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HIP 107975

HIP 107975

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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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 107975. Until now it may have been another distant light; pausing to look is the beginning of giving it a place in our own story.

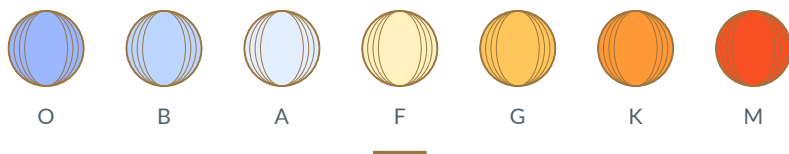
A dedication begins with that simple gesture: choosing something beautiful and wanting to share it. The star will continue on its way, beyond our calendars, while here below its light can accompany a date, a name or words we wish to keep. Immensity takes on an intimate measure: the measure of what matters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

The colour of its fire

The light of HIP 107975 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

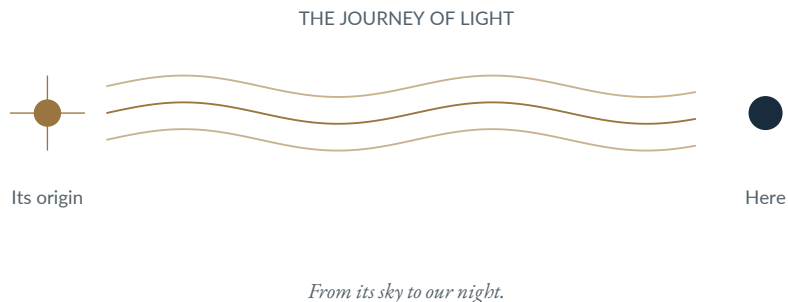


Light keeps the colours of its origin.

The journey ending here

The light of HIP 107975 crosses approximately 90.2 light-years to reach us. The brightness we receive has therefore spent about 90.2 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.

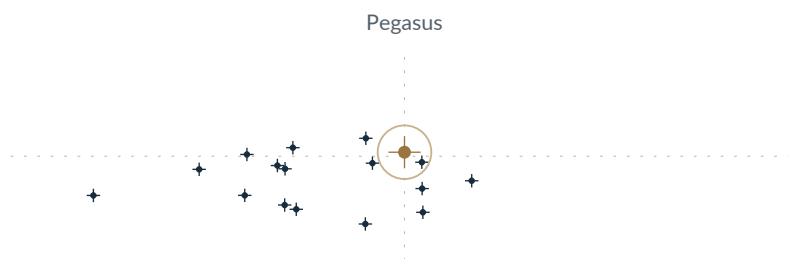
Its light travels on something like the scale by which we count a life. While it moved, streets changed, trees grew and many stories found their beginning. In a single glance, the star lets us receive something that has crossed years of the world.



A landscape for imagination

HIP 107975 lies in the region of Pegasus. Pegasus brings the road and flight into one image. We can imagine it rising from familiar ground, like wishes that begin close by and end by opening the whole horizon.

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 beryllium upper limit becomes a detection for HIP 107975

In 2009, Rodolfo Smiljanic and collaborators published a study of beryllium abundances in stars of the Galactic thick disk and halo. For HIP 107975, the paper compared the upper limit published by Stephens and collaborators in 1997, $\log(\text{Be}/\text{H})$ below -12.38 , with a new detection based mainly on the beryllium line at $3131 \text{ \AA}$: $\log(\text{Be}/\text{H}) = -12.25$. The study used high-resolution UVES spectra and spectrum synthesis.

A little light, patiently unfolded, had become a page rich enough to read. We can imagine each faint mark as part of a letter sent across the dark, arriving without sound and asking only for attention. The instruments reveal its detail; the evening gives it another meaning. Finding the star again can feel like opening a familiar letter whose distance has never diminished its welcome.

The threshold of another chapter

A subgiant stands within a transition in its stellar history. The balance that supported a long stage begins to change, and the star responds within both its interior and envelope. We can imagine it on a threshold: still keeping something of what it was, already learning another way to shine.

To approach HIP 107975, 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 107975 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 107975 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=107975

NASA · Our Sun

<https://science.nasa.gov/sun/facts/>

ESA · Measuring stellar distances by parallax

https://www.esa.int/ESA_Multimedia/Images/2013/06/Measuring_stellar_distances_by_parallax

R. Smiljanic et al., “Beryllium abundances and star formation in the halo and in the thick disk,” *Astronomy & Astrophysics* 499, 103–117 (2009), Appendix A discussion of HIP 107975

<https://arxiv.org/abs/0902.0483>

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/>

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.



May there always be a night
to look again.



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A STORY OF LIGHT