

# The night sky in February

Marc van der Sluys

Radboud University Nijmegen / Nikhef / Utrecht University / [hemel.waarnemen.com](http://hemel.waarnemen.com)





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Feb 4, 5, 7; Feb 19+

ISS in February

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Elongations of the planets

Mercury

The visibility of Mercury (and Venus)

Venus

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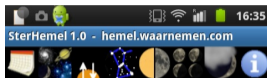
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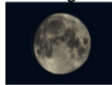
- Current events in the night sky, easily observable or with a bit more effort
- Visibility of Sun, Moon, planets, meteors, comets, deep sky, ISS, ...
- Astrocalendars, sky maps, lunar phases, sky tonight, observing weather, tables, ...
- Apps (Android/Apple), Twitter, (Facebook)
- ~ **10.000 pages in Dutch; No ads**
- **1–2 million visitors per year**



## hemel.waarnemen.com astrokalender

*Tijdstippen zijn in Midden-Europese  
zomertijd (MEZT)*

### maandag 19 augustus



**03.26: De Maan** is in het punt van zijn baan dat het dichtst bij de Aarde ligt: het **perigeum**. De afstand tussen de Aarde en de Maan bedraagt 362264 km. De **schijnbare diameter** van de Maan is groter dan gemiddeld (32'59,1"), door de kleinere afstand. De Maan is op dit moment **wassend**, voor 94% verlicht en hij is vrijwel de gehele nacht zichtbaar; 's avonds in het (zuid)oosten en tegen de ochtend in het westen of

These slides on <http://hemel.waarnemen.com/lectures>



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Google Translate

Dutch - detected → English

Popular: [View the Orion Nebula Sky Tonight Astrocalendar](#) [ISS Observing](#) [Weather StarSky app](#) [MySky](#) [Map Sun and Moon](#) [Moon Phases On / Below](#) [FAQ](#) [Contact](#)

Translation



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## sky.observation.com

The starry sky for the Netherlands and Belgium



To follow

Tweet

Zon: op: 08:21, onder: 17:25  
Nacht: 18:43 - 07:04 (nacht.)  
Richting: ZO, hoogte: 11,6°



Fase: 1,3%, eud: 28,6 dagen  
Richting: ZO, hoogte: 5,0°  
☾ is op, ondergang om 18:04

### Topical:

- **Sat Jan 29:** The Moon at Mars
- **Sun 30 Jan:** Last crescent moon at Mercury
- **Mon Jan 31:** View the open cluster M67
- **Wed Feb 2:** First crescent moon at Jupiter
- **Sun Feb 6:** All moons W of Jupiter

### New:

- Dates for Easter, Ascension and Pentecost
- What makes it colder as you go higher? on Radio 2
- Conjunctions and transits for Mercury and Venus
- Better animations for solar eclipses
- View constellation on sky map

Last update: 29 Jan 2022, 17:16

**Content:** general: [astro calendars](#) - [sky maps](#) - [planets](#) - [deep sky](#) - [applets](#) - [faq](#) - [various](#) - [links](#) - [contact](#)  
details: [Sun](#) - [Moon](#) - [Mer](#) - [Ven](#) - [Aar](#) - [Mar](#) - [Jup](#) - [Sat](#) - [Ura](#) - [Nep](#) - [Plu](#) - [Meteors/comets/planetoids](#) - [deep sky](#)



## Astro calendars:

- ◆ **Current astro calendar** - what's happening in the starry sky right now?
- ◆ **Tonight in the sky** - the most important information at a glance
- ◆ **Visibility of the ISS** - space station transits in the coming month

◆ By month: [This month](#) - [December](#) - [January](#) - [February](#) - [March](#)  
◆ By year: [This year](#) - [2021](#) - [2022](#) - [2023](#) - [2024](#) - [2025](#)

- [Glossary](#)



