



by Bernadette Rodgers (with a contribution by Jorge Meléndez)

# Why Visit Gemini?

*Queue-based observing is the norm at Gemini, so if you're a Gemini user it may seem unnecessary to be on-site. Observatory staff not only take your data in queue but also in the observing conditions required. All you need to do is download the files directly from the Gemini Science Archive when your "You've got data!" e-mail arrives. So why visit Gemini?*

*William Blair (Johns Hopkins University) during a visit to the Gemini South telescope for a classical observing run. See his article (with Frank Winkler, Middlebury College) in this issue to learn about this team's observations and discoveries.*

While it's true that you don't have to come to Chile or Hawai'i to get your Gemini data, here are five good reasons to consider a trip:

- 1. Participation (it's your data!):** While we cannot guarantee taking your queue data in your presence, we will do our best to schedule some (or all) of your band 1 or 2 observations during your visit. If we do, you can choose to monitor the process from either the summit or the base facility and watch in real-time as the data come in. You can then provide valuable feedback to the observer and, if necessary, make small adjustments (without impacting night-time efficiency) — just as you would if you were taking the data yourself. Such participation gives you an early look at the data and a better sense of the conditions and circumstances under which they were taken. All of this can help ensure you get the highest quality data during the observing run.
- 2. Improve your queue observing skills:** During your stay, you'll have the opportunity to meet with the observer(s), contact scientists, and other resident Gemini experts, and discuss your program. You'll also see how the queue gets planned and executed, how the Observing Tool is used at night, and how the telescope and instrument(s) take your data. If you are not familiar with Gemini, these learning experiences can be invaluable and will almost certainly improve your queue observing technique and help you in future planning. We especially encourage Principal Investigators of large programs, or those who expect to be frequent Gemini users, to take advantage of a visit to increase familiarity with Gemini operations and staff (see the testimonial on next page).



**3. Immediate data reduction:** All visitors can ask to extend their stay and work on data reduction while in the proximity of experienced Gemini staff. Especially for new users working with the Gemini data reduction package this can provide a great head-start.

**4. Impact Gemini's performance:** We learn a lot from our users, and we welcome your feedback. Most of the time this feedback arrives by e-mail, but during a visit you will have the opportunity to voice your opin-

ions or concerns in person. Your voice will be heard and may have an important impact on how we can better serve the user community and ensure that we acquire the best data possible for everyone. Your presence can make a difference on Gemini's performance and the data you and your colleagues get in the future.

**5. Share your knowledge:** Finally, during your stay, you'll have the opportunity to present your Gemini results (or other work) in front of an appreciative audience during a science colloquium. We hold these colloquia at the base facilities and most are well-attended by Gemini staff, other local

astronomers, and visiting scientists. It's a great venue for meeting new colleagues, obtaining instant feedback on your research, and inspiring discussion and thought.



Jonathan Ruel captures a photograph of the SOAR telescope from Gemini South at sunset as part of his visit which he describes in the box at right.

## Testimonial

Jonathan Ruel, Ryan Foley, Brian Stalder, and Saku Vrtilek visited Gemini South twice in 2011 to kick off their large program to study galaxy clusters using the the Gemini Multi-Object Spectrograph (Principal Investigator (PI) and Jonathan's advisor Christopher Stubbs). Jonathan writes:

*"Visiting the Gemini offices and then the telescope has made me a better and happier queue observer. The ways are hard to quantify but getting to experience the entire life cycle of the observations brought all the pieces of the mosaic together.*

*As the Gemini OT is concerned, I benefit generally from having observed so that I have the entire observing process and procedures in mind, and I would say that it is especially true for the details peripheral to the main science observations, that is the observation setup (slit mask alignment) and then the calibrations, as well as understanding where the overheads come from.*

*Above all things, I enjoyed very much meeting with the staff; beyond just putting faces on names that I had seen in e-mails, in discussing their roles that pertain to reviewing the slit masks, scheduling, and observing, I got to see them as team members concerned with the science, rather than an abstract approval step, and our interactions have been more focused and efficient as a result. Even though he was not there in person, the same goes with my NGO contact scientist. We had a few technical problems and he was helping alongside the Gemini staff with OT changes pretty much in real time, which was an enlightening departure from the usual."*

## Plan Ahead

Some of our PIs prefer the classical approach (see Figure 1), and we welcome that. Classical visitor feedback reports tell us that they have had very positive experiences at Gemini.

A roughly 90-percent majority of Gemini users, however, prefer queue. Visiting queue PIs realize all the same benefits as a classical observer with one exception: they have the advantage of leaving any unexecuted observations in the queue after they leave. Band 1, 2, and 3 PIs are welcome, however, we will not preferentially schedule programs in Band 3 for visitors.

To visit Gemini as a queue PI or student, contact your National Gemini Office. They will assist you in submitting a visitor request form. Be sure to specify in your request the duration of the visit, and how much time you expect to stay at the summit and base facility. Also note any special requirements or requests (e.g., assistance with data reduction and special timing needs). Due to budget constraints, Gemini cannot offer financial assistance, with one exception: the observatory will cover summit expenses (lodging, transportation, and meals) for student observers. Once a visit is approved, our administrative staff will help with local logistics, such as arranging lodging in Hilo or La Serena, as well as all summit logistical issues.

We like company, and we'll do our best to make your visit productive and enjoyable. You'll not only get to see your 8-meter telescopes in action, but enjoy the pristine natural locations of two of the most fabulous astronomical sites on the planet. They really are pretty spectacular (if we do say so ourselves) and we look forward to seeing you soon. Until then, clear skies!

