Philippe Busquin Visits Paranal

European Commissioner for Research at the ESO Very Large Telescope

The European Commissioner for Research, Mr. Philippe Busquin, who was visiting the Republic of Chile, arrived at the ESO Paranal Observatory on July 29, 2003.

The Commissioner was accompanied, among others, by the EU Ambassador to Chile, Mr. Wolfgang Plasa, and Ms. Christina Lazo, Executive Director of the Chilean Science and Technology Agency (CONICYT).

The distinguished visitors were able to acquaint themselves with one of the foremost European research facilities, the ESO Very Large Telescope (VLT), during an overnight stay at this remote site. Arriving after the long flight from Europe in Antofagasta, capital of the II Chilean region, the Commissioner continued along the desert road to Paranal, some 130 km south of Antofasta and site of the world's largest and most efficient optical/infrared astronomical telescope facility.

The guests were welcomed by the ESO Director General, Dr. Catherine Cesarsky, and the ESO Representative in Chile, Mr. Daniel Hofstadt, as well as ESO staff members.

The visitors were shown the various high-tech installations at the observatory, including many of the large, front-line VLT astronomical instruments that have been built in collaboration between ESO and European research institutes. Explanations were given by ESO astronomers and engineers and the Commissioner gained a good impression of the wide range of exciting research programmes that are carried out with the VLT.

Having enjoyed the spectacular sunset over the Pacific Ocean from the KUEYEN telescope, one of the four 8.2 m telescopes that form the VLT array, the Commissioner visited the VLT Control Room from where the four 8.2 m Unit Telescopes and the VLT Interferometer (VLTI) are operated. Here, the Commissioner was invited to follow an observing sequence at the console of the KUEYEN telescope.

"*This is a tribute to the human genius*", commented the Commissioner. " *It is an extraordinary contribution to the development of knowledge, and as Commissioner for Research, I am proud that this is a European achievement.*"

"*It is a great pleasure to receive Commissioner Busquin, whose actions towards European research we admire, and to share with him the excitement about the wonders of the Universe and the advanced technology that allows us to probe them*", said the Director General of ESO.

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ESO astronomers demonstrate an observation sequence to Commissioner Busquin.

The Commissioner visits the VLT Interferometric Laboratory with the VINCI instrument.

Fellows at ESO

Malvina Billeres

When I had my interview for an ESO fellowship in Chile, the committee asked me where I would like to work: Paranal or La Silla. I have to confess that I had never been to either of the ESO observatories before, and I thought that my tiny amount of experience wouldn't be enough to work at Paranal, so I answered la Silla.

After two and a half years of the la Silla routine, I know that my argument was completely wrong! The fellows at la Silla do exactly the same job as the staff, with a lot of responsibilities, freedom and interesting challenges.

I think that the most exciting thing at la Silla is that I can touch everything: be part of the difficult task of opening SOFI, pilot the New Technology Telescope with its active optics, do a turn as a Telescope and Instrument Operator (TiO), make tests with the instruments to do my science etc... With all these possibilities, I feel really lucky to be at la Silla!

Before coming to Chile, I spent almost 6 years in Montreal (Canada) where I did part of my thesis. I had the chance to work in a really good team at the University de Montreal, on pulsating stars: white dwarfs and mainly subdwarf B stars. During my thesis, I did a lot of fast photometry observations with the Montreal 3-channel portable photometer, LAPOUNE. I went to the CFHT several times, and spent weeks at the Mount Bigelow station in Arizona (amazing to see that observatories are always localized at such beautiful places).

Today, although my science is still centred on the study of variable evolved stars (EC14026 and ZZ Ceti), I have broadened my scientific interests: the search for LPs-dBV (a new class of pulsating sdB discovered last year) in the southern skies, the search for luminosity variations in young brown dwarfs, determining the influence of magnetic cycles on measured radial-velocity with HARPS. ESO is a perfect place to start new projects thanks to the interaction with all the visiting astronomers.

In addition, the mountains in Chile are almost as beautiful as the mountains in the French alps where I came from.

VALENTIN D. IVANOV

I STARTED WORKING for ESO in April 2001, after spending seven years in the US where I got my PhD. This was a new beginning as the ESO fellowships are different than most other academic positions. Besides the research, we are engaged in duties, and mine are with the Paranal Science Operations. It is a challenge and a blessing. The work requires attention, quick understanding of problems in a broad range of astronomy topics, good knowledge of the instrumentation and observing techniques, interaction with visitors in various situations. But the work also gives back a lot - the very same things, and they do enrich the great experience of being an astronomer.

When people ask me what I do, I answer - I am a craftsman and a general purpose infrared astronomer. After spending the last two years and a half at ESO, it is even more so. Still, my science interest is concentrated mostly on: (i) Stellar populations in star burst and active galaxies. Since these object often boast 10 or more magnitudes of visual extinction, I have assembled a stellar library and a population model for the near-infrared. The absorption features in the H-band turned out to be an excellent metallicity indicator. (ii) I lead a collaboration to search for hidden globular and massive clusters in the Milky Way. We are currently engaged on detailed follow up observations from various telescopes around the world.

