



UNMUSÉUMNATUREMONTREAL

# Montréal Planetarium

PRESS KIT



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Montréal 

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# Message from the Director

## Welcome to the Montréal Planetarium

When the Planetarium opened its doors on April 1, 1966, there was cause for real celebration—for the first time in Canada, a major planetarium would bring the night skies down to Earth, making astronomy accessible to everyone. Virtual reality, long before the concept became commonplace...

Over the years, the Planetarium has become an important educational institution, one of which we can all be proud. It enjoys an excellent reputation among planetariums around the world, and its multimedia shows are the envy of many of its international colleagues.

Since its opening, the Planetarium has welcomed over six million visitors and introduced them to the secrets and marvels of the Universe. Such results are key to its **educational mission**. By mounting original multimedia shows and organizing a great variety of activities, the Planetarium has kept abreast of major astronomical happenings, reported on scientific research and brought astronomical knowledge within everyone's reach. A team of professional astronomers and experienced educators presents shows, exhibitions, the *Sky This Month*, workshops, courses on astronomy, newspaper and magazine articles, a Website... astronomical information for one and all!

In addition, a new Planetarium will open soon on the Olympic Park site, right near the Biodôme, Botanical Garden and Insectarium. With attractive public spaces and cutting-edge equipment, the new Planetarium will offer visitors an unforgettable experience!

I hope that for many years to come the Planetarium will continue to convey to hundreds of thousands of visitors, and particularly to young people, the excitement of learning about and better understanding the fascinating and magnificent Universe around them. Our team is working enthusiastically to make this happen, frequently renewing our programs and explaining the shows that the Universe puts on for us.

Remember that whatever the weather outdoors, be it snowing, raining, cloudy or clear, our very own night sky and our team are always waiting eagerly for you, to whisk you away from Earth on our next voyage.

Welcome to your Planetarium!

A handwritten signature in black ink that reads "Pierre Lacombe". The signature is written in a cursive, flowing style.

Director

# The Montréal Planetarium

a sophisticated educational facility

## BACKGROUND

A few “stellar” dates

### 1964

At the prompting of Dr. Pierre Gendron, Chairman of the Board, the Dow Brewery had Canada’s first major planetarium constructed on Chaboillez Square. This gift to the city of Montréal represented the company’s contribution to two major events scheduled for 1967: Expo ‘67 and the centenary of Canadian Confederation.

### April 1, 1966

The official opening of the Planetarium was attended by Mayor Jean Drapeau and its first director, Dr. Donald D. Davis. The first show, entitled *New Skies for a New City*, provided a glimpse into the immense potential of the most advanced star projector in the world, the *Zeiss V*. Cost: \$1.25 million.

### 1969

A few months before Neil Armstrong walked on the moon, the Planetarium presented *Destination Moon*.

### 1971

Dr. Auray Blain, Dr. Davis’s assistant, succeeded him as Director.

### 1983

Claude Lebrun, administrative assistant to Dr. Blain, took over the helm.

### 1984

Pierre Lacombe was hired as the Planetarium’s first professional astronomer. In 1988, Mr. Lacombe succeeded Mr. Lebrun. Today, the team includes four astronomers and six educators.

### 1991

*The Planetarium: 25 Years of Astronomy* drew record crowds.

### 1992

The permanent exhibition in the Planetarium lobby was entirely redesigned. Temporary exhibitions were added and complementary discussions were held before or after each show.

### May 1994

The most significant solar eclipse to occur in Quebec before 2024 (extent of 92% in Montréal) was marked by a major information and educational campaign: the *Eclipse 94* show, sale of guides and observation glasses, outdoor activities on the day of the eclipse, etc.

### 1995

A unique exhibition on meteorites, featuring fragments of every meteorite ever found in Canada.

### April 1, 1996

The Planetarium celebrated 30 years of popularization and education by setting up a free telephone information line (861-CIEL) on the month’s astronomical calendar, as well as a Website.

### 2000

The Planetarium hosts the International Planetarium Society.

### 2004

The new Montréal Planetarium is one of the priority projects in the city’s 2005-2007 capital works budget.

### April 1, 2006

The Planetarium celebrated its 40th anniversary. To mark the event, it opened a new permanent exhibition, *40 Years of Astronomy*.

## LARGEST FRENCH-LANGUAGE PLANETARIUM IN NORTH AMERICA

The first of its kind in Canada, the Montréal Planetarium is now a respected member of a worldwide network of similar facilities.

