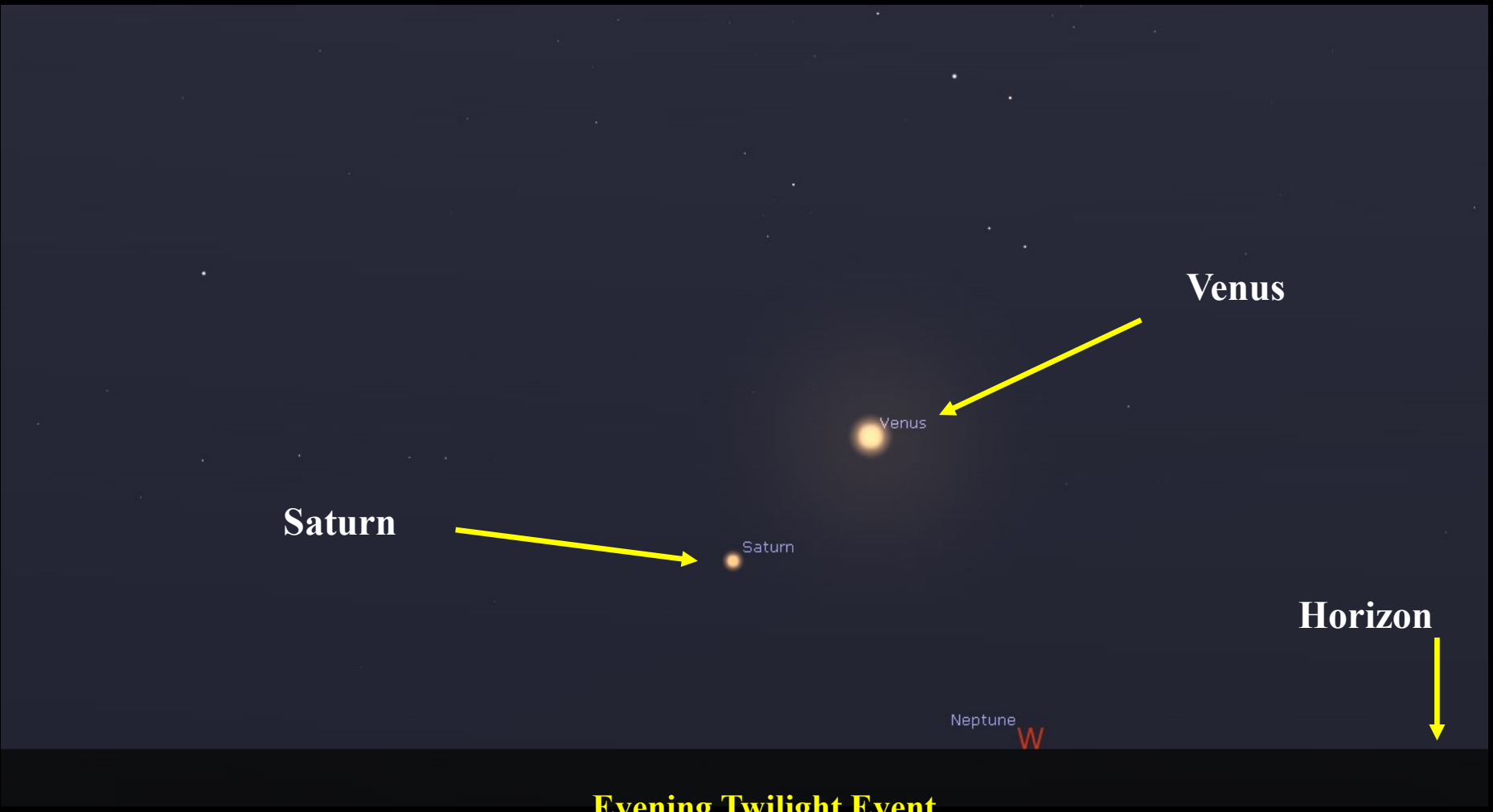
Horizon

Venus

Evening Twilight Event

Images from Stellarium

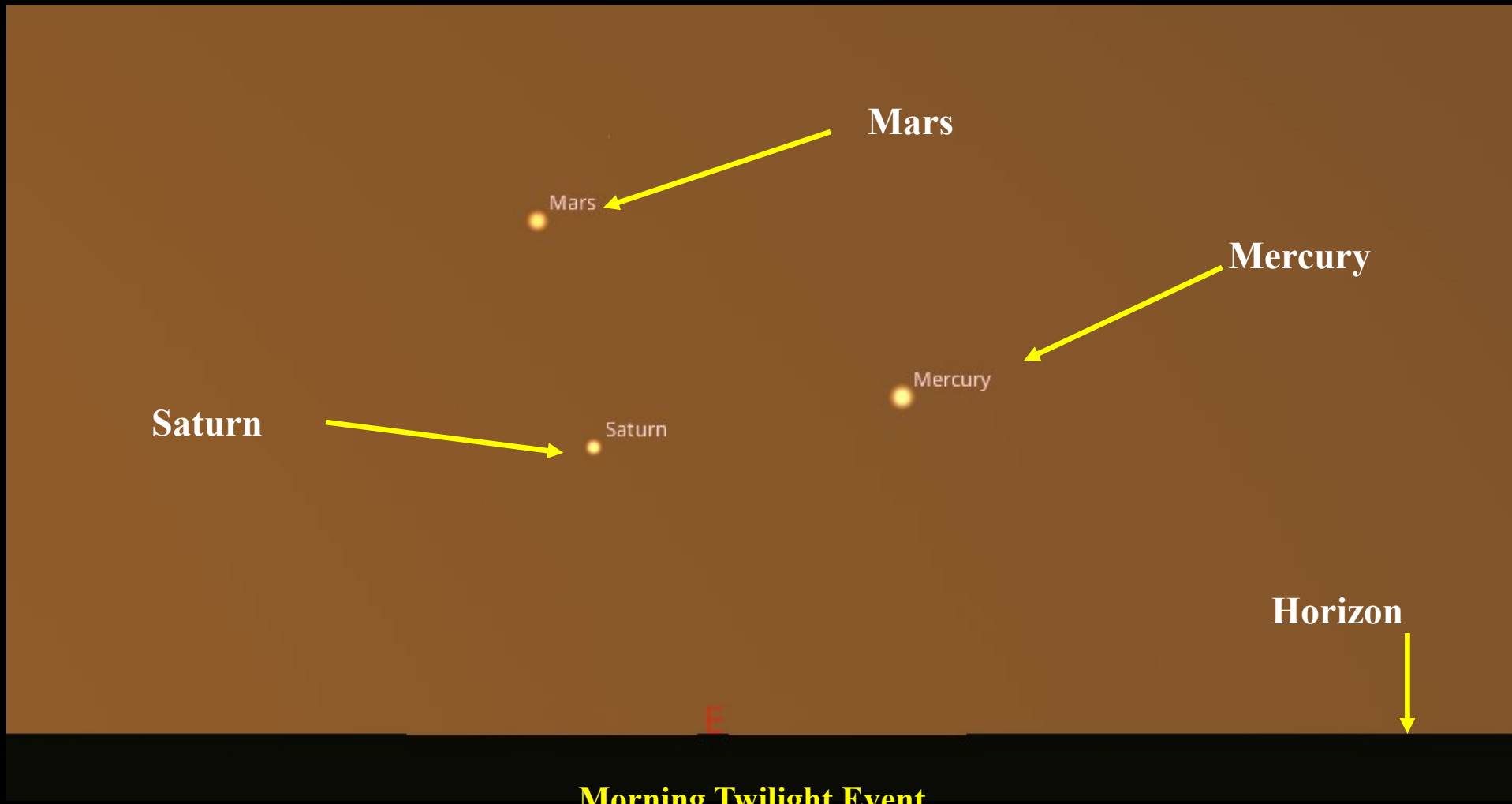
Venus and Saturn 1-degree apart in evening sky
8 March 2026 at 8:00pm,
5 degrees above Western horizon



Evening Twilight Event

Images from Stellarium

Mars, Saturn and Mercury in morning sky
19 April 2026 at 5:45am,
2 degrees above Eastern horizon



Morning Twilight Event

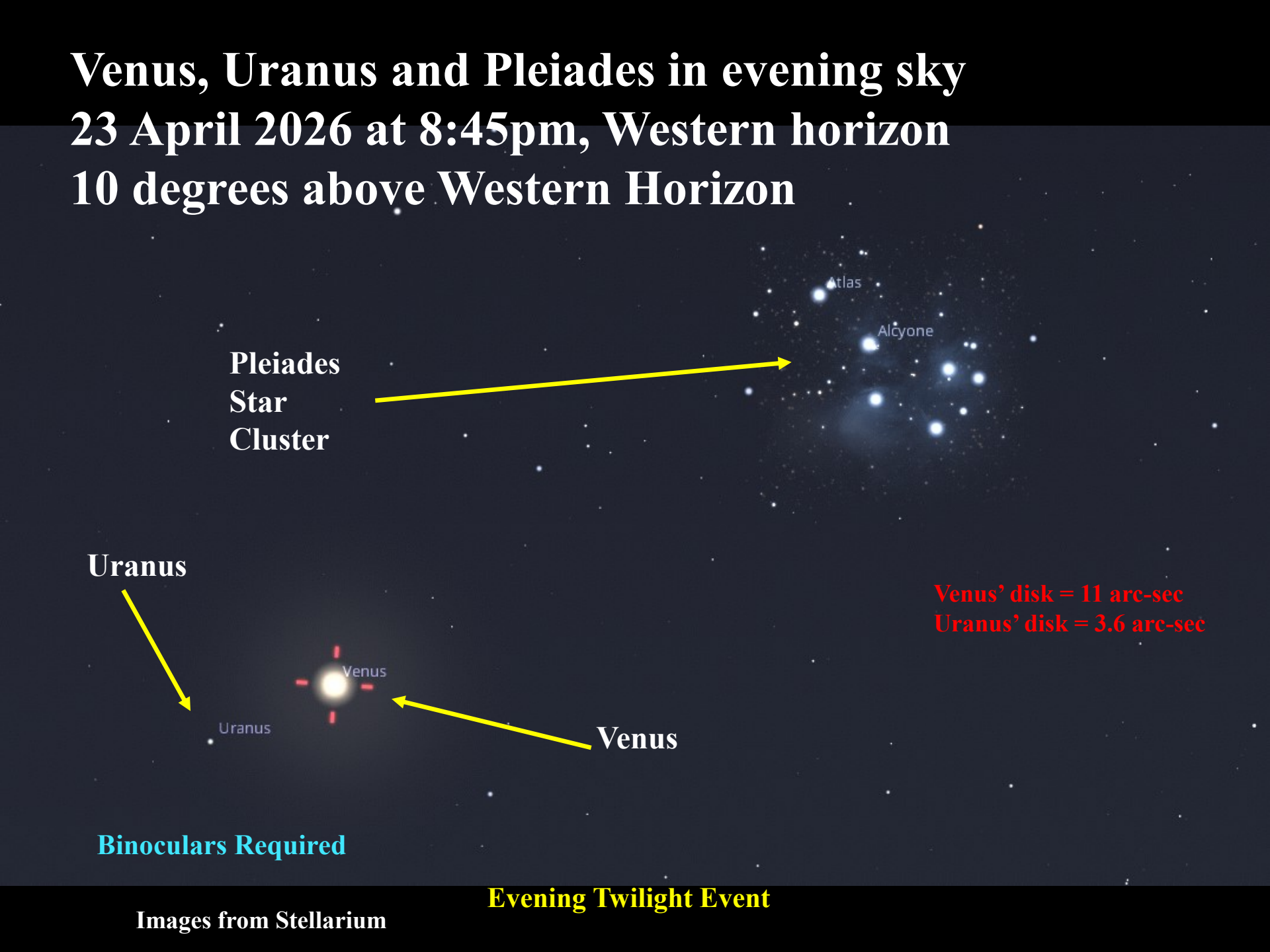
Images from Stellarium

Moon, Venus and Pleiades in evening sky
19 April 2026 at 8:30pm, Western horizon

Evening Twilight Event

Images from Stellarium

Venus, Uranus and Pleiades in evening sky
23 April 2026 at 8:45pm, Western horizon
10 degrees above Western Horizon



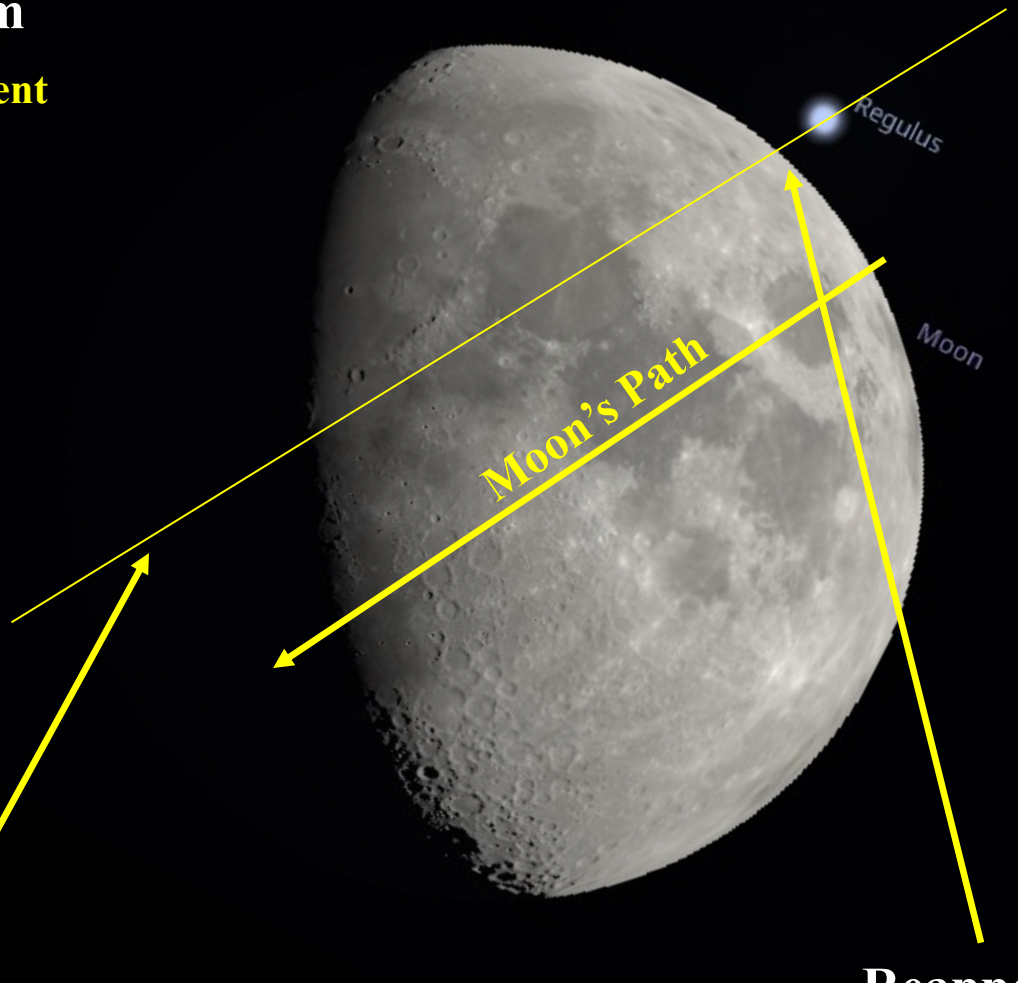
Evening Twilight Event

Images from Stellarium

Occultation of Regulus (Alpha Leo) by Moon. 25 April 2026

Sunset 7:45pm

Day/Evening Event



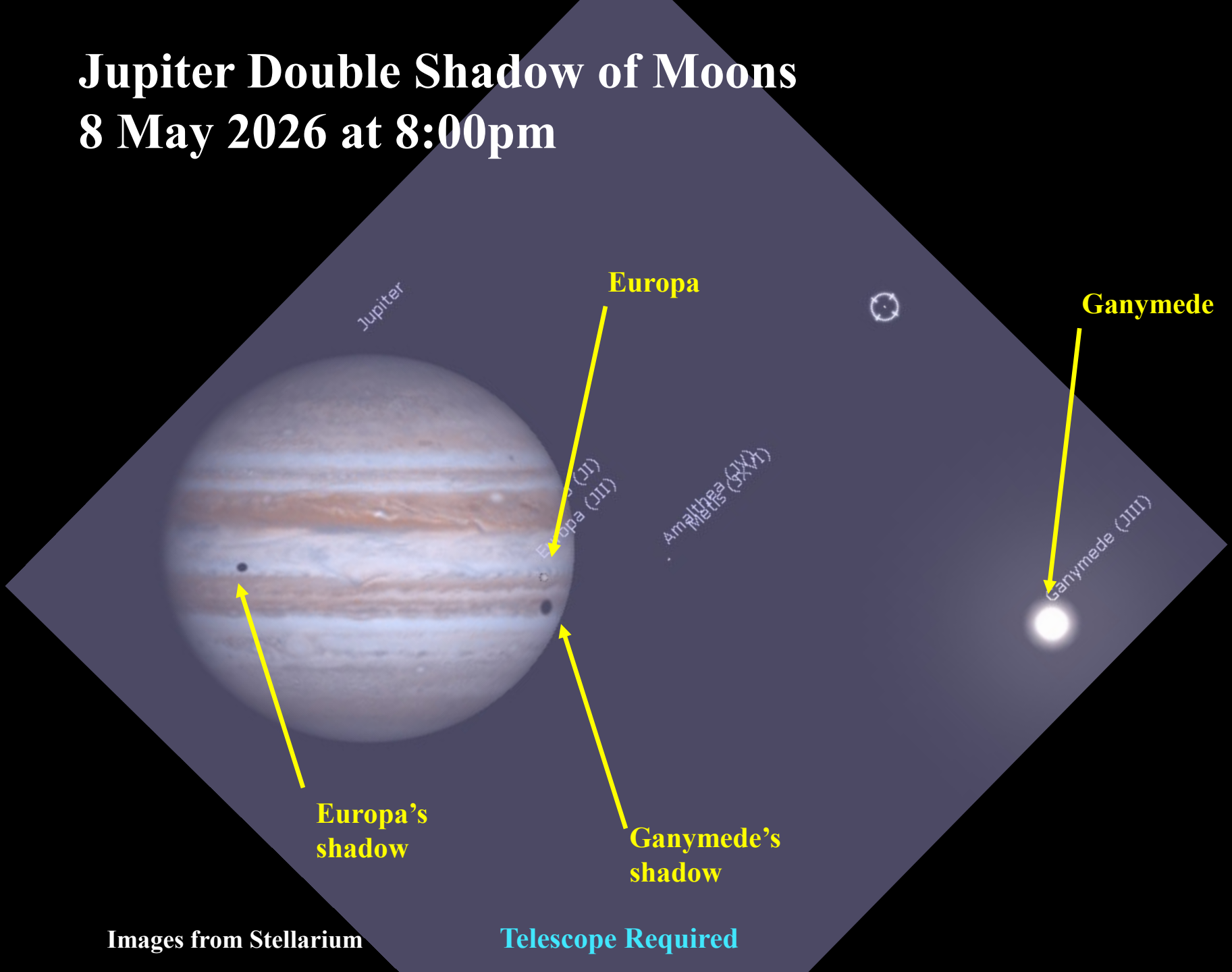
Disappear: 7:06pm
(alt=130deg, az=54deg)

Reappear: 8:17pm
(alt=62deg, az=160deg)

