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## The drift chamber project for the Super Charm-Tau Factory detector

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The Budker Institute of Nuclear Physics is actively developing the Super Charm-Tau Factory (SCTF) project, which is a mega-science class facility that will be used to study the decays of rare c-quarks and tau-leptons in Sarov, Russia. A new drift chamber to the SCTF detector is proposed consisting of 41 layers of hexagonal cells with an average radius of 7 mm in the He/C<sub>3</sub>H<sub>8</sub> gas mixture. The tasks of the tracking system are to provide efficient reconstruction of charged particles, to determine their momentum and to identify their type by measuring ionization energy losses. To obtain more isotropic isochrones inside the cells a wire structure optimization algorithm was performed. A momentum resolution was simulated, for pions with an energy of 1 GeV it is equal to 0.35%.

The spatial resolution was measured at various gas amplifications on a drift chamber small prototype consisting of 7 hexagonal cells. The average spatial resolution is less than 100  $\mu\text{m}$ .

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