## Sky Maps:

**Interactive:** [Sky map for every moment](#)

**Daily Sky Maps:** [Evening](#) - [Night](#) - [Morning](#) - [Explanation](#)

**Monthly Sky Maps** (for All Sky, N orth, E ost, S ud, W est):

◆ **February 1:** 7 a.m.: [H - N - O - Z - W](#) 19:00: [H - N - O - Z - W](#)  
 ◆ **February 15:** 6.30 am: [H - N - O - Z - W](#) 7.30 pm: [H - N - O - Z - W](#)  
 March 1: 6.00 am: [H - N - O - Z - W](#) 8 pm: [H - N - O - Z - W](#)



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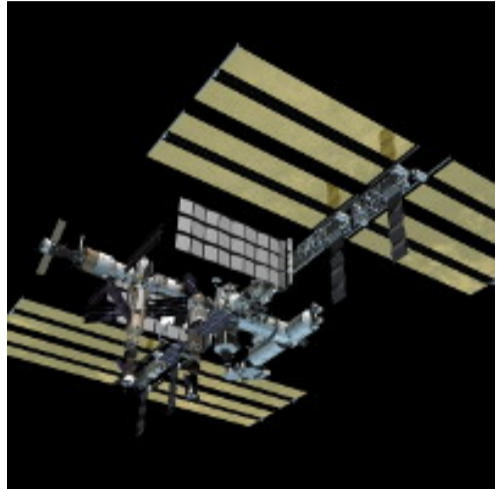
**What?** The space station **ISS** transits over the Netherlands.

**When?** **Tomorrow** and Monday around **18:20**.

**Where?** The ISS is coming from the **west-southwest** and moves low through the **south** to the **east**, where it will become too faint to be observed.

**And?** These are the last transits of this period, in the **evening**. The ISS will reappear starting 19 Feb, in the **morning**.

<http://hemel.waarnemen.com/iss/>



# ISS in February



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<b>vr 4 feb</b>	19:07:10	WZW	10°	-0.7m	<b>19:09:06</b>	ZW	<b>15°</b>	<b>-1.1m</b>	1240 km	19:11:03	Z	10°	-0.7m	<b>3.9 min</b>
<b>za 5 feb</b>	18:18:34	W	10°	-0.7m	<b>18:21:08</b>	ZW	<b>21°</b>	<b>-1.5m</b>	1004 km	18:23:43	ZZO	10°	-0.7m	<b>5.2 min</b>
<b>ma 7 feb</b>	18:20:40	ZW	10°	-0.7m	<b>18:21:05</b>	ZW	<b>10°</b>	<b>-0.7m</b>	1480 km	18:21:30	ZW	10°	-0.7m	<b>0.8 min</b>
<b>za 19 feb</b>	07:03:50	ZZW	10°	-0.7m	<b>07:06:21</b>	ZO	<b>20°</b>	<b>-1.5m</b>	1043 km	07:08:53	O	10°	-0.7m	<b>5.1 min</b>
<b>zo 20 feb</b>	06:16:24	Z	10°	-0.7m	<b>06:18:12</b>	ZO	<b>14°</b>	<b>-1.0m</b>	1287 km	06:20:01	OZO	10°	-0.7m	<b>3.6 min</b>
<b>ma 21 feb</b>	07:02:59	ZW	10°	-0.7m	<b>07:06:05</b>	ZZO	<b>36°</b>	<b>-2.3m</b>	687 km	07:09:13	O	10°	-0.7m	<b>6.2 min</b>
<b>di 22 feb</b>	06:14:58	ZZW	10°	-0.7m	<b>06:17:50</b>	ZZO	<b>26°</b>	<b>-1.9m</b>	860 km	06:20:44	O	10°	-0.7m	<b>5.8 min</b>
<b>wo 23 feb</b>	05:28:29	Z	16°	-1.2m	<b>05:29:37</b>	ZO	<b>19°</b>	<b>-1.4m</b>	1073 km	05:32:05	O	10°	-0.7m	<b>3.6 min</b>
<b>wo 23 feb</b>	07:02:36	WZW	10°	-0.7m	<b>07:05:55</b>	ZZO	<b>59°</b>	<b>-3.1m</b>	488 km	07:09:15	O	10°	-0.7m	<b>6.7 min</b>
<b>do 24 feb</b>	<i>begin valt samen met maximum</i>				<b>04:42:11</b>	ZO	<b>12°</b>	<b>-0.9m</b>	1361 km	04:43:07	OZO	10°	-0.7m	<b>0.9 min</b>
<b>do 24 feb</b>	06:15:05	ZW	15°	-1.1m	<b>06:17:34</b>	ZZO	<b>46°</b>	<b>-2.7m</b>	574 km	06:20:50	O	10°	-0.7m	<b>5.7 min</b>
<b>vr 25 feb</b>	05:28:41	Z	32°	-2.2m	<b>05:29:15</b>	ZZO	<b>34°</b>	<b>-2.3m</b>	708 km	05:32:22	O	10°	-0.7m	<b>3.7 min</b>
<b>za 26 feb</b>	<i>begin valt samen met maximum</i>				<b>04:42:13</b>	OZO	<b>20°</b>	<b>-1.5m</b>	1041 km	04:43:48	O	10°	-0.7m	<b>1.6 min</b>
<b>za 26 feb</b>	06:15:06	WZW	19°	-1.4m	<b>06:17:22</b>	ZZO	<b>70°</b>	<b>-3.3m</b>	448 km	06:20:44	O	10°	-0.7m	<b>5.6 min</b>
<b>zo 27 feb</b>	05:28:34	ZZW	52°	-2.9m	<b>05:28:58</b>	ZZO	<b>57°</b>	<b>-3.0m</b>	498 km	05:32:18	O	10°	-0.7m	<b>3.7 min</b>
<b>ma 28 feb</b>	<i>begin valt samen met maximum</i>				<b>04:41:59</b>	OZO	<b>27°</b>	<b>-1.9m</b>	846 km	04:43:49	O	10°	-0.7m	<b>1.8 min</b>
<b>ma 28 feb</b>	06:14:52	W	19°	-1.4m	<b>06:17:11</b>	Z	<b>85°</b>	<b>-3.4m</b>	425 km	06:20:34	O	10°	-0.7m	<b>5.7 min</b>

