

On 16 April, the workshop conducted programmes in areas other than astronomy and astrophysics discussed the previous day, which had been specifically conceived and designed to take advantage of the special attributes of the Hanle site. After a thorough going discussion of the proposed programmes it was felt that while some of these programmes, requiring substantial additional new inputs, will need to be

projectised for a longer term funding, a few of these could be taken up straightaway for the first-stage implementation in the summer of 1999. These programmes include: solar studies—exploratory attempts; development of a multiwavelength solar radiometer; studies on atmospheric transparency at 220 GHz; optical imaging of mesospheric gravity waves; environmental monitoring of O<sub>3</sub>, H<sub>2</sub>O, OH, aerosols, solar UV; magneto-

telluric studies and broad-band seismology for delineating the deep structure of the region; and GPS geodesy to understand the kinematics and dynamics of continental deformation zones.

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## PM asks IAEA to 'return to fundamentals'

In his Statement\* to the 43rd General Conference of the International Atomic Energy Agency (IAEA) at the end of September, R. Chidambaram, Chairman, AEC read a message from Prime Minister Atal Bihari Vajpayee which asked the Agency to 'ensure that we leave behind a legacy, not a liability, for future generations . . . by returning to the fundamentals, shorn of all rhetoric and verbiage and by acknowledging that the primary function of the Agency is to encourage and assist research, development and practical applications of atomic energy for peaceful purposes throughout the world'.

Chidambaram castigated the IAEA for becoming 'diffident on nuclear power related matters, perhaps influenced by the environment in which it is located, where power generation, having reached a point of saturation, finds it difficult to find support for new nuclear plants. However, while nuclear power may be stagnating in Europe and North America, it is growing fast in Asia and some other

parts of the world where it is being looked upon as an inevitable option to satisfy future energy needs.'

'Nuclear power becomes even more relevant in the context of global environment considerations. Presently, it accounts for the avoidance of 8% of global carbon dioxide emissions. It is unfortunate that the Kyoto Conference on the Convention on Climate Change did not explicitly mention "nuclear" among the cleanest sources of energy despite the Agency's efforts in recent years in projecting nuclear energy as one of the means for mitigating carbon dioxide emissions under the Clean Development Mechanism (CDM) evolved under the Kyoto Protocol of the UN Convention on Climate Change.'

Pointing out that spent fuel is 'a resource, and not a waste', Chidambaram added, 'Mature technologies for reprocessing, waste management and recycle of plutonium have been demonstrated and are available. Progress is under way (in India) on the thorium-uranium 233 cycle also. In this context, it is worth mentioning that because of our great interest in the closed nuclear fuel cycle,

we have always considered spent fuel as a vital resource material. This was emphasized by us during the negotiations on the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. The closed fuel cycle, adopting a "reprocess to recycle Pu" approach after extended period of spent fuel storage, has several advantages. It renders reprocessing and nuclear waste management a more viable and safe technology, with reduced Man-Rem expenditures, since it minimizes the complication due to the presence of Americium-241 in the recycled fuel fabrication process. The planning of reprocessing capacity should be such that the needs of the fast reactors/advanced PHWR, etc. which facilitate the utilization of plutonium and thorium, while reducing the input of natural uranium (in the process realizing the much higher energy potential of uranium) can be met on "just in time" basis, which is a very important concept in materials management. Americium is not of any proliferation concern and this has also been borne out by the Board's recent decision in this regard.'

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\*The full text of Chidambaram's Statement is available at <http://www.dae.gov.in/gc.htm>