

**GOVERNMENT OF INDIA  
ATOMIC ENERGY  
LOK SABHA**

UNSTARRED QUESTION NO:547  
ANSWERED ON:26.11.2014  
INDIA S ROLE IN CERN PROJECT IN SWITZERLAND  
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**Will the Minister of ATOMIC ENERGY be pleased to state:**

- (a) whether India had only an observers role in the Centre for European Nuclear Research (CERN) in Switzerland;
- (b) if so, the details thereof;
- (c) the amount of money the Government has spent in the project;
- (d) the number of Scientists from India doing research in the said project; and
- (e) the manner in which India will be benefited from the said project?

**Answer**

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (Dr. JITENDRA SINGH) :

(a)&(b) Yes, Sir. India was awarded the "Observer" status in the year 2002. "Observer" status allows non-member states to attend council meetings and to receive council documents, without taking part in the decision-making procedures of the organisation.

(c) Indian scientists have been involved in the major areas in the CERN project viz. (1) Construction of the Large Hadron Collider (LHC), (2) Compact MuonSolenod (CMS) experiment, (3) A Large Ion Collider Experiment (ALICE) and (4) GRID computing. India makes in-kind contributions to CERN projects by developing high technology components, equipment and hardware and supplying for the CERN Accelerators. India has made a one time in-kind contribution to CERN of about `145.84 Crore during construction phase of the LHC which ended by end 2007. After the LHC construction was over, recurring expenditure of `30 Crore per year is incurred which includes yearly operation and maintenance payment to ALICE and CMS experiments, in-kind contributions to the experiments and their upgrades, and towards LHC Grid computing.

(d) About 200 scientists/engineers and research scholars have been involved in the collaboration work with CERN in various research projects.

(e) The collaboration with CERN by participating in the construction of Advanced Accelerators, their commissioning, taking part in experiments and taking part in development of various software is highly beneficial to India. Experience in detector technology has been helpful for the groups to take up more active participation in the Nation's flagship project: India Based Neutrino Observatory (INO). India takes advantage of the large reservoir of experience gathered at CERN and has opportunity to interact with the expert scientists in various fields of science, engineering and technology. CERN provides crucial high technology components for India's accelerator projects under the mutual agreement. CERN also provides opportunity for our scientists and engineers to test their equipment and software at much larger scales which are not possible in Indian labs. Collaboration with CERN has helped in large scale computing, medical applications of imaging technologies, etc.