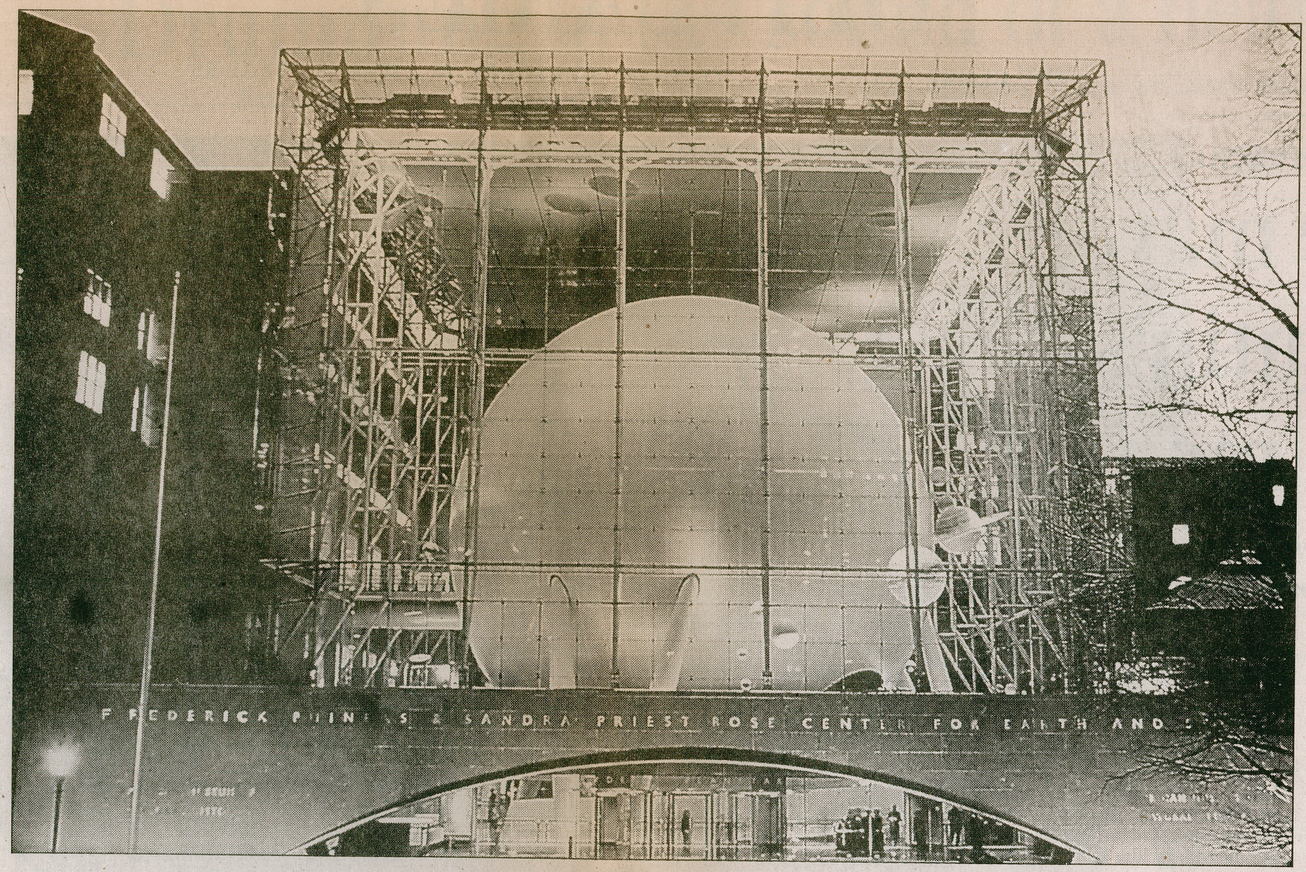


New York's new 'cosmic cathedral'

The Rose Center for Earth and Space: 'It isn't religion but scientific education that the pilgrims are coming for now'

BY SIMON HOUPT
Arts Reporter, New York

New York City may possess a well-deserved reputation for artistic boldness, but its track record for architectural significance rests almost entirely on the achievements of the past.

Yes, the city possesses its share of grand statements. Tourists flock to Grand Central Station, the Flatiron Building, the Chrysler Building, the Empire State Building and the Brooklyn Bridge. But it has been many years since anything commanded the kind of high-flying praise and immediate adoration of an awestruck public like the new Rose Center for Earth and Space at the American Museum of Natural History, which opened to a crush of visitors Saturday morning.

Six years since conception and three years in construction, the $210-million (U.S.) centre was inaugurated amidst a tsunami of tributes from critics who were almost embarrassingly grateful for a display of architectural audacity in a city that has been characterized by provincialism for much of the last 40 years. "The planetarium is an aesthetic apparition as well as a major civic event," gushed The New York Times's Herbert Muschamp. "It's like finding another world."