Telescope Required

Images from Stellarium

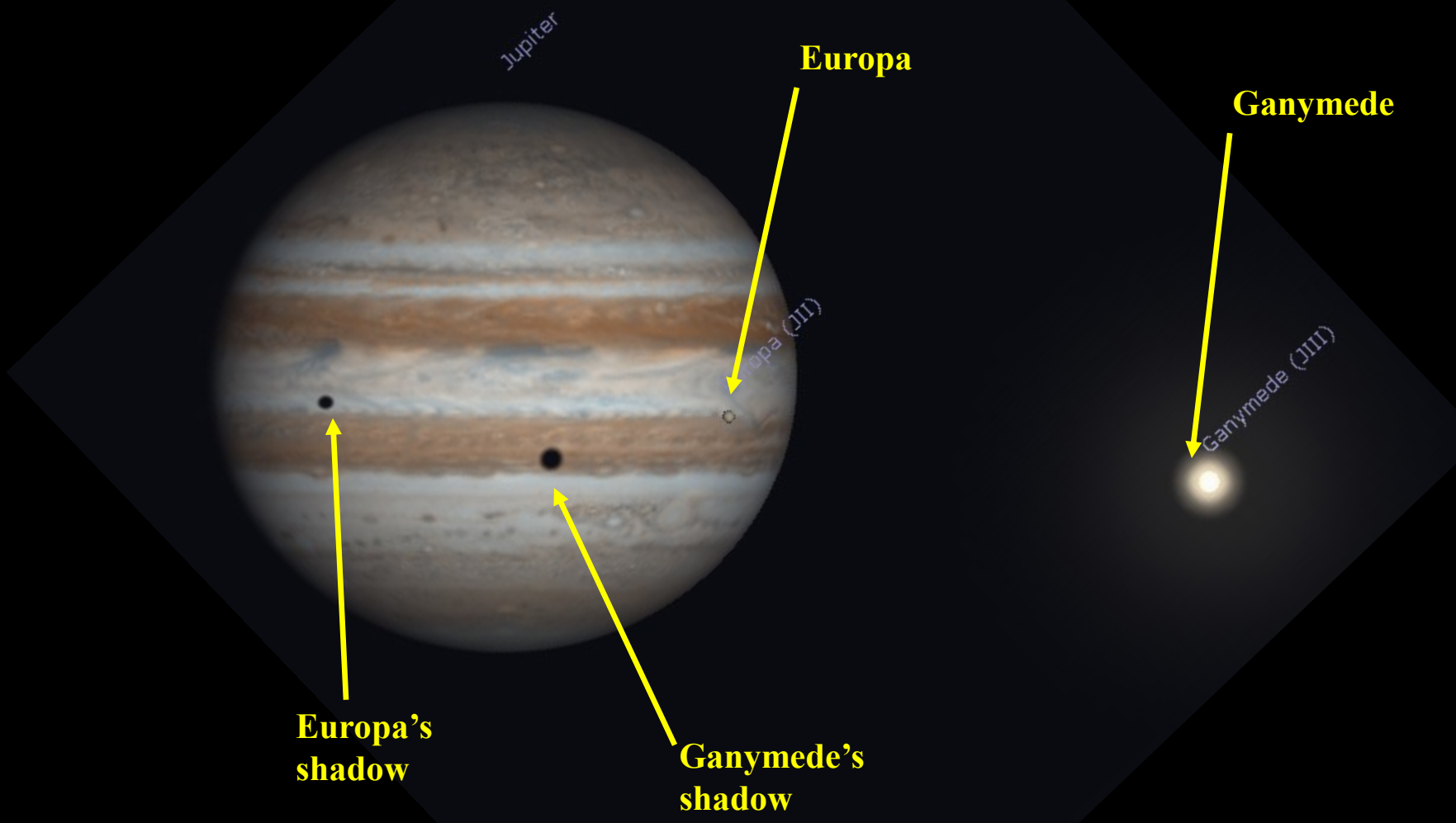
Jupiter Double Shadow of Moons
8 May 2026 at 8:00pm



Images from Stellarium

Telescope Required

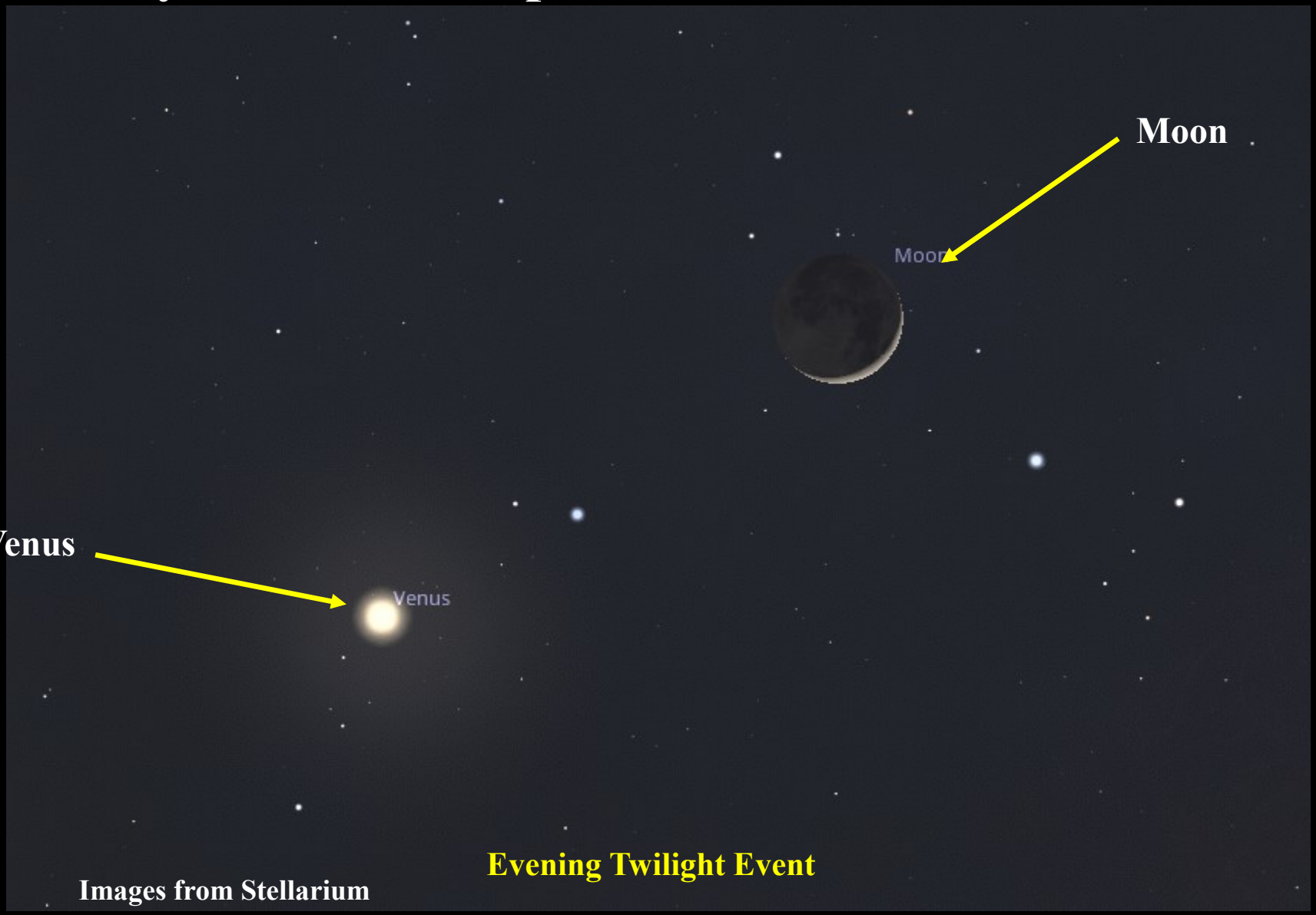
Jupiter Double Shadow of Moons
15 May 2026 at 10:45pm



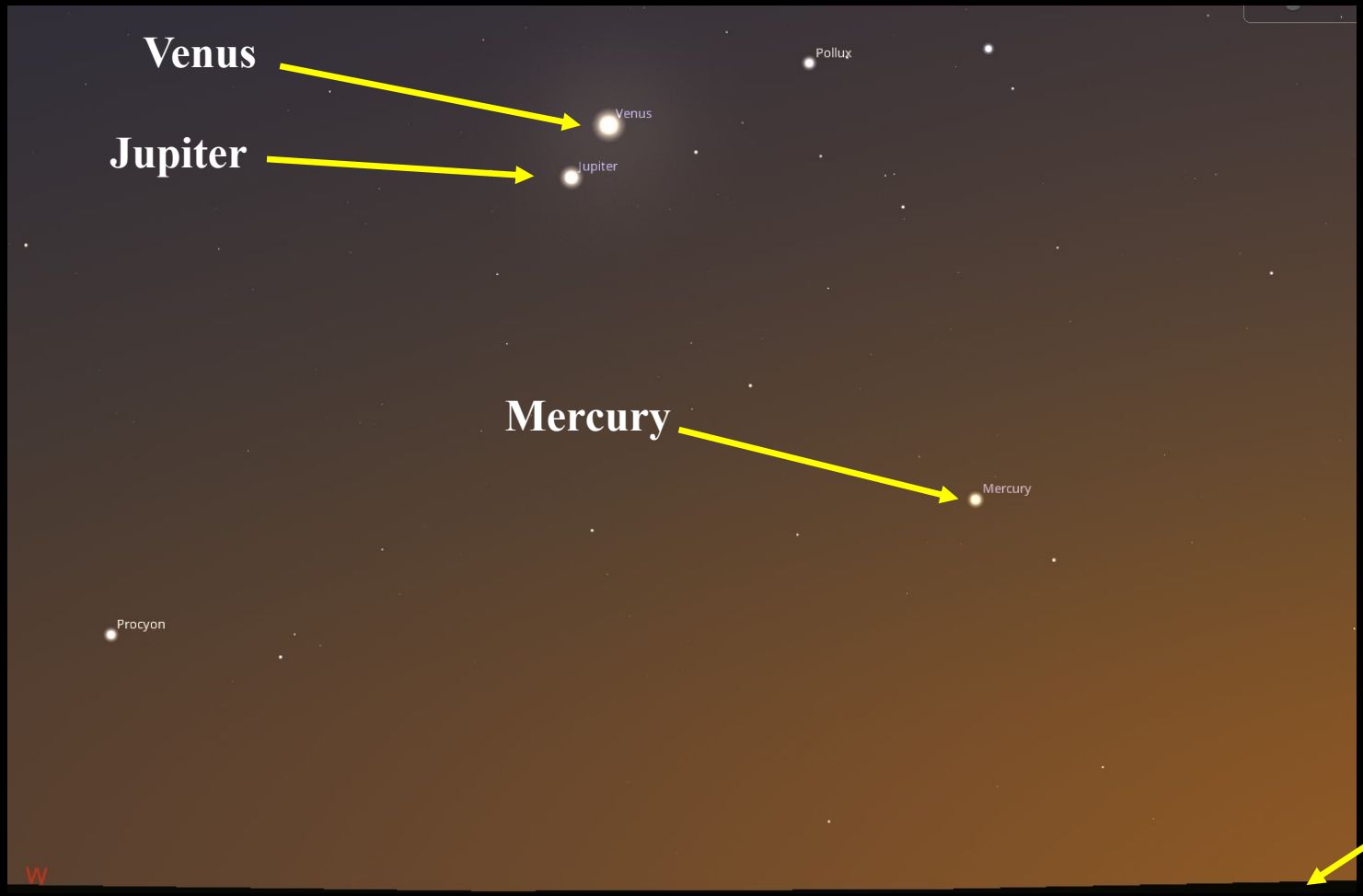
Images from Stellarium

Telescope Required

Venus and Moon
18 May 2026 at 10:00pm, Western horizon



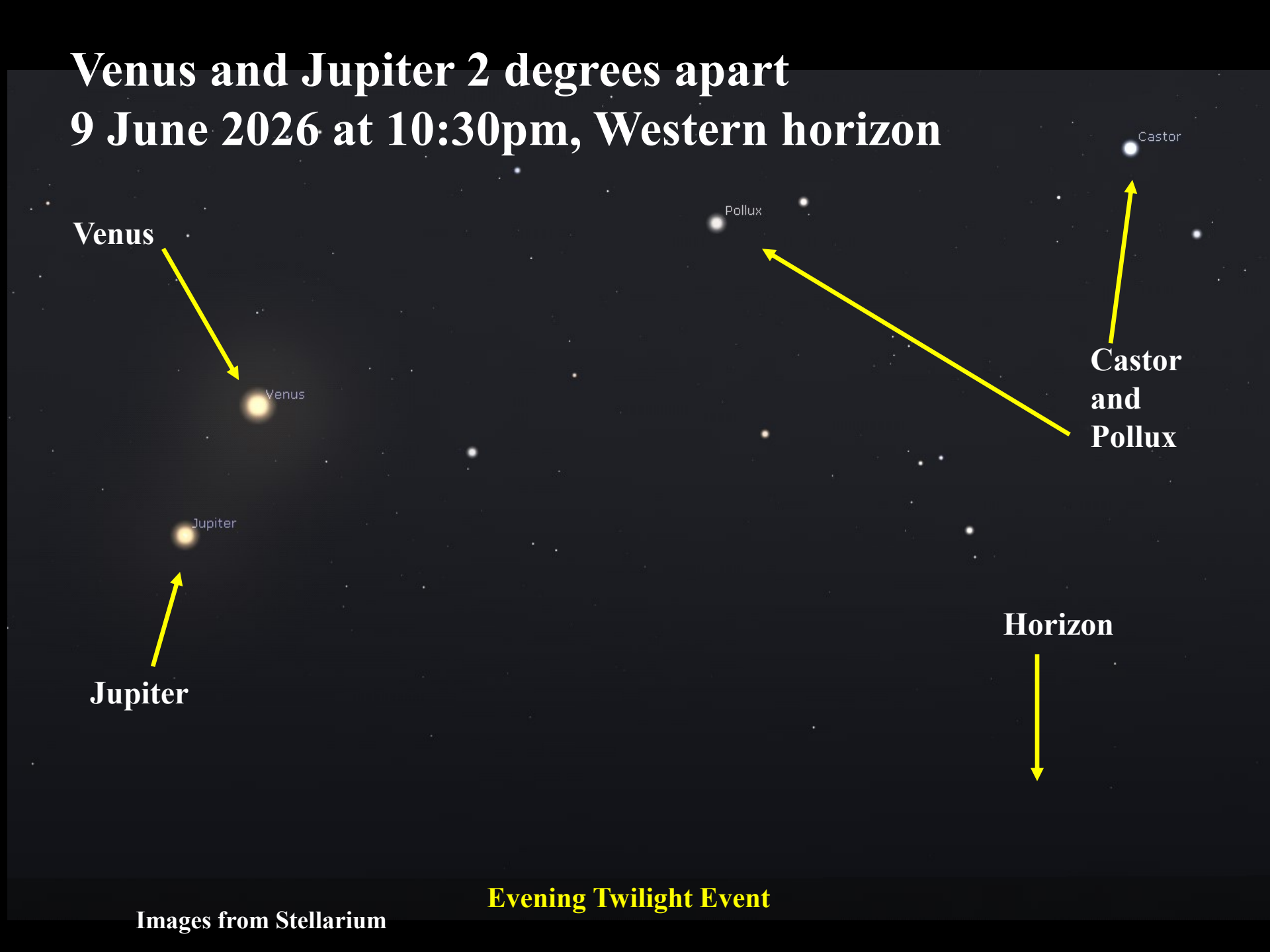
Venus and Jupiter will pass within 1°36' of each other 9 June 2026 at 9:00pm, Western horizon



Evening Twilight Event

Images from Stellarium

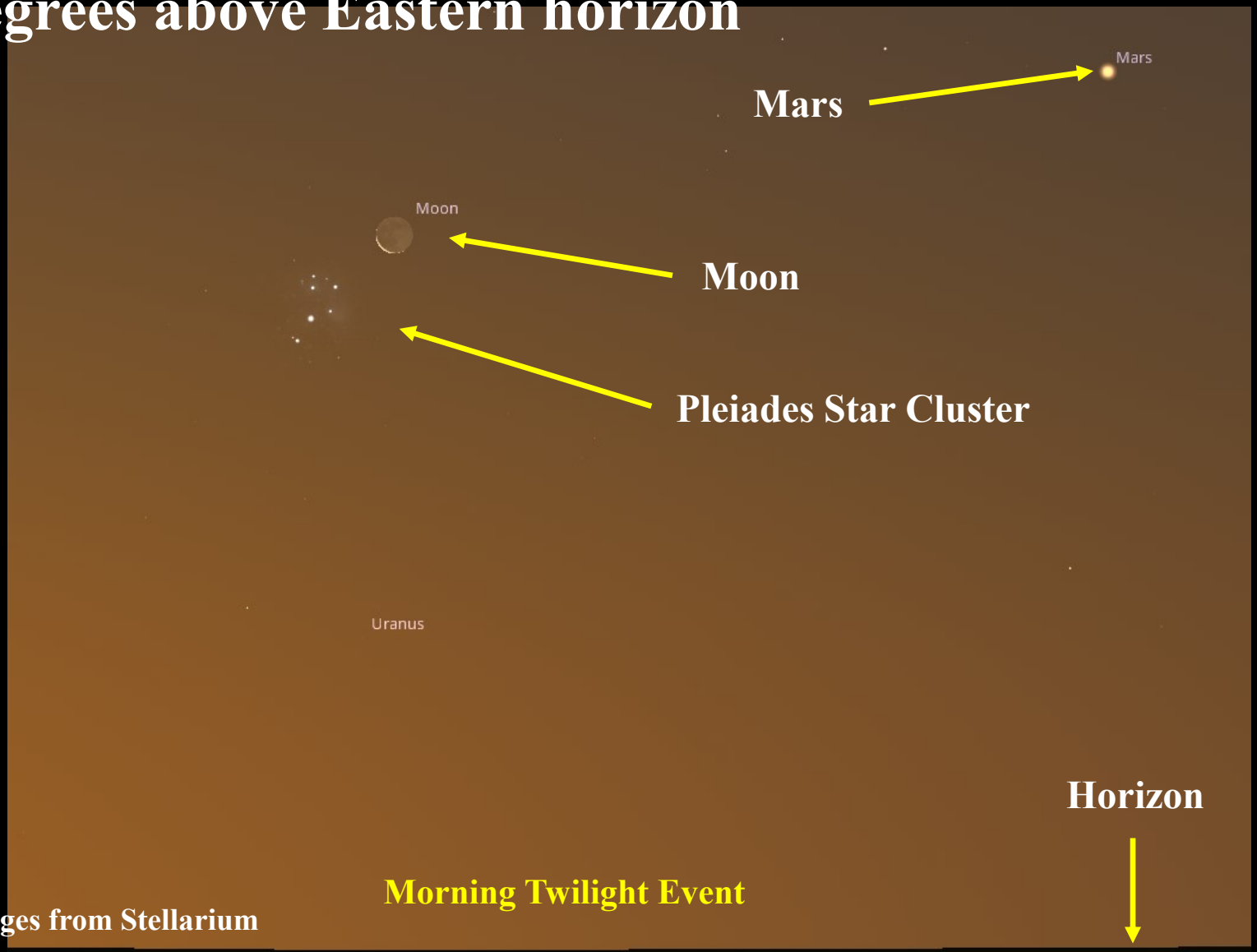
Venus and Jupiter 2 degrees apart
9 June 2026 at 10:30pm, Western horizon



Evening Twilight Event

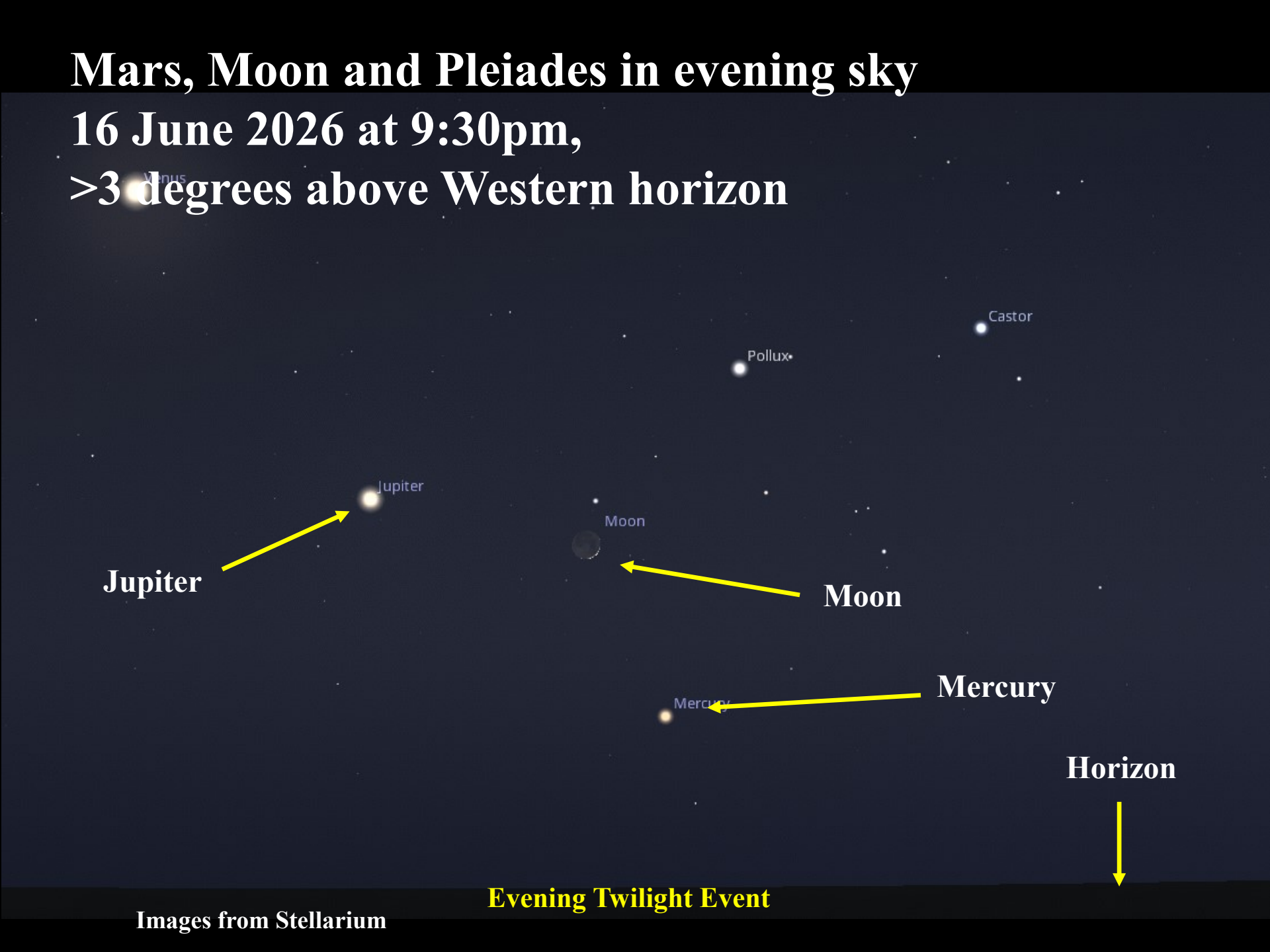
Images from Stellarium

Mars, Moon and Pleiades in morning sky
13 June 2026 at 4:30am,
10 degrees above Eastern horizon



