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## Beginning of Science Museums and Planetariums in India – Contribution of Ramanatha Subramanian

#### Jayanta Sthanapati

#### Introduction

Museums in India have existed in one form or other for almost two hundred years. The Indian Museum in Calcutta was opened in 1814. Other important museums of traditional nature, established during the 19th Century British India were Government Museum, Madras; Government Museum, Trivandrum; Central Museum, Nagpur; and the State Museum, Lucknow. A dedicated Museum of Industry, the Lord Reay Industrial Museum, primarily a display of collected artefacts and objects, was established in Pune in 1875. Two natural history museums were also established in British India, namely, Bombay Natural History Society Museum (1883) and Bengal Natural History Museum, Darjeeling (1903). The Indian Museum too had some collections of natural specimens. However no modern science museum fully dedicated for display of science and technology objects was established in British India.



Prof. Ramanatha Subramanian in M P Birla Planetarium in January 2013

The Japanese National Museum of Nature and Science, set up in Tokyo in 1871, was the first dedicated museum of science and natural history in Asia. India was the second Asian country to have a science museum, but only after its independence.

In early years of 1950s four Great Indians took keen interest in establishing Science Museums in the country. They were Pandit Jawaharlal Nehru, First Prime Minister of India, Shri G.D. Birla, a renowned industrialist, Prof. K.S. Krishnan, a world renowned physicist and Dr. B.C. Ray, a renowned physician and the then Chief Minister of West Bengal. With their support and under the leadership of Shri Ved Prakash Beri, Shri Ramanathan Subramanian and Shri Amalendu Bose, three science museums, namely, Birla Museum (1954) at Pilani; Science Museum of National Physical Laboratory (1956) in New Delhi and Birla Industrial & Technological Museum (1959) in Calcutta, were opened, respectively.

Prof. R. Subramanian, Director General of the M. P. Birla Planetarium, in an interview with the present author, has revealed that a few years before all those endeavours, while working as a Research Scholar at the Madras Government Museum, in 1950, he had set up a modest Science Museum cum Planetarium for the benefit of local student community. He also narrated the contribution of some great leaders of their respective fields, in establishing early science museums and planetariums in India.

# Growth of Science Museums and Planetariums in India since Independence

Science Museum is used as a generic term for museums on different aspects on science and technology. It includes traditional science museum, natural history museum, science centre and science city. We now have sixty such institutions and thirty nine planetariums located in various parts of the country, engaged in enhancing public understanding of science through their exhibits and activities. [Table 1]

	1950- 1959	1960- 1969	1970- 1979	1980- 1989	1990- 1999	2000- 2009	2010- 2013	Total
Science Museums	3	1	-	-	-	2	-	6
Science Centres	-	1	1	8	15	12	9	46
Science Cities	-	-	-	-	1	1	1	3
Natural History Museums	-	-	1	-	2	1	1	5
	2	2	3	7	9	7	9	39

Table 1. Science Museums and Planetariums in India sinceIndependence



Following is the interview of the author with Prof. Ramanatha Subramanian on January13, 2013 at the latter's office in M.P. Birla Planetarium in Kolkata.

**Jayanta Sthanapati :** Sir, let us begin our conversation by asking you to please give me a brief account on your origin and family background?



Prof. Ramanatha Subramanian was interviewed by Dr. Jayanta Sthanapati

**Ramanatha Subramanian :** I was born on 17 February, 1927 at Dharmapuri in Tamil Nadu. My father Late Shri Ramanatha Iyer was Headmaster of a school. My mother Late Smt. Lakshmi Devi was a home maker. We are a family of orthodox Brahmins of the Sarma group. We sometimes use the title Sarma and sometimes Iyer. My parents were devout Hindus and very religious minded with weekly temple visits for pujas.