Certainly, it is exceptionally easy to love. The centre's main feature, the newly rebuilt Hayden Planetarium, is a 1.8-million-kilogram, 26-metre white aluminum sphere suspended in a seven-storey glass cube. It feels like a planet momentarily captured and arrested in motion.

The centre is also a lot of fun, juxtaposing the intense majesty of its sphere with the playfulness of hallway floors made up of recomposed stone embedded with twinkling glass shards: Even when looking down, we're reminded of the stars above. Gazing upward from the floor of the centre, one's field of vision is dominated by the massive sphere, but each step gives a changing perspective. Planets hanging alongside the planetarium's sphere play hide-and-seek

Made in Canada: stars, planets, suns

GAYLE MacDONALD
The Globe and Mail, Toronto

Look up, way up, at the stars and planets floating in the lobby of Manhattan's new Rose Center for Earth and Space, and gaze upon the work of a tiny Canadian company you've probably never heard of.

Research Casting International, a 20-person operation owned by sculptor Peter May, made the celestial bodies in his foundry in Beamsville, Ont., a small community in the heart of wine country in Niagara's Peninsula. Then the company shipped the planets (with some molecules — carbon, ammonia and hydrogen — and a few suns thrown in) down to New York.

The past few months, May and his young team of artists have been busy putting the finishing touches on the Rose Center's astrological display, the centrepiece of the refurbished Hayden Planetarium.

But planet-making — Mars, Jupiter, Saturn, and the like, were all constructed out of half-circle fibreglass and plaster molds and held together with steel armatures — is a new thing for this innovative company. Research Casting's bread-and-butter to date has come primarily from reconstructing archeological formations, and building terrifyingly real dinosaurs for museums, theme parks, and adventure movies, such as *Jurassic Park*.

May says space was Research Casting's natural next business frontier because of its all-encompassing size.

"Our shop is capable of handling anything big," he says of his almost 2,000-square-metre facility that functions as a foundry, fibreglass casting and machine and wood shop. "It's made to build dinosaurs . . . So moving to the planets seemed like a good fit. These ones are the largest scale models ever built."

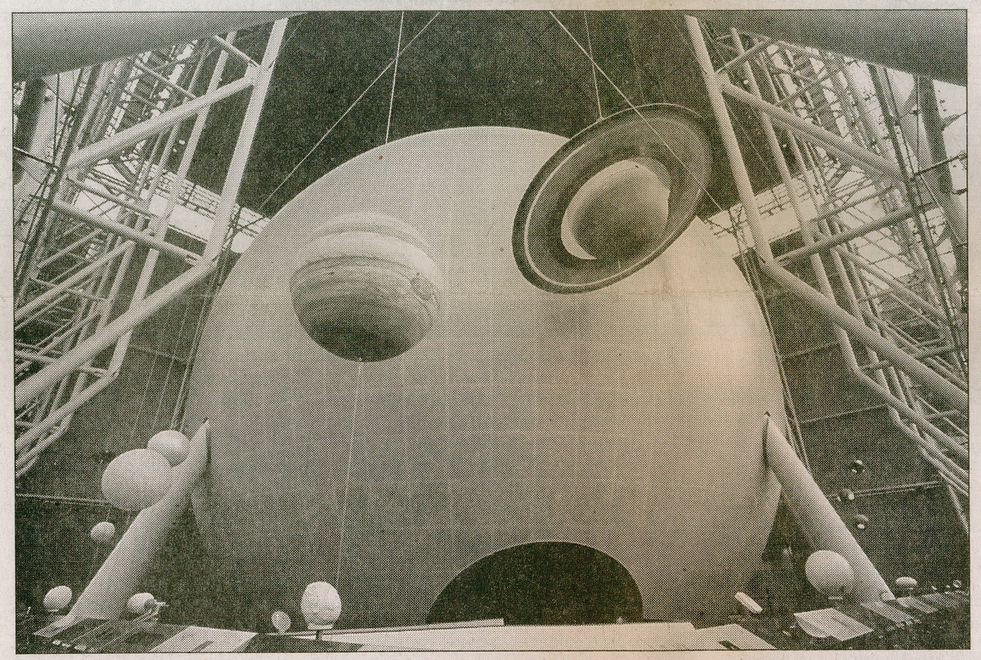
from behind the giant orb. The Cosmic Pathway, a 108-metre ramp radiating out from the sphere's equator that details the 13 billion-year history of the universe, appears to destabilize the equilibrium of the space as it snakes itself around the sphere's bottom half.

The centre's entrance, which some have criticized for being too low-slung for such an impressive structure, is a quiet wink at a sunrise. And the entire enterprise feels like — well, a little like the Starship Enterprise or a science fiction space port, all smooth white synthetic surfaces.