**Planetariums** first began to appear in the United States, in the 1930s. The goal of these revolutionary structures, which house theatres with star projectors that reproduce the movements of the celestial sphere, was to make astronomy accessible to everyone. Chicago, New York and other large American cities were the first to build such impressive institutions.

In the 1960s, the conquest of space and the race for the moon rekindled interest in astronomy and the space sciences. A new wave of planetariums was born, among them the Montréal Planetarium in 1966.

Today, the country has five leading planetariums; from West to East, they are in Vancouver, Calgary, Edmonton, Winnipeg and **Montréal**.

The Montréal Planetarium, Quebec's only public planetarium (some educational institutions have their own small facilities for teaching and entertainment purposes) is also the only French-language planetarium in North America.

## INTERNATIONAL REPUTATION

Within the global planetarium network, Montréal enjoys an excellent reputation—and rightly so.

Since it first began operating, the Montréal Planetarium has been able to count on a truly remarkable team of expert lecturers. These “amateur” astronomers, all with

impeccable educational credentials, gave the Planetarium a reputation for excellence. Professional astronomers have gradually taken over this role, especially since the 1980s, allowing us to maintain this reputation. At the Planetarium, scientific education is always based on exhaustive research and painstaking preparation.

### The following points also contribute to the Planetarium's excellent reputation:

- The Montréal Planetarium is still one of the few in the world to provide “live” commentary during its shows. Although the shows *per se* are pre-recorded, each performance commences or closes with a description of “the sky this month” by an experienced speaker.
- The Planetarium team includes four professional astronomers, reflecting the institution's high regard for program content and the public.

In addition, the Montréal Planetarium hosted the International Planetarium Society convention in 2000.

## MISSION AND GOALS

First established in 1966, the mission of the Planetarium is just as topical and important today: **to make astronomy accessible to everyone**, and thus...

- to acquire **knowledge** in the area of astronomy (and related sciences and technologies), and pass that knowledge on to the public—especially young people;
- to produce and present **multimedia shows** that foster a better understanding of astronomical phenomena and of the diversity, complexity and beauty of the universe;
- to **promote astronomy** in Montréal and Quebec in general, as both a scientific and leisure activity;
- to make a local, regional, national and international **contribution**.

## PRODUCTION CENTRE

Every year the Planetarium team designs, produces and presents three or four original multimedia events for the public and school groups of various ages. These shows, all of which have clearly defined educational objectives, showcase the star projector as well as a multitude of special effects.

## EDUCATIONAL FACILITY

- Every year about 140,000 people, most of them young, attend at least one of the Planetarium's shows.
- Every year these 140,000 visitors familiarize themselves with astronomy at their own pace by visiting the permanent and temporary exhibitions.
- Every year Planetarium astronomers and educators provide explanations and answers by means of shows, articles for the general public, television features and discussions.
- Every year the *Société d'astronomie du Planétarium de Montréal* offers lectures and introductory courses on astronomy along with observation evenings.
- Every year, the Planetarium team organizes a workshop for teachers and education students. This is a great way for them to brush up on astronomy so that they can introduce their classes to this fascinating topic.

## INFORMATION HUB

- Over the course of the year, the Planetarium's astronomers answer over 1,200 calls from the public. At times of special interest (eclipses, Perseid meteorite showers, Comet Hale-Bopp, etc.), they may receive hundreds of calls and e-mails a day.
- The media regularly consult the Planetarium for comments on astronomical phenomena (e.g., Comet Hale-Bopp, Pathfinder probe mission), to confirm information, obtain assistance in interpreting NASA astronomy photos, and so on. Publishers also request such information.
- Since 1995, Planetarium astronomers have written monthly columns in newspapers like *La Presse*, *Le Soleil* and *Métro*.

All public services at the Planetarium are provided **free** in **French** and **English**.

## FIRST-HAND EXPERIENCE

Each show at the Planetarium—presented under a starry sky free of all light pollution, far from the noise of the city—is not only heard and seen, but **felt**. This personal quality made the Planetarium a virtual reality site before the concept became commonplace. To experience it yourself, just look up at the stars...of the Planetarium.

