

# THE SOUTHERN HEMISPHERE



With Glenn Dawes

This month, enjoy the brilliant binocular fields near the Small and Large Magellanic Clouds

## When to use this chart

**1 Dec 00:00 AEDT (30 Nov, 13:00 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.  
**15 Dec 23:00 AEDT (12:00 UT)**  
**31 Dec 22:00 AEDT (11:00 UT)**

## DECEMBER HIGHLIGHTS

Jupiter is at opposition on the 8th, achieving its maximum angular size for 2024. As well as bringing spectacular telescopic views of its atmospheric features, its moons' orbits are magnified too, making them good binocular targets. Callisto at maximum elongation is now 10 arcminutes from Jupiter as seen on 8th, 16th and 24th. On 24th, Ganymede and Europa are also at maximum elongations between the planet and Callisto, 6 and 4 arcminutes respectively from Jupiter.

## STARS AND CONSTELLATIONS

The far southern constellations of Tucana and Dorado are homes to the two brightest members of the local group of galaxies, the Small and Large Magellanic Clouds. They are clearly visible to the unaided eye under dark skies, high in the south during December evenings. If you take the centre of the 'clouds' as corners of an equilateral triangle and imagine the third corner below, south of them, you'll have roughly found the position of the South Celestial Pole.

## THE PLANETS

The early evening sky is a planetary paradise in December. Saturn and Neptune are low in the northwest, about to depart around midnight. The real stand-outs are brilliant Venus and Jupiter. Venus is already low in the west, departing

around 22:00. At maximum brightness, Jupiter in the east outshines even the nearby luminaries of Orion. Mars follows Jupiter into the sky, rising mid-evening. Mercury is slowly rising out of the dawn glow and best left until month's end.

## DEEP-SKY OBJECTS

This month, a trip to Tucana, starting with impressive globular cluster NGC 362 (RA 1h 3.5m, dec. -70° 48'), less than 1° away from the northern edge of the Small Magellanic Cloud. At seventh magnitude, it's easily visible in binoculars, but overlooked due to nearby stunning 47 Tucanae. Visually, NGC 362 is a compact 10 arcminutes across, with a densely packed core that beyond thins out dramatically, with stars easily resolved to the edge.

Next up, move 1.5° to the north-northwest of globular cluster NGC 362 to find the isolated, naked-eye (mag. -5.5) star Lambda<sup>2</sup> Tucanae. Only 13 arcminutes to the west lies mag. +6.6 Lambda<sup>1</sup> (λ), making a great binocular double star. Lambda<sup>1</sup> itself is a brilliant small-telescope double, with mag. +6.5 and 7.9 components, the pair lying a comfortable 20 arcseconds apart. All three stars are yellow.

## 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	