Ending on a more personal note: back in my home country, Bulgaria, I am more (in)famous as a science fiction writer. I have published some stories, and they have even brought me some literary awards.

CLAUDIO MELO

MY INTEREST IN Astronomy started at the end of my under-graduate years when I had to choose a topic for my masters degree. Among the options I had, Astronomy was by far the most exciting. After that, I went to Geneva where I had the privilege to do my Ph.D. thesis with Prof. Mayor on some aspects of pre-main sequence spectroscopic binaries such as, binary frequency, orbital evolution and angular momentum evolution. This long-term study (4 years) took me many times to the Swiss Telescope at La Silla Observatory where I (like Linda in the last Messenger) fell in love with the place, making my application to ESO quite a natural step after my Ph.D.

I started as an ESO Fellow in May 2002 with duties at Paranal Observatory. It has been an amazing experience to work on Paranal – having contact with the new instruments, talking to and assisting visitor astronomers, performing operations, etc. Of course, the real world is certainly more stressful than what you imagined in your dreams. In spite of this, I am glad to be able to find in Paranal that magic that I experienced in La Silla during my first run in the Swiss Telescope. Another key change in contrast to my thesis years where I spent most of my time working alone, it is the need for team work. Learning how to work as a team on Paranal with people from many different countries and backgrounds has been a hard, but doubtless, an enriching process that I'm glad to be undertaking.

From the scientific point of view I'm also very happy with the ESO fellowship since we still have plenty of time for our research. Currently, I'm still interested on the evolution of angular momentum in both young stars in the pre-main sequence phase and more evolved stars in clusters. In the same direction, myself together with a few collaborators in different places have been working on the connection between the angular momentum evolution and the light element abundances. I'm also participating in a common project along with the star-forming people in Vitacura (led by Michael Sterzik) aimed to understand how spectroscopic binaries form.

One thing that I missed during my years in Geneva and that I still do miss here in Santiago is the Sea. Being from a coastal city of Natal (Brazil) makes the Ocean not only a place where you go to have some beers or to get tanned, but also makes it your friend. I'm patiently waiting for the day I'll be able to spend more time at the sea again, either watching it or in my sailing boat (for the greatest happiness of my inner Popeye!).

CHRIS MULLIS

I HAD THE PLEASURE to join ESO Garching in September 2001 directly after completing my PhD at the University of Hawaii. This global shift meant distinct changes in scientific and living environments, but I have found both to be very stimulating and very enjoyable.

Galaxy clusters lie at the heart of my research interests. More specifically, I use X-ray selected groups and clusters of galaxies to study the distribution and evolution of large-scale structure in the universe. X-ray selection is currently the optimal procedure for building cluster samples with minimum bias and maximum statistical completeness. Working with colleagues in several fruitful collaborations, we have discovered hundreds of clusters largely based on ROSAT data, and we are following these up with dedicated observations with *XMM* and *Chandra*.

We probe different redshift, luminosity/mass, and spatial regimes using several independent surveys. For example, in an on-going observing campaign at La Silla and Mauna Kea, we are completing the first comprehensive X-ray survey for galaxy clusters behind the Milky Way (nearly 200 systems located so far of which ~75% are new discoveries). This sample is crucial for making an unbiased census of the mass distribution of material in the nearby universe. On a different front, we are using deep, multi-color VLT+VIMOS imaging for a sample of high-redshift, high-X-ray luminosity clusters (z~0.6) to investigate the transformation of galaxies as they are accreted along filamentary conduits from the field to the cluster environment.

The exceptional quality of the science community at ESO and the supporting technical resources (hardware, software, and most importantly, people) is very beneficial to my research. Thus I'm very happy to contribute to the observatory's mission through my functional duties. During my first year at ESO, I had the opportunity to work in the Paranal Science Operations group. After spending many quiet nights observing at Keck with only the telescope operator's company, I was initially overwhelmed by the magnitude of the VLT operation.

However, I soon learned this large footprint is necessary to keep ESO's fantastic array of cutting-edge telescopes and instrumentation running smoothly and continuing to grow. The Paranal experience broadened my technical knowledge and continues to help maximize the effectiveness of my observing programs.

Now completing my second year at ESO, my functional duties are much closer to home (and to a much happier wife) with the Astrophysical Virtual Observatory group at Garching. I am developing a system that will allow astronomers to pursue innovative research made possible by efficiently leveraging the ESO Science Archive with processed X-ray data from the XMM and Chandra archives. In addition to these responsibilities, I have also served on various committees, organized weekly science discussions, and administered computers to our fellows and students.

With all the exciting work to be done, it's a supreme challenge to marshal free time. On the rare occasions that I succeed, my wife and I enjoy hiking and climbing in the Alps and exploring Europe.