

DIF-ASU Questions & Answers (during the meeting)

Antonio Verdugo

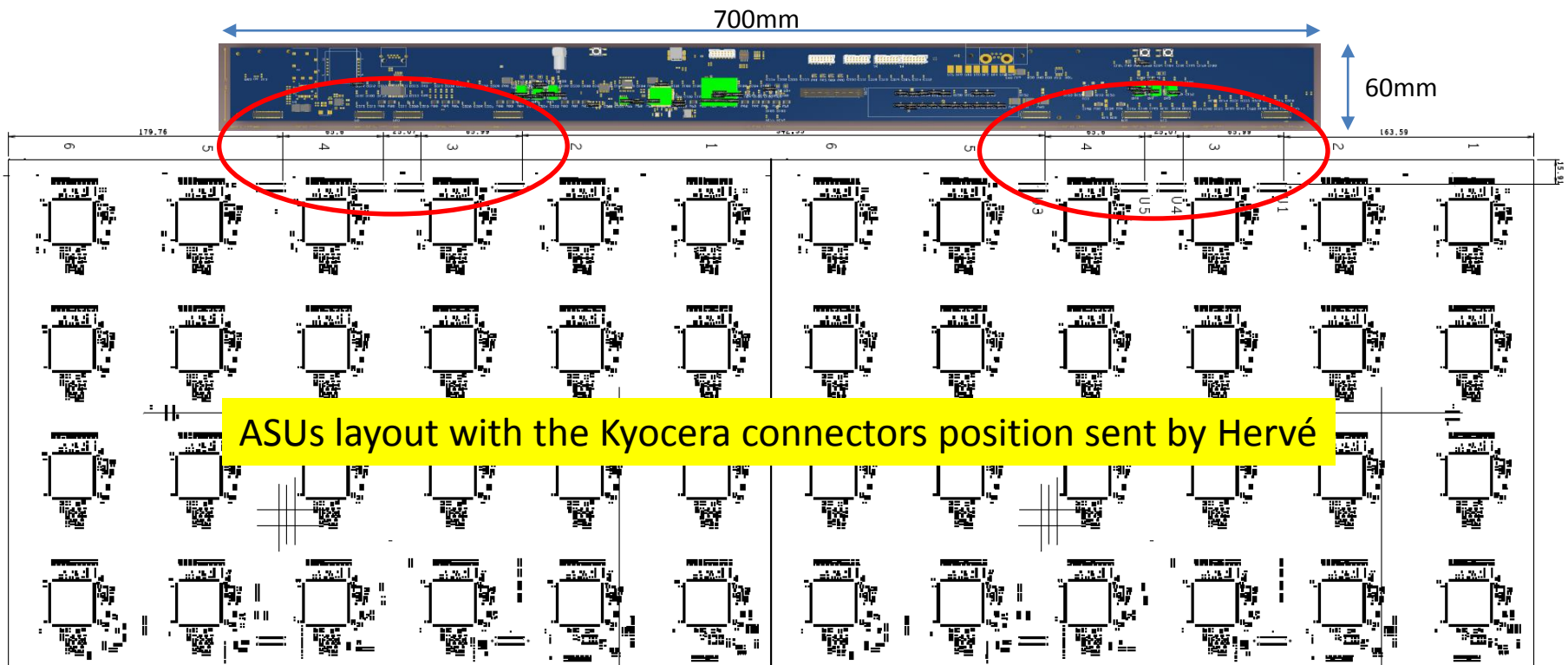
CIEMAT

05/07/2016

Current DIF layout

adapted to the Kyocera connectors position sent by Hervé

- **Length increased from 600 to 700mm to align DIF and ASU connectors in order to use the same connections between DIF - ASU and ASU - ASU**
- **Width keep at 60mm as there were no comments against that at LLR meeting (2-2-2015)**



Kyocera connectors

- Manufacturer doesn't recommend it for new designs
- Difficult to find, only available directly from manufacturer and minimum order is 2000 units
- Have you already bought the connectors ?
- Can we buy them together ?
- Use of another connector ?
- INPL will take a decision between continuing with this connector or choosing a new one. Will let us know by next Monday.

