TIFR and Bhubneshwar, the capability in the labs seems to be rather high. But on the other hand there is also the fact that, here things have to be built which in Europe and US you would simply buy from the industry. So clearly, the (Indian) industry needs to learn, that is part of the idea of this centre as I understand.

Clearly the technical and intellectual expertise of the Indian physicists and engineers is world class. You actually have a very strong tradition of fundamental science in India. It is small but strong and a rather old and proud tradition. And we are rather proud that you chose to work with us.

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OTHER ACTIVITIES / NEWS

DAE-CERN collaboration agreement for LHC.

A protocol agreement for Indian participation in the world's largest particle accelerator "The Large Hadron Collider" (LHC) was signed by Chairman, AEC & DG, CERN on March 29, 1996.

CERN, an European organization for nuclear research, has launched construction of LHC (27 Km circumference). This will accelerate & collide protons at 14 TeV and heavy lead ions at 1150 TeV energy. This is expected to create a quark-gluon plasma, similar to that which existed at the time of the Big Bang. The LHC will have Super conducting magnets operating at 1.9 K (super fluid liquid Helium) with a magnetic field of about 9T. It is scheduled to be commissioned by year 2004. European member states of CERN felt that it would be difficult to complete the LHC project (estimated cost US$ 2500 millions) in a reasonable time frame on their own due to inadequate funding and non-availability of highly skilled manpower in required numbers. In addition to this, operating such a large machine would be quite expensive. Therefore, CERN decided to ask the potential user countries for their contributions in construction of the LHC as well.

The agreement with India envisages contributions to the tune of US$ 25 Million by India to LHC in kind i.e. by way of supply of goods like super conducting magnets, UHV components, cryogenic vessels etc. and services like magnetic measurements, software development etc., during a period of about 8 years of construction of LHC.

Indo Japan agreement on SPring-8

The SPring - 8 project is to construct a large scale, advanced synchrotron radiation facility and to promote fundamental science in the field of synchrotron radiation research. The facility, currently under construction in Harima Science Garden City, Hyogo Prefecture, near Osaka, is to be commissioned in 1997. The facility basically comprises of three accelerators; a 1 GeV preinjector linac, an 8 GeV booster synchrotron and a 8 GeV storage ring. The storage ring has a circumference of 1436 m. It will generate X-ray and also VUV radiation with various kinds of undulators.

An academic exchange agreement between the Institute of Physical and Chemical research, Japan (RIKEN) and the Centre for Advanced Technology (CAT) on behalf of national institutes and university was signed by Prof H Kamitsubo, Director RIKEN and Dr D D Bhawalkar, Director CAT. The agreement signed for five years envisaged cooperation developed through joint research

Dr R Chidambram, Chairman, Atomic Energy Commission & Secretary, DAE (left), Prof CH Llewellyn Smith, Director general, CERN (centre) and Dr D D Bhawalkar, Director CAT at the time of signing the DAE-CERN collaboration aggreement for LHC.