# Lunar phases and apsides



**New Moon 1 Feb, 6:46.**

**First Quarter 8 Feb, 14:50.**

**Full Moon 16 Feb, 17:56.**

**Last Quarter 23 Feb, 23:32.**

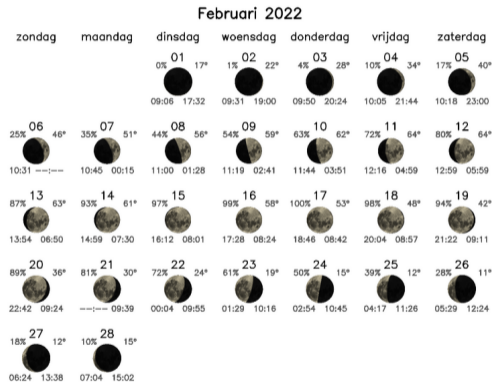
**New Moon 2 Mar, 18:35.**

- 28 Feb: last crescent
- 4 Mar: first crescent
- 11 Feb: apogee
- 26 Feb: perigee

See also:

- <http://hemel.waarnemen.com/applets/maanvers.cgi>
- <http://hemel.waarnemen.com/maan/maanfasekalender.php>

## Moon-phase calendar



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More information: <http://hemel.waarnemen.com/maan/>,  
<http://hemel.waarnemen.com/FAQ/Maan/004.html>

