New Staff at ESO

Eric Emsellem

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Coming back to ESO, 13 years after my first post here: impressive changes in Garching and Munich, and a large chunk of life on my side, quite a happy bit in fact. So why leave such a beautiful city (Lyon), the French capital of Gastronomy (G's are important), with such a relaxing atmosphere, wondrous surroundings, fine weather...?

Although I can, very probably, claim blood ties to too many wanderers and migrants, including Swiss, Italian, Spanish, Belgian, Maltese, Kabyle, and more relevantly from Visigoths, this is obviously not what led me back to ESO. I am in fact privileged enough that I can today carry out my passion as an astronomer, which took hold of me quite early on, while watching the sky during long summer nights in the countryside of France. For many years, I forgot about that passion, and after maths and physics studies in Paris, I directed my steps towards an Engineering School in Lyon. I soon realised this was a mistake, and took my chance to cross the ocean and spend some time at Cornell University as a Masters student. I have a degree in engineering, but this is clearly not my field: my first self-built piece of instrumentation (a laser-controlled Fabry-Perot) required part of the enclosure to be sawn off to make the instrument fit during commissioning at the IRTF (NASA Infrared Telescope Facility, Hawaii), and well, it didn't work anyway.

I then decided that –20°C was not the best temperature at which to spend my winters, and had the opportunity to head back to Lyon for a PhD, working on all sorts of galactic nuclei (axisymmetric, presumed triaxial, single or double) with the help of the first of a series of integral field units (IFUs), the (in)famous "TIGER" spectrograph. You could then easily remember every pixel of every spectrum, and I certainly knew each individual lens by their nicknames. Glorious days! I then spent more than two years in Leiden as an EARA postdoc, followed by a fellowship at ESO Garching. I was still in the business of galactic dynamics, and contributed to writing, with Niranjan Thatte, the ESO document that got SINFONI accepted by the Scientific and Technical Committee. Of course the IFU now at the VLT does not look at all like the one described in that document.

I finally came back to Lyon as Associate Astronomer at the Centre de Recherche Astrophysique de Lyon (CRAL), and a few years later led the TIGER team, to merge finally with the cosmology group to become GALPAC (Galaxy Physics and Cosmology). I served a few years as French–INSU deputy for Anne-Marie Lagrange and Jean-Marie Hameury, and more briefly as deputy director of CRAL. I became a Full Astronomer in 2006. During these very happy years in Lyon, I always enjoyed standing between the pure modelling and observational sides, and had the chance to witness the evolutionary line from TIGER to OASIS, and then SAURON and now MUSE. But time to move on! To paraphrase many, I cannot think right now of a place better than ESO for astronomy. Staying close to junior and senior researchers, and doing my best to catalyse science activities in Garching, with a strong link to Chile (thanks to Michael West), is both an exciting task and a challenge.

I, of course, had to ponder over a few things though. The first one is my irrepressible taste for fermented grape juice (I was born in Bordeaux). But living in Munich should not prevent me from pursuing this quest — so many vintages to discover, so little time. The second one may be related to the fact that most of my ancestors spent their lives near the sea. An inaccurate translation from German nearly tricked me here: I am a southern person, and I would need more than just an encouragement to dive deep into these Garchinger/Echinger/Starnberger "See" things, even if the Chiemsee is also known as the Bavarian Sea. But apart from that, Munich, with its size, number of inhabitants, rich culture, pork specialties, the nearby Alps, its weather and landscapes, it is probably as close as you can get to Lugdunum on a German-speaking country. I sincerely feel fortunate to live such an experience. I sometimes hear that "Emsellem" means "good star": it is certainly just a lie (a nice one though), but clearly stars and luck have been my best friends for decades.

Francisco Miguel Montenegro Montes

Although I was born and grew up in Madrid, my roots spread further to the southern region of Spain, near the city of Córdoba, where most of my family lives. When I was twelve I won my first telescope in a road safety education contest at school. It was a 5-cm diameter refracting telescope with a poor quality wooden tripod, but enough for me to have my first direct encounter with the craters and valleys on the Moon and the few bright "stars" visible at that time in the skies of Madrid.