# A unique structure

*Designed by the firm of David Barrott Boulva under the direction of Pierre Boulva, the Montréal Planetarium has all the necessary features of any planetarium, as well as some distinctive traits of its own. While all planetariums are distinguished by their hemispheres, the Montréal facility's **dome** is a cylinder truncated at an angle—seen from above it resembles Saturn and its rings.*

## WHAT IS A PLANETARIUM?

A planetarium is a very special structure. In the centre of its theatre is a **star projector**, a sophisticated optical and mechanical instrument made up of dozens of smaller adjustable projectors that recreate the movements of the celestial sphere on an interior dome that acts as a screen. The night sky is therefore visible in broad daylight, at any time—past, present, or future—and from any point on the Earth's surface.

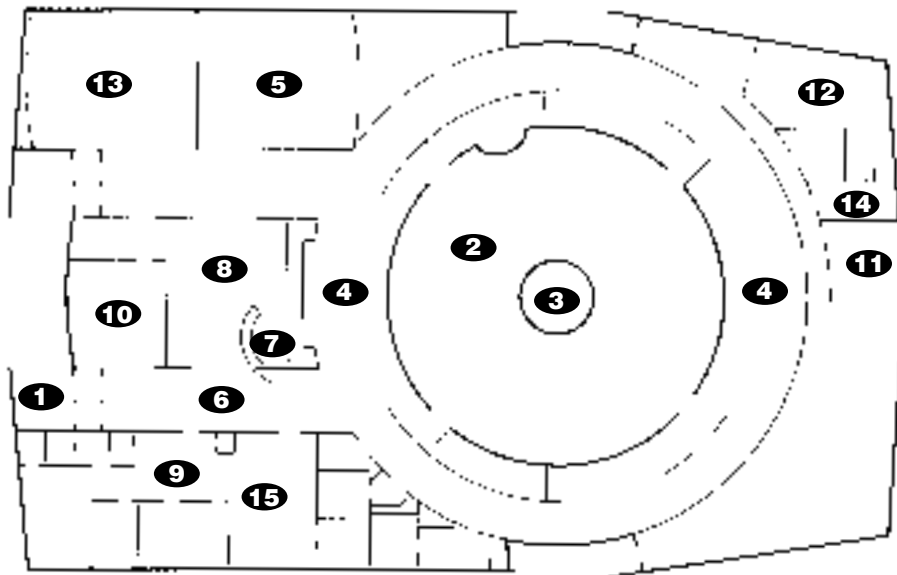
## LAYOUT OF THE MONTRÉAL PLANETARIUM

The heart of the Montréal Planetarium is the **Star Theatre**, with seating for 385. At its centre stands a **Zeiss projector**, which throws its light on the hemispheric dome above.

Circling the Star Theatre is a 4-m wide exhibition area with 18 display cases, housing the permanent exhibition and the current temporary exhibition.

The **gift shop** offers a variety of astronomy-related books and articles for all ages, especially children.

The **activity room** is used for occasional presentations to school groups and the public, serves as a lunch room for school groups and hosts activities of the **Société d'astronomie du Planétarium de Montréal**.



- 1 Main entrance
- 2 Star Theatre
- 3 Projector
- 4 Exhibition area
- 5 Activity room
- 6 Reception area
- 7 Ticket counter
- 8 Gift shop
- 9 Offices
- 10 Documentation centre
- 11 Darkroom
- 12 Mechanical shop
- 13 Optical shop and electronics shop
- 14 Kitchenette
- 15 Artistic production

## THE BUILDING

### Architects

David Barrott Boulva, under the direction of Pierre Boulva

### Exterior facing

Beige brick and cement

### Cross-section

Single storey, 27 m x 62 m (90 x 204 ft) (total surface area: 1706 m<sup>2</sup> [18,360 ft<sup>2</sup>])

### Natural lighting

12 narrow windows for administrative offices

6 skylight domes for lobby

### Renovations

1988: computerized control panel installed under a transparent dome (visible from the theatre)

1990: independent heating system installed, following the closing of the O'Keefe Brewery (successor to Dow), which had provided the Planetarium with direct steam heating.

1997: gift shop and ticket booth renovated.

## THE STAR THEATRE a spaceship

The Star Theatre, which has 385 upholstered chairs inclined at 23 degrees and modelled on those at Place des Arts, transports young and old alike to the limits of knowledge and outer space.

