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## Green light for Indian neutrino observatory

Oct 19, 2010 [1 comment](#)

Pressing ahead

Particle physicists in India have cleared a major hurdle in their plans to build a new facility for studying neutrinos after a site for the \$167m Indian Neutrino Observatory (INO) was approved yesterday by the Indian Ministry of Environment and Forests. If final clearance is given by India's Atomic Energy Commission, the INO will be built at Bodi West Hills in Theni district, southern India, with construction starting in 2012.

The observatory will be built by the Tata Institute of Fundamental Research (TIFR) in Mumbai and 20 other scientific institutions. The INO was originally planned to be located in the Nilgiri Hills at Singara in southern India. Singara was the prime site choice for the INO because the thick granite of the mountain would have helped to shield the experiment from cosmic rays that could overwhelm the signal from the neutrinos. But last year the INO suffered a major setback when the site was rejected due to the presence of elephants that use the land as a migration corridor and because it is near to the Mudumalai Tiger Reserve.

The new site in Bodi West Hills will be used to house the neutrino detector in a cavern some 1000 m below ground. The INO will consist of a massive 50,000 tonne detector – made from layers of magnetized iron and glass – that will be used to detect the neutrinos and antineutrinos produced when cosmic rays interact with the Earth's atmosphere. The detector could also be adapted later on to record beams of neutrinos fired from a distant accelerator to study how neutrinos change, or "oscillate", from one of their three possible forms to another.

"We are certainly very happy to get this important clearance. INO is an important basic science project in this country," physicist Naba K Mondal, INO spokesman and a researcher at the TIFR, told *physicsworld.com*. "[The INO] is well poised to provide great opportunities for achieving scientific success at the international level."

However, government approval for the Bodi West Hills site is subject to conditions that construction of the project does not entail cutting

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### About the author

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**loriknud**

Oct 26, 2010 1:55 PM

The construction of such a observatory is a step in the right direction. It will help in unraveling the neutrino mystery.

**Derматаl**

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