

## **In Memory of Professor Satish Dhawan**

By  
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It is well nigh impossible for us to separate the personal from professional while writing about Prof. Satish Dhawan who passed away in his sleep on January 3, 2002. But we will try and restrict here to our professional association.

One of us (KKP) met Satish Dhawan as a first year research student at the Indian Institute of Science. He was busy trying to solder a “hot wire” peering through a magnifying glass (one could not see the wire with the naked eye), a sensor used in turbulence research. That was in the year 1953. Those days foreign exchange for buying scientific equipment was simply not available. Thus one had to use local resources to build scientific equipment that could be used in research leading to publications in international journals. This led me to build a drum camera to measure flame speeds in tubes and a Mach-Zehnder interferometer (this required special intervention on behalf of Dhawan to persuade the Instrumentation Laboratory to undertake the grinding and coating of mirrors) to study natural convection.

It is this approach of using local resources – both material and human - that led to the founding of ASTRA (Centre for the Application of Science and Technology to Rural Areas) at the Institute in 1974. It was a natural extension of our collaborative work on Biogas technology (along with another colleague C.R.Prasad) and AKNR’s presentation on appropriate technology to a conference that was to discuss science and technology inputs to the Fifth Five year Plan that was under preparation at the time. Satish Dhawan, whose commitment to help the underprivileged knew no bounds, warmly embraced the idea.

At the time of founding of ASTRA he was, apart from being the Director of the Institute, was also the Secretary to the Department of Space and the Chairman of Space Commission. He used his position to telephone the Chief Secretary to the Government of Karnataka for ASTRA to explain its ambitions and to persuade the Government to part with land in a village to set up a campus for trying out technologies and serve as a demonstration centre for adaptation by the local population. Ungra Campus should have taken months of negotiation with the government bureaucracy to come into being. But Dhawan’s intervention made it possible to acquire the land in a few weeks.

Dhawan did not stop at that. In his busy schedule, he literally created time to spend with us virtually a whole afternoon discussing our plans for the campus. When some six of us planned to spend a week at Ungra, we could confidently use his name to persuade the Institute’s hostel cook to provide us the much needed food in the rudimentary facilities of a village. He went one step further. Half way through our work on Ungra Campus, he

decided to spend a whole day visiting the campus looking at all kinds of details and asking many searching questions that led us to improve upon our work.

Over the years ASTRA work has not merely expanded but has spawned many other groups on campus such as CGPL (Combustion, Gasification and Propulsion Laboratory), SUTRA and Centre for Ecological Sciences all of which have active interest in improving rural life. ASTRA was also a forerunner of similar groups at every IIT in the country.

It is hard for the two of us to avoid mentioning Dhawan's contribution to this state of affairs in institutions of higher learning in India.

Woodstove, that hardy equipment of rural living, catering to the basic need of living, is the theme of this issue. It presents many new ideas of bettering the equipment, ideas to create new fuels out of locally available resources, and to put together ideas to bring these for use in rural kitchens. We are sure it would have pleased Dhawan to learn about it.

We dedicate this issue to the memory of Prof. Satish Dhawan.