

Prof. R. S. Krishnan, doyen of experimental physics in the country, is having his Sathabishekam (i.e. he has in theory viewed 1008 full moons). We reproduce below a letter that was written to him on this occasion.

— Editor

A letter to R.S. Krishnan

My dear Prof. Krishnan,

I notice that your *Sathabishekam* is being celebrated on the 18th of September 1993. May I congratulate you on this auspicious occasion and also on the extraordinary life of science you have led. I wish you a further long period of very happy life.

Sometime ago, I had to speak on the growth of physics in India immediately after independence at an Indo-French meeting. It was while preparing the text of this lecture that many important issues came into perspective and I thought this may be a good occasion to mention them to you. In the lecture I said:

'Because of the policies the government had followed just before and immediately after Independence, one might have expected a set-back in the progress of science as the country would have had to wait for the newly trained young scientists who were sent abroad to return and establish schools of science. In the case of Physics and Applied Physics, this simply did not happen. In fact, Physics actually flourished magnificently. Vigorous schools of research in Pure and Applied Physics that too in new fields were set up which produced internationally competitive scientific work. The tradition and momentum built up in physics in the country during the previous three or four decades came into play.'

'The greatest contribution made by Raman to post-Independence physics was not just his science but the students he had trained and who had passed through his laboratories. One can mention the names of many of his students like S. K. Mitra, S. K. Banerjee, K. R. Ramanathan, L. A. Ramdas, K. S. Krishnan, S. Bhagavantham, K. Banerjee, R. S. Krishnan, Vikram Sarabhai, P. Nilakantan, P. R. Pisharoty, Anna Mani, G. N. Ramachandran, S. Chandrasekhar, A. Jayaraman and S. Pancharathnam. Many more could be added to this list.'

About you I said: 'R. S. Krishnan was amongst the most outstanding experimenters of Raman's students. He is well known for the new effects he discovered in colloid optics. His work on the second order Raman Effect is nothing less than brilliant. It was a pity, however, that it became a subject of much controversy; not his experiments but their interpretation. His work on Brillouin scattering in diamond and the work he did with V. Chandrasekharan can only be described as monumental. Apart from renown in his personal science, I think the greatest contribution he made was when he changed the style in which physics was done in India. A clear break from the traditions set-up earlier.'

He had a knack of picking young scientists and encouraging them to start new things and making them work in almost independent groups. He courageously started such activities like dating of rocks, mass spectroscopy, ultrasonics, crystal dynamics and crystal properties, especially photoelasticity, paramagnetic and nuclear magnetic resonance and also X-ray crystallography. Many of these had never before been done in the country. By creating these semi-independent groups, Krishnan was in a sense (perhaps unconsciously) responsible for breaking the 'GEHEIMRAT' system in which the Professor is supreme and all the members of the lab work for him. Unfortunately, this old system still persists at many places in the country.

You chose V. S. Venkatasubramanian (VSV) to work on the dating of rocks. The work you and he did was truly path breaking. The first mass spectrometer was built in the Physics Department under your guidance (and not in Bombay). With VSV and E. S. Raja Gopal, ultrasonic research came of age and elastic constants (of solids also) were determined using the most modern techniques. Your encouragement of Suryan, who was so full of ideas, was truly phenomenal. The first paramagnetic

resonance and nuclear magnetic resonance setup was done in the Physics Department. Indeed, modern electronics really entered into physics because of you in your department. The remarkable work of R. Srinivasan, his theoretical and experimental acumen is something you and all of us can be proud of. I think Chidambaram, under your inspiration, became one of the best in India in instrumentation and he produced notable science in many fields.

I remember how you egged me on to finish my doctoral thesis and later persuaded me to change my field of research from magneto-optics and paramagnetic resonance. When G. N. Ramachandran left, you 'picked me' and said that you had decided to put me 'in charge' of X-rays and said 'Try to build a group worthy of this department'. I am personally very thankful to you for this decision of yours. Students who came out of this group attained world renown: Viswamitra, Venkatesan, Vijayan and N. V. Mani (who died young) and also *their* students. I flatter myself in thinking that your experiment in this regard was not too unsuccessful.

You can be truly proud of your personal students V. Chandrasekharan, V. S. Venkatasubramanian, R. Srinivasan, E. S. Raja Gopal and R. Chidambaram for they are as good as any in the world. You can feel immensely proud of and pleased with some of the products of your laboratory who occupy/occupied few of the highest scientific posts like the Chairman of the Atomic Energy Commission, Director of the National Physical Laboratory, Director of the Indian Institute of Science, etc.

You can look back with pride and with some satisfaction on the contributions you have made to the intellectual wealth of the country by your personal efforts and through those who were associated with you.

With my respectful regards,

S. RAMASESHAN