### False wall

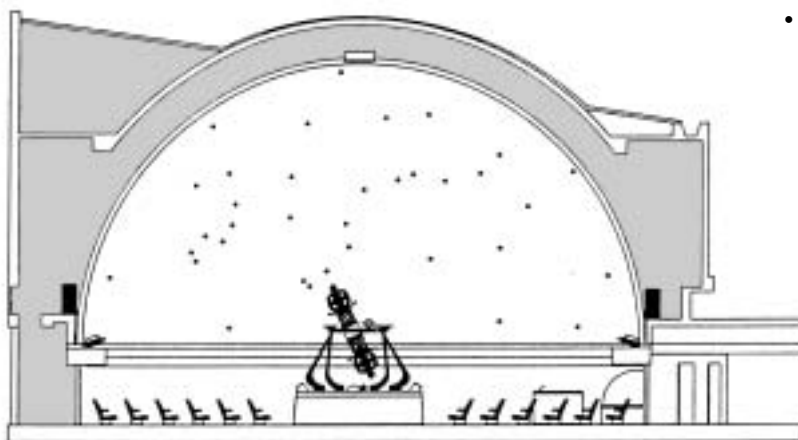
Covered by a thin layer of Macassar ebony, an exotic wood that glows warmly when illuminated, the false wall hides a circular walkway equipped with a shelf that supports the auxiliary projectors. Technicians use the walkway when installing and maintaining equipment.

### Dome

The Star Theatre is equipped with the first Zeiss dome in North America, developed by Walther Bauersfeld, inventor of the Zeiss projector. It is 20 metres in diameter and composed of two "layers":

- a *geodesic hemisphere* made of several hundred steel bars that support the interior screen;
- *1,309 aluminum strips* that comprise the screen. Each strip contains over 2,500 tiny perforations that are too small to affect image quality, but provide the theatre with excellent acoustics (there is also a high-quality wrap-around sound system).

The result is a white dome that, thanks to the magic of the *projector*, is transformed into the celestial sphere.





## **THE STAR PROJECTOR**

a time and space machine

How did the sky look to our ancestors? How will it appear to our descendants? The star projector provides the answers by reproducing the celestial sphere as it appeared—or will appear—at any time in history, and from any point on Earth.

As is customary with any “star,” the projector is introduced at the beginning of each show. Crouched at the centre of the theater, it looks like a huge insect as it slowly swings its “head” during the performance. Manufactured by Carl Zeiss in Oberkochen, Germany, and prototype of the V series (the most advanced in 1966), this 2.5-tonne “monster,” which today would cost \$3 million, is an extremely sophisticated instrument, and houses over 150 fixed and mobile projectors. These smaller projectors are attached to two swivelling axes and can be illuminated separately or in groups for a **high-speed** reproduction of the movements of the planets and stars as seen from the Earth (“geocentric” view).

### **In addition, there are:**

- over 100 auxiliary projectors used for shows about the constellations, Montréal’s nighttime sky, the lunar landscape, etc.; and
- some 150 special-effects projectors, most of them designed and built at the Planetarium, that are used to reproduce common astronomical phenomena such as meteorite showers, the aurora borealis, the slow passage of a comet, etc.

### **Controls**

The Planetarium’s main control room, which was equipped from the outset with the ultimate in electrical facilities, now houses a futuristic-looking computerized console developed in 1988 by Bédard-Girard Ltée of Montréal at an approximate cost of \$300,000. Visible from the theatre thanks to a glass dome, the console contains most of the controls for the star projector and audiovisual systems.

There is also a control panel that allows speakers to adjust the star projector and other projection equipment directly.

# The visible side of the Planetarium

astronomy for everyone

*Morning, afternoon and evening, the public is king at the Planetarium. The astronomical delights on the menu are divided into three courses, and may be enjoyed alone, with family or with friends.*

## “THREE IN ONE”

A ticket to the Planetarium allows each visitor access to three events: the exhibition, *The Sky This Month* and the main show.

### Exhibition 40 Years of Astronomy

The science of astronomy has made astounding progress in the past 40 years, in every field. Visitors are invited to relive some of the major discoveries of the past four decades, and see what was happening in Montréal and Québec at the time.

### The Show plus The Sky this Month

Now that your appetite has been whetted, sit back while the house lights dim and a hush falls over the crowd....

Up until 1994, each Planetarium show was commented live by a guest speaker. Because this inevitably resulted in a certain disparity among lectures, it was decided to change to a pre-recorded format. Needless to say, this in turn had its disadvantages, including nostalgia for the “good old days.”

Today, the Planetarium uses a combination of the two approaches: at the beginning or end of every performance, the educator uses a light-beam pointer to help the spectators decode Montréal’s nighttime sky, identifying the Big Dipper, the North Star, Orion the Hunter, Aldebaran (the eye of Taurus) and many other stars and constellations. This short fifteen-minute presentation is unique to our facility, and much appreciated by all.