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Feb 4, 5, 7; Feb 19+

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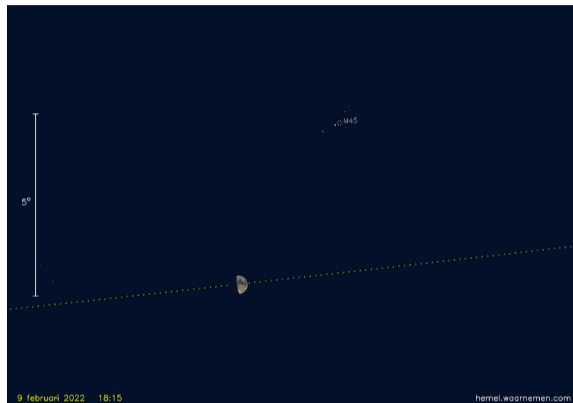
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- 9/2: near the **Pleiades** (Taurus)
- 10/2: occults 51, 56, 99 Tauri
- 11/2: occults 103 Tauri
- 13/2: near Pollux (Gemini)
- 16/2: near Regulus (Leo)
- 20/2: near Spica (Virgo)
- 21/2: occults 82 Virginis
- 24/2: occults  $\rho$  Ophiuchi
- 24/2: near Antares (Scorpio)
- 27/2: near **Venus, Mars**
- 28/2: (near **Mercury**)
- 1/3: (near **Saturn**)
- 2/3: (near **Jupiter**)



More information:

<http://hemel.waarnemen.com/astrokal/>



# The Moon near Mars and Venus

27 februari 2022 07:15

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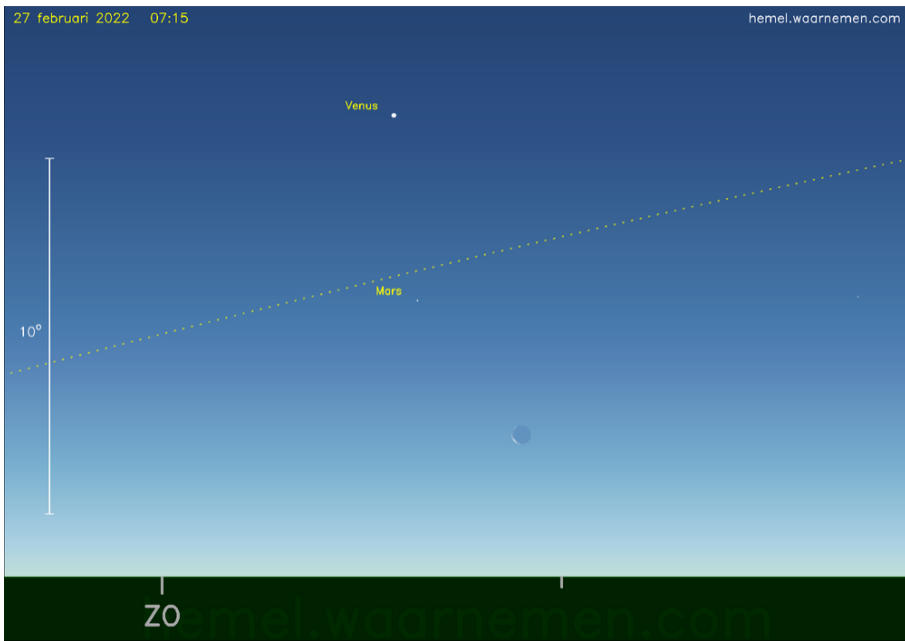
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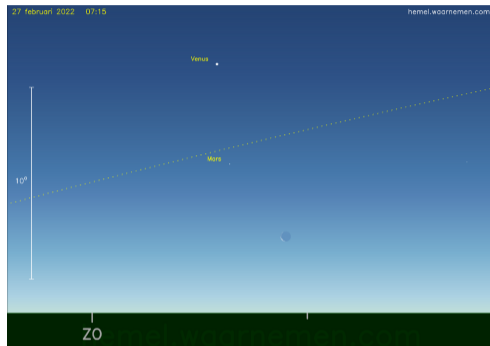
Next event

**What?** The **Moon** is near **Mars** and **Venus**.

**When?** February 27, around 7:15.

**Where?** In the constellation of **Sagittarius**, near the **southeastern** horizon.

**And?** Mars is called the **Red Planet**, but close to the horizon and hard to see. Venus is the brightest object in the sky, after Sun and Moon.



