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## **Focusing Aerogel RICH for particle identification and momentum measurement.**

*vendredi 7 mai 2010 11:20 (25 minutes)*

Latest steps in the development of the Focusing Aerogel RICH (FARICH) in Novosibirsk are presented. Our group has developed the technique of multilayer aerogel production. Several multilayer aerogel samples were produced. Optical parameters were measured.

A project of the Forward RICH for the SuperB experiment (Italy) is presented. It features a dual aerogel-water radiator and Photonis MCP PMTs. The detector will be able to perform pi/K separation at 3 sigma level from 0.2 to 7 GeV/c, mu/pi separation – from 0.13 to 1.4 GeV/c. FARICH precise velocity measurement gives the possibility to determine particle momentum with accuracy about 1%. An aerogel RICH for Super Tau-Charm factory project in Novosibirsk is proposed. It is shown that the detector will separate pions and kaons from 0.2 to 9 GeV/c momentum. Also mu/pi separation from 0.13 to 1.9 GeV/c momentum will be possible.

A prototype of the FARICH is being built at BINP (Novosibirsk). It will be tested with a dedicated electron beam line. At the first stage MRS APDs (SiPM) produced by CPTA (Moscow) will be used as photon detectors. Gain, photon detection efficiency and noise rate were measured for several APDs.

**Please indicate "poster" or "plenary" session. Final decision will be made by session coordinators.**

plenary

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