

Abstract Submitted
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UTA Large Cloud Chamber Research Project KENNETH CRAWFORD, JACOB SMITH, JAMES CREEL, SHANE SPIVEY, PRIYA MYDUR, PEDRO DUARTE, JAY PURHEE, CARLOS MEDINA, RANDI GBUR, HEATHER BROWN, JAEHOON YU — A cloud chamber is a particle detector that shows the traces of charged particles using super-cooled vapor. The UTA Large Cloud Chamber group and the UTA SPS have jointly submitted a proposal to construct a $1m \times 2m \times 30cm$ cloud chamber which will be in display next to the newly constructed planetarium. The chamber will not only be used for K – 12 education for demonstrating the existence of cosmic particles but also be used in higher level classes experiments, such as cosmic ray angular distributions. In this talk, we present the research done for the design of the UTA large cloud chamber. We will present the improvements in technologies of the detector parts and the optimal design considerations, along with our plans with the final design.

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