More information:

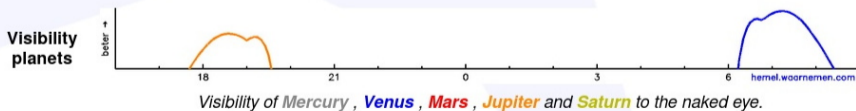
<http://hemel.waarnemen.com/astrokal/>



## Planets tonight:

Planet	Visible	Time visible	Passage	magn.	diam.	stb.	Twilight
Mercury	morning twilight	—	11:38 20°	1.1m	9.4"	sgr	In morning twilight 3° above SE horizon
Venus	Morning	06:46 – 07:43	10:40 22°	-4.3m	49.9"	sgr	In morning twilight 11° above SE horizon
Mars	Morning	07:23 – 07:43	10:18 14°	1,6m	4.3"	sgr	In morning twilight 7° above SE horizon
Jupiter	twilight	18:02 – 19:07	14:30 28°	-1.6m	33.6"	aqr	At dusk 14° above SW horizon
Saturn	Invisible	—	13:06 21°	0.9m	15.3"	cap	In evening twilight 4° below WZW horizon
Uranus	Evening/night	18:02 – 01:17	18:26 53°	6.1m	3.6"	ari	At twilight 52° above S horizon
Neptune	Evening	18:02 – 20:30	15:23 33°	7.8m	2.2"	aqr	At dusk 25° above SW horizon

Colors: favorable, neutral, unfavorable.



More information: <http://hemel.waarnemen.com/vannacht/>

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# The planets on the ecliptic



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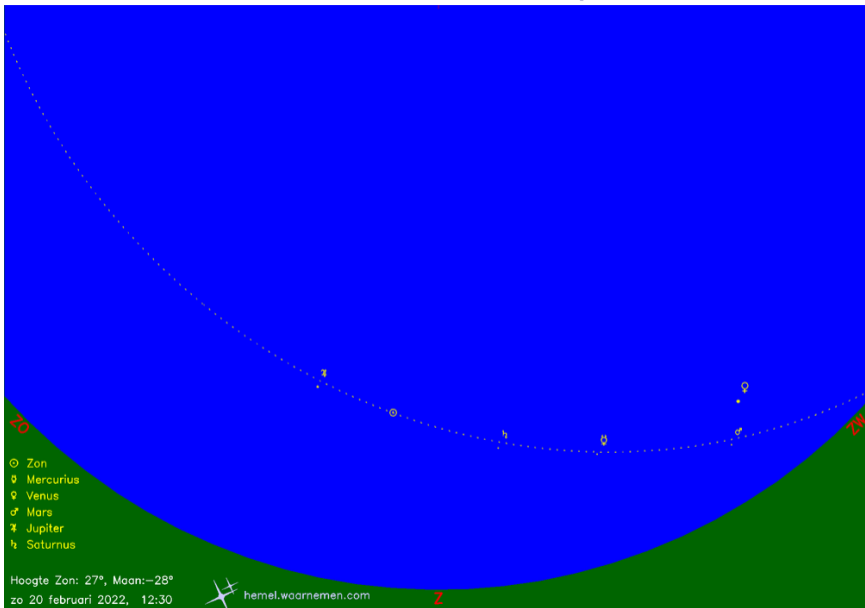
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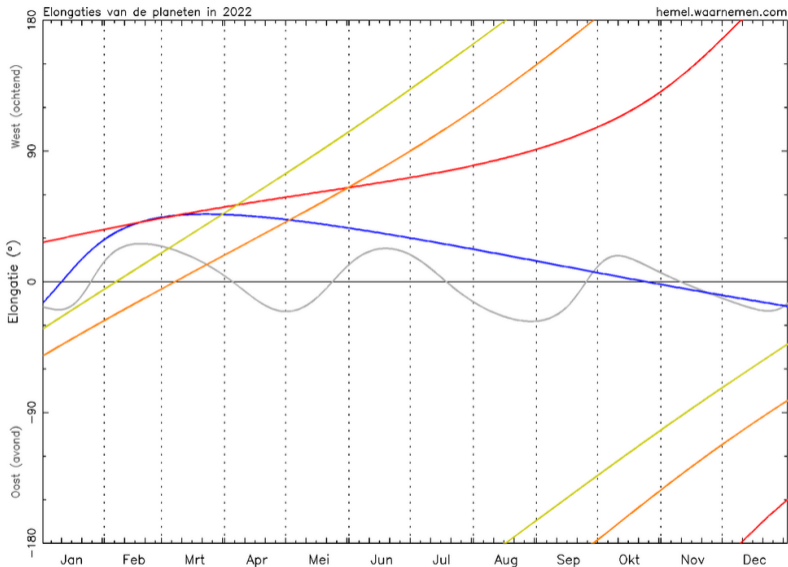
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# Elongations of the planets



