The *Night* Atlas

A browser-based exercise for first-time sky-chart readers, proposed independently for Astra Intelligence.



Which way did the pattern turn?

A beginner can recognise Orion’s three belt stars and still struggle to describe their tilt once the chart changes.

A planetarium presenter can keep the outer compass in view while the class switches observing windows. Readers gain a common reference for comparing their sketches.

> **FIRST OBSERVATION**
>
> Start at W, draw a line toward E, then mark the direction of the belt.



FIXED COMPASS RIM · ORION AT MIDNIGHT

Three ways to find the target



CONSTELLATION

Orion

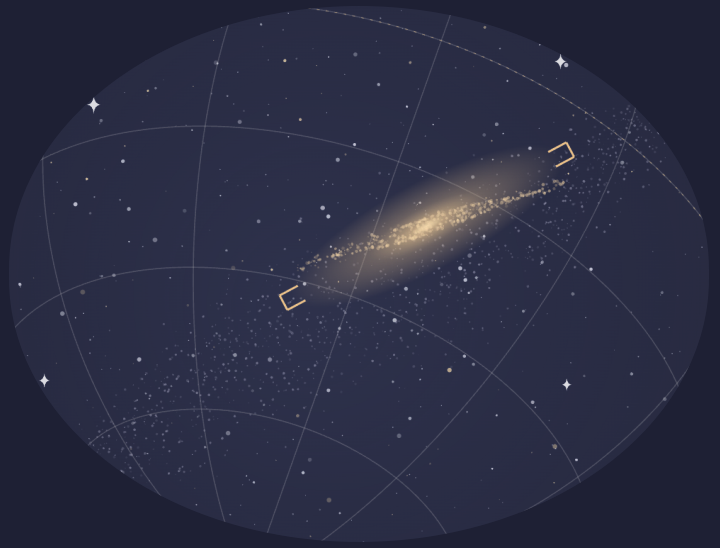
Trace the three close belt stars in the gold outline.



STAR CLUSTER

Pleiades

Count the seven bright marks inside the dotted oval.



GALAXY

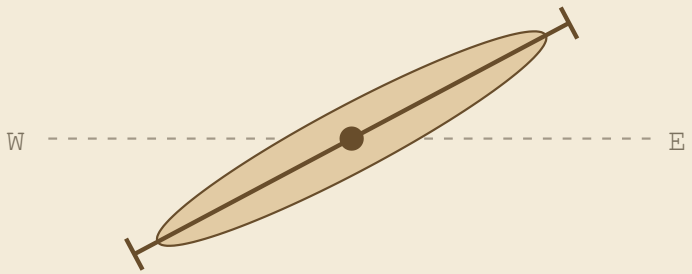
Andromeda

Find the two brackets at either end of the bright disk.

When is Andromeda closest to level?

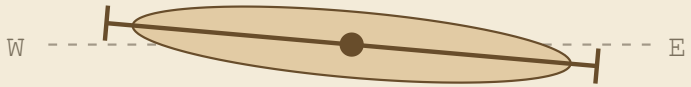
Sketch the long axis from the western bracket to the eastern bracket. Keep north at the top.

Dusk −28°



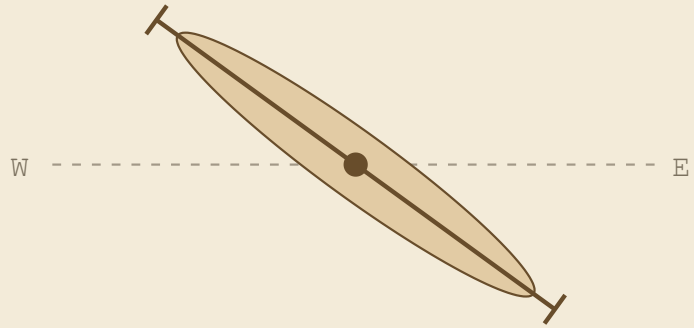
The eastern end rises well above the W–E line.

Midnight +5°



The eastern bracket sits just below the western one.

Pre-dawn +36°



The disk slopes more steeply downward to the right.

Midnight has the smallest tilt. The core stays between the same two brackets.

Where the three angles come from

The disk starts at –0.49 radians. Each window adds a clockwise rotation to the sky field. The browser draws the compass rim afterward.

The Midnight setting adds 0.58 radians. Multiply the resulting 0.09 radians by 180/π to get about 5.2° on the page.

THE SAME STARTING DISK IN EVERY WINDOW

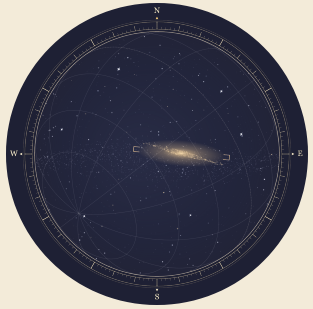
WINDOW	ADDED TURN	DISK ANGLE
Dusk	0.00 rad	−28.1°
Midnight	0.58 rad	+5.2°
Pre-dawn	1.11 rad	+35.5°

Midnight lies 5.2° from horizontal.

A two-person observing exercise

At the teaching table

One person operates the atlas. The other draws three W–E lines, adds a stroke for each disk and dots the bright core. Compare the sketches before reading the observation notes.



Ask the reader to point to the bracket that supports the answer.

At an outdoor session

The illustrated targets share one repeatable, generated field. Their brightness and positions serve the reading exercise. The three window names mark stages of that exercise.

FOR AN ACTUAL SKY

Use an observing chart or ephemeris for the site, date and local time. Check the target's visibility before planning a viewing.

Try a round *without the clue*

Choose Orion. Ask a partner to select one of the three windows and hide the clue. Name the window from the belt's slope, point to your reference on the rim, then reveal the setting and switch roles.

ASTRA INTELLIGENCE

Fathia Akinwumi, Founder



PRACTICE PLATE · ORION