



ARTAGoN

&



ART EXPLORA

PRODUCTION
RESIDENCY
AND EXHIBITION

Hangar Y (Meudon – Grand Paris, France)
European call for projects

20/04 → 05/06/2022

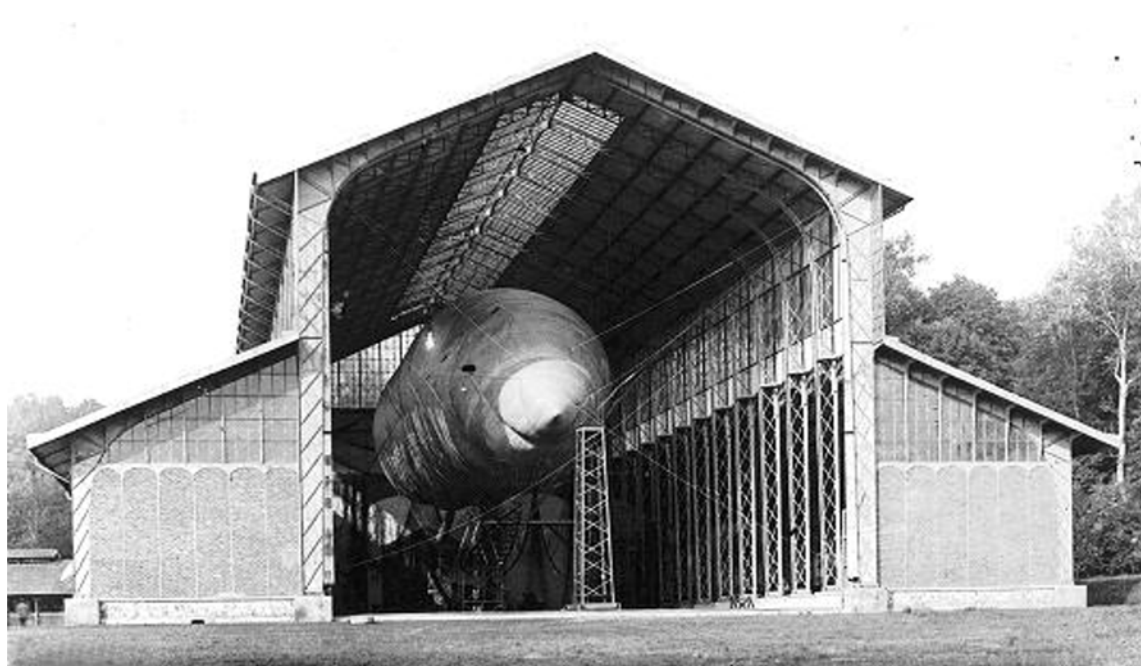
CONTENTS

CALL FOR PROJECTS

PRESENTATION	3
RESIDENCY	4
SELECTION PROCESS	5
HOW TO APPLY?	6
TIMELINE	6
ABOUT ART EXPLORA AND ARTAGON	7

APPENDICES

APPENDIX 1 — Vues du Hangar Y	9
APPENDIX 2 — Vues du parc et de l'étang	10
APPENDIX 3 — Vues du projet de transformation	11
APPENDIX 4 — Materials from the Hangar Y site	13
APPENDIX 5 — History of the Hangar Y	14
APPENDIX 6 — Historical panorama of the city of Meudon	19
APPENDIX 7 — Local institutions and actors	25



View of the Hangar Y before it was decommissioned | © DR

PRESENTATION

Art Explora and Artagon are joining forces to invite 10 European young artists to participate in a production residency during the transformation of the Hangar Y into a cultural centre. The works produced during the residency will be exhibited there as part of a restitution between 2022 and 2023.

As the world's first airship hangar, the Hangar Y is a key heritage site for the history of aeronautics. Created one year after the *Exposition universelle* (Paris World's Fair) of 1889 within a ten-hectare park, it is a building of extraordinary dimensions, typical of the 19th century industrial architecture. It will become in 2023 a new cultural centre, led by the Art Explora Foundation, with local, national, and international reach. The programming will be dedicated to contemporary arts, and will focus particularly on scientific issues, technological innovation as well as social and environmental challenges.

The theme of this residency project is exploration, whether it be scientific, aeronautical, spatial, technological or environmental, in order to echo both the history of the Hangar Y and the commitments of Art Explora. The artists will be able to collaborate – depending on their projects – with local associations and inhabitants and will be invited to follow a logic of upcycling, reusing as many elements from the Hangar Y site as possible for the production or presentation of their works.

Organisation

The residency will be organised in three stages, throughout the transformation of the Hangar Y:

1. End of July 2022: the 10 selected artists will be invited a first time to Meudon for an time of immersion of approximately 3 days in order to get familiar with the location and meet the ecosystem surrounding the Hangar Y: scientists, researchers, associations, representatives of the city of Meudon.

2. September 2022: a second residency period of approximately one week will allow the artists to produce and finalise their works on site, depending on the specifics of their project.

3. Autumn 2022 or spring 2023 (exact date to be determined) : presentation of the projects to the public, as part of the Hangar Y prefiguration programme. The artists' projects may be installed either outdoors, in the Hangar Y park, or indoors in a space specially designed for the occasion.

Location

The Hangar Y was built in 1879 from the metal gantries of the secondary galleries of the *Galerie des machines*, created for the *Exposition universelle* of 1889. Being the world's first airship hangar, it is an essential heritage site for the history of aeronautics as well as an emblematic landmark for the city of Meudon, located in the Paris metropolitan area.

In 1884, the airship "La France" performed the world's first closed-circuit flight there. The park where the Hangar Y is located and its three-hectare pond are part of the historical perspective designed as an extension of the former Château de Meudon at the end of the 17th century by Le Nôtre, gardener to King Louis XIV, who notably designed the gardens of the Château de Versailles. Classified as a historic monument in 2000, the Hangar Y is a token of the art of metal carpentry. It marked a decisive turning point in industrial architecture at the end of the 19th century, showcasing wide glass roofs, a central nave and metal beams. More generally, the Hangar Y symbolises a pioneering spirit of discovery, inviting people to push back limits and explore new territories.

A detailed presentation of the history of the Hangar Y and the city of Meudon, as well as visual documentation are attached to this call for projects.

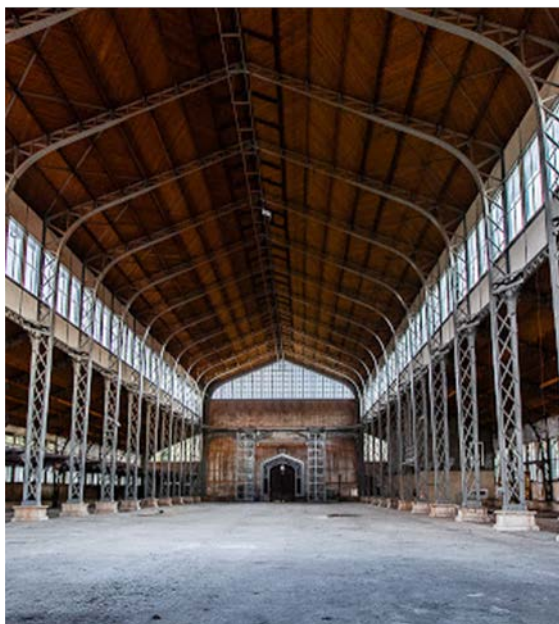
RESIDENCY

Dedicated to artists who graduated from art schools in 2020 and 2021, the residency aims at supporting the conception and production of artistic projects linked to the subject of exploration.

