

INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI IN INDIA-CMS



**Bipul Bhuyan
IIT, Guwahati**

September 27 – 28, 2007

**India-CMS Meeting
Delhi University, Delhi**

IIT, Guwahati at a Glance

@ Was established in 1994

- Academic program was started in 1995.
- First IIT to be established in India without any foreign collaboration.

@ Has 17 departments, 7 centers dedicated to teaching and research in basic science and technology.



Physics Dept at IIT, Guwahati

@ 21 Faculty

- One HEP experimentalist, one in phenomenology, one string theorist.

@ Wide range of Human Resources:

- B.Tech. Engineering program
- 4 years B.Tech. Engineering Physics Program
- 2 years M.Sc. Physics Program
- 4 years of Ph.D. Program.



@ Available human resources at present:

- Two possible M.Sc. Projects for a semester.
- Requested Ph.D. Students from this academic session.
- Plan to form a HEP group with research scholars, post-doctoral fellows and other research staffs.

CV of Bipul Bhuyan

@ B.Sc. (Hons) Physics:

- 1994 – 1997, Hindu College, Delhi University.

@ M.Sc. Physics:

- 1997 – 1999, Delhi University.

@ Ph.D. (2000 – 2003), Delhi University:

- Thesis Title: Search for the rare kaon decay $K^+ \rightarrow \pi^+ \nu \bar{\nu}$

(Ph.D. Work was entirely done on the E787/E949 experiment at BNL, New York. Won the 2004 RHIC & AGS Thesis award competition.)

@ Post-Doctoral Fellow:

- 2003 – 2007, Worked on BaBar at SLAC as a member of the University of Victoria group.

@ Assistant Professor:

- May, 2007 – present, IIT, Guwahati.

Curriculum Vitae - Continued

- @ Presented about 12 talks on my research work both in India and abroad.
- @ Leading author of about 14 research papers published in PRD, PRL and Physics Letters B. Contributed to about 75 research papers. Wrote about 8 technical notes on E787/E949 and BaBar.
- @ Have served as the coordinator for the tracking efficiency group on BaBar for a year. Guided the work of four Ph.D. Students and one post-doctoral fellow as the tracking efficiency coordinator.
- @ Served as the Chair of the review committee for the physics analysis that looked for $B \rightarrow \tau \nu$ using Hadronic Tags.

Possible contribution to India-CMS

@ Will work closely with the Delhi University group.

- Have extensive experience with the detector development/testing and maintenance; worked on plastic scintillators.
- Could provide expertise in DAQ, trigger etc.
- Could provide expertise in detector calibration, online monitoring of PID selectors etc.
- Could provide expertise in tracking software development, tracking efficiency measurements etc.

@ Potential area of physics analysis will be Higgs physics, high p_T physics, SUSY, B-Physics at CMS.

Regional Workshop on High Energy Physics/Particle Physics and AstroPhysics and Cosmology

Venue: Department of Physics, IIT, Guwahati.

Tentative Dates: February 21 -23, 2008.

Objective: The objective of the “Regional Workshop on High Energy Physics/Particle Physics and Astrophysics and Cosmology” is to bring together both theoretical and experimental physicists and researchers working in the fields of High Energy Physics/Particle Physics, Astrophysics and Cosmology from the North Eastern region of India. The proposed workshop will be the first one in a series of such workshop which will be organized every year and will give an opportunity to the researchers from the NE region to present their research work and also to collaborate in the fields of common interest. The invited speakers for the workshop who are experts in their respective fields will be able to give an overview of the research work going on both at the National and International level.

**Looking forward to join India-CMS,
work closely with the Delhi University group and
participate effectively in the CMS Physics.**

Thank you very much.