From S Basu

India should Join International Physics Olympiad (IPhO) and International Chemistry Olympiad (IChO)

It is high time that India joins the IPhO (Indian Science Crusier, July, 1991). In addition to Association of Physics Teachers as mentioned in the editorial pages, there are two professional Societies in Physics — one is the Indian Physics Association at Bombay and the other, the Indian Physical Society at Calcutta. These two Societies are conducting many programmes mostly in unversity and research levels and creating stimulus in physics within the country. These two Societies could probably form a board for this purpose. The main problem is to select from several hundered good physics students by primary examination from all over India to tens of students and from them to select half a dozen only. The next stage is to coach them rigorously. This board can easily procure information on selection procedure of other countries for this purpose. There are many funding agencies in India nowadays. However, since this directly involves teaching and training, Ministry of Human Resource Development or UGC may provide fund for this purpose. So far my knowledge goes, International Chemistry Olympiads are also taking place. Probably the same procedure may be adopted for Chemistry also. When other Asian countries are joining such competition — why should not India ?

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From S Sanatani

Lighter Side of the Lindau Nobel Laureates' Conference in Physics 1-5 July, 1991.

I heard from Hans Lemmel, International Atomic Energy Agency, Vienna about the annual meetings of Nobel Prize Winners that are held in Lindau on Lake Constance, one of which he had attended as a bright university student many years ago. These meetings, he said, were veritable intellectual feasts with so many luminaries mixing freely with the participants and sharing with them their knowledge and widsom. I don't remember having seen more than one Nobel laureate at a time and the prospect of listening to so many leading scientists in a single meeting was very tempting indeed. Being neither a Nobel Laureate nor a bright student any more, I had no hope of attending a Lindau conference myself. Anyway, being asked to write on these meetings of famous men by this Indian journal (Ind Sc Crs) published in Calcutta, I contacted Bonn. To my inquiry I received a prompt response not from Bonn, but from the organizing committee in Lindau. It was an invitation to attend the 41st Meeting of Nobel Laureates: 14th Meeting of Prize Winners in Physics to be held in about week's time. I was completely taken by surprise and, of course, extremely delighted. I gratefully accepted the invitation, booked a room in Lindau and bought the train tickets. My wife readily agreed to join me.

We arrived in Lindau, covering 700 km in a little over eight hours. The mountain scenery in Arlberg was breathtakingly beautiful. On Monday the 1st July, the beautiful Countess Sonya Bernadotee, president of the organizing commitee, opened the

+ A technical report of this conference was published in July '91 issue of Ind Sc Crs.

meeting in the presence of many dignitaries including ministers of German provinces, professors of universities and 28 Nobel Laureates from USA, Germany, Switzerland, UK, Canada and USSR. After the official part of welcoming address the cream of the programme started: lectures on pre-announced topics by 22 Nobel Laureates lasting four days. I had no idea that the scientists would deliver such well—prepared and easily understandable lectures. It was indeed as Hans had told me, an intellectual feast. The lectures were packed with authentic information and insight and interspersed with humour. About 500 students, mainly from 70 German universities, listened with rapt attention as the speakers urged them to devote their best efforts to the persuit of physics, a difficult but a rewarding field.

Some of the scientists spoke on topics which were remote from those for which they were awarded the prizes. The lectures covered a broad spectrum of theoretical and experimental physics: quantum optics, astro-,bio-, solid state-physics, elementary particles and high energy physics. To quote a few data from a press handout distributed in Lindau: *The series of annual meetings of Nobel Laureates started in 1951. There is a permanent organizing committee for these meetings and funds provided by different foundations. This year a total of 28 laureates came : 24 physicists, 3 chemists, 1 economist. Of the 22 lecturers, 16 were held in English, rest in German. The next meeting will be in 1994. The total number of Nobel laureates who came to Lindau in the last 40 years is 319, but since many laureates repeat their visits, the total number of Nobel Laureate-visits to Lindau so far add up to 713, perhaps higher than the corresponding number for Stockholm for the same period.* Sometimes two or three scientists share the Nobel Prize. Calling them scientific **twins** and **triples**, there were the following interesting examples among the participants this year :

Twins

Johannes Bednorz and Karl Müller (1987).