Images from Stellarium

Mars, Moon and Pleiades in evening sky
16 June 2026 at 9:30pm,
>3 degrees above Western horizon



Evening Twilight Event

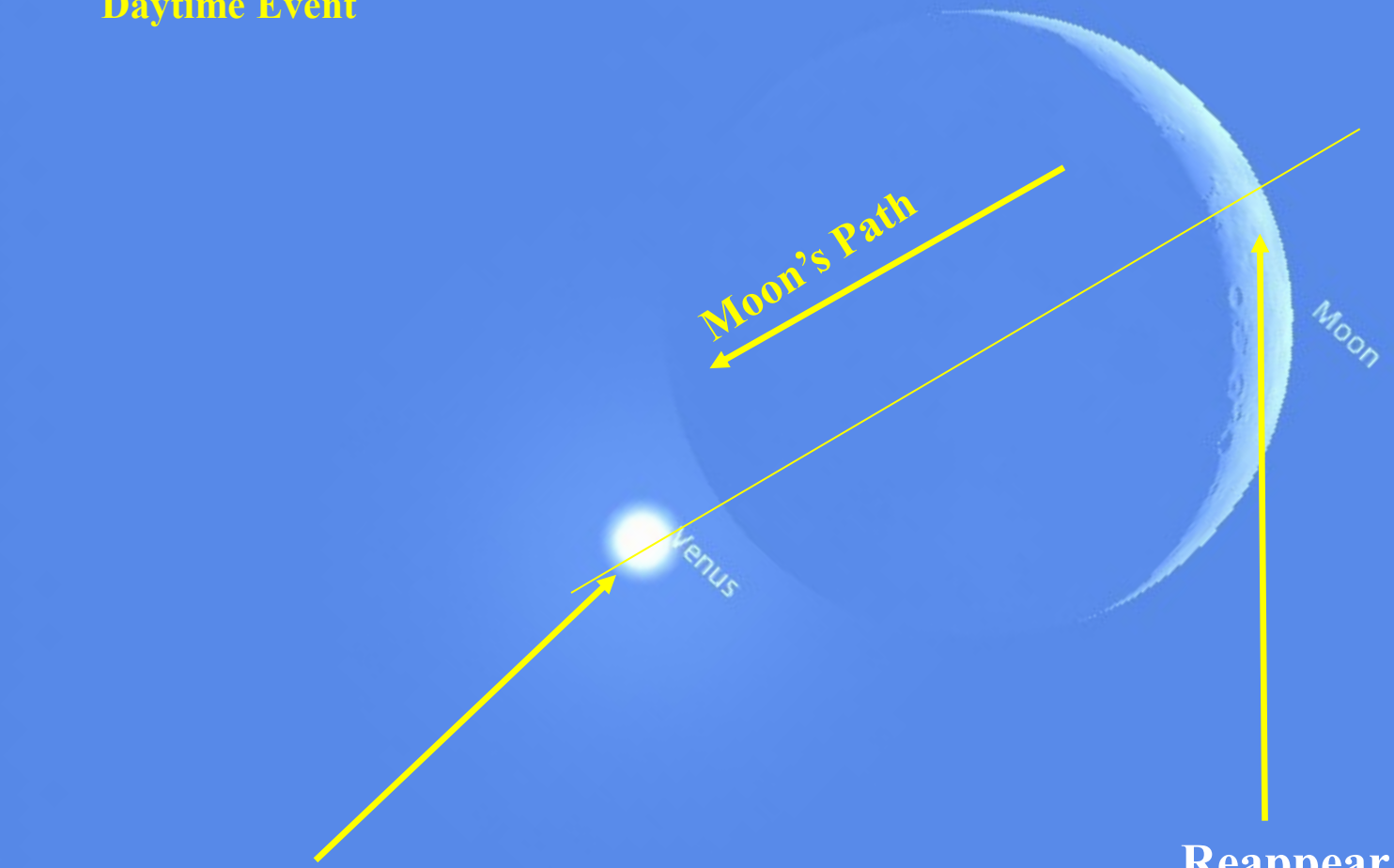
Images from Stellarium

Occultation of Venus by Moon. 17 June 2026

Sunset 8:28pm

Daytime Event

CAUTION do not point telescope at Sun.



Disappear: 2:22pm
(alt=64deg, az=127deg)

Reappear: 3:45pm
(alt=72deg, az=183deg)

Telescope Required

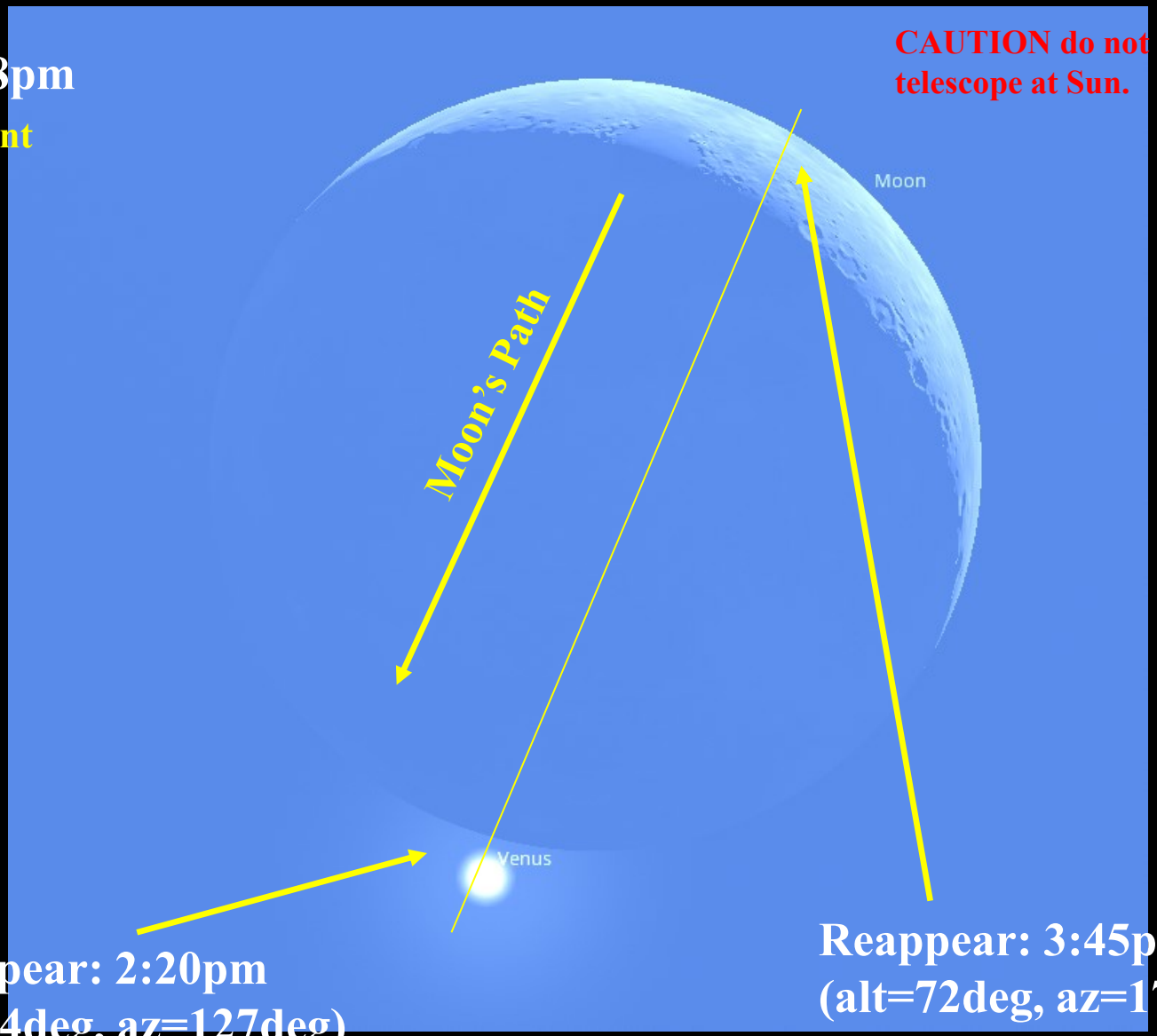
Images from Stellarium

Occultation of Venus by Moon. 17 June 2026

Sunset 8:28pm

Daytime Event

CAUTION do not point telescope at Sun.



Disappear: 2:20pm
(alt=64deg, az=127deg)

Reappear: 3:45pm
(alt=72deg, az=179deg)

Telescope Required

Images from Stellarium

Moon and M44 will pass within 48.0 arcminutes and Venus is nearby
17 June 2026 at 10:00pm, Western horizon

Binoculars Required

Evening Twilight Event

Images from Stellarium

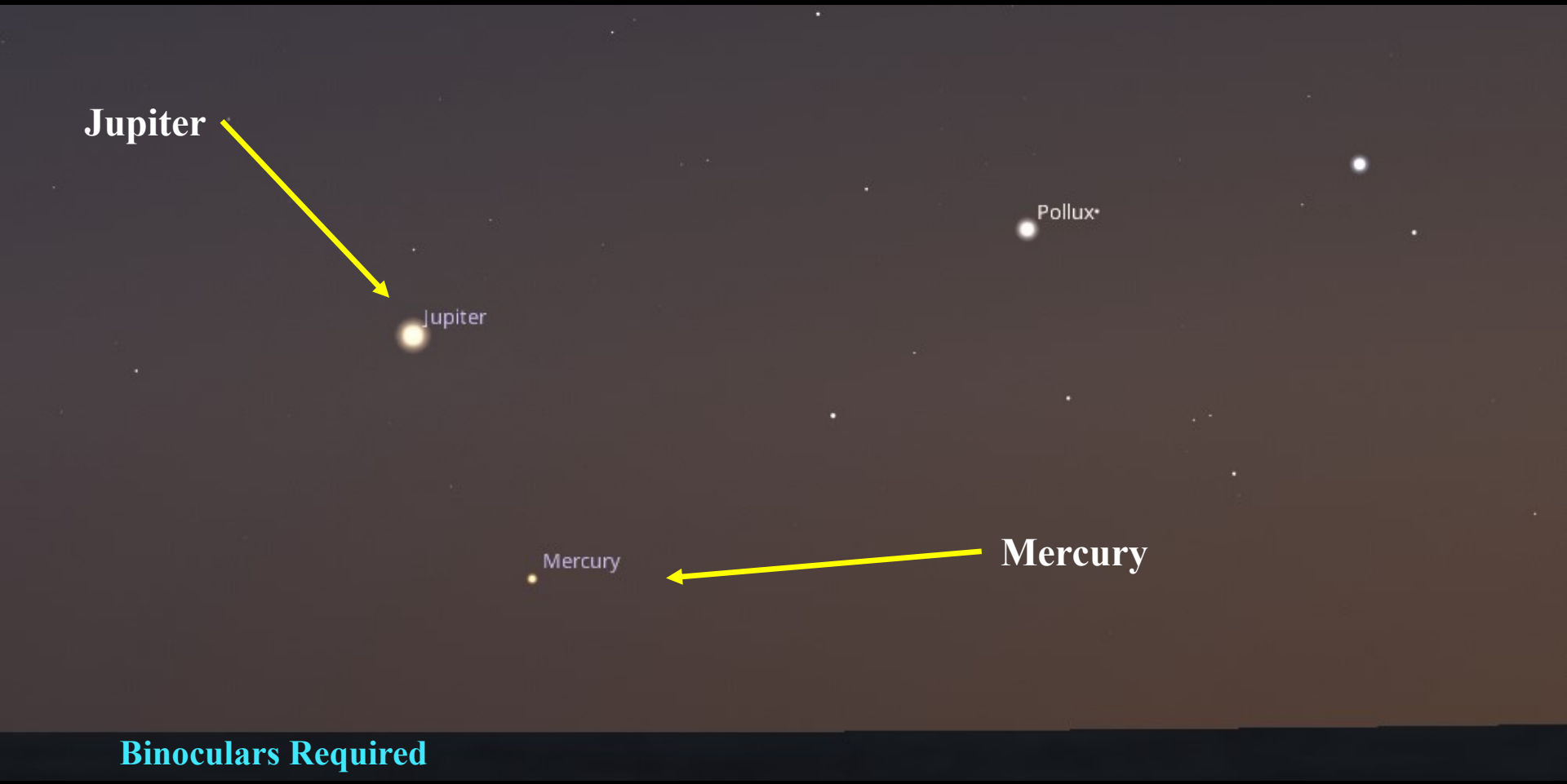
Venus and M44
19 June 2026 at 10:00pm, Western horizon

Binoculars Required

Evening Twilight Event

Images from Stellarium

Jupiter and Mercury
25 June 2026 at 9:30pm, Western horizon
5 degrees above horizon

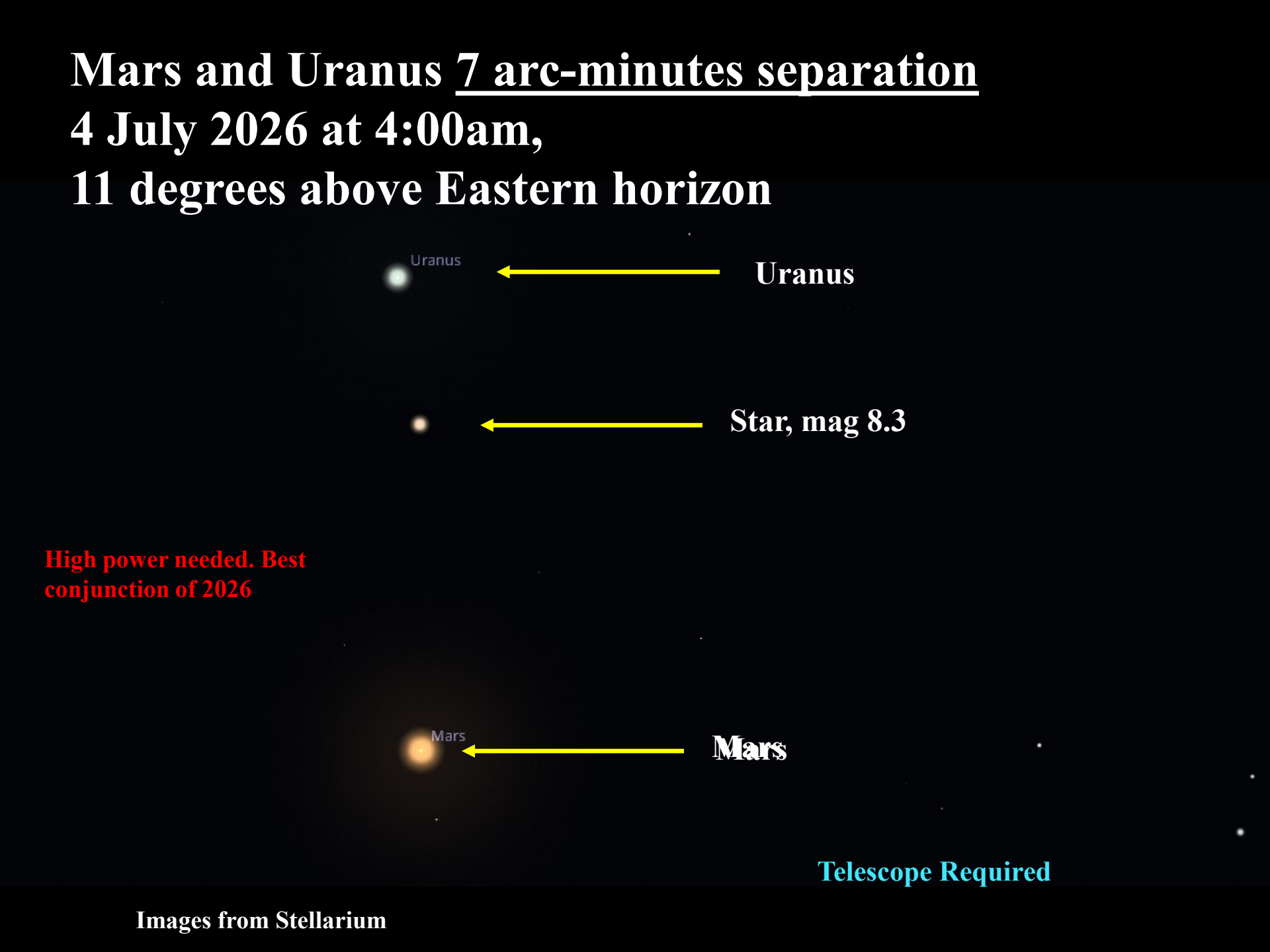


Binoculars Required

Evening Twilight Event

Images from Stellarium

Mars and Uranus 7 arc-minutes separation
4 July 2026 at 4:00am,
11 degrees above Eastern horizon

