

## sPHENIX TPC mechanical design

The sPHENIX experiments will explore the properties of the quark gluon plasma via measurements of jets and upsilons. sPHENIX will feature a state of the art tracking system which consists of a highly granular MAPS silicon pixel detector, a silicon strip detector (INTT) and a time projection chamber (TPC).

The tracking system will work in continuous read out at high data collection rates, 30kHz, and will be able to provide momentum resolution below 2% at 5 GeV/c, which is suitable for upilon reconstruction. The TPC will span a radius from 24 to 78 cm and 2.2 units in pseudorapidity, much smaller than any other TPC ever build, and will hold high electric and magnetic fields. The strategy for its construction, mechanical specifications and progress of the outer field cage construction will be shown in this poster.

### Preferred Track

Future Experimental Facilities, Upgrades, and Instrumentation

### Collaboration

sPHENIX

**Primary author:** DEHMELT, Klaus (State University of New York Stony Brook (US))

**Presenter:** DEHMELT, Klaus (State University of New York Stony Brook (US))

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