Candidates profile

This call for projects is open to all young artists (visual arts, photography, video, performance, etc.) who have graduated in 2020 or in 2021 from a French or European (continental Europe) higher art school with a master's or post-graduate degree and whose work may fall within the theme of exploration in a broad sense (scientific, aeronautical, spatial, technological, philosophical, societal, etc.).

By choosing to give priority to the art schools graduates of 2020 and 2021 for this residency, Art Explora and Artagon wish to support a generation of young European artists who have been particularly affected by the health crisis, as they did not benefit from the same professional opportunities as the others after their graduation, and started their artistic activity in a particularly difficult context.



Current view of the Hangar Y, before the transformation work | © DR

Arrangements

Each selected artist will benefit from:

- ★ A production grant of €2,000 delivered on the basis of supporting documents, depending on the specificities of the project.
- ★ An artistic fee of €500 (exhibition fee not included).
- ★ Accommodation during both periods of residency, in Summer and in Autumn.
- ★ The possibility to work in the immediate vicinity of the Hangar Y during the production residency, according to each project's specificities.
- ★ Coverage of travel expenses.
- ★ A *per diem* of €20 per day of residency for living expenses.

Art Explora and Artagon will be able to put the artists in contact with local actors, depending on their projects.

All applicant are encouraged to adopt a logic of re-use, integrating and reusing as many elements as possible from the current Hangar Y site for the production or exhibition of their projects (*see Appendix 2 for the list of available materials*).

SELECTION PROCESS

Applications will be examined according to precise criteria by a selection committee, consisting of qualified personalities from the art world and local representatives, in order to choose the 10 participating artists.

Selection criteria

1. Originality and artistic quality of the proposal. the candidate must present a singular and original artistic project, as well as a level of reflection and achievement demonstrating in-depth research.

2. Relevance and coherence of the proposal. the proposal must resonate with the history of Hangar Y and the more general theme of exploration, in accordance with the main themes developed by Art Explora, in particular the intersection between the arts, science and society.

3. Social commitment. projects that integrate the key issues that drive society (such as the ecological transition, new technologies, inclusion, social dialogue, etc). ., as well as projects with a participatory dimension, designed in dialogue with different actors in society (such as researchers, thinkers, scientists, educational, extracurricular and social structures, social economy companies, manufacturers, craftsmen, etc.), will be particularly appreciated. Finally, candidates are invited to make the most of the materials from the Hangar Y transformation site.

4. Formal presentation. The clearer, better designed and written application files will naturally attract the attention of the jury more easily.

Jury

A jury will be responsible for selecting the 10 participating artists among the candidates. It will consist of the following personalities:

- ★ Rebecca Lamarche-Vadel, Director of Lafayette Anticipations, Paris
- ★ Daniela Zyman, Artistic Director of TBA21, Vienna
- ★ SMITH, Artist
- ★ Denis Larghero, Mayor of Meudon
- ★ Jean-Philippe Régnault, Member of Star's Up Festival, Meudon
- ★ Blanche de Lestrang, Artistic Director of Art Explora
- ★ Anna Labouze & Keimis Henni, Founding Directors of Artagon



Current view of the Hangar Y,
before the transformation work | © DR

HOW TO APPLY?

Online application

Applicants must submit their application online before the 5th of June on the dedicated platform accessible by clicking on this link:

**ACCESS TO THE ONLINE
APPLICATION PLATFORM**

They will be invited to create a user account, then to fill in the questionnaire that makes up the application and to download the additional documents detailed on the right.

No email applications will be accepted. Incomplete applications will not be considered.

Requests for further details of additional information should be sent by email to artagon@artagon.org before Thursday 2 June at 6pm.

Additional documents

In addition to the questionnaire, candidates should prepare and upload the following documents to the platform:

- ★ A note of intent in PDF format (maximum 2 pages) explaining the proposed project. It may be accompanied by visuals, sketches, models, photographs, videos, links or any other document allowing a good understanding of the project.
- ★ A provisional production budget of €2,000 maximum.
- ★ An up-to-date portfolio in PDF format (maximum 30 pages).
- ★ An up-to-date resume in PDF format (one A4 portrait or landscape page maximum).
- ★ A copy of the diploma received in 2020 or 2021 or a certificate from the school certifying its issue.

TIMELINE

- ★ 20 April 2022: Opening of the call for projects. .
- ★ 5 June at 23h59: Closing of the call for projects.
- ★ 30 May-30 June: Reviewing of applications and deliberations.
- ★ From 30 June: Announcement of the participating artists..
- ★ Last week of July: Immersion residency in Meudon and meeting with local actors.
- ★ 12-25 September 2022: Production residency at the Hangar Y in Meudon for about 15 days.
- ★ Between 2022 and 2023: exhibition as part of the prefiguration programme for the opening of the Hangar Y.

ABOUT

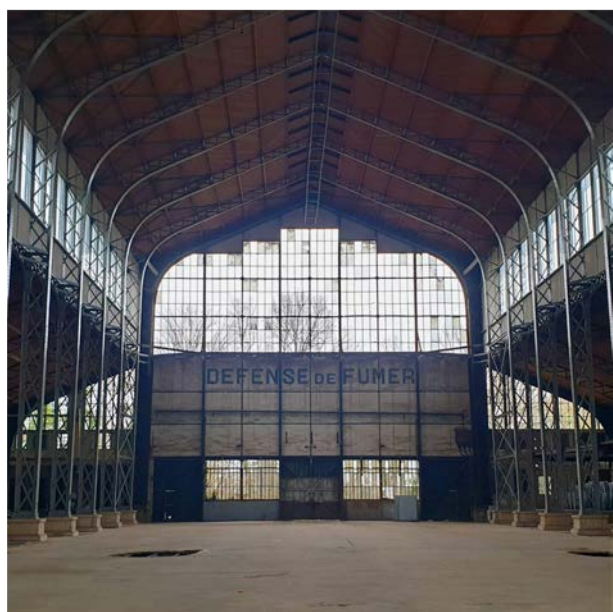
ART EXPLORA

Convinced that culture is a tool for dialogue and social cohesion, the Art Explora Foundation is committed, through all the projects it undertakes, to reducing cultural divides by promoting access to the arts and culture for as many people as possible.

In order to carry out this mission of general interest, the foundation defends several projects such as creating a digital platform for discovering the arts and art history that is aimed at the widest possible audience; Setting up in a historical exhibition site with a magnificent park where the links between art, science and nature will be highlighted; Offering itinerant devices such as the MuMo, a mobile museum in collaboration with the Centre Pompidou, or the sailing boat ArtExplorer designed as a floating museum, to meet people from all continents of the globe.

Art Explora was created by Frédéric Jousset, a French entrepreneur and great patron of culture.

artexplora.org



Current view of the Hangar Y, before the transformation work | © DR

ARTAGON

Artagon is a non-profit organisation founded in 2014, dedicated to the support, promotion and guidance of emerging creation and cultures.

Throughout the year, it offers a wide range of programmes - exhibitions, events, production support, grants, training, meetings, support, documentation, creation and management of venues - aimed at art students, young artists and cultural professionals at the beginning of their career.

