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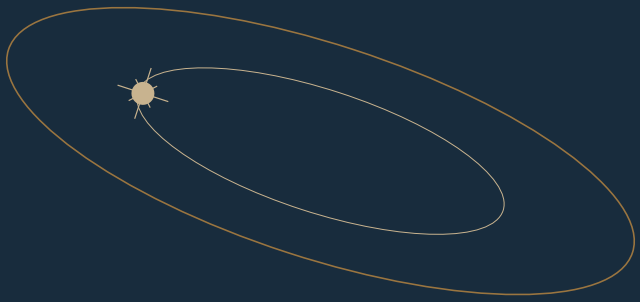
Mira

A light for our story



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A story among the stars

Celestial Library edition

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Every light holds a story. These pages follow its journey, from the heart of the star to the sky we share.

The sky, page by page

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One light among many

Some nights begin when we stop hurrying. The day withdraws, our eyes learn the darkness and, little by little, the stars appear. Among them is Mira. Until now it may have been another distant light; pausing to look is the beginning of giving it a place in our own story.

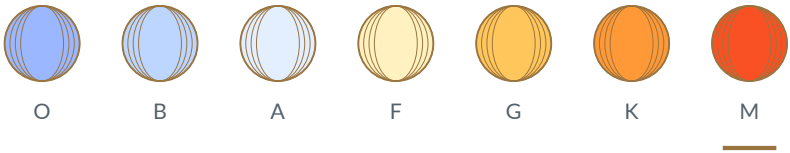
A dedication begins with that simple gesture: choosing something beautiful and wanting to share it. The star will continue on its way, beyond our calendars, while here below its light can accompany a date, a name or words we wish to keep. Immensity takes on an intimate measure: the measure of what matters to us.

The colour of its fire

The light of Mira has a character of its own. In the M family, red seems to keep the last colour of sunset. These surfaces are relatively cool among the familiar stellar families. The same tint can clothe very different bodies: colour opens the story while leaving much still to discover.

To the unaided eye, a stellar colour can be little more than a whisper. The atmosphere makes it tremble and our eyes receive it in their own way. Beyond that point we can imagine a living surface of hot matter: the visible beauty of processes working on a scale far greater than ours.

SEVEN FAMILIES OF LIGHT



Light keeps the colours of its origin.

The journey ending here

The light of Mira crosses approximately 418.7 light-years to reach us. The brightness we receive has therefore spent about 418.7 years on its way. Distance becomes time: looking at this star means meeting light that began travelling before this moment. When it set out, the Sun and its planets already shared a history billions of years old. On their scale, this journey is barely a breath.

Its light has crossed the time of several generations. We can imagine hands writing letters, lit windows and voices that now live only in other voices. Through all that passing on, the brightness kept travelling; tonight it reaches us.

THE JOURNEY OF LIGHT



Its origin

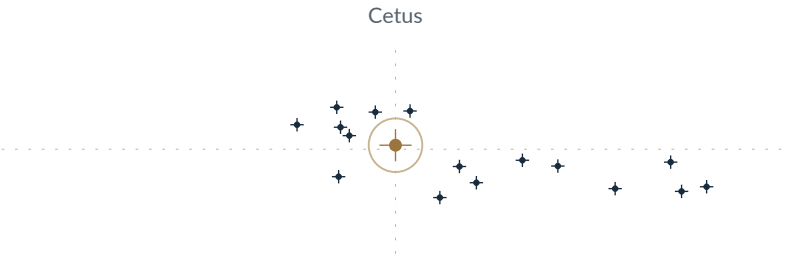
Here

From its sky to our night.

A landscape for imagination

Mira lies in the region of the Whale. The Whale opens an imagined sea in the sky. Its lights suggest a creature moving slowly through darkness, carrying the calm of deep water.

Figures in the sky are a human way of approaching immensity. In our gaze they join lights that may lie at very different distances. Imagination stretches the thread; the stars provide the brightness. A single landscape can therefore keep old images while receiving a story that begins tonight.



Its light, among other lights of the constellation.

The wake our eyes could not see

In 2007, GALEX's ultraviolet gaze revealed a surprise behind Mira: a long wake of material the star had shed along its journey. A light known for centuries kept a landscape that visible light had not revealed. The new image presented it almost as a traveller with a memory, accompanied by a trace stretching through space. Matter that had left the star was still telling something of its path. A change in the way observers looked allowed them to recognise new depth within a familiar presence.