More information: <http://hemel.waarnemen.com/planeten>



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# Mercury morning star

Ochtendhemel, januari–februari 2022

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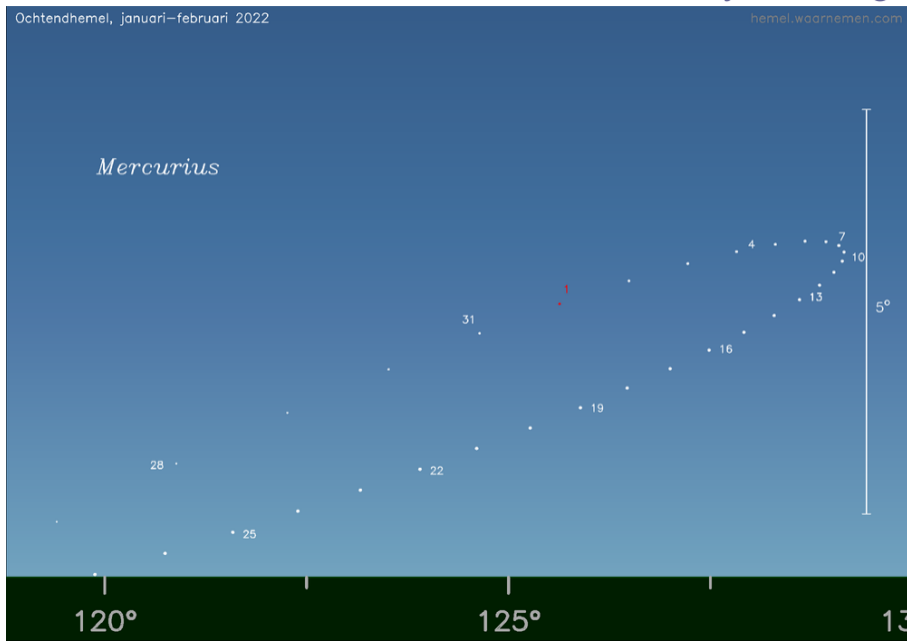
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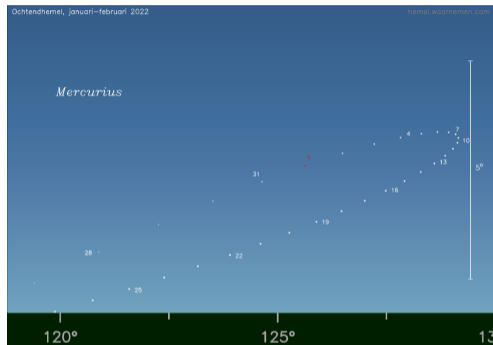
Next event

