

PLANET VISIBILITY

July 2009 - June 2010

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 2009 – June 2010.

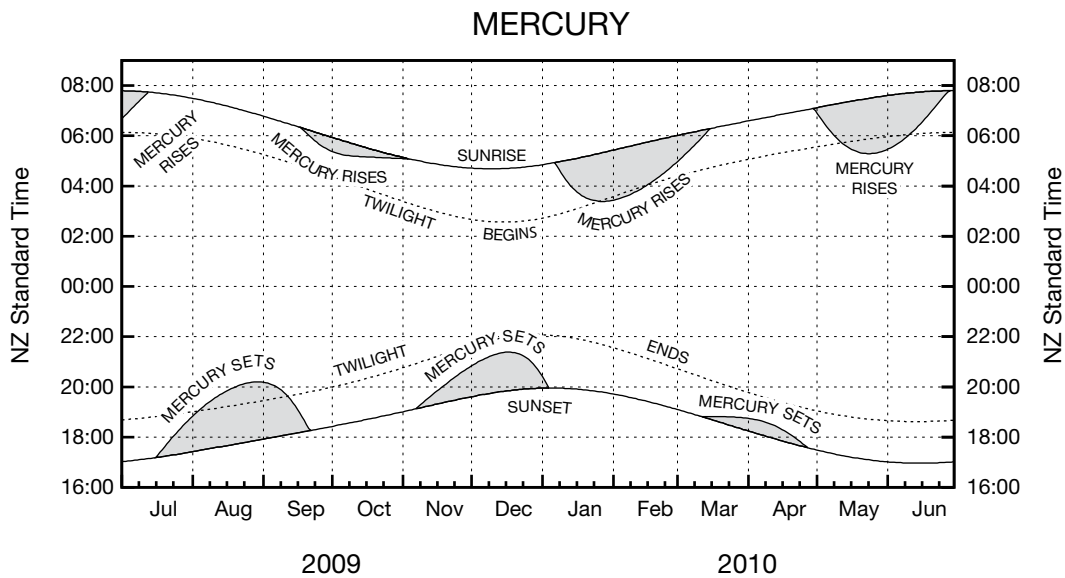
Each diagram spans the hours of darkness, covering the period from 16:00 to 08:00 with midnight being represented by the central line across the diagram. For a given date, time runs from the bottom to the top of the diagram. Times are shown in terms of NZ Standard Time; one hour must be added when NZ 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.

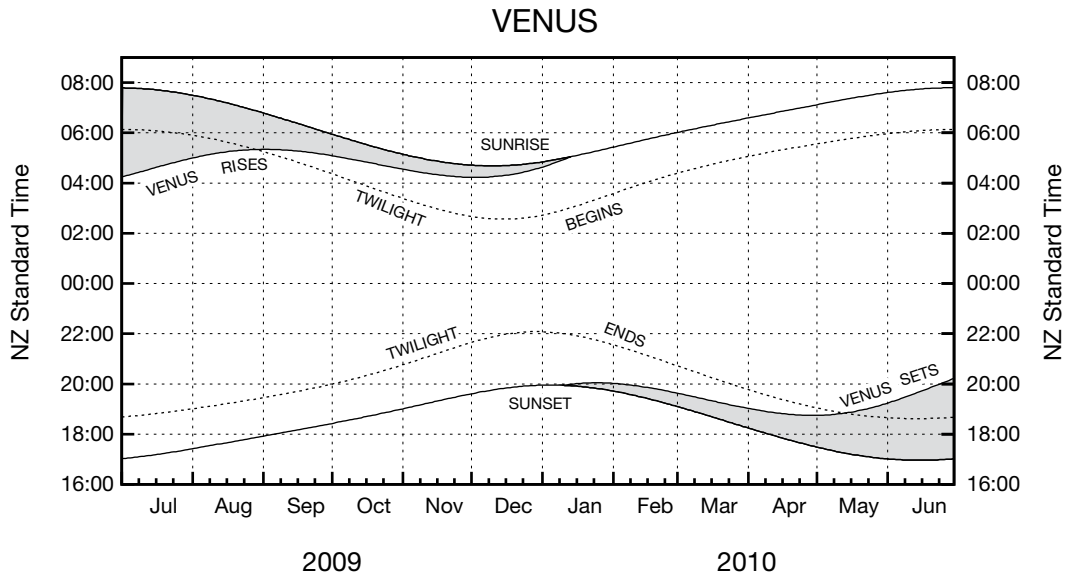
Appearance of the planets

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.

