

By Carolyn Collins Petersen

Eyes on the Skies: *Juan Carlos Forte*



As a young child growing up in Buenos Aires, astronomer Juan Carlos Forte discovered the Earth's rotation using what he calls "primitive sky charts" from an encyclopedia his father gave him. That was when astronomy became a force in his life. "The sky was my driving engine," he said. "Physics, mathematics, philosophy, the political implications of astronomy — those are all topics that I enjoy. But they come in second place to astronomy itself."

Since then, Juan Carlos has continued his life-long love affair with the universe. It has taken him to the heights of Argentina's scientific research community, and allows him to share his fascination for the cosmos with his many students and

Argentina's Juan Carlos Forte has spent his career researching globular clusters and bringing new astronomers to a love of the sky. Here, Juan Carlos is seen through the steel structure that represents the local meridian in Buenos Aires, at the entrance of the Galileo Galilei Planetarium.



mountain landscape and his concerns about the future of the observatory. Everything changed for him a decade later, after Gemini South officially opened its eyes. “Coming back in 2005, as a member of a review panel,” he said, “I entered the dome and had a very intense emotional experience.”

Today, he describes Gemini Observatory as a place where astronomers can get the information they need to explain the universe. For his own country’s scientists, it’s a positive place to be. “Certainly, the Gemini Observatory is also a very friendly environment to promote international collaborations,” he

said. “Our Minister of Science and Technology, Dr. Lino Barañao, has been very supportive of our participation, and I hope this will continue in the future.”

These days, Juan Carlos focuses most of his astronomy research on extragalactic globular cluster systems. It began when he was a post-doctoral researcher at Kitt Peak National Observatory in Arizona. “My interest at that time (in 1980) was focused on star-forming regions and all the spectacular events that are associated with these places,” he said. But, his advisor, Steve Strom, had other ideas. “Steve suggested we should work on the more quiet, relaxed, old (and, to my mind, boring) globular clusters. My first impression of these objects changed dramatically in a few weeks as I became involved in one of the first massive applications of digital techniques in astronomy: the study of the very rich globular cluster systems associated with the giant galaxy M87.”

Juan Carlos entered the field of globular studies at a particularly fortuitous time. Interest in these massive objects was growing, par-

The Galileo Galilei Planetarium in Buenos Aires, Juan Carlos’ current professional home.

colleagues. He is currently a member of Argentina’s “National Council for Research” (CONICET), which has supported his research and educational activity throughout his career. As a member of the Facultad de Ciencias Astronómicas y Geofísicas, he teaches Stellar Astronomy at the Universidad Nacional de La Plata, the first graduate school in South America — an institution where he also got his Ph.D. in 1978.

Juan Carlos is also a member of the first National Academy of Sciences of Cordoba in Argentina, and has served the Gemini Observatory as a member of the Board of Directors. He recalled his early contact with the observatory: “My previous knowledge about the Gemini telescopes was quite appalling, and was in a short article I saw titled ‘Muddled Twins,’ published by a well-known amateur magazine. Fortunately, the dark and gloomy landscape painted in that story was not real and the Gemini Telescopes became the wonderful tools they are today.”

In 1994, Juan Carlos visited the Gemini South site at Cerro Pachón before the facility was built. He remembered well the bare, flattened

ticularly as astronomers came to realize that globulars are among the first stellar systems formed in the universe and that some were probably born earlier than the galaxies they are associated with. "Globular clusters belong to the first stellar populations that show up," he said. "On average, they are older than the average age of the stellar populations in a galaxy."

Juan Carlos and his colleagues have been looking for a way not only to differentiate globular cluster stars from galactic populations, but also see if a quantitative connection exists between them. "Some results do suggest that such a connection exists and allows the description of the dominant (non-resolved) stellar populations in a galaxy just by properly reading the globular clusters' characteristics," he said.