We can imagine that wake as a thread left for the night by a journey. Mira offers a gentle image of time: moving onwards can also mean sharing something of ourselves. Seeking its light, we meet a story continuing beyond the reach of our eyes.

The time of stars

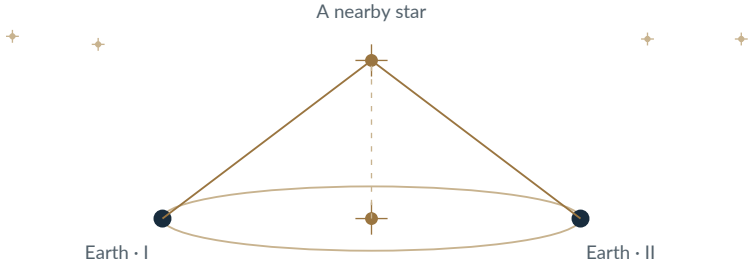
Every star has a rhythm shaped by the matter with which it was born and the stage of life it is passing through. Some spend their light intensely; others sustain it for much longer ages. We can imagine them as a library of different times, where no story needs the same length to deserve being told.

To approach Mira, we can let that scale widen our imagination. A stellar age is unlike a birthday: it speaks of changing matter, of energy finding a way out, of a balance sustained and transformed. Tonight's light is one page of that time, and we happen to be here to receive it.

Measuring with two glances

To begin measuring a stellar distance, Earth offers us a movement. We observe from one side of its orbit and look again about six months later from the other. A nearby star seems to shift slightly against more distant ones. That small change of perspective is called parallax.

We can feel the principle by looking at a finger with one eye and then the other. What fits between two glances at home requires our planet's journey in the sky. There is something beautiful in that patience: to learn how far a light is from us, we first learned to look from somewhere else.



Two positions of Earth, six months apart.

Nothing stands still

Although it seems still, Mira belongs to a moving sky. Stars travel through the galaxy and our own home moves with the Sun. The distances are so great that many of these changes need years of observation to become visible. The serenity we see is really keeping a journey.

We can imagine every night as a meeting between travellers. We arrive with one more day of memories; the star arrives with its light and its path. The meeting seems to repeat, yet it is never quite the same. Perhaps that is why looking again can be such a simple way to celebrate shared time.

The night of finding it

We can begin with something simple: looking into a starry sky and letting our eyes grow used to darkness. The dedication page lets us choose a place and time to find where to look. Recognising the constellation first turns a distant map into a familiar landscape.

If a telescope joins the evening, a wide field is a gentle beginning. As a reference, a 114 mm Newtonian with a 500 mm focal length gives 20× with a 25 mm eyepiece. The star remains a point of light; the instrument gathers more of its brightness. The best memory may be the moment we leave the eyepiece and say: there it is.

Somewhere to return

We can close this booklet and let Mira become a small light in an enormous night again. Something, though, will have changed. We now know part of its journey, a shade of its colour and a way to find it. What seemed far away has a place in our memory.

There will be clear nights and others when clouds keep the sky. Not every night will allow observing, but each can bring back the memory of this gesture. Sometimes a name is enough to return to a date, a voice, a few shared words. And when the light appears again, we will have one more reason to pause and look.

The traces of this story

ESA Hipparcos / VizieR
https://vizier.cds.unistra.fr/viz-bin/VizieR-5?-source=I/239/hip_main&HIP=10826

NASA · Our Sun
https://science.nasa.gov/sun/facts/

IAU · Constellations and their names
https://iauarchive.eso.org/public/themes/constellations/

Celestron · Choosing eyepieces
https://www.celestron.com/blogs/knowledgebase/how-to-determine-which-eyepieces-to-use-with-your-telescope

Original ISDORA prose and illustrations. Images are artistic evocations or diagrams, not to scale. Distances are approximate. Constellation figures include contemporary literary readings.

To keep discovering

NASA · The lives of stars
https://science.nasa.gov/universe/stars/

NASA · What is a light-year?
https://science.nasa.gov/exoplanets/what-is-a-light-year/

ESA · Measuring stellar distances by parallax
https://www.esa.int/ESA_Multimedia/Images/2013/06/Measuring_stellar_distances_by_parallax

NASA · GALEX reveals Mira's long ultraviolet tail
https://science.nasa.gov/photojournal/mira-soars-through-the-sky/



May there always be a night to look again.

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A STORY OF LIGHT