

主 题:	Muon合作组文章审核邮件记录--已通过
发件人:	"Pengcheng Cao" <pengcheng.cao@cern.ch> 2020-7-20 10:24:50
收件人:	"Zhen-An LIU" <liuza@ihep.ac.cn>, "Jingzhou Zhao" <zhaojz@ihep.ac.cn>, "gongwx@ihep.ac.cn" <gongwx@ihep.ac.cn>, "caopc@ihep.ac.cn" <caopc@ihep.ac.cn>, "taojia@ihep.ac.cn" <taojia@ihep.ac.cn>, "kouhj@ihep.ac.cn" <kouhj@ihep.ac.cn>, "songjn@ihep.ac.cn" <songjn@ihep.ac.cn>

FWD

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**From:** Richard Breedon [[breedon@physics.ucdavis.edu](mailto:breedon@physics.ucdavis.edu)]  
**Sent:** 16 July 2020 11:37  
**To:** Pengcheng Cao  
**Cc:** Jesus Puerta Pelayo; Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov  
**Subject:** Re: [CMSNOTES] New note submitted

Dear all,

All my editorial comments have been suitably dealt with and I approve going to the next step, whatever that is, and if it is really required for me to say so.

Regards, Richard

On Jul 16, 2020, at 02:10, Pengcheng Cao <[pengcheng.cao@cern.ch](mailto:pengcheng.cao@cern.ch)> wrote:

Dear Richard, all,

Thanks for your comments, I accept all of these comments and attach the new draft (changes highlighted) accordingly.

Could we go to the next approval step if you have no more comments?

Looking forward to your kindly reply!

Regards,  
Pengcheng

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**From:** Richard Breedon [[breedon@physics.ucdavis.edu](mailto:breedon@physics.ucdavis.edu)]  
**Sent:** 16 July 2020 09:41  
**To:** Pengcheng Cao  
**Cc:** Jesus Puerta Pelayo; Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov  
**Subject:** Re: [CMSNOTES] New note submitted

Dear Pencheng,

If you want to retain the original title, please change "Readout Electronics System" to either "Readout Electronics" or "the Readout Electronics System". Likewise change "improved Resistive Plate Chamber" to "the Improved Resistive Plate Chambers" (note that "Chambers" is plural))

In line 76, please correct my misspelling of "achieved".

In lines 190-1, I already figured that "DC" in "with consideration of the DC-balance" meant "direct current", but would your typical reader know what "DC-balance" is without more explanation? I don't. In any case, it would be better written as "keeping the direct current (DC) balance under consideration".

In line 212, insert "the" before "IRPC".

Since  $\mathit{\text{Eff}}$  seems to work, you could also apply it as " $\text{HV}_{\mathit{\text{Eff}}}$ " in Eq. 1 to fix the spacing there.

The paper looks very nice. Good luck!

Best regards, Richard

On Jul 15, 2020, at 03:25, Pengcheng Cao <[pengcheng.cao@cern.ch](mailto:pengcheng.cao@cern.ch)> wrote:

Dear Richard,

Thanks for your comments!

I accept most of your comments and have made the modification accordingly.

But for some points, I would prefer to keep them if you agree. I list them here:

1. For the title, after discussion with my supervisor, we think it should not be changed. The described readout system is not the final one(as the final one still need to be discussed or updated) that would be used for iRPC. So, we think it is better to use "research and development" to avoid arguments.
2. For Line 122 - L125, the DAQ, SC, TTC are functions that the BEE provide, not the PC server. I think it means the PC provides them with your comments.
3. For L212-213, the 64-bit data format is not defined by iRPC 2D chamber, we defined it for our joint test. So I modified this sentence to avoid misunderstandings.
4. For L231-232, I mean the 'GBT-FPGA' is also integrated in GBF side to ensure communication with the BEE. So I added the 'in the GBF' to avoid misunderstandings.

The new PDF(with changes highlighted) and Word(copied the Latex source) files according to the updated manuscript are in the attachment, please have a look.

Thank you again and looking forward to your reply!

Best Regards,  
Pengcheng

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**From:** Richard Breedon [[breedon@physics.ucdavis.edu](mailto:breedon@physics.ucdavis.edu)]

**Sent:** 14 July 2020 06:24

**To:** Pengcheng Cao

**Cc:** Jesus Puerta Pelayo; Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov

**Subject:** Re: [CMSNOTES] New note submitted

Dear Pengcheng,

Attached is my edited version of the Word copy of the LaTeX file of your paper. Please look at the corrections very carefully, as I made some spelling corrections that involve only one letter that could be easily overlooked. I also made a few LaTeX corrections, but I did not compile the file in LaTeX to make sure that I did not introduce additional errors.

