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HIP 7978

HIP 7978

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

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HIP 7978

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 HIP 7978. Until now it may have been another distant light; pausing to look is the beginning of giving it a place in our own story.

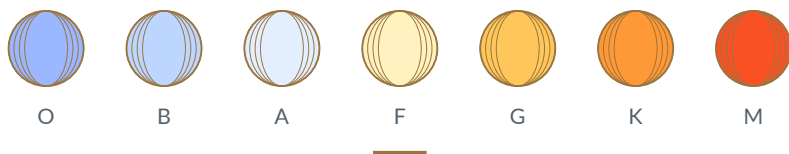
A dedication begins with that simple gesture: choosing something beautiful and wanting to share it. The star will continue on its way, beyond our calendars, while here below its light can accompany a date, a name or words we wish to keep. Immensity takes on an intimate measure: the measure of what matters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

The colour of its fire

The light of HIP 7978 has a character of its own. The F family occupies a delicate place between white and gold. Its brightness suggests a lamp still keeping the freshness of dawn. A temperature is hidden within that tint: nature writes information even into what we experience as beauty.

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 HIP 7978 crosses approximately 56.6 light-years to reach us. The brightness we receive has therefore spent about 56.6 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 travels on something like the scale by which we count a life. While it moved, streets changed, trees grew and many stories found their beginning. In a single glance, the star lets us receive something that has crossed years of the world.

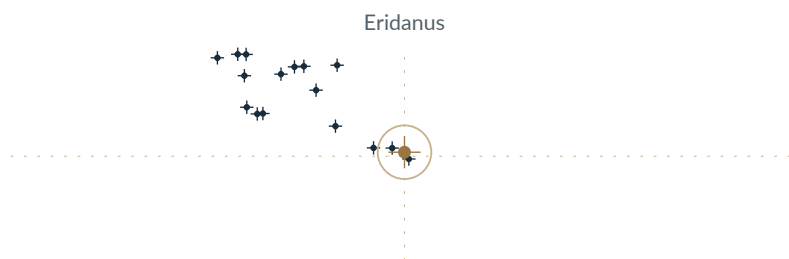


From its sky to our night.

A landscape for imagination

HIP 7978 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 distant analogue of the Kuiper Belt

In 2010, R. Liseau and collaborators used the Herschel space observatory's PACS camera to image ρ 1 Eridani, HIP 7978, at far-infrared wavelengths. They resolved its dust disc for the first time in that light and inferred a ring about 40 astronomical units wide, centred near 85 AU. The team described it as the first observed analogue of the Solar System's Edgeworth–Kuiper belt. The result concerns the star's surrounding material, not the discovery of the star.

We may imagine a quiet workshop beyond the visible point, where the question of surrounding matter gives the star a deeper landscape. The measurements tell us how far the evidence reaches; wonder lets us linger at its edge. Beneath that light, unfinished questions can become an invitation to return together, to look more patiently, and to keep making room for surprise.

The balance of a life

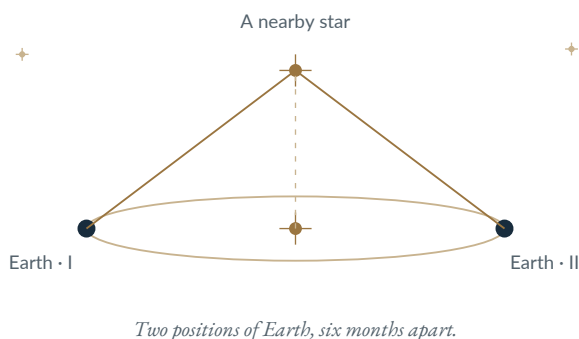
During the main sequence, hydrogen fusion sustains the great conversation between gravity and pressure. Gravity gathers; the hot interior answers. From that balance comes light able to accompany entire ages. We can imagine a life written slowly, while matter at its centre transforms part of itself into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

To approach HIP 7978, 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.



Nothing stands still

Although it seems still, HIP 7978 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 HIP 7978 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

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https://vizier.cds.unistra.fr/viz-bin/VizieR-5?-source=I/239/hip_main&HIP=7978

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

Liseau et al. (2010), 'Resolving the cold debris disc around a planet-hosting star: PACS photometric imaging observations of ϵ Eridani (HD 10647, HR 506),' *Astronomy & Astrophysics* 518, L132.

<https://ui.adsabs.harvard.edu/abs/2010A%26A...518L.132L/abstract>



May there always be a night
to look again.



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A STORY OF LIGHT