

IWC - Astronomically Complicated

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The Schaffhausen-based brand introduces its most complicated timepiece to date, displaying an exuberant inclination toward astronomical contemplation.

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Elizabeth Doerr

With the brand-new Sidérale Scafusia, it can well be said that [IWC](#) is celebrating the phenomenon of time.

This company generally known for its ultra-reliable pilot-style chronographs yesterday introduced its most complicated timepiece to date. Not only did [IWC](#)'s astute engineering team complete the mechanics within the extraordinary space of ten years, but the company wisely involved a cerebral research professor of astrophysics and cosmology to provide a soul for the mechanically beating - and jumping - heart of this masterpiece.



If the sidereal elements are the Sidérale Scafusia's soul, then its exceptional caged escapement in the form of a tourbillon is certainly its beating heart. © [IWC](#)

Professor Ben Moore is the savant in question. Occupying the same chair at the University of Zürich's Institute for Theoretical Physics that Albert Einstein did in the early 1900s, this modern-day explorer of time and space provided the astronomical knowledge needed to complete the personalized celestial charts found on the backside of the

Sidérale Scafusia. This “soul” side of the watch also includes scales encircling the star charts providing information on the date and year (perpetual calendar), the “star” (sidereal) time that is also shown on the front of the watch within a small subdial fittingly found right at 12 o’clock as well as daylight savings time. Moore brought more to the table than just his tables: he adds a quirky theoretical element that not only explains the *raison d’être* of sidereal time - astronomers need to use it in their work - but also combines the studies of astronomy, cosmology and astrophysics to form very tangible questions that lurk in the back of nearly every human being’s mind: where did we come from and where are we going?

Heart and soul

If the sidereal elements are the Sidérale Scafusia’s soul, then its exceptional caged escapement in the form of a tourbillon is certainly its beating heart. The original premise of this timepiece at its conception in 2001, a brand-new constant force tourbillon dominates the left side of the timepiece’s dial. Its central element is an unusually large 13 mm balance wheel, making it awfully stable, which fits neatly into the 15.8 mm tourbillon cage. The remontoir providing constant force comprises a couple of extra parts, none of which are the usual simple spring found in a remontoir. Here, two bridges, a lever, and an unusual wheel IWC calls the “stop wheel” perform the service.



Mario Klein (left) and Professor Ben Moore explained the mysteries of astronomy and horology to a room full of curious journalists in Schaffhausen yesterday © IWC

Perhaps most eye-catching of all, however, is the jumping - almost deadbeat - motion of the entire cage and its contents, which also move the small second hand attached to the top of the cage’s bridge. This jumping motion is really a “stop and go” because the remontoir takes the escapement and tourbillon out of the direct flow of energy. The energy gets stored up in the remontoir temporarily and is released precisely once a second. This keeps the energy constant and provides the source of the attractive motion of the cage.

Additionally, the constant force tourbillon contains two components that have never been used in this fashion before. Created by Microworks of Germany, which is the commercial outlet of the KIT Forschungszentrum of Karlsruhe, a cam used in the constant force assembly is made of LIGA-processed nickel-cobalt. Perhaps even more impressive, the pallet lever and fork of the escapement is created as one piece in LIGA hard gold.

“We need very precisely manufactured components for this,” said Thomas Gäumann, IWC’s R&D department head for movements. “For this reason we utilize two components created by the x-ray LIGA process, which can be manufactured within tolerances of just a few thousandths of a millimeter.”



IWC product group manager Mario Klein demonstrated the twilight function of the Sidérale Scafusia last night in Schaffhausen © Worldtempus/Elizabeth Doerr

Twilight time

In addition to the time, sidereal time, star chart and perpetual calendar, this timepiece also displays the times of sunrise, sunset, and twilight - the latter an important feature for astronomers, and here depicted by the celestial chart changing color along with the real-time changes happening in the sky. This is accomplished with the use of colored, transparent disks.

A classic IWC Portuguese from the front, it measures a very wearable 46 mm in diameter. Product group manager Mario Klein explained that the case height of 17.5 mm was the deliberate result of bringing the Sidérale Scafusia's balled complication down to a wearable critical mass. A feat of engineering, the Sidérale Scafusia also boasts easy operation of all displays using the crown and two recessed pushers. Hand-wound Caliber 94900 boasts 96 hours (4 days) of power reserve, during the first two of which Klein guarantees constant force.



In relation to a regular collection Portuguese timepiece, it is easy to see that the Sidérale Scafusia remains entirely wearable © Worldtempus/Elizabeth Doerr

At a price of 750,000 Swiss francs, board of director spokesman Hannes Pantli only expects to sell these masterpieces to dedicated collectors, and they will only be completed upon order. Once the connoisseur in question has ordered his or her very own Sidérale Scafusia, he or she can expect to wait a full year to receive it. However, upon receiving it, it will not only be personally handed over by Pantli, but it will also have been customized to the individual wishes of the client, who can choose from more than 200 design options.

With the introduction of the Sidérale Scafusia, [IWC](#) celebrates both its powerful place within the watch industry and life itself. As astrophysicist Moore explains, astronomy has shown that we came from nothing billions of years ago and a billion years from now we will return right to nothing. The Sidérale Scafusia and Moore therefore project one single message: Carpe Diem.

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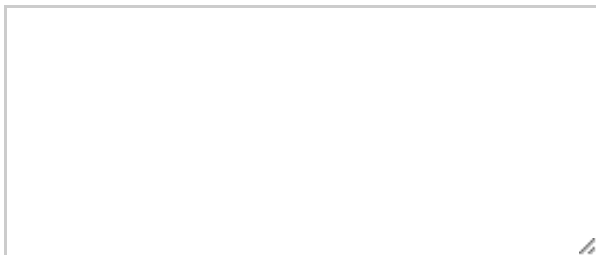
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