Notes for discussion final session

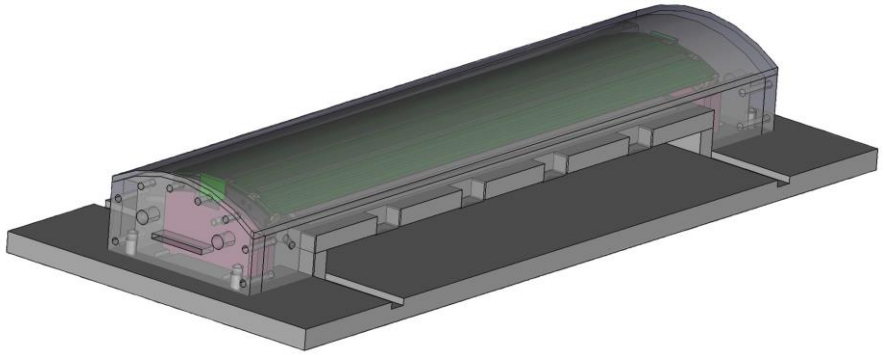
Thermal test outer layers

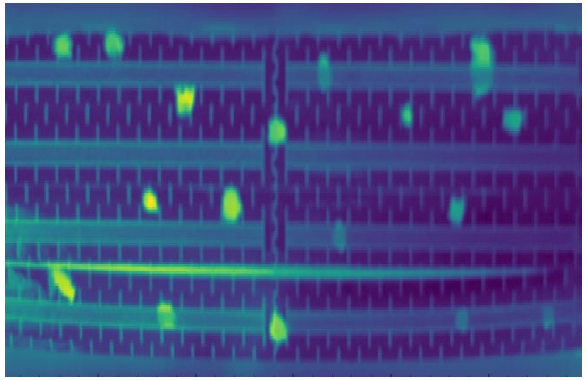
Sofar test have been done on an early single module prototype and for the full detector in simulation (still including v-channel cooling)

More recently some work done in Liverpool (Andrew Groves),

mostly to demonstrate we have adequate cooling for module QA.

- Cold air is flowed along the module in a small volume above and below the flex heater ladders. 18Lpm at 18degC (shown we can pre-cool to 12degC)
- Ladders are powered to 2x nominal power per ladder half
- Max delta T is ~ 20 degC.





Thermal test outer layers

We do still need a more detail test to:

1. verify cooling performance of full outer detector (beyond simulation results)
2. verify changes to helium flow

For this we need

- Complete set of L3 and L4 flex heater modules (can add silicon heater module at some stage)
  - L4 exists, L3 ladders available modules to be built (~2 weeks), but not all built modules have full electrical connectivity and not all are the same lengths. The latter means we will have larger gaps between ladders.
- Need all modules mounted on support rings with correct helium flow gaps (design review ongoing)
- Need all modules connected to power and resistive temperature sensors read out. (Lot of work but can be done)
- Need a suitable chamber (tube) in which to mount everything
- Need Helium cooling

Work structure for (pre)-production

Weekly production meeting

Adopt model more similar to integration meeting?

i.e. have a detailed schedule and evaluate detailed progress weekly

Do we need dedicated working groups on specific areas?