James Polshek, the project's lead architect, cites inspirations such as Etienne Louis Boullee's design for a Cenotaph to Sir Isaac Newton and Wallace K. Harrison's Perisphere at the 1939 New York World's Fair. But a child raised on recent science fiction — and the planetarium is there to inspire children, after all — can't help but see it as a white version of the Death Star from filmmaker George Lucas's *Star Wars* series. The Hayden Sphere possesses the same grandiosity, the same perforated texture, and even the same concave parabola at its equator as Darth Vader's malevolent treasure.

But the Hayden's mission is Good, not Evil: Polshek said his primary goal was to make the museum's scientific mission more appealing to the public.

"I have taken to calling this a cosmic cathedral," he said recently. "When one thinks about the similarities to real cathedrals in the Middle Ages that attracted millions of pilgrims coming to a dark Europe, to those great spaces, coming for religion into those monumental



Top, The Rose Center for Earth and Space: 'Architecture in the service of science.'
Above, Scales of the Universe, a made-in-Canada display.

volumes . . . today this too is a kind of cathedral. It isn't religion but scientific education that the pilgrims are coming for now. The architecture is intended to enthuse and support — and frankly awe — so people will return again and again to study the scientific principles of astrophysics and astronomy."

One of the centre's most impressive features is its pair of glass curtain walls. Supported by more than four kilometres of rod rigging, the walls are constructed from almost an acre of glass — 736 individual panes of Pilkington water white glass that gets its name from the fact that it has been purified of the iron that tints most glass a slight green. Looking through the glass offers a slightly hyper-real effect, like finally seeing the world from behind perfectly fitted eyeglasses after a lifetime of blurred vision. There is a magnetic pull drawing you in from the outside. From inside, the grand residences of the surrounding Upper West Side neighbourhood seem even more charming set within the frame of an ultramodern glass curtain wall.

"The glass is really important in terms of the mission and the strategy of this institution, namely to debrick the science and make it transparent, accessible and comprehensible," said museum President Ellen V. Futter. "Astrophysics is one of the most abstract fields there is."

The glass certainly had the desired effect on those who turned up Saturday afternoon. "You see it from outside and it just makes you want to come in. It invites you in," said George Pavey, standing on the Cosmic Pathway, within an arm's length of the giant sphere. "From here, when you're this close, it feels like you're in space."

It would be difficult to remember the last building New Yorkers embraced with such immediate fervour. Philip Johnson's AT&T Building, which went up in the 1980s, was widely admired but far from a universal hit. The recently opened LVMH Tower on 57th Street is a quiet success, it is, after all, just another office building. The planetarium, on the other hand, is not just an impressive new building but a perfect marriage of form and content.

"This is architecture in the service of science," said Ellen Futter. "For example, the sphere is the dominant shape in the universe," so visitors entering the hall "are presented instantly with an icon that is reinforcing of one of the big ideas. There is a synergy between the architecture and the science, and I think you feel a seamlessness and a flow between the content and the setting."

Yeah, whatever, said freckle-faced 10-year-old Sarah Presky, who was one of more than 16,000 visitors to the museum on Saturday. "I like the exhibit where they showed how the planets were formed," she said, pausing by a 3.69 billion-year-old rock from the Northwest Territories donated by the Royal Ontario Museum. "It's all just really cool."

Suspended as if by magic, May's handiwork is strategically placed around the planetarium's nine-storey orb. The planets — Jupiter, Saturn, Neptune, Uranus, Mars, Venus and Mercury — are built to scale as a factor of 10.

Pluto, no longer considered a planet, was left out. Good thing, too, May adds, since it would have been roughly the size of a pea.

On the night Research Casting's crew installed some of the bigger celestial bodies, May recalls, "we walked outside and looked up, and there was the moon above the planetarium. And there was Saturn and Jupiter directly above. We'd just finished installing them and there they were. It was beautiful. A little eerie.

"I don't know if it was a sign or anything. But everyone was so tired, it became one anyway."

Research Casting's planet exhibit is one of many the 13-year-old company has done for the American Museum of Natural History in the past decade.

It built a rearing, five-storey tall Barosaurus defending its young from an attacking Allosaurus in the museum's main rotunda and last year a handful of staff travelled to exotic locales to make molds of important geological features around the world. The group went to the lava fields in Hawaii, made imprints from volcanic ash in Pompeii; replicated rock upheaval in California and took molds in Switzerland that show the building of the Alps. All are now part of the Rose Gallery's Hall of Planet Earth exhibit.

So what's next?

"We could mold up Stonehenge. Go to Easter Island. Do the Sphinx," laughs May. "Well, that's getting a little big. The only thing holding us back is our imagination."