

THE SOUTHERN HEMISPHERE



With Glenn Dawes

Catch a total eclipse of the Moon and take a walk in the Magellanic Clouds

When to use this chart

- 1 Nov at 00:00 AEDT (13:00 UT)
- 15 Nov at 23:00 AEDT (12:00 UT)
- 30 Nov at 22:00 AEDT (11:00 UT)

The chart accurately matches the sky on the dates and times shown for Sydney, Australia. The sky is different at other times as the stars crossing it set four minutes earlier each night.

NOVEMBER HIGHLIGHTS

On 8 November a total eclipse of the Moon is visible from Australia. From the east coast the penumbral phase begins by moonrise, with the main shadow (umbra) underway by the end of twilight. It begins at 20:16 and ends at 21:42 AEST, with maximum eclipse at 20:59 AEST. From central Australia the early part of totality has some twilight interference. Sadly for Western Australia, the Moon already reaches mid-eclipse as it rises. At the same time the Sun has just set.

STARS AND CONSTELLATIONS

High in the southern sky is a view unique to the Southern Hemisphere, the Magellanic Clouds. Like our Galaxy, their 'milky' appearance is from the combined light of millions of stars. The smaller, SMC (mostly in Tucana) precedes its larger companion, the LMC (in Dorado) across the sky. The SMC appears to have no structure, while the LMC has a distinct east-west equatorial bar. Under dark skies the 'clouds' are good naked-eye objects; through binoculars they are brilliant.

THE PLANETS

Saturn is getting lower in the northwest evening sky, setting around midnight at month's end. Jupiter and Neptune are easily seen due north around the end of twilight. As Mars heads towards opposition next month it can be

seen rising in the mid-evening sky, its brightness exceeding the luminaries of Orion and rivalling Sirius. Uranus is at opposition and visible all night. Venus and Mercury remain too close to the Sun; both return to the evening in December.

DEEP-SKY OBJECTS

This month we will use the Magellanic Clouds to find two other gems in the far southern sky. Located 1° west of the SMC is the spectacular globular cluster 47 Tucanae (RA 0h 24.1m, Dec -72° 05'). A brilliant object in any telescope, you will need at least 150mm instruments to see individual stars. At mag. +4.0, it's visible to the unaided eye and binoculars even give a glimpse of its bright, compact core.

Turning to the LMC, binoculars will reveal a bright nebulous spot just above (north of) the eastern end of the central bar - a magnificent super star cluster, the Tarantula Nebula (RA 5h 38.7m, Dec -69° 06'). Only a 150cm telescope is needed to reveal this complex of nebulae and star clusters that extends for approximately 1°. The legs of the spider are the loops of nebulae clearly seen extending from its centre.

Chart key

GALAXY	DIFFUSE NEBULOSITY	ASTEROID TRACK	STAR BRIGHTNESS: ● MAG. 0 & BRIGHTER ● MAG. +1 ● MAG. +2 ● MAG. +3 ● MAG. +4 & FAINTER
OPEN CLUSTER	DOUBLE STAR	METEOR RADIANT	
GLOBULAR CLUSTER	VARIABLE STAR	QUASAR	
PLANETARY NEBULA	COMET TRACK	PLANET	