Answers needed to continue

- Will we use for DIF-ASU the same connection than for ASU-ASU ? **YES**
 - If so:
 - We need to know the connectors orientation (pin 1 position) on both sides of the ASU and the position of the power pads.
 - **The power pads will be on the component side.**
 - **INPL will send us the pin 1 position of all the Kyocera connectors on the ASU and the power pads specific positions by next Monday**
 - If not:
 - ~~We will reduce the DIF length to 600mm to produce the DIF with one of our known manufacturers -> **less risk on the production quality**~~
- Can we continue with the 60mm DIF width? **Yes, we can.**

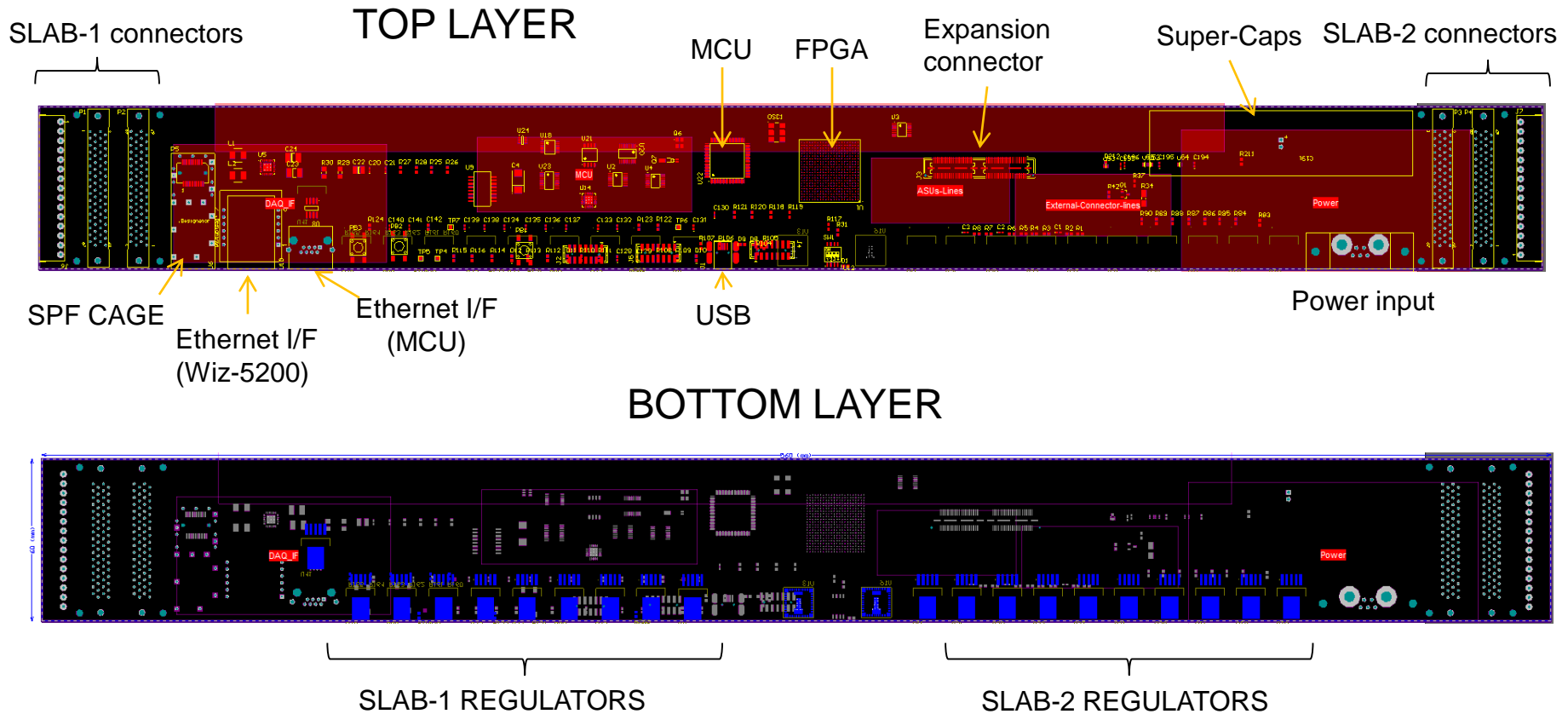
Thinking on the DIF tests

- We are thinking on testing the DIF with a board with some (4) HR3 to test the DIF-HR3 communication lines
- We can build a board for that purpose or use one ASU if they are available by the end of the year
- When will be the ASU and ASU-DIF connections available ?
- Could you provide us 4 HR3 for the test board ?
- **INPL can provide us one ASU by November for the DIF tests**

backup

DIF layout

(presented on 2-2-2015 @LLR)



