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HIP 75572

HIP 75572

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 75572

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 75572, a quiet point in Boötes. To seek it is to give one small light a place in the immense sky.

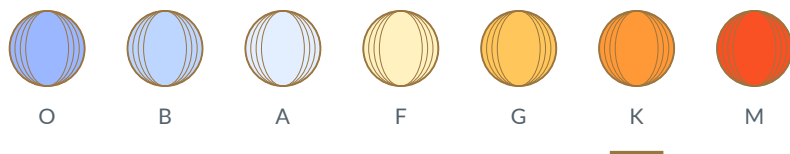
Its story includes a meeting between two observatories. Each received the same distant starlight through its own instrument, then traced what that light could tell. Their separate measurements leave room for care: the sky offers a signal, and science learns to read it patiently.

The colour of its fire

The light of HIP 75572 has a character of its own. The K family keeps the colour of an ember seen at the end of an evening. Its surfaces are cooler than the Sun's, though still extraordinarily hot. That amber tint suggests a gathered light, a warmth that seems to ask us to stay a little longer.

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

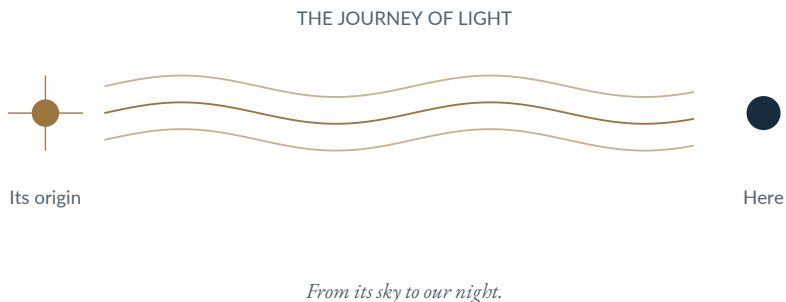


Light keeps the colours of its origin.

The journey ending here

The light of HIP 75572 crosses approximately 489.7 light-years to reach us. The brightness we receive has therefore spent about 489.7 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.

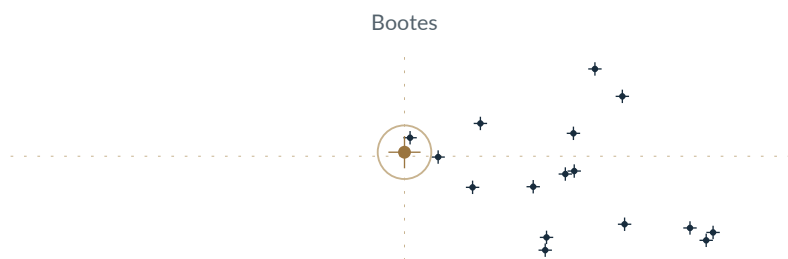
Its light has crossed the time of several generations. We can imagine hands writing letters, lit windows and voices that now live only in other voices. Through all that passing on, the brightness kept travelling; tonight it reaches us.



A landscape for imagination

HIP 75572 lies in the region of the Herdsman. The Herdsman carries an earthly task into the sky: accompanying and caring. The name keeps the intimacy of the fields even when spoken before immense distances.

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 giant seen through two instruments

In a study of cool red giants, Dencs and colleagues included HD 137704, our HIP 75572, among the stars observed with two one-metre telescopes: the Piskéstető Observatory in Hungary and the SONG telescope at Tenerife's Teide Observatory. The same target appears in their table under its 2MASS position, J15261738+3420095. From the Piskéstető spectrum they fitted an effective temperature of $4,059 \pm 58$ kelvin; the SONG spectrum yielded $3,916 \pm 92$ kelvin. Their radial-velocity estimates were -48.32 ± 0.24 and -48.99 ± 0.05 kilometres per second. These are distinct results from two instruments and analyses, not evidence that the star changed. In a wider sample of twenty-one giants, its light became a careful comparison between observatories, each reading the same distant signature through its own instrument.

There is tenderness in the patience of that listening. A distant light becomes a rhythm, and a rhythm becomes something we can return to. Beneath the star, we may think of the days that resemble one another without ever repeating: each carries its own small variation, yet together they make the long, recognisable music of a shared life.

A life opening out

The word giant speaks of a star that has moved beyond the appearance of its first long stage. Its envelope has expanded and the interior has changed the way it supports itself. We can imagine a life opening its rooms, a light taking up more space while writing a different chapter of its story.

To approach HIP 75572, 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 75572 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 simply: look into a starry sky and let our eyes grow used to darkness. Boötes rises in the evening sky; a clear horizon helps. A wide field is a gentle start if a telescope joins the night. A 114 mm Newtonian with a 500 mm focal length gives 20× with a 25 mm eyepiece. HIP 75572 remains a point of light. Finding it can be its own quiet reward.

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 the star become a small light in an enormous night again. We have followed its spectrum from two observatories and kept both sets of measurements in view. Their differences remind us that careful observation includes the limits of each instrument.

There will be clear nights and others when clouds keep the sky. The record can wait for another reader, another telescope, another season of attention. When Boötes returns above the horizon, HIP 75572 will be there among its lights, ready to be found again.

The traces of this story

ESA Hipparcos / VizieR

https://vizier.cds.unistra.fr/viz-bin/VizieR-5?-source=I/239/hip_main&HIP=75572

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>

SIMBAD / CDS · HIP 75572 = HD 137704 = HR 5741 = 2MASS
J15261738+3420095; coordinates and aliases

<https://simbad.cds.unistra.fr/simbad/sim-id?Ident=HD+137704>

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

Dencs et al. (2024) · PASP 136, 054202 · §§2–4, Tables 1 and 4; direct spectra and fitted parameters for HD 137704

<https://iopscience.iop.org/article/10.1088/1538-3873/ad4177>

ESA Hipparcos catalogue via CDS VizieR · HIP 75572 row; coordinates and magnitude

https://vizier.cds.unistra.fr/viz-bin/asu-tsv?-source=I/239/hip_main&HIP=75572



May there always be a night
to look again.



HIP 75572

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A STORY OF LIGHT