



Extrait du Observatoire de Paris - PSL Centre de recherche en astronomie et astrophysique

<https://www.obspm.fr/the-paris-observatory-partner.html>

# The Paris Observatory, partner to the First Light exhibition



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astrophysique

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**The Paris Observatory is a partner to First Light, an exhibition on the frontier of art and science, conceived by the artist Lily Hibberd, on show at the Musée des arts et métiers... An absolute must ; on show till January 31st 2016.**

The Musée des arts et métiers and the Australian artist Lily Hibberd, artist in residence at the Musée over one year, are offering an experience truly off the beaten track of popular science.

Created as part of the UNESCO 2015 International Year of Light, together with the Paris Observatory, the First Light exhibition materializes the vision of an artist faced with a set of objects related to the history of the science of light.

The artist's goal is to find new artistic forms to highlight this history and thereby reveal its hidden face.

According to the artist herself, "First Light is an artistic journey into the origins of the capture of light".

The outcome is an original museographic approach in which the scientific explanations of a collection of historically important scientific objects are intertwined with the intellectual meanderings of an inspired and creative artist producing objects, videos and sound tracks.



**Disparition ou avenir. Huile et pigment photoluminescent sur plexiglas. Eclairé par LED ultra-violet. 100 x 200 cm. © Lily Hibberd**

To achieve this, Lily Hibberd worked with a series of scientists and historians, specialists in photonics, astrophysics and photography, including a number of astronomers from the Paris Observatory.

## Three distinct series

There are three distinct series of works, on show at the museum's Saint-Martin-des-Champs church :

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- Under an ephemeral sun : a set of daguerréotypes and one painting explore the forgotten origins of photography as related to solar astrophysics. This series is enriched with films about the Sun, made in the 1940s by the Paris Observatory astronomer Bernard Lyot (1897-1952), who invented the coronagraph, an instrument which revolutionized the study of the solar corona.
- •clipse [...] diaphane : a two-part installation comprising a short film about the total solar eclipse, filmed on March 20th 2015 on the Faroe Islands, in which the enigmas of light and time are revealed during total eclipses of the Sun. And Paris Observatory physicist Léon Foucault's (1819-1868) 20cm telescope eslescope, which was transported to Spain in order to observe the 18 July 1860 total eclipse.
- Beyond the speed of light : This is a triptych concerning Léon Foucault's experiment to measure the speed of light (1862).
- In the video La chouette de Minerve et moi, (Minerva' owl and I), Foucault explains in a voice-over how he thought of this invention.
- A second video shows for the first time the path followed by photons in a beam of light as in Foucault's original experiment. It was possible to make this film thanks to an innovative technology developed by a team of physicists at (Extreme light, Heriot Watt University, Edinburgh).
- The triptych terminates with a presentation of the original instruments which were used by Léon Foucault for his determination of the speed of light.



**Au-delà de la vitesse de la lumière, 2015. Scénographie provisoire dans la salle de la tour de la chapelle, Musée des arts et métiers. Trilogie des vidéos et des instruments de l'expérience de mesure la vitesse de la lumière (1862) de Léon Foucault. © Lily Hibberd**

Three of these instruments are from the Paris Observatory collection :

- Foucault's rotating mirror turbine,
- the cog wheel mechanism used for the measurement of the speed of light by Foucault in 1862
- the mirrors and their stands used by Foucault. See the exhibition, with explanations by scientists from the Paris Observatory !

-\* The first photograph of the Sun ?

Thursday, November 19th 2015, 19h-20h30, in the Museum church. Reservation unnecessary.

Lily HIBBERD, James LEQUEUX, emeritus astronomer at the Paris Observatory, François BRUNET, Professor of art and literature, Paris Diderot, and Dominique GENTY, creator of daguerreotypes.

\_\_ In 1845, Léon Foucault and Hippolyte Fizeau made the oldest known solar daguerreotype. This plate is conserved in the collections of the Musée des arts et métiers. Lily, astronomy and photography historians, as well as a creator of modern daguerreotypes explore the origins of photography as related to astronomy. The difficulty of making a daguerreotype of the Sun, such as the modern ones shown in the exhibition, will be noted.

-\* Between the Metre and the measurement of the speed of light.

Thursday, December 3rd 2015, 19h-20h30, in the Museum church. Reservation unnecessary.

Lily HIBBERD and Suzanne DÉBARBAT, honorary astronomy at the Paris Observatory.

The purpose of this bicephalic visit is to investigate the scientific evolution of systems of measurement, from the first standard metre to the one, now in use, defined by the speed of light. Simultanément, The Mètre, a bronze sculpture made by Lily Hibberd, gives a philosophic tone to contemporary discussions about the relativity of measurement systems.

## Videos

La chouette de Minerve et moi.

Light in Flight