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In addition to his research, Juan Carlos is well-known as a fantastic teacher and supporter of his students. Former Ph.D. student Sergio Cellone reminisced about his first days under Juan Carlos's tutelage. "Among other things, he explained how he and his colleagues managed to subtract a galaxy's halo light to detect and measure the clusters. I still remember that moment, when I thought: "That's what I want to do!"

Later, Sergio wrote his thesis on the surface photometry of dwarf galaxies under Juan Carlos's direction. "He gave me full liberty to orient my work following my own decisions," recalled Sergio. "He gave me all the tools I needed to work, and he was almost always ready to answer my doubts. When I started my Ph.D. work, the department chief assigned me a desk in an office at the basement

of the observatory (a rather humid and dark place). I told Juan Carlos about this, and he immediately said "you will not go there, you will use my desk, instead." He managed to get another place for himself so that I could work during my doctorate in a comfortable and sunny office."

Sergio says that generous spirit is a hallmark of his mentor's disposition. "He is very polite and respectful. I never heard him raise his voice." I think anyone who knows him would agree on describing him as a gentleman."

Bob Williams, former Director of both the Space Telescope Science Institute and the Cerro Tololo Inter-American Observatory, also remembers his colleague as a wonderfully generous and polite person. "Juan was a dean at the University of La Plata when I knew him, and his demeanor was characterized by dignity and integrity," said Bob. "He was always self-effacing, and it was always clear that whatever he did he put the big picture first and his own personal goals second. I have a really high regard for Juan, and he is an excellent role model for young scientists."

While Juan Carlos may be one of the mainstays of Argentinian astronomy, he jokes that he's actually somewhat atypical for an Argentinian. "My profile should include tango dancing, mastering the art of barbecuing, or being an excellent football player," he said. "However, I do not fill any of these expectations. In fact, I do not have a particular hobby. I'm a bit of a newsaholic. I also enjoy watching the Barcelona football team. They are probably the best I have ever seen on a planetary scale."

Juan Carlos has spent his life in Buenos Aires, and raised his family there. His sons are both grown, and he says they are inclined to artistic and musical activities. He keeps a telescope on the roof of his home, which he uses to spy out flyovers of the International Space Station and used to enjoy passes of the space shuttles. While he doesn't consider himself a hobbyist,

Juan does like to take his telescopes out to explore the sky. "When the Pampero (a cold, dry wind) blows and cleans out the Buenos Aires skies, I go out," he said. "Finding galaxies or faint clusters is something I enjoy doing."

Juan also has been trying to find a very special object, but so far has not had much luck. "I have not succeeded in observing the asteroid that bears my name (8780 Forte), but I will keep trying."

Juan Carlos Forte is a man with the stars on his mind. His colleagues call him a consummate researcher, and point out that his passion also lies in educating the next generation of astronomers. These days, he is taking his interest in education in a unique direction. "Currently I am on a leave of absence from the Facultad and working at the Galileo Galilei planetarium in Buenos Aires," he said. I continue my research work, but am also involved in a collaborative program aimed at integrating astronomy in all the different educational levels. I think that the distinctive features of astronomy must be preserved and taught to the new generations of astronomers."

From his first visits to the observatory in his childhood, to joining the Asociacion Argentina Amigos de la Astronomia where he became a "proud telescope maker," Juan Carlos Forte has walked a path to the stars and wants others to come along. "I follow the ideas of the late Dr. Jose L. Sersic, who influenced me to become an amateur astronomer who earns his living as a professional one," he said.

But, there is more to Juan Carlos's passion for the stars than sharing. Deep inside, he has always carried with him a unique definition of astronomy, one that he is happy to share with others if it helps get them to appreciate the cosmos we live in. "A young lady at the Asociacion used to say that 'Astronomy enters through the eyes and then flows through the veins,'" he recalled. "I've always found that to be a delightful and powerful definition."

No wonder. It's how Juan Carlos grew into astronomy as a child. And it's how he extends his own vision today — not only out to the distant stars and galaxies but also to the students he continues to inspire.

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