Gerd Binnig and Heinrich Rohrer (1986) [Earnot Ruska who also shared the 1986 Nobel Prize did not attend].

Nicolaas Bloembergen and Arthur Schawlow (1981) [Kai M Siegbahn who shared the 1981 Nobel Prize did not attend].

Triplets

Hans Dehmelt, Wolfgang **Paul and Norman** Ramsey (1988).

Leo Esaki, Ivar Giaever and Brian Josephson (1973).

One of the aims of these meetings is a personal contact among the laureates, and among the laureates and the students. Many professors and assistants of physics departments, besides students, attended this year — the total number being over 600, not including the members of the press. There was a social evening with music and dance on the first day of the meeting and a boat trip to the island of Mainau on the last day.

Among the lighter sides of the gathering, many anecdotes and jokes were narrated by the scientists. Leon Lederman after returning from Stockholm was asked by his wife to clear the garbage can. He said, How can you ask a Nobel Laureate to clear the garbage can? When travelling by train from Chicago to New York Lederman saw a nurse enter the compartment with four patients from a mental hospital in her charge. When Lederman casually mentioned that he was a Nobel Prize winner just returning from Stockholm, the nurse smiled and replied : Now I have five patients to look after.

Einstein and Niels Bohr taking a walk in the woods sighted a bear.

When Einstein took out his Adidas shoes from the rucksack, Bohr asked — What are you doing?

I am putting on my *running shoes* so that I can run if the bear attacks, Einstein replied.

But Albert, you know you cannot run faster than the bear.

I know, but I can run faster than you, Einstein calmly replied.

I said to Von Klitzing in a party, You are lucky, you did not have to share your prize with any body else. He said, The amount is much higher now than it was in my time, I should have waited a few years with my work. Rudolf Mössbauer mentioned that there were so many open problems in neutrino physics that Nobel Prizes were lying on the road waiting to be picked up by students choosing this field of research. Von Klitzing referred to this remark in a joke in his lecture. Mössbauer was tempting his students to study neutrino physics in order to pick up Nobel Prizes from the raod. We, workers in solid state physics, ignoring his advice have already started picking them up. So ours is undoubtedly a more promising field of work.

In the island of Mainau, having lost my wife in the vast area of the garden, I was standing alone with my normal badge without a blue border indicating a Nobel Laureate, on my jacket. This fine distinction was not noticed by an Egyptian scientist and his wife in the party. He came up to me full of respect and said, Can I please have a photograph of mine taken with you, if you don't mind, Professor Salam?'

On Lindau railway platform, waiting for our train, I saw a Nobel Laureate and his wife also waiting for their train. I was collecting autographs and I hadn't got his among the twenty or so, I had managed to collect in the five days. I meekly approached him with my note book and offered him my Parker ball point to sign. He graciously obliged me with a smile. In the train I looked everywhere for my ball point but I could not find it. I had now twenty one signatures of Nobel Laureates on two pages of my bound note book.

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From M M Biswas

Dirac and Heisenberg in Nobel Laureates' Conference

During my stay (1960-62) in Max Planck Institute for Nuclear Physics in Heidelberg, Germany, a few American physicists from the USA joined Heidelberg MPI as visiting scientists. Seymour Margulies was one of them. One day he told me that he attended this year the Nobel Laureates' Conference at Lindau and asked me why I did not go. I did not know at that time that such conferences occur. He related to me one evening's event. In the evening, many physicists gathered around Heisenberg and Dirac and requested them to tell how they select the problems and solve them. Heisenberg stated that he collects the experimental results on a topic and constructs various types of systematics of the experimental results graphically and try to find some regularity or pattern of such results. When the results indicate some regularity he starts constructing theoretical framework to fit such experimental result. On the while Dirac pointed out that he starts with some physcial idea and carries out mathematical deduction and finally obtains some specific solution. Then he tries to attribute physical meaning of the final result — however unitelligible such physical meaning may appear to the mind. Obviously, these are the two diametrically opposite methodology of research work.

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