- **60mm x 560mm**, 2mm thickness and 12 layers board
- One of the goals of this DIF is to test the feasibility of its integration in the final detector plane where only 5cm will be available for it.
- If this layout is used 6 cm instead of 5 are needed due to the connectors length

Unanswered

Asunto: Fwd: Re: Kyocera DIF connectors

De: Antonio Verdugo <antonio.verdugo@ciemat.es>

Fecha: 03/06/2016 12:48

Para: 'Mathez Herve' <h.mathez@ipnl.in2p3.fr>, Imad Laktineh <laktineh@in2p3.fr>

CC: M^o De La Cruz <mcruz.fouz@ciemat.es>, Jesús Marín <jesus.marin@ciemat.es>

Hello,

I've seen in the Kyocera web page that these connectors may not be available in the future:

<http://www.kyocera-connector.com/en/prdct/list/board-to-board-connectors/5801-series/>

As they could not be used for the final plane, I wonder if it's now the right time to substitute this connector to make the next tests with the new one.

I still need the information about the position of the pin 1 of the connectors.

Could you send me the layout of the DIF-ASU board or the pin 1 position on both sides of the ASU?

Should I leave space for holes close to the connector as they are in one of the ASU connectors ?

Best regards,
Antonio.

Unanswered

Asunto: Re: Kyocera DIF connectors

De: mathez <mathez@ipnl.in2p3.fr>

Fecha: 15/06/2016 8:15

Para: laktineh <laktineh@ipnl.in2p3.fr>, Antonio Verdugo <antonio.verdugo@ciemat.es>

CC: Laktineh Imad <i.laktineh@ipnl.in2p3.fr>, Jesús Marín <jesus.marin@ciemat.es>, M^e De La Cruz <mcruz.fouz@ciemat.es>

Dear Antonio,

Concerning the pin 1 of connector U2 and U9, I have to check with Didier (the person in charge of the layout), but I think that all Kyocera connectors are have the same pin 1 position.

The cable DIF-ASU and ASU-ASU will not be the same because of the geometry.

And, concerning the distributor of Kyocera connectors I will check with Luigi next Monday.

So next Monday I will check for the pin 1 position and the distributor of kyocera connectors.

Best regards,

Hervé

DIF length related to connectors position

Asunto: Re: HR3 ASU schematic and DIF connectors

De: Antonio Verdugo <antonio.verdugo@ciemat.es>

Fecha: 20/01/2016 10:06

Para: laktineh <laktineh@ipnl.in2p3.fr>

CC: mathez <mathez@ipnl.in2p3.fr>, Jesús Marín <jesus.marin@ciemat.es>, M^{re} De La Cruz <mcruz.fouz@ciemat.es>, Laktineh Imad <i.laktineh@ipnl.in2p3.fr>, "Christophe Combaret" <c.combaret@ipnl.in2p3.fr>, Delaunay Didier <d.delaunay@ipnl.in2p3.fr>

Hello Imad,

If you give us the name of the companies we will contact them.

Regards,

Antonio.

El 20/01/2016 a las 9:41, laktineh escribió:

Hi Antonio,

We will discuss this issue quickly, however, it is rather strange that no company was found that could realize such a PCB. Did you try to contact companies outside Spain?

When we conceived the SDHCAL ASUs we discussed with different companies and we were told that 8-layer PCB up to 50x70 cm² are possible.

If needed we can contact these companies and put them in contact with you.

Regards

Imad

Le 20 janv. 2016 à 09:35, Antonio Verdugo <antonio.verdugo@ciemat.es> a écrit :

Dear Hervé,

As we've already mention several times, we have not found any manufacturer able to produce the DIF longer than 600mm, so, it will not be long enough to place the Kyocera connectors at the positions that you have specified. If you can't find the way to place the connectors closer, then, the adaptor cable will be necessary.

Best regards,
Antonio.

El 19/01/2016 a las 15:40, mathez escribió:

Dear all,

Please find in attached files the final ASU HR3 schematic and the Kyocera position connector for DIF board.

Best regards,