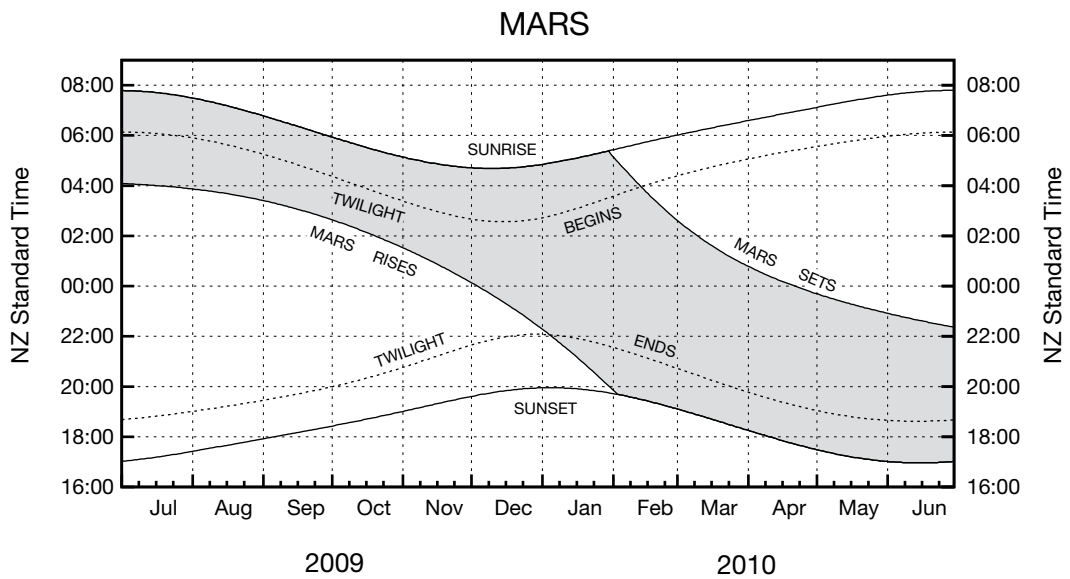
Mercury is the most difficult to see of the bright planets; due to its close proximity to the Sun it is seldom seen in fully dark skies. Venus is readily identified by its brightness - being exceeded by only the Sun and Moon. Venus is often referred to as either the Evening Star (when visible in the 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.



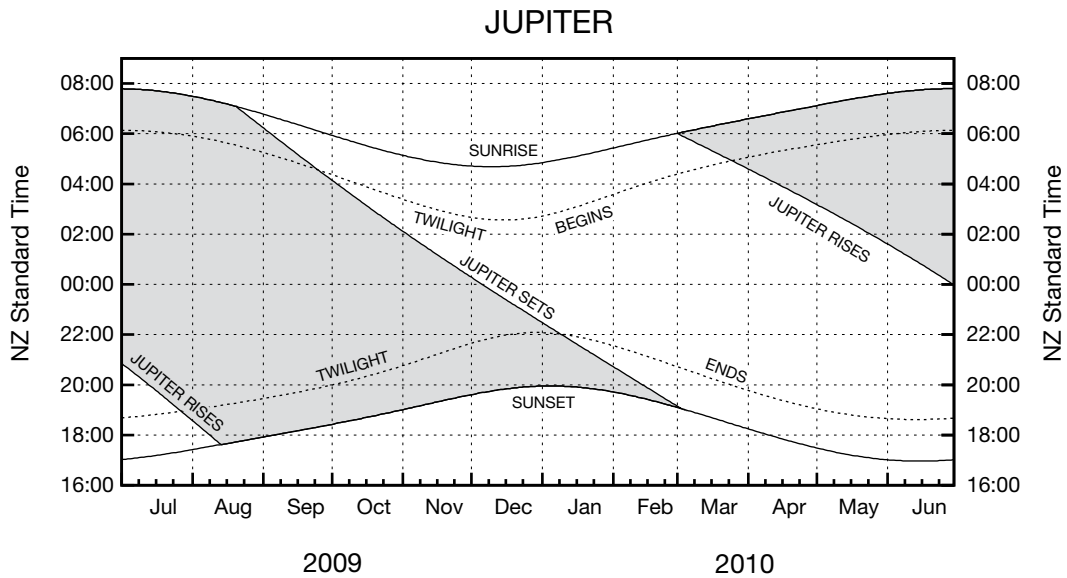
MERCURY is only visible low in the east before sunrise and prior to the beginning of twilight, or low in the west after sunset, from about the time that twilight ends. In the mornings it will be seen best during the periods mid-January to late February and mid-May to mid-June, with less favourable appearances during early July and late-September to early October. The most favourable time to see Mercury in the evening will occur between mid-August and early September. Other appearances during late-November to December and late-March to early April are less favourable as Mercury sets before evening twilight ends.