Based on the vision that art and culture play a key role in the development of an innovative, more inclusive and caring society, and that emerging creation contributes to reinventing and enchanting the world, Artagon leads and provides guidances to projects in collaboration with numerous public and private actors, particularly in the economic, social and educational fields.

Artagon promotes an inclusive, accessible and popular vision of contemporary creation, and acts in favour of the discovery of art by a wide range of audiences.

Artagon was founded and is led by artistic directors and curators Anna Labouze & Keimis Henni.

artagon.org

Facebook – Instagram: @artagonofficiel

APPENDICES

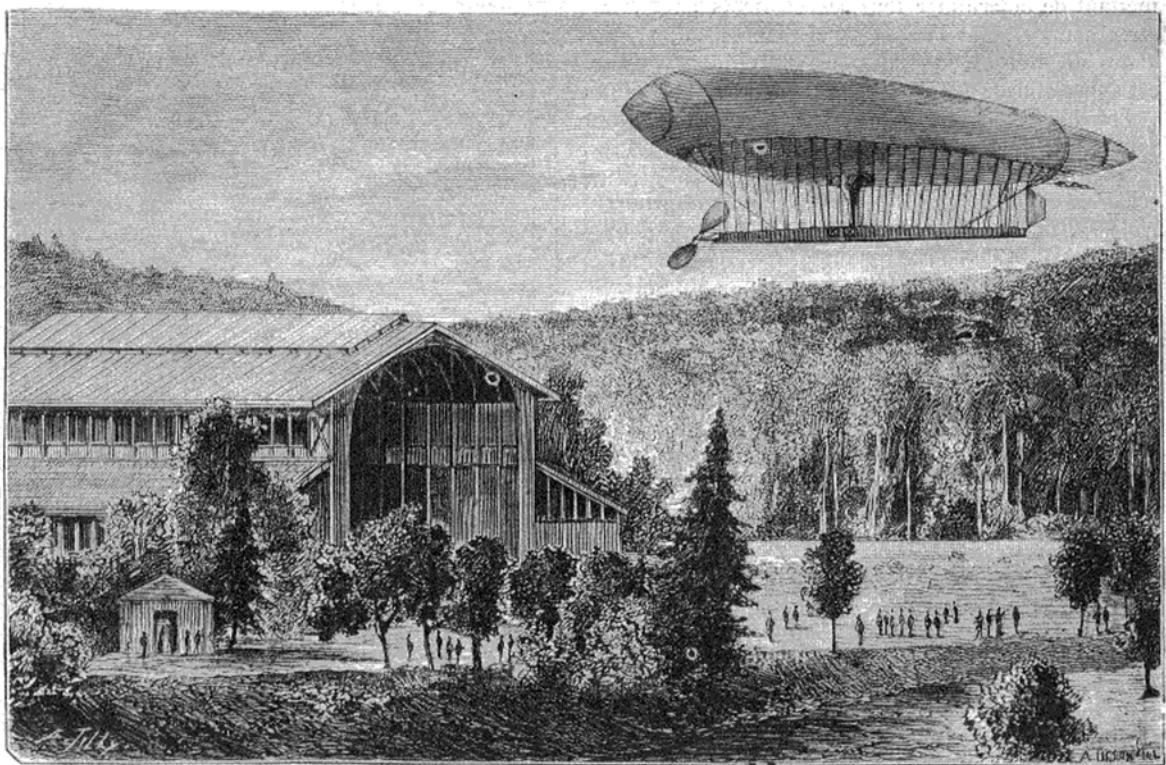


Fig. 1.— L'aérostat dirigeable électrique de MM. Ch. Renard et A. Krebs, au-dessus de l'usine aéronautique militaire de Chalais, Meudon.
D'après l'esquisse d'un témoin oculaire de l'expérience du 9 août 1884.

APPENDIX 1

VIEWS OF THE HANGAR Y



APPENDIX 2 VIEWS OF THE PARK AND POND



APPENDIX 3 VIEWS OF THE TRANSFORMATION PROJECT





APPENDIX 4

MATERIALS FROM THE HANGAR Y SITE

Indicative list, subject to modifications according to the construction progress:

- Wooden beams
- Wooden slats (see visual)
- IPN steel beams
- Scaffolding (see visual)
- Window glass tiles
- Rubble
- Sheet metal
- Lampposts (see visual)
- Cables
- Airship nose cone (see visual)

Each material, apart from the scaffolding and the airship nose cone, is available in very large quantities.



APPENDIX 5

HISTORY OF THE HANGAR Y

Introduction

Populated since Neolithic times, Meudon was a hunting reserve in the Middle Ages before becoming a royal estate in the 15th century. It was inhabited by Anne de Pisseleu (mistress of François I), Ambroise Paré (the King's surgeon), François Rabelais (parish priest of Saint-Martin in the 16th century), Charles de Guise, Nicolas Poussin, Louis XIV, Saint-Simon, Stanislas I (King of Poland), Madame de Pompadour, the scientist Marie-Geneviève-Charlotte Thiroux d'Arconville, Louis XVI and Marie-Antoinette.

After the French Revolution, the Comité de Salut Public established the first military balloon companies created by Nicolas Conté and Joseph Coutelle. In the 19th century, Meudon saw the passage of notable figures such as Napoleon, Richard Wagner (who wrote *The Flying Dutchman* there), Manet, the French chemist and politician Marcellin Berthelot, and Auguste Rodin (who set up his studio there). In the 20th century, Isadora Duncan founded a dance school in Meudon; the Russian poet Marina Tsvetaeva settled there, as did the Van Doesburg couple, Hans Arp and Sophie Taeuber.

The Hangar Y: A witness to the development of aeronautics

- **1782:** the **Montgolfier brothers** had the idea to use the smoke from a fire to overcome gravity. They developed the first balloon, called a hot-air balloon, by using hot air to inflate a paper sphere (they were trained papermakers). They subsequently achieved **the first uninhabited flight** and became the inventors of hot-air balloons. This is the origin of the invention of the balloon.
- **1783:** Pilâtre de Rozier and the Marquis of Arlandes achieved the **first manned flight**. The problem was that the balloon remained uncontrollable against the winds. The balloonists therefore tried to control and steer it as early as 1784 [first "dirigible balloon" in 1884]. The spherical shape of the balloon was reviewed, and elongated shapes were preferred from then on.
- **1793:** The **Committee of Public Safety, convinced of the interest of observation balloons, ordered the construction of a new balloon** that would be "easily usable in battle and capable of carrying two observers". A group of the best scientists of the time, Coutelle and Conté, was charged with carrying out this work in the former royal domain of Meudon, transformed, for the occasion, into an entrenched camp. Conté was appointed to take charge of operations at the Château de Meudon, which thus became a centre for the manufacturing of aerostats and the training of pilots. In four months, the **first military aerostat, l'Entreprenant, was built** (with a silk envelope covered with varnish, a capacity of 523 m³, and a nacelle to carry two officers). Conté left traces of the different phases of the construction of this balloon in an album of magnificent watercolours.
- **1794:** Shortly after their invention, in 1783, **balloons were used by revolutionary armies for observation (Battle of Fleurus)**. Various military organisations were set up for the use or the manufacturing of this new device.
 - On 2 April 1794, **the first aerostat company was created**, placed under the command of Coutelle, and a second company was created on June 23rd of the same year, in the wake of successful ascensions.
 - In order to rapidly train the men needed to serve in these new aerostats, the Public Safety Committee planned their training. On 31 October 1794, the **École Nationale d'Aérostation** was established in Meudon, under the direction of Nicolas Conté.
 - The construction of observation balloons was carried on in Meudon: After the *Entreprenant*, there would be the *Vétéran*, the *Précurseur*, the *Svelte*, the *Télémaque*, the *Hercule*, the *Intrépide*. All were spherical balloons measuring more than 10 metres in diameter.

