

## IMPROVEMENTS OF THE RESOLUTION OF THE MUON TRACKING DETECTOR IN KASCADE

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The Muon Tracking Detector has been built up in an underground tunnel north of the centre of the KASCADE experiment and measures muons and their directions in EAS by using Limited Streamer Tubes. Therefore tracks with hits in 2 and 3 modules are considered, each hit consisting of a signal from wire pairs and from influence strips perpendicular to them. Diagonal strips are used to reduce ambiguities. In order to get a good determination of the muon production height by means of triangulation, a good separation of multiple muon tracks and coping with high muon densities, close to the shower core, a best possible detector resolution is needed. Methods of improving the angular resolution of the detector system will be presented. Investigations have been conducted to separate the wire pair signals and to include drift time measurements. Simulations of the electric field in a Streamer Tube cell ( $9 \times 9 \text{ mm}^2$ ) and also the distance - drift time correlation will be presented, as well as the resulting detector resolution. With respect to the KASCADE-GRANDE upgrade the improved resolution becomes very valuable, because of increasing muon densities at higher energies of the primary shower particles.