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## A Dream Comes True: Brazilian Students Meet Large Telescopes

by Jorge Meléndez

*In the era of large telescopes, it is becoming increasingly common to acquire observations remotely. As a result, astronomers are losing direct contact with their precious link to the universe. This is especially true for countries with only a small share of telescope time, such as Brazil. The large majority of our approved projects at Gemini take only a few hours of observing time, which is not enough for deserving observations in visitor mode. In addition, many graduate students work on their thesis projects without ever visiting the observatories that took their data.*

*As the new professor of the graduate course "Observational Astrophysics" at the Institute of Astronomy, Geophysics and Atmospheric Sciences (IAG) of the Universidade de São Paulo (USP) in Brazil, I thought it important that students should visit at least one international observatory. Having traveled to different observatories around the world, I know first-hand that such an experience cannot only give them a better understanding of how astronomy is done, but also serve as a source of inspiration, especially for those who want to become astronomers. Thus, I was thrilled when the directors of Gemini Observatory, the Southern Astrophysical Research (SOAR) Telescope, the Cerro Tololo Inter-American Observatory (CTIO), and the La Silla Observatory accepted my request to bring some of my students to those facilities in Chile during April 2012.*

*Eight students participated in the trip. All loved the experience. I now invite you to read accounts from three of these students about their visits to Gemini, SOAR, and CTIO. Their words show how important this trip was to them, not only*



At the Gemini headquarters in La Serena. From left to right: Prof. Jorge Meléndez and students Patricia Martins de Novais, Miguel Paez, Fernando de Sousa Mello, Andressa Silva Ferreira, Nathália Cibirka, Marcelo Tucci Maia, Viviane Salvador Alves and Ana Maria Molina. Picture taken by A.M. M.

to learn about telescopes, but also in encouraging them to make true their long-sought dreams of becoming astronomers. I'd like to thank Manuel Paredes, Pascale Hibon, and Tina Armond, our main guides during the visit to the above facilities, for explaining every detail of the telescopes. We gladly acknowledge the financial support from the Vice Dean of Graduate studies at USP (Vahan Agopyan) and the Director of IAG/USP (Tércio Ambrizzi).

*The visit to Gemini, SOAR, and CTIO from the students' point of view...*

**Fernando de Sousa Mello:** The full understanding of some things only comes when they are truly lived. To watch the world on TV brings information, but not deep understanding. To watch the large telescopes such as Gemini on the Discovery Channel is amazing, but to see one in reality is just an incredible experience. Only then is it possible to realize how big they are and admire their slow and gracious movements.

*The large telescopes are like airplanes or satellites: they are only developed through cooperation. How many people did it take, all of them different, working together with the same objective to build these grandiose dreams? All of these thoughts were in my mind while I watched everything tiny and still through the airplane window and also when standing in front of those giant telescopes with silver domes.*

**Viviane Salvador Alves:** Sometimes the best events in life happen suddenly... and that was the case of our adventure to Chile. When Prof. Jorge Meléndez told us that he was seeking authorization to visit international observatories, we were totally skeptical. Although the observatories could accept us, how could we find the money to travel there? When some of our colleagues and professors learned about the possibility of our trip, they were even more incredulous. Fortunately, the financial aspect ended up being easier than expected, and we couldn't have been happier. In less than one month from the day that the Professor gave us the news, we were on our way to the telescopes. Our families back at home were thrilled and proud. When my father saw an image of us in front of the Gemini telescope, he described it as a "monster."

Experiencing strong winds in front of the Gemini South dome.

From left to right: student Andressa Silva Ferreira, Prof. Jorge Meléndez, students Fernando de Sousa Mello, Nathália Cibirka, Marcelo Tucci Maia, Ana Maria Molina, Miguel Paez, Patricia Martins de Novais, and Viviane Salvador Alves.

Photo by Manuel Paredes.

With this trip, some thoughts have arisen and will stay on my mind for a long time. One was an experience on the mountains on La Silla where we took a long hike to search for petroglyphs (which we did find!). Days before this, we saw the 8-meter Gemini telescope, which was a colossal technological contrast against the petroglyphs. Millions of thoughts and emotions went through my mind when I looked at those stones, carved by men thousands of years ago. Those ancient men

looked at the same sky and spent the night under the same darkness, asking themselves perhaps some basic questions, as we still do today — with the difference being that now we have 8-meter eyes to fuel our thoughts! Indeed, we certainly live in a very thrilling era!

**Nathália Cibirka:** So many doubts and emotions run through our minds in this stage of life; after long years attending lectures in college, attending graduate lectures could sometimes be torturous! We want to work on our theses, to finally boost our flight! This is when some insightful persons who can see what lies beyond can take bold initiatives that can change our expectations as young astronomers. Professor Meléndez is one such person. He gave us that much needed encouragement, and prepared us for a profession that requires strong theoretical and observational backgrounds.

The experience gained during this trip goes well beyond knowledge of astronomical instrumentation, which was indeed very enriching. For me, emotions were greatest when we got to see the telescopes that are used in our work up close (the data for my thesis came from here, I can't believe it!). To understand the overall process, from knowing the telescopes and their instruments, to the climate conditions necessary to operate them, to the point when the data are taken and the data reduction is performed, made my vision grow by so many orders of magnitude! It gave me that breath needed to return to my everyday activities with more pleasure.

When I returned, my family felt proud and my friends were a bit envious. They cannot fully understand yet how our whole experience was even possible. I felt that I had taken one firm step towards making my childhood dream of becoming an astronomer come true.