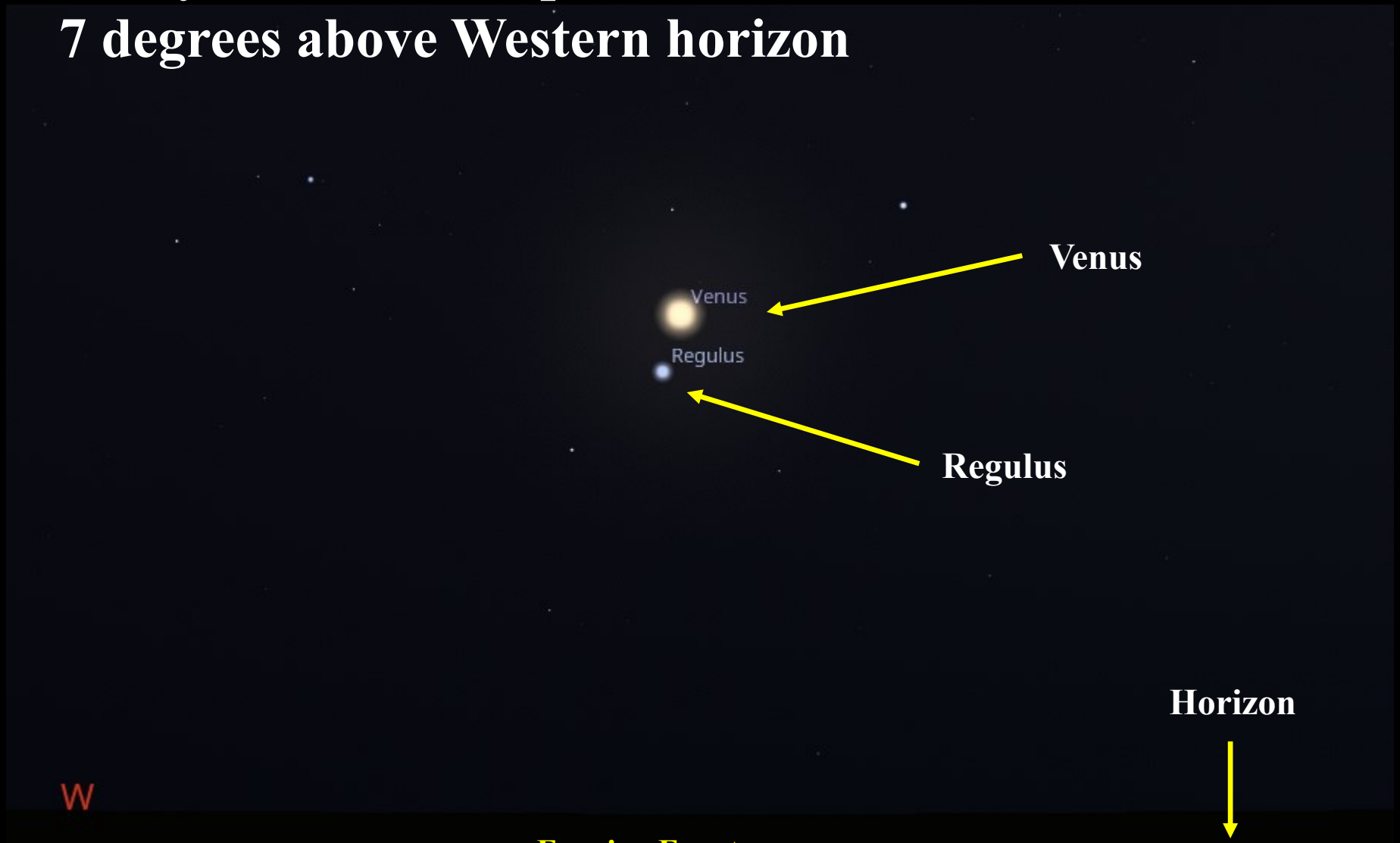


High power needed. Best conjunction of 2026

Telescope Required

Images from Stellarium

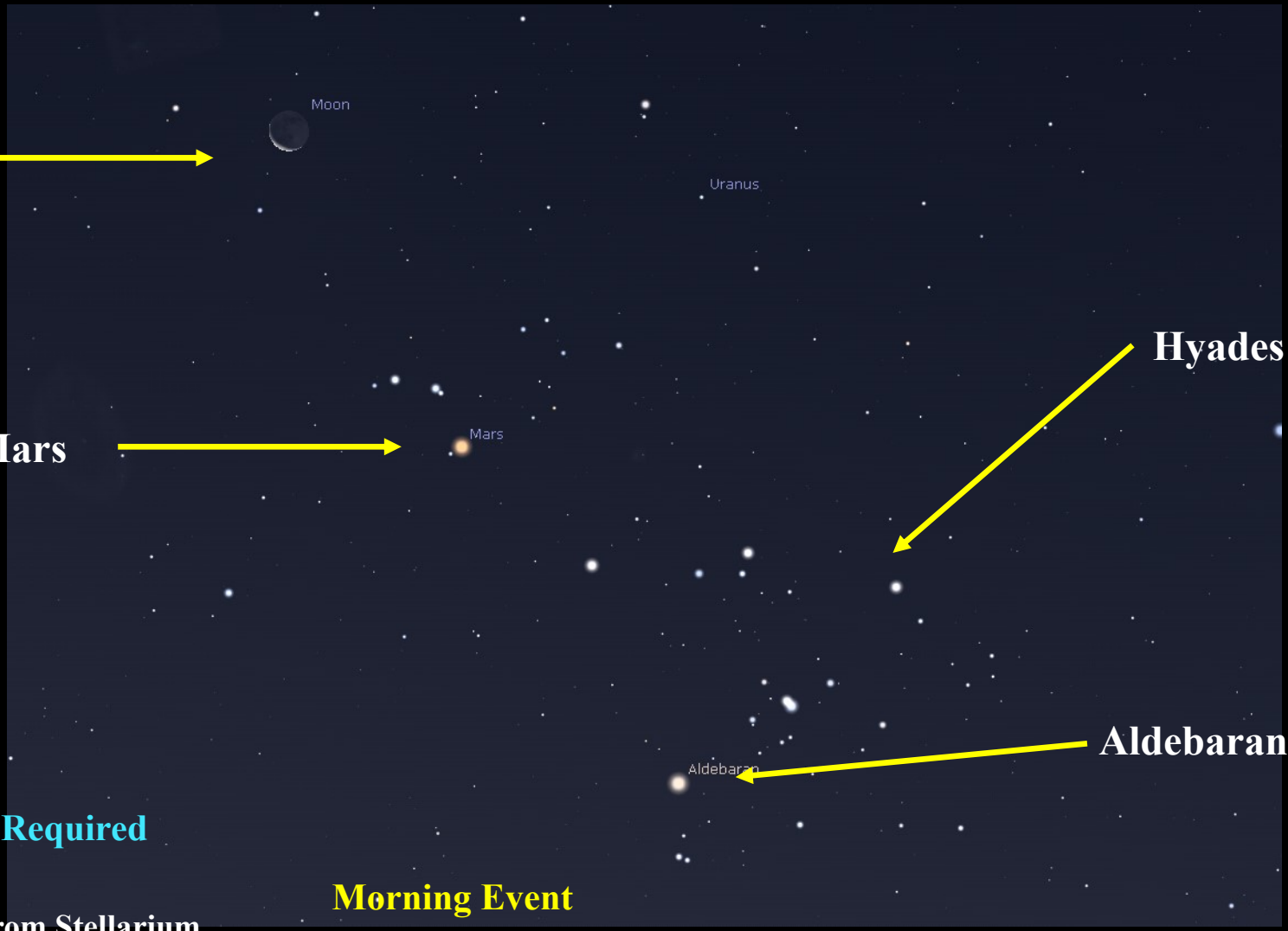
Venus and Regulus in evening sky
9 July 2026 at 10:00pm,
7 degrees above Western horizon



Evening Event

Images from Stellarium

Moon, Mars, Aldebaran and Hyades Star Cluster
11 July 2026 at 4:30am, Eastern horizon
15 degrees above horizon



Moon

Mars

Hyades

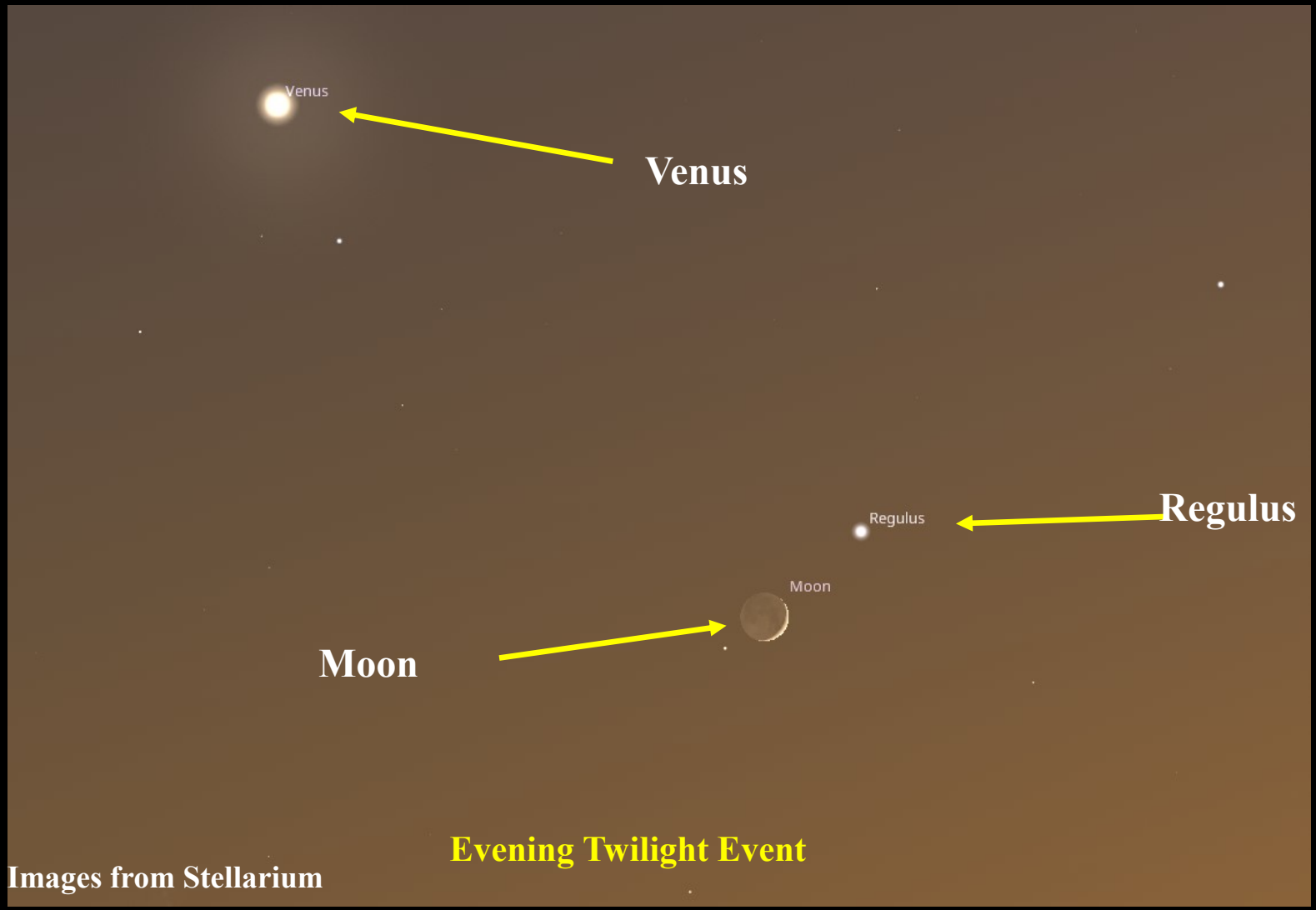
Aldebaran

Binoculars Required

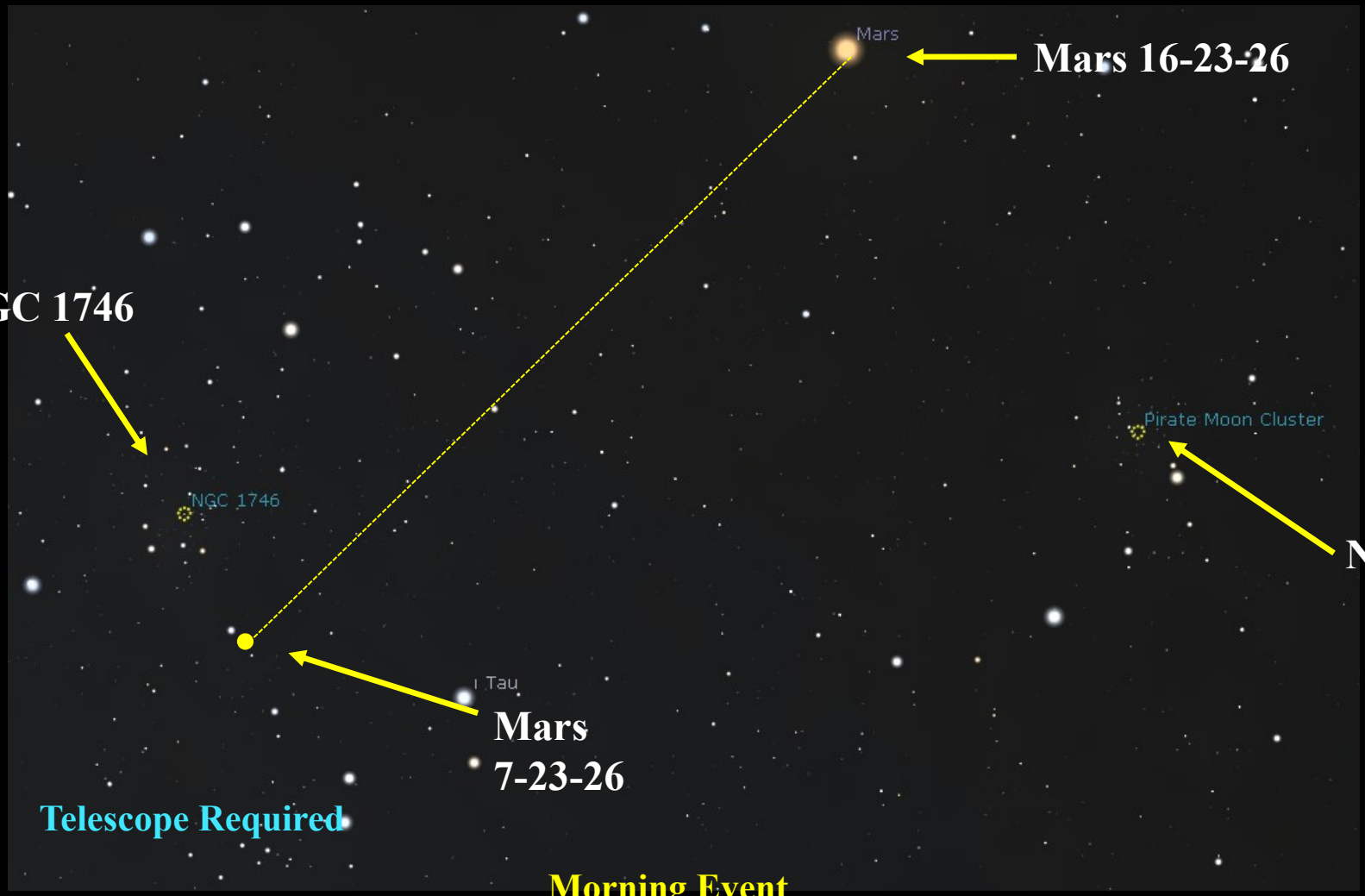
Morning Event

Images from Stellarium

Venus, Moon and Regulus in evening sky
16 July 2026 at 9:00pm,
12 degrees above Western horizon



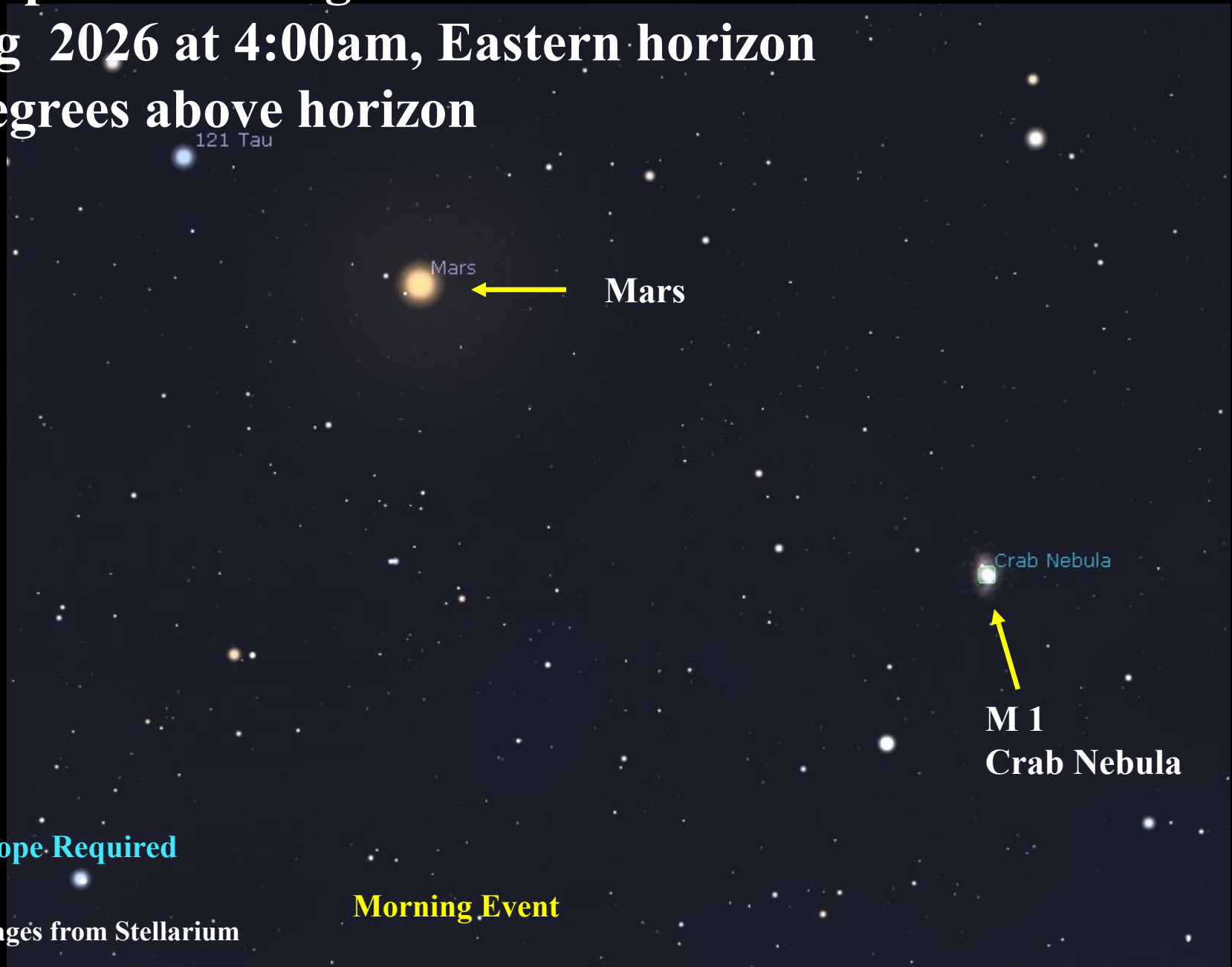
Mars passes by Star Clusters NGC 1647 & NGC 1746
16 to 24 July 2026 at 4:00am, Eastern horizon
15 degrees above horizon



Morning Event

Images from Stellarium

Mars passes 1.5 degree from Crab Nebula
3 Aug 2026 at 4:00am, Eastern horizon
15 degrees above horizon

