A BLURRY STORY

Pierre Léna – When I was still an astrophysics professor I often told my students at the start of the year, you are very fortunate, because you have a free and fresh mind. You know things, but not too much, but you are not encumbered with all of the knowledge of those who came before you. When I was a student myself I would go to the library at the École normale, rue Lhomond, the physics library terrorized me! I felt ignorant because I saw the accumulation of knowledge that I obviously could never familiarize myself with enough to understand and share it. And that gave me a feeling of despair which otherwise took me a number of years to overcome. Therefore it seemed reasonable and perfectly productive, to tell my students: it is because you have a fresh viewpoint that you will be able to make discoveries that no others have made before you! It is not that you are more extraordinary than the great geniuses, but it doesn't matter! If you are convinced of this, then you will bring something to science over the course of your life...

And perhaps an example of this happened to me later in what I might call a blurry story, meaning, the reality that the entire astronomical community accepted during the 60s, that astronomical images captured by earth bound telescopes were blurry due to optical effects of earth's atmosphere, which causes stars to twinkle. So with quite a small sized team we worked on this problem, can we remove this blurriness in astronomical images by modifying the telescope and in a few years, highly motivated by the soon to be built Large European Telescope, now located in Chile, with its 8 meter wide mirrors, could we overcome this blurriness? And the rest of the story, at the end of the 80s, showed that yes, it was possible, and there have been many results since, in particular the discovery by my German colleagues, but with an instrument that we constructed, of the black hole at the center of our galaxy... I recall the thought of a colleague who said to me, "If you were to be right, it would be too good to be true!" It is true that it was very good, but it is the case that it was true as well. So, this reaction, it's a reaction of an old guy, in the end, who said to himself, we should have found that out, if it were true, we should have found that out sooner! And I believe it is perhaps a message for young folks that it is this sort of unworrying naivete that allows us, at the beginning of a scientific career, to do what prior generations could not. Anyways, it is a bit of what I would like to convey to school children today, that science is freshness of thinking, a naivete of looking, at the world, at things, at light, at phenomena, much more initially than knowledge. Then subsequently afterwards, of course, it takes, it takes a lot, to go forward, but we are carried by this kind of inner force that makes the acquisition of knowledge at once easier and more necessary, but we accept this necessity and after, there is nothing more but to work.