**Minutes – 300718**

**Present: SB, IT, JT, SW, TJ, AG, HH, YY**

**Apologies: PS**

**Strip modules**

Drawing review this week for the tooling. => whole week.

Missing drawing for HV tab gluing/attachment tool.

=>ATLAS engineering note?

Ensure reviewers review the quality of the drawing and not the design

Hybrid submission, delayed due to designing test coupon. Submission before holiday.

Q: do we know if ASICs have been ordered? We suspect not. Unlikely to get ASICs this year. 3-6 month delay

Concern that we keep losing places in the queue.

IBM gave process up to global foundries. Everyone else moved away from global foundries. Pixels may also follow strips.

Building modules

*SW: Building modules, 1 needed power board, 2 needs gluing then wirebonding.*

*Issues with power boards – too noisy.*

*LS module from test beam -> noise peak across modules. => noisy power boards.*

*Request to measure modules with and without powerboards.*

*No impact on next stave? There are no power boards in UK to produce new modules. Timon is sitting on them.*

*Jens wanted one side of electrical stave for itk week. (Liverpool, Sheffield and Glasgow building modules).*

*Announcement from TUMM that SM had heard that the throughput in global foundries is getting worse. => shedding staff on UBM line. So no indication of when chip gets released from manufacture. Still awaiting start date for ABC\*chips.*

*US will be ordering hybrid panels. US limited to 3.5 k per order for non-US parts.*

* *Procurement meeting cancelled -> no one knows what is happening. Andrew Blue is production management.*

*AG to place order this week. AB said to hold off until EDMS reviewed. AG to go for quotation.*

*SW: International module meeting tomorrow finalise tooling. EDMS of tooling drawings by end of the week. Q: are the drawings industry standard.*

*SW: Sven has done half of the drawings. In the workshop now. Bits for assembling hybrids. Worked on module frame (LS) and module jig. => do drawings this week.*

*AG: working on multiplexer for crate. To be done before AG goes on holiday (12th August).*

*There is a requirement for module review that modules go through QC. Need crate set up for April. Also need Warwick freezer.*

*Q: what do we need in terms of infrastructure for module assembly?*

*In production we would need a glue robot. Not needed yet. Site qualification ~ July next year.*

*Q: how to weigh glue, without ruining precision of hybrid assembly.*

**Strip Mechanics**

Drawings are practically complete for assembly drawings. Part drawings to do.

Stephanie just creates models => drawings to follow.

PS to start on vacuum jig next week. PS to complete vacuum jig drawings by ? PS to discuss with TJ this week.

DS to start building 13 module stave this week with Hamish. Hamish started measuring and calculating. May need new scales.

Hamish to update twiki page on measurements.

*Brewing saga on cold curing. US/UK disagree on how to do it.*

* Still ongoing. Bogged down. Liverpool/Oxford disagree. Oxford is “approved”.

*Dave has been all week. He left Hamish a list of jobs. Unclear if it was done. TJ to follow up.*

*Brewing saga on cold curing. US/UK disagree on how to do it.*

**Pixel modules**

**PD:**

News:   
  
I’ve ordered the sensors for the ring 0 box.  
They have arrived. So I’ll setup the daq for them.  
  
I’ll need to order the electrics part today (OR gates, 5V power supply and switches).   
  
They are the cheap part!  
  
Paul  
  
PS: I disagree that the irradiated RD53 modules are sent to Glasgow. I will hold them in Birmingham until our YARR system works.

* **Can Yanyan visit Glasgow and participate?**

We need to focus on getting Bonn system working with alternative FPGA card?

Borrow “sintext” card from LHCb.

We need to be in position to test single chip cards with Ilya’s test cards.

**For next week, we need proper proposal for how we are setting up for RD53a DAQ.**

**Proper costed plan (IT, JT, PD).**

We are making test boxes for ring0 module boxes. => get Liam to make.

Ilya available for phone meeting this afternoon.

Oxford is struggling with module. May need drive to oxford. Tomorrow or Wednesday?

Oxford unsure bonding diagram correct. Can we ask oxford to have electronics engineer to look at it? Get JJ to look at it. Ask oxford to send module here.

Common hybrid timescale is 1st September for a paper. IT has a design.

IT to submit flexes to Glasgow for bending.

Hybrid QA on sharepoint => JT.

Need to tidy lab and make room.

**Pixel Mechanics**

Attore from Genoa is looking at new material for bustape. Glass fibre pre-preg.

Akhil coming in this afternoon -student for test box. Arriving at 1:30.

Jon T: pastries for next week.

Test box for ring 0: not much progress. Need to understand

3D print 3 module section of ilya’s module. => TJ

Need to start place orders in preparation for Uta’s student.

IT: Pastries for next week.