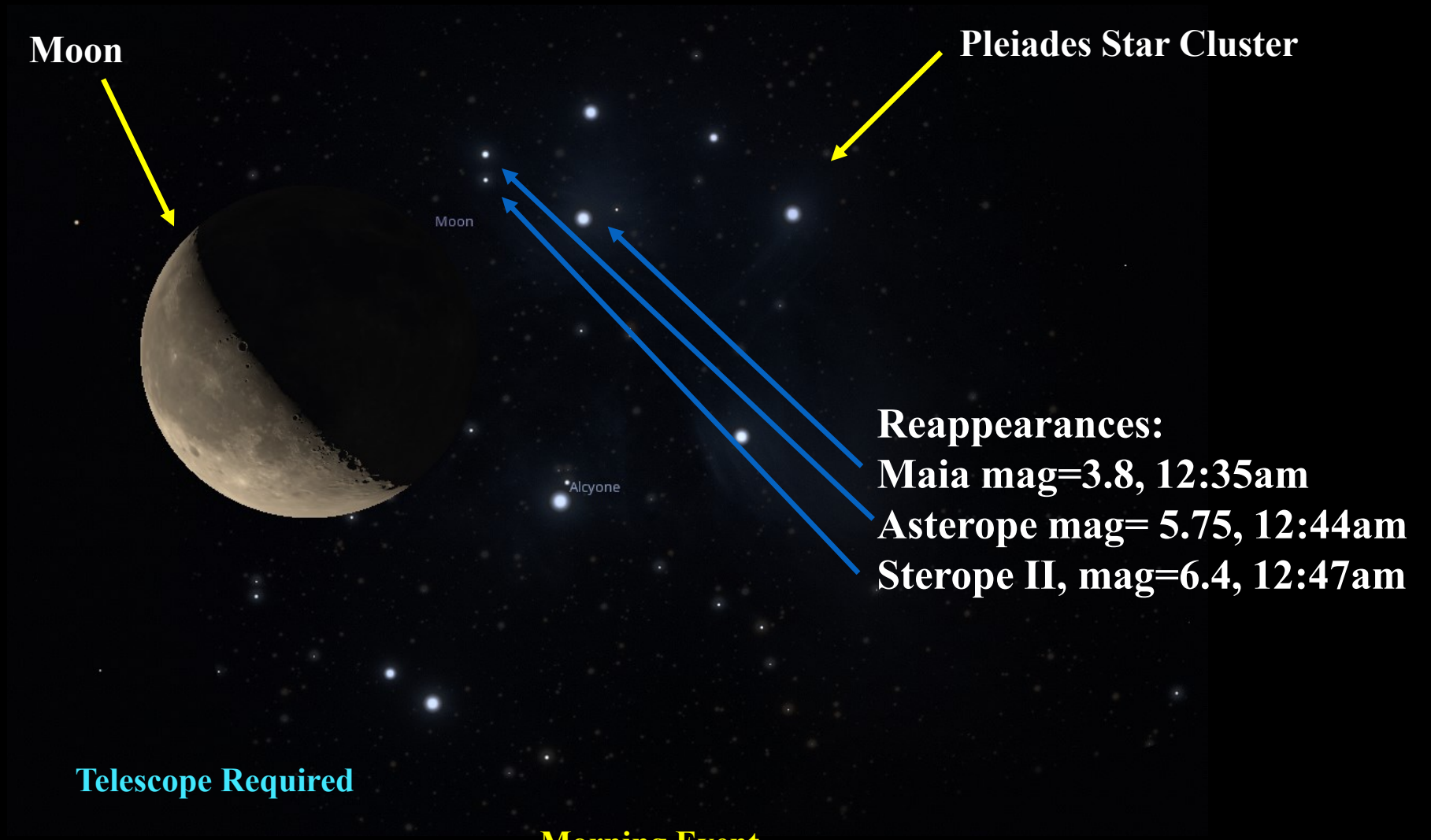


Telescope Required

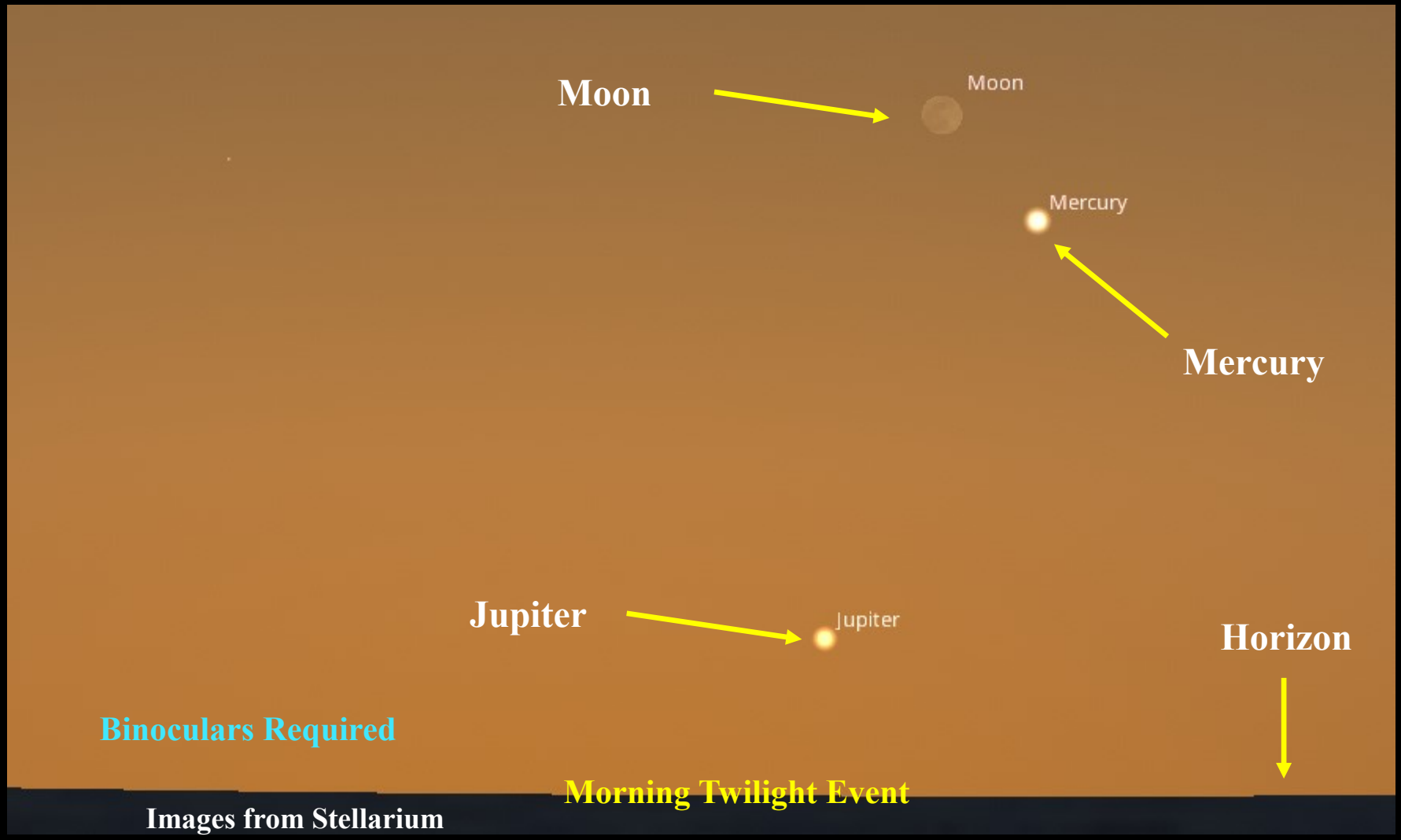
Morning Event

Images from Stellarium

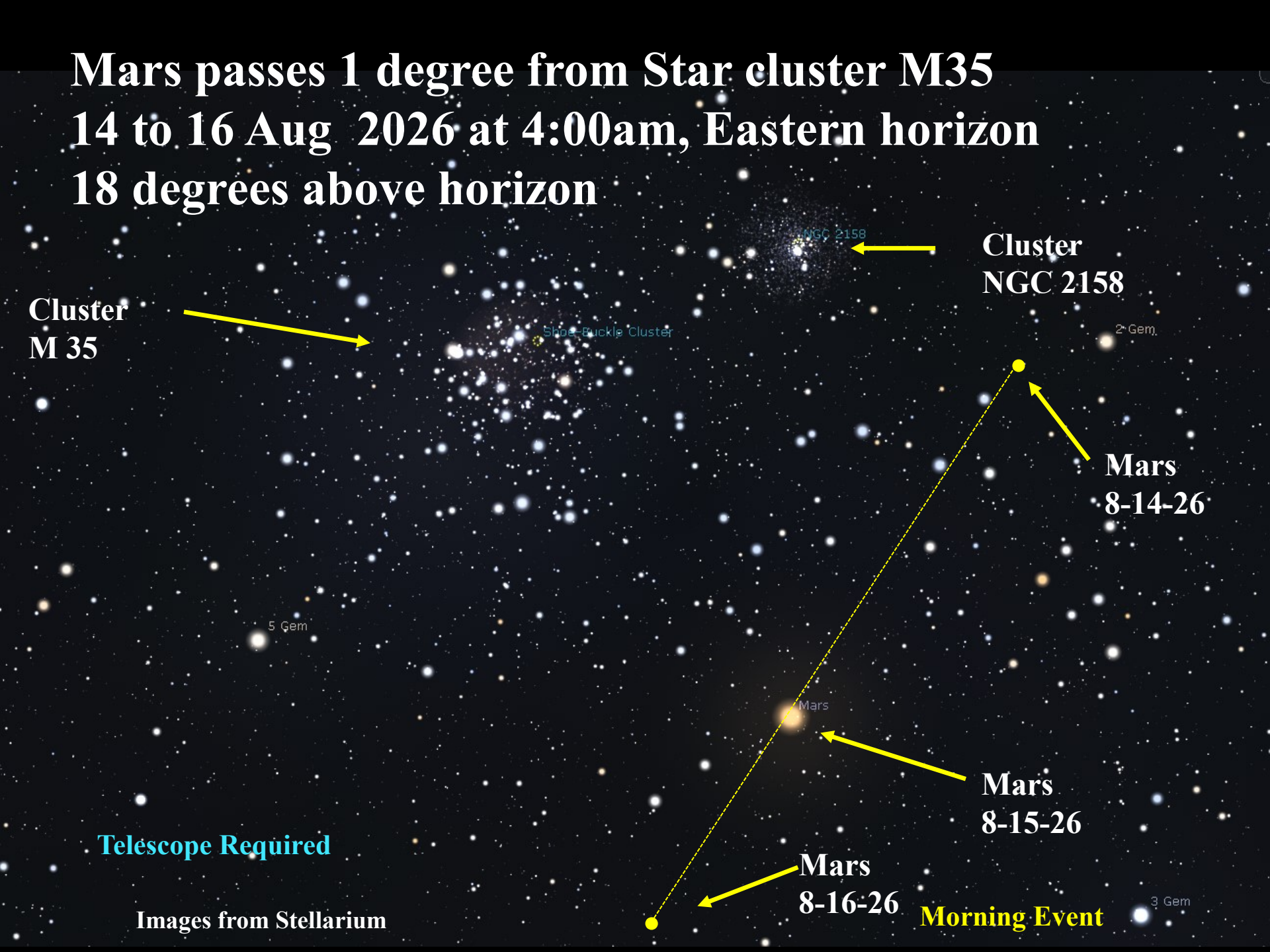
Mars and Pleiades Occultation
7 August 2026 at 0:30am, Eastern horizon



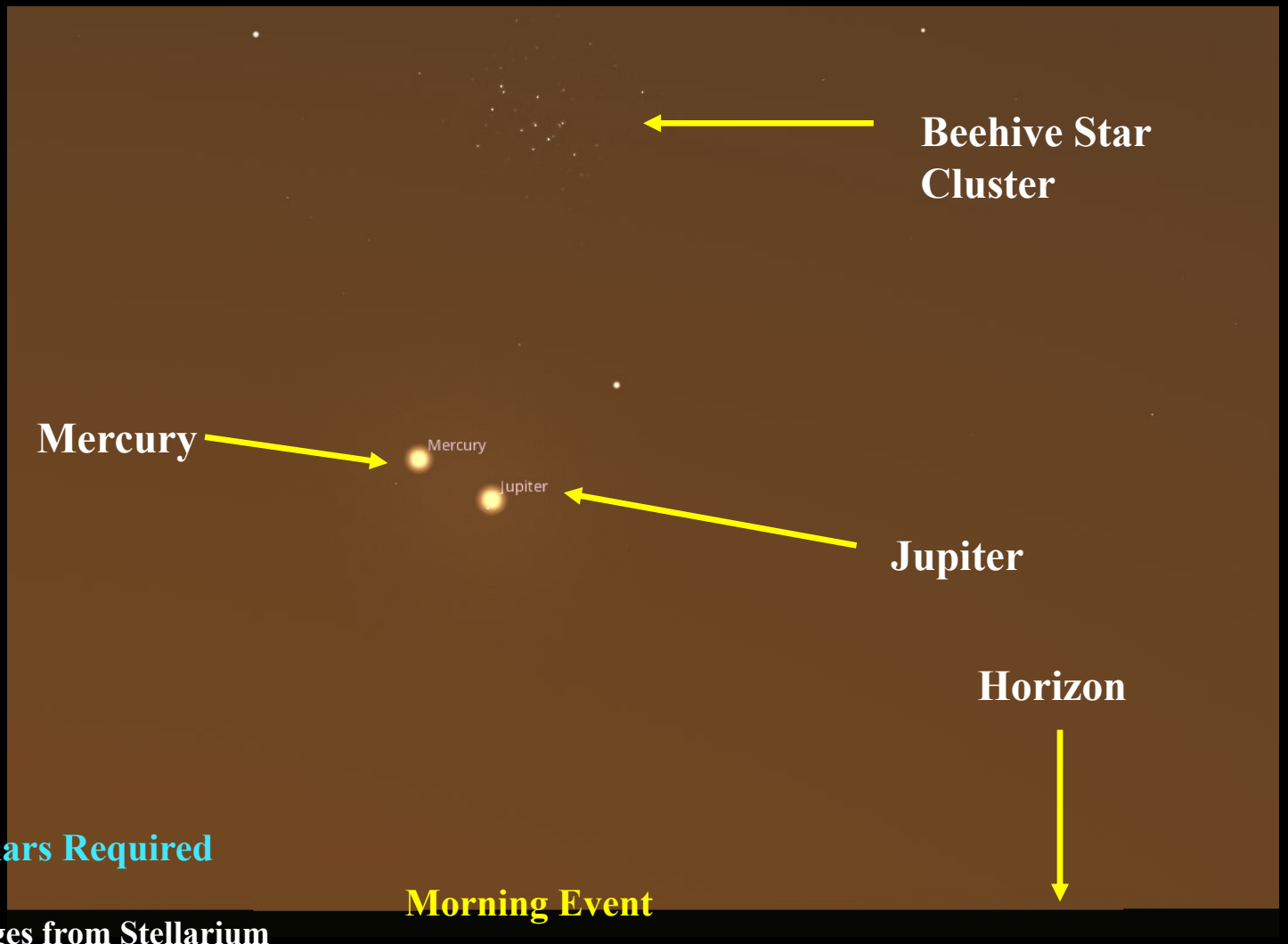
Moon, Jupiter and Mercury
11 August 2026 at 5:30am, Eastern horizon
Moon 8 degrees above horizon



Mars passes 1 degree from Star cluster M35
14 to 16 Aug 2026 at 4:00am, Eastern horizon
18 degrees above horizon



Jupiter and Mercury in morning twilight
15 August 2026 at 5:30am,
2 degrees above Eastern horizon

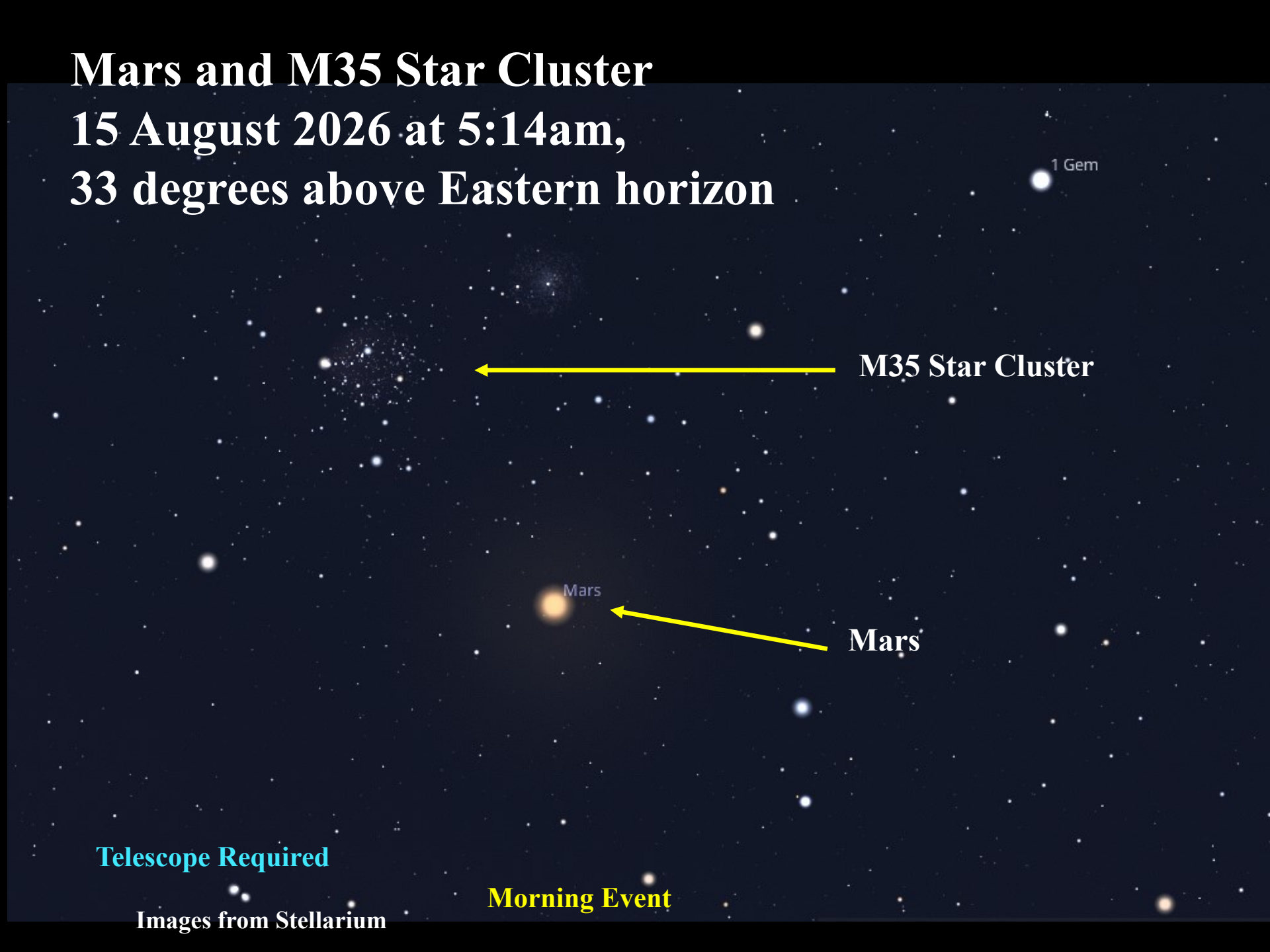


Binoculars Required

Morning Event

Images from Stellarium

Mars and M35 Star Cluster
15 August 2026 at 5:14am,
33 degrees above Eastern horizon

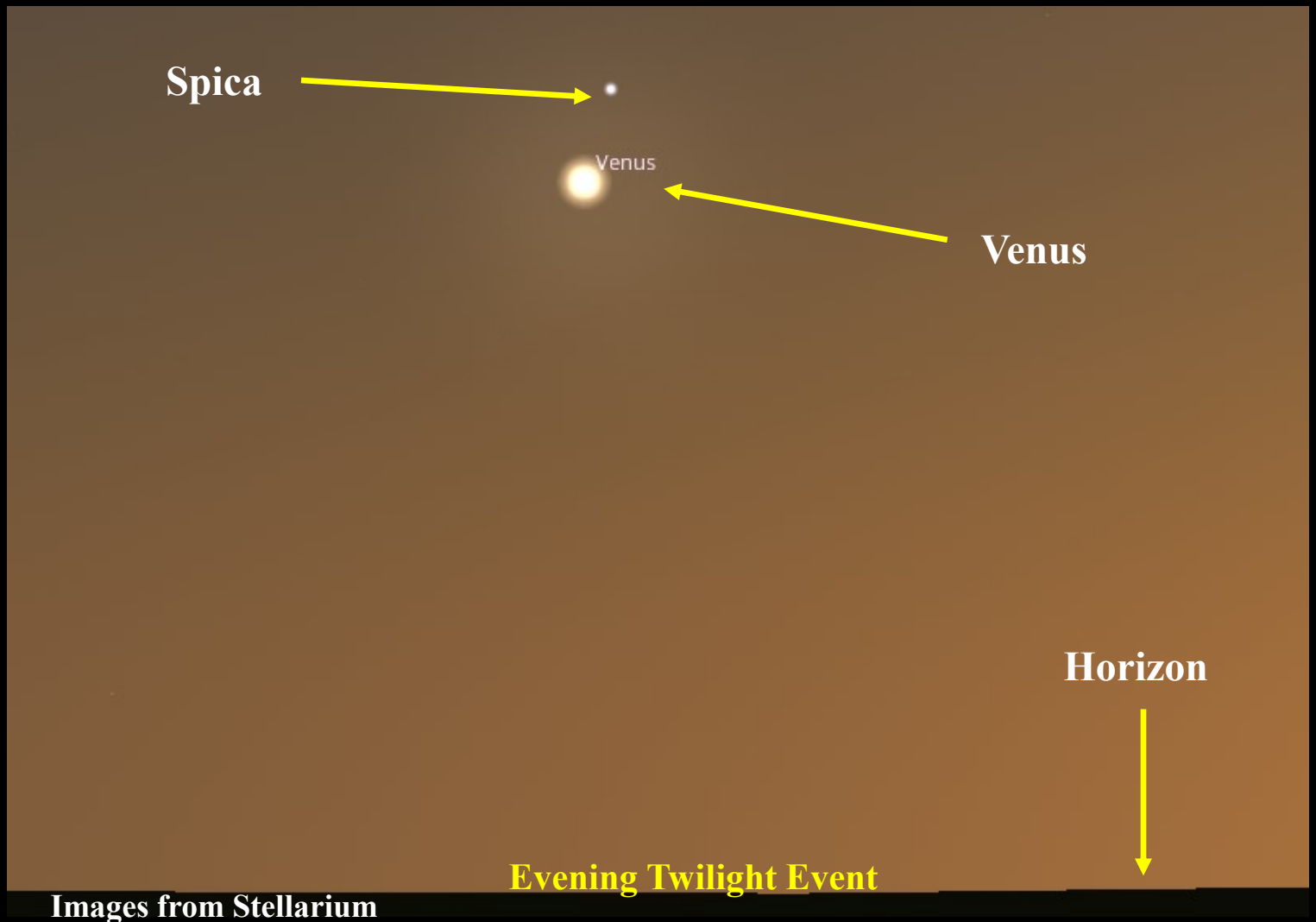


Telescope Required

Morning Event

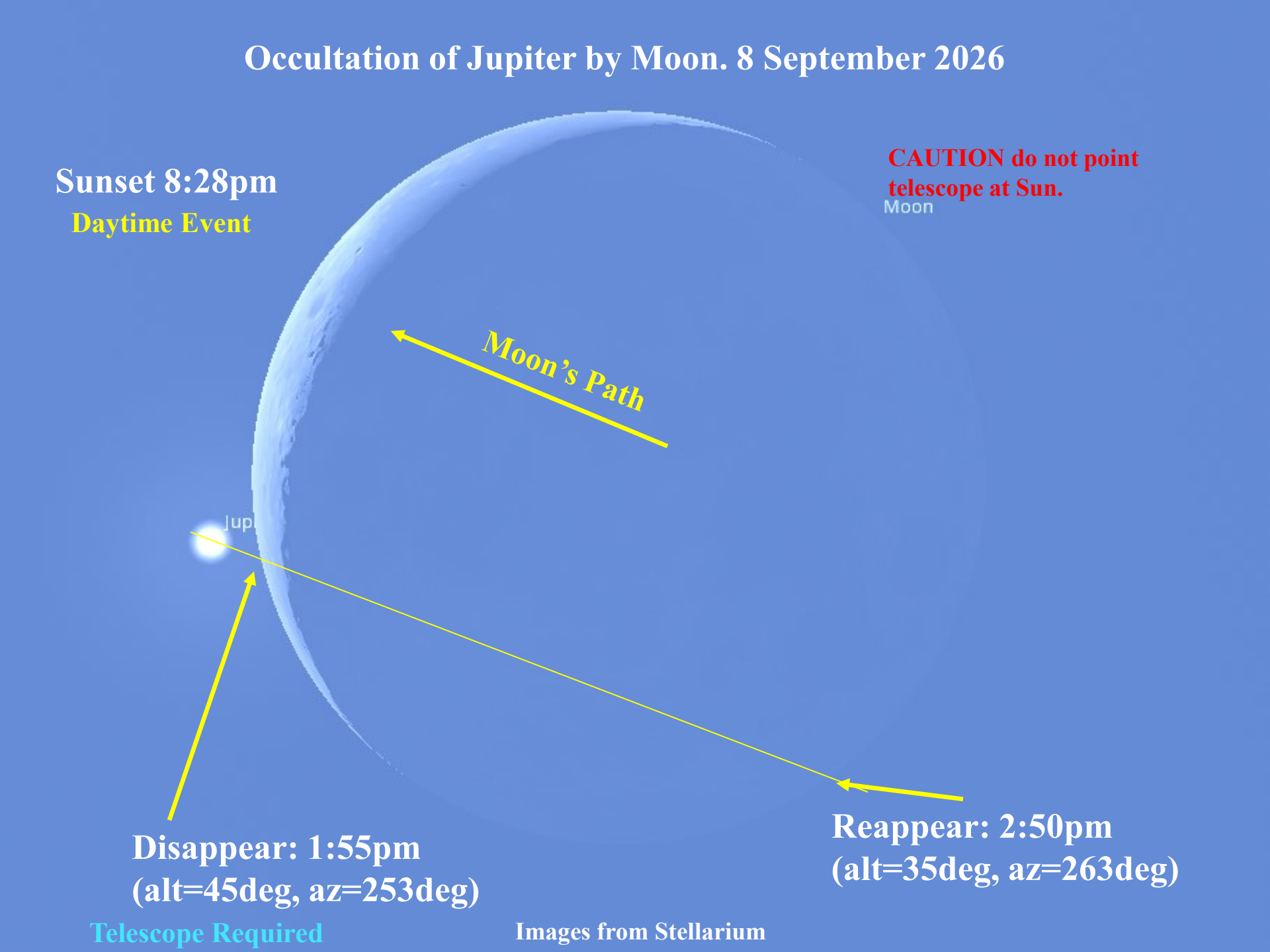
Images from Stellarium

Venus and Spica in evening sky
1 September 2026 at 8:00pm,
10 degrees above Western horizon