**What?** The planet **Mercury** is in **greatest elongation** on 16 February and acts as **morning star**.

**When?** **Never, really...**

**Where?** As a dim 'star' in the morning twilight, low in the **east-southeast**.

**And?** A (simple) pair of **binoculars** can help to find Mercury.



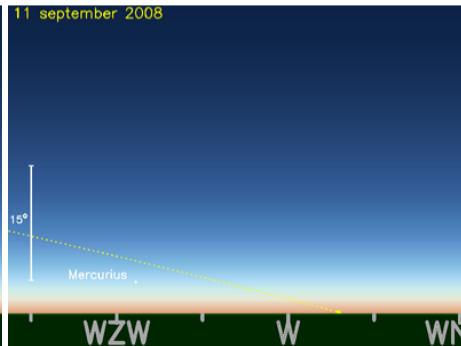
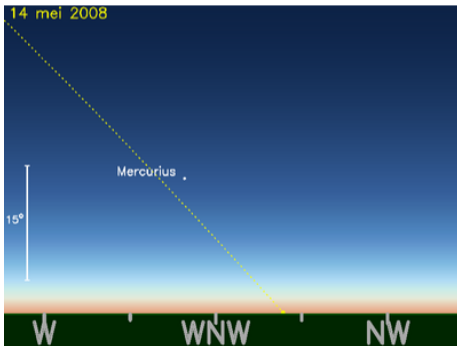
More information:

[http://hemel.waarnemen.com/mercurius/elongaties/mercuriuselongatie\\_20220216.html](http://hemel.waarnemen.com/mercurius/elongaties/mercuriuselongatie_20220216.html)

# The visibility of Mercury (and Venus)

Maximum apparent separation from the Sun: **Mercury: 28°**, **Venus: 47°**.

Elongation	Appearance	Direction	Visibility in	
			spring	autumn
Western	<b>Morning sky</b>	Eastern horizon	<b>Unfavourable</b>	<b>Favourable</b>
Eastern	<b>Evening sky</b>	Western horizon	<b>Favourable</b>	<b>Unfavourable</b>



More information: <http://hemel.waarnemen.com/FAQ/Planeten/014.html>



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# Venus morning star

Ochtendhemel, januari–oktober 2022

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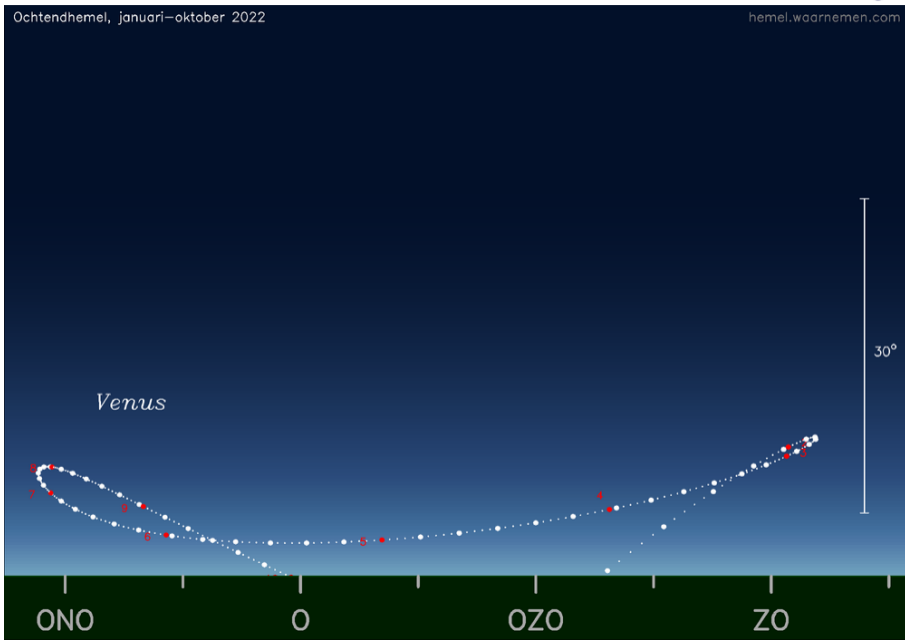
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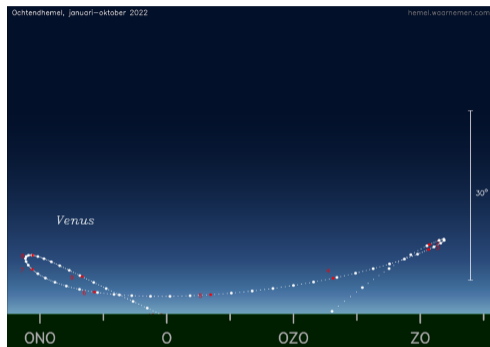
Next event

**What?** The planet **Venus** is in **greatest elongation** on 20 March and visible as the **morning star** — the brightest object in the sky after Sun and Moon.