My father was a great Tamil scholar and also a great historian. He was a close friend and classmate of late Sir S. Radhakrishnan, President of India. He had exchanged letters for several decades with Sir Radhakrishnan who was Vice-Chancellor, Benaras Hindu University and when he was Spalding Professor of Eastern Religion in Oxford.

My father was very broad based in his approach to caste and was the first Headmaster of the school to admit Harijans in to school classes. In fact he had instructed me to sit in the classroom next to a Harijan student. We were five brothers and five sisters. Both my parents were very much keen that all the children should receive the best coaching and training in education and they were following the progress in education of the children on day to day basis. They always had a great regard and respect for language, history, literature and things like that. They taught us to appreciate great people who have given their mark, in the various fields, whether music or literature or things like that.

**Sthanapati :** Please tell me about your school and college education.

**Subramanian :** I had my schooling in board high school in Krishnagiri, Hosur and Dharmapuri all in Salem District. Sometimes my father himself is to be the headmaster of that school. Sometimes, somebody else; when he was transferred to some other school. One school teacher whom I liked the most was one C.B.A. Subramanian. He frequently gave anecdotes as he was teaching mathematics on the blackboard and easily participated with the students in the jokes and stories.

I passed Intermediate Science and B.Sc. from American College, Madurai. There I essentially studied Mathematics, Physics and Chemistry with a little bout of religious instructions.

It was during the Second World War. The Principal of American College was a very broad minded neutral type of American, who used to assemble all the students and say "Whatever way you want to condemn the British you condemn, I do not mind. But you have to condemn that within this campus. Then only, I will be able to give you protection. If you go out, I will not be able to protect you. But I don't mind students trying for their country's independence and praying for it, working for it, in a positive direction. I am an American, I know my sentiments".

In 1948, I received a Master's degree in Physical Science from Presidency College, Madras. During college days broadly my aim was to become a scientist or an engineer, more towards a scientist.

**Sthanapati :** What did you do after completing formal education?





**Subramanian :** My career plan after passing Master's degree was to become a scientist. I thought of one line, which was study of metal alloys of ancient civilization. It was called Archaeological Chemistry. A little earlier a laboratory for such study was established in British Museum in London. Harvard University also had a laboratory for studies in chemical archaeology. In India, I and one Dr. Paramasivan took first initiative to introduce the study by convincing the Tamil Nadu Govt. to set up a laboratory in the campus of Madras Museum. We started our work to examine what metals and trace elements the ancient Indians used for bronze images and things like that. We published results of our studies in the 'Current Science' journal in 1951.

**Sthanapati :** Did you set up a modest science museum cum planetarium in Madras Museum in the early 1950s?

**Subramanian :** In 1950, while working as a research scholar in Madras Museum, with the permission of the museum authority, I installed some models on physics in a shed behind my laboratory. I also installed a second-hand table model planetarium there which I bought from a local curio shop. With all that I set up a modest science museum cum planetarium, which was occasionally visited by invited school groups.

**Sthanapati :** I understand you moved to the United States soon quitting assignments in the Madras Museum. How did that happen ? Where in the US you met Prof. K. S. Krisnan ?

**Subramanian :** Yes, I received a fellowship from the American Philosophical Society and a Fulbright travel grant to conduct research at Johns Hopkins University, Baltimore and the Smithsonian Institution, Washington D C.

While working there, once I heard that Sir K. S. Krishnan (1898-1961), the then Director of the National Physical Laboratory, New Delhi had come to Washington D. C. for giving some lecture and would visit Baltimore to see the Tulip Flower Show at Sherwood Garden. Prof. Krishnan was an associate of Prof. C. V. Raman while working at the Indian Association for the Cultivation of Science, Calcutta and had significant contribution in the discovery of Raman Effect. I thought, I would also like to be there, and if possible meet Sir Krishnan, that will be a privilege for me. So I went. He had come with some scientists to the flower show. I met him and casually so many things were talked. Sir Krishnan had a great interest to see that India set up some science museum like the ones in London and Munich. I talked to him and told him that in India both Calcutta and Madras have already celebrated centenaries of museums of natural history and art, but there is no museum on Sciences or Engineering. He asked, "Do you have interest in that?" I replied in positive. He said, "I have been thinking that idea in Delhi. When you go back to India, after your work is over, be in touch with me. If something happens, I will call you. If you are interested you may consider the offer".