Images from Stellarium

Occultation of Jupiter by Moon. 8 September 2026



Moon and Mars in morning sky
5 October 2026 at 1:30am,
>2 degrees above Eastern horizon

Morning Event

Images from Stellarium

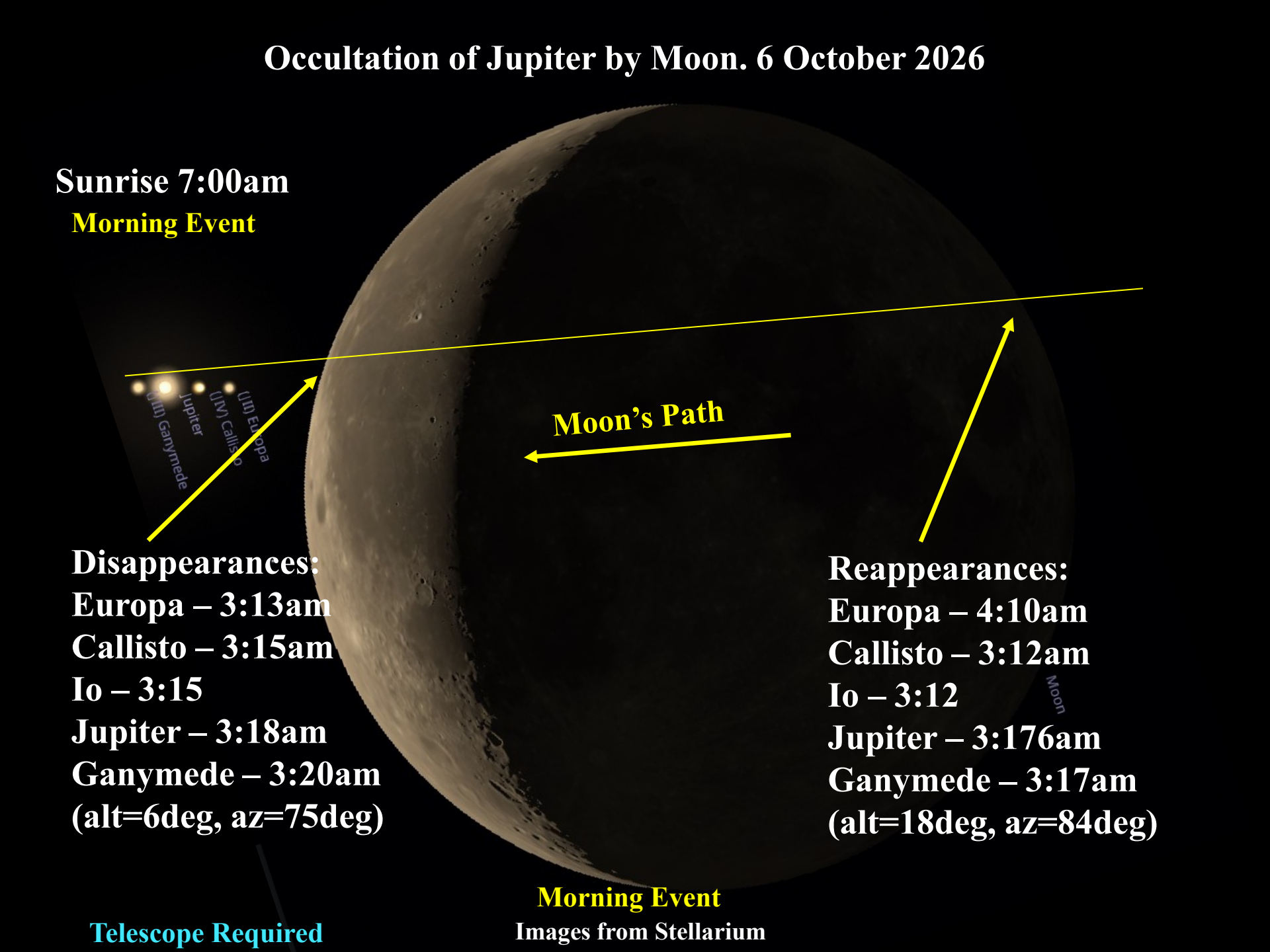
Moon and M44
5 October 2026 at 6:30am, Eastern horizon

Binoculars Required

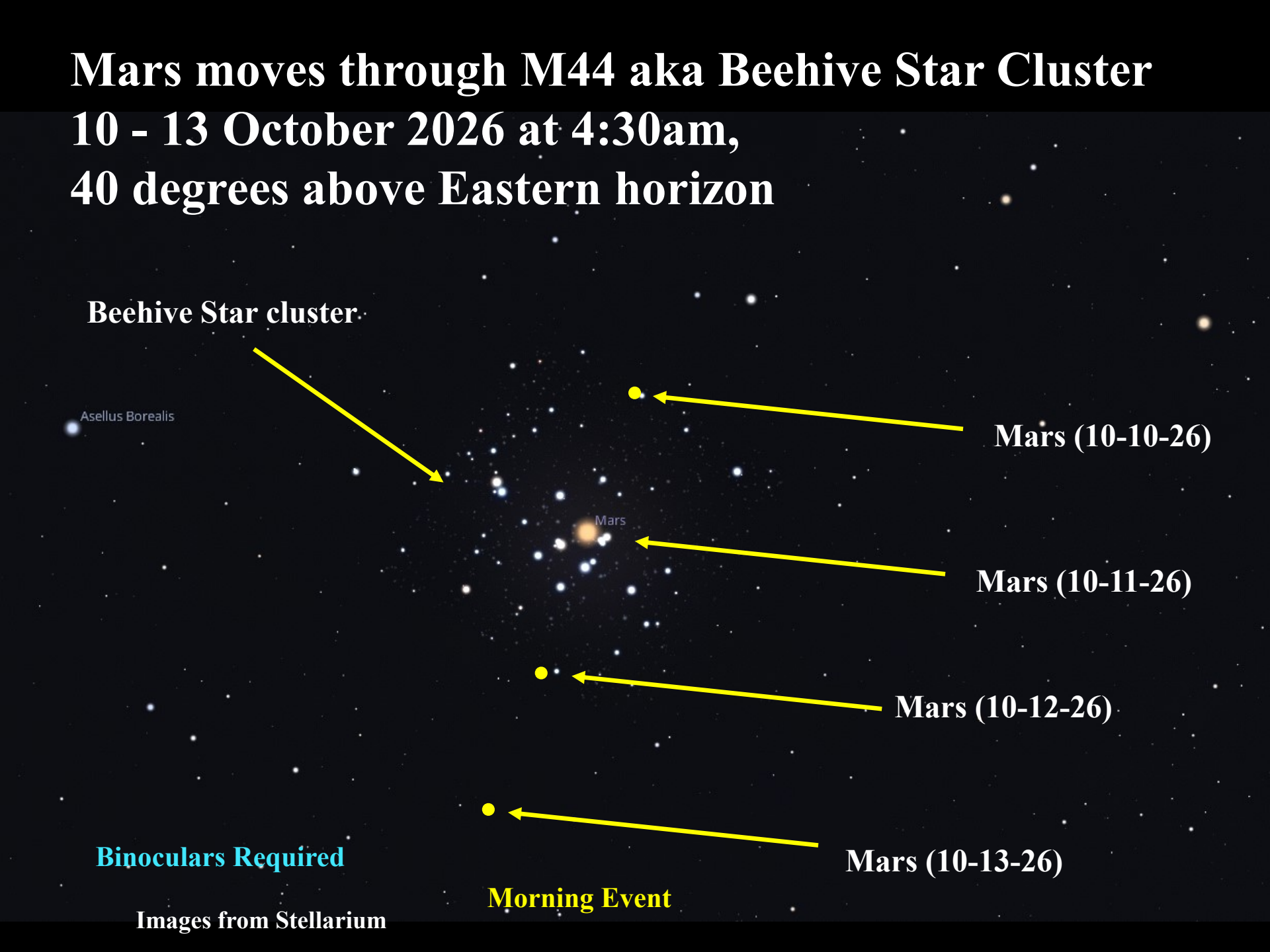
Morning Twilight Event

Images from Stellarium

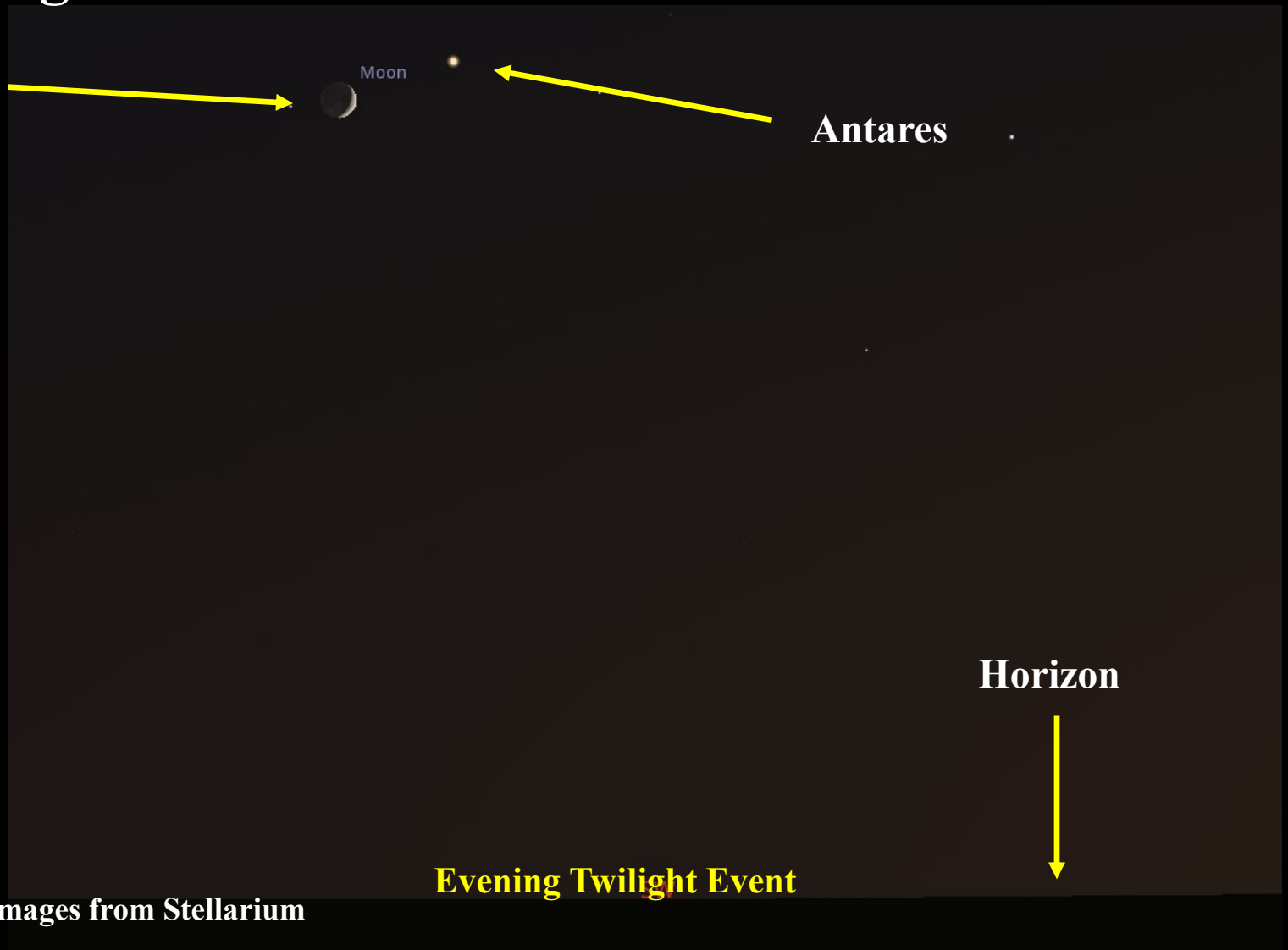
Occultation of Jupiter by Moon. 6 October 2026



Mars moves through M44 aka Beehive Star Cluster
10 - 13 October 2026 at 4:30am,
40 degrees above Eastern horizon



Antares and Moon in evening sky
14 October 2026 at 7:00pm,
11 degrees above Western horizon

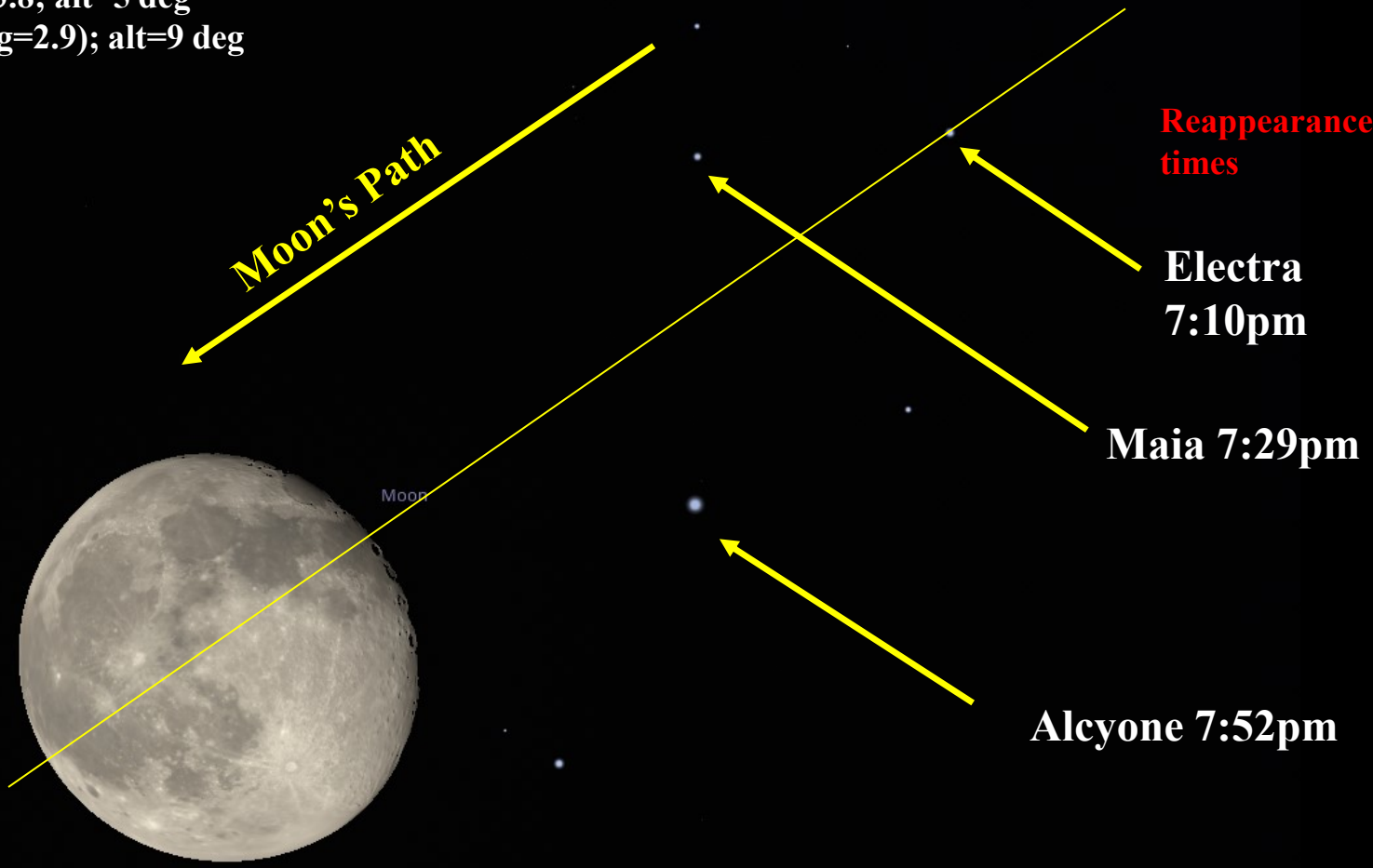


Evening Twilight Event

Images from Stellarium

Occultation of Pleaides by Moon. 27 October 2026

Electra - mag=3.7; alt=2 deg
Maia -mag=3.8; alt=5 deg
Alcyone (mag=2.9); alt=9 deg



Evening Event

Telescope Required

Images from Stellarium

Mars, Moon and Jupiter in morning sky
2 November 2026 at 6:00am,
66 degrees above Eastern horizon

Morning Event

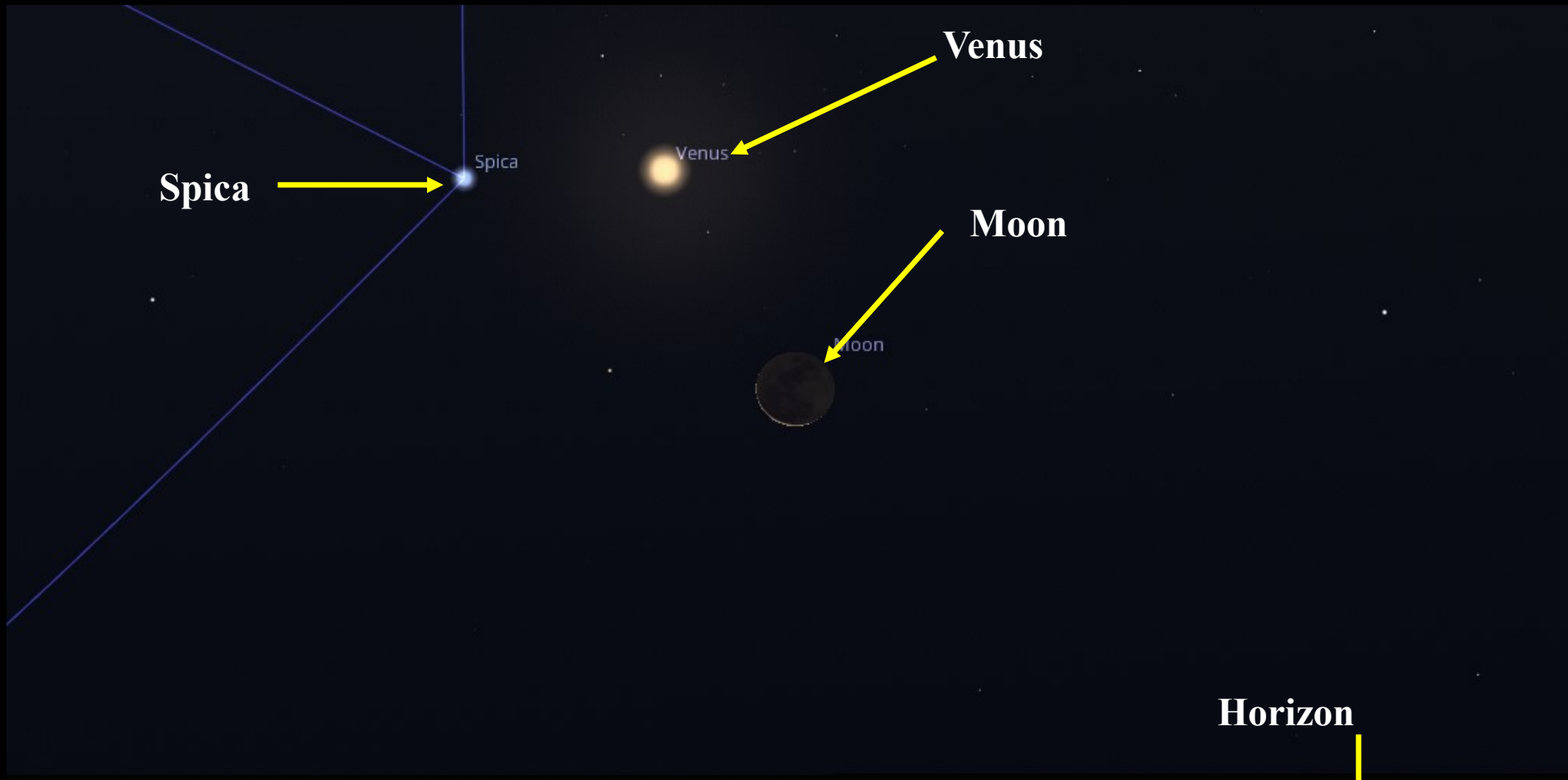
Images from Stellarium

Regulus, Moon and Jupiter in morning sky
3 November 2026 at 1:00am,
10 degrees above Eastern horizon

