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PID system for Super C-τ Factory at Novosibirsk

The Super C-τ Factory at Novosibirsk is a new experiment with e^+e^-- collider with energy W=2÷6 GeV and luminosity up to $10^{35}cm^{-1}s^{-1}$ (in 100 times higher than in operated today experiments in this energy region). For successful execution of the broad experimental program development of universal detector with excellent parameters is needed. R&D activities on all detector subsystems are carrying out today. The main requirements for PID system are following: good π/K-separation in whole operational momentum range and good μ/π-separation up to 1.2 GeV/c. Few options are under consideration today: FARICH (Focusing Aerogel RICH) based on 4-layer aerogel tiles and more than 1 million channels photon detection pixels, threshold ASHIPH (Aerogel SHifter PHotomultiplier) counters with 6000 liters of aerogel of two refractive indexes and TOF technique with time resolution better than 30 ps. All these options are described. Results of simulation, preliminary calculations and some results of prototypes tests are presented.

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