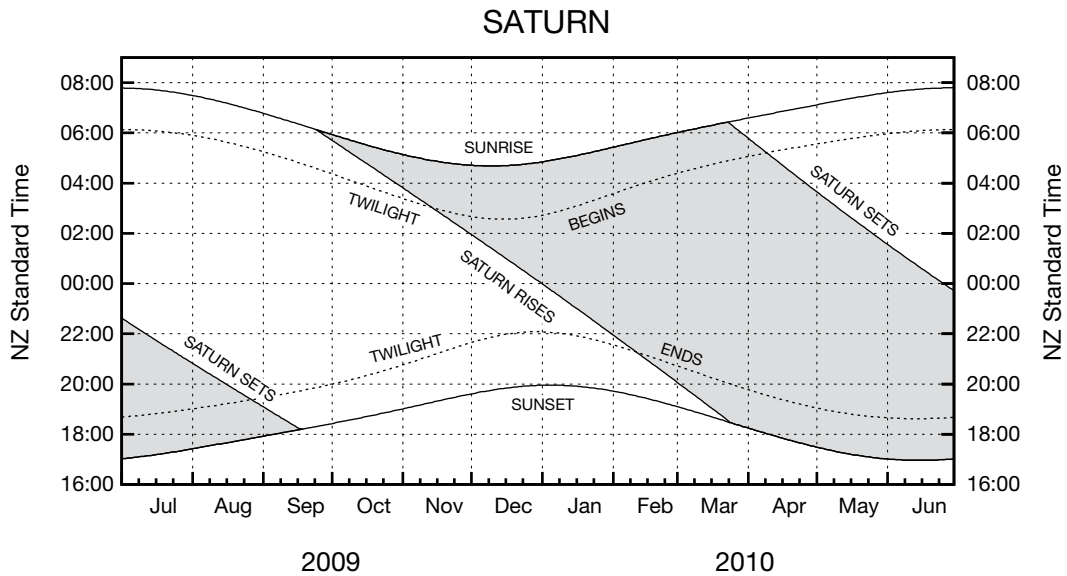
VENUS will be visible as a brilliant object in the pre-dawn eastern sky from July when it rises 2 – 4 hours ahead of the Sun. By late September Venus rises 1 hour before the Sun and this interval reduces progressively until Venus becomes lost in the glare of the Sun at the end of the year. By late February Venus will become visible in the west when it will set half an hour after the Sun. During the following months Venus will become more conspicuous and by June it will set 3 hours after the Sun.



MARS rises nearly 4 hours ahead of the Sun between July and early November and will rise before midnight after early December, becoming visible all night at the end of January. During the next five months Mars will be visible in the evenings after twilight ends, setting at midnight around mid-April and shortly after 10pm at the end of June.



JUPITER will rise at 9pm at the start of July and will become visible all night around mid-August when it rises as the Sun sets. Over the next six months Jupiter will set progressively earlier – by early December it sets at midnight and from early January Jupiter will set during twilight and by the end of February it will be too close to the Sun to be seen. From early March Jupiter will emerge from the Sun’s glare in the eastern sky and will rise at midnight by the end of June.



SATURN will set nearly six hours after the Sun at the beginning of July, but by mid-September it will be too close to the Sun to be seen. By early October Saturn will begin to appear in the east before sunrise and rise progressively earlier, rising at midnight at the beginning of 2010 then becoming visible all night late in March. At the end of June Saturn will be setting shortly before midnight. For a few days mid-August Saturn will be within 4° of brighter Mercury in the west after sunset.