Morning Event

Images from Stellarium

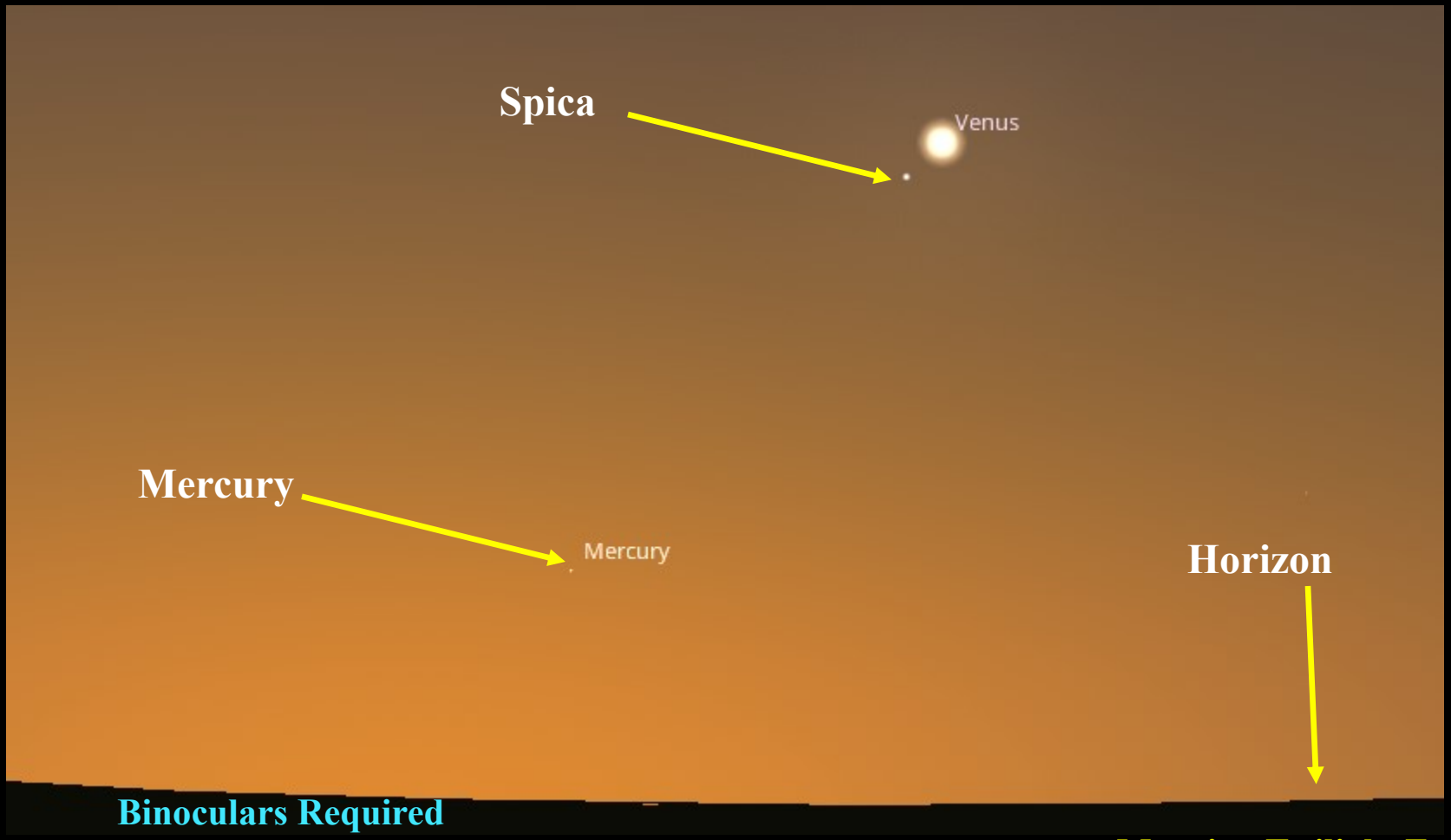
Moon, Venus and Spica in morning sky
7 November 2026 at 5:00am, Eastern horizon



Morning Twilight Event

Images from Stellarium

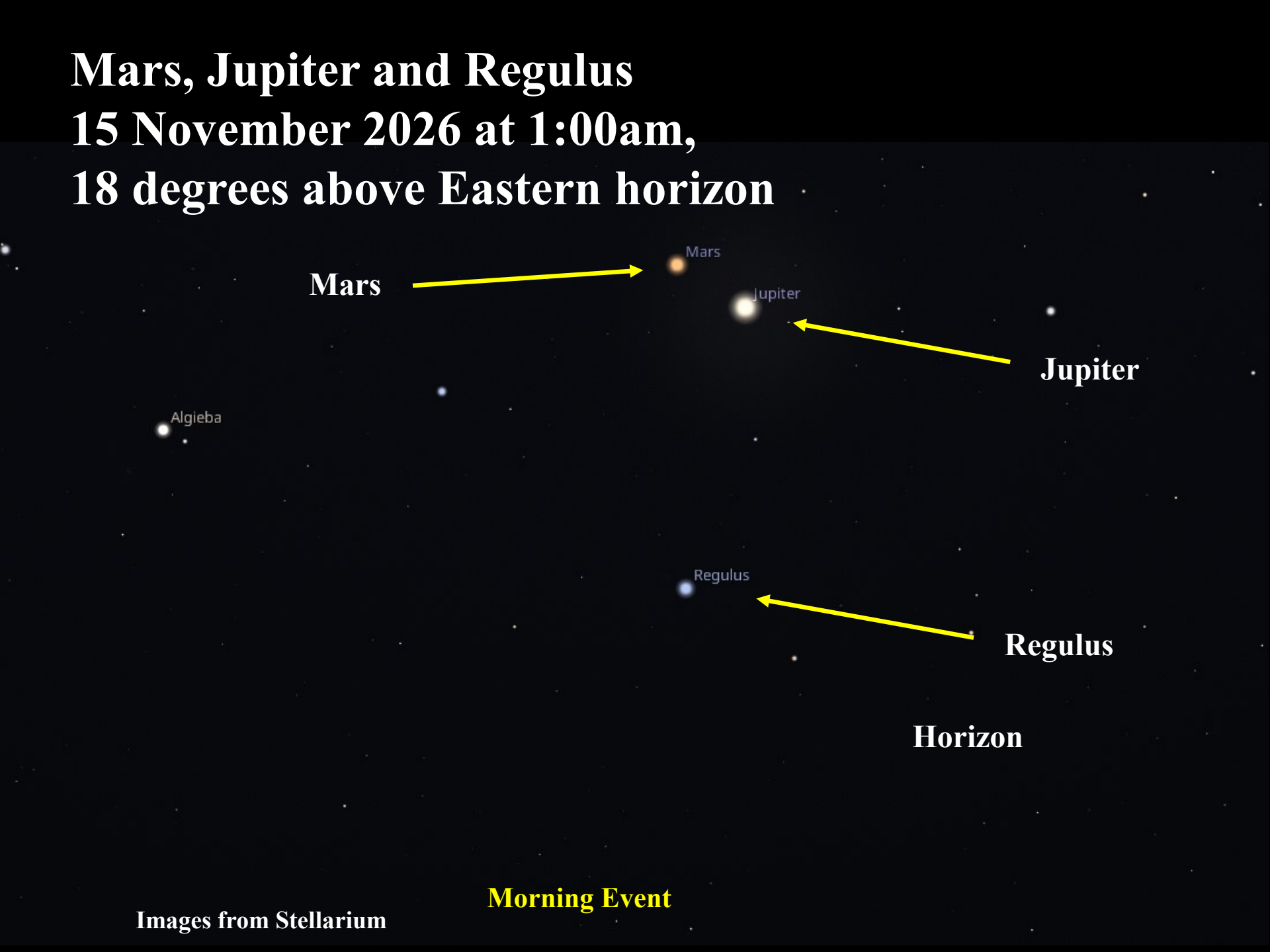
Close approach of the Venus and Spica
10 Nov 2026 at 5:00am; 14 degrees
Low on eastern horizon



Images from Stellarium

Morning Twilight Event

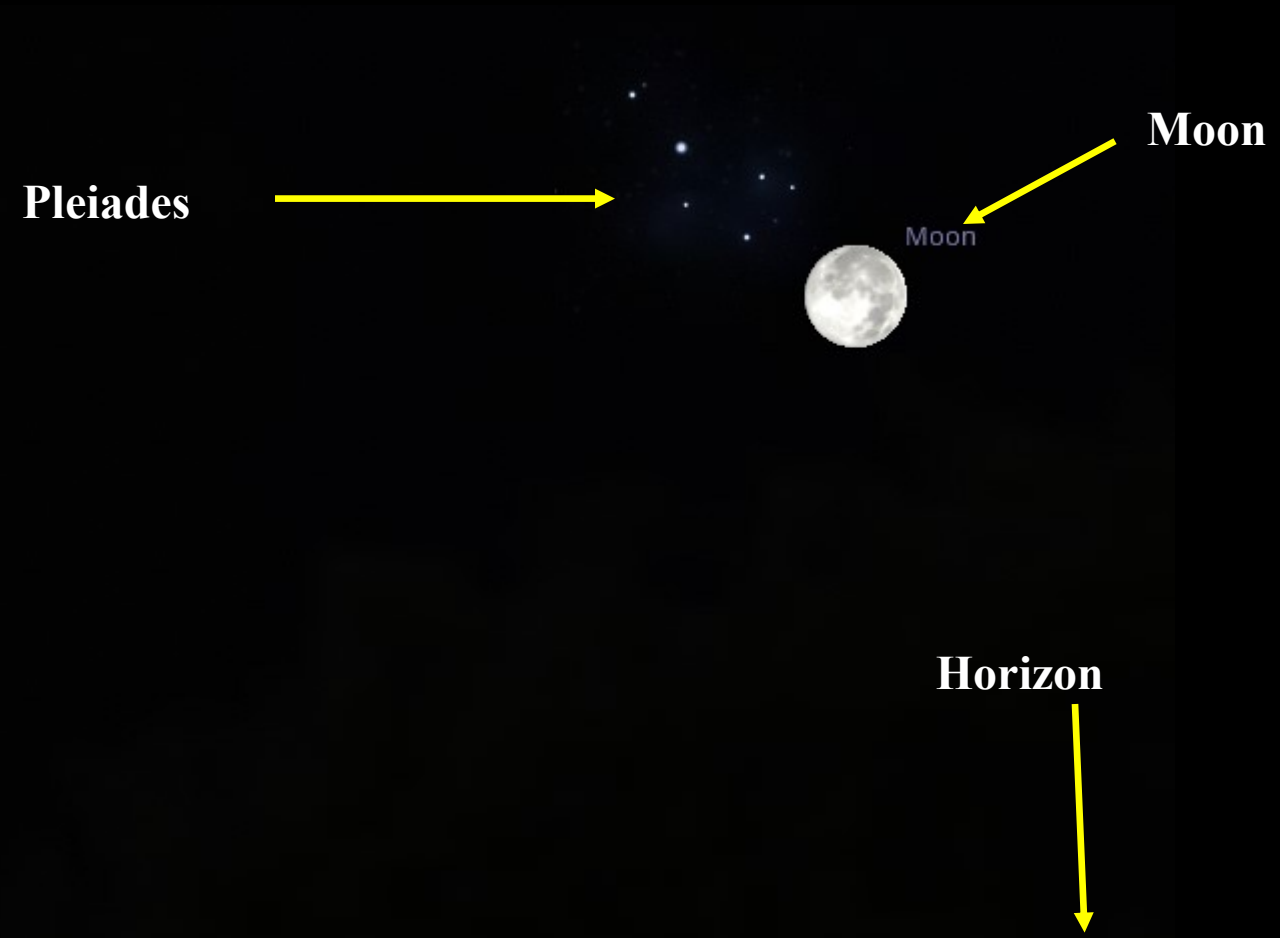
Mars, Jupiter and Regulus
15 November 2026 at 1:00am,
18 degrees above Eastern horizon



Morning Event

Images from Stellarium

Moon and Pleiades
24 November 2026 at 5:30am,
16 degrees above Western horizon

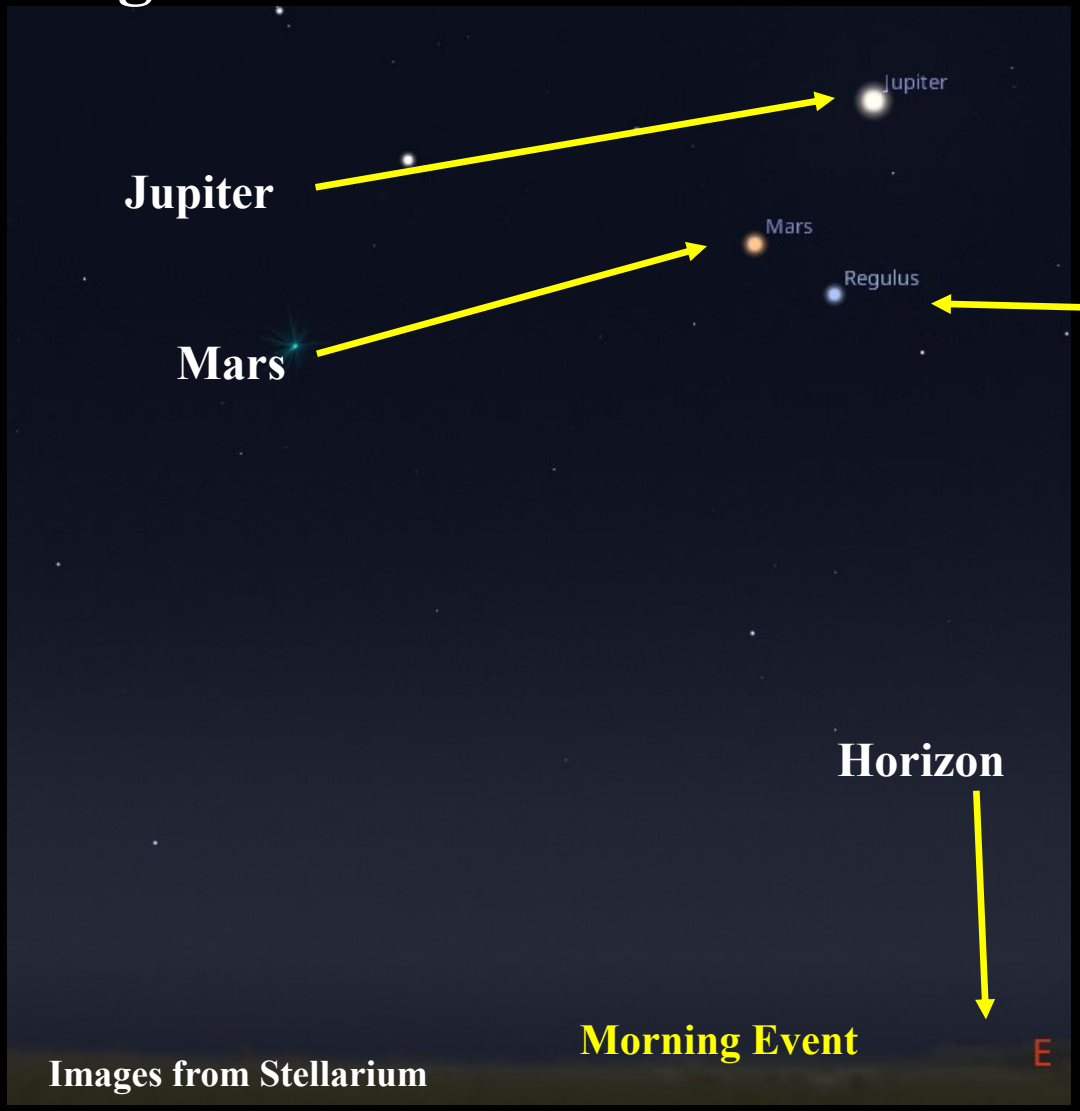


Binoculars Required

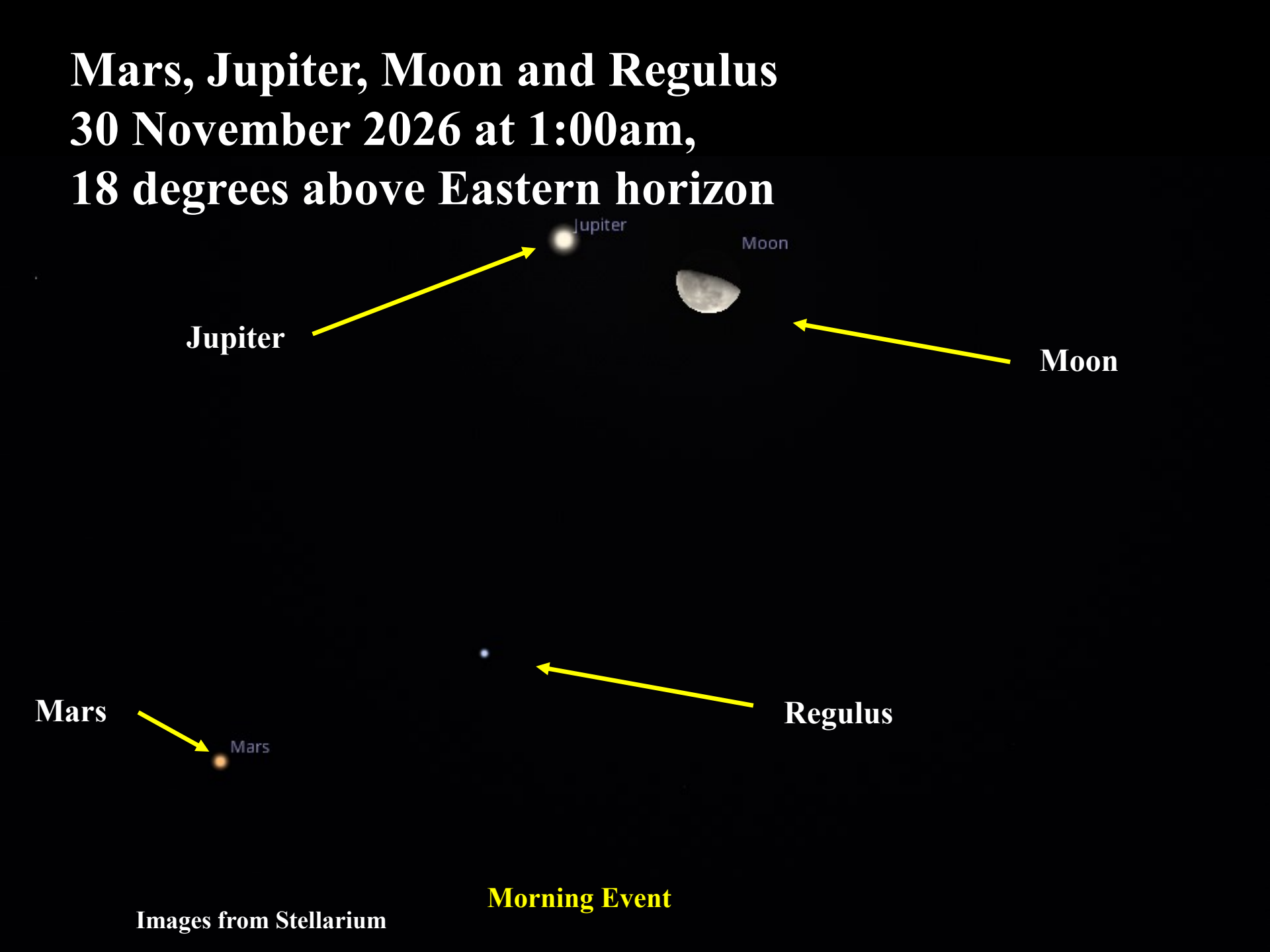
Morning Event

Images from Stellarium

Mars, Jupiter and Regulus
25 November 2026 at 12:30am,
15 degrees above Eastern horizon



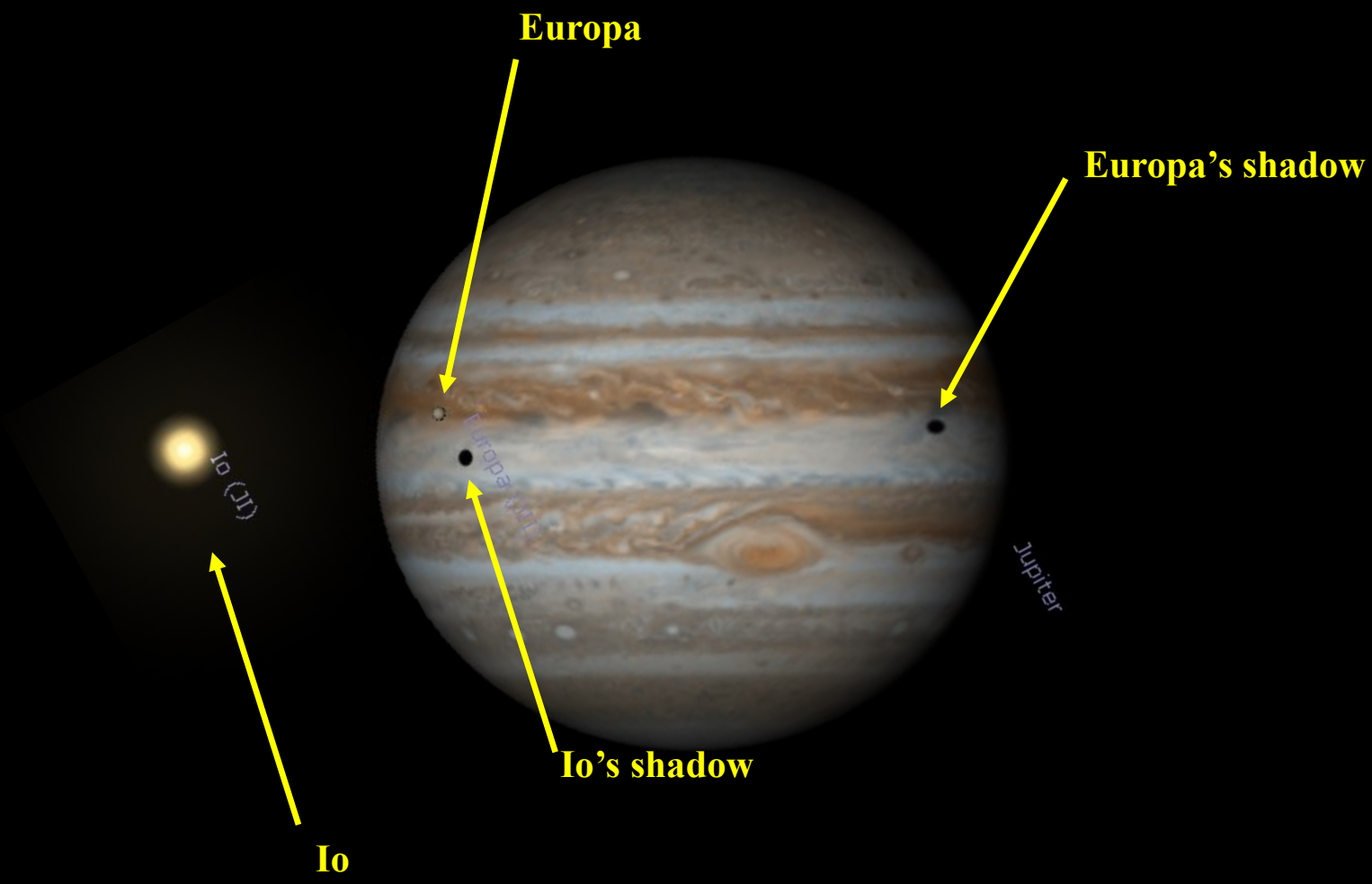
Mars, Jupiter, Moon and Regulus
30 November 2026 at 1:00am,
18 degrees above Eastern horizon