- **1795: Artillery laboratory.** The first companies of military balloonists were created by Nicolas Conté and Joseph Coutelle during the Revolution wars.
- **1798:** At the insistence of Conté and Coutelle, **General Bonaparte sent a company of balloonists to Egypt.** Alas, all the equipment disappeared when the ship "le Patriote" was sunk by the British in Aboukir.
- **1799:** On the return from the campaign, **the two companies were definitively suppressed** on January 28th.
- **1852:** Henri Giffard invented the **steam-powered aircraft:** He covered a distance of 27 kilometres while controlling his aircraft. The feat was applauded but he was still unable to counter the effects of the wind. Despite this unprecedented performance, Henri Giffard's aircraft was not recognised as a dirigible.
- **1870:** During the **siege of Paris**, the Minister of the Interior, **Léon Gambetta, was able to escape the blockade and joined the Loire army using a balloon.** The War of 1870 and the siege of Paris put ballooning back in the spotlight. Free-flying balloons were used to ensure communications between besieged Paris and the provinces.
- **1877:** The army decided to create the **Military Aerostatic Establishment in the park of Chalais-Meudon.** Gambetta, who had appreciated balloons during his escape from Paris, created a commission for "air communications" and **Colonel Charles Renard** was assigned there and put in charge of military aerostation. He set up his research centre in Chalais-Meudon in 1877, and became director of this Central Establishment of the Military Aerostation with the aim of creating a corps of aerostiers. It is the **first experimental aerostation laboratory in the world.** But there was a need for a building big enough to store the different balloons studied.
- **1878:** The ***Exposition Universelle*** (the third Paris World's Fair) took place in Paris. B Krantz, general commissioner of the 1878 ***Exposition Universelle*** in Paris, **appointed Henri de Dion as head of all metal constructions** for this exhibition. De Dion, whose pupil was Gustave Eiffel, supervised the construction of the Grande Galerie des Machines. Its construction was entrusted to the Moisant-Laurent-Savey company. But De Dion died before the work was completed and did not see it completed. Henri de Dion's Machine Gallery, built on the Champ de Mars, was intended to display agricultural equipment. Unlike the Eiffel Tower, the **Galerie des Machines was completely dismantled** and the metal frames that made it up were reused in several places - the two most emblematic of which are the Jean Jaurès Gymnasium in Paris and the Hangar Y in Meudon. It was a symbol of the industrial architecture of the 19th century (the first self-supporting bent with no tie rod).
- **1879:** creation of the **Hangar Y** in Meudon :
 - Site's origin: the huge hangar was **built from the metal gantries of the secondary galleries of the Galerie des machines of the 1878 Exposition Universelle**, installed at the Champ de Mars. Indeed, Charles Renard was seduced by the volumes of this immense gallery and decided to transfer it to Meudon to serve as a hangar for balloons and airships, the first in the world. The gable wall on the south façade thus takes up the elements of the Grande Galerie des Machines from the Exposition of the Champ de Mars. Originally, the north side was open to allow balloons and airships to pass through.
To adapt it to its new functions, the structure was raised. The height of the vertical walls was raised to 18 metres. Two galleries were added on both sides. The architecture is reminiscent of Gothic churches, with the side trusses avoiding the buckling of the central trusses.
 - Name's origin: The old maps of Meudon had annotated it "Y", Y being the mark of the military, who had designated by a letter each of the buildings of their aeronautical research and construction centre; this new hangar was **designated on the ground plan by the letter Y.**

- How it worked: Initially, the Hangar Y was used to improve existing balloons. Tethered balloon parks were created. They consisted of horse-drawn rolling stock for use in the field, with steam winches. The Hangar Y was then used for the **construction of airships**. Colonel Charles Renard resumed work on airships, taking inspiration from the balloons of Giffard, Dupuy de Lôme and the Tissandier brothers. Renard drew the plans for a new airship and teamed up with an engineer, Captain Krebs, who developed a light and powerful electric motor (8hp), allowing the airship to go upwind. In the nearest buildings, including the "Z building - hydrogen devices", the gases needed to inflate the balloons were produced.
A testimony to the art of metal carpentry: **This hangar marked a decisive turning point in the metal architecture of the late 19th century**. It was at this time that De Dion invented the two-part latticework truss for a ship's hull vault, a technique later taken up by Eiffel. Its open volume up to the ridge was of interest for aerostatic use.
- **1884: Airship "La France" and the world's first closed-circuit flight**, over the Villacoublay plateau → On 9 August 1884, Charles Renard and Arthur Krebs took off in the airship "La France" and made the world's first closed-circuit flight. Leaving from Chalais, they turned over Villacoublay and landed at the exact place of their departure after 7.6 km and a 23-minute flight. It was a total success! The exact description of the August 9 adventure was published the very next day in the *Moniteur Universel*. Here is how this journey was told in this newspaper: *"Yesterday Saturday, 9th August 1884, an aerostat in the shape of a very elongated cigar, equipped with a propeller and a rudder and set in motion by a mysterious engine, of a surprising power, considering its lightness, rose majestically from the aerostation workshops of Meudon. The aeronauts needed great audacity and a prodigious confidence in their aircraft... Finally, after twenty-five minutes of travel, it reached exactly its starting point and descended, after a series of skilful manoeuvres, into the very lawn from which it had risen... the air road is open"*.
- **1895: Another more important airship, the "General Meusnier", replaced "la France" in the Hangar Y.** But it would never fly. The Hangar then housed the famous **Lebaudy IV airship** for training purposes. This airship was dismantled in 1912.
- **1902: The centre of Chalais-Meudon was not only dedicated to aerostation, it participated in the efforts that contributed to the birth of aviation.** In 1902, Archdeacon built a copy of the Wright brothers' N°3 glider, but with limited success and thus remained sceptical about their exploits despite the published reports. In 1903, he had a glider built in Chalais-Meudon on the Chanute model. On 15 August 1902, the engineer Léon Levavasseur signed an agreement with Colonel Charles Renard, head of the Chalais-Meudon military aeronautical centre, concerning the development of an aviation engine.
On 28 August 1902, **Levavasseur filed the patent for the engine, a revolutionary 90° V8 engine** supposed to develop 80 bhp and weight only 100 kg. The army advanced 20,000 francs for its realization. Things went wrong when the army learned that Levavasseur had undertaken the construction of a flying machine. The engine was completed at the end of spring 1903. Tested at Chalais-Meudon, it developed only 63 hp and weighed 180 kg. The engineer was asked to review his copy.
- **1904: However, Ferber's experiments with aeroplanes** (revealed in his article on the progress of aviation published in the *Revue d'Artillerie*) attracted the attention of Charles Renard, who offered him a job at the Chalais-Meudon military aerostation park. **Ferber agreed to settle in the Hangar Y** and carried on with his research under good conditions and with the help of the State. Detached from the Artillery to the Engineers, he returned to his post on 9 May 1904. It was, for him, a kind of official recognition; He could then devote himself entirely to his work on the heavier-than-air craft. At Chalais-Meudon, he imagined a new launching solution. He had pylons built forming a 33% inclined plane that supported a 40-metre long cable. This inclination enabled an initial speed of 10 metres per second to be achieved at the end of the cable when the aircraft was released.