**When?** The planet is visible **until October**, in the mornings, before sunrise.

**Where?** As a very bright 'star', in the **east to southeast**.

**And?** With a good pair of **binoculars** or small telescope, the **phases** of Venus can be seen (currently ~20%).



More information:

[http://hemel.waarnemen.com/venus/elongaties/venuselongatie\\_20220320.html](http://hemel.waarnemen.com/venus/elongaties/venuselongatie_20220320.html)



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## ISS

Feb 4, 5, 7; Feb 19-  
ISS in February

## The Moon

Phases and apsides  
Conjunctions

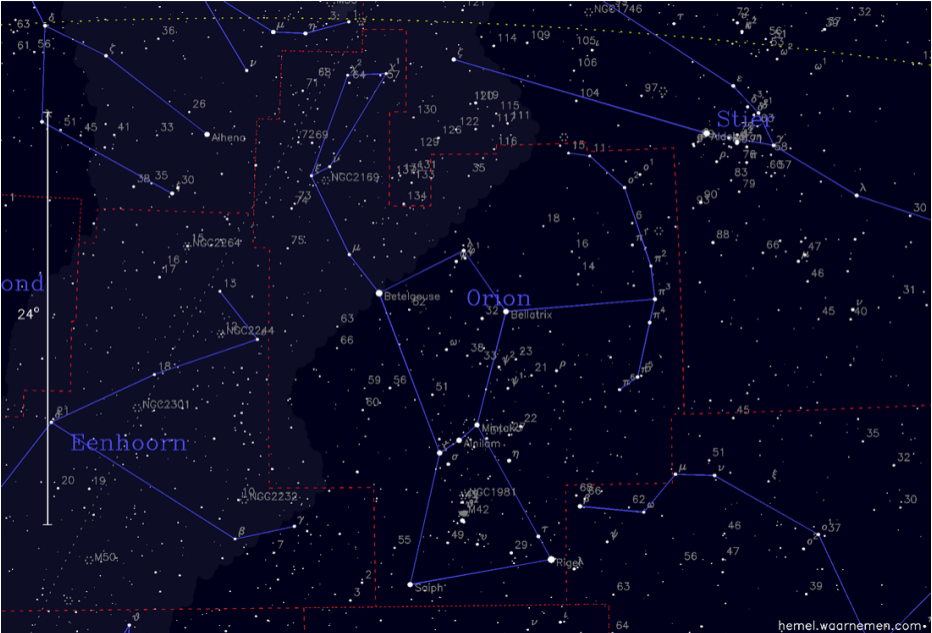
## Planets

Overview  
The planets on the  
ecliptic  
Elongations of the  
planets  
Mercury  
The visibility of  
Mercury (and Venus)  
Venus

## Deep-sky

Orion nebula

## Next event





### ISS

Feb 4, 5, 7; Feb 19+  
ISS in February

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**What?** The constellation of **Orion** is a typical winter constellation, best seen in December/January.

**When?** Currently in the evenings.

**Where?** In the southern sky.

**And?** Easy to recognise, with the **red giant** Betelgeuse in the left shoulder and the three bright blue **young stars** in Orion's belt. The **Orion nebula** can be seen with binoculars. Its distance is  $\sim 1340$  light years, and the stars are 10 000–100 000 years young.



*Image: HST.*

More information:

<http://hemel.waarnemen.com/sterrenbeelden/>

# Next public-observing/online astronomy night



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## Next event

**What?** Next public-observing night  
at the Radboud University.

**Where and When (1)?** **Friday February  
25**, in **Nijmegen**, if possible

**Where and When (2)?** **Friday March 4**,  
**online.**

**And?** New programme, new  
lecture, new night sky, new  
discussion!

More information: <https://www.ru.nl/astrophysics/public-outreach/stargazing-evenings/>

This lecture at: <http://hemel.waarnemen.com/lectures>