Morning Event

Images from Stellarium

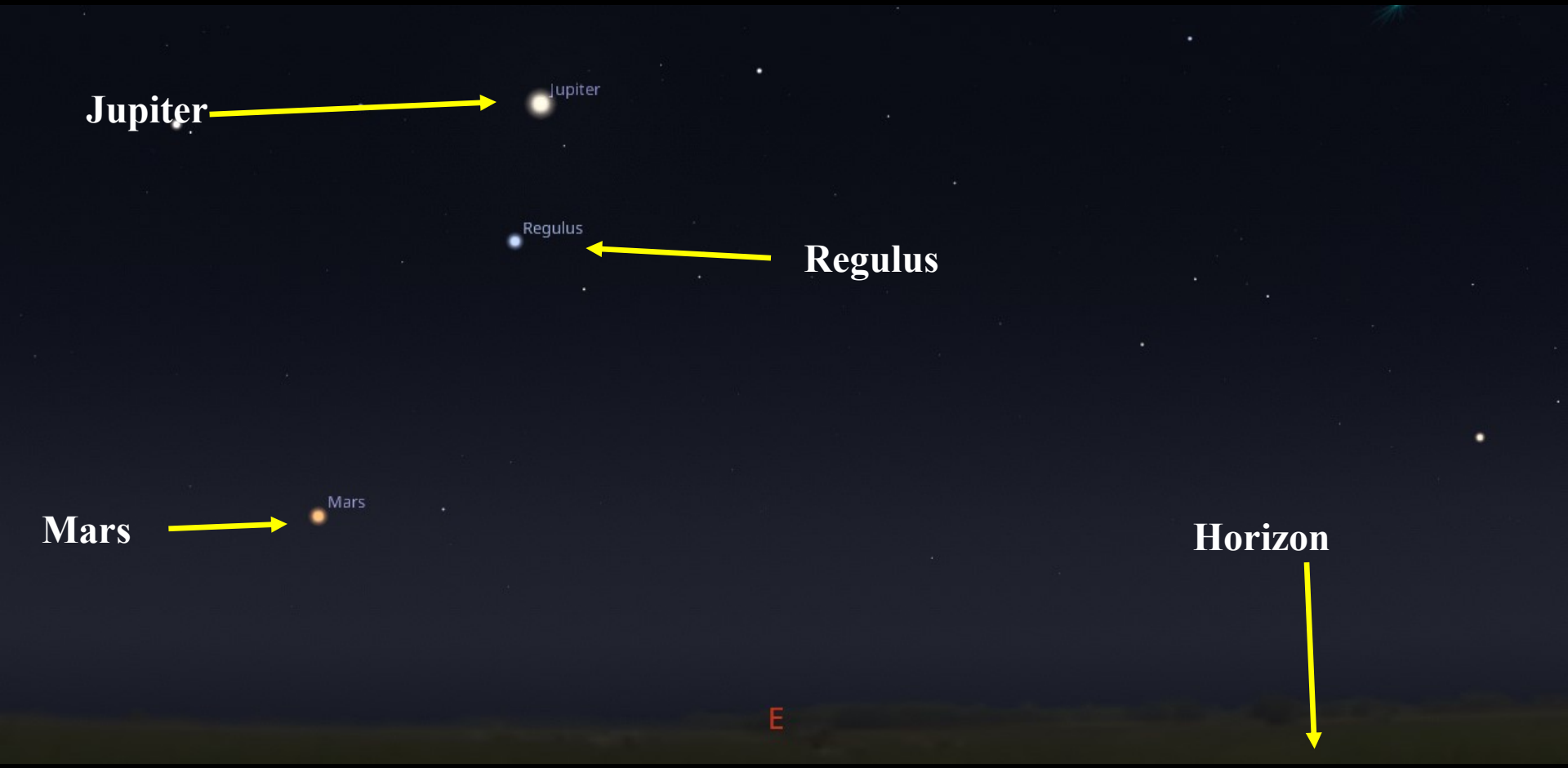
Jupiter Double Shadow of moons
8 Dec 2026 at 3:00am



Images from Stellarium

Morning Event
Telescope Required

Mars, Jupiter and Regulus
19 December 2026 at 11:30pm,
10 degrees above Eastern horizon



Evening Event

Images from Stellarium

Moon and Pleiades
21 December 2026 at 5:30pm,
36 degrees above Eastern horizon

Pleiades

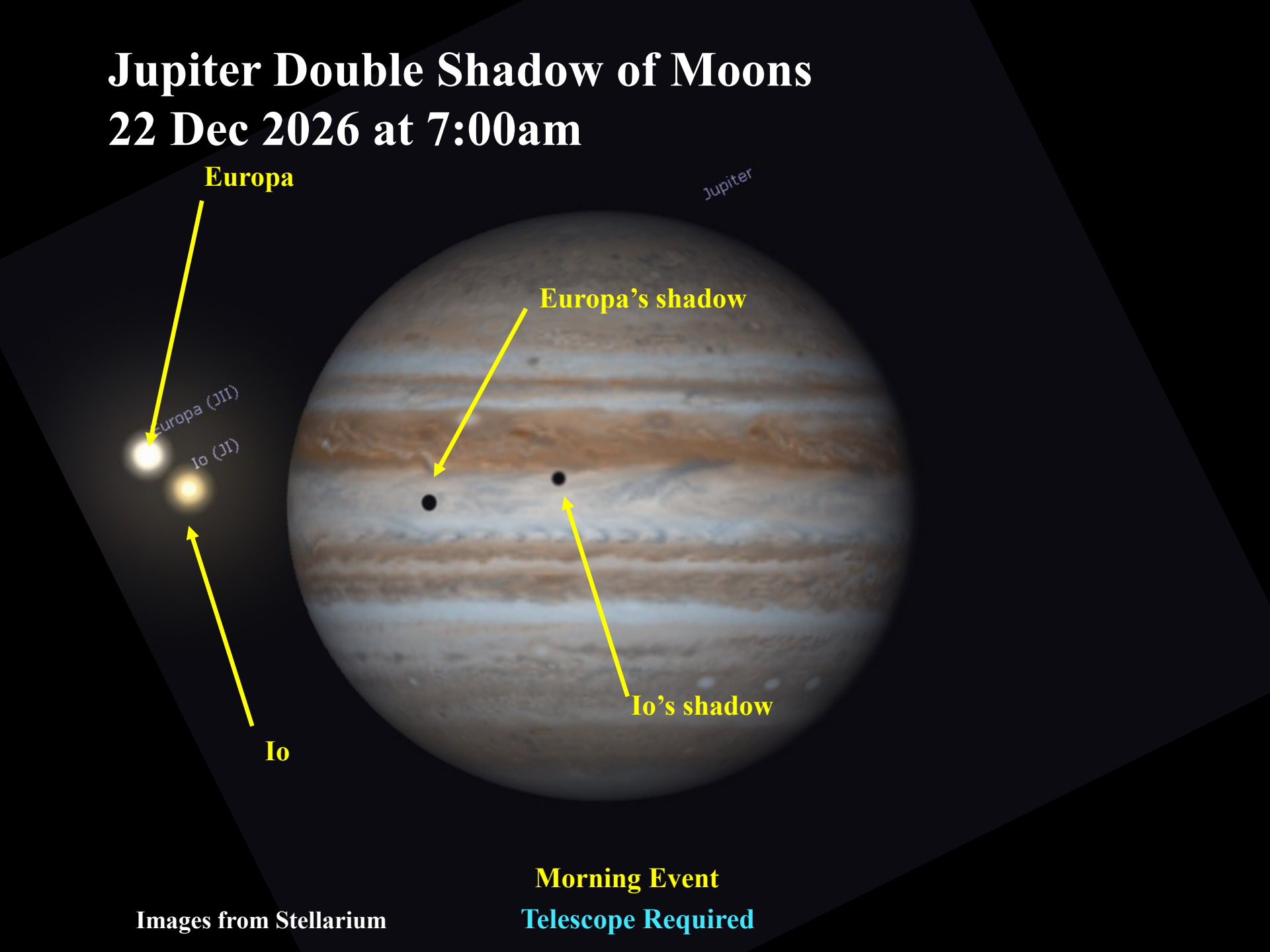
Moon

Binoculars Required

Evening Event

Images from Stellarium

Jupiter Double Shadow of Moons
22 Dec 2026 at 7:00am

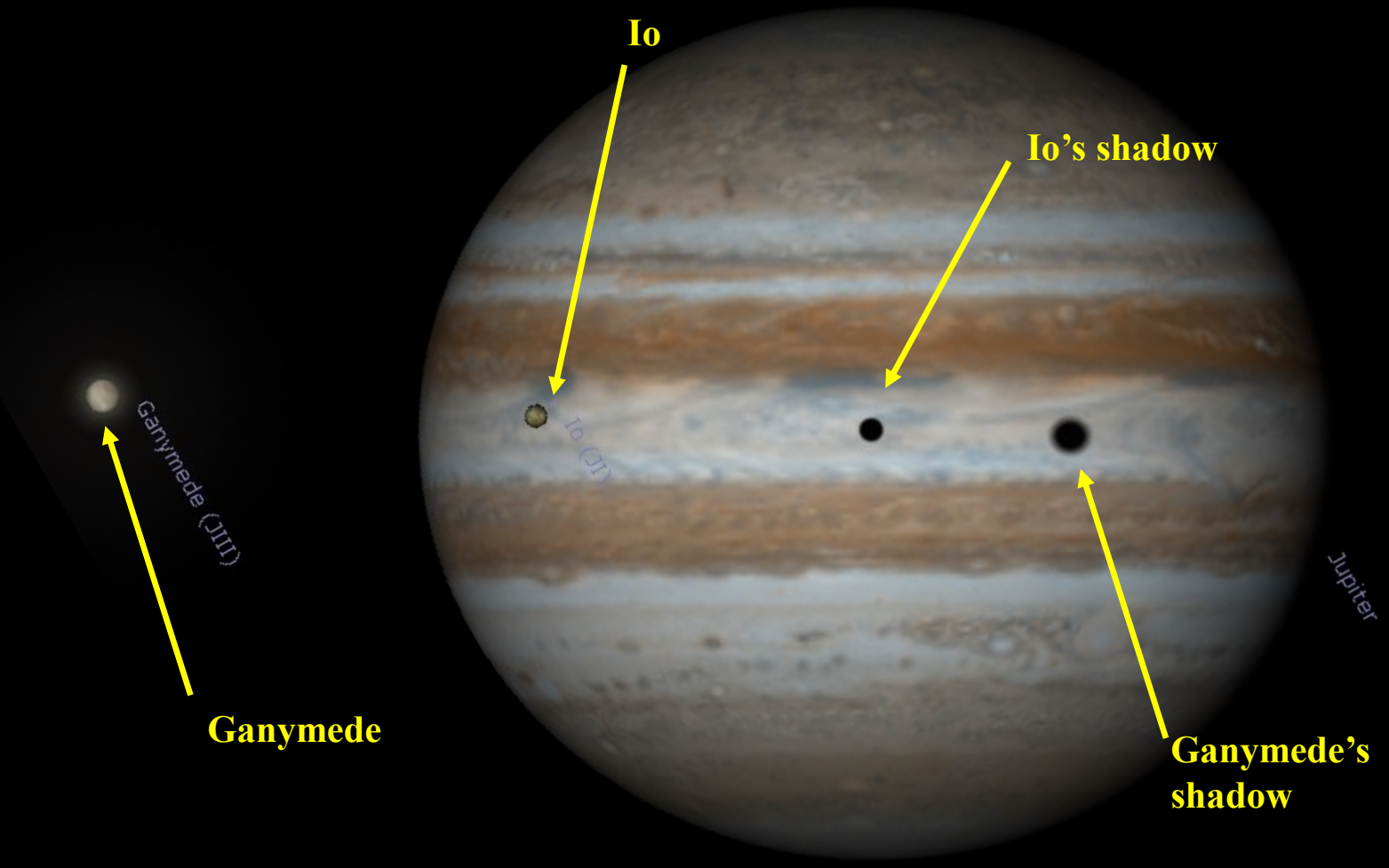


Morning Event

Telescope Required

Images from Stellarium

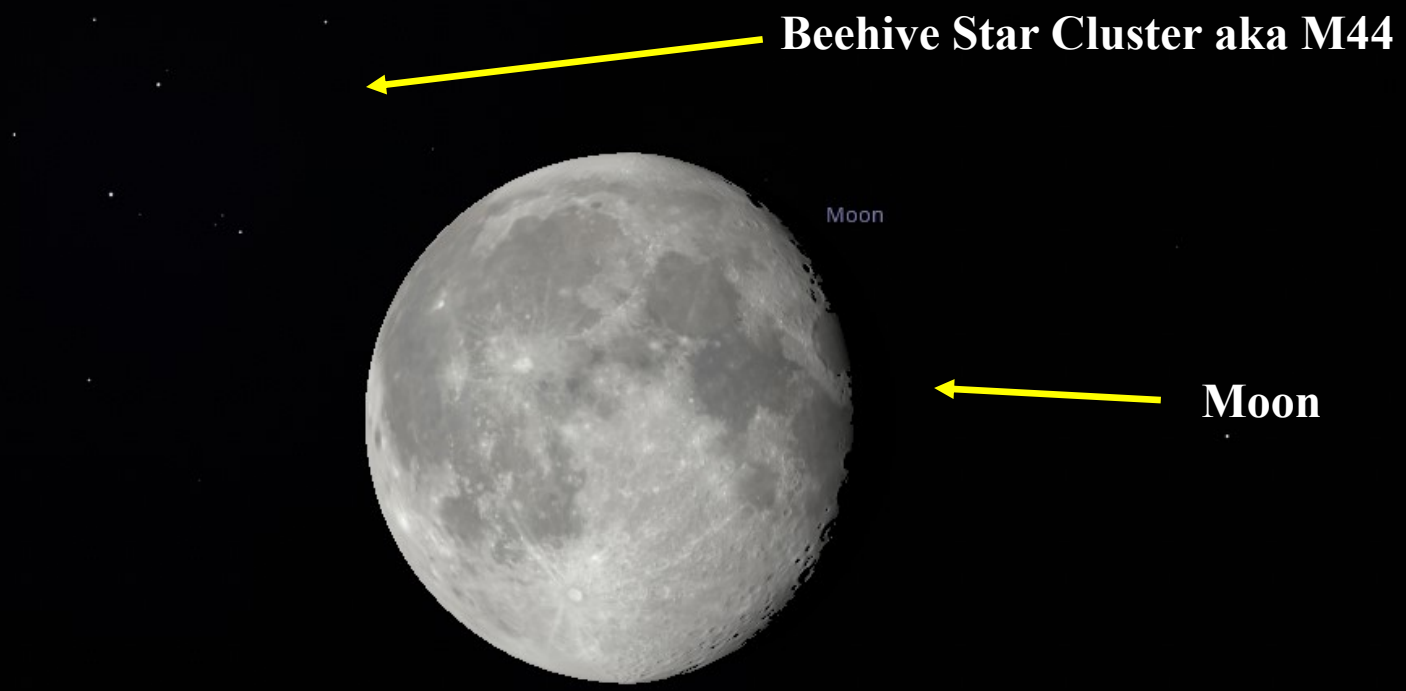
Jupiter Double Shadow of Moons
24 Dec 2026 at 2:00am



Images from Stellarium

Morning Event
Telescope Required

Moon and Beehive Star Cluster
26 December 2026 at 2:30am,
70 degrees above Southern horizon

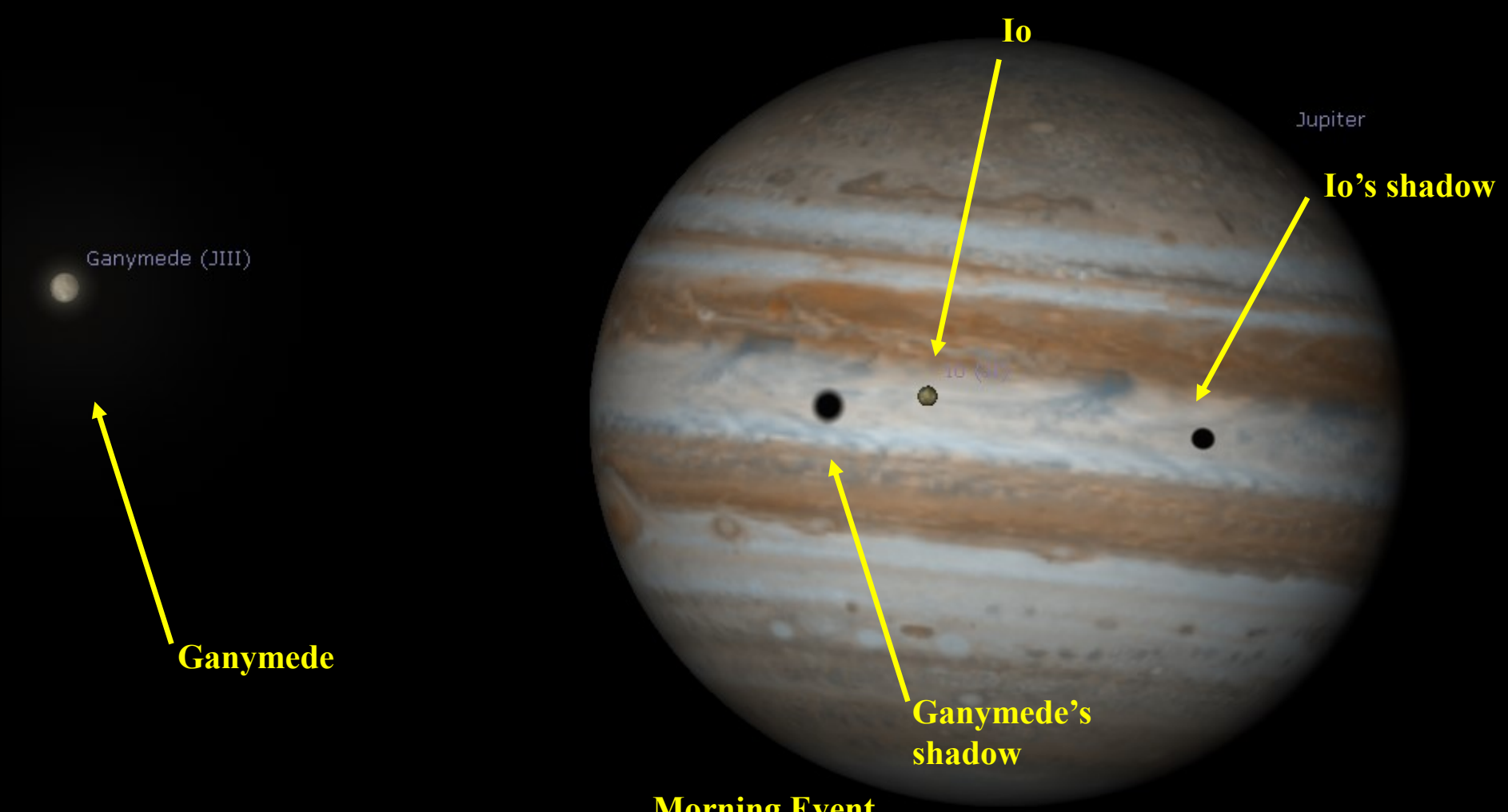


Telescope Required

Morning Event

Images from Stellarium

Jupiter Double Shadow of Moons
31 Dec 2026 at 4:30am



Images from Stellarium

Morning Event
Telescope Required

Happy observing