To a great extent I was motivated to become a professional astronomer by the fascinating science fiction stories and outreach literature that captured my interest at that time. The library of the local amateur astronomy group (AAM, Agrupación Astronómica de Madrid) was a fantastic place to find such videos and books. I remember the excellent "Cosmos" TV series by Carl Sagan with particular fondness. In one episode he was peacefully walking over his one-year "cosmic calendar" while explaining the history of the Universe in half an hour, in another relating how Erastothenes of

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Cyrene could manage to measure the circumference of the Earth with remarkable accuracy many centuries ago.

At some point I started studying physics (and lots of mathematics) at the Universidad Complutense de Madrid. Later, I moved to the Canary Islands to complete my studies and there I had the first opportunity to explore the clear Canarian skies with a professional telescope: the IAC-80 at the Teide Observatory in Tenerife. For my PhD I moved to the heart of the province of Emilia-Romagna in Italy. At the Istituto di Radioastronomia in Bologna I started to study the Universe with different "eyes". There I learnt about dishes, interferometers, correlators and day-time (non-solar) observations! In those years I gained experience with the use of several astronomical facilities around the world, like the 100-metre radio telescope in Effelsberg (Germany), the IRAM 30-metre single dish in Granada (Spain) and the VLA and VLBA arrays in the US.

I have been studying the radio emission from an interesting group of quasars, Broad Absorption Line (BAL) quasars. Forty years have passed since their discovery and it is still not clear why about 15% of quasars develop the winds that give rise to the absorption troughs we can see in the optical spectrum of BAL quasars. We have tried to use radio observations to find hints about the orientation and evolutionary status of these distant objects. I am involved in an international collaboration with participation from Italy, Spain, the Netherlands and Chile that aims to study these objects with a multi-wavelength approach.

Since December 2008 I've been working at ESO in the APEX Science Operations group. This is a great new experience for me in various ways. Working in the Atacama desert is sometimes a surprising adventure where I can find wild donkeys in the middle of the ALMA road and thousand-year-old cacti. But it is also one of the driest atmospheres in the world, which makes this prototype a privileged eye at mm and submm wavelengths. Every day I learn something new about the telescope and its many instruments. In my still short stay here, APEX has performed very important observations (see for example, the cover of last issue of *The Messenger*, 135) and I'm pretty sure it will continue like this for several years, successfully scrutinising the dry skies above Chajnantor.

The Integral Field Spectroscopy Wiki

The field of integral field spectroscopy (IFS) is now well developed, with IFS instruments installed on all the main optical telescope facilities around the world. Some of the most sophisticated are available on the VLT. However IFS continues to be avoided by large sections of the astronomical community due to perceived difficulties with data handling, reduction and analysis. There is no doubt that dealing with IFS data is more complicated than simple imaging or long-slit spectroscopy, but many of the problems that arise could easily be avoided by benefiting from the experience and knowledge of others.

In order to facilitate exchange of IFS knowledge, a repository of information, tips, codes, tools, references, etc., accessible and editable by the whole community, has been initiated. The wiki is intended for use by IFS beginners for any questions or issues with IFS data and for more expert users who are invited to contribute tips, experience of particular instrumental quirks, pieces of code, etc.

Topics covered by the wiki are:

– current and future integral field spectrographs;
– observational techniques and planning;
– data reduction, including overview of procedures for different types of IFS;
– more advanced tasks like mosaicing or differential atmospheric refraction (DAR) correction;
– analysis techniques, from visualisation to line fitting and source extraction.

The originators and maintainers of this site are currently Katrina Exter (Katholieke Universiteit Leuven, Belgium) and Mark Westmoquette (University College London, UK). To access the wiki go to: http://ifs.wikidot.com