Meeting with Prof. K. S. Krishnan was a turning point in my life. That is how there was a change again, from the US laboratory I switched to Sir K. S. Krishnan in NPL.

**Sthanapati :** What assignment did Prof Krishnan give you in National Physical Laboratory, New Delhi?

**Subramanian :** Primarily to set up a science museum. I worked in NPL from 1955 to 1961 as a Scientific Officer.

I was appointed at the NPL as a Scientific Officer for the Science Museum project. I was allotted a floor area of about 550 square meters, distributed on ground floor and a mezzanine floor for display of science exhibits.



Science Museum, National Physical Laboratory



In 1956, I started a science museum in NPL with thirty exhibits highlighting important activities of leading research laboratories in India. There were many physics exhibits, a closed circuit television set up, a varied collection of minerals, ores and crystals, a planetarium and so on.

**Sthanapati :** Was there any foreign consultant to guide you for the project ?

**Subramanian :** Dr. W. T. O'Dea, a Keeper of London Science Museum was brought to the Science Museum project at National Physical Laboratory under a UNESCO grant as per recommendation of Sir K. S. Krishnan to the Govt. of India. He worked along with me on new ideas of setting up working scientific exhibits and had also helped in getting replicas of early scientific and engineering machines and transportation models.

**Sthanapati :** We have heard that the science museum and planetarium at NPL became inoperative after demise of Prof Krishnan. Is that true?

**Subramanian :** The museum and planetarium at NPL were having up and down situations. People were not too much interested. In fact some of them were always criticizing museum and planetarium coming up amongst priority areas of physics and chemistry and things like that. You see always science museums and planetariums had only a step motherly treatment in the Govt. from all angles. Anybody you talk either in the Secretariat or within the scientists. This is not a priority area.

Prof. Krishnan passed away in 1961 at the age of 62. He was quite active at that time. Suddenly one night he died. You see, he had a great soft corner for the sub-staff. If they made any complaint to him, it will never go unheeded. One day, it was a hot day, it was June, some of the sub-staff complained to him that no administrator, no scientists are going towards their quarters and looking after their interests and all that. One Mustafi was the Administrator. He was an IAS man. Later, I am told he became a Secretary of the CSIR. So he called Mustafi and said, "What is it there ?" "Sir they will complain many thing. I will take you one of the days". "No, no, no. I want to go now". "Sir, it's a hot sun, where are you going ?" "No, no, give me an umbrella. I will go

with you". They walked that distance all the way to the quarters. When he came back he was very tired due to heat of the sun. That night he passed away. So, the science museum and planetarium lost their importance in the NPL.

**Sthanapati :** What compelled you to move from NPL Museum, New Delhi to Birla Planetarium, Calcutta ?

**Subramanian :** In 1961, the big planetarium here (in Calcutta) was coming up. It was a dream project of Shriyukt Madhav Prasad Birla. Then I was wondering, Sir Krishnan my mentor, my Guru, my God has passed away. I thought what I should do? I was still in the Govt. So, I was thinking about the planetarium. I went to CSIR to ask them, whether they will release me on lean for two years to go to Calcutta, which has been a seat of many activities, always taking a first place, whether it is a museum or University. Both Chennai and Calcutta used to be competing in each and everything.

There was one Deputy Secretary in CSIR, I think his name was Agarwal. He asked me "What is the matter"? I said "I have come from NPL, I have substantive post there. But this (planetarium in Calcutta) is coming up, can you possibly give me lean for two years to go there"? "You are in a Govt. body here, sponsored Govt. body. You want to go to another institution there, how is it possible? It is not possible". I came back to NPL.

