Planet Visibility

2024 - 2025

The following diagrams show, in graphical form, when the five "naked-eye" planets Mercury, Venus, Mars, Jupiter and Saturn are visible in the night sky during the period July 2024 – June 2025.

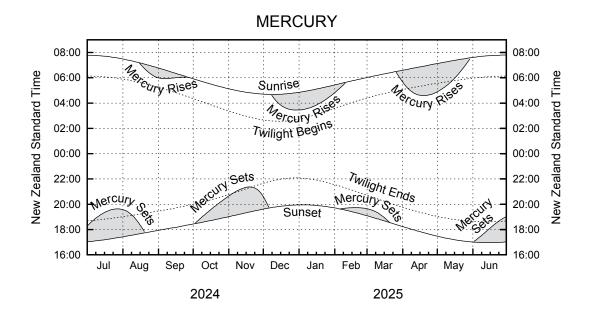
Each diagram spans the hours of darkness, covering the period from 16:00 to 08:00 with midnight being represented by the central line across the diagram. For a given date, time runs from the bottom to the top of the diagram. Times are shown in terms of New Zealand Standard Time; one hour must be added when New Zealand Daylight Time is in force. Each diagram is plotted for Wellington; time differences at other locations in New Zealand will generally not exceed an hour.

In addition to the planet information, the diagrams show the time of sunset and sunrise as well as the end and start of astronomical twilight which is the time when the Sun is 18° below the horizon. The shaded area of each diagram indicates the range of dates/times that the planet is visible in the night sky.

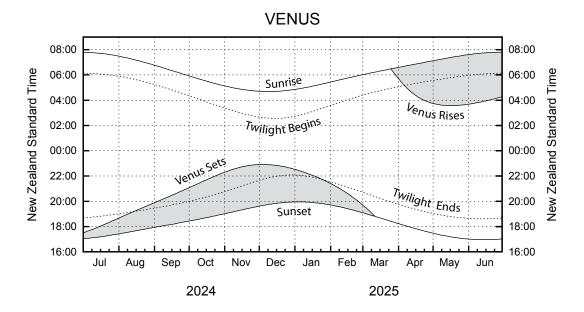
Appearance of the planets

Unless they are near to the horizon, planets can be distinguished from the twinkling stars by their more steady appearance. Twinkling is caused by turbulence in the atmosphere which has a greater effect on the light coming from point sources (stars) than on the light from much closer planets which are not point sources. Another pointer to identifying planets is that they are usually one of the brightest of the objects in the night sky.

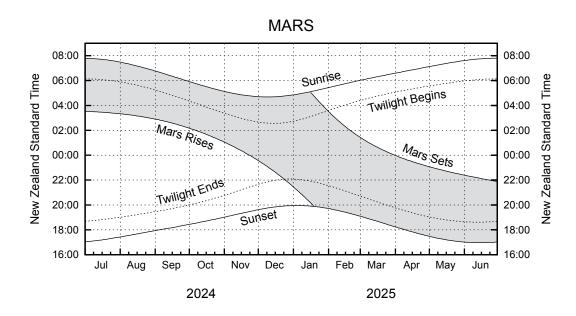
Mercury is the most difficult to see of the bright planets; due to its close proximity to the Sun it is seldom seen in fully dark skies. Venus is readily identified by its brightness – being exceeded by only the Sun and Moon. Venus is often referred to as either the Evening Star (when visible in the west after sunset) or the Morning Star (in the east before sunrise). Mars is notable for its orange-red appearance and is popularly known as the Red Planet. Jupiter's white light always outshines all of the stars whilst pale yellow Saturn is usually the least conspicuous of the five naked-eye planets.



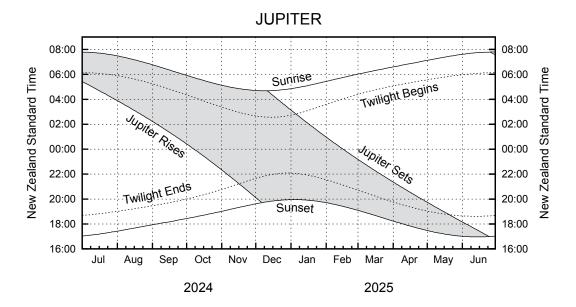
Mercury is the most difficult of the bright planets to see as it always appears near the Sun. This means it is visible only towards the horizon in the twilight sky. The best period to see Mercury in the morning sky will occur during April and early May when the planet rises before twilight begins. Other morning appearances during August-September and December-January are less favourable as Mercury rises during the dawn period. The best time to see Mercury in the evening will occur during July and early August when it sets after twilight has ended. Other evening appearances during October-November, February-March and June are less favourable as Mercury sets before twilight ends.



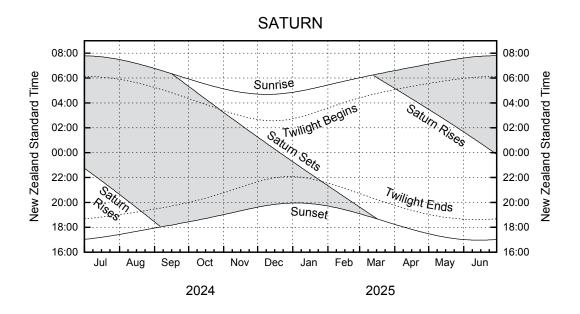
Venus will be in the western sky after sunset from July to late February, being particularly prominent as the bright 'evening star' from mid-August through to late January. During April, the planet will appear in the east as the 'morning star', rising two hours before twilight during the following two months.



Mars will rise two hours before twilight begins during the period July-October. The red planet will rise before midnight from late November and two months later will rise at sunset and be visible throughout the night. Mars will then start to set during the early hours of the morning, at midnight at the end of March and 10 p.m. at the end of June.



Jupiter will rise shortly before twilight begins at the beginning of July, before midnight from early October and at sunset at the beginning of December when the planet will be visible throughout the night. The giant planet will then start setting earlier in the morning hours and from mid-February, Jupiter will set before midnight. Throughout March and April, the planet will set during the evening after which time it will set during twilight and be lost from view towards the end of June.



Saturn rises late evening at the beginning of July and will be visible throughout the night early September. The ringed planet will then start setting during the early morning hours, then during the evening from mid-December. During February, Saturn will set during twilight and will become increasingly difficult to see as the month progresses. The planet will then reappear in the eastern sky, rising as twilight begins at the start of April, then progressively earlier until it rises at midnight at the end of June.