- **1905:** On 27th May 1905, **Ferber completed his first motorised run with his n°6 bis aeroplane** at Chalais-Meudon. It was the first motorised, stable and controlled glide flight in Europe. The slope of the trajectory was reduced by almost a half and was then only 12%. For Ferber it was a great satisfaction but it was only a first step. He then ordered from Léon Levavasseur a 24 hp engine, that needed not to exceed 100 kg in order to equip his n°8 airplane. Ferber joined the Antoinette Company in July and left Chalais-Meudon with the assurance that he would be able to return to test his N°8 as soon as it would be ready. The N°8, still waiting for its engine, was taken out of the hangar (in order to house the airship "La Patrie") by the aeronautical engineers of Chalais-Meudon and was left outside. On 19 November a storm destroyed it, and the machine could not be repaired.
- **1910:** Chalais-Meudon was also part of the **beginnings of French military aeronautics**. In April 1910, the laboratory bought about twenty aeroplanes and oversaw the training of the first military pilot students. The use of wind tunnels and the tests carried out by the military at Chalais-Meudon made it possible to develop wooden two-bladed wings that could be used on airplanes. In 1910, the propeller industry supplied the army with reliable, standardised products at an affordable price. Whereas a propeller cost more than 1,500 francs in 1908, a two-bladed Chauvière-type propeller cost only 600 francs in 1913. The products imagined by the propeller makers were ruthlessly tested in the wind tunnel. Several test bench systems were available. Colonel Dorand at the military aeronautical park of Chalais-Meudon used a mobile railcar to measure the traction of a real propeller. Recorders measured the traction force, the speed of the wagon, the propeller rotation speed and the power absorbed.
- **1916:** On 28 February 1916, **the Technical Section of Aeronautics (STAé) was created**. It was entrusted to Dorand, then head of the Chalais-Meudon aeronautical laboratory. **Marcel Dassault's** contribution to French aeronautics began during the First World War. It was at the Chalais-Meudon aeronautical laboratory that he put his engineering talent to work for France, creating a propeller called Éclair (1916) and a two-seater fighter jet, the SEAé (1918) in collaboration with Henry Potez and Louis Coroller. On 11 January 1918, Major Caquot replaced Colonel Dorand.
- **1914-1918:** The Hangar Y was used as a balloon workshop. During the First World War, **aerostatic equipment and tethered observation balloons** for the armies at the front had to be built quickly. During the war, nearly 4,200 tethered balloons were built: 1,700 observation balloons and 2,500 barrage balloons. In 1915, a special hangar was built to house the workshop for manufacturing wicker nacelles. Steam winches, hydrogen generators, nacelles, etc. were also manufactured in Chalais-Meudon. In the War Diaries of Félix Peaucou, a former balloonist in the centre of Chalais-Meudon, we can read that: *"What did we have as captive military balloons in 1914? Spherical balloons, of an old model.... A second balloon system had indeed been timidly designed as a small model and was being tested as a meteorological device. It was the so-called "Drachen" kite balloon. But none of them was big enough to carry men.*" At the end of 1914, the "Drachen" balloon began to replace the spherical balloon in many companies. In 1916, the drachens balloons disappeared completely to make way for the so-called "captive-extended balloons", designed by the engineer Caquot. In 1914, Albert Caquot, an aeronautical lieutenant, produced a tapered tethered balloon equipped with rear stabilisers, capable of withstanding winds of up to 90 km/hour. Also known as a "sausage", this balloon placed France at the forefront of nations in the field of aerial observation. During the Great War, the aerostatic workshop at Chalais-Meudon manufactured "Caquot balloons" for all the allied armies. During the Occupation, Chalais-Meudon continued to be a **research centre**: German technicians carried out engine tests there and studied the sails at low speeds. Models of delta wing aircraft that they tested there were even found after the liberation.
- **1919:** After the Great War, Albert Caquot, Head of the Aeronautical Technical Service, proposes to the Minister of War the **creation of an Aeronautical Conservatory**. The first elements of the collections were gathered in a hangar in Issy-les-Moulineaux, built by the Voisin companies. The first *"Collections de l'Aéronautique"* were presented to the public, but the flooding of the Seine at that time was a real threat to the material exhibited in this hangar. The collections were moved "temporarily" to Chalais-Meudon.

- **1921:** Abandoned after the war, the hangars in Meudon were used **to house the collections of the Musée de l'Air et des Transports** (see 1921, inauguration of the exhibition hall). The new Aviation Museum was housed in the hangar that was used to make the wicker nacelles for the Caquot Observation Balloons and not in Hangar Y. Visitors could see a rich collection of aerostation and aviation equipment and a large number of engines that marked the beginnings of aviation and survived the 1914-1918 war. This temporary exhibition lasted more than fifty years. It is to the first curators, Captain Hirschauer and Charles Dollfus, that the current Musée de l'Air du Bourget owes its wealth. The collections continued to grow ever since, until it became so overcrowded that it was decided to move the museum elsewhere.
- **1927:** The renowned aeronaut Charles Dollfus took over the Museum.
- **1929:** After the war, in Chalais-Meudon, Albert Caquot launched the **construction of a giant wind tunnel** (measuring 120 metres long and 25 metres high) in 1929 to test an aircraft with a 12-metre wingspan, with the engine running and a pilot on board.
- **1934: Inauguration of the wind tunnel** for testing full-scale aircraft in 180 km/h winds. The wind tunnel was designed by the chief aeronautical engineer Antonin Lapresle and the construction was carried out by Gaston Le Marec. Before the Second World War, it was one of the largest in the world (at the time of its inauguration, there were only two other wind tunnels as large, in the United States and the U.S.S.R.). It was used to test the Mirage III, the Caravelle and the Concorde. It resumed service after 1945 but became obsolete in the 1970s. It was classified as a historic monument in 2000.
- **1935: The Chalais Meudon site closed its doors** to allow the transfer of the collections to its new location on Boulevard Victor in Paris. The latter was closed by the Germans during the Second World War, and at the end of the war the collections were repatriated to Chalais Meudon. For several decades, however, the museum suffered from a lack of space to display all its collections in good conditions. The choice to relocate then fell on the new Le Bourget airport. For the duration of the work, spread over ten years, the collections relating to the beginnings of aerostation and aviation remained in Meudon.
- **1964: Marc Chagall** used the Hangar Y to assemble the red and gold vault of the Opéra Garnier auditorium.
- **1973:** The museum moved progressively from Chalais-Meudon to Le Bourget airport. In 1975, the first exhibition hall of the *Musée de l'Air* at Le Bourget opened to the public.
- **1981:** The hangars of Chalais-Meudon were open to the public until 1981.
- **1982:** The Hangar Y was listed in the Supplementary Inventory of the Historic Monuments.
- **2000: The Hangar Y was classified as a historical monument.** It is the oldest historical monument in the world in the field of aerostation.
- **2002: The Voliris 900 piloted airship was assembled.** The Hangar Y's last contribution to the conquest of the air dates back to June 2002, with the assembly and inflation of the first piloted airship authorized to fly in France: the Voliris 900. On June 26th, the Voliris company presented its first airship Voliris 900 in front of more than 300 guests. At the beginning of July, the airship was dismantled and taken to a base in the provinces to carry out its first test flight. The Voliris 900 is a professional aircraft, designed for commercial, scientific or sporting operations.