Next day morning the same Agarwal telephoned NPL to connect me. I was on the line. "Yesterday you came to me for going to Calcutta". "Yes, but you said it is not possible. So I dropped the idea and dropped it from my mind also". "No, no, no, don't do that".

Mr. M. P. Birla and Prof. Humayun Kabir, a Cabinet Minister at that time, were close friends. So he told Kabir, "I am setting up this big planetarium. I don't see anybody in this country. There is one man who is working at NPL, why don't you spare him"? So Prof. Kabir wrote a note to Prof. M. S. Thaker, DG CSIR at that time. "What is delaying Subramanian's departure ?" This was the note. He did not say for what and where and when. The moment the note came, they tried to find out who is this Subramanian. What is he doing ? Finally, the Secretariat people located me and this man said, "You come, I want to talk to you". "What is the use of coming?" "No, no, you come to me". When I went,





he said, "Whatever conditions you want for the lean you jot down and give me. I will get it signed by the minister. Immediately you go to Calcutta". That is how I came here for two years on lean.

**Sthanapati :** Sir, you had worked with Syt. M. P. Birla for many years, tell us something about his industrial ventures and philanthropic activities.

Subramanian : Syt. Madhav Prasad Birla (1918-1990) was born in Bombay. He was universally and affectionately called Shri M. P. Babu. His uncle, the legendary Syt. G. D. Birla inducted him into business at the early age of eighteen. As was the practice in the Birla family, he was given a small fledgling company known as Birla Jute & Manufacturing Company Ltd., which he built by sheer dint of dedicated hard work and enterprise, into a multi-product industrial giant encompassing products like jute, cement, calcium carbide, synthetic yarn and others. A man of great enterprise, Shri M. P. Babu set up a host of other companies like Universal Cables, Vindhya Telelinks, Hindustan Gum & Chemicals, Digvijay Woollen Mills, Indian Smelting etc., all leaders in their own fields, manufacturing quality products. His contribution to the banking sector was equally significant as Chairman of the United Commercial Bank till its nationalization.



Syt. Madhav Prasad Birla

Shri M. P. Babu will also be remembered as a great philanthropist. Totally devoid of ego, and instinctively averse to self-advertisement, he gave profusely and generously to charitable causes spread over the length and breadth of country. He gave to it the Birla Planetarium, Kolkata one of the finest in Asia and the Belle Vue Clinic & Nursing Home, Kolkata one of the best equipped medical institutions in this part of the country. He established the M. P. Birla Foundation in fulfilment of his deep commitment to furthering progress in the fields of education and medicine. The Foundation has also set up and operates a modern 60bedded hospital at Birlapur in West Bengal, with a second hospital operating, at Satna in Madhya Pradesh. Shri M. P. Birla was also intimately associated with the famous Birla Institute of Technology and Science at Pilani.

**Sthanapati :** Was the planetarium in Calcutta, conceptualized by Syt. M. P. Birla ?

**Subramanian :** Syt. Madhav Prasad Birla, during 1950s, had been seeing, visiting various planetariums in Europe and America. So he wanted to set up a planetarium in Calcutta.

**Sthanapati :** Birla Planetarium was a nongovernmental project. What support did Syt. Birla get from the local or central government?

**Subramanian :** Dr. Bidhan Chandra Roy (1882-1962), the then Chief Minister of West Bengal was very keen to have a planetarium in Calcutta. Earlier due to his initiative Syt. G. D. Birla had donated his residential building to Govt. of India to set up Birla Industrial and technological Museum in Calcutta. So, when requested by Syt. M. P. Birla, he arranged to allocate this vantage plot of land of two acres, where we are now, in Calcutta maidan for the planetarium.

Dr. Roy used to visit the planetarium in the making, but was not present when it became operational on 29th September 1962. He had expired earlier on 1st July in the same year. I remember, M. P. Birla was almost in tears when he heard that Dr. B. C. Roy had passed away.