Please let me know if you have any questions about my suggested corrections.

Regards, Richard

Richard Breedon, Ph.D.  
Research Professor Emeritus  
Dept. of Physics, UC Davis

> On Jul 12, 2020, at 21:23, Pengcheng Cao <[pengcheng.cao@cern.ch](mailto:pengcheng.cao@cern.ch)> wrote:

>

> Dear Richard,

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> Thank you and I will do as you suggested.

>

> Regards,

> Pengcheng

>

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> From: Richard Breedon [[breedon@physics.ucdavis.edu](mailto:breedon@physics.ucdavis.edu)]

> Sent: 12 July 2020 11:12

> To: Pengcheng Cao

> Cc: Jesus Puerta Pelayo; Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov

> Subject: Re: [CMSNOTES] New note submitted

>

> Dear Pengcheng,

>

> Thank you for providing me with a Word copy of the LaTeX file of your paper. I will edit that instead of the simple Word file I started to create from your article's PDF text. In my decades of experience switching between Word and LaTeX, your best approach would be to manually enter my edits that you accept.

>

> Regards, Richard

>

>> On Jul 11, 2020, at 06:53, Pengcheng Cao <[pengcheng.cao@cern.ch](mailto:pengcheng.cao@cern.ch)> wrote:

>>

>> Dear Richard,

>>

>> I am very happy to hear from you!

>> I appreciate so much that you could provide the help to improve the English for this paper.

>> I copied all the contents in the LaTeX file of the latest draft you received into a Word file(Maybe this would be helpful for you to give corrections. If it is not suitable, please let me know.), please see the attachment.

>> I will modify the paper according to your comments, no matter what kind of file you are using. (Word will be better, PDF is also OK.)

>>

>> For the title, thanks for your comment but I have to discuss with my supervisor and then make the decision, because I have no right to change it myself.

>>

>> Thanks again and looking forward to your reply!

>>

>> Regards

>> Pengcheng

>>

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>> From: Richard Breedon [[breedon@physics.ucdavis.edu](mailto:breedon@physics.ucdavis.edu)]

>> Sent: 11 July 2020 03:10

>> To: Pengcheng Cao

>> Cc: Jesus Puerta Pelayo; Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov

>> Subject: Re: [CMSNOTES] New note submitted

>>

>> Dear Pengcheng,

>>

>> I have looked over the paper, and I recommend its acceptance by the MCPB once the English has been significantly improved. I can help with that, and the quickest way for me to do so is with a file I can directly edit. I have begun copying the text from the PDF to a Word file. Would it be acceptable to you to receive my corrections in the Word file with Track Changes on? You would have to enter the corrections yourself into the LaTeX file. (I could also make a PDF of the Word file if you do not have access to Microsoft Word.)

>>

>> Moreover, I recommend the title be changed to something like "New Readout Electronics for the Improved Resistive Plate Chambers in the CMS Experiment".

>>

>> Regards, Richard

>>

>>> On Jul 10, 2020, at 04:55, Pengcheng Cao <[pengcheng.cao@cern.ch](mailto:pengcheng.cao@cern.ch)> wrote:

>>>  
>>> Dear Jesus,  
>>>  
>>> Thanks for your reply.  
>>>  
>>> I fully understand and accept the paper approval procedure of MCPB and CMS PubComm.  
>>>  
>>> Yes, I need the acceptance letter from RDTM before 15th July, so I hope to submit my manuscript to the journal as soon as possible (I thought I had no right to submit until I get the final green light from the CMS PubComm).  
>>>  
>>> I'm glad you've agreed to provide a support letter first, that would be very helpful to me. I will explain the situation to the journal with the letter and submit the last draft to it as you suggested, hoping they could also start the normal review process.  
>>>  
>>> Thanks again, what should I do to get the support letter?  
>>>  
>>> Best Regards  
>>> Pengcheng  
>>>  
>>> \_\_\_\_\_  
>>> From: Jesus Puerta Pelayo  
>>> Sent: 10 July 2020 12:07  
>>> To: Pengcheng Cao  
>>> Cc: Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov; richard breedon  
>>> Subject: RE: [CMSNOTES] New note submitted  
>>>  
>>> Dear Pengcheng,  
>>>  
>>> The new version of your note has been forwarded to Richard Breedon (in cc) and he's working on it. You'll have his comments in a few days.  
>>>  
>>> Let me try to understand your situation: what is exactly that you need for your PhD before July 15th? The Muon group approval is not an "official" document or status. I am guessing what you need is a proof that the paper has been accepted for publication, and that usually takes much longer, even if you send the paper right now.  
>>>  
>>> For next time: the approval of a paper is not an easy process; it takes longer than a week. After the MCPB approval it has to get the final green light from the CMS PubComm, so we are really short in time now. We will try to do as fast as possible.  
>>>  
>>> In the meantime I would suggest you contact the journal, maybe send them the last draft and ask for their agreement for publication, explaining the situation, and making clear a statement that it is NOT the final version. Maybe they will provide you the acceptance letter. We can sign a support letter if that helps. But we cannot force a faster review. A quality check takes time.  
>>>  
>>> Let us know.  
>>>  
>>> J.  
>>>  
>>> \_\_\_\_\_  
>>> From: Pengcheng Cao  
>>> Sent: 09 July 2020 13:14  
>>> To: Jesus Puerta Pelayo  
>>> Cc: Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov  
>>> Subject: RE: [CMSNOTES] New note submitted  
>>>  
>>> Dear Jesus,  
>>>  
>>> Sorry to bother you, but it is really urgent for me to get approval in Muon group. I have to get the accept letter before 15th July to finish my PHD.  
>>> Could you please inform me the current status of the Muon approval for the new draft, or where can I check its status?  
>>> If the new version is still not suitable, please let me know.  
>>>  
>>>

>>> Regards  
>>> Pengcheng  
>>>  
>>>  
>>> From: Pengcheng Cao  
>>> Sent: 07 July 2020 15:11  
>>> To: Jesus Puerto Pelayo  
>>> Cc: Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov  
>>> Subject: RE: [CMSNOTES] New note submitted  
>>>  
>>> Dear Jesus,  
>>>  
>>> Yes, the paper is intended to be published outside of CMS. The journal is Radiation Detection Technology and Methods (<https://www.springer.com/journal/41605>)  
>>> The first draft was submitted to Muon and RPC group to be approved simultaneously, in order to save time. Because I have to get the accept letter from the journal for my graduation, time is really limited. (I would thank Roumyana for this suggestion. )  
>>> After I get the approval in RPC group, I find that I could not upload the latest version of the draft in iCMS.  
>>> Please find the updated draft (many modifications have been made according to Sijin's comments, the text is greatly improved.) in the attachment.  
>>>  
>>> Thank you for your arrangement and please let me know whether the draft is suitable or not.  
>>>  
>>> Best Regards,  
>>> Pengcheng  
>>>  
>>>  
>>> From: Jesus Puerto Pelayo  
>>> Sent: 07 July 2020 10:48  
>>> To: Pengcheng Cao  
>>> Cc: Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov  
>>> Subject: RE: [CMSNOTES] New note submitted  
>>>  
>>> Dear Pengcheng,  
>>>  
>>> I'm contacting you on behalf of the Muon Conference and Publications Board. We understand that this note is intended to be published outside of CMS, correct? In order to do proceed with the review, please make sure that the text has been proofed by a native English speaker. Find below a few preliminary comments by Richard Breedon.  
>>>  
>>> Please let us know when a new version is available.  
>>>  
>>> Best regards  
>>>  
>>> Jesus on behalf of the MCPB  
>>>  
>>> From: Richard Breedon [[breedon@physics.ucdavis.edu](mailto:breedon@physics.ucdavis.edu)]  
>>> Sent: 06 July 2020 22:26  
>>> To: Jesus Puerto Pelayo  
>>> Cc: Sijin Qian; Roumyana Mileva Hadjiiska; Borislav Pavlov  
>>> Subject: Re: [CMSNOTES] New note submitted  
>>>  
>>> Dear J.,  
>>>  
>>> Sorry for not responding to your message more promptly.  
>>>  
>>> If it is intended for this IN to be submitted for publication, the authors have to work with a native English speaker to greatly improve the text. Once this is completed, I will be happy to review the article in detail.  
>>>  
>>> When used as the first word in a sentence, "Fig." should be spelled out as "Figure". There should also be a space between "Fig." and the figure number, e.g., "Fig. 7".  
>>>  
>>> In addition, the format of the Reference listings is not consistent. The authors should check the

preferred format of the submitting journal and follow it.