APPENDIX 6

HISTORICAL PANORAMA OF THE CITY OF MEUDON

Prehistory and Antiquity

- Archaeological sites prove that **Meudon has been populated since Neolithic periods**: Fossil bones, found in the chalk quarries of Montalets, testify to an animal presence on the land of Meudon 55 million years ago. Some megaliths are still visible on the Observatory terrace and in the woods.
- The Gauls called this place *Mole-Dum*, the Romans called it *Moldunum* ("**harvester's fort**"). On the etymology of Meudon: *"There are few places, I believe, whose Latin or Latinized name has undergone more changes than that of Meudon. In all the works that mention this village, it is indifferently called Metiosedum, Moldunum, Meodum, Modunum, Meudun, Campum meudoninse. (...) According to Bullet, Moldunum would be made up of two Celtic words: moel mol, peeled; dun, mountain; the ending um has obviously been latinised. (...) But if we have no definite period for Meudon, adds this author, it is also true to say that we cannot give its etymology in full; it is certain that the end of the word coming from dun, a Celtic term, alludes to the correlative depth of the castle and the village. In Anglo-Saxon, English and Flemish, soft and mul mean sand, dust; it is the closest we can get to it. Let us add to this that the hills of Meudon are indeed crowned by powerful sand deposits, from which one could perhaps infer that **Meudon means hill of sand.**" »*

Middle Ages (approx. 1200 AD-1500 AD)

- The Chalais valley, situated between Paris and Versailles, was a **hunting reserve**.
- The oldest known lord of Meudon was the knight Erkenbold, in 1180.
- Since the 12th century, there was an abbey, the **Abbey of Saint-Germain**. In 1235, Simon, abbot of Saint Germain, bought back the tithes of wheat and wine from the territory of Meudon which Etienne de Meudon benefited from. The abbey then continued to buy other lands in Meudon.
- Importance of the **de Meudon family**, family of the very old French nobility which died out with Marguerite de Meudon at the beginning of the 15th century:
 - o Robert de Meudon was panetier of King Philip the Fair, i.e. one of the great officers of the court of the King of France, as well as head of the great pantry, i.e. of the service of mouth including stewards, vegetable gardeners, squires and kitchen children. He was also concierge of Saint-Germain-en-Laye.
 - o Henri de Meudon and Jean de Meudon were two masters of the king's venery (=hunting) in the years 1313 and 1315. They were also Master Investigators of the Waters and Forests of France (in charge of forestry organisation). Jean de Meudon was also Canon de Noyon. In 1334 he was delegated by Jean XXII with the abbot of Sainte-Geneviève to force the nuns of Longchamp to admit certain nuns among them.
 - o Marguerite de Meudon represents the end of the dynasty. The de Meudon family sold their land to the abbey of Saint-Germain.
- **1426: The fiefdom of Meudon was bought by William Sanguin**, valet to Charles VII and treasurer of the Duke of Burgundy. It seems that he had a manor house rebuilt instead of the old castle. On his death, his son Jean Sanguin inherited the lordship from his father and then bequeathed it in turn to his son, Antoine Sanguin.

16th century

- **1520:** **Cardinal Antoine Sanguin** had a square one-storey brick and stone main building built in place of the manor house, with attics ornate with dormer windows.
- **1527:** He **donated the castle to his niece Anne de Pisseleu**, mistress of François I. She stayed there until 1552.
- **1550:** Ambroise Paré, the King's surgeon, bought the house of his in-laws in Meudon.
- **1551:** The **Saint-Martin's parish was attributed to François Rabelais**. He therefore became parish priest of the Church of Saint-Martin of Meudon between 1551 and 1553. However, he was able to receive the benefits of his parish without staying there permanently, so that there is no effective proof of his presence in Meudon [During the French Revolution, the commune provisionally bore the name Rabelais]. It was there that, after completing his novel *Pantagruel*, he died on 9 April 1553.
- **1552:** After the death of François I (1547), **Anne de Pisseleu, then in disgrace, had to sell the estate** of Meudon for an annual annuity of 3,000 pounds **to the cardinal of Lorraine, Charles de Guise**. He then transformed his residence, taking his inspiration from Italian models, which he had discovered during his travels to Rome (he took an active part in the Council of Trent). Terraced gardens and an orangery were created around small buildings including a small fantasy palace dedicated to nymphs and muses. **Based on drawings by Primatice, he had "The Grotto" built:** A group of pavilions decorated with fountains. This grotto was an immediate success and was praised by Pierre de Ronsard in the *Chant pastoral sur les noces de Mgr Charles, duc de Lorraine and Madame Claude, fille II du roy*. In 1568, Giorgio Vasari became enthusiastic about the Grotto, whose echo had spread as far as Italy: "*In Meudon, for the Cardinal of Lorraine, Primatice carried out numerous decorations in his great palace called La Grotte, of such an extraordinary scale that it is reminiscent of the ancient baths, due to the infinite number and grandeur of its galleries, staircases, public and private flats*".
- **1574:** **The castle fell to Henri de Lorraine, Duke of Guise**, then to his children. It was looted during the wars of religion.

17th century

- **1618:** **The Duke of Lorraine** commissioned his architect, Gabriel Soullignac, to modify the castle and extend the gardens.
- **1641:** In April, Nicolas Poussin came to visit the castle, attracted by the famous Primatice decorations.
- **1648-1653:** The estate was being **plundered again under the Fronde**, since the Lorrain princes, the owners of Meudon, had sided with the rebellion against the royal authority. Thus, as early as 1649, the Grand Condé, at the head of the royal army, seized Charenton, Saint-Denis, Saint-Cloud and Meudon.
- **1654:** **The de Guise family sold their estate, in poor condition, to Abel Servien**, Louis XIV's Superintendent of Finances. He had the terrace built and undertook the afforestation of what would become the forest of Meudon. He had major **embellishment work carried out by the architect Louis Le Vau** (architect of the Château de Vaux-le-Vicomte). At the cost of numerous purchases of land, he managed **to create a "Great Perspective"** to the south of the castle, and laid out ponds and lakes, including the one of Chalais.
- **1659:** After Servien's death, the estate passed to his son, Louis-François Servien, Marquis de Sablé, protector of La Fontaine, who kept the estate for 20 years.
- **1676:** Armande Béjart, Molière's widow, bought the old house of Ambroise Paré and lived there until 1700.

- 1679: the Marquis de Sablé sold the estate to the Marquis de Louvois (Minister of War), for 400,000 pounds. The new owner enlarged the gardens, which he had remodelled by André Le Nôtre, and spent millions to embellish the buildings. The Marquis de Louvois died in 1691.
- 1695: At the suggestion of Louis XIV, the widow of Louvois agreed to exchange Meudon for the Château de Choisy. Louis XIV bought Meudon for his eldest son, Le Grand Dauphin.