**Sthanapati :** Was there any building, trees, road, etc. on the land allotted for the planetarium ?



**Subramanian :** Two old big trees were there. The trees were felled. As the felling was taking place, there was lot of up roar in the press – 'Vanishing Maidan'. There was a lot of protest from the public. But finally when it came, people realized a new type of institution for this country is coming for the first time here and in a very big way. So, they forgot about the trees.

**Sthanapati :** Who were the architects and constructors of the planetarium building ?

**Subramanian :** M/s Ballardie, Thompson & Mathews were the architects and Mr. J. K. Gora was the chief architect and he was another man very meticulous in work. He will ask M. P., Sir you come with me and see what I have done and tell me where you want me to change?

Architecture of the planetarium building was based on Sanchi Stupa. Somebody was asking, why a Buddhist Monument was chosen? I would not be able to answer this, because never have I probed M. P. Birla, either directly or indirectly to find out why he chose that? But one thing is clear, that Sanchi Stupa has a nice dome, a big dome, so that fitted well.

M/s M. L. Dalmiya & Co. Ltd. had constructed the planetarium building. With its huge hemispherical dome, measuring 23.2 meters of inner diameter, it was the largest in Asia at that time.

Sthanapati: When was Birla Planetarium inaugurated?

**Subramanian :** It was formally inaugurated by Pandit Jawaharlal Nehru, Prime Minister of India on 2nd July 1963. Birla Planetarium was later renamed as M. P. Birla Planetarium.

**Sthanapati :** It seems our Prime Minster, Pt. Jawaharla Nehru had interest in all initiatives to establish science museums and planetariums in India at that time.

**Subramanian :** Pandit Nehru had significant contribution in establishment of Birla Museum (1954) at Pilani, Science Museum at NPL (1956) in New Delhi, Birla Industrial and Technological Museum (1959), Calcutta and Birla Planetarium (1963), Calcutta.

**Sthanapati :** The Planetarium instrument has been surviving for more than 50 years. Could you elaborate ?



Birla Planetarium was inaugurated by Pandit Jawaharlal Nehru on 2nd July 1963



Birla Planetarium in late 1960s

**Subramanian :** The main instrument is the universal planetarium instrument, which is available for any latitude in the northern or southern hemisphere. It can be set for any date, past or future and the planets are all linked up with that. When I say planets are linked up, that itself is a sort of precise analog system so to say.

The instrument was manufactured by Carl Zeiss at Jena in East Germany. As you might have known, Carl Zeiss Germany at Jena split into two parts after the Second World War. Some of the engineers and scientists moved over to the West Germany, to a place called Oberkochen, and set up another Zeiss factory called Carl Zeiss AG. Now both of them enjoy equal status.





But our equipment was from East Germany, because we had some rupee trade agreement with some of the countries. We imported it in 1960.

This type of instrument has a lot of testimonials so to say, and we have been running that from the very beginning, since 29th September 1962. All this years, it has been running, it is also a proof of the quality and the engineering accuracy of the Zeiss machines.



Carl Zeiss Planetarium project is operational in M P Birla Planetarium since 1962

**Sthanapati :** With how many staff the planetarium started functioning?

**Subramanian :** The planetarium started functioning with 3 Lecturers, 1 Instrument Engineer, 1 Assistant Engineer and 2 staff members to handle complete AC plant, a host of mechanics, 4 Ushers, 3 Darwans and 2 Gardeners. The planetarium had the necessary administrative and accounts staff apart from the ticket sales staff.

**Sthanapati :** To whom would you give maximum credit for keeping the planetarium projector functional for such a long time?

**Subramanian :** Our Engineer Mr. D. K. Roy, had been sent and trained in Jena Works itself for six months, after he was employed by us. He was in England when he was employed. So he was asked to proceed to Jena and be under training and then come here. Afterwards, he had taken full charge here. He was very meticulous in his work, very careful in observations. He had also maintained link with Carl Zeiss and interacted with them periodically, whenever they came here or happen to be in India.