Next, the Montréal skyline disappears, and the pre-recorded show begins. For 30 minutes the Star Theatre turns into a spaceship, and the audience is taken through the galaxies, a meteorite shower, the solar system, etc.

## ROAMING EDUCATORS

When there are lots of people here between shows, the Planetarium’s educators roam the exhibition corridors with a cart full of wonders. Are you interested in meteorites? Would you like to touch one? No problem! Do your children wonder just how much bigger Jupiter is than Earth? The educator will be pleased to make a model of the Solar System before their very eyes, using marbles and balls!

**EVEN MORE, WITH THE  
SOCIÉTÉ D'ASTRONOMIE  
DU PLANÉTIARIUM DE  
MONTRÉAL**

If your visit to the Planetarium hasn't quenched your thirst for knowledge or has even whetted it, then now's the time to join the *Société d'astronomie du Planétarium de Montréal*.

This non-profit organization, founded in 1992, now has about 450 members, making it the largest amateur astronomy club in Québec.

There are many good reasons for becoming a member:

- to join a network of other people interested in astronomy;
- to keep up to date with new developments, in particular by means of the club's *Hyperespace* newsletter;
- to take advantage of annual benefits: invitation to premières, free admission, 15% discount at the gift shop, special activities (lectures, field trips), loans of books, sky charts, telescopes, etc.;
- to contribute to the development of amateur astronomy and the reputation of the Montréal Planetarium.

Meetings are held at the Planetarium, on Friday evening twice a month. You don't have to be an expert to join: members are just experts in the making. Anyone wishing to attend a meeting before signing up is welcome to do so.

# The hidden side of the Planetarium

**shows for young people**

Mornings are reserved for regular “invasions” of students, who love our shows designed with them in mind. Schools appreciate our efforts and send their charges to us in great numbers: elementary and secondary students represent **over a third of our clientele**. If we also take into consideration those youngsters who visit with their parents or friends, the figure rises to 55%.

## **FROM KINDERGARTEN TO UNIVERSITY**

Whether one is entertaining toddlers with *Little Bear's Wonderful Journey* or discussing current knowledge about the universe with university students, the Planetarium offers a broad range of shows designed for everyone and providing an ideal complement to the programs of the *Ministère de l'Éducation du Québec*.

Morning shows are reserved for groups of elementary and secondary students. After they reserve, teachers are invited to consult the Planetarium's Website and download preparatory and follow-up sheets related to the show themes, for use in the classroom.

## **ANNUAL PROGRAM**

Come along on an entertaining and instructive trip to the Planetarium. For a copy of the guide to educational activities, call 514 872-4530.

# Planetarium administration

## **A CITY OF MONTRÉAL FACILITY**

Since November 1995, the Planetarium has been one of the four major scientific institutions managed by the City, along with the Biodôme, the Botanical Garden and the Insectarium. All four are part of the Montreal's Nature Museums. Together, they attract some 2 million visitors every year.

Strict control by Planetarium management, with the help of its versatile team, has made it possible to maintain a balanced budget and constantly renew its programming as well. Proving that it is possible to have your head in the stars and your feet on the ground!

## **STAFF**

The Planetarium staff, recognized for its expertise, is enthusiastic and very busy. There are some twenty people working at the Planetarium.

## **OPERATING BUDGET**

The Planetarium's 2006 operating budget around \$2 million, a modest amount, considering an average of 140,000 visitors per year and the capital investments required to maintain premises and equipment.

# Fact Sheet


## Montréal address

Montréal Planetarium  
1000 Saint-Jacques Street  
Montréal, Québec  
H3C 1G7

## Planetary address

Internet: <http://www.planetarium.montreal.qc.ca>

## Access

 Bonaventure Metro: de la Cathédrale exit at the corner of Peel and Saint-Antoine. Full wheelchair access.

## Parking

Adjacent parking lot accessible via the Planetarium entrance (from Peel north or south) or from de la Cathédrale (south).

## Services

- Gift shop

## Schedule

Please consult the Planetarium brochure or Website.

The show schedule is subject to change.

Visitors are asked to arrive early.

## Viewing time

- Exhibition: 30 minutes
- Show: 30 minutes
- "The Sky This Month": 15 minutes

## For other information about the Planetarium

Tel.: 514 872-4530. A recorded message in French and English gives its location, the name of the current show, schedule and admission fees.

