

# Colloquium # 237

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## Institute for Plasma Research

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**Title :** R&D for Fast Reactor Programme  
**Speaker :** Dr. P.R. Vasudeva Rao  
Distinguished Scientist & Director  
Indira Gandhi Centre for Atomic Research  
Kalpakkam, Tamil Nadu, India  
**Date :** 19th September 2014 (Friday)  
**Time :** 03:30 PM  
**Venue :** Seminar Hall, IPR

### **Abstract:**

Fast reactors are expected to play a very crucial role in the Indian nuclear power programme in the coming decades. Since the global experience with fast reactors is limited and since there are very few avenues for international collaborations, India has had to chart its own path with high emphasis on indigenous development. Over the last 40 years, IGCAR has been pursuing along with other DAE institutions, national laboratories, universities as well as industries a sustained mission oriented R&D programme that has provided a strong base for the launch of commercial fast breeder reactors in the country. Fast Breeder Test Reactor has been one of the focal points in the developmental activities and has provided rich experience in operating various systems for the fast reactors. Based on this experience, the construction of 500 MWe Prototype Fast Breeder Reactor has been undertaken by BHAVINI. The reactor is expected to go critical in the next six months. A clear road map also exists for R&D in reactors as well as associated fuel cycle to make fast reactors viable, safe and economical.

The presentation will deal with the development of fast reactor programme in the country and R&D at IGCAR. In particular, emphasis will be given to the development of materials for fast reactors which have much in common with materials for other higher temperature systems including fusion reactors and ultra super critical power plants.

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