18th century

- **1706:** The Grand Dauphin built a second castle. **Jules Hardouin-Mansart intervened on the estate** to build the new castle on the Place de la Grotte. Death of the Dauphin in 1711. Until the death of Louis XIV (1715), no member of the royal family returned to Meudon.
- **1718:** The Duchess of Berry, daughter of the Regent (Philippe d'Orléans), exchanged the Château d'Amboise, which she owned, for the Château de Meudon. She was then the first lady of the French court, and cousin and aunt of the little king, who was still single. She died in 1719.
- **1719:** After the death of his daughter, the Regent made Meudon available to Saint-Simon, one of his principal advisers. The famous memorialist could then stay close to Saint-Cloud, where the Regent owned his family castle. He stayed there until 1722.
- **1726:** A royal edict reunited Meudon with the domain of the crown (i.e. the whole of the patrimonial estate which is attached to sovereignty and which is considered public and inalienable).
- **1736:** Stanislas I (King of Poland from 1704 to 1709 and then from 1733 to 1736 and father-in-law of Louis XV), after his abdication in April, settled in Meudon temporarily. In September, the "**Declaration of Meudon**" was signed in secret by King Stanislas under pressure from Louis XV and Cardinal Fleury. He left the direction of the affairs related to the Lorraine region to a French intendant, Chaumont de La Galaizière, in exchange for an annual pension of two million pounds.
- **1748:** Louis XV had a castle built in a location called Belle-Vue, which he sold in 1749 to his favourite, Madame de Pompadour.
- **1755:** The scientist Marie-Geneviève-Charlotte Thiroux d'Arconville founded a hospice in Meudon: There, nuns cared for the sick of the surrounding area at her expense. It was also a laboratory: A number of experiments were carried out with rigour in her laboratory in Meudon between 1755 and 1763. For each of them, she accurately recorded the air temperature, the strength of the winds, the colour of the preserving liquids and their smell over the course of the days. Her experiments were related to the preservation of foodstuffs and particularly meat preserved in wines, vinegar, liqueurs, etc. Her biographers note that she was considered in Meudon as a protective power, and that she had influence and consideration in the Marais.
- **1775:** The Meudon estate became the **holiday resort of Louis XVI and Marie-Antoinette**. In 1783, Louis XVI himself designed a pavilion, known as the "Pavillon de Trivaux", in an Anglo-Chinese style, which was finally corrected in a more French style by the architect Heurtier.
- **1792:** The Convention kept the two castles of Meudon.

- **1793:** The **Committee of Public Safety** set up workshops to build machines, objects and materials useful for the war. The old castle became a **national establishment for artillery tests** (artillery laboratory). → The site was transformed by the Convention into a "national establishment for various tests". It was then used as an **aerostat** factory (the Committee of Public Safety, convinced of the interest of observation balloons, ordered the construction of a new balloon "easily usable in the field and capable of carrying two observers"): Meudon then truly became the "Château de la République", which served as a place of experimentation to arm the new regime. As such, the castle was the object of illumination paid for by public funds. **Nicolas-Jacques Conté** was, along with several other scientists including the physicist Joseph Coutelle, in charge of these military and scientific experiments in Meudon, where he was entrusted with the direction of the aerostation school that was established there. Conté had to approach the elements of different sciences, because this new teaching had to embrace everything: Chemistry, physics, mechanics. Giving both theoretical and practical lessons, Conté made his pupils execute the models he gave, the instruments he imagined, spending his nights preparing the drawings used in his lessons or carrying out various, and sometimes dangerous experiments. [Conté was inventor of the pencil]. It was also the time of the **first military balloon companies created by Nicolas Conté and Joseph Coutelle**. In four months, the first military aerostat, l'Entreprenant, was built (made with a silk envelope covered with a varnish, with a capacity of 523 m³, and a nacelle able to carry two officers).
- **1794:** The first balloon company was created by the Committee of Public Safety and placed under the command of Coutelle. In view of the successes achieved during the ascensions, a second company was created on 23 June of the same year. The Entreprenant achieved a tour de force for that time, when it was moved for more than a month only with only the help of men. Conté took care of the equipment and Coutelle made 25 ascensions. After L'Entreprenant, there was the Veteran, the Precursor, the Slender, the Telemachus, the Hercules, and the Intrepid. All were spherical balloons of more than 10 metres in diameter. The company of **balloonists** took part in the **battle of Fleurus** in 1794.
- **1795:** The old castle burned down following a shooting experiment. The castle remained in the same state for about ten years. Many English visitors came to Meudon from 1802 onwards, and left several descriptions or drawings (for example James Forbes' drawing or the testimony of the English colonel Thornton).
- **1798:** At the insistence of Conté and Coutelle, **General Bonaparte sent a company of balloonists to Egypt**. Alas, the ship "le Patriote" ran aground in the port of Alexandria. The equipment was removed, but the iron necessary for the production of hydrogen rusted and was therefore unusable.
- **1799:** The **Directory abolished the aeronautical company**: on the return from the campaign, the two companies were definitively abolished. Indeed, **Napoleon** did not retain this innovation, because of its reduced mobility, incompatible with the rhythm with which he conducted his operations. His refusal to take an interest in captive balloons was also due to the difficulty of manufacturing hydrogen within an extremely mobile army. Indeed, it required to build a masonry oven, let it dry, then start the reaction between steam and the filings or iron turnings.

19th century

- **1803: Demolition of the old castle**, damaged by the fire of 1795. The painter **Hubert Robert**, who was notably in charge of landscaping the gardens of Meudon under Louis XVI, came to draw the demolition site in 1804. **Napoleon transformed the new castle into an Imperial palace**. He wanted to **convert Meudon into a European "school for kings"**. He therefore **installed the King of Rome** (Napoleon II, son of Napoleon I and Marie Louise of Austria) who stayed there during the Russian campaign.
- **1815:** **Louis XVIII**, **Charles X** and **Louis-Philippe** used Meudon as a **hunting estate**, close to Versailles, and invited eminent personalities there: the Duke of Berry (son of Charles X), Marshal Soult, Pierre I (also known as Dom Pedro and Duke of Bragança) settled there in 1831, after his abdication to the imperial throne of Brazil.

- **1840: The railway line linking Paris-Orsay to Versailles** with two stations in the commune, Meudon and Bellevue, was inaugurated: It was **one of the country's first lines using locomotives that was accessible to passengers** [The railway made its appearance in France in 1827, with the Saint-Étienne to Andrézieux railway. It was then reserved for the transport of goods was powered by animal traction].
- **1841: Richard Wagner composed *The Flying Dutchman* in Meudon** between 29th April and 30th October. The script was inspired by his crossing between Riga and Boulogne sur Mer, which he made by boat in order to reach Paris and where he suffered a terrible storm as he passed the coast of Norway.
- **1842: Meudon railway disaster** (a double-drive train from Versailles to Paris derails). It was not the first railway accident, but given its heavy toll (fifty-five official deaths, including the sailor and explorer Jules Dumont d'Urville and his family, and more than one hundred and fifty injured (probably three times as many deaths in fact)), it is considered the first railway disaster to occur in France and one of the first in the world. Among the survivors was Marguerite Yourcenar's grandfather (story related in Archives du Norn).
- **1864:** Thanks to Napoléon Jérôme, host of the Domaine de Meudon, Charles Verd de Saint-Julien (mayor of Meudon) endowed the commune with **gas street lighting, making it the first suburban commune** to be equipped with such infrastructure.
- **1870:** Installation of a **Prussian artillery battery in the new castle** of Meudon.
- **1871: 3-day fire.**
- **1876:** The ruins were given to the astronomer **Jules Janssen**, who turned them into an observatory. On the territory of Meudon, a third castle was built on the hillsides of Bellevue. The observatory was built by Jules Janssen from the ruins of the castle. Founded in 1876 by Jules Janssen on the remains of the castle of Meudon, the **astrophysical observatory** of Meudon was mainly intended for the observation of the sun. The first applications of light analysis were carried out there. However, a large telescope was also built there in order to study the planetary surfaces. This work was continued thanks to the 1m and 60cm telescopes for the planets and the Solar Tower for the sun.
- **1876:** The **School of Chalais-Meudon reopened under the direction of Charles Renard** and under the name of Établissement central de l'aérostation militaire. The War of 1870 and the siege of Paris put aerostation back in the spotlight. Free-flying balloons were used to ensure communications between besieged Paris and the provinces. Gambetta, who realized the usefulness of balloons when he fled Paris aboard one of them, set up a commission for "air communications" and Colonel Renard was assigned to it and put in charge of military aerostation. He naturally set up his research centre in Chalais-Meudon. In 1877, he became the director of this establishment with the aim of creating a corps of aerostiers. All French military aerostatic equipment was designed, produced and tested there, and the men were trained to use it. Important construction workshops were set up there as well. Tethered and free-flying balloons were studied, hydrogen was now rapidly prepared, and varnished silk casings were built. They were waterproof enough to store the hydrogen gas for several months.
- **1879: The Hangar Y.** Creation of a hangar which was necessary for the construction of balloons and airships.
- **1879: Stay of Manet and his wife at the Bellevue pavilion** for a cure (at a hotel for curists staying at the hydrotherapy establishment). He painted the house in which he lived, at the sentier des Pierres Blanches.

