

South Asian Physics Foundation Overview and Objectives

Introduction

Welcome to the South Asian Physics Foundation! We are excited to take this opportunity to introduce the foundation and to describe our work and vision. SAPF is a nonprofit organization dedicated to fostering international cooperation among South Asian nations in the areas of physics research and education.

South Asia has a rich tradition of excellence and leadership in the sciences in general and in physics in particular. South Asian physicists have made major discoveries and contributions to physics knowledge. Over one hundred physics institutions and university departments in South Asia currently undertake research and teaching in fields as varied as solid state physics, optics, particle physics, astronomy, biophysics, mathematical physics, string theory and many others. These programs have helped fuel economic development and industry, leading to new products and services and training new generations of professionals to work in advanced science and technology. Three South Asians have won the Nobel Prize for physics (Chandrasekhar Venkata Raman in 1930, Abdus Salam in 1979, and Subramanyan Chandrasekhar in 1983).

For the most part, South Asian nations successfully conduct their own independent physics programs, although their scopes vary greatly (for example the Maldives, an island nation with a population of less than half a million, has only had a university since 2011). The past few decades have also seen an enormous increase in physics collaboration between South Asia and other parts of world. For instance, South Asian countries are already represented in a number of high-profile international physics experiments such as those at CERN (Switzerland/France), Fermilab (USA), ITER (France), KEK (Japan) and SESAME (Jordan).

Despite these impressive achievements, political barriers have sharply limited opportunities for international collaboration within South Asia itself. This has been particularly true for the field of physics, in which too many resources have been squandered in counterproductive nuclear weapons programs. The most prominent organization promoting regional cooperation generally is the South Asian Association for Regional Cooperation (SAARC), which consists of eight member nations and identifies as one of its areas of cooperation Science, Technology and Meteorology. So far, its main accomplishment in physics-related activities has been to establish a large-scale collaboration in the atmospheric sciences and meteorology: the SAARC Meteorological Research Center was

established in 1995 in Dhaka. Smaller such initiatives undertaken by individual physics institutions and societies in the region have been very limited.

However, recent developments among South Asian nations indicate that prospects for greater ties, including those in the areas of scientific research and education, are improving. In 2010 the countries of SAARC established the international South Asian University in New Delhi. This is one hopeful sign that the outlook is brightening for wider collaboration in physics, an area of great opportunity and promise in South Asia.

SAPF aspires to help realize this promise by funding, promoting and supporting international physics projects in South Asia. Specifically, we aim to foster any type of productive physics activities that involve joint efforts between scientists, students and educators from more than one South Asian country and that benefit more than one South Asian country. The countries served by SAPF are Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

Why is this important?

Developing nations must balance development efforts between immediate needs and long-term objectives. Modern practice in the charitable sector has gradually been moving toward an emphasis on sustainable development rather than one-time handouts. In physics as in other fields, there is great value in supporting a full range of activities from basic education to cutting-edge research. Academic and scholarly collaboration and exchange are central features of any such endeavor and an essential contributor to progress and stability in the region.

While the benefits of promoting long-range forward-looking activities such as international cooperation in physics can sometimes seem intangible, this type of work is absolutely necessary for South Asia to reach its full potential. During times when it can be made a priority, funding and support from different sources will always be needed. In times of turmoil, continuing activities that evoke normalcy can serve as a reminder of what is possible and provide hope for the future.

SAPF's role

The South Asian Physics Foundation was created as an independent publicly supported organization with the aim of contributing to the efforts of individuals, groups and institutions in South Asia who are collaborating regionally to pursue projects that advance and promote physics for peaceful and productive purposes. SAPF was established late in 2005, the World Year of Physics. After three years in "stealth mode", we started the Professor Faheem Hussain Student Conference program at the beginning of 2009, the International Year of Astronomy.

With a focus on international collaboration within South Asia, we hope to also pursue many other activities such as sponsoring South Asian physics students to study abroad while remaining in South Asia, providing funding for scientific exchanges between South Asian physicists and physics educators, and supporting their joint projects with colleagues in other South Asian countries. With continued commitment and innovative ideas, efforts of this type can make an important contribution to peace, prosperity and advancement in the region.