

PIERRE J. LÉNA

I was born in Paris in 1937, the elder of a family of six children. After secondary school, I decided to study physics and entered the *Ecole normale supérieure* in 1956. I found there an exceptional intellectual atmosphere between humanities and science students, great masters such as Laurent Schwartz or Alfred Kastler, and an extreme sensitivity to injustices and world conflicts, at the time of the Algeria war, the decolonization and the emergence of the Third World. I began to teach at the Sorbonne (Orsay) and decided to go to astrophysics, at a moment when access to space was going to deeply transform this field. The immense infrared spectral range was entirely virgin of exploration and I spent the next two decades on it. My Doctorat d'Etat was prepared partly in Arizona, on the infrared radiation of the Sun, one of the very few objects to be bright enough to be detectable at that time! I was lucky to use a NASA airborne telescope, and, back in France, we created a modest airborne observatory, which made some of the early observations of molecular clouds and dust emission in our Galaxy.

At the end of the 70s, while Professor at the University of Paris VII and inspired by the work of the French astronomer Antoine Labeyrie, I made every effort to obtain astronomical images with high angular resolution and to reach the diffraction limit of large telescopes by gaining one and later almost two orders of magnitude on image sharpness, beating the effects of the Earth's atmosphere. Working with a small team, this led us in 1989 to success with the first astronomical use of adaptive optics, a technique now adopted worldwide by all large telescopes.

While my colleagues or students were exploiting it to study many solar system objects or the star formation process, I became involved in the project of the European *Very Large Telescope*, for which, again following Labeyrie's ideas, we proposed an interferometric mode, using the coherence of light and combining several independent telescopes to gain another order of magnitude in resolution. Although this had never been done at such a scale, the project was adopted in 1987 and is now practically in operation, just in time to plan observations of the extrasolar planets discovered in large number since 1995.

I have always cultivated my interest for education, and in 1991 became president of the French *Institut national de recherche pédagogique*, while in charge of the Graduate School of astrophysics in Ile-de-France. With Georges Charpak and Yves Quéré, we founded in 1995 *La main à la pâte*, a nation-wide movement to renovate science education in

primary schools, soon to be expanded to many countries. It led me to discover the urgency and magnitude of science education issues in the world and to spend large efforts on it.

Four children and their spouses and eight grandchildren form a happy circle, while many former students or young colleagues extend this circle: among them I would like to mention especially Daniel Rouan, Christian Perrier, Guy Perrin, Marie Glanc and the regretted Jean-Marie Mariotti.