**Minutes – 090418**

**Present: HH, TJ, PS, DS, AG, MdO, YG**

**Apologies:**

Sven

**Strip modules**

2 modules to test (electro mechanical – proper powerboards. – new DAQ. New communication protocol. Hybrid panel – for review at AUW?

SW – at AUW

----TJ, HH to clarify procurement homework

Hybrids finished and documented -> onto EDMS, on to review. Hopefully before AUW.

Priority: Hybrid panel.

Hopefully be then we will know if hybrid design ok, and then move onto y-flavour. Then high speed.

(Busy until at least June).

2 modules parked up -> DAQ to be done. -> lower priority

Last week: geometry for hybrid panel. AG to do panel layout with connectivity. 1 hybrid that is laid out -> documentation for mini review. -> next version hybrid y.

Standard circuit carrier for irradiation (AG, TS, IT)

No decision on leaded vs. unleaded process.

High speed multiplexer.

RN has instructed AG to ignore emails asking for names for strip hybrid procurement.

TWEPP: deadlines.

*SW to speak with AG to finalise tool designs: SS and LS, narrower hybrid. Asic pad ring frozen- awaiting confirmation from ASIC people. 1mm gap between powerboard and hybrid. Panel design missing (some influence on tools). Holes or trenches for vacuum pad. To distribute vacuum.*

*Sven’s last week. Going from holiday then direct to AUW. Thursday morning database meeting Thursday of AUW.*

*Test electronic readout.*

*Whilst Sven is away – priorities for AG?*

*Strip module meeting this week.*

**Strip Mechanics**

DS contacted Stephanie. Workshop need to move on carbon blocks/foam.

HH/PS- ask Mark Whitley.

Side closeouts / c-channels. Stephanie should have some.

Swagelock fitting kit. 28 week deliverable.

DS to go to swagelock on Wednesday. To see how LHCb are getting there parts done.

**DS to go to Sheffield with RF. To see Sheffield setup.**

**Mass estimates - TJ**

DS has setup what he can. “Playing”. Have vacuum pump for CF bed. Some fittings leaking.

Preparing bits. Getting parts. Welding on going. Sheffield

Awaiting parcel from Richard.

Ask for c-channels back from Oxford.

End of April.

Everything ready for strip stave in clean room. Awaiting foam blocks and side closeouts. Need order into Mark.

Build stave, take to QM for themal analysis. We should therefore put final thermal foam.

T-channels = end closeouts. TJ discussing with DPP about final size. Waiting for final funding.

*PS ordered components for DS. Setting up area for stave core. Needing foam blocks.*

*Get holes in c-channels. -> order for workshop.*

*Orbital welding -> organise meeting with RF, TJ. Targeted training. Ordered parts.*

*SBND -> PS to chase. (Kostas). – awaiting hockey sticks. Ship*

*Tim cannot release area of clean room from SBND. Formal request to Themis to resolve this.*

**Pixel modules**

**Silicon from Glasgow for quads. Test Ilyas new carrier card.**

**CB request to make more carrier cards for**

**Need circuit diagram.**

**JT to email Ilya for BOM.**

Argonne workshop: 15th-17th May. (IT, YG, backup JT).

Help student to make presentation:.

Populate one module for Craig, have new adapter card and cables.

Check hybrid

New bus tape.

Concerns over floating bus tape. (also concern for coils in strips.)

JT: double trigger noise scan. Compare to IBL scans. Stave looks good.

Testbeam: efficiency looks good. Statistics look good.

PD: chasing on orders.

Request 2 more modules made into old type modules: FEI4.

YY to go to RAL YARR workshop.

WP1/13 this week.

1) Craig is going to send us two assemblies (silicon and FEI4)

- we will make two modules from these with the old hybrid (**Ilya or YYG, JT**)

- these two will be added into the serial power chain (on chucks, not glued down)

- these two can then be used for other activities. eg. Stephan has asked for one.

- we also have another assembly in the lab - we want **Ilya** to populate a new hybrid - and then glue this to the assembly - a first!!!  - **days work.**

- these three will then make a serial power chain of 16 - something the intention community want.

PSPP higher priority than 16 modules

2) Two PCs have been ordered:

-one for the cob - which I’ll setup.

-one for YARR - which we can give to **Yanyan** - as a project she can get her teeth into.

3) Cables have been ordered (some have arrived).

-These are the length of the ATLAS cables

- And will be added onto the serial power chain to see how it all works.

Pipe joining workshop 18th May at CERN – Dave Sim to go. (Graham B. Jo P. also on mailing list).

Working module from Zott hybrid. MW away this week. MW to tell LB how to do it.

Ilya – order out for Stevenage.

RD53 – firmware prepared.

Ilya to design RD53 sensor?

A lot of data for straight stave.

Ordering realistic cable .

Forward biasing. -> funny features from outer barrel.

Testbeam -> sw working ! discuss with Glasgow.

What is schedule for test beams?

Use PD for irradiation at Birmingham

**Pixel mechanics**

Need to get started on prototyping. Get started on end flanges. Work out tooling system. Q: what inserts are going to be? What are threads? How are they incorporated in to flange? (molded? Afterwards?).

Establish oven curing. Q: how much material do we want to order?

Accounting for workshop/time.

Q: do we know decision on outerdiameter of pipe? Still in discussion. Going to Bart and Pedro for calculations. Probably 2.5 mm OD. 0.16 wall thickness. 200 bar test pressure.

Q: what pipe do we need for ring 1. ? 2.75mm. any difference is calculated.

Should we start designing for ring1.

PS to write parmeter list for pixel endcap.

*PS working on new model. Tape meeting all day Tuesday. PS to ring Jo.*

*What is plan with prototyping. Only 20k for CF.*

*PS to discuss with DS about how to make items.*

*LAU Friday before upgrade week.*

*AUW: 16th April.*

*PS:*

*Discuss KO after lunch.*

AUW:

Sven, HH, PS, JT, PD