>>>

>>> Regards, Richard

>>>

>>>> On Jul 2, 2020, at 09:07, Jesus Puerta Pelayo <[Jesus.Puerta.Pelayo@cern.ch](mailto:Jesus.Puerta.Pelayo@cern.ch)> wrote:

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>>>> Dear Richard,

>>>>

>>>> Could you please review this file? It has been submitted as IN with the idea of publishing it in Radiation Detection Technology and Methods (<https://www.springer.com/journal/41605>)

>>>>

>>>> Sijin is in charge of the review from the RPC group, so you would be the "external" MCPB reviewer. Please let me know if it's possible.

>>>>

>>>> Thanks a lot. Best

>>>>

>>>> J.

>>>>

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>>>> From: Cms Notes

>>>> Sent: 25 June 2020 17:33

>>>> To: Othmane Bouhali; Richard Breedon; Kerstin Hoepfner; Borislav Pavlov; Jesus Puerta Pelayo

>>>> Subject: [CMSNOTES] New note submitted

>>>>

>>>> Dear Jesus Puerta Pelayo, Borislav Pavlov, Kerstin Hoepfner, Richard Breedon, Othmane Bouhali,

>>>>

>>>> Pengcheng Cao has submitted a new note for reviewing with:

>>>> title: Research and Development of Readout Electronics system for improved Resistive Plate Chamber in CMS

>>>> authors: Pengcheng Cao, Zhen-An Liu, Jingzhou Zhao, Jia Tao, Hanjun Kou, Jianing Song, Wenxuan Gong, et al, on behalf of the CMS collaboration

>>>> abstract: To complement the missing part in the endcap of the Compact Muon Solenoid (CMS) detector, the improved Resistive Plate Chamber (iRPC) will be installed  $\sqrt{s}$  RE3/1 and  $\sqrt{s}$  RE4/1 with its capability of more precise time measurement by new layout of strips. Accordingly, iRPC readout electronics needs to support the 2D or dual-side readout. Besides, it is required to handle the critical timing and combine Timing Trigger and fast Control (TTC), Slow Control (SC) and detector data into one data stream over bi-directional optical link with a line rate of 4.8 Gb/s between Front-End Electronics (FEE) and Back-End Electronics (BEE). Based on these requirements, a new readout electronics system is researched and designed. A uTCA (Micro Telecommunication and Computing Architecture) based processing card is designed for this study to establish a prototype system together with a uTCA crate. The Giga-Bit Transceiver (GBT) protocol is integrated to provide the bi-directional communication between FEE and BEE. The server and BEE are connected by a 1 GbE link for SC and a 10 GbE link for Data Acquisition (DAQ). A joint test with the iRPC 2D prototype chamber is performed. The timing synchronization adjustment with the timing precision of 2.5 ns is successfully realized, the detector efficiency of 97.7% for longitudinal strips and 96.0% for orthogonal strips is well measured. Test results demonstrate the correctness and reliability of the BEE functionalities. The designed prototype readout system satisfies the requirements for the iRPC 2D chamber, and performs stably and reliably during the long-term joint test run.

>>>> type: IN

>>>> project: MUON

>>>>

>>>> It has been sent to you as one of the subeditors of the MUON subproject.

>>>> You may directly access the uploaded draft at [http://cms.cern.ch/iCMS/jsp/openfile.jsp?tp=draft&files=12204\\_iRPC\\_BEE\\_PaperDraft\\_Pengcheng20200625.pdf](http://cms.cern.ch/iCMS/jsp/openfile.jsp?tp=draft&files=12204_iRPC_BEE_PaperDraft_Pengcheng20200625.pdf) or through the CMS Notes page.

>>>>

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>>>> P.S> This is an automated message. In case of problems please contact [icms-support@cern.ch](mailto:icms-support@cern.ch)

>> <PaperSourceFile\_To\_Richard.docx>

<iRPC\_BEE\_PaperDraft\_Richard\_comments20200715.pdf>

<PaperSourceFile\_To\_Richard\_20200715.docx>

<iRPC\_BEE\_PaperDraft\_Richard\_comments20200716.pdf>