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Cover Letter

Dear Madam/Sir,

This is in response to the advertisement regarding the vacancy for postdoctoral position in your group. I am a student at the Department of Physics, Indian Institute of Technology Bombay, India. For my Ph.D thesis, I have been working on *Neutrino Oscillation phenomenology*. I intend to finish my degree by July 2013. The problems on which I have worked are briefly described below.

My work focuses on studying the capabilities of the currently running and upcoming long baseline superbeam experiments. These experiments are designed to determine the remaining unknowns in neutrino oscillation physics: 1) the mass hierarchy 2) leptonic CP violation and 3) octant of θ_{23} mixing angle. T2K, NO ν A and the Fermilab-Homestake 1300 km LBL experiment - DUSEL are some of the set-ups that I studied. My recent work includes study of the capabilities of a liquid argon detector for superbeam and atmospheric neutrino experiments. Flavor physics, dark matter-dark energy and neutrino masses and mixing are some of the topics that I am interested to work on, during my postdoctoral fellowship.

I am well-versed with the programming languages C and C++. I have been doing simulation using the software GLOBES. For a full description of my work, please see my research statement.

Yours sincerely,

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