We never had the necessity to close down the planetarium, even for a day because of some problems with the instrument. Occasionally, because of Holi we might have closed, not otherwise. Every show was done. Even if some problems were there, even through a show, quickly we will manage it, continue the show and finish it. Whatever was needed later on we tried to improvise it from local markets with an equivalent product, which may not be always Zeiss product, but which will serve our purpose.

He felt the instrument and the planetarium his responsibility, to see that everything goes on well. In 1969 or so there was a big crowd in the maidan, where the police employed lathi-charge and things like that and thousands of people rushed towards the planetarium, they were breaking the glasses and all that. Seeing the crowd coming rushing, I called Roy, told him "Shut up all the machines, and send out the people, close the planetarium, I will also escape with the crowd, you also escape to your quarters". Roy went to the central part of the auditorium and stood at the centre where the instrument is there, from the platform with folded hands, "You damage all the planetarium, I will not report anything bad about you to my management. But, please, please don't put your hand on the instrument. If the instrument cracks, Calcutta will lose this unique instrument; which has been set up by the first planetarium". The crowd although so big, understood the meaning of that statement and did not harm the planetarium instrument.

Many a time D. K. Roy would say, "Sir when you retire, at that time I will also retire". But he passed away due to some cerebral problem. Ever since he passed away, still I am without one limb, as it were. That is how my mental makeup is, because he had a type of dedication which was unique.

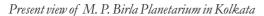


**Sthanapati :** Do you think dedication is still there or people think this is a kind of job ?

**Subramanian :** Birla Planetarium has flourished due to dedicated work of its associates. You see, some dedication is there and that number or percentage is coming down. At my times, a professor had a Govt. quarters, four bed room quarters. He was happy. He would continue, continue as a professor. People were bothered about their books, their publication, what response it had, what recognition it had, and so on.

Today our approach of life and living standard has changed. Now it is a question of job, money, facilities, comfort. Some scientists now a day are competing with business people in the facilities they are enjoying. The business man has wall to wall carpet in his house. Why I could not have? Of course there are exceptions. The whole world is going through a change. We cannot blame that also.





**Sthanapati :** Did you ever set up an Astronomical Observatory in the planetarium?

**Subramanian :** Till now we are not having an observatory as such. Some 20 years ago, I had moved for procurement of Celetron C14 telescope, which is manufactured in USA. I wrote several times to them, on some excuse or the other, they were not giving me the quotation. Then I wrote to some German firm, who immediately responded. That is how I imported it, though American equipment from Germany. It has got several attachments. Filters are there. It is also computerized. You can set the coordinates and it will chase it. It was set up on the terrace of the M. P. Birla High School in Kolkata, where we had used a sliding roof type of observatory. Mr. Piyush Pandey, Assistant

Director, at that time had taken a lot of interest in that type of thing.

**Sthanapati :** Kindly tell us briefly on the Planetarium's Graduate Diploma Course and Research activities in Astronomy and Astrophysics.

Subramanian : We had introduced the Post Graduate Diploma Course in Astronomy in 1998. It was possible due to sincere cooperation of two eminent personalities of Kolkata, Prof Mrinal K. Dasgupta, former Director of Institute of Radio Physics and Electronics, and Prof. Amalendu Bandyopadhyay, former Director of Positional Astronomy Centre. I had developed course materials in collaboration with them, which we are still continuing with some modifications on the topics. We award the diploma. It is not linked up with any university. About twelve years ago, we recruited Dr. D. P. Duari, who had earlier worked with Dr. Javant V. Narlikar in IUCAA (Inter-University Centre for Astronomy and Astrophysics), Pune. As Director of Research, Dr. Duari has been conducting research in Astrophysics from our planetarium.

