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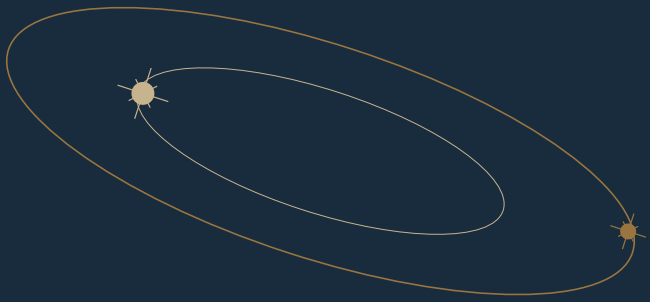
GW ERI · VISUAL A/B

GW Eridani

A light for our story



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A story among the stars

Celestial Library edition

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

A · HIP 19571 | B · J04116-2021 B

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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 GW Eridani. Until now it may have been another distant light; pausing to look is the beginning of giving it a place in our own story.

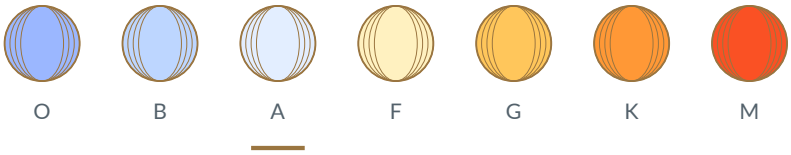
A dedication begins with that simple gesture: choosing something beautiful and wanting to share it. The star will continue on its way, beyond our calendars, while here below its light can accompany a date, a name or words we wish to keep. Immensity takes on an intimate measure: the measure of what matters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

The colour of its fire

The light of GW Eridani has a character of its own. In the A family, brightness has a whiteness that invites comparison with a jewel. The surface is hotter than the Sun's; colour is a way of hearing that difference through our eyes. A tiny detail opens a door into the star.

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 GW Eridani crosses approximately 249.7 light-years to reach us. The brightness we receive has therefore spent about 249.7 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.

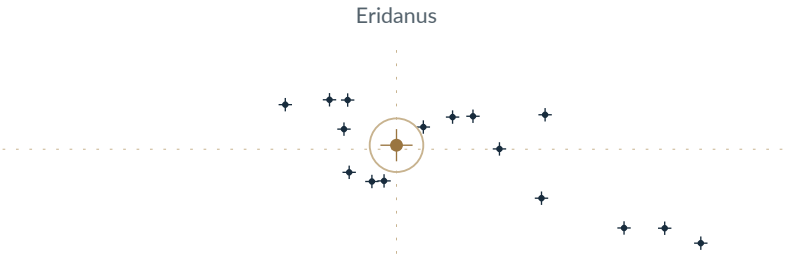


From its sky to our night.

A landscape for imagination

GW Eridani lies in the region of Eridanus. Eridanus offers a river to travel with our eyes. Each light can be a bend, a shore or a pause; the destination matters less than the company along the way.

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.

A measured thread from 1894

The USNO Washington Double Star Catalog lists this visual pair as SRT 2 at WDS position 04116-2021. The entry spans 1894–2016 and gathers 15 mean positions; the first and latest listed separations are 61.9 and 61.8 arcseconds. Those dates mark catalogued measurement epochs, not necessarily the first time a person saw the pair. The entry also does not establish that both stars are gravitationally bound. It preserves a specific sequence of relative-position measurements that later observers can compare with their own view.

The numbers leave a quiet human trace: different instruments and observers returning to the same small geometry. We can look at these two lights tonight and join that chain of attention, while leaving unknown what the record does not tell us.

The balance of a life

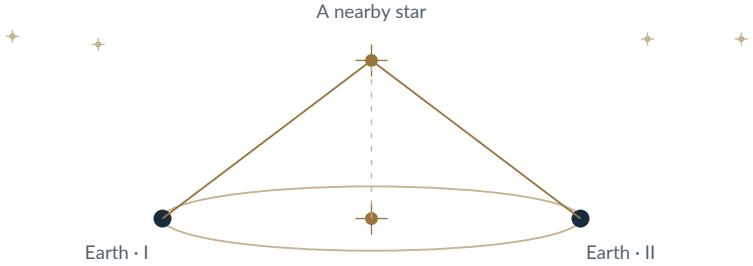
During the main sequence, hydrogen fusion sustains the great conversation between gravity and pressure. Gravity gathers; the hot interior answers. From that balance comes light able to accompany entire ages. We can imagine a life written slowly, while matter at its centre transforms part of itself into energy.

To approach GW Eridani, 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.

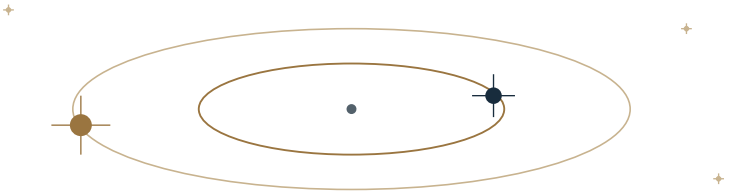


Two positions of Earth, six months apart.

Two lights, one journey

This story brings together HIP 19571 and J04116-2021 B. Two distinct lights share one gaze. Each star keeps its own brightness; together they make a figure we can find and remember. The physics of binary systems also offers the image of a dance around a shared centre. We can carry that image into the sky without asking its partners to be identical before recognising the beauty of companionship.

The image allows an intimate comparison: companionship does not require ceasing to be oneself. There is space between the lights, and that space is part of the figure too. Night offers the beauty of two presences; our imagination finds in them a way of speaking about companionship.



Two lights, one shared gaze.

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 GW Eridani 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=19571

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

USNO WDS exact summary entry
https://crf.usno.navy.mil/data_products/WDS/Webtextfiles/wdsweb_summ2.txt

May there always be a night to look again.

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A STORY OF LIGHT