New President of Council

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Is there an astronomer who has not dreamt of being actively involved in the development of world-class astronomical facilities, including the building of the largest telescope ever? This is the fantastic opportunity that has been offered to me by the ESO Council following my election as President of this body in late 2017. This is an incredible honour, a huge responsibility and the cause of some anxiety, but I also feel a genuine eagerness to get started. So many challenges lie ahead, but the organisation is strong thanks to several factors: its extraordinary staff; the dedication of Member States to work for its success; and the strong engagement of the community at large at all levels. These constitute a strong recipe for success, and are good reasons for me to be confident.

I grew up in Neuchâtel, a small town in the French-speaking part of Switzerland, where I studied physics. I later obtained my PhD in astronomy under the guidance of Michel Mayor at the University of Geneva and then moved to the USA on a one-year fellowship from the Swiss National Science Foundation. I ended up staying for thirteen years — life is unpredictable. A postdoctoral position at Los Alamos National Laboratory followed, and I then became junior faculty at Harvard University and senior faculty at the University of Arizona. My scientific interests were quite broad, ranging from understanding the origin of our Moon to the physics of supernova explosions. Eventually, I focused on the origin and evolution of planets within and outside the solar system.

In 1997, I was offered a professorship in the Physics Institute of the University of Bern and my whole family returned to Switzerland. While my wife and I had left home with two suitcases and our 20month old daughter Sophie, we returned with one container, two additional daughters, Florence and Melanie, Coal the dog, and Leo the cat!



Unsurprisingly, Switzerland is quite different from the USA and it took us all some time to re-adjust. After a few years, I became director of the Physics Institute, a job that I held for thirteen years. During that time, I also got involved in my first ESO project, the High Accuracy Radial velocity Planetary Searcher (HARPS). More recently, I had the chance to join new ESO projects such as the Échelle SPectrograph for Rocky Exoplanet and Stable Spectroscopic Observations (ESPRESSO), the Near Infra Red Planet Searcher (NIRPS) and even the proposed Extremely Large Telescope (ELT) instrument, HIRES. Having started as a theorist, I didn't play a leading role in these projects but supported their construction with the help of our engineers.

In 2008, a few colleagues and I started playing with the idea of building the CHaracterising ExOPlanets Satellite (CHEOPS), a small Swiss satellite dedicated to measuring the radii of known planets orbiting bright stars using the transit method. Unfortunately, a one-year feasibility study concluded that the mission was too ambitious to be carried out by Switzerland alone.

The project took on a new dimension with the decision in 2012 by the European Space Agency's (ESA) Space Programme Committee to establish smallclass missions. As chairman of the Space Science Advisory Committee, I had carefully followed the discussions leading to

the decision and decided to submit our idea in response to the call. We eventually assembled a consortium and submitted the proposal in June 2012. Our proposal was selected against 25 other proposals that October, and I was subseguently appointed Principal Investigator of the mission, which involves institutes in 11 ESA member states. Life is unpredictable. Unsurprisingly, this project has taken a lot of my time during the last five years, but the launch is scheduled for early 2019 and science is now on the horizon!

While all these activities were going on, we managed to establish the Center for Space and Habitability at the University of Bern in 2011, and, in 2014, a National Centre for Competence in Research (NCCR) in planetary sciences, called PlanetS, of which I am now the director. Bringing together all the key players in this field across Switzerland, this centre has provided scientists in the country with new research opportunities, including the means to participate in ESO instrumentation projects (for example, the Enhanced Resolution Imager and Spectrograph [ERIS] and NIRPS).

My excursion into the European Space Programme has not prevented me from keeping close ties with ESO. It is simply impossible to move away from such an organisation! Eventually, I had the privilege of serving on two visiting committees, and in between, to chair the Science and

Technical Committee over the period during which Laurent Vigroux and then Xavier Barcons presided over Council. These last three years, I have been one of the two members of Council representing Switzerland — a time during which I could learn the inner workings of the Council and appreciate the exemplary leadership provided by its President Patrick Roche.

I don't think it will come as a surprise to anyone to hear that the organisation is facing significant challenges. These result from embarking on the building of the ELT, the largest telescope ever conceived, while at the same time keeping the existing world-class observatories (La Silla Paranal Observatory and the Atacama Large Millimeter/submillimeter Array) operational, up-to-date and at the forefront of ground-based astronomy.

The challenges are not solely of a financial nature. Just two examples include finding staff with the specific qualifications needed, and managing large projects across the world. Furthermore, in a financially constrained environment, the workload and the associated stress on everyone, from the Director General to all the staff, including everyone's families, have risen significantly. The Director General and I are aware of this situation and, together with Council, we will regularly revisit and monitor these issues, including the general work-life balance at ESO, over the coming years.

We have given ourselves fantastic challenges that we now must overcome. We have prepared ourselves to the best of our abilities to tackle them effectively and in a timely manner. With the organisation, the Member States and the community we have assembled a winning team. I am looking forward to working with everyone to continue building this world-leading astronomical organisation.

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Review of the Last Three Years at ESO

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I completed my three-year term as President of the ESO Council at the end of December 2017. This is therefore an appropriate point at which to review Council's activities over this period and to reflect on how ESO's programme has moved forward.

ESO is an evolving organisation, in terms of its Member States as well as its scientific and technical programmes and its organisational structure. Poland became the fifteenth Member State when the formal accession process was completed in 2015. In 2017, Australia entered into a strategic partnership with ESO, providing Australian astronomers with access to the La Silla-Paranal facilities for a decade, whilst opening up the possibility of moving towards full membership in due course. There was also good progress with the accession of Brazil through its parliamentary process in 2015, but the procedures have not been completed.



Working with the Director General, Council sets the policy and strategy for ESO while Council delegates work closely with their ministries, science communities and the ESO executive towards realising the agreed strategy. Council normally meets four times a year, with two formal meetings usually held at the Garching HQ and two less formal Committee of Council meetings, which are often hosted by a Member State. I am very grateful to the hosts of these meetings, which afford opportunities to meet representatives of the scientific communities and funding agencies, and to learn more about national activities as well as undertaking Council business.