**Sthanapati :** How did Dr. Ramatosh Sarkar, a mathematician, help the planetarium in reaching its goals?

Subramanian: Dr. Ramatosh Sarkar worked with us in Birla Planetarium as a Curator for more than 30 years. He was a very cooperative, very congenial, very knowledgeable person. Sarkar was with me almost from the beginning. At that time he was an M.Sc. in mathematics. We took him initially as a lecturer. He worked under me – in the sense it's not as a higher staff to a lower staff, very close. If he has a problem he will come to me. Even if M. P. Birla created the problem, before answering him, he will come to me. As a matter of fact once he wanted to go to Japan for a conference. He was short of money. He approached the Birla Group for some extra money. It was not forthcoming. He asked me, "They have said no. Shall I still try other sources and if I manage to get that balance of the amount shall I go?" "Yes you may go, but perhaps you may antagonize the big bosses. This is my suggestion only. But if you are convinced, proceed." What I am saying is in all matters like this he would consult. Hierarchy of his discipline, everything was a much sacred to him as it was to me. I myself has been brought





up and grown where hierarchy matters a lot. But now-adays it is going off in various places, which is a part of the change that is happening.

**Sthanapati :** I believe, Dr. B. G. Sidharth, founder Director of B. M. Birla Planetarium, Hyderbad had also worked with Birla Planetarium for many years.

**Subramanian :** Burra Gautam Sidharth was one of the few very bright students of our evening course on Popular Astronomy. He was with Birla Planetarium for about 15 years giving lectures. It was in 1966 or so. One day I asked Sidharth, "If I give you some part time lecturing work, would you be able to take it"? "I don't think Sir, I don't think so". He went away. He was a student in the Intermediate of St. Xavier's College.

After two days, Sidharth came to me. "Sir, I have thought about the whole thing again, I will try Sir". 'OK, I am glad you are prepared to take". That's how I brought him, tried him and even when he was a student I gave him some part time lecturing work, which he was doing well. He also moved up, M. Sc. and all that. Then he was getting employment in St. Xavier's College. Then I said, "Would you take a job as a part time lecturer"? "Yes", he said. I made him a part time lecturer. After sometimes I asked him whether he will become a full time lecturer here and a part time lecturer in St. Xaviers College. He agreed. Here he was working for his doctorate. That also I encouraged him to work. Sidharth moved to great heights, probably he is in a position, bigger and higher than me. I am very happy for that.

**Sthanapati :** When was Birla Institute of Fundamental Research formed and how is it linked to M. P. Birla Planetarium?

**Subramanian :** The Birla Planetarium or M. P. Birla Planetarium was first set up by the Birla Education Trust, Pilani. Later it was shifted to the unit called Birla Institute of Fundamental Research, which was a new trust, set up about 30 years back under M. P. Birla Group. So, Birla Institute of Fundamental Research is the parent body of the planetarium.

Prof. R. Subramanian not only adorned the position of the chief executive of M P Birla Planetarium over 50 years, his dedication and vision took the Planetarium to an institution of national and international importance. His association during these years have directly or indirectly benefitted many science museum and planetarium projects in this country. He was elected a Fellow of the Royal Astronomical Society, London in 1963. He was elected Vice-President of the International Planetarium Directors' Congress in Moscow in 1987. Prof Subramanian became the President of the International Planetarium Directors' Congress in 1999 in Florida, a position he held until 2004.



**Dr. Jayanta Sthanapati** is a PhD in Physics from the University of Calcutta and a PhD in History from Jadavpur University. As a science museum professional he held positions like Director, Birla Industrial and Technological Museum; Director, National Council of Science Museums (Headquarters) and Deputy Director General, National Council of Science Museums. He is currently a Project Investigator to study the 'History of Science Museums and Planetariums in India', a research project sponsored by the Indian National Commission for History of Science of the Indian National Science Academy. Email: dr.jayanta.sthanapati@gmail.com