Minutes 24/10 2018 by Peter

We only managed to cover the talk from Christian Bierlich because there was a lot of discussions.

Christian expressed a wish that a Rivet adopted (yields in measured pT ranges) version of the ALICE pp strangeness enhancement paper was in Rivet. This should be followed up by ALICE people.

A lot of discussion then focused on slide 11:

Christian mentioned that with the rapidity correlations one can measure the droplet size and with Tuva's method one can measure it in pT.

Experimental challenge:
It is not clear how easy it is to trigger on a phi since the PID signal (Minv analysis) has a large background. To do a correlation study one needs to subtract the correlations from the background but since phi sits at the edge of the Minv distribution it is not easy to measure it on both sides (side band) to estimate the background correlations under the peak.
The background has two components: combinatorial kaons and non-kaons. The non-kaons are huge at low pT but can likely be reduced by cutting into the PID signals to reject pions. As one does not need the trigger efficiency for correlation studies this might mean that one can do better.

Action: the idea was to see if Adrian could do some studies of the expected s/B for ALICE varying the PID cut before Xmas.
(On a longer timescale we should also investigate the possible purity for multi-strange baryon triggers.)

Theoretical ideas:
Can one use an easier trigger? Lambdas?
Could one look at correlations that are easier:
phi-K would already indicate how strange the phi is (compare to Lambda-K, Cascade-K?) and would confront naive thermal models where the phi is assumed to be non-strange. It would be great if EPOS3 was public so one could see what EPOS says for these correlations.
Phi-K should be similar in string and rope models and so phi-Omega is really the next level because here the rope bias will kick in. (but interestingly it was mentioned by Christian that the rope idea is in some sense consistent with the picture of canonical suppression because there one would also expect strong correlations via the volumes).
Peter mentioned that it is easier to get a measurement approved in ALICE if there is a theoretical paper motivating it. The Lund ALICE group is very interested in these measurements.

Concerning slide 12:
One should definitely look at it experimentally (when one understands how to trigger on phi) but it would be good to understand better what to expect from theory.