- **1882:** The French chemist, essayist, science historian and politician **Marcellin Berthelot** settled in Meudon where he had a tower built for his experiments. There he cultivated experimental fields in the vegetable gardens of the old castle to study the links between plant growth and electricity. It was in a 28-metre tower, which was installed in the vegetable gardens of the old castle and which still exists, that he studied the effect of altitude on the electrical potential of plants subjected to different heights and possible effects on certain plant functions. These experiments led him to prove the fixation of nitrogen by microbes. He produced the electricity needed for his laboratory by means of a motor and a battery of accumulators.
- **1884: Flight of the airship "La France", the first closed-circuit flight in the world.** Charles Renard and Arthur Krebs built and developed the airship La France. On 9 August 1884, with a propeller powered by a battery-powered electric motor, this airship made the world's first closed-circuit flight over the Villacoublay plateau. It lasted 23 minutes through an 8 km course.
- **1893: Auguste Rodin settled in Meudon.** Even though he regularly went to Paris, he set up his studio in Meudon in annex buildings where moulders, workers and secretaries would work.

20th century

- **1901:** A year before, in 1900, Rodin had a large personal exhibition on the fringes of the *Exposition Universelle*, in a specially built pavilion on Place de l'Alma. The following year, he had the building dismantled and reinstalled in Meudon. He literally glued it to the house so that he could move from one building to another. The pavilion became a workshop and the place where he showed his works to his guests.
- **1912:** In June, the musicologist and sinologist **Louis Laloy**, General Secretary of the Opera, received **Stravinsky** and **Debussy** who performed the piano reduction of *The Rite of Spring*.
- **1913:** **Paris Eugène Singer**, a wealthy heir of the inventor of the domestic sewing machine **Isaac Merrit Singer**, bought the Bellevue pavilion and gave it to his mistress, **Isadora Duncan**. She **founded a dance school** in her new Bellevue property, known as Le Dyonision. Shortly after the outbreak of World War I, Isadora Duncan put the Bellevue Hotel at the disposal of the army **for the installation of a military hospital** and brought her students to the United States.
- **1919:** Back in France, Isadora Duncan found her property in such a dilapidated state that she decided to sell it to the *Office des Inventions*, which became the *Office national des Recherches Scientifiques et Industrielles et des Inventions* (ONRSI) in 1922 and then the **CNRS** (Centre national de la recherche scientifique) in 1939.
- **1927:** The Russian poetess **Marina Tsvetaeva** moved to Meudon and stayed there until 1932.
- **1929:** Meudon saw the passage of the Dutch painter, sculptor and poet **Theo van Doesburg** and his wife who died in Meudon, **Nelly van Doesburg**, a Dutch pianist, dancer and artist; **Jean Arp** and **Sophie Taeuber** lived in Meudon as well until **1940**. **Theo van Doesburg's house-studio** still serves as an artist's residence.
- **1962:** At the end of the Algerian war and in order to cope with housing shortages during the 1960s, a vast construction plan was launched. The **repatriation of the pledés-noirs from Algeria** following the war, the exodus of rural populations and the demand for labour from the Renault factories in Billancourt caused a surge in the need for housing. The choice was therefore made to **urbanise the cereal-growing plateau situated to the south of the commune**. On the cereal-growing land of Villebon, the district of Meudon-la-Forêt was developed by **Fernand Pouillon**, among others. The 2,635 social housing units of the Le Parc residence in Meudon-la-Forêt, including the 5 and 10 storey buildings built by Fernand Pouillon, were classified as cultural heritage in 2009.

APPENDIX 7

LOCAL INSTITUTIONS AND ACTORS

Events and associations

> STAR's UP Festival: STARS'UP is the festival where specialists in space sciences, aeronautics and aerospace and the general public meet. It contributes to the decompartmentalisation of knowledge and specialities by giving the general public access to information on the most recent technological advances and research themes.

> Association for a European Balloon and Airship Centre: founded by Audouin Dollfus, its objective is to promote the study of the history of airships and to work for the prefiguration of a centre on the history, the practice and the future of the lighter-than-air.

Scientific institutions

> ONERA – Meudon centre: With 12 hectares dedicated to the sky and 135 people working there, the Meudon aerospace science centre devotes all of its activities to aerodynamics, fluid mechanics and energy. It houses the Aerodynamics, Aeroelasticity and Acoustics Department (DAAA). ONERA has a set of wind tunnels in Meudon which cover a vast speed range from low subsonic (a few tens of km/h) to hypersonic (over 5,000 km/h). The Meudon centre is an important place in the history of aerostation and the beginnings of aeronautical research.

> Observatoire de Paris – Meudon site : Founded in 1876 on the initiative of Jules Janssen, this observatory is entirely dedicated to astrophysics, a completely new discipline at the time.

It gradually acquired impressive and innovative instruments. Joining forces with the Paris Observatory in 1926, it will keep its scientific specificity. Although night-time observations have ceased, it is still a site for daily observation of the Sun and continues to host the work of many astrophysicists.

> CNRS of Meudon : The Ile-de-France Meudon delegation of the CNRS groups together 77 research and service structures covering a wide range of disciplinary fields: human and social sciences, sciences of the Universe, biology, environment, engineering and systems, physics, mathematics, computer science and chemistry. Its missions include: representing the CNRS within the various local bodies, coordinating the support missions to the laboratories, implementing the administrative acts of the units and accompanying local scientific projects.

> Marcelin Berthelot Residency of the Collège de France in Meudon : In the middle of a 4.5 hectare park, on the edge of the Meudon forest, this residence has 58 flats intended primarily for researchers from the Collège de France, the Observatoire de Paris and the CNRS, but also from other scientific organisations. In the middle of a 4.5 hectare park, on the edge of the Meudon forest, this residence has 58 flats intended primarily for researchers from the Collège de France, the Observatoire de Paris and the CNRS, but also for other scientific organisations. It is managed by the ARPEJ (Association des résidences pour étudiants et jeunes).



ARTAGON

